GLOBAL FORUM

Shaping the Future

2008

e Government

GOOD PRACTICE EVENT 2006

COLLABORATIVE CONVERGENCE

Users Empowerment in the Global Digital Economy

Conference Proceedings

Tuesday, October 21st, 2008
Wednesday, October 22nd, 2008

Zappeion Mansion, Athens

Under the auspices of

digitalgreece

CITY OF ATHENS

HELLENIC REPUBLIC
MINISTRY OF ECONOMY AND FINANCE
SPECIAL SECRETARIAT FOR DIGITAL PLANNING

Organisers

ITEMS INTERNATIONAL

FONDATION SOPHIA ANTIPOLIS

contents





Report written by
Susanne Siebald, Communications Consultant
assisted by Florentina Chirca, Items International

The conference is over and more than 320 delegates from over 30 different countries attended the conference sessions taking place on 21 and 22 October at the Zappeion Mansion in the historic Athens Gardens.

In ancient Athens, citizens met, face to face, in the agora to conduct business and to debate civic and major political issues. Given this historical background, Athens provided a most appropriate location for the Global Forum. In the tradition of the past meetings, the intention of the Global Forum 2008 was to provide a platform for governmental representatives, the private sector, the users, and the academia to meet and discuss the various challenges of the evolution of our today's and future Knowledge Society - this year under the main topic of "Collaborative Convergence – Users Empowerment in the Global Digital Economy".

The organization of an international networking event like the Global Forum 2008 is not possible without the help of an excellent and highly motivated team and we wish to thank all those many people who contributed to the preparation of the Global Forum. We would like to particularly thank our partners from Greece for their excellent work and for showing us that physical networking knows no borders.

We sincerely thank the main sponsors and co-operating institutions of the Global Forum 2008, which are, besides ITEMS International, the Foundation Sophia-Antipolis, the Special Secretariat for Digital Planning of the Hellenic Ministry of Economy and Finance, Digital Greece and the City of Athens

IBM, OTE, COSMOTE, Microsoft, Sagem Securité SAFRAN Group, Qualcomm, Oracle, Consip, AT&T, Intracom Telecom, Verizon, Global Trust Center, White & Case, Orange, the Hellenic Ministry of Transportation & Communications, Postelink, Best of Media, Cosmos, Turn Key Solutions, Proxim, DAEM, Afilias, Filnet, ETSI, Momentum, Gov2U

as well as the supporting sponsors, which are

the European Commission, Politech Institute, Global Cities Dialogue, INA, PoliticsOnline, PTI, enisa, Le Club de l'économie numérique, Major Cities of Europe IT Users Group, CIP Malta National Contact Point, Observatory for the Greek Information Society, ANUIT, ULSS8 Veneto, ENSA, Summit Strategies International, ICT plus, Athens Plus, Metropolis, Herald Tribune.

And last, but certainly not least, I would like to thank the Global Forum's principal actors, who are its moderators, speakers, and participants, for having brought their knowledge to the Forum and having once again contributed to its success.

We are already looking forward to meeting you next year at the Global Forum 2009.

Sébastien Lévy
Vice-President of the Global Forum

Sylviane Toporkoff
President of the Global Forum

The Global Forum 2008 was realized with the active and efficient support of its

Main Sponsors

And with the friendly support of its

Supporting Sponsors

21 October 2008

1ST DAY WELCOMING ADDRESS AND OPENING SESSION p 18

Chair & Moderator: **Sylviane Toporkoff**, President Global Forum & Founder Partner Items International, France

Welcoming Address:

Sylviane Toporkoff, President Global Forum & Founder Partner Items International, France
Pierre Laffitte, Senator & President Sophia Antipolis Foundation, France

Keynote Speakers:

- **Yannis Larios**, Advisor of Vassilios Assimakopoulos, Special Secretary for Digital Planning, of the Hellenic Ministry of Economy and Finance, Greece
- **Christos Akratopoulos**, Advisor of Dr. George Anastasopoulos, Secretary General of Communications, Ministry of Transport & Communications, Greece
  Infrastructure Development - New Generation Access Networks
- **Konstantinos Giannatos**, Managing Director of DAEM, City of Athens - IT Company, and representative of Nikitas Kaklamanis, Mayor of Athens, Greece
  City of @thens: A Contemporary Digital Metropolis
- **Francisco Ros**, State Secretary for Telecommunications and Information Society Ministry of Industry, Spain
  The Spanish Information Society Programme: Plan Avanza
- **Lorena Boix Alonso**, Deputy Head of Cabinet of Mrs. Neelie Kroes, Commissioner for Competition, European Commission
  Ex-ante and Ex-post Application of Competition Law to the Electronic Communications Sector Aim to the advent of the Digital, Knowledge-based Economy
- **Thomas Rosch**, Commissioner, Federal Trade Commission, USA
  Convergence with Respect to Competition Rules around the World
- **Eli Pagourtzi**, President of the Greek Information Society Observatory Greece,
  The New Broadband Performance Indicators
- **Mechthild Rohen**, Head of Unit ICT for Government and Public Services, DG INFSO & Media, European Commission
  Empowerment of Citizen ICT for Governance & Policy Modelling

Chairperson: Kathryn C. Brown, Senior Vice-President for Public Policy Development & International Government Relations, Verizon, USA
Collaborative Convergence

Moderator: Giorgio Prister, President Major Cities of Europe Association, Italy

Speakers:

Joao Schwartz da Silva, Director for Network and Communication Technologies, DG Information Society & Media of the European
Toward the Internet of Things
Yang Zemin, President of the China Academy of Telecom Research - CATR, China
Broadband of the Future
Jorgen Friis, Deputy Director General, European Telecommunications Standards Institute – ETSI, France
Collaborative Convergence in the Broadband of the Future
Latif Ladid, President IPv6 Forum, Chair EU IPv6 Task Force, Luxembourg
The New Internet Based on IPv6 – Power to the End-User
Lionel Chmilewsky, Executive Vice President Proxim Wireless Corporation, USA
Wireless Infrastructures for New Applications and Services
Roberto Saracco, Director Future Centre, Telecom Italia, Italy
Future Centre – From Convergence to Ecosystems

Chair & Moderator: **Elly Plooij-van Gorsel**, Vice-chairperson of the Global Trust Center International Council and Senior Counsellor Blueprint Partners, The Netherlands
Thomas Andersson, President Jönköping University, Chairman GTC International Council, Sweden

Speakers:

- **Gilles Maguet**, Secretary General XBRL Europe, Belgium
  Interoperability and Trust in the Financial World – XBRL a Tool for Global Transparency
- **Victor Emmanuel de Sa**, Partner Geneva Solutions, Switzerland
  Interoperability, Identity Mismanagement & Trust A Security Point of View
- **Max Snijder**, CEO Biometrics Expertise Group, The Netherlands
  Anonymous Biometrics under the GTC Policy
- **Constantine Steriadis**, Principal Sales Consultant Oracle Hellas S.A., Greece
  Hermes: The Citizen-centric Gateway to Greek Public Services
- **Maria Tsakali**, Scientific Officer, DG INFSO & Media, Software & Service Architectures and Infrastructures Unit, European Commission
  The Future Internet of Services
- **Oliver Väärtnõu**, Advisor, Strategy Office, Government Office of the Republic of Estonia,
  Interoperability, Identity Management and Trust: The Case of Estonia

Commentators:

- **Jacques Bus**, Head of Security Unit DG INFSO & Media, European Commission
- **Zahid Jamil**, Barrister-at-law Jamil & Jamil, Pakistan

1ST DAY • AFTERNOON'S OPENING SESSION • p 46

Moderator: Jean-Pierre Chamoux, Professor Paris V-René Descartes University, France

Keynote Speakers:

- **Nikitas Alexandridis**, President of the National Telecommunications and Post Commission - EETT, Greece
  Challenges for Expanding Broadband: The Greek Perspective
- **Robert A. Morin**, Secretary General of the Canadian Radio-television and Telecommunications Commission - CRTC, Canada
  Towards a Converged Digital Environment - Rethinking Opportunities
- **Deborah Taylor Tate**, Commissioner, Federal Communications Commission – FCC, USA
  United States Broadband Policy: From Sea to Shining Sea
- **Seitaro Fujita**, Advisor to International Affairs, Global ICT Strategy Bureau, Ministry of Internal Affairs and Communications, Japan
  ICT Policy Toward Ubiquitous Net Society

1ST DAY • SESSION 3 • Regulation & Governance Initiatives • p 52

Chairperson: Konstantinos M. Ploumpis, General Director of Regulatory Affairs for OTE S.A., Greece
Between Efficiency & Legitimacy

Moderator: Andrew D. Lipman, Senior Partner and Practice Group Leader at Bingham McCutchen, USA
Foreign Investment in US Telecommunications Industry

Speakers:

- **Brent Olson**, Assistant Vice President Public Policy AT&T, USA
  The Evolving Communications Landscape
- **Mina Zoulovits**, Partner Philotheidis, Rogas & Partners, Legal Consultant to the Ministry of Economic Affairs, Special Secretariat for Digital Planning, Greece
  Internet Governance
- **Jacquelynn Ruff**, Vice President International Public Policy & Regulatory Affairs Verizon, USA
  User Empowerment in the Global Digital Economy
- **Jay Edwin Gillette**, Professor of Information and Communication Sciences, Center for Information and Communication Sciences, Ball State University, USA
  Common Sense and Common Carriage: Draining the Net Neutrality Swamp

- **Anne-Marie Vesdrevanis**, International Relations Officer DG INFSO & Media, European Commission
  Strategic European Framework for International Science and Technology Cooperation
- **Gao Xinmin**, Director of Policy Planning Committee, the Advisory Committee for State Information (ACSI), Vice President of Internet Society of China (ISC), China
  A Key Factor for Sustainable Development of Internet in China: Effective Governance Based on Healthy Cyberculture

Commentator:

- **Miriam Sapiro**, President Summit Strategies International, USA

1ST DAY • SESSION 4 • Living in a Digital World • p 62

Chair & Moderator: Sergio Antocicco, Chairman INTUG & President Anuit, Italy

Speakers:

- **Olivier Midière**, Executive Vice President Strategy and Marketing Bestof Media Group, France
  Enabling the New Digital Brand-consumer Relationship
- **Phil Noble**, Founder & Journalist PoliticsOnline.com, USA
  The Obama Campaign: An Online Revolution
- **Robert Harutyunyan**, General Director of the Armenian Development Agency – ADA, Armenia
  The Digital Life in Armenia
- **Danilo Oreste Broggi**, Chief Executive Officer of Consip S.p.A., Italy
  Facilitating SMEs' Access to the Public (e)Procurement Market
- **Norman Jacknis**, Director IBSG Public Sector, Cisco, USA
  Some Questions About The Impact Of Digital Life On Government & Community
- **Cristina Imperi**, Manager New Technologies at Postelink, Italy
  Living in a Digital World - From the Company Perspective to the Users Involvement
- **William Sloan Coats, Intellectual Property Partner White & Case, USA**
  The Revolution of User Generated Content
- **Nancy Pascall**, DG INFSO, Directorate C: Lisbon Strategy and Policies for the Information Society C1: Lisbon Strategy and i2010, EC
  Eliminating the Glass Ceiling and the Leaky Pipeline
- **John Soldatos**, Associate Professor at the Athens Information Technology (AIT), Adjunct Professor at the Carnegie Mellon University, Greece
  Pervasive ICT and Applications Alleviating the Cognitive Decline

Chairman & Moderator: **Steven Adler,** Program Director, IBM Data Governance Solutions, USA
Toxic Content and Data Governance

Speakers:

- **Bent Poulsen**, Chief Auditor, VP Securities Services, Denmark
  VP's Security Regulation
- **Renaud Finaz de Villaine**, CMO, Micropole Univers, France
  Data Governance, Intellectual Capital & Customer Value Creation
- **Michael Dziekan**, Office of Strategy – Director of Research and Solutions Strategy, Cognos, an IBM Company, USA
  The Data Governance Balanced Scorecard
- **Jacques Bus**, Head of Security Unit, DG INFSO & Media, European Commission
  The Crisis in Internet Security
- **Zahid Jamil**, Barrister-at-Law, Jamil & Jamil, Pakistan
  Data Governance Legislation in Pakistan
- **Sokratis K. Katsikas**, Member, Hellenic Authority for Information and Communication Security & Privacy, Professor, Dept. of Technology Education & Digital System, University of Piraeus, Greece
  Towards a National Strategy for Information and Communication Security and Privacy
- **Paris Kokorotsikos**, Chairman and CEO, Euroconsultants SA, Greece
  Challenges for SMEs in Information Governance, Security and Privacy
- **Jean-Marc Suchier**, VP, Director European Programs, Sagem Sécurité, France
  Biometric Cryptography: A Solution to Protect Privacy?
- **Thomas Hart**, Regulatory Expert, EU-China Information Society Project, China
  Information Governance and "Informatisation" in China: Solutions and Plans
- **Thomas Myrup Kristensen**, EU Internet Policy Director, Microsoft EMEA, Denmark
  Information Governance - How to Protect Privacy Online?

Chair: **Thierry Zylberberg**, Executive Vice President in charge of Strategic Partnerships & General Manager of Health Line of Business France Telecom, France

Moderator : **Patrice Cristofini**, Director Partnership and Strategic Alliance, Orange Healthcare, France

Speakers:

- **Michèle Thonnet**, Official Representative e-Health France, Responsible for European and International Partnerships & Relations, Ministry of Health, France
  The European eHealth Initiative
- **Mario Po'**, Administrative Director & **Alessandro Bruno**, Administrative Assistant Azienda ULSS n 8 Asolo, Italy
  PIC, Medical Network – Health, to Hand
- **Alisoun K. Moore**, Director, State & Local Health and Human Services, Northrop Grumman Corporation, USA
  The New Business Models on e-Health for Innovative Solution
- **Sultan A. Bahabri**, Chairman HiTS Telecom Telecom Group, Saudi Arabia
  Major Trends in Healthcare – 21st Century's Challenges
- **Mikael Grannas**, Chairman of the Board and CEO & **Kaj Söderman**, Project Manager Archipelago Networks LTD, Finland
- **Kostis Kaggelides**, Chief Operating Officer and Vice President of Gnomon Informatics S.A., Greece
  Healthcare eProcurement – Challenges for Efficiency
- **Victor Emmanuel de Sa**, Partner Geneva Solutions, Switzerland
  User Empowerment in the Global Digital Health
- **Octavian Purcarea**, WW Health Industry Solutions Manager Microsoft EMEA, France
  Towards Sustainable eHealth

2ND DAY • OPENING SESSION • p 91

Moderator: **Sylviane Toporkoff**, President Global Forum & Founder Partner Items International, France

Keynote Speakers:

- **Thaima Samman**, Senior Director & Associate General Counsel, Corporate Affairs - Corporate Social Responsibility, Microsoft EMEA, France
  New Channels to the World
- **Todd S. Ramsey**, Manager Director, US Federal IBM Corporation, USA
  Government 2020 and the Perpetual Collaboration Mandate
- **Jim C. Williams**, Senior Vice President & Chief Technology Officer at Motion Picture Association, USA
  Content Protection Enables Consumer Choice
- **Thomas Andersson**, President Jönköping University and Chairman of the GTC International Council, Sweden
  ICT, Innovation and User Empowerment
- **Gabrielle Gauthey**, Member of Board, ARCEP - Autorité de Régulation des Communications Electroniques et des Postes, France
  Delivering High Capacity Broadband for France - Regulatory Challenges on NGA
- **Helen Domenici**, Chief International Bureau Federal Communications Commission – FCC, USA
  Collaborative Convergence: User Empowerment in the Global Digital Economy

Chairman & Moderator: Hervé Rannou, President Items International, France

Speakers:

- **Per Hellström**, Head of Unit, DG Competition, Unit C.3 – Information Industries, Internet and Consumer Electronics, European Commission
  Software and Innovation in Services
- **Xiaohua Zhao**, Partner, Akin Gump Strauss Hauer & Feld LLP, USA
  China Convergence
- **Makoto Yokozawa**, Dr., Nomura Research Institute, Professor of Joint Research Unit, MOIS Labo., Kyoto University, Japan
  Participative Innovation in Media and Contents
- **Stéphane Grumbach**, INRIA, French Director of the Sino-French IT Lab LIAMA Beijing, China
  Internet in China
- **Thomas Nogues**, Director of Technology EMEA, Motion Picture Association, Belgium
  Seeking Convergence in Content Protection
- **Anne-Lise Thielblemont**, Director Government Affairs Qualcomm, USA
  Convergence Case Study: Mobile Digital Multimedia
- **Jean-François Tournu**, Chairman of the Regional TV Channel TV8 Burgonde, France
  Challenges a Local TV Channel Must Face Nowadays
- **Luis Rodríguez-Rosello**, Head of Unit Networked Media Systems, DG INFSO & Media, European Commission
  Networks and Media: Trends and Prospects in EU Research

Commentators:

- **Kathryn C. Brown**, Senior Vice-President for Public Policy Development & International Government Relations, Verizon, USA
- **Thomas Rosch**, Commissioner Federal Trade Commission – FTC, USA

Chairperson: **Despina Anastasiadou**, Director Southeastern Europe Telecommunication & Informatics Research Institute (INA), Greece
eGovernance Development in Southeastern Europe: Coordinating Efforts and Seizing Opportunities

Moderator 1: **Daniel Van Lerberghe**, President & Executive Director POLITECH - Political Technologies, Belgium

Speakers:

- **Demetrios Sarantis**, Management and Decision Support Systems Laboratory, National Technical University of Athens, Greece
  Overview of Electronic Participation Projects in the European Union
  The MOMENTUM Project
- **Christos Chrysos**, Project Manager IDEAL-EU, Project Manager Open Technology Services S.A, Greece
  Integrating the Drivers of e-Participation at Regional Level in Europe
- **Fenareti Lampathaki**, WEB- DEP Project Partner, Management and Decision Support Systems Laboratory, National Technical University of Athens, Greece
  Systems and Services for eParticipation in News Creation and Distribution: The WEB.DEP Project
- **Rolf Lührs**, PET-NET Project Co-ordinator, Head of Department for Interactive Communication TuTech Innovation GmbH, Germany
  PEP-NET – The Pan-European eParticipation Network
- **Efthimios Tambouris**, DEMO-net Partner, Researcher CERTH/ITI and University of Macedonia, Greece
  e-Participation Research and Practice

Moderator 2: **Hugo Kerschot**, Managing Partner of indigov, Belgium
eDemocracy and eParticipation in the Flemish Region: Where is the "Demand Site"?

Speakers:

- **Vassilis Goulandris**, Strategic Planner, City of Trikala, Greece
  Lessons From e-Deliberation – The e-dialogos Project in Greece
- **Eric Legale**, Managing Director of Issy Média, City of Issy-les-Moulineaux, France
  GCD Members' Experiences with Mobiles Services
- **Gabriela Felder**, National Competence Center for Research (NCCR), Zurich University, Switzerland
  Profiling Websites - Bringing Elections Closer to Citizens? The case of the 'EU Profiler'
- **Marianna Posfai**, Leader of the e-Hungary Project, Hungary
  eHungary Program 2.0
- **Ian White**, Business Development Director - Public Sector - EMEA, Oracle, UK
  e-Services as a Means to Transform Government – The UK Experience

Chairperson: **Shigehiko Naoe**, Professor Chou University, Faculty of Policy Studies, R&D Division, Japan
Mobility – Migrations to Future

Moderator: **Jay Edward Gillette**, The Human Factor Institute, Professor at the Center for Information and Communication Sciences, USA

Speakers:

- **Sascha Haselmayer**, General Director Living Labs Global, Spain / Denmark
  Your Market for Mobility
- **Giorgio Prister**, President of Major Cities of Europe, Italy
  Municipal Wireless: New Opportunities for Better City Management
- **Evika Karamagioli**, Deputy Director Gov2U, Greece
  Interoperability: A Key Component for the Delivery of Efficient and Effective eGovernment Services in Europe.
- **Gerald Santucci**, Head of Unit "Enterprise Networking and RFID", DG Information Society & Media of the European Commission
  Towards the Internet of Things
- **Philippe Scheimann**, Chief Technologist Politech Institute, CEO Ayala Alternative Organizational Consulting, Israel and **Eyal Bloch**, Co-Founder and Co-Director Educational Institute for Sustainability, the David Yellin Academic College of Education, Israel
  Sustainable e-Inclusion in a Mobile World
- **Alan Shark**, Executive Director, Public Technology Institute, USA
  Mobility in a Digital World

The “Global Forum on Shaping the Future” is an annual, independent international event dedicated to business and policy issues affecting the successful evolution of the Information Society. As a high-profile international Think Tank, bringing together senior government officials, policymakers and industry leaders from Europe, North and South America, the Pacific Rim and Africa, the academia, and the civil society – both from advanced and developing economies, its main purpose is to promote interaction and dialogue between the different stakeholders, to give impulses for the formulation of common visions, and to pool knowledge, expertise, research, policy analysis and networking capability.

The “Global Forum on Shaping the Future” is a not-for-profit initiative of ITEMS International. It is sponsored by organisations from all over the world, interested in sharing and influencing global IT-agendas, and enabling business and government leaders from all sectors of the ICT communities to meet and work with suppliers and service providers.

THE GLOBAL ROADMAP

2008 Collaborative Convergence – Athens, Greece

2007 Global Convergence 2.0 – Venice, Italy

2006 The Digital Convergence – Paris, France

2005 The Broad Convergence – Act II – Brussels, Belgium

2004 The Broad Convergence – Malmö, Sweden

2003 Connecting Businesses & Communities – Rome, Italy

2002 The Promise of Broadband Services – Washington DC, USA

2001 Expanding the Global e-Society – Newcastle, United Kingdom

2000 Towards a Global e-Society – Sophia-Antipolis, France

1999 New Satellite and Terrestrial Applications – Sophia-Antipolis, France

1998 Networked Communities – French Senate, Paris, France

1997 Smart Communities Forum – Economic Development in a Global Information Society – Sophia-Antipolis, France / Rome, Italy

1996 Smart Communities Forum - U.S. Tour of cities and regions – New York / Washington / San Francisco / Silicon Valley, USA

1995 The Second Europe / Japan Forum on Communications – Kyoto, Japan

1994 Europe / Japan Forum on Cooperation and Competition in Communications – Paris, France

1993 Europe / United States Meetings on Cooperation and Competition in the Field of Communications – Rome, Italy

1992 Europe / United States Meetings on Cooperation and Competition in Telecommunications – Washington / New York, USA

The Global Forum 2008 took place on 21 & 22 October at the Zappeion Manison in Athens, Greece.

The two-days event attracted more than 320 high-profile representatives from the world of politics, the business community, and academia. Influential leaders and prominent speakers from around the world came together to share their visions and concerns and to discuss the most recent developments and the most fundamental questions related to the topic of this year's Global Forum: Collaborative Convergence – Users Empowerment in the Global Digital Economy.

The Think Tank was organised in 4 plenary and 8 panel sessions of which two always took place simultaneously.

The following synthesis report highlights the key issues of each presentation and summarizes the discussions that took place during the sessions. All slides, speaker profiles, and other documentation are available for download on the website of ITEMS International www.items-int.com. Do not hesitate to contact ITEMS International to get in touch with one of the speakers.

The Global Forum's report is structured according to the actual sequence of presentations during the 2 conference days. The summaries of the presentations made during the Global Forum 2008 are listed in chronological order corresponding to their succession in the final conference programme, as listed in the beginning of the present document.

WELCOMING ADDRESS & OPENING SESSION

DAY 1 – MORNING – PLENARY SESSION

SYLVIANE TOPORKOFF, President of the Global Forum & Founder Partner Items International, welcomed the participants and opened the 17th edition of the Global Forum / Shaping the Future Think Tank.

This year, about 320 experts coming from more than 30 different countries from all over the world discussed the impact of digital technologies on consumers and public policies.

A thank you was given to the City of Athens for hosting the Global Forum 2008 and to the Special Secretariat for Digital Planning of the Hellenic Ministry of Economy and Finance. A special thank you was addressed to the sponsors of this year's Global Forum who helped make this event possible and who demonstrated excellence through their commitment to the Global Forum's mission, vision and values.

Technological convergence creates opportunities to achieve widespread access to new services and applications through open platforms. Compelling examples are digital television and third generation mobile communications.

The ICT sector is expected to generate about 8% of the GDP that would represent 25% of the economic growth in modern countries. Today, we are facing a deep financial crisis. We don't know yet of all its consequences. We know, however, that it will affect all sectors of the real economy and especially the ICT sector.

Institutions and players need to understand the key issues for the next future. Convergence, including access issues, contents issues and new applications and services is at the core of this edition of the Global Forum. During the coming two days, the participants are invited to gather their energies to work on innovative propositions.

As a strategic result of the Global Forum, a "Global Forum Roadmap" will be launched this year for the very first time. It will be presented not only to all participants of this Think Tank, but to market players and public decisions makers.

As **moderator** of the opening session, Sylviane Toporkoff welcomed and introduced the members of the panel.

PIERRE LAFFITTE, Senator & President Sophia Antipolis Foundation, France, welcomed the attendees.

This 17th meeting of the Global Forum is a very important one, especially in the context of the financial crisis the world is currently facing. The United States have already taken measures to limit the economic impact of the crisis. Many of the European countries worry that the financial crisis will generate a serious economic one. Thus, the EU Member States, under the leadership of the French Presidency, have joined forces in order to mobilize about 2,000 billions of Euros to anticipate the economic impact of the crises.

A big amount of money has been made available and the only real response for the economic development of Europe would be a big effort in innovation. Innovation is the most important response to such type of a crisis.

Since many years now, the Global Forum annually emphasizes the importance of innovation in the ICT sector as a priority for any regional, national and European policy. A High Level Advisory Group has been set up by the DG Enterprises of the European Commission in order to foster innovation through innovative clusters all over Europe. The Advisory Group is currently trying to promote international co-operation between these different activities. A Memorandum of Understanding, stressing the importance of such co-operation, has been signed by the Advisory Group as a guide for European policy.

If there has been a way to made available 2,000 billions of Euros to stop the financial crisis, there must also be a possibility to made available 200 billions of Euros to foster innovation in Europe – but also in the Mediterranean Area. For big companies EMEA – Europe, Middle East and Africa – represents a subdivision of the earth: there is Asia, North and South America and EMEA. However, EMEA has also become a topic for the EU. A project to forge closer political ties with Europe's North African and Mideast neighbours on the Mediterranean Sea is currently under preparation. Such project could be one of the responses to give in the context of fostering innovation and economic growth in Europe.

YANNIS LARIOS, Advisor of Vassilios Assimakopoulos, Special Secretary for Digital Planning, of the Hellenic Ministry of Economy and Finance, Greece, welcomed the participants of the Global Forum 2008 on behalf of the Special Secretary for Digital Planning of the Hellenic Ministry of Economy and Finance.

Greece is known for its history and its impact on philosophy, arts and science. It has indeed a glorious past. But there is also a Greece of modern times demonstrating in practical terms that it does not matter anymore whether a country is among the first ones to embrace ICT or not. Greece is showing that ICT can help to leapfrog ahead if one really wants to. This is why – despite the very low starting point of Greece – today, broadband growth rates in Greece are among the highest in the world.

A lot of things happened since the last Forum in Venice: There is the financial crisis, which will slow things down a little, but which is not the major force shaping our digital world. There have been other important forces with more profound effects. In 2008, the following three elements related to empowerment occurred: The first element is the explosion of everything related to social networking though the Internet. During the last 12 months, millions of people came together in virtual spaces, making new friends, forming new communities, breaking down geographical or linguistic barriers and networking aggressively to exchange views, ideas and projects across the globe. Perhaps at this very moment, a young guy from Europe is collaborating with kids from Asia and Latin America, and they are working together to develop a software on their own.

Another major element is just emerging: It is about “who makes what in the Internet”. In the past, the government was at the forefront of the provision of digital services. It was followed by firms. This is changing: There is for instance the case in Australia, where a community of people built their own job portal. They created this platform of their own and the government came afterwards to embrace the initiative. There are similar examples in Greece allowing for instance to look for bus itineraries not in a portal provided by the government but on free web

sites build by two kids based on Google maps. More and more people are creating free of charge digital services based on freely available public data.

The third aspect force is twofold: On one hand, there is the huge appetite for higher broadband speeds, but on the other hand there is an equal need for trust and confidence in the new medium. For every ten million people that request more broadband, there is another ten million that will not enter the Internet due to trust issues. It is no longer the cost or the availability of technology that hinders growth but a lack of trust.

It is important to thing about these three major forces in a collaborative manner. While these three kids in Europe, Asia and Latin America can work together in blazing speed, what should governments do? Shouldn't they adopt more flexible and quicker means of collaboration? Shouldn't they be faster in exchanging know-how and best policies? Can governments afford to continue to co-operate in the traditional way while younger generations minds fly in blazing speeds? These are questions to discuss during this Global Forum. This time it is all about governments getting empowered and influenced by citizens. The powers have shifted. People in global communities can provide value added digital services. Government should provide them with public data wherever possible and should promote innovation. Governments have to be honest and transparent and admit errors. It is the safest way to engage constructively with citizens and help them to create the new innovative services on their own. Governments should let them making the first step. Today, it seems that there are no longer the governments and the firms leading the pack, but the citizens.

CHRISTOS AKRATOPOULOS, Advisor of Dr. George Anastasopoulos, Secretary General of Communications at the Ministry of Transport & Communications, Greece, presented an ambitious project for the development of an open-access passive network:

Infrastructure Development - New Generation Access Networks

Greek is working on a project proposal for the development of an open-access passive network that will provide optical fiber to approx. 2,000,000 homes and businesses in Athens, Thessalonica and at least 50 other cities across the country.

The relevant political decision was taken in September including an agreement with the Minister of Finance regarding the economics of the drafted project in accordance with the Minister of Transport and Communications. Greece is prepared to invest in a fibre optics access network bringing its citizens and businesses at the forefront of Europe with respect to communication potentials.

This network will also assist in enhancing the country's geographical potential as a communication hub connecting south-eastern Mediterranean territories with Europe. Public consultations concerning this project have been realized and about 90% of the participants answered that they believe this project is important. It is planned that the Greek state will participate to this project by means of paying availability dividends that will correspond to a percentage of the total investment budget, while the proportion of public-private participation will be fixed after a consultation with the EC.

The project will be split into three subprojects geographically defined with the creation of special scope corporations in a PPP sense lasting for 30 years. Due to the state participation there will be opportunities for launching competitive rates through the European Investment

Bank for participating private entities. The whole budget of this project is approx. 2.1 billion Euros. In addition to the monetary contribution, the State is actively participating in this project through other means. State intervention will be via financial support, legal and regulatory interventions, and the establishment of technical standards and requirements aiming at minimising the risk of investment, assuring swift profitability while creating at the same time a safe environment of equal terms for all market players. On the technical side, the State has prepared the draft technical regulation to be put down as a common ministerial decision which standardises the installation of indoor fibre networks and includes the regulation of relevant access to buildings and sites issues.

The project proposal will be submitted to the EC by the end of 2008. The project approval by the PPP committee as well as the selection of a PPP consultant who will prepare the documents for the public tender, is expected for the first semester of 2009. An international public tender for the project is planned for the second semester of 2009. The project will change the everyday life of the Greek citizen and creates a leading role for the country in the new digital era.

The session's moderator referred to the Olympic Games in 2004 which were hosted by the City of Athens. As this accomplishment was definitely related to the use of modern technologies, the next speaker, C.E.O of the IT company of the City of Athens, was asked to describe the actions that Athens is planning in order to support the citizens and the visitors in their needs.

KONSTANTINOS GIANNATOS, Managing Director of DAEM, City of Athens - IT Company, [www.daem.gr], **and representative of Nikitas Kaklamanis, Mayor of Athens**, Greece, welcomed the participants on behalf of the Mayor of Athens and provided a fascinating insight in the

City of @thens : A Contemporary Digital Metropolis

"Metamorphosis" is a Greek word. It does not only mean transformation, but also entails the element of innovation. Investing in new technologies is equal to investing in a renewed quality of life in a more optimistic digital economy and the provision of an optimum level of services for the citizens. The City of Athens strongly believes that local administration is in the position to shape the future of this planet. A future that will be written in digital terms.

Athens, the capital of Greece and a modern European city, is investing in the wide use of modern ICT technologies by providing the necessary infrastructure and the up-to-date digital and electronic services. In order to implement this strategy, the City of Athens with the support of DAEM, has already build up on its infrastructure and has designed and put forward several projects related to the national Operational Programme "Information Society" such as the Telematics Management System related to the waste transportation planning and communication within the cleaning department; some websites and portals for the City of Athens; the Integrated Information System for the central administration services and authorities providing four level e-Services; the ongoing BPR for the enhancement of the services' structure in order to improve not only the structure of the services, but also the procedures followed by the different departments, especially the municipal districts and the urban planning; the Centralized Incident Management System (the electronic registration system of the Police of Athens) using PDAs; Public Internet Hotspots using WiFi technology in several areas and central squares of the city; and specialized software applications and hardware equipment with more than 50 services related to citizens' needs.

Athens uses this infrastructure in order to achieve the strategic goal of providing digital and electronic services to citizens and also to visitors of Athens. These modern services are related to the following systems and structures: One Stop Service in order to provide better and more efficient citizen oriented services to Athens' residents; the Citizen Smart Card to provide security and innovation for e-Government services; e-Payments to maximize administrative efficiency, productivity and transparency; e-Democracy as a drive towards the achievement of next generation global citizens via strong e-Participation in political decisions; a Citizen Relationship Management (CRM) integrating call centres, voice portals, info kiosks and other technologies; e-Tourism and e-Culture by using interactive systems and tools; e-Accessibility according to W3C for helping and assisting different groups of people with special needs; e-Communities in order to empower the citizens locally through e-Participation as a digital neighbourhood; e-Business Centres for the small enterprises of the city by improving synergies, partnerships and joint ventures. All this with the aim to obtain SttH (Services-to-the-Home) via FTTH (Fibre-to-the-Home).

The vision and commitment of Athens is to provide better services and to maximize efficiency in order to emerge the next generation global citizen. In this scope, best global practices – once they are efficiently adapted to the local needs and structure- can support a beneficial scale of economy and social growth. Athens, committed to a more humanistic approach, is working with the people and for the people of the city as to provide up-to-date digital solutions and services leading towards the "City of Athens 2.0". In the current state of affairs of the global economy, we should not underestimate the importance of local societies and economies as the recent worldwide experience renders evident. This local economy can and should become a vivid reality for all citizens through the use of new technologies focussed on the users, on content, on services in the context of the globalised digital economy.

The following **Q&A** part of the presentation addressed the question of how easily empowerment of the citizens in the global digital economy can be achieved for a capital city like Athens, in terms of users, content and services. Mr Giannatos answered that a series of parameters are related to this demanding task, such as broadband technologies, interoperability and security, regulation by the local authorities and the local government for a more collaborative knowledge convergence.

FRANCISCO ROS, State Secretary for Telecommunications and Information Society Ministry of Industry, Spain, brilliantly presented with great competence and commitment

The Spanish Information Society Programme: Plan Avanza

Communication and Information Technologies are driving a convergence process of infrastructures, platforms, operators and services. They are considered strategic assets for the economic and social progress of countries that want to take advantage of new opportunities offered by technological developments. This ICT-driven convergence is creating a different paradigm in which social and geographic barriers vanish, and in which users' opinions are progressively taken into account by market experts in order to come up with fresh and innovative services.

In this context, companies must adapt their business models and place focus on the new demands of customers, and Governments have to provide guidelines and devise policies addressed to conform a collaborative techno-ecosystem in which investments are fostered and competition effectively develops.

The Government of Spain is leading a specific programme aimed at the overall development of the Information Society, narrowing down the digital divide and expanding its use to favour productivity and competitiveness. This "Plan Avanza" aims at developing the Knowledge Society by fostering the development of broadband and mobile infrastructures, especially in rural areas; improving IT technological awareness and usage for all citizens and SMEs; fostering R&D&I activity in the corporate environment; expanding e-Government practices and services; and selecting key areas to promote Spain's IT industry into leadership positions. In order to assure sustainability of the efforts, the industry has to be part of it. Thus, a number of key social areas have been identified where the development of cutting edge technology and applications has been promoted in order to involve the industry.

The budget allocated to this programme between 2005 - 2008 is about 6.5 billion Euros. Because this effort has been realised in co-operation with and with the co-financing of private and public sectors (regional and local administrations), additional non-central Government funds could be mobilised (in 2006–2007: over 3.8 billion Euros)

After three years running this programme, there are important achievements towards the proposed goals; some of the most remarkable samples are:

A national infrastructure that provides broadband coverage to nearly 100% of the population, including that of rural areas (25% of the populations lives in rural areas).

An e-Education Programme that has equipped the schools and is connecting with broadband more than 95% of them to the Internet, replacing, therefore, traditional education methods by modern ones more in line with the digital era. 98.5% of all educational centres are connected to the Internet. 92% of these already have broadband, compared to 67% in the EU-25. Digital infrastructures and content are implemented in 18,000 schools.

e-Government actions that are modernising public services, empowering citizens to access and maintain online interaction with the various Administration bodies, especially through the extensive use of the national e-Identity Card, that includes digital signature. Two recent laws have been approved: one to foster Information Society services (such as e-Billing in public procurement, compulsory online channel to customers for services companies, etc.); another one, that will be in place by 2010, declares online access to Government (central, local) services as a citizen right.

The e-Health Programme, that is interconnecting all Spanish hospitals and health centres so as to have a unified e-Health Card that is allowing the provision of online medical appointments and the access to medical records throughout the system.

Reinforcing Terrestrial Digital Television (TDT) deployment, the highest one in Europe, presently covering more than 90% of the population and due to totally replace analogue TV technology by April 2010. In addition to entertainment, it will provide an additional mean to access interactive services of the Information Society.

During the following **Q&A** the question came up whether there are groups of individuals or organisations who are running into specific difficulties in the acceptance of ICTs. And, what role is playing the Spanish ICT industry (including SMEs) in the progression of the "Plan Avanza"? Mr Ros stressed that one of the key objectives of the plan was to mobilize people and to create awareness. Mobile units have been visiting rural areas and neighbourhoods of

big cities in order to explain and demonstrate the new technologies. Young people adopted new technologies very fast and as regards people below 45, indicators show that the Spanish population is well above the average. However, Spanish citizens above 50 (and in particular above 60) are below the European average. Therefore, the current second phase of the Plan Avanza focuses on people above 60. The situation is similar regarding the industry: There are many micro-companies, i.e., companies with less than 10 employees. This part of the industry has proved to be more reluctant concerning the adoption of new technologies and the second phase of the plan is now focussing on this part of the industry. There are also several open tenders to motivating companies to present projects and to develop new cutting edge products, services and applications.

LORENA BOIX ALONSO, Deputy Head of Cabinet of Mrs. Neelie Kroes, Commissioner for Competition, European Commission, brilliantly highlighted the importance of competition law to the advent of the digital, knowledge-based economy and, in particular, the interplay between ex-ante and ex-post intervention of authorities in this field:

Ex-ante and Ex-post Application of Competition Law to the Electronic Communications Sector Aim to the Advent of the Digital, Knowledge-based Economy

ICT services are key instruments to increase productivity of companies and administrations and to provide newer and better services to customers and end-users. Europe is shifting towards a digital, knowledge-based economy, as foreseen by the Lisbon agenda. Today more than half of Europeans are regular Internet users and 80% of those use broadband.

However, much remains to be done to improve EU citizens' access to inexpensive, world-class communications infrastructure and services. Competition law has to ensure that there is effective and sustainable competition in electronic communications markets to ensure that end-users derive the utmost benefit from the digital economy.

Experience that competition encourages more investment and innovation to the benefit of the end-user. In order to provide value-added services to their customers and set themselves apart from their competitors, telecom operators all over Europe have initiated a new cycle of investments. They upgrade their fixed and mobile networks towards convergent IP infrastructures; they increase the capacity of their access networks, notably by rolling out fibre in the "last mile"; and they invest in content and innovative digital services.

This requires that the right conditions of competition are set and maintained in the corresponding markets. And that regulators and authorities adopt a consistent approach within the EU. Convergence is indeed necessary in this field. In the field of electronic communications, this is done by combining ex-ante and ex-post intervention. Regulators put in place ex-ante regulatory mechanisms allowing competition to develop. However, regulators cannot entirely eliminate the risk of anticompetitive behaviour. This is why, sometimes Competition authorities need to act ex-post and sanction anti-competitive behaviour.

In some industries ex-ante regulation is indeed a necessary complement to ex-post application of Competition Law, in particular where economic bottlenecks exist due to non-replicable legacy facilities. In this case, access regulation is indispensable to allow market entry. In particular, where legacy infrastructures were rolled out by incumbent operators under monopoly regime.

In recent years, the Commission, together with national competition and regulatory authorities, has been very active to ensure fair competition in the electronic communications markets across Europe. In order to provide guidance and ensure a consistent and convergent approach among regulators in key markets, the Commission also issues ad-hoc Recommendations. It is currently working on 2 Recommendations, one concerning the regulation of access to high speed broadband networks or next generation access networks and the other concerning the regulation of voice termination rates.

Without a vision for harmonisation, convergence and consistency, Europe risks the emergence of a patchwork of regulatory obligations. Such discrepancies concerning future national regulatory regimes create uncertainty and are detrimental to investment and innovation. They carry the risk of distorting competition in some Member States to the detriment of the end-users. The role of the Commission is to set out a clear common strategy to move to self-sustaining competition.

As regards ex-post intervention, the Commission's enforcement policy has focused on abuses dominant positions, which is not surprising taking into account that, at least as regards pure telecoms, many incumbents still enjoy such positions and might be sometimes tempted to abuse them. In telecoms, the Commission's activity has focused on price abuses in the broadband market, which is of considerable economic importance and plays a crucial role in the development of the Information Society.

Last year for example, the European Commission adopted a decision against the Spanish incumbent Telefónica for an abuse of its dominant position in the Spanish broadband market. The Commission found that Telefónica imposed unfair prices in the form of a margin squeeze between the wholesale prices it charged to competitors and the retail prices it charged to its own customers. With high wholesale costs and weakened retail competition on the broadband market, Spanish consumers were paying more than they should be. This is the third Commission decision on price abuse since the telecommunications sector was fully liberalised in 1998. Previous cases concerned Deutsche Telekom in Germany and Wanadoo in France.

In the ICT sector it is also important to have a consistent approach across the EU. The European Competition Network, the network of all European competition authorities works precisely to build a common competition culture.

The Lisbon agenda highlighted the potential for growth, competitiveness and job creation of a digital, knowledge-based economy. It is important to make sure that users can also benefit from this. It is only in a competitive market, that companies will put their customers at the centre of their strategy and will be willing to deliver what the end-users demand. A consistent/ convergent intervention both ex-ante and ex-post are key to attain this objective.

The **Q&A** referred to next generation networks. To what extent should they be regulated? And, how should we balance the incentives of companies to invest against competition on the market leading to better prices? Are "regulatory holidays" the solution? Mrs Boix Alonso answered that broadband is currently regulated in the EU Member States in order to avoid distortions of competition. The roll-out of NGA networks does not remove the existing competition concerns regarding broadband. Incumbents could leverage the dominant position they enjoy as owners of non-replicable legacy infrastructure to monopolise new high speed broadband services.

Unless it can be established that NGA access services are markets different from the current regulated wholesale broadband markets, operators with SMP should provide access to their NGA networks. No regulatory holiday should be granted from the outset. Proper broadband regulation remains a necessity to ensure a level playing field amongst NGA investors. A correct regulatory approach, incl. notably proper risk reward, will foster NGA investment. This will not prevent competition authorities from intervening. The EC will scrutinize carefully any leverage behaviour of NGA first movers. It is not acceptable that owners of non-replicable passive infrastructure would leverage their advantage as sole providers of enhanced broadband and content services to exclude competitors from the retail broadband market.

Then, the question raised, whether in a modern digital economy where firms are active in an environment of fierce competition and aim at innovating and differentiating their products and services, is price competition as important as in other areas? Mrs Boix Alonso stressed that price competition is important also in innovative sectors. One of the big challenges for a competitive knowledge-based economy is to increase internet penetration, in particular broadband internet. One of the conditions for increasing broadband penetration is to reach national DSL coverage. This condition is currently nearly met in most Member States. In order to increase the take-up of broadband among those European customers who have not yet opted for it, an appropriate and non-excessive pricing is key. Competitive pressure forces operators to meet the varying willingness to pay of end-users, through differentiated pricing for example. A properly functioning market will address all customers, through competition on products and innovation for the most advanced users and through bare price competition for entry level products. This is why the Commission, together with some National Competition Authorities, has put so much effort on sanctioning pricing abuses. Indeed it is clear that absent price competition internet uptake remains low, even when there is innovation, such as the advent of multiple-play and convergent offers. This, in turn, impairs the development of the digital economy and the information society.

Another question asked if it is not contradictory to talk about a liberalized telecommunication sector and of ex-ante regulation at the same time. Mrs Boix Alonso emphasized that a good balance between both is needed. The problem of the telecommunication sector, which was liberalized in 1998, is that it is very much about networks. These networks have been built in most of the cases under a monopoly regime. This means that some companies have control over competition. In order to enable faire competition regulation is needed.

THOMAS ROSCH, Commissioner Federal Trade Commission - FTC, USA, provided a brilliant talk and elucidated with great perspicacity and clarity a different kind of competition and convergence:

Convergence with Respect to Competition Rules around the World

The first issue to discuss is whether or not the convergence of competition rules is desirable. On the one hand it could be argued that we are operating in a global economy and it is essential that we have one set of rules for businesses around the world. It also maybe said that a proliferation of competition rules around the world leads to forum sharking by those who's interest are best served by going to a particular regime and asking that regime to enforce its competition rules. Those are the principal arguments in favour of convergence of competition rules. On the other hand, there are many differences in countries and in regimes, but that argues that one size does not necessarily fit all. It also maybe argued that in this area as well as in other areas competition is a good thing. We should let the differences in

our competition regimes and practices play themselves out over time and then decide which is the best one and select it. That is the argument against convergence.

Then it has to be discussed whether or not convergence is achievable. There are eight barriers to competition rules convergence: 1) There are different histories among countries. Some countries have had a history of state-owned enterprises (natural monopolies) and other countries do not. 2) There are different cultures in different countries. Some cultures are more regulatory than others. Some cultures are more adversarial than others. 3) There are different economies throughout the world. Some are mature economies like the US or Europe – other are not so mature. 4) There are different kinds of economics involved. On the one hand, the US tends to praise the Chicago School of Economics, which assumes that markets always correct themselves even if they may be out of balance from time to time. And that any efforts by a business to exploit market or monopoly power is doomed to failure over time. On the other hand, in Europe there is more emphasis on economics that praises Game Theory. Europe tends to recognize different kinds of competition other than price competition (such as competition in innovation, competition in terms of quality, etc). 5) There are different statutes. Article 82 of the EC Treaty is very different from the US Sherman Act Section 2. It prohibits the abuse of a dominant position. This does not exist in the US. There is an offence called attempt to monopolise in the US for which there is no counterpart in Europe. And most of all, there is a private treble damage enforcement system in the US. At the present time none in the world has the same kind of private damage system than the US. 6) There are different law enforcement tools and 7) there is a lack of common standards around the world for identifying the best practices. As long as this is true, it will be very difficult to converge around the world on a best set of competition practices. 8) And finally, there is a barrier in terms of language. The common language for international organizations seems to be English and while people in the US and the EC seem to take this for granted, but there are other countries around the world that are not as facile in English than others and they tend to be more shy in terms of voicing their thoughts with respect to globalization.

The **Q&A** referred to whether those same barriers exist with respect to consumer protection law enforcement. Mr Rosch, who had been engaged in consumer protection at the FTC in the early 1970s, told that, at that time, the US focussed only on what was happening in the US. However, today in a world of globalisation, the US can no longer afford to have a US only policy with respect to consumer protection. The US is increasingly trying to co-operate with its counterparts throughout the world. It seems that one of the major problems in terms of international enforcement in the consumer protection area is that different countries have different sets of rules with respect to the transport of data and information about their customers and their employees. That hampers multinational co-operation in terms of transporting that kind of data and information from one country to the other – a problem that has to be solved sooner or later. There are too many multinational corporations in the world to have a proliferation of standards.

ELI PAGOURTZI, President of the Greek Information Society Observatory, Greece, focused in a very fascinating way on the very practical problem of measuring the impact of ICT via

The New Broadband Performance Indicators

One of the basic tasks of the Greek Information Society Observatory is to measure and analyse Information Society performance indicators. Greece is quickly covering the gap with the other developed countries. Greece is expected to meet up with the European average in the next two years or less. Double or triple play adoption along with two large broadband infrastructure is expected to boom the local market.

Furthermore, the Observatory is expecting a significant change in the percentage of the capital spent in ICT towards broadband services. In 2004, broadband penetration has been zero; today it increased up to 11%. Due to investments in broadband access and services, Greek enterprises with the more than 10 employees are using extensively the available e-Government services but there are problems in using the Internet as a fully commercial channel. Still, we are expecting this to change in the immediate future. However, just like Spain, Greece has to focus on the small enterprises with less than 10 employees.

Greek citizens are adopting ICT at a satisfying and promising rate. As regards the 16-25 years old, Greece has the same average as the EU. Up to the 35 age group Greeks tend to exploit ICT as much as the rest of the European citizens. Age, educational levels and the place of living are the main discriminating factors.

A set of new Broadband Performance Indicators (BPI) has been introduced in the EU. There is a need to measure the relative performance of the countries wide broadband economy, but also to identify relative weaknesses and strengths of the individual countries and to fine-tune policy making to better understand the potential of countries to maximise broadband impacts. The BPI will describe countries in terms of supply and demand factors that affect the take-up and the use of broadband. Some of the dimensions of these indicators are: the rural coverage, the degree of competition, quality, speeds, prices, the users, and the socio-economic context.

There are the dimensions rural coverage, competition, quality with two sub-indicators speed and percentage of subscribers, and advanced e-Services with indicators such as enterprises, invoicing and e-Government services. Another dimension is the socio-economic context with indicators such as the ICT expenditure per capita, PC and 3G penetration, e-Skills and the broadband price.

There is the need for the development of an enriched methodology and a structured indicator framework that measures the impact of ICT on businesses, economic growth and the Greek society through the Greek digital strategy compared to two main objectives: Enhanced business productivity through the use of ICT and new skills and an improved quality of life through ICT. The Observatory composed indicators and will further develop them to track the progress and to measure the impact and analyse the needs of the Greek digital strategy.

The analysis of the indicators “business productivity” and “quality of life” is done by considering different dimensions: ICT deployment by businesses, human resources, ICT innovation and access to knowledge, the legal and business environment, ICT infrastructure availability and the ICT sector. These dimensions are composed of sub-indicators. Dimensions to be considered to analyse the quality of life are ICT infrastructure availability for the people, the citizens ability to use ICT and the citizens’ satisfaction from ICT use.

The moderator introduced the next speaker with two questions: The European Commission is very much the driving force for policy making and also co-operative research in EU. Could research help citizen empowerment, policy making and governance? What is the Commission doing about it? And, the wide use of Internet, mobile phones, blogging, social networking, face book, web 2.0 etc. are all happening. What is the Commission doing to capitalise on these to better engage the citizens with policy and decision makers?

MECHTHILD ROHEN, Head of Unit ICT for Government and Public Services, DG INFSO & Media, European Commission, provided a most interesting insight into the Commission's perspective of

Empowerment of Citizen
ICT for Governance & Policy Modelling

The EC recently launched a new initiative focussing on citizen empowerment. A set of research activities in the 7th Framework Programme for Research (FP7) under the heading "ICT for Governance and policy modelling" will be approved by the EU Member States in the coming days.

The citizen is already increasingly using powerful ICT applications such as the Internet, blogging, Wikipedia, YouTube, Facebook, LinkedIn, Second Life, Google, as well as many other empowering and collaborative tools that change the way services can be delivered. This reshapes our social structures and behaviours.

As citizens changed the way they interact, they expect the same thing from others as well – including public administrations. Now it starts to affect both the political and the administrative sphere. Whereas the regular user of the Internet embraced Web 2.0, both politicians and administrations are still struggling how they can use these Web 2.0 tools. However, Web 2.0 is not a challenge (or problem). On the contrary, it has an untapped potential for decision makers to open up and re-engage with the ones that elected them.

Low participation in elections – no participation in decision making; young Europeans disconnected from politics. Nowadays citizens are no longer used to raise their voice in democracy through traditional party systems. Our society can do more with our democracy than going to a ballot box once every four years. e-Participation and the use of Web 2.0 can bridge this democratic deficit.

It is time that we put more emphasis on empowerment. It means fostering a strong incentive for all members of society to participate, not just as consumers, but also as producers and decision makers. 'Empowerment' seems to be the next great turning upside down – literally – in response to the massive increases in information and communication. ICT can help to leverage the voices and expertise of huge numbers of individuals and groups. This will require rethinking governance structures & processes to create an open democratic e-Society. In fact both citizens and government need to be empowered in order to improve communication between them!

Web 2.0 helps to empower citizens and businesses when dealing with decision makers. Web 2.0 is the instrument to fuel empowerment of the citizen. ICT can help to leverage the voices and expertise of huge numbers of individuals and groups. It also enables citizens to reduce information asymmetries, monitor government performance and expose inefficiencies. We

are seeing more and more the citizen taking control of how he/she interacts with Government. This will sooner or later affect policy and decision makers and the question is: how can administrations embrace powerful web 2.0 tools for policy and decision making?

Web 2.0 makes governments again understandable and the decision making process transparent. Politicians could do more than solely reacting in the press to what has been said in fora and blogs. Instead, they could involve constituents through consultations. Possible tools are: modelling and visualising decisions and policies, real-time tracking and tracing of the policy decision process, etc.
This will help increase responsibility, reduce corruption and make decisions more responsive. Web 2.0 is already in place. Now it is the administration's turn to act.

There is a high potential for research to help administration's in doing so. The Commission wants to make its part by supporting this societal challenge. Here FP7 is the right mechanism to do research in order to address this new way of interaction between policy & decision makers and citizens. ICT for Governance and Policy modelling will be part of the FP7 research portfolio. It will be a brand new task for DG INFSO.

The objective in FP7 "Governance and policy modelling" provide powerful tools to politicians and decision makers to re-engage with their constituency. It helps to improve government services in a increasingly complex world and works on user empowerment and the public engagement of users. On-line collaborations have the potential to trigger and shape significant changes in the way future societies will function. Citizens and businesses have to be enabled to participate in decision making at all levels. Very large percentages of populations could be addressed and simultaneously voice their opinions and views on societal challenges. Currently there are no appropriate governance models. Citizens cannot track decision making processes and see how their contributions have been taken into account. Thus, it is important to look for tools that help to shape, guide and form public opinion. These new means of social interaction are linked to an increased openness and wider sharing of knowledge and information, where trust will be an important prerequisite. All this makes policy modelling a complex process; predicting the impact is an even more difficult task to achieve. Research is essential to address this challenge. This is why it has been reintroduced eGovernance in FP7.

The focus will be 1) the development of a Governance and Participation Toolbox that helps to develop new governance models to empower and engage large societal groups. They could operate on mass co-operation platforms. Governments could incorporate their opinions. This is the way governments could deal with its citizens in 10 year. And 2) policy modelling, simulation and visualisation: Policy making could be helped by simulation tools and techniques. Tools that can be used are real-time opinion visualisation and simulation based on behaviour and wishes of individuals.

Equally, there will also be an opportunity for road mapping and Networking. This community building for 'participation, governance and policy modelling' encompasses an RTD roadmap for the ICT domain for participation, governance and policy modelling. Also a dynamic 'Network' to encourage networking of relevant stakeholders and teams could be created.

DAY 1 – MORNING – PARALLEL SESSION

GIORGIO PRISTER, President Major Cities of Europe Association, Italy, **moderator** of this session, welcomed the panellists and participants and introduced the overall topic.

As **chairperson** of the session, **KATHRYN C. BROWN, Senior Vice-President for Public Policy Development & International Government Relations, Verizon,** USA, [www.verizon.com] opened the panel with an excellent and very interesting presentation of an American experience in the field of:

Collaborative Convergence

Internet has connected people to people, then people to data and video and now it moves along to connecting device to device and Verizon is part of these developments that will change the way we live and do business. Namely, it has one of the largest deployments of FTTH and an important presence not only in the USA but all around the world, with a large number of points of interconnection. The latest technologies are being used, such as IPv6 that will be deployed in North America by the end of the year and throughout Europe and Asia in the next two years.

Verizon has also the most advanced NGN (Next Generation Network): the different FiOS products are delivered over the FTTP (Fiber To The Premise) network using passive optical network (PON) architecture, 4G mobile network using LTE and EV-DO standards. They provide the large capacity, speed, mobility and permanent availability demanded by the Internet of Things. Verizon also opens its network to other users, thus contributing to the develoment of convergence and of the services offered to the final users.

The fiber infrasctructure and general convergence will bring enormous benefits to the society in fields like economy, security, energy, education, healthcare, environment and for these reasons it is important to develop the network and expand the services available. Only that deploying this new infrastructure requires tens of billions of US dollars, so public policies must play a major role in encouraging investments from private companies and intermodal co-operation. Furthermore, a heavy ex-ante regulation will only inhibit innovation and discourage investment. In spite of all the difficulties, the efforts must continue because the Internet economy will enhance the quality of life of the citizens.

The **Q&A** following the presentation, referred to the American experiences of a company like Verizon, that will be interesting for the global attention. Mrs. Brown answered that it is important to look at the reasons why people use Internet, thus transforming it into an important factor in a country's development strategy. In the USA, fiber deployment has been influenced by the need of fast speed when connecting to the Internet or the high quality of the video services, Verizon offering 400 television channels, part of them in HD. In the future, the elements that will foster the development of fiber will be the government services delivered over the Internet and the educational, environmental or health issues that can bring a new efficiency in homes and businesses.

JOAO SCHWARTZ DA SILVA, Director for Network and Communication Technologies, DG Information Society & Media of the European Commission, delivered a most captivating talk by providing the European Union point of view on the evolution

Toward the Internet of Things

The Internet of Things (IoT) is the universe where physical objects have the capability to be integrated into the Internet. The essential feature when connecting things is the geo-location capability built into these devices, which opens an important potential for services. The identification technologies evolve from barcodes to RFID tags and geo-tagging, the terminals evolve from conventional and mobile readers to sensors, and the third component of IoT is the network that will depend on the kind of data base that will allow things to connect, the routers that need to be used and discovering the necessary services.

Nowadays, most of the smart devices have very small memory capabilities and almost no transmission or processing capabilities. Steps have been taken lately for these devices to hold IP stacks and maybe later IPv6. An interesting use of IoT is the geo-location which is the capability to impose a virtual world to the real one. Far more applications are possible in fields like manufacturing, logistics, transportation, remote sensing, home management. IoT will trigger the exponential development of a completely new range of services that will change the value chain because they will involve a variety of actors who don't have necessarily business relationships.

The European Commission issued a Staff Working Paper on the Internet of Things and is open to suggestions in order to encourage a debate with all the stakeholders and finally produce new policies. The main aspects concern the architecture of IoT, the governance, the naming of things, the spectrum for wireless devices, the interoperability, etc. A Commission Communication is planned for 2009 on the Internet of Things.

Considering that mainly private funds are invested in the deployment of IoT, the **Q&A** raised the issue of governance and Government implication in the European Union. Mr. da Silva answered that in every field, public investors should not and will not be left alone because somewhere on the value chain, there will always be a public authority involved that will deal with the visibility, accessibility, security of all the information going around and the respect of privacy.

YANG ZEMIN, President of the China Academy of Telecom Research - CATR, China, presented with great wisdom the Chinese perspective on the

Broadband of the Future

Today, fixed and wireless access to Internet makes us benefit of numerous services due to the convergence of broadcast, telecom and Internet. Mobile access will bring a significant difference by taking the services to a new dimension and FMC technology will optimize the service in terms of price and space and time coverage. These developments are confronted to certain issues like the scarceness of addresses, the quality of service, the security and privacy matters, the return on investment.

The broadband of the future will have to face certain challenges like being ubiquitous, assuring the optimal bandwidth, a sufficient number of addresses, data security and a capability to support different business models. For the network operators, the challenges are related to their capital and operational expenditures. Fixed operators are facing a decreasing average revenue per user and an income increase speed way below the one of the consumption rate of the bandwidth. They are worried about their return on investment and the sustainable development. For the mobile operators, the main concern is the cost of deploying the infrastructure and who should support it.

Tomorrow, we should have new business models based on a win-win psychology that will ensure the fair price for the final user (depending on the quality of the service) but also a good profit sharing for everybody in the service providing chain. This requires a lot of wisdom and effort.

The Chinese operator is already transforming itself in order to provide more services and an open infrastructure, to optimize resources and to help providers promoting their services. The customers' behaviour has changed from simple searching on MSN to movie downloading which requires more resources and an efficient network.

In conclusion, the broadband business can bring a lot of value into the economy and its success relies on infrastructure and a high-value service delivery. After the huge effort to figure out the technical issues, it is time to think with great wisdom of the way to do business and adopt a win-win model that shares the profit among the entire chain.

JØRGEN FRIIS, Deputy Director General, European Telecommunications Standards Institute – ETSI, France, [www.etsi.org], brilliantly presented the point of view of an independent organisation on:

Collaborative Convergence in the Broadband of the Future

Standardisation and convergence are both about attaining a common value or point of view. Furthermore, collaborative convergence is about all the players coming together and converging their innovations and developments. ETSI offers the neutral place needed for these meetings and fosters collaborations that will lead to the developments of standards.

Collaborative convergence helps bringing affordable products to the market and this is very important because the client's wishes are at the core of every new technological development. Generally, the customers want a certain type of terminal that offers the services they need, no matter what technology is used. This is the challenge for convergence because standardisation will not impose one network or one device. Convergence is not only about the technology, but also about the services because every operator wants to use technologies like all-IP to deliver all the services available, with a minimal cost.

ETSI is behind this technological consensus due to its technical committee TISPAN that works on NGNs, 3GPP working on LTE and LTE Advanced as part of IMS which is the general platform for fixed – mobile convergence. ETSI supports also WiMAX by developing test cases and organises with FMCA a conference on customer experience.

The future will be about the Internet of Things and ETSI has already included it on its agenda, established several workgroups, organized RFID Plugtests and machine-to-machine workshops. In its neutral role, ETSI brings companies together to discuss and thus achieve

interoperability, which has become a priority for policy makers like the European Commission.

ETSI is “must-consult” body when it comes to bringing convergence and standardization into practice and a global dialogue partner, in spite of its European roots. The ICT standards issued are globally applicable and ETSI is part of an international network of stakeholders who prepare the future: the Internet of Things.

LATIF LADID, President IPv6 Forum and Chair EU IPv6 Task Force, Luxembourg, provided a most interesting presentation about:

The New Internet Based on IPv6
Power to the End-User

Broadband is the first step to user empowerment but eventually, in the near future, users will become content producers. Under these circumstances, we will run out of IP addresses because the IPv4 protocol has almost reached its maximum capacity of around 500 million hosts. The main goal of the ISP (Internet service providers) has been to attract customers and lock them into their models. Today there are only 15% of the IP addresses left, enough for the next two years, so the Internet needs an upgrade and this means investment.

The answer is IPv6 and the European Commission as well as Industry representatives have already invested, over the last ten years, hundreds of millions to get the backbone and create the specifications. All it needs are the applications and the ISP to deploy it. Internet growth is THE killer application because the IPv4 Internet has reached its critical mass of 20% penetration. IPv6 is the protocol that will take us to 50% penetration and will help connect trillions of devices equipped with RFIDs and sensors.

Thus the Internet of the future will be mainly mobile and broadband should be rethought to bring enough speed to wireless connections. The evolution from IPv4 to IPv6 will bring new important features: Internet will function automatically, the unique IP address for each connected device will lead to user empowerment, multicast will be possible, the user will have a mobility among networks with all the respect for his security and privacy. But some of these issues still need to be discussed and resolved.

The end-to-end model is the base of the Internet. It enables communication among web services and the user will have the option to be always connected as well as the power over the content he wants to release on the Internet thus becoming a producer.

The **Q&A** referred to the level of IPv6 implementation by the telecom industry. M. Ladid answered that the IPv6 Forum has the support of public authorities in Europe, United States and Asia. Even more, all products sold today have IPv6 embedded because all vendors have complied to the IPv6 Ready Logo interoperability programme sustained by ETSI for Europe (www.ipv6ready.org). It is up to ISPs to allocate prefixes and the best part is that the transition is done without the user knowing it, thus leaving him concentrate on the content and not the technical issues. For more information, please visit www.ipv6forum.com.

LIONEL CHMILEWSKY, Executive Vice President Proxim Wireless Corporation, USA, [www.proxim.com] outlined with great clarity and skill the employment of

Wireless Infrastructures for New Applications and Services

Wireless technologies are characterised by the amount of throughput and the mobility of the applications. Fifteen years ago, 2G offered a good mobility with limited throughput, then 3G came with up to 1 Mbps, later WiFi brought 25 Mbps but low mobility, lately WiMAX is offering a very high level of mobility with the 802.16 standard and the future belongs to LTE.

Internet of the future will be mobile and wireless will provide the necessary throughput and speed, but also security with AES encryption and a good quality of services. Furthermore, capital expenditures drastically inferior to the ones for wireline, make of the wireless, the choice for still uncovered areas. Other benefits of wireless include flexibility, interoperability but also the deployment of unlicensed networks, with no administrative costs and interferences that could be mitigated by intelligent radio technology.

The use of wireless can differ from the emerging markets to the established ones because the first are concerned with access while the later are driven by backhaul. The main fields of application are: the digital divide, security and surveillance, municipal network, emergency networks, education, health and transportation.

With the G8 countries having 34% of the mobile users and 50% of the Internet users, the last mile access is a wireless application that fights the digital divide. IP cameras are linked to wireless networks to ensure security in sensitive areas and buildings and thus reduce violence, crime and terrorism. Local authorities may benefit in many ways from the wireless technologies and use them to improve the quality of life of their citizens. The different applications in education, health and transport can contribute to reduce costs and enhance productivity and reactivity in these fields.

To conclude, wireless has many advantages for the new generation of applications and services because it can support licensed and unlicensed networks, it is fast and secure and offers a quick return on investment from 5 to 15 months.

The **Q&A** referred to the kind of difficulties encountered when implementing a new wireless application. M. Chmilewsky answered that wireless can adapt to any local regulation, to any type of deployed infrastructure and to any goals. Serving end-users or linking a point of presence, technically everything is achievable.

ROBERTO SARACCO, Director Future Centre, Telecom Italia, Italy, was not able to attend but sent his very interesting presentation on:

Future Centre – From Convergence to Ecosystems

Business, in the classical sense, is not going to increase the revenues deriving from connectivity. Actually, the general trends towards lowering the cost of connectivity will continue leading less and less money into Operators' coffers. However, the Broadband infrastructure is going to enable a variety of business models through the unlimited bandwidth at negligible price. This requires the set up of indirect business models for Operators, the provisioning of Platforms above pure connectivity and the entrance in the domain of the ecosystems.

The business in the context of ecosystems may be significantly different from the one where Operators thrived in all these years. It is also a space where regulation needs to take a different standpoint and its role will be crucial in fostering the new business models.

--- ✦✦✦ ---

Before starting the concluding **debate**, the chairperson of the session, Mrs. Kathryn Brown outlined that, as expressed by the speakers, the evolution of Internet and its new applications will become vital for economic growth and it will change the way of life. Connecting people to Internet and to things will lead to a gain of efficiency and to building new communities. It seems that in the last 10 years, the growth of productivity in the USA was due mainly to Internet. Therefore, the question today is why broadband deployment has become so important to all stakeholders, in spite of the considerable financial effort and risks that it implies.

M. Latif Ladid answered that people realized the importance of having access to information and communication and this had an impact on GNP and growth. Unfortunately, this is not the case of developing countries like India, where the infrastructure offers up to 256 kbps and is insufficient compared to the potential number of users. Moreover, good quality broadband needs the same download and upload speeds so that the user may send and produce content too. Countries that will promote technologies, like China with its techno-poles, will have definitely a lot to gain.

M. Jørgen Friis outlined that standardization is mainly a matter for the industry that affects the entire society because Internet has become a tool for in the hand of citizens and an instrument of governance. The issue of trust related to IoT should and will be overcome but it will have a tremendous impact on our lives, and standardization will play a major role in this change.

M. Yang Zemin added that China is a country that lacks natural resources and still managed to develop continuously its economy over the last 30 years. Today China faces serious problems in terms of energy and environment. Therefore, the Government encourages the use of ICT as a way to sustain growth.

M. Lionel Chmilewsky emphasized that broadband brings efficiency for people and businesses, for this, it is important to bridge the digital divide. The new applications, in fields like health care, can only improve our quality of life.

M. Joao Da Silva stressed that we are moving toward a hyper connected society and steps need to be taken to get ready for an unprecedented number of IP addresses. Despite the gain of efficiency, there are real threats and challenges like the privacy issues. Mrs. Brown answered that as the society evolves towards this new model, its expectations evolve too and technical solutions can be found to protect the basic need for privacy. Furthermore, each new invention must consider this aspect.

A question from the public referred to the eventual possibility for citizens to provide not only services but also networks. One of the panellists answered that today there is a demand for higher broadband and a need for more sophisticated and powerful networks. Technology allows the deployment in the same perimeter of several networks dedicated to different services, so technically everything is possible. Mrs. Brown added that interoperability should be assured between networks, as a guarantee for efficiency. M. Friis stressed that the users generally want to build virtual networks, independently of the technical aspects behind them. The attendee gave the example of Greece five years ago, where a WiFi network was deployed by a non-for-profit organisation at a reasonable price. Mrs. Brown explained the example of the USA where there are two nation wide cable networks and a wire line network with numerous carriers competing among them. All the wireless providers are moving to 4G technology that will bring the download speed up to 73 Mbps. All the efforts of standardization and interoperability aim to achieve a network that gives enough capacity, mobility and is always-on for the user, no matter the provider.

DAY 1 – MORNING – PARALLEL SESSION

The **chair**, **ELLY PLOOIJ-VAN GORSEL, Vice-chairperson of the Global Trust Center International Council**, [www.globaltrustcenter.org], and **Senior Counsellor Blueprint Partners**, The Netherlands, welcomed the participants. She opened the session with a most interesting presentation of the main topics that the session addressed: Overcoming legal and technical fragmentation; reconciling accessibility, flexibility and integrity in information management; Open-Source, Open-Architecture and radical innovation; interoperability -- towards a new layout with Web 2.0; trust, user control, accountability and legal approaches in world regions; user-driven modes of communication – collaborative architecture: seamless transition digital – from ubiquitous network to ubiquitous services; and innovation in stakeholder engagement and policymaking

The chair highlighted "the importance of addressing critical challenges of our time with respect to the standing of the individual human being". She rightfully emphasised the need for collaborative work to address these issues in international fora.

THOMAS ANDERSSON, President Jönköping University and Chairman of the Global Trust Center International Council, Sweden, [www.globaltrustcenter.org], followed up by underlining with great sensitivity and know-how that fundamental conditions as regards integrity, privacy, security and accountability are at stake. Mr. Andersson explained with his usual brilliance and wisdom that as interoperability and convergence are under way, interrelated challenges with regard to authentication represent critical weaknesses in the use of ICT. The state of play is such that they have to be addressed through a "systemic approach" that entails broad-based change at global level, while enabling local implementation. As so much is at stake the nature of the task makes it difficult to address effectively in the established multilateral fora. Hence, the Global Trust Center, an independent non-profit international organisation fills a role in bringing together all stakeholders for the purpose of enabling trust in the digital world, through the issuance of a bold policy which is set to evolve through close interface with efforts of the market to address the outstanding issues.

GILLES MAGUET, Secretary General XBRL Europe, Belgium, provided a remarkable insight in the subject of

Interoperability and Trust in the Financial World
XBRL a Tool for Global Transparency

Financial reporting increases exponentially: Financial reporting is required more and more frequently and faster and contains not only more but also more and more detailed information. It is dedicated to inform and protect the consumer and should provide information in an easy-to-understand and easy-to-analyse manner.

XBRL is a language for the electronic communication of business and financial data which is revolutionising business reporting around the world. It provides major benefits in the preparation, analysis and communication of business information. It offers cost savings, greater efficiency and improved accuracy and reliability to all those involved in supplying or using financial data.

XBRL stands for eXtensible Business Reporting Language. It is one of a family of "XML" languages which is becoming a standard means of communicating information between businesses and on the Internet. XBRL is being developed and maintained XBRL International Inc.

XBRL is an open and free of any rights language. It is extensible which allows a great flexibility in building the electronic files. XBRL allows to avoid constant re-keying, mistakes, misinterpretations in reusing as much as possible e-filed data. As XBRL is based on the Internet protocol, it allows to be free of proprietary file transfer protocols. XBRL is the perfect language to avoid costly converters between financial software and enables interoperability and transparency.

Instead of treating financial information as a block of text - as in a standard Internet page or a printed document - XBRL provides an identifying tag for each individual item of data. This is computer readable. The introduction of XBRL tags enables automated processing of business information by computer software, cutting out laborious and costly processes of manual re-entry and comparison. Computers can treat XBRL data "intelligently": they can recognise the information in a XBRL document, select it, analyse it, store it, exchange it with other computers and present it automatically in a variety of ways for users.

XBRL can handle data in different languages and accounting standards. It can flexibly be adapted to meet different requirements and uses.

XBRL is supported by major companies, organisations and government agencies. XBRL is managed by the international non-profit-organisation “XBRL International” with more than 550 members all over the world. XBRL is growing quickly around the world with increasing participation from individual countries and international organisations.

There are a number of XBRL projects underway all over the world. For instance, filing of accounts by Belgian companies to the National Bank of Belgium, which is responsible for collecting financial statements from the nation's firms, will switch to XBRL from April 2007. Some 295,000 commercial and industrial companies are due to start filing in XBRL from that date. The Bank's project to introduce XBRL has finished its development phase, leaving only details and final testing to be completed before launch. Financial services companies in Japan have been reporting monthly data in XBRL to the Bank of Japan since February 2006. The Bank of Japan says the introduction of XBRL for monthly balance sheet information has led to a significant reduction in the burden of data validation and other gains in efficiency. It plans to expand the scope of XBRL reporting and to develop new systems for storing and accessing its XBRL data. More than 400 banks are filing monthly financial statements in XBRL to the Bank of Spain, which is responsible for overseeing the country's banking system. The introduction of XBRL for this reporting has enabled automatic data validation, achieved better quality of data and reducing manual effort. The Bank of Spain is now pushing ahead plans for expanded use of XBRL. The Tokyo Stock Exchange has launched a pilot system which demonstrates the use of XBRL for company financial statements and the benefits it can offer. The exchange is aiming to promote wider understanding and

acceptance of XBRL among investors, companies and public as a step towards the introduction of full XBRL reporting by all companies in 2008.

The 19th XBRL International Conference will take place on 23-25 June 2009 in Paris.

VICTOR EMMANUEL DE SA, Partner Geneva Solutions, Switzerland**,** delivered a captivating talk on:

Interoperability, Identity Mismanagement & Trust
A Security Point of View

On the physical world, I am physically who I am, with my own particularities and someone can often challenge it. Today, one can be anyone on the net, and each person in the audience could be transformed into just anyone. How being sure the person on facebook or Linkedin is really the person he/she is pretending to be? Everything is already digitalised and nothing is closer to a digit than another digit so who can make the difference? How can you trust one rather than another? The web actors are often unknown; dealing underground they are controlling and playing with our digital lives... It is important to be aware of the seriousness of current “identity mismanagement” in the Internet.

Nowadays our digital identities are almost everywhere inside the digital word and worse they are already interoperable without our specific control. There are insufficient means to verify any claimed identity while, at the same time, the individual user has a multitude of digital identities, which he or she cannot control, scattered in a number of databases containing personal data.

On pretext of "user-friendly", they introduce some security artifices exaggeratedly complex. Who is managing and controlling those digital identities? Definitively not the end user...but some are controlling them! Who are they? And you who are you? Hidden behind a PC screen you can be whoever you want...but even if you can be whoever you would like to be, you will not manage it at all!

On the other end, the so-called “hacking” community is constantly ahead of security solutions, as it is able to access and/or control the Internet’s technological architecture. Moreover, currently there is no responsibility in the digital world. The current state of ICT development does not allow for accountability and non-repudiation. There is clearly a need for a new Internet framework model where responsibility will be assured.

MAX SNIJDER, CEO Biometrics Expertise Group, The Netherlands, gave a most interesting introduction to biometrics and discussed

Anonymous Biometrics under the GTC Policy

Biometrics represents a cross-over between the digital and the physical world and as a means of digital identification can raise the level of risk. However, this is related to the personal data connected to the biometric information. If no data are connected, biometrics is anonymous and can be disconnected from identity. Thus, the use of biometrics should move from identification to verification.

Biometrics can say about an identity as much as you want and as less as you want. It depends on what data are connected to the biometric information (directly by the user or with

his or her consent). If no data are connected, biometrics are anonymous and can be disconnected from the identity.

So far, there are no policies available for biometrics in electronic environments such as electronic identity cards: Standards issued by the International Civil Aviation Organisation (ICAO) seem to have a major impact on the e-ID card domain as many countries will use only ICAO compliant biometric functionality on their national e-ID cards. The European parties working on electronic identity and authentication include the WS eAuthentication working group of the CEN/ISSS (Information Society Standardisation System). However, up to now, there is no agreement on the functional positioning of biometrics – just some general privacy statements have been issued by the working group. Moreover, there had been no adoption of biometrics in any of the EU Member States requirements on National e-ID cards to support e-services.

As far as authenticity and integrity of biometric data are concerned, there is a high risk in unsupervised scenarios. Furthermore their purpose (identification or verification?) remains unclear.

To protect biometric information, biometric templates have to be encoded in proprietary files, which cannot be used to re-create biometric raw data. Templates do not have to be recognized as being biometric data. Moreover, it has to be ensured that biometric can not be used for 1:n search (the process of determining a person's identity by performing matches against multiple biometric templates). No raw biometric data shall leave the user's biometric template generating system.

The Global Trust Center (GTC) is a non-profit, independent and international organisation that develops policy, standards and procedures to enable trust in all digital interactions. In order to enable full user empowerment, GTC requests within its policy on anonymous biometrics not to link biometrics to the root identity or claimed identity. Biometric information can be any modality from any person ("I am the only one who knows which biometric and from who") – as long as it is the same as originally enrolled for a specific service. Thes claims

GTC advocates the following four policies on anonymous biometrics: 1) Unsupervised biometric enrolment via a third party; 2) Biometric verification via a third party; 3) Unsupervised enrolment using a personal device; and 4) Biometric verification using a personal device. The goal of GTC's policy is to allow to access to ASP services, using biometrics as an extra convenient key.

CONSTANTINE STERIADIS, Principal Sales Consultant Oracle Hellas S.A., Greece, [www.oracle.com], presented with clarity and enthusiasm:

Hermes: The Citizen-centric Gateway to Greek Public Services

Hermes is planned as the Hellenic central e-Government portal for the provision of information and secure and integrated e-Transactions to citizens and businesses. The aim of Hermes is to become the one-stop shop for government services at all levels.

The overall goal of the Hermes project is to set-up an interoperability portal in order to provide information to citizens and organizations, to provide online and secured e-Government services 24 hours a day and 7 days a week.

Hermes is based on the following three axis: to collect and provide relevant content, to enable interoperability of services of different governmental agencies and to enable digital authentication of citizens and organizations.

Hermes is realised by the Greek Ministry of the Interior with a budget of EUR 10 million. The implementation of the Hermes project started in September 2007 and will be completed in December 2008.

The 6 strategic pillars of the Hermes project are: provision of a one-stop shop for information for citizens and businesses; setting up of an interoperability platform; creating an "electronic maestro" of the public sector; setting up a platform for secured transactions; provision of an expert advisor for improvement of the public sector; and ensuring compliance with e-GIF (Greek eGovernment Interoperability Framework).

User can access the information provided on Hermes via different "entry points", such as characteristics of the user (e.g., unemployed, students, immigrants, SMEs), the user's needs or life situations (e.g., getting married, getting divorced, expecting a child, setting up a company, …) or accroding to specific sercices (people, communities, living, education and research). Once the user selects his or her need all related information, services and announcements will be displayed.

Confidentiality, authentication, integrity and non-repudiation are the basic security requirements of Hermes. Hermes has established a Certification Authority which has undertaken the task of issuing digital certificates to citizens and businesses for the purposes of authentication, digital signatures, and confidentiality. The underlying PKI infrastructure uses RSA asymmetric cryptography and hash functions.

Hermes provides insight into information through reports and dashboards. It drills down at the finest level of information and provides powerful what if scenarios and alters to improve and speed decision making.

MARIA TSAKALI, Scientific Officer, DG INFSO & Media, Software & Service Architectures and Infrastructures Unit, European Commission, gave a very distinguished presentation on

The Future Internet of Services

The discussion about how the Internet of tomorrow will look like has as many divergent viewpoints as the "Blind Man and the Elephant". It may be viewed differently depending upon someone's perspective.

New network and service infrastructures will gradually replace the current Internet and web as we know it. The future will be networked. People will be able to be connected at any time, anywhere, and to anything.

The Internet and media landscapes are undergoing a revolution. As the Internet has revolutionised the access to multimedia content and enabled collaborative user-generated content, requirements in this field have a huge impact on the future Internet. Advances in 3D processing give rise to innovative applications particularly in gaming technologies and in virtual worlds.

The Internet of the Future will also be the Internet of Things, where everyday objects, rooms, and machines are connected to one another and to the larger digital world. These new networks and service platforms need to be trustworthy, i.e., secure, reliable and resilient to attacks; guaranteeing desired levels of services; protecting user data; ensuring privacy and providing usable and trusted tools to support the user in his security management.

Software engineering technologies, service architectures and virtualisation technologies will support the Future Internet. The Future Internet will comprise a global service delivery platform - the Internet of Services - which complements the converged global network infrastructure. The vision of the Internet of Services is a multitude of connected IT services, which are offered, bought, sold, used, repurposed, and composed by a worldwide network of service providers, consumers, aggregators, and brokers resulting in a new way of offering, using, and organising IT supported functionality.

The web-based service industry is a very important new industry and it is important to ensure European leadership in this field. There are different roles in the global service delivery: Making services available (service gateway), composing services into value-added services (the role of the service aggregator), brokering and billing of value-added service (service broker) and the delivery of value-added services using customer specific channels (service channel).

The main topics for future research in the field of the Internet of Services are: service front ends, service architectures, virtualised infrastructures, service engeneering, verification and OSS. Cross domain challenges in this context are interoperability (which should not be limited to a specific technology platform, but should extend across platforms offering businesses and consumers choice at all levels); identity management; security, privacy, and trust; self-management and governance; software and service engineering (as the key to developing good quality and reliable software and services for the future Internet); semantics and OSS.

The "Future Internet" is our future and a major federating research theme. The European Commission has put the future of Internet at the heart of its research programmes. To date under FP6 and FP7, Europe has invested around EUR 500 million in Future Internet research. In order to be among the leaders in ICT in the next ten years, European researchers and engineers have to address the major technological challenges. Europe is investing in research and is putting in place the right regulatory framework needed to provide new opportunities for jobs in the Future Internet economy.

A range of European research projects are involved in the creation of the European Future Internet Assembly, which aims to identify the long term societal and economic trends of future "online societies"; how they may impact the underlying network and service technologies; and how they subsequently drive research requirements. As a consequence, opportunities for action at European level will be explored with the intention of further facilitating and mobilising the relevant research constituencies, also taking into consideration initiatives already launched in other regions of the world.

The European Future Internet Assembly offers a vehicle for excellence and innovation that will create an opportunity for European actors to exchange and promote their views in the global "Future Internet" debate.

OLIVER VÄÄRTNÕU, Advisor, Strategy Office, Government Office of the Republic of Estonia, delivered a fascinating presentation of a small high-tech country:

Interoperability, Identity Management and Trust: The Case of Estonia

Estonia is a country in the Baltic region of Northern Europe. The capital and largest city of Estonia is Tallinn. Estonia has about 1.4 million inhabitants and covers a territory of 45,226 km². The country is member of EU and NATO from 2004. Estonia has a strong IT sector and the government declared Estonia an IT test site in 1996.

Estonia uses Information Technology as an instrument for increasing administrative capacity and ensuring an innovative and convenient living environment for citizens. Around 2,9% of the GDP is spent annually on ICT. 50 % of the Estonian households have access to the Internet. 94% of the enterprises have Internet access. 59% of the Estonian population is using the Internet. The e-Government online availability in Estonia is 80%. With 136 mobile phones per 100 inhabitants, mobile phone penetration is extremely high. 98% of the banking transactions are digital transactions from which around 25% are e-banking transactions.

Estonia's e-Government portal was launched in March 2003. Since then, the portal has constantly evolved. The State portal's environment allows users authenticated with their national eID card to: access and check their personal details; perform transactions with municipal and Government bodies; complete and convey online forms and applications; sign documents digitally; create email addresses with the suffix @eesti.ee; and receive email or SMS notifications. In addition, it gives access to other registry services of more than 20 national databases. Based on the data held in the State Commercial Register, entrepreneurs using the portal can access transactional services for businesses.

The services offered through the portal are closely integrated with the infrastructure of the data exchange layer X-Road. The X-Road (X-Tee in Estonian) is a middle-tier data exchange layer enabling Government databases to communicate with each other. The system allows officials, as well as legal and natural persons, to search data from national databases over the Internet within the limits of their authority, using a unified user interface. X-Road is one of the cornerstones of the Estonian State information system.

From 27 April to 19 May 2007 Estonia suffered a three-week wave of cyber-attacks. Anonymous foreign networks comprising hundreds of thousands of computers repeatedly disabled Estonia's Internet servers used by the government, banks, media, and other organizations by bombarding them with information requests. Life in the Internet-saturated country was severely disrupted and the director of Estonia's Computer Emergency Response Team was to say later that during the first peak in the attacks – on May 10 – Estonia lost 50% of its "bread, milk, and gasoline" for 90 minutes.

To conclude, the conception of trust changed in the cyber society. Societies increasingly are related to the cyber world and dependent on e-Services, but the whole notion has to be treated with great care. It is easy to organize the cyber attack. Cyber attacks are a very serious threat today and represent an increasing threat in the future. Critical information infrastructure protection and partnerships for protecting the digital world in this context become more and more important.

As one of the two **commentators** of the session, **JACQUES BUS, Head of Security Unit DG INFSO & Media, European Commission,** commented on the importance of trust in the digital world and thus the need for accountability and transparency as for example in financial reporting. He stressed the importance of Identity Management as the starting point to tackle the issues of accountability and transparency and emphasized the need for a global interoperable framework for Identity Management.

The second **commentator**, **ZAHID JAMIL, Barrister-at-law Jamil & Jamil**, Pakistan, highlighted the problem of single point of failure regarding the centralised identification framework and its vulnerabilities. He pointed out the need for a distribution of identification within a decentralised framework that would enable trust in the digital world.

--- ✦✦✦ ---

The **general discussion** raised the subject of anonymity and protection of personal data versus the need for verification of digital identities as two apparently opposing forces. Going ahead, it is necessary to achieve a solution to Identity Management that is capable of reconciling these forces without compromising either of them. A real solution must entail a stronger position for the individual user, to allow real control of all digital communication that he or she is engaged in. That is also required for enabling trust in digital interactions. Some relevant global initiatives were discussed, including the Global Trust Center policy and the efforts of the Liberty Alliance.

In her final remarks, Elly Plooij-van Gorsel concluded that the eight excellent presentations each had given food for an interesting discussion. At the same time, they gave evidence that trust in the digital world could be viewed from different angles, but the basics of trust and security have to be the same for digital transactions as for real life transactions.

In closing, Thomas Andersson stressed that the current state of affairs in digital interactions must be addressed in a way that incorporates increased accountability and transparency within a framework of increasingly global and interoperable eID frameworks. It is clear that a solution will not grow out of technology alone but must grow out of a strengthened ability of the demand side to “pull” a systemic change. He concluded that it is encouraging that there are already initiatives to tackle the problem and that an open collaboration between them is important in order to achieve a globally acceptable solution.

The **moderator** of this opening session, **JEAN-PIERRE CHAMOUX, Professor Paris V-René Descartes University**, France, welcomed the participants and panellists and expressed his delight about the very distinguished panel. He then opened the session and conducted it with ease.

NIKITAS ALEXANDRIDIS, President National Telecommunications and Post Commission - EETT, Greece, persuasively shared the Greek vision of the

Challenges for Expanding Broadband:
The Greek Perspective

Broadband development is not any more only an opportunity for societies and nations but a necessity and a right of every citizen. In order for each country to progress towards such a challenging and mission-critical target four elements are essential:

1) A regulatory framework promoting competition. Competition, particularly infrastructure based, is a main driver for broadband development. Until 2006 competition in Greece was primarily service based. OTE (the Greek telecom incumbent) enjoyed the absolute monopoly on directly connected subscribers and alternative operators who relied almost solely on bitstream for the provision of retail broadband services. When the Greek Telecoms Regulator EETT initiated, in early 2006, a major effort for unbundling of the incumbent's local loop (LLU), the picture of the Greek broadband market changed radically: LLU penetration increased from 0.2% in mid 2006 to more than 10% today of the total telephone lines and represents about 42% of total broadband lines. Nominal download speeds have exhibited an explosive growth now extended up to 20 Mbps. Retail prices have been reduced by up to 60-80% (depending on speed) since early 2006. Broadband uptake (lines added per month) in 2007 increased by 5 times compared to 2005. Broadband development through LLU has exceeded the one through the incumbent's ADSL lines.

2) A national strategy for migrating to next generation networks and access, even through subsidization, whenever necessary, of the relevant projects. Today a new challenge lies ahead. Copper can hardly support the byte crunching requirements of new applications and services. More and more countries, with Asia-Pacific pioneering, focus on next generation access networks. The Greek government, promptly recognizing this need, initiated a project to deploy an FTTH network that will (initially) reach 2,000,000 households, to be completed within seven years. The results of a study performed at a first stage indicated that such a project is not economically viable in any other city except Athens. This meant that in a country with the geographic and demographic characteristics of Greece, FTTH deployment cannot be left alone to market forces. Thus, prerequisites for the success of this project include immediate State interventions, such as: The publication of a national law that governs all aspects relating to FTTH networks, seeking to encourage and facilitate FTTH deployment, without however compromising the "level playing field". A long term subsidization project that will eventually bring FTTH to a substantial proportion of Greek households in the urban centers throughout the country.

3) A national strategy for an effective mechanism to ensure that all people have access to broadband networks and services. One risk to be avoided is the development of an advanced market with high capacity networks and killer applications and services, addressed however to only a few privileged citizens. Access to broadband services is a public good from which no one can be left behind. In a country like Greece, one cannot hope that FTTH will reach every household in any remote village. Still, it has to be made sure that every citizen, no matter where he/she lives, has access to a minimum set of broadband services, at an affordable price. The broadband revolution calls for reconsidering the notion of Universal Service. Flexible subsidization schemes are necessary, driven by the state and the regulator (for example by setting up a fund). Flexible spectrum and wireless networks schemes and policies must be established in order to provide broadband access to remote areas where fiber or DSL solutions are not practical. Local action is also necessary to promote the "broadband everywhere and for all" concept. Broadband development must be placed high in the agendas of local communities.

4) A powerful and independent regulator, who will apply effectively the Framework Directive and ensure that the development of next generation networks and access does not lead to new monopolies. One should not underestimate the emerging regulatory challenges. The deployment of FTTH networks could possibly facilitate the development of new monopolies, by the same or new players. At the same time, shifting business paradigms generate new issues, network neutrality being a typical example.

The rapidly changing broadband environment needs a powerful regulator to address such challenges. Two are the cornerstones in this direction: a) Guaranteed independence, both administrative and financial. b) Armament with the necessary legal instruments. The European Commission recognizes the importance of these two elements and in the current framework review asks for the formal and substantial reinforcement of regulators' independence, while adding new instruments in the regulatory armory. To the above, one might also add the importance of competition powers, which has proved an invaluable tool.

ROBERT A. MORIN, Secretary General Canadian Radio-television and Telecommunications Commission, - CRTC, Canada , delivered a most inspiring and interesting talk on

Towards a Converged Digital Environment
Rethinking Opportunities

The new convergent landscape is characterized by an abundance of content and of distribution channels; an abundance of competing service providers; and an abundance of rapidly evolving technology. All this makes for increasing worldwide interconnectedness. Such a landscape offers fertile ground for new business models and new economic activity. Creative thinkers can build new applications and formats such as social networks. At the same time, companies with access to funds and audiences can bring these new applications and services together. This results in reduced prices and richer experiences for their customers. Now, what does all this mean for policy-makers and regulators?

Digital technology is the irresistible force that has been driving convergence. In response, the industry is embracing convergence as fast as it can. In Canada, however, regulation has been lagging behind. The CRTC regulates both broadcasting and telecom – but under two separate mandates: the Broadcasting Act and the Telecommunications Act, each with its

own priorities. The concept of convergence was not even on the radar when these Acts were last revised –17 and 15 years ago, respectively. CRTC is pressing ahead now with policies and procedures that will harmonize the regulatory work within the existing mandates, and make regulations more streamlined and balanced.

The Canadian Broadcasting and Telecommunications sectors will continue to focus on their specific concerns. But all activities that are common to broadcasting and telecom have been grouped together within an expanded sector called PDR—Policy Development and Research. Among these common activities is Social Policy, which includes issues like telemarketing and accessibility. Both of these are very active files right now. Many Canadians have expressed a desire for relief from unwanted telemarketing calls. Last month the National Do Not Call List has been launched, which provides a way for telephone subscribers to minimize these intrusions.

Next month, a public proceeding on accessibility issues will be launched in order to ensure that Canadians with disabilities will not be discriminated against in gaining access to telecommunications and broadcasting services. Another responsibility for the PDR sector is Dispute Resolution, which will become more and more important in an increasingly deregulated industry. PDR also handles Convergence Policy, which includes the high-profile New Media file. PDR continues to support Broadcasting and Telecommunications by processing ownership and acquisitions applications. It conducts economic analysis on both industries and on markets and technologies. The findings that emerge from this analysis are now being presented in the spirit of convergence. In the past, separate monitoring reports on the broadcasting and telecom industries have been published. This year the first merged report was issued, recognizing that the two industries are fast becoming one.

New Media is a high-profile area which raises some interesting challenges for regulators. Under the Broadcasting Act, one of CRTC's main responsibilities is to make sure that a substantial proportion of radio and television content that is broadcast in Canada is in fact Canadian content—produced for Canadians by Canadians. But what about the increasing quantity of professionally produced content that is being broadcast over the Internet and through mobile devices? Should the production of Canadian content for these platforms be encouraged as well?

Interactive and on-demand technologies are becoming more and more important for cable companies and popular among consumers. CRTC is currently looking at their role in the broadcasting system with a view to developing a coherent approach.

In the New Media world the user, and not the provider, is in charge. The questions therefore arise: Do we need to develop a new regulatory approach? Can we do it? Do we want to? And finally, are there possible enforcement mechanisms?

On the telecommunications side, net neutrality is emerging as one of the more significant issues. Through the Telecommunications Act CRTC has the tools to address traffic-management issues and can help ensure that customers have the same access to the Internet, whether their provider is a traditional incumbent or a competitor that delivers its services through leased telephone lines. But before determining whether intervention is needed it has to be considered whether there are broad public-policy objectives that are not being met by the marketplace alone. CRTC is currently addressing one particular complaint on a traffic-shaping issue. But there will be more, and the overall issues will have to be addressed by all stakeholders as well as the regulator.

The economic and cultural goals of policy and regulation may remain the same – but in the face of convergence and new technologies, the traditional approaches simply will not succeed. The familiar forms of regulation took shape in an environment of scarcity: limited spectrum, few platforms, few providers, and little choice. There will be a different style of regulation for an environment of abundance. Obligations such as quotas may have to be supplemented by incentives for the creation and promotion of content. Rapid technological innovation will require a lighter and more responsive regulatory hand.

The role of the regulator will have to evolve. The ex ante gatekeeper of the system will have to develop into an ex post referee, offering arbitration and dispute resolution. The regulator will need enhanced resources for handling complaints and conducting investigations. It will also need penalty powers for enforcement.

DEBORAH TAYLOR TATE, Commissioner Federal Communications Commission, - FCC, USA, gave a first-rate keynote on

United States Broadband Policy:
From Sea to Shining Sea

With regard to the US regulatory framework, the FCC has taken a light-touch approach to broadband. For example, in the Brand X case, the US Supreme Court found that the FCC had the authority to classify broadband services as an information service, which is subject to less regulation than traditional telecommunication services. By pursuing a deregulatory approach, broadband has been allowed to grow organically and has produced great results.

Last year, the US benefited from over USD 70 billion in broadband investment, robust industry competition and cooperation, and unprecedented consumer options in this dynamic marketplace. No policymaking body should dictate a particular technology adopted. Results show that deregulation has had a tremendous effect. Worldwide, countries are moving towards more open networks, and away from monopolies. In 2007 alone USD 225 billion was invested in networks, and USD 3.5 trillion in revenue was generated. 3G and 4G wireless networks continue to expand. Wire-line broadband networks continue to explode in growth, pushing speeds up and fibre to the end-user. In 2005, the FCC adopted the Internet Policy Statement, which contains four principles that encourage broadband employment while ensuring an open Internet. The stated goal of these principles is to help guarantee that consumers will be able to freely access whatever legal content they chose on the Internet, and to foster the continued innovation of the Internet.

Network providers face very real constraints every day. In the US, 5% of users use 90% of the bandwidth. This means is that 95% of people may suffer slowdowns due to a small handful of individuals using peer-to-peer software designed to complete gigantic data transfers. This presents a major problem for the average user on a cable broadband network, which are shared networks. On a shared network, users share upstream and downstream bandwidth, since everyone must connect to a central point (node), where the “last mile” facilities connect to the optic fibre network. These nodes may have only a handful of subscribers attached, but can have as many as 2,000 users. To combat “bandwidth hogs” and protect the overwhelming majority of broadband consumers from reductions in quality, carriers must manage their networks.

On August 20, 2008, the FCC concluded that the Comcast cable company’s network conduct was a “discriminatory and arbitrary practice” that “unduly squelches the dynamic benefits of

an open and accessible Internet and does not constitute reasonable network management." At the centre of this controversy is a simple question: "What is reasonable network management?" P2P users feel that this is a restriction on their free use of the Internet. Most parties realize that traffic management, in some form, is needed. Some users felt that Comcast's targeting of the BitTorrent protocol was unfair. A protocol agnostic approach does not discriminate against any specific protocol but takes a holistic look at total traffic, and slows down all traffic when a certain amount of capacity is reached. Industry is producing real solutions to deal with network management. A prime example of this is the P4P working group. In addition to setting rules that are transparent, technologically-neutral, and economically efficient, regulators can play a key role in arbitrating disputes on how these rules should be applied.

Rather than concentrating on 5% of the heaviest bandwidth users that use 90% of the traffic, FCC should be ensuring that the 95% of ordinary subscribers are not negatively impacted as they use their Internet for their child's homework, shopping, getting news, sending emails and watching TV and YouTube. Perhaps the best way for regulators and governments around the world facing this issue is continue to help facilitate agreements among the broadband industry and create an experience that maximizes the benefits of all users.

The positive side of network management is far too often overlooked. Network management has a very positive role when it comes to eliminating online piracy and online child pornography. Much of the emphasis of network management is put on the restriction of lawful uses of the Internet, but we should also focus on how network management can help reduce illegal uses of the internet.

A long-time concern is fighting the proliferation of online child pornography. Thankfully, industry players and regulators are coming together in America to fight this problem, along with law enforcement. This summer, the majority of America's cable broadband providers signed an industry-wide agreement to fight child pornography on their networks. An example of the benefits of network management in action, this was an important step in the fight, and was endorsed by the Attorney Generals of 48 of our 50 states, and the Center for Missing and Exploited Children, America's center for child protection. Scotland Yard and Ireland's law enforcement have similar initiatives.

We must ensure that our children are safe when using the Internet. Today, the wonders of the world are just a click away; with access to information on almost anything, and in almost any format. While these advantages are closer and more accessible, the dangers of the Internet are more pervasive than ever. However, industry players are stepping forward, and the international dialogue on this issue continues to be developed.

In the midst of the incredible consumer benefits of the digital age, piracy is a very real and present danger. For the US, it is estimated that cost of piracy is USD 12.5 billion. While Internet service providers have done much to help filter out copyright-infringed content on their networks, it is also important to note that strides have been taken in the global marketplace to provide creative content to consumers who value it and that, at the same time, provide compensation to those who develop this content. The modern information economy produces numerous forms of intellectual property, all of which are subject to theft – from medicine, to content providers, to applications providers, to the piracy of software. The Business Software Alliance found that IP theft cost the software industry USD 48 Billion dollars last year.

Regulators must make sure to weigh oftentimes competing public policy goals and giving effect to the legal standard: “in the public interest.” They must listen to the citizens, facilitate a dialogue between industry players when possible, create the correct incentives for investment, and allow the market to generate its own solutions. In summary, regulators must act with a light touch.

SEITARO FUJITA, Advisor to International Affairs, Global ICT Strategy Bureau, Ministry of Internal Affairs and Communications, Japan, delivered an excellent presentation outlining the very interesting and relevant points concerning the Japanese

ICT Policy Toward Ubiquitous Net Society

The Japanese Government is developing ICT strategies since 2001. The first e-Government policy aimed at creating the most advanced IT-nation in the world by 2005. Then, the objective was renewed by 2005 and the new policy aim is to realize the Ubiquitous Network Society – an extensive network that all users can access whenever they want and from wherever thy wish. It is also expected that the development of the Ubiquitous Network Society will enable Japan to play a role as a world leader in this area.

Today, broadband services are already available to 98% of the households. According to a survey carried out in June, the number of optical fibre subscribers has surpassed that of ADSL. The current coverage of mobile phone service users is 99.8%. That is to say that there are still 300,000 people of the entire population who are not covered. At the moment Japan dedicates big efforts in the diffusion of Digital Terrestrial Broadcasting which transmits both HD movies and movies for mobiles simultaneously. By Summer 2011, the transition from analogue to digital broadcasting should be completed. According to a survey of September this year, more than 40 million digital receivers were sold. However, the expectation is to reach 100 million by July 2011.

A research on Internet users carried out by the MIC showed an insufficient level of satisfaction of the public as regards top level ICT infrastructure. The ICT society is not yet beneficial to all. Thus, the Japanese Government is now committed to the following three aspects: administrative services, medical care as well as safety and security.

The focus of the Japanese strategy shifted away from developing infrastructures towards the promotion of a widespread use of utilisations. The court should not longer be divided into variety of networks or services but rather be regulated by layers of infrastructure, platform services and contents. This requires a restructuring of the legal framework. The legal framework to support service creation shall be simple and suitable to the future. Japan plans to co-ordinate a new legal framework by 2010 in order to celebrate 2011 as a digital new year.

Safety and security issues are now big social matters in Japan. One can easily imagine that young people get hold of illegal information by the mobile phone behind the back of their parents. A new law announced this June obliges filtering services, such as rating under parental control. In addition, the law entrusts the private sector with this task to in order to encourage their own efforts.

The **chair** of this regulatory panel**, KONSTANTINOS M. PLOUMPIS, General Director of Regulatory Affairs for OTE S.A.**, Greece, [www.ote.gr], welcomed the participants and panellists and brilliantly opened the session by discussing the underlying philosophy of telecom regulation:

Between Efficiency & Legitimisation

Economic regulation is characterized by a lack of confluence between national actions and global markets without taking into account that regulation is affected by globalization. Privatization of former monopolies is a global concept with local actors and so is regulation. There is an endogenous problem of regulation since the lack of procedural discipline is evident between national actions and global concepts. At the same time, the balance of interests is fragile and built on a wave of optimism about global markets and absence of political consensus in the implementation of goals.

Regulation today is impacted both by global and local forces. However, economic development is a chief focus, especially in today's financial climate. Indeed, the economic crisis revealed the limits of virtual regulation as national considerations prevailed over global concepts such as state aid, competition, governance, stability pacts and other factors.

The problematic mixture of incentives, soft law guidelines, powers of law making, technocratic instructions is the method of regulating economic sectors of the world in the borderline of democratic legitimization. Historically, the object of regulation is primarily political and not technocratic and is subject to the law of all public authorities. It is not a totally new world of law out of constitutional power and administrative procedures.

Experience shows that there are few specific criteria for the balance between competition and consumers' interests. The recent global financial crisis reveals total failure of independent regulators to judge correctly and to safeguard basic interests of consumers of financial products. The same applies to other markets built on the foundation of regulatory assistance and not in a solid business case that produces real wealth. In the moment of crisis, re-emergence of the traditional state has revealed the limits of efficiency and leads to rigid central law making. Appraisal of regulatory efficiency is now obligatory to understand the reasons of failure beyond financial greed. Stable value creation is a key concept which should be addressed in the context of competition enforcement either ex-ante or ex-post. Regulators' extra responsibility as a watchdog is not mapped in a strict legal context. The lack of direct relationship with public voting makes the regulatory authority look inadequate as supervising authority especially in an era of technocratic failure. The foundations of power should be strong enough to withhold crisis.

In Europe, privatizsation of former monopolies created the regulatory concept and the fear of dominance. Uncertainty created by regulatory failure in the financial sector may as well make us rethink about the "evil nature of dominance" and how to protect the continuation of a viable development. Not necessarily more regulation is needed, but regulation can be constantly improved.

The **moderator** of the session, **ANDREW D. LIPMAN, Senior Partner and Practice Group Leader at Bingham McCutchen**, USA, welcomed the panellists and provided an excellent overview on

Foreign Investment in US Telecommunications Industry

Key factors that might indicate a foreign ownership issue: The investment target provides FCC regulated services; the investment target owns communications infrastructure such as towers, fibre, carrier hotels; the investment target holds FCC licenses. Further factors are that the acquiring entity, investor, or potential licensee, is a foreign entity or has greater than 10% foreign ownership, including: indirect foreign ownership anywhere in the ownership chain above the licensee; aggregation of interests of foreign individuals or entities investing in funds that hold interests in licensee or upstream parent.

Foreign ownership is one of many public interest factors reviewed by the FCC. The FCC International Bureau is responsible for review of foreign ownership in all FCC applications. International Section 214 applications are analysed under the World Trade Organization (WTO) framework and the FCC's Foreign Participation Order (effective competitive opportunities "ECO" analysis). The FCC defers to the Executive Branch on issues of national security, law enforcement, foreign policy and trade policy concerns.

General principles of determining the level and type of foreign ownership are: Upstream equity and voting interests count, though may be diluted using "multiplier rule". Options, warrants or other future ownership interests do not count until exercised. Debentures and other debt instruments do not count until converted to equity. The exception is, if terms of repayment of debt or debt/equity ratio is such that debt appears more like equity than debt. This is reviewed by the FCC on a case-by-case basis. Certain investment vehicles may allow for some insulation of foreign ownership.

CFIUS (Committee on Foreign Investment in the US) is an inter-agency executive branch group chaired by the US Treasury. Its focus is on foreign ownership and control of communications and critical infrastructure (radio towers, fiber, carrier hotels), technology, energy, transport, and defense-related industries, as well as on companies holding government contracts. CFIUS has broad powers to condition or block deals or to require divestitures of subsidiaries/lines of businesses and can review closed deals if prior approval was not obtained.

NSA (Network Security Agreements) is the typical mitigation agreement for facilities-based telecommunications carriers. Domestic communications infrastructure must be located in the US and under control of US-based personnel. Transactional data, subscriber information, billing records, etc. must be stored in the US. NSA requirements typically include restricted access to domestic network and data by foreign persons and prohibition on disclosure of domestic communications and data to foreign persons. It also requires an appointment with an US-citizen Security Officer and the implementation of personnel screening procedures as well as annual reporting and provides the US Government with inspection and audit rights.

Dealing with the CFIUS requires early diligence and structure. It is important to understand what network and contract issues may present biggest hurdles. US Government's contracting and defence work are a big issue. Involvement of SWFs (Sovereign Wealth Funds) should be limited. In case of SWF involvement, SFW from a WTO country is highly preferable to a SWF from a non WTO country. Investors should be prepared to offer meaningful concessions and should anticipate and promptly address agency concerns.

BRENT OLSON, Assistant Vice President Public Policy at AT&T, USA, [www.att.com], presented a captivating expert's point of view on

The Evolving Communications Landscape

AT&T, like many other telecom companies, is in constant flux. The company is increasingly involved in new, non traditional businesses, such as video, where it is not necessarily the dominant player. Moreover, the dominant role that it played in voice, especially landline voice, is diminishing. Increasingly, mobility is replacing landlines. Broadband is also increasing. These developments are new and not just peculiar to AT&T, but increasingly becoming a global phenomena.

Mobile telephone subscriber numbers have increased from 69 million in 1998 to over 266 million in 2008. The number of fixed telephone lines in use has decreased from a high of 192 million in 2000 to under 167 million in 2007. As a percentage of telecoms revenue, mobile telecoms revenue has increased from 14.9% in 1998 to 46.2% in 2007. Text messaging has skyrocketed – from 12.2 million texts sent per month in 2000 to over 72 billion in 2008.

The number of Internet subscriptions in the US has increased from 38 million in 1998 to over 87 million in 2008. Broadband Internet subscriptions has also increased as the number of dial-up subscriptions has decreased. Broadband Internet subscription numbers increased from less than 1 million in 1998 to over 74 million in 2008 while dial-up subscriptions have steadily decreased since a high of 42 million in 2001 to 13 million. The percentage of high-speed Internet coverage across the US has also greatly improved.

As Internet availability has increased, so has usage and the different way consumers are utilizing the Internet. There are currently 2.25 billion emails sent per day and 12 billion searches performed in July 2008. Facebook and MySpace each have over 100 million users, and Facebook overtook MySpace as the No. 1 online networking site in April 2008. Wikipedia has seen tremendous growth, as there are currently more than 2.5 million English articles on Wikipedia. Growth is expected to continue as consumers increasingly watch online videos. User generated content such as YouTube will generate more than 73 billion streams or downloads in 2008 – delivering more traffic than the entire US backbone in 2000.

In 1998 many common devices were in their infancy (e.g., analogue cell phones were still widely used, the most prevalent internet connection was a 56kbps dial-up modem, the Walkman combined the ability to listen to tapes and the radio on-the-go, the first commercial bluetooth products began coming out only in 1998…) – all of which are now incorporated into one device (e.g., the iPhone automatically connects to the nearest WiFi station, roughly 360 albums can be held on the iPhone, bluetooth is now ubiquitous in cell phones and is present in some vehicles,…)

ICT policy should take into account these macro developments and recognize both how far we've come, how much the landscape has changed, and how much more can be accomplished. First, we need to promote investment. We need to encourage all companies to continue to take risks in new technologies. In order to get the broadband that we need, there has to an environment that encourages investment. At a minimum, policies must be assessed for whether they will deter investment in broadband and new services. Second, where there are gaps in service or broadband coverage, such as for rural areas or for low income households, we need to promote public/private partnerships. Government can help steer this process, but ultimately we need to figure out ways to make it more economic to serve these areas. In the U.S., there is a good model with a group called Connected Nation

that works with industry and government to identify those areas and work from a both and adoption angle to try to get more broadband deployed while linking to stimulating demand. Third, we need to recognize that innovation comes at all levels and at all layers -- from the edge to the core of the network. We need new applications and we need new networks to handle the increasing amounts of traffic, but more importantly, to enable applications that require differing levels of service. Government shouldn't put its finger on the scale, but instead should simply ensure that consumers are benefiting from the virtuous circle of innovation. Fourth, because innovation comes at all levels and layers and because this innovation has led and continues to lead to the formation of new competitors and new competitive business models, competition policy must focus on preventing anticompetitive behaviour through case-by-case adjudications, rather than adopting prescriptive mandates and attempting to micromanage network planning and engineering decisions through complex rules and regulations. Finally, we need to make broadband part of a broader ICT strategy and ICT must be made part of a broader social agenda. We shouldn't approach broadband policy in a vacuum. Our broadband policy should be reconciled with other policies to make sure that they aren't working against each other, but rather are synched up and working hand-in-hand toward a common goal.

MINA ZOULOVITS, Partner Philotheidis, Rogas & Partners, Legal Consultant to the Ministry of Economic Affairs, Special Secretariat for Digital Planning, Greece, gave an articulate, well received and highly interesting presentation on

Internet Governance

Corresponding to the Working Definition of the UN Working Group on Internet Governance "Internet governance is the development and application by Governments, the private sector and civil society, in their respective roles, of shared principles, norms, rules, decision-making procedures, and programmes that shape the evolution and use of the Internet" .

Public policy issues in the context of Internet Governance are related to infrastructure and management of critical Internet resources, the use of the Internet, the wider social interest and the developmental aspects of Internet capacity. However, the basic concern is to ensure the stable and secure functioning of the Internet. There is a need for both government and the private sector to better co-ordinate and develop rules furthering these objectives. These issues should not be treated in a vacuum, but as part of a wider social backdrop. Rules need to be better co-ordinated in connection infrastructure management, developing optimal Internet capacity, best use of critical internet resources and overall governance of the Internet.

Main problems to overcome are the potential unilateral control over the Internet by any single country, the uneven distribution of costs, the lack of multilateral mechanisms on crucial matters, as well as the lack of efficient enforcement tools in other jurisdictions and the lack of unified approach on crucial matters due to the difficulty to balance interests. Any multilateral effort will be complicated by different and overlapping regulatory jurisdictions.

The crucial point is to develop a common understanding of the respective roles and responsibilities of all stakeholders from both developed and developing countries. The role of governments has to include public policymaking, co-ordination and implementation, as appropriate, at the national level, and policy development and co-ordination at the regional and international levels.

The private sector should contribute to the policy proposals, apply self-regulation rules, and promote research and development of technologies. As regards the civil society, increased awareness and capacity building are crucial, but also to ensure that political and market forces are accountable to the needs of all members of society, and the development and dissemination of best industry practices.

JACQUELYNN RUFF, Vice President of International Public Policy & Regulatory Affairs at Verizon, USA, [www.verizon.com], spoke elegantly and brilliantly on

User Empowerment in the Global Digital Economy

There are 1.5 billion Internet users (global population: 6.7 billion) and Internet users growth is fastest outside the US and Europe. IP traffic should nearly double every two years through 2011 – with consumer IP traffic growing at 58% and business IP traffic growing at 21% CAGR. Key drivers will be high definition video and high speed broadband penetration. Multinational businesses that drive economic growth rely on global connectivity. Convergence is ubiquitous, and collaboration is paramount.

Today, Verizon provides communications services for tens of thousands of businesses and government agencies, including 97% of the Fortune 500, in more than 2,700 cities and 150 countries around the world. It delivers a global network of more than 485,.000 route miles, including terrestrial and undersea cable, spanning six continents – the Verizon network is large enough to circle the world 18 times. Moreover, the company is ranked the No. 1 global IP network – the most-connected public Internet backbone network for the ninth consecutive year by TeleGeography. Verizon Business offers one of the industries' widest arrays of global enterprise services.

Increasingly, network services and provisioning is a global phenomenon, as are the global reach and network management of many large enterprise users. Business user perspectives need to be better taken into account. Convergence is ubiquitous. Business users, because of convergence, are increasingly driving international traffic growth. This growth is a positive for the macro economy and should be encouraged to the maximum extent possible. Regulators need to recognize and facilitate this growth. And, the chief goal to achieve it is a supportive and responsive regulatory environment globally. Moreover, regulation cannot simply be reactive. It needs to be increasingly anticipatory.

Verizon is committed to providing users full access to the Internet so they can access any content and run any application or device. Proposals to limit quality of service differentiation or mandate non-discriminatory treatment of traffic may have unintended consequences of actually limiting consumer access and curtailing innovation and investment.

Anticipatory regulations could jeopardize network stability and user confidence by curtailing measures designed to provide good connections when networks are congested, block spam emails, ensure specific user behavior doesn't unfairly affect quality for others, enable real-time medical monitoring and other telemedicine, deliver highest quality IPTV experience, and to enforce parental controls to protect minors from inappropriate online content.

In the interest of innovation and investment, it is best to rely on transparency and self-regulation combined with case-by-case government action if anticompetitive problems actually arise.

JAY EDWIN GILLETTE, Professor of Information and Communication Sciences, Center for Information and Communication Sciences, Ball State University, USA, delivered a brilliant talk by ably addressing a topic of highest relevance and interest: Net neutrality.

Common Sense and Common Carriage: Draining the Net Neutrality Swamp

Network Neutrality is a very topical issue in US and Europe, and has caused a bit of a schism between carriers and end users, as well as application providers. If not addressed satisfactorily, Network Neutrality issues can impair access to the Internet, increase costs, lead to a digital divide and raise unsatisfactory issues of content control. Moreover, Network Neutrality could also impair innovation in the sector. The Bottom Line is to prevent the underlying carriers from engaging in discriminatory conduct. This applies to blocking or degrading Internet access, access to devices and quality.

In order to solve this problem, it would be advisable to reframe the debate by using the colloquial business maxim: "When you're up to your [anatomy] in alligators, you have to remember we first set out to drain the swamp." In truth, this policy swamp is an old problem with a classic solution — common carriage principles: Toll roads, ferry boats, railroads, telegraph, and telephone are all historic, feasible precedents. To provide protections for the network provider's revenue and management, while at the same time providing safeguards for customer costs and service, regulation of Network Neutrally should be based on the rational concept of common carrier principles which have applied for over a century to railroads, utilities and traditional telecom carriers, as these regulatory schemes are premised on foreclosing dominant market players from exercising their market power to discriminate against smaller rivals, vertically integrated applications and end users.

US law now accounts for both innovation and neutrality, if enforced. It is the policy of the US to encourage the provision of new technologies and services to the public. Moreover, US telecom policy requires real network neutrality: "It shall be unlawful for any common carrier to make any unjust or unreasonable discrimination in charges, practices, classifications, regulations, facilities, or services for or in connection with like communication service, directly or indirectly, by any means or device, or to make or give any undue or unreasonable preference or advantage to any particular person, class of persons, or locality, or to subject any particular person, class of persons, or locality to any undue or unreasonable prejudice or disadvantage."

Common carriage principles allow for end-users, businesses and customers —information access, content freedom, reasonable cost/ performance ratios. They allow for carriers and service providers reasonable, predictable network management parameters, a potential for tiered service revenues (not "unjust or unreasonable"), and a level competitive playing-field. They provide for regulators and governments a rational, feasible, tested basis for policy and regulation, equality of treatment for users and providers, and a framework for handling innovation and especially future growth.

To conclude, broadband growth is the engine of common good—21st-century development and prosperity. Therefore, broadband demand and supply should be encouraged. Broadband demand and traffic growth inevitably lead to conflicts of "public convenience, interest, or necessity". Therefore, the intra-industry fights have to be stopped — and common sense relied upon to craft solutions based on the common good shall be use. Broadband architecture problems lend themselves to common carriage solutions. Therefore, it is

recommended to work co-operatively to craft 21st-century common carriage Net Neutrality legislation and applications.

ANNE-MARIE VESDREVANIS, International Relations Officer DG INFSO & Media, European Commission gave an excellent presentation and background on the EU's issues and concerns in the specific arena of

Strategic European Framework for International Science and Technology Cooperation

The European Commission has adopted a Communication on a Strategic European Framework for International Cooperation in Science and Technology. This Communication results from a close co-operation between the Directorates-General on Information Society and Research. Its objective is to further promote European ICTs worldwide and in particular to improve Europe's competitiveness in the global economy.

This Framework responds to the Council Conclusions of February 2008, and is one of the five Commission initiatives following public debates on the future of the European Research Area (ERA) and on the globalization on the Information Society. It also supports the conclusions of the 2005 World Summit on Information Society (WSIS). In this context, particular attention will be given to strengthening the global position of the European ICT industry by further promoting EU regulatory principles, developing R&D co-operation and encouraging partnerships with non-EU counterparts as intended by the respondents to the 2007 public consultation held by DG INFSO.

The public consultation on International Co-operation which took place in 2007, raised a number of issues that are of great importance to the relevant stakeholders. For example the objectives of international co-operation in the field of ICTs included the need for legal certainty; collaboration for research, IPRs and standards; the liberalization of markets in industrialised countries and the fight against poverty in developing countries. In addition, similar issues were raised regarding regulatory and scientific co-operation.

The Communication is, first of all, about the ways to improve the effectiveness of the EU's international action in ICTs since telecommunications, the Internet, mobile telephony and television increasingly impact our life and the EU economy. To make EU action in ICTs on the international arena more efficient, the Framework stresses the importance of synergies with all the stakeholders and gives a new impetus to the partnership with Member States and European industry.

The Framework marks an important step forward towards achieving a common, global, EU offer resulting from reinforced exchanges between Member States, the Commission, European industry and the research community. This reinforced co-operation will concern actions in both the research and regulatory issues.

In the field of research, the Commission proposes common principles: a further opening of the ERA to the rest of the world; better coherence between research and other policy instruments for international co-operation; and fostering strategic research partnerships through geographic and thematic targeting. More specifically on ICTs, the Framework includes setting up international research co-operation priorities, inspired by inputs from industry and researchers, in particular from European Technology Platforms. It also

prioritises international pre-competitive industrial research collaboration, in particular in the area of divergent standards which hamper competition on the markets.

By strengthening its research effort and facilitating the use of new technologies, Europe can respond more effectively and efficiently to the major challenges society is facing today. Enhancing the ERA through greater integration and cross-border co-ordination of research investments and activities, will increase Europe's competitiveness and its attractiveness as a place to invest in research and innovation. Promoting European ICTs worldwide as a key driver of socio-economic growth will also contribute to the Growth and Jobs agenda.

Globalization is accelerating, and this has an impact on the way we produce, share and use knowledge. Major global challenges such as climate change, poverty, infectious disease, threats to energy, food and water supply, security of the citizen, networks security and the digital divide highlight the need for effective global S&T cooperation to promote sustainable development. With regard to regulatory co-operation, many EU companies – providing services and equipment on third markets – face administrative hurdles and the lack of legal certainty. The framework therefore recommends strengthening the global position of the European ICT industry by further promoting EU regulatory principles.

A first step will be to make ongoing policy dialogue more results-oriented by early identification of priorities for regulatory cooperation and joint research. Where appropriate, this dialogue should be extended to the convergence of the telecom and media sectors. Business consumer dialogue should also be results-oriented. Priorities for regulatory co-operation will include promoting the establishment of independent and effective regulatory authorities, the non-discriminatory allocation of scarce resources, publicly available licensing criteria and transparent award procedures, non-discriminatory and cost-orientated interconnection, and the use of open technologies. Monitoring non-tariff barriers and regulatory hurdles faced by EU players on third markets should be stepped-up.

These actions will improve the investment environment and anticipate the convergence between electronic communications and media. Current examples of co-operation with third countries, involving European Regulators include REGULATEL in Latin America and EMERG in the Mediterranean.

This strategic framework raises also the principle of the European Community and Member States working together. By working together, Member States and the EC will achieve much more, both within the EU and worldwide. Better co-ordination also responds to the interest of many partners worldwide to learn from our regulatory approach on issues such as convergence. At the same time, pooling our efforts will provide Europe with better economic intelligence on key countries or regions in the research and information society sectors.

The importance of achieving a global European offer was clearly demonstrated by the recent examples of the digital TV standard. Two Latin American countries, Colombia and Uruguay, have opted for the European standard. The framework will therefore be an important instrument in further promoting the economic co-operation with the rest of the world on hot issues.

In addition, this Communication recognizes the importance of co-operation with developing countries, in particular with Africa, through the new "Partnership on Science, Information Society and Space". The Partnership opens new possibilities for concrete actions in complementing investments made on physical infrastructures, creating conditions for setting-

up public-private partnerships on ICTs, or reinforcing the deployment of regional research and education networks.

This proposed European framework consists of a number of core principles for action. Actions under this framework will strengthen European public and private players in the way they interact with their partners and competitors elsewhere in the world. The proposed framework will contribute to the free circulation of knowledge at global level, to raising the S&T profile of Europe worldwide and to disseminating European ICT know-how in the world.

In conclusion, the Strategic European Framework for International Cooperation in Science and Technology, is not a breakthrough of policies but should be rather seen as recognition of the two principles: a) the need of Europe to speak with one voice on the international arena; and b) pooling Member States and Commission resources to achieve the best policy results.

GAO XINMIN, Director of Policy Planning Committee, the Advisory Committee for State Informatization (ACSI), Vice Chairman of Internet Society of China (ISC), China, provided a fascinating speech by educating the panel on the history and development of the Internet in China.

A Key Factor for Sustainable Development of Internet in China: Effective Governance Based on Healthy Cyberculture

Internet in China has became the most important national IP infrastructure. It is playing a significant role in the economic, political, cultural, education fields, and people's daily life. By the end of June, 2008, Internet users in China had reached 253 million. Therefore, the size of Internet users in China has leaped to the first place in the world, increasing by 91 million from the same period last year. Currently the main Internet usages in China are to browse news, e-mail, entertainment and games. The usage environment for online public service, commerce, learning and health care has to be improved.

Ubiquitous infrastructure is extremely important and the Internet Society of China (ISC) is encouraging this developments. With ubiquitous infrastructure and effective Internet governance, broadband use increases dramatically. The country is undergoing extraordinary growth in both Internet and broadband deployment.

WGIG provides the following working definition of Internet Governance: "Internet governance is the development and application by Governments, the private sector and civil society, in their respective roles, of shared principles, norms, rules, decision-making procedures, and programmes that shape the evolution and use of the Internet."

However, Internet Governance includes more than Internet names and addresses, issues dealt with by the ICANN, it also includes other significant public policy issues, such as critical Internet resources, security and safety issues, and developmental aspects and issues pertaining to the use of the Internet.

Rapid and continuing growth in the use and misuse of Internet, and the business and government activities online, has created an urgent need for effective Internet Governance. However, attempts to centralize control are likely to stifle sustainable development of Internet. Therefore the governance should be best steered in manner close-knit co-operation between government, private sector and civil society, to sustain the continuing growth of

internet. Internet Governance should consider a complex set of guidelines driven by legal, technical, administrative and cultural factors, that serve to establish a desirable online environment.

The necessity of a culture and ethical norm for Internet Governance is rooted in the special features of the Internet as well as in the special impact of the Internet on the human society. A more secure cyberspace can only be achieved by the combined efforts of everyone, and the more realizable instrument to make this happen would be a healthy culture and ethical norms rather than any law or regulations. This cultural and ethical norm has to become a fundamental pillar of effective Internet Governance.

ISC has played an important role in terms of self-discipline, facilitation and guidance the Internet culture and behaviour. ISC announced Public Pledge of Self-Regulation and Professional Ethics for China Internet Industry, and more than 1,200 Internet enterprises acceded to this pact. ISC also published the Declaration of Resisting Harmful Internet Information, calling for creating a healthy and trusted online environment. ISC issued the Guide for Web-based Public Email Service of Internet Society of China and signed an anti-Spam co-operation Memorandum of Understanding with various international organizations, contributing its efforts to the global anti-Spam campaign.

ISC and its provincial Internet Society branches appealed to 2,600 members, service providers and citizens for the call of “Civilized Online Behavior”, creating a clean and healthy Internet and prospering Internet culture. Moreover, ISC organized various Internet security-related training, summit, and public education, such as the Workshop on Global Culture of Cyber Security at the 2006 IGF Conference in Athens.

The **commentator** of the session, **MIRIAM SAPIRO, President Summit Strategies International**, USA, very articulately said a few words about the relationship between government and its citizens on Internet policy issues, especially the critical importance of the multi-stakeholder model and public-private sector cooperation. Continued and close collaboration is the best way to achieve the great potential the Internet holds for people around the world.

The WSIS process that began in Geneva and ended in Tunis recognized that many stakeholders, including the private sector, the technical community and civil society, have important roles to play. WSIS also recognized that “Policy authority for Internet-related public policy issues is the sovereign right of States. They have rights and responsibilities for international Internet-related public policy issues.” These responsibilities for governments in the WSIS context should include working closely with other stakeholders. Indeed, it is hard to think of governments working in the area of international communications and information policy in isolation from civil society and the private sector. These issues simply do not break down neatly into different work for different groups.

It would be desirable to focus more on enhancing co-operation than in creating rigid categories or roles. The Internet Governance Forum (IGF) taking place in Hyderabad, India, in December 2008 is an important step in this direction. The first IGF took place in Athens, and last year’s Forum was in Rio De Janeiro, Brazil. Each year, the IGF has brought together hundreds of stakeholders, on an equal footing, to discuss recent developments, take stock, and learn from one anther. The IGF therefore represents a promising development for bringing together the critical players and focusing their attention on concrete ways to make the Internet more accessible, useful and successful.

DAY 1 – AFTERNOON – PARALLEL SESSION

The **chair and moderator** of this opening session, **SERGIO ANTOCICCO, Chairman INTUG & President Anuit**, Italy, welcomed the participants and opened this session dedicated to the topic of "living in a digital world" with great enthusiasm by underlining the many changes living in a digital world implies for the daily life of all. It changes the way people are normally doing things and enables them to do things, they would not be able to do without a digital system. Mr Antocicco conducted the session with great incentive and ease.

OLIVIER MIDIÈRE, Executive Vice President Strategy and Marketing Bestof Media Group, France, [www.bestofmedia.com], provided a noteworthy presentation on

Enabling the New Digital Brand-consumer Relationship

For the first time in history, a culture – the digital culture – with its objects, its languages, its styles, the communities it generates and gathers, the rights it defines, the ways of living it determines, is universal.

Bestof Media Group was created in 2000 with the sound conviction that consumers will essentially rely on the Internet to get product information and make their decision before buying high-tech products. Bestof Media, which is present in 12 countries and 3 continents, has the following brands: Tom's Guide, Tom's Games, Tom's Hardware.

Digital becomes a new way of living. Digital is everywhere in the car, at home, at work, in sports, in health care, in leisure and education; in the fashion and in all conversations; and in the media and in most brand communications. Digital brings new products and services that redesign our daily living: Life Shapers transform our lives and change our habits. Life Enhancers enhance our life, making it easier to manage and to organize, letting us focus on what we enjoy the most. Life Stylers define our lifestyles and the ways we live together. Digital can lead to a better well-being for all of us, provided that digital is understandable and accessible, provided a better sharing of knowledge and practices and more clarity and legibility of the offerings.

In this new digital life, consumers are prosumers and influencers. They now have gained true power, but at the same time are overexposed to techno innovation and brand value propositions and overwhelmed with information of variable quality and reliability. As a consequence, consumers are unease and insecure in their path to purchase, they clearly express their frustrations as well as strong expectations. They want to know what to believe and moreover, they need to know who to believe when it comes to making decisions in the digital environment. It will be important to help each consumer to understand and embrace

digital products and services and to help bringing to all the benefits of the comfort and the well-being promised by the new digital way of living.

The consumer is the new "co-owner" of the brands and an emancipated, aware and engaged producer and supplier of information. He or she invents, distributes, proposes and learns even faster than brands. Brands need to build a new relationship with their consumers by reinforcing their presence and participation in networks and in communities. It is important to understand the new rules: Listening to the customers, telling more intimate brand stories, managing identity and reputation across the networks, and being part of the 24/7 conversation.

The Internet is the favoured communications and information mean for hundreds of millions of individuals around the world. There are dozens of emerged digital platforms both information and entertainment-based and millions of information sources. There are new places, new devices, new modes for media consumption. The information "snack culture" has arrived and the traditional media mix and efficiency measurement are under scrutiny. Classical marketing principles are to be revised and digital media require new expertise to overrun traditional media analysis.

Policy makers have to accompany consumers and companies. The challenge for policy makers is to help them understanding the global digital shift, to avoid a divide that would weaken social cohesion and economical growth and to promote full access for all to the new digital way of life. It is important to ensure that each individual, each company has fair access to the digital world and to promote a more legible and more accessible market for consumers and professional buyers.

PHIL NOBLE, Founder & Journalist PoliticsOnline.com, USA, delivered a most inspiring presentation via videoconference:

The Obama Campaign:
An Online Revolution

Barack Obama unleashed the new power of the Internet in politics. The digital revolution has radically changed virtually every segment of our society – music and entertainment, commerce and business, news and information. And now, Obama has done it in politics. He used the technology to empower literally millions of people to give money online, contact and persuade their friends, organize events, register and reach new voters.

The way of how the Internet and new technologies are being used in Obama's campaign primary focussed on four new trends:

The first trend is that there is a new metrics of success in politics. It used to be that the measures where how much money have been raised (big money donors), a candidate's standing in the polls, endorsements from other politicians and the reaction of the press. However, with the raise of online politics, there is a whole new set of measures that get added to theses and that are just as important: E.g., online fundraising (big versus small donors), how much traffic the candidate gets to his/her website; how many people volunteer online for the candidate's campaign; how many people sign up for the candidate's emails; how many friends the candidate has in MySpace; how often the candidate's name is searched in Google; or how often the person is listed on blogs. All of these are new measures of political success.

Trend number two is the shift from providing information to building activity. The core of Obama's strategy was my.barackobama.com, a social network that let followers and volunteers share organizational tips, discuss successes and failures, and plan local events. It is the ability to enable people to go to the site and do things right now today.

The third trend is the rise of personal media or "voter generated content". An example is a music video released by Will.I.Am and dedicated to the presidential campaign of Barack Obama. That song features Obama's voice from a New Hampshire concession speech set to Will.I.Am's music and melody. This video message has been seen by 12 million people.

Trend number four is that the campaigns are "moving" to commercial, non-news or non-campaign sites. People are using new tools like YouTube, google checkout, Facebook, flickr, Wikipedia or MySpace. One of the unique features of the Obama campaign has been its ability to embrace social networking. On www.barackobama.com, there are links to 16 social networks where Obama has a presence. They include familiar names such as MySpace, Facebook, LinkedIn, Twitter and YouTube, as well as more specialized networks, including BlackPlanet, Faithbase, MiGente, MyBatanga and AsianAve.

The prediction is that Barack Obama is going to win nationally with over 55 percent of the vote. Obama will be the JFK of the Internet and his online revolution is just beginning. Just as Kennedy used the new medium of television, Obama will use the new digital technology to change how leaders communicate and connect with the people. Obama will be the first new type of truly wired global leader of the 21st century.

ROBERT HARUTYUNYAN, General Director of the Armenian Development Agency – ADA, Armenia, provided an excellent and very rich overview on

The Digital Life in Armenia

Armenia is an emerging country, where the strong stress in the economy has been put on the development of high value-low volume products. As a result, today the share of IT sector constitutes in the GDP of the country is approximately 2%. Moreover, recently the Government of Armenia adopted a very ambitious programme for 2008-2012 aiming at establishing the knowledge-based economy focused on innovation. At the same time, the Armenian Government is one of the lead users of IT products, e.g. e-VISA applications, etc.

Armenia's competitive strengths in the software and IT services sector are based on a unique 50 year-old tradition of multi-generational IT skills. The highly qualified workforce is based on a traditionally strong education system and leading research institutions. There are more than 50 universities among which 8 are foreign universities: the American University of Armenia, the French University, the European University and the rest are Russian Universities. Armenia has 96 research institutes and research units.

Today, the average trend of the graduate output of IT specialists during last 5 years is more than 30%, while according to the Brainbench Global Skills IQ report for 2006, Armenia was ranked second in the world after the USA, in the number of IT certifications received per capita. The government is continuously spending resources in order to create infrastructure and well developed R&D institutes to have knowledge based country.

Currently, there are over 160 IT companies in Armenia among which are: Alcatel-Lucent, Microsoft, Siemens, Sun Microsystems, Synopsys, etc. Technical specialists make up 72%

of the workforce with the remaining 28% as management and marketing staff. This sector in Armenia is dominated by foreign investors, where the annual growth rate is more than 20%. Meanwhile, there are two communication operators with foreign capital participation in Armenia. The 3rd operator will enter the market in coming year.

Based on different surveys, it can be stated, that the focus of this sector in Armenia should be on the development of customized applications and embedded software, where the foreign companies as well as domestic ones registered in Armenia have already reached the level of competitiveness comparable to international requirements. The multimedia Armenian project “Aram Khachaturian: The Life and Works” has been nominated as the world's best multimedia project in e-Culture within the "World Summit Award 2005”. In 2006, the Global e-Content Forum was held in Armenia.

Attractiveness of IT related projects during the last few years started the process of IT techno-park launching in Armenia. One of the biggest technology parks in Armenia, the Epygi Technology Park, will host 1,000 students per year for 3D-technologies.

Armenia offers the ability to serve the customers on a high level in Western as well as Eastern countries based on its geographical location and historical experience. And today, this county is a very profitable location for making investments as well as starting business cooperation.

DANILO ORESTE BROGGI, Chief Executive Officer of Consip S.p.A., Italy, [www.consip.it], delivered a great presentation on

Facilitating SMEs’ Access to the Public (e)Procurement Market

Consip is a public stock company entirely owned by the Italian Ministry of Economy and Finance created in 1997 and operating along two main areas: the development and management of IT services for the ministry and the implementation of the programme for rationalisation of public spending in goods and services.

SMEs play a crucial role in the European economy as they represent 99.8 percent of all European enterprises. Moreover, SMEs often display the most innovative and flexible production processes. Among SMEs, over 91 percent are micro-enterprises, each of them employing less than 10 employees. According to the Italian Institute of Statistics, in 2005, 4 million micro-enterprises employed about 8 million people, which represents 47 percent of the entire workforce in the industrial sector. Such figure should convince even the most sceptical person that SMEs have to be put among the top priorities on the industrial policy agenda.

Centralized procurement is often associated to sizeable national frame contracts. When this is the case, centralized procurement may hamper the participation of SMEs in public procurement. There exist, however, several ways to overcome this negative effect. In order to foster the participation of SMEs in frame contracts, Consip is implementing a set of strategies:

The frame contracts are split in geographical lots, which number depends, among other things, upon the main characteristics of the supply market, such as the relative weight and the location of SMEs over the country. A lot of care has to be taken to asses the degree of potential participation - the higher the number of lots the higher risk of potential market sharing agreements if eventually participation turns out to be lower than expected. Furthermore, for a given number of lots, reducing the length of the contracts reduces the

overall value of awarded contracts and increases the number of SMEs that are able to participate. Consip also defines both economic and technical requirements in order to promote the participation of SMEs in bidding consortia. More generally, participation requirements are tailored to the specific features of each single frame contract, which reduces the barriers of entering into the procurement market for smaller firms.

In order to foster the use of eProcurement tools, Consip organizes permanent working tables with suppliers' institutional representatives as well as free of charge training events. Furthermore, Consip offers to SMEs dedicated Supplier Training Desks ("Sportelli in Rete") – a very effective means of communication and interaction. Finally, the eMarketplace for goods and services (Mepa) has been set up in 2003 with the specific aim of facilitating public procurement access for SMEs. The eMarketplace is a very effective tool when dealing with spot purchases below the EU threshold. In 2007, 90 percent of the enterprises registered to the eMarketplace are SMEs. 50 percent of the SMEs are micro enterprises with less than 7 employees and more than 60 percent of the value of orders transacted was handled by SMEs with up to 14 employees.

The Supplier Training Desks were initially set up in 2004 in partnership with the major institutional representatives and the National Association of Enterprises. These desks are intelligent encounters in which resources of the local supplier quarters offices are trained by Consip experts. These desks may provide any enterprise with free training and assist in the use of eProcurement tools especially in the eMarketplace. It is a kind of training to trainers office and a very efficient PPP. Today, 130 desks are fully operating in 19 regions all over Italy.

These local desks are part of a strategic programme which combines a centralised model with a decentralised model of a national eProcurement system. According to the European Code of Best Practices, a European study on the difficulties that SMEs encounter in accessing public procurement, it is not a legislative change in the procurement law what is most needed in order to facilitate their access but rather a change in the contracting authorities' procurement culture. The overall objective of this European Code of Best Practices is to allow Member States and their contracting bodies to fully exploit the potential of the public procurement directives in order to level the playing field for all economic operators whishing to participate in public tendering. Therefore the purpose of this document is twofold: 1) Providing Member States and their contracting authorities with guidance on how they may apply the EC legal framework in a way that facilitates the participation of SMEs in contract award procedures; 2) Highlighting national rules and practices that enhance the access of SMEs to public contracts. However, more actions and especially international co-ordinated actions are needed.

The concluding **Q&A** of the presentation addressed the question of the next steps necessary to further improve the efficiency of public procurement system for SMEs. Mr. Broggi stressed that one of the most important issues is to combine the centralised with the decentralised model. As regards the Italian legislation, it is necessary to set up a national network in which the central purchasing body like Consip and the regional authorities co-operate. This is the main reason why Consip has dedicated a specific division to establish a co-operative relationship with the regional authorities.

NORMAN JACKNIS, Director IBSG Public Sector, Cisco, USA, shared with great know-how and awareness

Some Questions About The Impact Of Digital Life On Government & Community

The private life of people is not separate from how they relate to the public sector. All of these trends – collaborative and social software tools, digital life, games and simulated environments, and network-based services – will affect governments as well.

Government is essentially defined by the ability to control a given geographic region. However, people spend more and more time on the Internet and while the physical bodies of citizens may be within a government's borders, their minds are often elsewhere. In many developed nations, a majority of adults use the Internet. In the US, 75% of all adults use the Internet, including 37% of those over 65 years of age. More than one third of Internet users participate in online multi-player games with others on the Internet. In games and other ways, for several hours each day, citizens constituents are interacting with other people online. None of whom may live in the geographical area a government "controls" – all of whom may even live in another nation.

Does these trends make their governments less relevant to citizens? As people become more global, spending more and more time in the digital world, it becomes harder for them to understand their local governments. If their citizens' minds are elsewhere, it becomes more difficult for government leaders to convince citizens they should support taxes for the government. The political system become more fragile because it is easier for a sudden surge of "reform" to take politicians out of office.

The old idea of government delivering services that citizens "consume" will change. This also means that one-way e-Government communications will be less important, even if it looks new (like blogs). With the citizens becoming prosumers (= producer and consumer) in the digital life, they might want to participate in getting public services online and even creating services themselves. When looking back at businesses 25 years ago, one of the first impacts of technology in the business world was to eliminate the middle management. The old idea that government leaders are foreign and apart may be replaced by the idea that civil servants are also citizens and citizens can do some of the work of civil servants.

People are now helping others with consumer problems by offering free advice and even criticism about products they have bought. They exchange on a website created by the company that made that product because the company knows its consumers are better and more credible at solving problems than it is. But the company still benefits by getting feedback and ultimately more satisfied consumers. Why does government try to do this with paid staff? And citizens are often still not happy then when the problem is solved because of what they went through!

Governments can help build communities. An example is the Australian web site Communitybuilders.nsw – a web site designed and managed by a central public agency to encourage individuals to build up communities. Westchester 2025 allows citizens to drive virtually through Westchester in order to understand certain implications of urban planning decisions. 3-Way Communications is another example: Governments use the Internet to get their citizens to other governments when they want policy to change. (Example: A web page that solicits a resident to create a message that supports your position, which you then send on their behalf – as an email or fax – to the national government.) FixMyStreet is a place

where citizens complain to their local council about problems on their street. All of those social tools are not just for teenagers. At least in the US, they are used predominately by people between 35-45.

Leaders should build a Web 2.0 capability by using Web 2.0 internally. They have to catch up to where their citizens are in order to be able to lead them. Government will have to be more efficient, flexible and effective in the process. They also have to change their conception of government. This new digital world should be used to empower the whole community to participate in the creation and provision of public goods and services

CRISTINA IMPERI, Manager New Technologies at Postelink, Italy, [www.poste.it], provided a most interesting insight in the transformation of a formerly rather traditional company:

Living in a Digital World
From the Company Perspective to the Users Involvement

Poste Italiane Group is a leading company on Italy's services market. The group offers integrated communication, logistic and financial products, and services throughout the country. In recent years, Poste Italiane has changed its business model from a traditional one, based on postal and financial services, to a new one based on the integration of new value added services. From 2002 to 2007 Poste Italiane's product portfolio reported a 52% growth.

Communication technologies have been one of the main drivers of business development, boosting service innovation and creating a new customer relationship. Communication technologies have allowed to simplify and expand the services which can be accessed via Internet, telephone, self-service machines. Every day, 1,500,000 people visit post offices, over 23 million items are handled and 20 million real-time financial transactions are carried out.

The main areas of innovation of Poste Italiane are electronic communications, logistics and e-Commerce, electronic payment systems, international initiates, multi-channel access (including mobile phones), and e-Government.

Poste Italiane recently launched the "high-tech postman": The postman is equipped with a portable handset allowing to offer to customers at home the same services the customer could have at the post office. New technologies have changed customer relationship as well as communications inside the company. Today, Poste Italiane is using unified messaging, videoconferencing, fax over IP, and other collaboration and communication services.

Service innovation is governed by a technological infrastructure that is among the most advanced in the world. Communication infrastructure is one of the main investment areas, representing the innovation service enabler. ICT Investment accounts for 44% of the company's industrial investments.

The main benefits of the transition towards the new technological platform are an 30% decrease of connectivity data cost, increased access speed and a 15% decrease of voice phone cost. Efficiency and productivity have been increased due to the integration between communication systems and business process, people (collaboration), application and communication platform. Moreover, the services level increased due to faster services at the front office.

Poste Italiane' s progress toward the constant enrichment of its product and service offer has yielded outstanding results. The company is strengthening its role as a partner of public administrations, companies and citizens. A special relationship has been established with public administrations through initiatives that promote and increase citizens' access to public services, enabling an improvement of government's administrative efficiency. Poste Italiane offers its own infrastructure integrated with the administration systems to ease citizen access to services. A new agreement has been signed with the Ministry of Public Administration and Innovation in order to support the government in increasing efficiency and improving the quality of services to citizens.

WILLIAM SLOAN COATS, Intellectual Property Partner White & Case, USA, [www.whitecase.com], presented with great know-how

The Revolution of User Generated Content

User Generated Content is publicly available media content produced by end-users. It could be blogs, online customer reviews, fan films or mash-ups. Japanese amines for instance are provided on YouTube subtitled in English by fans a few hours after the anime has been shown in TV in Japan. On one hand the fans in Europe get the immediate benefit of being able to see it the same day the anime is shown in Japan – however, those who are in the business of selling these animates are less happy about such practices. The new technologies are wonderful and terrible things at the same time. In this case they destroy the economics of what otherwise is a great business.

Most popular social networking and media platforms for UGC are MySpace, Facebook, Xanga, Bebo, Tagged, iGoogle, Netvibes, PageFlakes, Webwag, various video sites for UGC, YouTube, MySpaceTV.com, Yahoo! Video, MSN Video, AOL Video, or VideoEgg.

International copyright infringement concerns are whether the Internet Service Providers (ISPs) - including social networking sites, and sponsors or promoters of UGC contests – are liable for copyright infringement or for actively inducing copyright infringement if the user's content violates the rights of copyright holders.

The 1998 Digital Millennium Copyright Act (DMCA) has created a safe harbour for ISPs against copyright liability if they adhere to and qualify for certain prescribed safe harbor guidelines. An ISP shall not be liable for storing infringing material at the direction of a user if the service provider does not have actual or apparent knowledge that the material is infringing; does not receive a financial benefit directly attributable to the infringing activity in a situation where it has the right and ability to control such activity, and, upon notification, acts expeditiously to remove or disable access to the infringing material. Courts have interpreted the DMCA as providing broad protection to ISPs.

Viacom sues YouTube for one billion dollars. Viacom accuses YouTube of direct, contributory and vicarious copyright infringement related to the unauthorized display, performance and reproduction of Viacom videos, and inducement of copyright infringement by YouTube's users. Viacom's complaint challenges the careful balance established by Congress when it enacted the Digital Millennium Copyright Act. The DMCA balances the rights of copyright holders and the need to protect the internet as an important new form of communication. By seeking to make carriers and hosting providers liable for Internet communications, Viacom's complaint threatens the way hundreds of millions of people

legitimately exchange information, news, entertainment, and political and artistic expression. Google and YouTube respect the importance of intellectual property rights, and not only comply with their safe harbor obligations under the DMCA, but go well above and beyond what the law requires"

YouTube has implemented the requirements of the DMCA. Nevertheless, the case raises novel questions: Given the massive levels of infringement on YouTube, can YouTube claim that it was not "aware of facts or circumstances from which infringing activity is apparent"? By allowing users to "embed" video clips in websites across the web, is YouTube actively inducing users to infringe copyrights? And, can YouTube successfully argue it does not receive a financial benefit directly attributable to infringing activity?

YouTube has implemented the requirements of the DMCA. Nevertheless, the case raises novel questions: Given the massive levels of infringement on YouTube, can YouTube claim that it was not "aware of facts or circumstances from which infringing activity is apparent"? By allowing users to embed video clips in websites across the web, is YouTube actively inducing users to infringe copyrights? Can YouTube successfully argue it does not receive a financial benefit directly attributable to infringing activity?

Well before the Viacom suit, YouTube started entered into licensing deals with major content providers: In September 2006, a deal with Warner Music Group. In October 2006, deals with Universal Music Group, Sony BMG Music Entertainment and CBS. YouTube filters out unauthorized content owned by these companies. Authorized content can be posted on YouTube in exchange for a share of revenue from streaming advertising.

On October 15, 2007, YouTube launched in beta form its new content identification tool: YouTube Video Identification. YouTube's Product Manager stated that the new technology "will help copyright holders identify their works on YouTube, and choose what they want done with their videos: whether to block, promote or even - if a copyright holder chooses to license their content to appear on the site - monetize their videos".

On October 18, 2007, Internet and media industry leaders announced support for a set of principles for User Generated Content Services: UGC Services should use effective content identification technology ("Identification Technology") with the goal of eliminating from their services all infringing user-uploaded audio and video content for which Copyright Owners have provided Reference Material". "If the Copyright Owner indicates in the applicable Reference Material that it wishes to block user-uploaded content that matches the reference data, the UGC Service should use the Identification Technology to block such matching content before that content would otherwise be made available on its service".

The Viacom case, YouTube's new filtering tool, and the Principles for UGC Services suggest the industry may be shifting towards online content distributors playing a more proactive role in filtering out infringing UGC. However, if companies monitor UGC, then they might lose the DMCA safe harbor protection because then they, not the users, have determined what can be posted.

NANCY PASCALL, DG INFSO, Directorate C: Lisbon Strategy and Policies for the Information Society C1: Lisbon Strategy and i2010, European Commission, eloquently described the challenges of

Eliminating the Glass Ceiling and the Leaky Pipeline

ICT is our future - however, less and less young people, particularly women, take up ICT-related subjects or pursue an ICT career. 3.6% go into electrical and electronic engineering and 4.2% out of the total of graduates go into computer science and ICT-related studies. Out of these, only 0.9% in ICT are women. Moreover, many engineers actually decide to change their carrier and to work in other sectors than engineering. Recent reports highlight that by the year 2010 there will be a shortage of around 300,000 qualified staff in ICT areas in the European Union and 500,000 engineers in India.

The problem to be solved is twofold: On the one hand is important to attract young people to get into engineering, while on the other hand, it is necessary to persuade them to stay in. There exists an important pool of talents: the pool of young women and of women returners. The problem is that there are a lot of stereotypes concerning women and ICT: ICT has got poor quality working conditions, no holidays and spare time, ICT is a very male dominated area, and being a mother and having a carrier in ICT is not compatible - that is what many women believe about ICT – even if 79% of ICT jobs are outside the ICT sector. There are also stereotypes that the ICT sector has about women: They are technically incompetent, they lack commitment and motivation to have a challenging carrier, they have no managerial capacities in top positions, and being a mother and having a carrier is not compatible…

None of these stereotypes is valid and there are many examples of women who succeeded! But how to intervene? It is important to make ICT professions attractive, to educate people, to educate them to like ICT and technical-related subjects, to educate the trainers and teachers and to fight techno-phobia. Then, it is important to create transparent conditions for recruitment, transparent conditions for career progress and to work on best practises to avoid the leaky pipeline phenomenon. It is important to break the glass ceiling and to progress, to break the glass wall and to move from one place to another and to open the glass door and to let women in by providing equal conditions of salaries and payment. It is important to break stereotypes by awareness raising or by shadowing – which is a very successful initiative of the European Union to stimulate the interest of more young women, who are at the point of deciding on their future career.

To encourage young girls to choose a career in the ICT sector, the European Commission co-ordinated the organization of Shadowing Days in ICT companies and institutions. On a shadowing day a young girl "shadows" a female engineer for a day as she goes around her daily duties. The girl can thus see all the facets of working in the sector.

JOHN SOLDATOS, Associate Professor at the Athens Information Technology (AIT), Adjunct Professor at the Carnegie Mellon University, Greece, brilliantly discussed the very topical subject on how to build technology for the aging society:

Pervasive ICT and Applications Alleviating the Cognitive Decline

One of the technology trends that is gradually penetrating application for the aging is "pervasive computing" to make the environment computationally active and gracefully integrated with human users. Main approaches are tags, smart spaces and wearable computing.

Examples of pervasive infrastructures for the provision of assistant services for seniors are apartment consoles, personalized databases, personal badge locators with help functions, RF and IR locators, environmental sensors for location, weight, and speech recognition, pervasive databases (personalized databases for status and history), plethora of wearable systems, infrastructures for user authentication, or secure networking.

However, the most prominent application for the aging population is the alleviation of cognitive problems, e.g., prevention of cognitive decline, mild dementia or Alzheimer's disease. By 2020, 40 million people will be affected by Alzheimer worldwide and by 2050, the number could be increased to 80 million. Applications should target three complementary aspects: to boost mental activation, to enhance social interaction and to promote physical exercise.

There are a number of technical challenges. The greatest one is to take into account the human factor and to bridge between the special requirements of the elderly and the technology to build. Technical challenges concern the integration of mental activation, social interaction and physical exercise, the design of ergonomic and easy to use interfaces. ICT is not isolated from human factors and another technical challenge is to combine the human care and support factor with innovative ICT enabled services and independent living technologies.

Organizational challenges concern to blend ICT systems into existing processes - in homes, care centres, leisure centres, or hospitals. It is important to have the active involvement of gerontologists, caretakers, neuro-psychologists, or geriatric internists. Economical challenges concern the financing of the ICT systems TCO (Total Cost of Ownership) and the definition of the right balance as regards cost distribution (public authorities, private entities, end-users).

Conventional interfaces dies not work for elderly people. A solution is AIT's Multi-touch Surface Technology that is tracking fingertips. AIT is currently involved in several European projects, such as ElderGames creating a motivating environment through an entertainment offer with high preventive and therapeutic value using advanced technologies; the Vital Mind project, providing cognitive brain training by using the television medium and advanced interactive ICT; and the Hermes project providing cognitive care an assistive technology that combines the functional skills of the older person to reduce age-related decline of cognitive capabilities and assist the user where necessary. Based on intelligent audio and visual processing and reasoning, the project results in a combination of a home-based and mobile device to support the user's cognitive state and prevent cognitive decline.

As **chair and moderator** of the session, **STEVEN ADLER, Program Director, IBM Data Governance Solutions**, USA, [www.ibm.com], opened the session with an attention-grabbing presentation on

Toxic Content and Data Governance

Nowadays people are confronted to huge amounts of data and the challenge of choosing the one they can trust. Without knowing the source or the general context, any information available in photos, videos, databases, web documents can be misinterpreted and misused with significant consequences. Facing toxic content every day becomes a pervasive challenge, therefore data governance is a major issue.

The New York Times revealed in April 2008 the story of 6 retired generals invited on different TV channels to give expert opinions on the war in Iraq but who actually got their talking points from the Pentagon. Another example is the credit crisis where there is a public story of derivative products and greedy companies but also a story of bad data quality and loan origination. In 2005 the Federal Reserve has changed a key regulation to allow lenders to get a credit on the basis of a simple declaration, without documenting their incomes. This legislative relaxation allowed the alteration of these declarations so that the loans went through even if the clients represented a high risk for the bank.

Toxic content has invaded the public and private sphere and nobody can insure himself against. Information governance is dealing not only with threats to organizational and personal data that must be protected but also with threats to our own organization from bad data.

BENT POULSEN, Chief Auditor, VP Securities Services, Denmark, provided a very interesting presentation on

VP's Security Regulation

In the 80's Denmark dematerialized the stocks and bonds and all has been transferred on IT so data governance became a necessity. VP exported its system in Norway and today is implementing it in Mexico after being chosen as the most efficient mortgage system in the world.

The system is based on a balance principle. The loans are issued by the mortgage banks and in order to keep the balance, they are always pasted on an equivalent amount of securities so if house prices go up, so do the bonds. If a house is sold, the new owner takes over the mortgage loan. By following such principles the subprime crisis has been avoided in Denmark.

VP is dealing with 3.5 million accounts and a daily turnover of around 100 billion DKK in 66,000 trades. Everything is happening on IT and in order to make such a system work, data governance is a must. As a natural consequence, VP has joined the IBM Data Governance Council and contributed to the Maturity Model. A special attention must be brought to data quality because problems may relate to incorrect but also to inconsistent data. A strong regulation is also needed and in Denmark provided the necessary legislative framework completed by the European one.

One of VP's concerns is benchmarking its security system. To do so, the compliance with the existing regulations and recommendations is checked on a regular basis and organizations like the IMF ran its assessment program for the financial sector in 2005 and confirmed that the Danish mortgage system is one of the best in the world. VP is member of the Information Security Forum (ISF) and takes part in the biannual ISF Survey to the assessment of its security system because its goal is to equal and even surpass the highest security level within the financial sector worldwide. The Danish Financial Supervisory Authority imposes also executive orders on audit.

VP has developed a security policy with many standards, procedures and control levels. 98% of the control is performed within the system and this may explain its high efficiency. Beside the Mexico project, VP has signed two more memorandums of understanding and in 2008 has opened a subsidiary in Luxembourg and thus benefit from European funds. With a subsidiary in the Euro-zone country of Luxembourg, VP intends to maintain its competitiveness as the lowest-priced central securities depository, in spite of Denmark's continued position outside the Euro-zone.

RENAUD FINAZ DE VILLAINE, CMO, Micropole Univers, France, gave a very interesting perspective on

Data Governance, Intellectual Capital & Customer Value Creation

Today in the context of globalization, of economic and financial crisis, the governance issue is of main importance. Everyday we handle huge amounts of data and technology continues to change the way we work (e.g. company mashup will allow cleaning the data by eliminating the useless data). We need data governance because we have seen the failure of present regulation especially in the financial field. As the quantity of data increases steadily, the management of data quality is important for a company's competitiveness as well as cross selling and up selling.

The value of the enterprise should not only be measured by economical factors but also by its intellectual capital which is represented by the human and the structured capital. If the human factor is easy to understand, the structured capital contains the image, innovation, organizational and customer capital. Thus knowledge management is vital for any company.

Micropole Univers is a consultancy and integration firm working mainly on business intelligence, CRM and e-business which has created a customer value chain. The customer added value is coming from the economical added value, the emotional attachment added value perceived by the client and very difficult to measure but also from the market influence on customer value perceived by expert panels. From this observation, Micropole Univers has developed a model starting with the company quality perceived by the customer, the perceived value like the price / quality link and the perceived satisfaction which leads to the image of the company that influences the loyalty of its internal and external customers. All

this together with the financial added value and market influence play a role in increasing the value of the company and the customer value and data governance is very important at every stage of this process.

The **Q&A** following the presentation referred to the concrete measures that a company must take in dealing with data governance. Mr. Finaz de Villaine answered that the best clients of Micropole Univers are the French telecom operators which deal with millions of customers and their main problem is the churn. Their master data management was created so that every application within the company acts like a silo, with his own referential and the effort is to unify referentials. Decreasing churn only by a few percents reduces costs by millions of euros.

MICHAEL DZIEKAN, Office of Strategy – Director of Research and Solutions Strategy, Cognos, an IBM Company, USA, [www.ibm.com], delivered a most captivating speech by presenting a very interesting tool for data governance:

The Data Governance Balanced Scorecard

Data governance is the foundation of decision making. Its efficiency and effectiveness are key issues. Collaboration and knowledge sharing are the way to attain this goal but they depend on the quality of the exchanged data. Many elements influence the way information is used (e.g. changing demographics, accelerating globalization, etc) therefore a more collaborative business model is needed because decisions are taken upon silos of bad, inconsistent data. The business and IT must work together because information is a strategic asset.

Around 70% of the companies have the so called uncontrolled behavior, working on projects, in silos and or immediate goals. Over the last years, the companies move toward the operational efficiency by rethinking the use of technical and human assets and grouping their knowledge. The four pillars of this efficiency are: the information foundation, the governance, the processes and the business intelligence & performance management.

IBM has put together a six step data governance success program with blueprints and artifacts to help their clients become more successful. A scorecard has also been issued in order to look at the data governance program as a company and measure its performance. It shows the full list of measured values, the drivers and the associated actions, the causes and the effects.

In conclusion, 50% of public and private companies will form competency centers in order to be more collaborative, improve data quality for better decision making and improve efficiency. Mainly, it means connecting value people through process and enabling them with technology. The four key tenants to a successful competence center are the sharing of best practices, the growth through raised value, the support and education of the users and the governance program.

The **Q&A** part raised the question of the governance solutions and their level of maturity today. From the IBM prospective, the solutions are just enabled by technology and based on a pervasive performance management. The tools are mature from the point of view of data delivery and decision making. The research is also mature from the software point of view because solutions have been documented from gathered experiences. The immature part is the understanding of the market because it is more of an educational aspect.

JACQUES BUS, Head of Security Unit, DG INFSO & Media, European Commission, presented with great know-how the European point of view about

The Crisis in Internet Security

Today newspapers report frequently on problems related to security, privacy and the undermining of trust particularly on the Internet but not only. Huge data losses within enterprises are often due to internal governance problems. In spite of all these negative aspects, data collection is vital for governments, businesses as they work to bring useful services to the end users, such as e-government, e-health, e-education, public security services, innovative applications that will eventually improve the quality of life.

The main issue is how to deal with the governance problems related to these services because deceiving people has been an ongoing problem since humans started to communicate. To overcome the trust and security issues, governments issued laws, agreements of international cooperation to protect the citizens and their rights. Any technological development must take into account these policies and stakeholders should cooperate to prevent any problems.

All exchanges among humans rely on trust, which is based on certain freedoms and the respect of privacy. Laws and political institutions appeared from these principles and they are now the foundation of our society, along with the culture of justice, of accountability and of transparency. It is very important to define the reporting criteria and the governance principles to avoid problems like the ones of the financial system today and foster trust. The progress of cyber security is based on understanding the characteristics of the global political structure and the cooperation between judiciaries, the respect of social values such as privacy, the persons' or organisations' liability for any of their digital actions.

Building a trustworthy ICT includes four policy areas: creating accountability and transparency based on an identity framework providing global interoperability and privacy protection, setting up structures, services and technologies for a sound risk management and building governance on these principles.

ZAHID JAMIL, Barrister-at-Law, Jamil & Jamil, Pakistan, presented with great enthusiasm the Pakistani legal efforts in the field of data governance.

Data Governance Legislation in Pakistan

In today's world, sensitive data like credit card numbers or phone numbers is transferred to third countries through outsourcing. Problems appear when this data does not benefit of a legal framework protecting it in the host country, like it is the case in Pakistan, India, or Bangladesh, the favourite destinations for IT outsourcing.

Incidents were revealed about credit card information sold by the employees of the data processing company. In this scenario, the legal relationship between the outsourcing company and the data processor is established in a contract, the later has another contract with its employee. These contracts are only valid between the two parties which means that there is a problem of privity: a customer cannot go after the data processing company nor after the employee who leaked the information. Even if sued by his company, the employee's

annual income may not cover for the damages. The customer can go to court and get a restraining order about the data or incriminate this kind of act.

Countries like India, Pakistan or Bangladesh have the same contract legislation because of their English heritage. When outsourcing, the personal data is considered financial information and not property, which is protected by copyright laws or patent laws. Then lawyers have tried to bring this act into the cyber crime sphere but employees are authorised to manipulate data and so they are not considered hackers. As there is nothing to do on the contract front, on the damage front or on the cyber crime front, lawyers look for a confidentiality law. But these countries do not have legislations about confidentiality, privacy and data protection and this for a good reason: they are mostly dealing with the US market much less strict on the privacy issue compared to the EU. In their effort to enter the European market, governments drafted an EU centric legislation, which has never been promulgated because it would have made them lose the American clients who represent around 75% of their activity. The solution was found by working with the International Chamber of Commerce and consists of the model clauses which enable the data transfer from EU countries to the data processing companies. In August 2008, Pakistan was the first country where these contracts became mandatory to any company outsourcing within Pakistan. This legislation says that any contract signed between the data processor and the data controller, will be enforced in respective of public policy, of the constitutionality, it will be enforceable against the parties signing it but also against third parties or fourth parties and criminal penalties will be attached to it.

SOKRATIS K. KATSIKAS, Member, Hellenic Authority for Information and Communication Security & Privacy, Professor, Dept. of Technology Education & Digital System, University of Piraeus, Greece, provided a great insight in the Greek effort

Towards a National Strategy for
Information and Communication Security and Privacy

In Greece, the right to personal data protection and communication privacy are guaranteed by the Constitution. The respect of these rights is overseen by two independent authorities: the Hellenic Authority for the Protection of Personal Data and the Hellenic Authority for Information and Communication Security and Privacy (ADAE). National laws are completed by the European ones that Greece is bound to respect, and together they cover a wide field of application.

ADAE is an independent organization which reports to the Greek Parliament who appoints its board members. Just like the Hellenic Authority for the Protection of Personal Data, its role is to oversee the implementation and application of the law both in the private and the public sector and to protect citizen's rights. ADAE has the right to audit every organization providing all types of communication services, to confiscate evidence and proceed to hearings, supervises the lawful interceptions and issues recommendations and regulations.

The framework for privacy and data protection exists, but Greece still misses a national strategy for these issues. The imperativeness of such strategy is beyond any doubt and its main goals should be to enhance national and international cooperation, to foster the competitiveness of Greek ICT enterprises, to improve risk management, to protect citizens' rights and the national knowledge capital, and to improve societal awareness and professional competencies in information and communications security. ADAE proposed as a first step towards this national strategy, the establishment of a body responsible for

formulating, monitoring and auditing its implementation but also for providing information to the state, the businesses and the citizens. Secondly, each minister should have an information and communication security office and a national forum should be put in place with the businesses and the citizens, thus implicating all the stakeholders.

PARIS KOKOROTSIKOS, Chairman and CEO, Euroconsultants SA, Greece, delivered a very interesting and concise talk about the

Challenges for SMEs in Information Governance, Security and Privacy

SMEs, unlike big enterprises, do not have big data bases requiring data governance, but sometimes they have to rely on third parties for information. Different sources may provide financial information related to taxes, credit assessment, social security, stock market. Regulatory information comes from chambers of commerce, company registry and controlled product data bases, but professional associations may also provide information for SMEs.

The SME involvement in data governance is inhibited by the lack of a significant infrastructure, with standards, practices and government support. Otherwise, SMEs are always compliant with imposed electronic systems for taxes, insurances, etc, which means that they have access to the technology and skilled staff. They will get more involved in data governance as they will become the backbone of tomorrow's Europe which fosters innovation and they will find in ICT the way to an increased competitiveness.

A good example is public e-procurement representing 16% of the European combined GDP which justifies the great SME involvement. In this field there is already a Single Electronic European Market, innovation driven which explains the need for increased market efficiency through ICT. The SMEs will get more involved if certain requirements are met such as: interoperability across different sectors and institutions, compliancy with business and legal practices, cost efficiency, compatible processes centered on SMEs, etc.

Euroconsultants works to an interesting proposal for interoperable trust on e-procurement based on the GTC guidelines, a system that will be domain trust server enabled, with third party witnesses, operating in a common legal framework connecting the real and the digital worlds. The system is based on fundamental values like legality, integrity, accountability, security and privacy, assuring the existence and the integrity of the procuring and supplying organisations and of their representatives, as well as the integrity of the processes that must be fair, transparent and non-discriminatory to all participants with an enhanced protection of intellectual property and other rights.

In conclusion, public e-procurement will diminish related costs and involve SME in the data governance process. The system needs regulation and the involvement of all data management operators in an interoperable manner and as all the technology already exists, the change must start at the top, with the governments, as the major actors in procurement.

JEAN-MARC SUCHIER, VP, Director European Programs, Sagem Sécurité, France, [www.sagem-securite.com], provided a most interesting presentation that outlined with great clarity the features of a new technology

Biometric Cryptography: A Solution to Protect Privacy?

Biometrics is a technology aiming to protect identities, checking that only the true owner or authorized persons are using the identity information and preventing the later from being stolen. The first step is the enrolment which happens only once for each application and consists of providing the biometric data (e.g. facial data, fingerprint or iris) and transforming it into templates which are stored in data bases or on smart cards. The data can be protected through encryption. Each time the data is used, an authentication process is necessary. It means that every time, the biometric data must be provided and transformed in a template that will be compared with the stored data. The encrypted data must be then unencrypted for comparison.

Concerning biometrics there are two major concerns: the fake biometrics and the unforeseen use. If some of the biometric data is quite easy to get (e.g. fingerprints), its abusive use is prevented by human control and technological solutions able to check that a real person, a live finger and a real iris not a lens is presented for authentication. The unforeseen use means using stolen templates to other applications. Practically, this is not impossible, but very difficult to do because it requires sophisticated material and people capable to get inside another application. However, the future deployment of biometrics on a large scale will need an improved protection from this function creep.

Europe is a pioneer in data protection regulation. In this context, the industry comes up with solutions that are compliant with this regulation. They must also respect two major constraints: enabling multiple identities of one individual and allowing an identity to be repudiated. Biometric cryptography is a solution to these problems. The biometric information is transformed and encrypted through an algorithmic process into “pseudo-identities”. For authentication, only encrypted data is used. Furthermore, this encrypted data cannot be used in reverse to get to the original biometric data. Several pseudo identities can be handled without any connection being possible among them and revocation is possible if needed. Research in privacy protection has moved forward due to collaborative projects partially funded by the European Commission within FP6 and FP7 (e.g. 3D Face, Turbine) and a couple of years are still needed before marketing large scale solutions.

THOMAS HART, Regulatory Expert, EU-China Information Society Project, China, delivered a great talk about the Chinese efforts to put up a legal framework for data governance:

Information Governance and “Informatisation” in China: Solutions and Plans

The EU-China project contains diversified subjects like e-commerce, e-contract, e-government, freedom of information, multimedia convergence and many more. On its regulatory side, the project’s backbone is built on electronic signature, information security and personal data protection.

China has already put in place, since 2005, the legal framework related to e-signature and its implementation meets the same challenges as in Europe. Organisations need to be informed

of who will benefit from an electronic signature, of the implementation process, the possible legal traps, the certificate providers and certificate continuity, cross-border interoperability and mutual recognition of e-signatures, which is a problem even between Chinese provinces.

The personal data protection policy is a current topic of discussion for the Chinese Government. Although the specific law is still under preparation, data protection already exists to a certain extent. Article 40 of the Constitution stipulates the right to individual privacy and correspondence privacy. Supreme Court decisions along the years have supported this right, the law on resident ID card taking up the issue of personal data, the post law grants the right to mail secrecy. Other measures and decisions refer to specific issues like Internet security, personal credit information, HIV infected patients, minor's right to privacy, access to government information, etc.

China faces the challenge of looking at European and American models, trying to adapt and integrate them in their own model. China is about to build its information society regulation and is looking for information from countries with previous experiences. Europe is bringing its input through the EU-China Information Society project which aims, among other things, to build bridges between experts and create a sustainable dialogue.

THOMAS MYRUP KRISTENSEN, EU Internet Policy Director, Microsoft EMEA, Denmark, [www.microsoft.com], brilliantly demonstrated some very interesting examples of a company's approach to privacy issues:

Information Governance – How to Protect Privacy Online?

The present regulation concerning privacy was established in a time when data flow was less important than today and it will be insufficient for the Internet of the future. Public and private organisations try to deal with data protection but the consumer still carries the largest part of the responsibility and this affects his trust in products and services. Statistics show that 2/3 of online users are worried about their privacy and 12% restrain from ordering online.

Internet and networks brought a threat environment for operating system developers. Thus, Microsoft came up with the trustworthy computing initiative, according to which, each piece of software goes through a check for security implications at every stage of its life cycle.

Last year, Microsoft also developed a set of principles for online search and ad targeting. The fist principle is user notices attached to websites, built in a layered approach to privacy and easier to read. The principle of user control offers a view of the PC's security and privacy. An example is the phishing filter that can be set up but with a privacy impact. The third principle concerns the data left online and the transparency about its storage and deletion. The other principles are about the people who have access to data and the legal requirements and industry best practices.

Another example is the latest version of browser, Internet Explorer 8 that gives more control to users: preserving favourite data while deleting others, the possibility to browse without being tracked locally. As average users surf on more than 2000 websites each month, they come in contact with third-party content without knowing it. This content can be harmless but it can also serve to track them. Browser developers will give users more control over their info to third parties and the possibility to assess and block their exposure to third-party content.

DAY 1 – AFTERNOON – PARALLEL SESSION

The **chairperson** of this healthcare session, **THIERRY ZYLBERBERG, Executive Vice President in charge of Strategic Partnerships & General Manager of Health Line of Business France Telecom**, France, welcomed the participants and panellists with enthusiasm and opened the session with an inspiring address on its main objectives.

The session's **moderator**, **PATRICE CRISTOFINI, Director Partnership and Strategic Alliance, Orange Healthcare**, France, [www.orange.fr], provided an attention-grabbing introduction by showing two short video clips showing how healthcare in the future could look like.

Up until 2007, ICT were only rarely incorporated into healthcare practices in France. Since then, Orange Healthcare has developed several services, including: "mobile teleassistance" for people needing reassurance or comfort services, "Connected Emergency Response" for the emergency services, as well as various solutions facilitating home care.

MICHÈLE THONNET, Official Representative e-Health France, Responsible for European and International Partnerships & Relations, Ministry of Health, France, delivered a very clear and concise overview on

The European eHealth Initiative

The aim of the European eHealth Initiative is to establish the open co-operation between Member States of the European Union and associated states to implement European wide interoperable cross-border e-Health services.

An ageing population, the evolution of chronic diseases, the transformation of citizen demands and needs, increasing costs of research, equipments, examinations, and treatment, but also pandemic expansion, shortage of healthcare professionals, an increasing mobility of citizens and patients, increasing expenditures and a new economic model are common challenges across the globe and make reforming the health system a necessity.

ICT is necessary but not sufficient for successfully transform the health system. It will be important to meet the expectations of the EU citizens. Free choice and the availability of healthcare services, but also a high level of continuity, security, and quality are crucial success factors.

Everybody likes talking about technology, but cultural changes are key. It is more difficult to change behaviours – it needs more time and continuous efforts. It is important to change professional exercise and to re-organize the actors' relationships and positions. There is a need for collaboration, team work and information sharing.

Health is a national prerogative. There are substantial differences between national healthcare systems of the EU Member States, but at the same time similar challenges and political ambitions to reform the healthcare system. National and regional systems could benefit from a closer co-operation among the states.

Health systems and health policies across the EU[2] are becoming more interconnected than ever in the past. In order to provide a means of addressing these issues, the Commission adopted a Communication on patient mobility and healthcare developments in the EU in April 2004.

On 2 July 2008, the Commission adopted a draft Directive on the application of patients' rights in to cross-border healthcare, which provides a Community framework for safe, high quality and efficient cross-border healthcare, by reinforcing co-operation between Member States and providing legal certainty over the rights of patients to seek healthcare in another Member State. Furthermore, the Commission published a Recommendation on Cross-Border Interoperability of Electronic Health Record Systems.

The three European Standards Organisations (ESOs), CEN, CENELEC and ETSI, accepted a mandate from the European Commission. M/403 aims to provide a consistent set of standards to address the needs of the rapidly-evolving field of e-Health for the benefit of future healthcare provision.

epSOS (Smart Open Services for European Patients) is a European wide project realized by an international consortium consisting of 15 competence centres, 31 companies, research centres and 12 EU Member States (Austria, Czech Republic, Denmark, France, Germany, Greece, Italy, Slovakia, Spain, Sweden, The Netherlands, UK). The overarching goal of epSOS is to develop a practical e-Health framework and ICT infrastructure that will enable secure access to patient health information, particularly with respect to a basic patient summary and e-Prescription, between European healthcare systems. The project is co-financed by the European Commission within the Competitiveness and Innovation Programme. epSOS was launched on 1st of July 2008 and will be in progress for 36 months.

Patient summary and e-Prescription services are in place in many member states on a national basis. Two distinct types of use cases for cross-border communication have been identified for the use case “patient summary”: An occasional visitor, for example someone on holiday or attending a business meeting, and a routine case, for example someone who lives in one country but works in another. Within the cross-border prescription area there are two basic generic use cases: A patient needs medicine that is already prescribed in the home country when in another country, and a medical professional decides to prescribe medicine to a visiting patient from another country.

Health is a national prerogative but international collaboration is a key issue enabling patient mobility. In this context, the European Commission has adopted on 2 July 2008 a recommendation on cross-border interoperability of Electronic Health Record (EHR) systems. Aimed at EU Member States, this document provides a set of guidelines for developing and deploying interoperable systems, allowing for the cross-border exchange of patient data (patient summaries, emergency data sets, medication records) for healthcare purposes.

MARIO PO', Administrative Director and **ALESSANDRO BRUNO, Administrative Assistant Azienda ULSS n 8 Asolo,** Italy, provided a most stimulating and well received presentation of a highly innovative project:

PIC, Medical Network – Health, to Hand

Today, health is to hand even in your pocket. To obtain in real time all information regarding your health data, medical reports, clinical tests and clinical data records, the Local Health Authority N° 8 of Asolo has created PIC – the individual clinical portable service. An innovative individual archive of clinical data available for online consultation on www.ulssasolo.ven.it.

PIC is very easy to use: The panel patient inserts his personal password (which he can obtain from the Local Health Authority of Asolo and which guarantees maximum privacy), selects the required information and with just one click, PIC will display all his clinical data and relative documentation clearly and in up-to-date form and accessible from anywhere.

PIC can be consulted in four languages: Italian, English, German and Spanish so that the information can be used also when you are abroad. In case of need, your data will be easily understood by foreign doctors. Everyone can search his data by period, international coding of the disease, branch or kind of event. PIC will immediately display the required information, the data of your blood test, an x-ray, details of your stay in hospital, your clinical file for example with the individual graphic presentation chart.

A family doctor, a specialist or a doctor in another hospital, thanks to PIC, can have access whenever his patient gives permission to all the health records of that patient and they can thus find out more about their patient's medical history. He can do this even if he has been charged on a different local health authority or he stays in another country through a special function called "temporary authority". Through special functions he may also add the latest information to the patient's file. To ensure the security and privacy of information that is transmitted PIC uses the HTTPS protocol. Not only that: all requests for consultation are recorded in a special log-file which may be consulted afterwards.

ALISOUN K. MOORE, Director, State & Local Health and Human Services, Northrop Grumman Corporation, USA, provided a clearly focussed and fascinating presentation of

The New Business Models on e-Health for Innovative Solution

The most important drivers of change towards new business models in the health sector are demographic drivers, such as an aging population, an increase in chronic disease, changing employment patterns, an increasingly mobile, global workforce and patient empowerment.

Within the next 40 years, the number of persons aged 65 years and older is expected to double in the US. 29% of the healthcare expenses incur within the age group of 65 years and over. Diseases of the heart and cancer are the leading causes of death in the US.

The majority of the non-elderly obtain health insurance coverage through their employer. In 2006, 61% of the nonelderly population in the US was covered by employer-based health insurance. However, the share of employees with job-based coverage fell markedly between 2001 and 2006. Public programs, such as Medicaid, provide coverage for some of those with low-incomes who do not have access to employer-based or other insurance. Still, in 2006,

46.5 million nonelderly people in the US lacked health insurance, representing 18% of the non-elderly population. National health spending is projected to continue to increase as a share of GDP over the next decade.

The most prominent IT applications in the health sector are applications concerning the health information exchange market, Electronic Health Records (the adoption of EHRs in the US is quite slow compared to UK and European nations) and telehealth or telemedicine applications.

A Nationwide Health Information Network (NHIN) will be set up in the US. It will be sponsored by US Government in order to enable the exchange of Electronic Health Records by 2014. The Department of Defense (DoD) and Department of Veterans Affairs (VA) launched the joint DOD/VA EHR – the world's largest EHR project.

The adoption of EHRs is rather slow in the US and currently hovers below 20%. To speed up the process, the US Department of Health & Human Services just announced a Medicare EPR reimbursement for physicians. The problem is that the ROI is not achieved very quickly (3-5 years) and requires a successful implementation and high usage. EHRs access is not yet available to patients in most cases.

Telehealth in the context of home care relies on the use of digital networks to remotely monitor and treat patients. Telehealth for home care is an emerging market with great potential to improve the quality and delivery of care while decreasing costs. However, work processes and technology need to improve before telehealth adoptions become more widespread.

Telehealth home care includes traditional live-interactive video telehealth for remote consults between patient to physician or physician to physician. Store and forward telehealth means sending data, messages, or images that can be stored and read/evaluated at later time. It includes radiology images, reports, lab results, clinician reports, etc. Another application field is home monitoring telehealth, increasingly relying on wireless technologies, for applications such as diabetes monitoring or heart monitoring.

Telehealth in the home care sector saves costs of visits and need for skilled nursing care. Current growth projections indicate that home health care will grow at five year compound annual growth rate of 56%.

The main challenges to be met are interoperability, privacy and security issues, legacy systems, the availability of broadband, cross-border co-operation and infrastructures and the related cost.

SULTAN A. BAHABRI, Chairman HiTS Telecom, Telecom Group, Saudi Arabia, eloquently spoke on

Major Trends in Healthcare – 21st Century's Challenges

The current developments in health care are characterised by fundamental changes and the failure of current healthcare systems as we know it. The future of National Health Services is put into question and there is a radical paradigm shift concerning the delivery of care.

Healthcare today can be considered as a knowledge activity and the dramatic changes and the transformation in the healthcare sector can be compared to the information revolution. The changes are technology driven, with assets shifting from tangible towards intangibles. The global environment of healthcare increasingly makes international networking a necessity in this sector. The infrastructural transformation of the healthcare sector, caused by the impact of ICT and e-Healthcare represents another current major trend.

It isn't just the fantastic growth of medical knowledge (and obsolete) in recent decades that holds revolutionary potential for improving health; it's also the parallel shift in control of that knowledge.

Global healthcare is characterized by a rise of patient power and many people using Google as their main diagnostic tool. People do want to be prepared and informed and be sparring partners with their General Practitioners. As stated by Dr. Lowell Levin, Professor at the Emeritus Yale University, 85% to 90% of care is provided by ordinary people.

Healthcare today is output driven and characterized by a competitive environment. Aging and chronic diseases are other major challenges in the healthcare sector. No Country's health-care system has been designed for this combination of diseases heavily dependent on behavioural and lifestyle factors plus an aging population (Alvin & Heidi Toffler).

It is important to know, where one wants to go. The healthcare sector is 20 years behind other industries in terms of quality and innovation.

MIKAEL GRANNAS, Chairman of the Board and CEO & **KAJ SÖDERMAN, Project Manager Archipelago Networks LTD**, Finland, delivered a captivating presentation of a very distinguished initiative:

e-Health and Well-being in the Finnish Archipelago

The Finnish Archipelago consists of 8 municipalities with a total of 24,000 inhabitants. The Archipelago has 15,000 islands and skerries, 10,000 km shoreline, 10,000 summer cottages, 40 ferries and a 100% wireless broadband coverage.

The association "Region Åboland" acts as the regional development agency. Its members are the 8 municipalities in the region. "Region Åboland" supports the municipalities and lobbies in issues of regional importance.

Archipelago Networks LTD is fully owned by "Region Åboland" and the municipalities. The company builds and maintains the core network of the region, act as network operator and develops and tests new services. Archipelago Networks LTD was the first commercial WiMAX-operator in Finland. It VoIP and IPTV services as well as MobiRoad (wireless broadband available on ferryqueues and passes). Moreover, the company provides broadband network access in rural areas to local inhabitants, tourists and local businesses where there is no existing commercial provider.

One of the programmes prepared and carried out by the South Finland Regional Alliance is the InnoELLI Senior program. InnoELLI Senior 2006-2008 is a program funded by the ERDF (European Regional Development Fund). The aim of InnoELLI is to promote the development of well-being services for the elderly in Southern Finland.

ArchipelagoELLI was one of the projects realized within the framework of the InnoELLI Senior Programme. The project aimed at giving senior citizens in rural areas the possibility to live at home as long as possible thanks to a videophone with high-resolution display and good audio. The videophone functioned trough the Internet and required at least a DSL-connection at the customers (senior) premises. The phones were connected to a regional network containing 21 similar phones installed at the seniors' homes, health centres (such as the responsible district or community health nurse, doctors) and relatives.

The videophone considerably increased feeling of safety of the elderly persons. It prevents social isolation while at the same time allowing to contact the health staff immediately in case of need.

With only three numbers to remember, the phone is very easy to use. Installation takes approximately 30 to 45minutes, and further 30 minutes (including s test call) to train the customer to use it.

The final evaluation of the project showed that the phone was easy to use, even for seniors with minor dementia. All seniors where 80 years and older. The eye-contact by video with the patient was more of use to the nursing personnel than to the patients. The technology allowed to replace unnecessary trips by making the diagnose via the phone. However, the broadband wireless connections caused some extra obstacles: Thunderstorms and other weather phenomenons caused disturbances in electric distributions and in signal quality. It is also important to take care not to confront the seniors with too many devices. The general project expectations were fulfilled.

One of the project participants was a private rehabilitation centre in Kimito with clients in Houtskär and Västanfjärd. Parts of their rehabilitation program was done by using the videophones. The geographic distance between the rehabilitation centre and its patients were about 195 km of road (including the use of 3 ferries, 1 boat …) – a distance that corresponds to a one-way travel time of 4.5 hours. Due to the use of the videophones, it has been possible to save travelling time and to spend more time with patients.

KOSTIS KAGGELIDES, Chief Operating Officer and Vice President of Gnomon Informatics S.A., Greece, provided an excellent talk on

Healthcare eProcurement – Challenges for Efficiency

Healthcare expenditure is increasing and insurance funds are in trouble. Low wage countries invade medical consumables with high risk products but there are also complaints for efficiency and service. Standards conformance in medical supplies and the transparency and the public nature of healthcare are further characteristic of the current state of healthcare.

Medical expenditure is continuously increasing: Money spent on medical durables more than doubled between 2000 and 2004. Expenditures spent on medical goods increased from roughly 560.000 to about 766.000 million EUR in the OECD countries.

e-Procurement solutions in the healthcare market significantly increase process efficiency: It can help exploiting group buying and helps to devise a better needs analysis. Moreover, e-procurement can reduce so-called "maverick" or off-contract purchasing. e-Procurement solutions also improve market efficiency, especially in view of a single European electronic

market: The transparency of information provided by e-Procurement may introduce new players. e-Procurement also implies advanced winner determination mechanisms.

When implementing an e-Procurement solution, there are some vital issues to take care of: The most important aspect is user acceptance, but also flexibility, security and trust in order to gain user acceptance, interoperability of the technical solution as well as the cost of ownership and process improvement.

The e-Procurement solution Gnomon Informatics is involved in is currently installed in the region of Macedonia and Thrace, Greece. The project implementation phase is 10 months with the phase of gaining user acceptance already completed. The solution is deployed in 12 hospitals and the service will be launched at the end of this year.

VICTOR EMMANUEL DE SA, Partner Geneva Solutions, Switzerland, delivered a great talk and a notable presentation on

User Empowerment in the Global Digital Health

An April 2008 Europe-wide survey on e-Health has found that 87% of European General Practitioners use a computer. 80% of them are using Electronic Patient Records. The survey highlighted that around 70% of European doctors use the Internet and 66% use computers for consultations. European doctors often exchange data electronically with laboratories (40%), but less with other health centres (10%).

All of them are sharing sensitive information -- but did they really care about it? The threat landscape is very dynamic, which in turn makes it necessary to adopt newer security measures. Just over the last year, the kinds of vulnerabilities that are being exploited are very different from the ones being exploited in the past. For instance, Operating Systems have less vulnerability that can lead to massive Internet worms. On the other hand, vulnerabilities found anti-virus, backup or other application software, can result in worms. There is significant growth in the number of client-side vulnerabilities, including vulnerabilities in browsers, in office software, in media players and in other desktop applications. Web application vulnerabilities account for almost half the total number of vulnerabilities being discovered in the past year. Attackers are finding more creative ways to obtain sensitive data from organizations. Therefore, it is now critical to check the nature of any data leaving an organization's boundary.

While the traditional view of the e-Health definition ascribes it as the merging of the Web 2.0 phenomenon within healthcare, others believe it is so much more. In this perspective, Health 2.0 goes way beyond just the pervasive social networking technology to include a complete renaissance in the way that healthcare is actually delivered. Realize that Health 2.0 is absolutely reliant on interoperability of health information. Everything from the Personal Health Record (PHR), to the Clinic Health Record (CHR), to the Enterprise Health Record (EHR), to the National Health Record (NHR) must be based on standards, be seamlessly transitioned between environments per standardized security and privacy protocols, and be accessible anytime from anywhere.

Today, preventing fraud and scams over Internet is a major and serious issue. The standards applied today, even in banking institutions, are permissive and weak. The medical records transmitted are too often, and too easily, accessible by malevolent people. The fact is that ICT is really complex and there are so many places to secure. Who is responsible for

guaranteeing security and privacy of the patients' information? Are e-health prescription sensitive information? e-Health records – where are they stored? These are vital questions to be answered. Easily integrated into existing applications, Quantum Dana, from Geneva Solutions and the State of Geneva, encapsulates data using applied cryptographic techniques based on a True Random Number generated by a quantum factory - all on the server side and far from the user's browser. Quantum Dana has been awarded with the "European e-Government Awards 2007" to become the security transparent state-of-the-art good practice.

It is important to think global – but in all knowledge of the fact. Several pieces of information are not under your control and thus, it is important to keep the master ones under your hand!

The presentation concluded with a citation of Mahatma Gandhi, saying that "all compromise is based on give and take, but there can be no give and take on fundamentals. Any compromise on mere fundamentals is a surrender. For it is all give and no take."

OCTAVIAN PURCAREA, **WW Health Industry Solutions Manager at Microsoft EMEA**, France, [www.microsoft.com], delivered a most interesting and enlightening talk on

Towards Sustainable eHealth

The World Bank estimates that between USD 25 billion and USD 70 billion per annum is required to meet the Millennium Development Goals for health. Measured against these rising requirements, the current proportion of expenditure on healthcare by many countries remains quite limited. Healthcare spending (2004) accounts for 16% of GDP in the United States, 9% on average in OECD countries and less in developing countries.

Current health care delivery in many developed and developing countries is facing major challenges. The context of healthcare investment has to reflect the upcoming challenges facing our societies and healthcare systems. Investments, by definition, impact on the future, so they should aim to address issues of rising importance such as the health care delivery, not just fix short-term drawbacks.

The most important challenge faced by many healthcare systems and society at large is demographic change. Ageing societies lead to changing pathology patterns in the population, often broadening the scope and capacity of the health services required. A second large group of challenges to the traditional healthcare model of developed countries comes under the umbrella of chronic and lifestyle related diseases, such as diabetes or cardio-vascular conditions. Third, there has been a change in the public attitude towards health and healthcare. Although national differences remain substantial, individuals are generally more informed and demand better quality health services (E.g., in EU: Observation made on the basis of results from the eUser survey 2005; see www.euser-eu.org)

According to the World Health Organization, it is expected that as populations age in middle- and low-income countries over the next 25 years, the proportion of people dying from non-communicable diseases will rise significantly (see World Health Statistics 2008, WHO p. 29). For example, global deaths from cancer will increase from 7.4 million in 2004 to 11.8 million in 2030 and deaths from cardiovascular diseases will rise from 17.1 million to 23.4 million in the same period. In general, the impact of population ageing is more important than that of population growth. It is also well known that healthcare consumption increases

disproportionately with age. In general, per capita spending in the age group of the 85 to 89 year olds is on average five times higher than for the 35 to 39 year olds.

Technology-enabled healthcare or e-Health, can substantially contribute to improvements in quality, access, efficiency and cost of healthcare. Although e-Health applications are still in the early stages of implementation in most countries, initial findings from the European Commission's e-Health IMPACT study (see www.ehealth-impact.org) on the socio-economic cost benefits, based on an evaluation of ten proven e-Health investments in Europe, show that a decrease in unit costs of 50% is achievable. In this sense, the goal of quality and efficiency at lower cost points to increasing investment in e-Health as an essential part of the future of healthcare systems.

Cost/benefit analysis for e-Health projects can demonstrate the potential. In Canada, Canada Health Infoway projects for electronic medical records are projected to achieve savings of $6 to $7 billion CAD per annum, create 37,000 new jobs by 2010 and add $2 billion CAD in employment income. However, realizing the benefits from ICT in healthcare requires not only technology integration but also organizational change. As noted in the e-Health IMPACT study, the costs of organizational change could represent around 40 per cent of the ICT investment. Exact amounts depend on the type of e-Health investment and its duration. The conclusion was that both organizational change and ICT must be fully financed, otherwise risk and potential additional costs increase.

e-Health solutions are complex implementations with multiple risk factors, such as users adoption, customisation, legacy system integration, the length of implementation, a long ROI (5-7 years), organizational changes, training and education of users, rising costs and the search for sustainable financing models.

Future challenges are related to the Knowledge Management integration in EHRs; this will require additional medical IT trained people (Knowledge Managers) and new business models.

One way of reducing the risk in addressing these complex challenges is to build PPPs. Public and private funding are the two main sources of financing healthcare, however for most countries public sector funding is the predominant source. An average of some 72% of total healthcare expenditure across OECD countries in 2001 relied on the public sector as the main source of finance. For e-Health, a long-term, sustainable financing is required. R&D requirements, as well as the long period for return on investment, necessitate planning at least 5-7 years in advance to enable adoption and modernization of systems. Identification of cost savings can in turn provide an impetus to investment.

PPPs provide a solution for shortages of capital and non-recurring finance and introduce private sector discipline to the e-Health investment. PPPs may build and maintain e-Health to a higher quality and longer life. Non-core, highly skilled services handled by those most capable, usually excluding clinical and medical skills. Risks can be transferred to the party best capable of mitigating it.

However, PPPs also may have some disadvantages: For instance, the cost of capital to a PPP operator can be higher than for governments and NGO. The PPP contracts are for services. These include products, but they are set in the context of the assets and tools needed by operators to fulfill their contractual obligations. Suppliers provide the ICT services as an external service. Offers the opportunity for some risk to be transferred and mitigated by suppliers, especially some of technology risks and resourcing risks.

International experience shows that the successful implementation of e-Health has been achieved when the government defines strategic objectives and subsequently delegates operational activity to an independent institution that is funded based on achievements. For example, Health Infoway in Canada has defined the standards and managed the whole project including partnerships and funding. Health Infoway is also a strategic investor with public sector partners to develop, replicate and reuse compatible electronic health systems, thereby leveraging public funds. Other country models have involved public agencies in different roles as Governor, Funder, Strategic Investor, Intervener and Developer.

In order to succeed, decision makers should commit to invest in e-Health for a period of at least 5-7 years. It is important to build coherent multi-annual national e-Health strategies and policies including e-Government and e-Learning. PPPs should be envisaged to mitigate risks and attract private investors. User involvement and change management are further critical success factors. It could be advisable to delegate the implementation to an independent body including private partners.

The session's moderator, **PATRICE CRISTOFINI, Director Partnership and Strategic Alliance, Orange Healthcare**, France, [www.orange.fr], closed the session with a brilliant summary of the main issues addressed:

The session allowed speakers from different countries and companies to have an interested exchange on the main challenges and future of e-Health. All speakers agreed that healthcare is a very interesting sector but stays very complex due to the many actors involved (healthcare professionals, hospital, patients…).

Through the presentation of various innovative approaches the audience had the opportunity to understand how e-Health (use of IT in healthcare) could be a cost saving approach of healthcare. Technologies are attractive but their adoption (sociological acceptance) remains a key problem: nothing will be put in place without the agreement and participation of the different actors, such as health professionals, patients etc.

In view of the global chain of data exchange, security and the exchange of data also seems to be major issues that have to be addressed. e-Health solutions are very complex implementations and one of the main barriers is the Return on Investment period (5-7 years).

The **chair and moderator** of this opening session, which is dedicated to issues of innovation in a converging world, **SYLVIANE TOPORKOFF, President of the Global Forum & Founder Partner Items International**, France, welcomed and introduced the members of the panel.

THAIMA SAMMAN, Senior Director & Associate General Counsel, Corporate Affairs - Corporate Social Responsibility, Microsoft EMEA, France, [www.microsoft.com], brilliantly elucidated with great charm and insight the topic of

New Channels to the World

The world is changing fast. Less than 10 years ago, we lived in a world with one device and one type of content and usually an identified type of operator targeting specific consumers from either the telephone, TV, radio, cell phones or Internet. Internet use was very low, with only email, surfing, and limited contact with a one on one or one to a few type of exchange.

Today, users are at the centre of the network with multiple devices carrying different types of content, with the emergence of mobile TV, with the consumers being more and more the content producers and operators who are doing the same things but in different ways. When it comes to media, the long tail implies today personal media in order to be able to use all the opportunities of this new world. Today, there are different business models addressing the same kind of needs in different ways, different business models addressing different needs in different ways – but all integrated in each other, working like an ecosystem rather than a one fits all solution in the area the you are specialized.

Posting messages to chat rooms, newsgroups or forums, using peer-to-peer file sharing sites and creating a webpage are already very popular in the EU. In Finland, Norway, Iceland, Portugal, Luxembourg, Hungary and Poland, in 2005 around one third of all Internet users aged 16-74 were engaged in these activities.

This new world raises some new policy issues which need to be addressed. Intellectual property and copyright are important issues to think about. How can we live in a world of multi-producers and multi-users with a strong intellectual property protection? How do we live in this world while taking into consideration issues like security and privacy? Some solutions could come from the industry through self-regulation and commitment. Moreover, the User Generated Content, or UGC, Principles (http://www.ugcprinciples.com/), which are supported by a group of companies, including Microsoft, are important to ensure that we address the intellectual property issue while allowing the world the freedom and opportunities it needs to move forward. Not only is policy to protect consumers and users important , but protection of security and privacy is becoming increasingly important as well.

Microsoft strongly believes in the principle of Intellectual Property Rights, or IPR, including the technology to address these issues. Transparency for the users is a key issue – transparency to know exactly how data are stored and what is made with the data. Technology should allow users to manage their own privacy.

Education, awareness, technology and partnerships between all the stakeholders are crucial when addressing these issues. All these issues need to be addressed from a business point of view but need to take into consideration the new policy issues this new world has raised. However, these policy issue cannot be addressed by one actor, they need to be addressed within a partnership between the business community, the NGOs representing the civil society, the public authorities and all other specific experts.

The moderator invited the next speaker to summarize the major challenges that governments must be prepared to address and the characteristics that will enable them to succeed.

TODD S. RAMSEY, Managing Director US Federal IBM Corporation, USA, [www.ibm.com], provided a brilliant keynote address on

Government 2020
and the Perpetual Collaboration Mandate

Six major driving forces are reshaping societies and the way they are governed. These driving forces affect every country, but no country controls them. Moreover, it will take generations to change them. These are issues that governments must deal with, they are going to force governments to react much more quickly and they are going to force governments to transform the way they operate. Each one of these forces has a kind of a threat and an opportunity associated with them.

1) Changing demographics: Long-term changes are occurring in the composition of populations. These vary by country and region and include rising average age in many developed countries (e.g., Japan), falling average age in many emerging countries (e.g., India) and a shift in the male/female balance in select situations (e.g., China), evolving educational requirements. 2) Rising environmental concerns: Societies and governments are becoming more attuned to what the earth can provide and what the earth can tolerate. These issues cross domains as diverse as politics (growing importance of the “green vote”), economic development, public works, civil infrastructure development and education. 3) Evolving societal relationships: The trends that are reshaping the relationships between individuals and between customers and businesses are reshaping the expectations that citizen and business constituents have of their governments. Governments are expected to deliver results and value through secure, private services that are available anywhere and anytime to businesses, individuals, employees and other governments. 4) Expanding impact of Technology: As businesses, individuals and public institutions are adopting technology it is changing the way each functions and reshaping the relationships between them. This trend creates a range of challenges and opportunities many of which are unexpected and require responses. 5) Growing threats to social stability and order: Societies face challenges from terrorism and armed conflict – including inter-cultural friction – to pandemics and natural disasters. The nature of these threats is changing and the consequences of inadequate mitigation, preparation and response are increasing. Governments and societies are forced to respond to protect lives and property and to ensure stability. 6) Accelerating globalisation: Countries and societies are becoming more economically interdependent across social, political and cultural, boundaries. This trend is evidenced by increased global movement of capital, raw materials, finished goods, work and labour between previously independent and sovereign entities. Additionally, public policies are becoming increasingly globalise as well.

What should governments do about this? Many programs will need to be refurbished as strategies are aligned with existing realities. Integration and collaboration are critical enablers. Each of the six items has a different way of manifesting itself in each country and they are very interdependent with each other. For instance, when dealing with globalisation, governments have to be aware of the cost of their healthcare programme, educational programmes, or the way immigration is handled for right skills. When designing a programme, governments have to take a broader scope of what that programme is deserved as opposed to what governments have traditionally done when designing a specific programme to solve a specific problem. There is much more interrelationship and interdependence between these programmes than people have done in the past.

Addressing the challenges ahead requires new core capabilities. The overriding theme is collaboration, transparency and integration. Governments are going to have to go through significant organizational transformation. There is no doubt that the silos of government are not very effective for the future. They will have to do much like businesses have done in the last 15-20 years. They will have to use technology and process change to enable organization or culture change to do things in new and different ways. There has to be a competency to integrate within governments, across levels of government within a country, but also across international bodies.

Citizen participation is a further factor: Where businesses compete for clients or customers to create experiences to attract them, governments tend to see their citizens and businesses as given and they are obligated to offer services. They need to begin thinking about client satisfaction and designing things to attract them. Partnerships are needed, not only with the private sector but with government international bodies in order to solve these problems. Ultimately governments need to be much better at knowledge sharing, providing information and in an integrated more holistic way to allow their businesses to succeed and allow the government to take a better decision. Collaborative government needs to be the overriding feature.

There are many successful raw models for governments to implement significant change and a lot of encouragement for people who want to attack the problem. It takes strong and committed leadership, some very clear and focussed execution and certainly collaboration and transparency are the keys to success in the future.

As environment has been mentioned as a major driving force. The following **Q&A** referred to how governments could react to the "green" challenge to reduce carbon emissions. Todd Ramsey stressed that there were tremendous movements in governments over the last years on what could be called the green agenda. The UK is a real leader in this area and there is a very active programme in Canada. There are many possibilities to reduce carbon emission. A lot of the early actions are in data centres where it is possible to consolidate servers. Some servers are used 10-15% of the time and it is possible to generate savings as much as 40% in terms of cost, which also significantly reduces the carbon footprints. Some countries are setting carbon emission standards (e.g., British Columbia and the UK government looking at their carbon footprint and making public commitments to reduce the governments footprint). Another example concerns the area of road-charging: Stockholm has reduced carbon emissions by about 15% by reducing the number of cars as well as the time cars are spending on the road.

JIM C. WILLIAMS, Senior Vice President & Chief Technology Officer at Motion Picture Association, USA, delivered an excellent talk on a fascinating subject. He outlined with great clarity and expertise the movies' industry's view on IPR:

Content Protection Enables Consumer Choice

"Content protection enables consumer choice" - a statement that does not seem obvious to everybody. In 2007, a typical Hollywood movie cost 107 million US dollars to make and market. That same typical movie made only 46 million dollars at the US box office. Very few films are profitable through their theatrical release alone. Increasingly, they rely upon a variety of distribution paths to break even and – eventually – generate a profit. Paths like domestic or international theatrical, hospitality and airline, video-on-demand, home entertainment (like DVDs and Blu-ray discs), PayTV and cable channels, free-to-air broadcast channels, and, increasingly over the Internet and to mobile devices. Even after all of this, only 4 in 10 movies ever generate a profit.

The foundation of this global digital economy in which we all increasingly share a stake is intellectual property rights. It adds up to real jobs – real tax revenues – real economic growth etc. that are increasingly spread around the world and across many industries. The purpose of Digital Rights Management is to protect these assets as they are offered to consumers through the variety of distribution paths and with the variety of choices needed to generate a return on investment – to make innovative, legitimate offers possible – in other words, to enable choices for consumers.

It's a new world today. All of these forms of piracy are in fact happening now – blurring the lines between one choice that is available to a consumer and another. It robs the content producer of their ability to fine-tune their offers based on consumer demand. And when content producers cannot adapt their offers to consumer demand, consumers lose choice.

There are illegal DVD copying products in the marketplace, such as Slysoft's AnyDVD, DVDFab and others, that disregard legitimate content protection and copy DVDs. This allows someone to make an illegal copy from a borrowed DVD or rented DVD rather than purchasing a legitimate one – essentially eliminating one window of distribution – one means of recapturing investment for those who made the film. What may seem to the casual observer as an innovative product, is actually simply a transfer of value from one industry, in this case the copyright owner, to another industry, in this case the maker of the DVD copying product.

These products also compete directly with other legitimate channels that are opening up as a result of broader industry collaboration, for example: Internet download services like iTunes, where a typical purchase is about USD 15 and a rental is about USD 4; and "Digital Copy," which offers a second, copy-able disc along with the purchase of a traditional DVD.

Delivering movies and television to consumers with the features and flexibility to satisfy their demand requires collaboration across the creative and technology communities. But it is hard to do so in competition with those who don't have to worry about ensuring that the artists, authors, producers and distributors are paid for their work.

Suppose there would be no content protection or laws to protect intellectual property rights. Could a movie producer still offer a USD 4 rental option? Would those who just wanted to watch the movie be disadvantaged by those who wanted to purchase a copy for their

archives? What about people who are willing to wait, watch a few commercials and get it for "free?" These are all legitimate and quite popular choices that consumers make every day.

Effective DRM enables these choices. Properly conceived and implemented, content protection empowers consumers. The lack of content protection forces everyone toward a one-size-fits-all world. There are a few implementation challenges that industry needs to address to give consumers choices to consume content when, where and how they want. E.g., the DVB and ETSI standard Content Protection and Copy Management allows for home networking and remote access of all types of commercial content in accordance with rights granted. It enables many, many choices that were previously not available through a standardized system.

Content protection plays an essential role in helping to meet the ever more sophisticated and diverse demands of today's consumers. It enables consumer choices like the option to pay less to rent than to buy. Existing and emerging content protection systems help ensure that the legitimate avenues of enjoying film and television offer a superior consumer experience – a sustainable marketplace – and the commensurate benefits to the global digital economy.

THOMAS ANDERSSON, President Jönköping University and Chairman of the GTC International Council, Sweden, [www.globaltrustcenter.org] delivered a captivating talk on:

ICT, Innovation and User Empowerment

Technical progress and the diffusion of new knowledge through Information and Communication Technologies (ICT) offer unprecedented economic opportunities for people all around the world, but also gives rise to risks and challenges. There are many questions raised by many people: What can we believe in? What can we hold onto? The confidence is quite low when it comes to general views of governments or big businesses, as well as when it comes to media. Universities belong to the few actors that are held in pretty high faith.

Universities are thought of as a sort of bastions of new knowledge generation and higher education. In practice, how dynamic and agile are universities? In many respects, a university is operating in a highly conservative market. Universities often look to the past – but it is really the future that matters, including the ability to respond, to change, to be ahead and look to the future. As one example, Jönköping University faces challenges being a young institution with a long road to establish itself. On the other hand, not being a public authority university but a foundation university, believing in entrepreneurship and innovation and with more freedom to manoeuvre, Jönköping also enjoys advantages. Today, every institution must identify its special strengths, its core business, and build on that.

One area held in high esteem is that of R&D. There is almost an obsession in many parts of the world that we need to spend more on research. Based on the Lisboan Agenda, Europe is supposed to become the most competitive knowledge based society in the world by 2010. R&D is important – but how much money we spend on it is not the crucial factor. More attention should be paid to the productivity of research. There is a worldwide pool of research out there, which many could tap into more effectively. It is of course important to carry out research yourself if you are to be able to exploit that performed by others, but there is too much focus on the production side rather than the user side.

Innovation is essential and is not a linear result out of what is produced in terms of research and new knowledge coming out of the research agenda. Innovation is crucially evolving in-

between the market, the real needs of people and of the society. Crucial here may be survival for the day, food and medicine or more goods, but it may also be better use of time, taking care of family or of the environment, etc. Today there is an unprecedented potential for diffusing, accessing and combining different kinds of information – science and technology can now do anything for us, or will be able to soon. But, then, how are we actually putting the new tools to work? What about the content?

Unfortunately we do not see the wealth of opportunities for constructive contributions realised. Plenty of energy and inspiration are devoted to things that create little lasting value, or are outright destructive. The attention of the media is evolving with our perception of what is seen as news, worth cabling out over the world, and what is not seen as worthy of attention. It will be crucial how we keep learning and developing in this respect. It will be essential how, as human beings, we are to identify and articulate our needs – and put what we really need in the driving seat, to pull the development of new technology, rather than allow ourselves to be using technology for technology's sake.

As regards the role of governments and how it has to change, governments around the world are now keenly interested in the knowledge-based society and what they can do to pave the way for it. Naturally, they view it in different ways. The Finnish approach of shaping policy and government's role is one of the most advanced. They are stressing globalization and a world without borders. They also put a lot of emphasis on innovative communities and on achieving a demand and user orientation. Generally speaking, lessons how to achieve that take time to sink in for governments.

Governments need to show leadership in terms of shaping a policy and institutions and an economy in which the demand side and the human individual user are placed at the centre. That, in turn, requires constructive learning processes. Coming back to universities, they not only need to play their part. Our ability to respond in a favourable manner to the opportunities at hand will crucially depend on the extent to which universities, businesses and governments will be able to achieve a collaborative circle, an interface, which is centring on the real needs of people. This in turn will hinge on individuals getting into a stronger position, with regards to being less ignorant but more aware, less passive and more active, less uncertain and more confident.

There are critical weaknesses in ICT itself. The Internet was not created as a medium for diverse interactions between a myriad of parties. There are few mechanisms to trace, account, audit and validate data. The individual user cannot seamlessly transit between the real and the digital world, and digital data and information are organized around databases and organisations rather than people – the users. And there are quite fertile conditions for cyber-crime.

The Global Trust Center represents an initiative to engage multiple stakeholders in cherishing the individual and user perspective. It requests a systemic response to put in place higher level digital functionality in support of the human being. It develops a policy that aims to reaffirm fundamental values of legality, integrity, accountability, security, and privacy. Progress in this regard is essential for our ability, across-the-board, to stay on top of technology, and of institutions. One particular area showing the consequences of the current mode, and of the current approach to content, is that of health: The health sector is one of the most knowledge-intensive when it comes to the level of education among those who operate in that sector. Yet, the health sector is one of the weakest when it comes to putting ICT to use. Governments and businesses keep investing a lot of money into pharmaceutical industry and into expensive new technology, but management change in hospitals and

concern for the wider health sector is weak. And the patient, the human being, is not yet well positioned to have his or her say.

A project to be mentioned in this context is the Patient Certification Scheme, a project pioneered through collaboration between Sweden and Saudi Arabia. It provides a specific example of ways to make use of ICT to empower the individual, in this case through certification of the patient, as well as to motivate the development and diffusion of content in response to where it is most needed. Empowerment will be key for making use of ICT for real innovation.

GABRIELLE GAUTHEY, Member of Board, ARCEP - Autorité de Régulation des Communications Electroniques et des Postes, France, delivered with smoothness and humour an excellent presentation of the challenges French regulators are facing in the context of ultra-broadband:

Delivering High Capacity Broadband for France
Regulatory Challenges on NGA

The regulation of broadband has encouraged investment by all operators. Competition through active infrastructures is the main driver behind the development of broadband: The geographic extension of local loop unbundling has encouraged France Télécom to equip all of its MDF (Metallic Distribution Frames) for ADSL. France has joined European leaders in terms of penetration and is in first place for "triple play“ and VoIP. Regulation has made this increase in investments possible.

Fibre is going to be the infrastructure of the future in the fixed world. In France, major players have all announced fibre deployment and investment and investment is now starting. The new entrants started first, and especially the one of the most dynamic new entrants in France, Free, launched FTTH in France which made it necessary to define rules very quickly. The objective of a regulator is to promote investment but also to tackle the bottlenecks for his and to prevent regression of competition and irreversible foreclosure of the market.

Operators are not on an equal footing for three main reasons: The size of the customers' base to convert from broadband to ultra-broadband, investment capacities of the operators, and access to essential facilities, such as ducts.

France Télécom's ducts are an essential infrastructure: Alternative operators can roll out only in limited cases like Paris, where sewers can be visited and pass under every building. France Télécom deploys optical fibre in its civil engineering ducts inherited from the former monopoly. In its market analysis on broadband and very high broadband, which has been adopted on 24 July, ARCEP has proposed to regulate the access to France Télécom's ducts as a remedy to the SMP position of France Télécom. France Telecom has published its ducts reference offer on 15 September. ARCEP will make sure that all operators, including France Télécom, have access quickly to civil works under equivalent conditions.

Another bottleneck is access to the buildings and to the fibre inside the buildings, because in France the landlords and building managers do not allow more than one operator rolling out fibre in their buildings. Sharing among operators is necessary. The principle is the first operator installs the fibre in the building then gives other operators access to its network. Means of sharing must encourage competition through infrastructures. Sharing of in-house wiring at the level of the building and access to ducts alone will not be sufficient to guarantee

sustainable competition, even in dense areas. Having a point of sharing higher up in the network raises a few issues: In terms of technology, it has to be compatible with different technologies: PON and point-to-point. Furthermore, the physical location of the point of sharing depends of the topography, of the density, and of the architecture of the operator.

Legislative measures have been adopted to facilitate the roll out of fibre networks inside the buildings. A law has been adopted this summer deals with the deployment of fibre and the sharing of the last part of the local loop among operators: A “right to fibre” has been instituted, to facilitate the roll out of fibre networks inside the building. ARCEP has the power to define the technical and tariff related terms of the shared access and guarantee operators respect them. However, access does not follow the same logic as LLU: it takes into account the differed “co-investment” on access and a risk sharing through IRU.

ARCEP just issued first recommendations, which deal with prior information of the eligible buildings, location of the shared access point, and the type of sharing the last part of the local loop. ARCEP also published a sample agreement between property owners and operators dealing with the respective parties’ responsibilities. ARCEP encourages the signing of first private commercial agreements between operators on limited areas in a first stage.

Local authorities have an important role to play. Their intervention can be just as essential on very high bandwidth, even more crucial by providing local information, e.g., on site surveys, on civil engineering, on the last part (with social landlords, by authorising wiring on facades and encouraging pre-wiring in new buildings and major renovations), and for promoting the choice of common passive optical loop topography by operators.
Mobile Broadband is a natural and geographical complement to wire-line ultra broadband. There is a growing demand for high speed ubiquitous access to broadband services. Broadband mobile services will be available tomorrow (first deployment in 2010) in urban areas using the 2.6 GHz band. In order to cover rural areas, low frequency bands beneath 1 GHz will be necessary (lower roll-out and better in-door penetration). Unless a low frequency sub-band is made available for broadband mobile in rural areas, a considerable part of the European population will be deprived of tomorrow’s innovative services.

As regards content and net-neutrality issues: A balance has to be found between three different points of view. The end-user wants to access or provide contents, services applications of his choice, on any device, and without discrimination relating to the source, destination, content or application. The end-user wants at least be aware and informed in a transparent way of any technical limitations. The content provider-wants to provide services, applications and contents to a maximum part of the population. The electronic communication network or service provider wants to finance capital intensive NGA networks expansions and be able to manage traffic and optimise backbone investments.

The main concerns in France today are the unbalanced share of the value between contents and networks. Content related ARPU is not sufficient today (3 EUR/month/subscriber for DSL) and the VOD catalogue too limited and costly. This is an incentive for network providers to provide their own integrated contents and acquire exclusive rights, to provide their own distribution platforms, and to provide their own device. Vertical integration problems arise when an operator with significant market power has a distribution exclusivity of premium content and tends to discriminate in a non transparent way between its any content and other providers’ contents.

Article 2 of the Access Directive and article 20 of the Framework Directives will give NRA competencies to resolve the dispute between "content providers" and undertakings providing electronic communications networks or services. Articles 21 and 22 of the Universal Service Directive protect the end user: "Inform subscribers of any change to any restrictions imposed by the undertaking on their ability to access, use or distribute lawful content or run lawful applications and services of their choice. […] In order to prevent degradation of service and hindering or slowing of traffic over networks, Member States shall ensure that national regulatory authorities are able to set minimum quality of service requirements on undertakings providing public communications networks".

Regulators have to promote transparency to end users and fair information. They have to promote a win-win relationship between operators, distributors and rights holders. Regulators have to be careful of exclusive distribution rights and vertical integration (especially for premium contents) and NGAs must be seen not as a threat but as a new opportunity to increase in the value of contents.

HELEN DOMENICI, Chief International Bureau Federal Communications Commission – FCC, USA, brilliantly elucidated with great clarity and expertise the topic of

Collaborative Convergence:
User Empowerment in the Global Digital Economy

For more information, please see the slide presentation of Ms Domenici available at www.items-int.eu

As **chairman and moderator**, **HERVÉ RANNOU, President Items International**, France, introduced the topic of the session with some figures related to media and content issues.

We experience today in the modern countries, a period of important change in the media environment enriched with new media channels like Internet, mobile phones, digital TV and radio, video games, etc. If Europeans still watch TV about 11 hours per week, this figure is for the first time decreasing because people spend more and more time on the Internet. The important transition to digital environments is an undeniable reality and this new market opportunity arouses the interest of major payers. For them it is important that value follows the increasing usage of these services and this is not obvious for the moment if we look at the chart comparing the turnovers and the market shares of different companies.

The speakers will present different views on issues like technology, innovation, regulation, business models for the new media content.

PER HELLSTRÖM, Head of Unit, DG Competition, Unit C.3 – Information Industries, Internet and Consumer Electronics, European Commission expressed with great clearness the European regulator's point of view on

Software and Innovation in Services

Generally, competition is considered to foster innovation and investments for the benefit of customers and consumers. Thus, protecting competition is a way to improve market functionality. In certain sectors, this aim is achieved by ex-ante regulation and ex-post anti-trust enforcement.

In the constantly evolving ICT sector, we experience a technological convergence but also an economical one, with the concentration of firms in this area. Convergence offers new market opportunities and challenges the existing business models. New innovative ideas need a healthy competitive environment provided by the legal framework. In Europe, the telecom sector has an ex-ante regulatory framework, a set of rules for state aid that can distort competition, a control over mergers to prevent dominant positions on the market. The Commission intervenes also ex-post like in the case of price abuses on the broadband Internet market.

There are three recurrent problems arising in this competition context. The "gatekeeper" issue refers to the control of the market through technology or know-how or standards. The source issue refers to control over the primary input like music, movies or other content. Finally the path issue is about control over distribution. A competition law enforcer such as the European Commission has to assure the access to the market, to the content and to distribution.

Another competition concern is leveraging, i.e. the use of a power position in order to gain control over a neighboring market and thus foreclose competition through anti-competitive

means. Such was the case of Microsoft, condemned lately by the court for leveraging to the detriment of innovation and consumers. Numerous cases concern standards and intellectual property rights although they are normally meant to promote innovation and interoperability. Proprietary technologies incorporated into standards may raise competition issues.

Collaborative convergence and the digital economy have a potential for growth and job creation and law enforcers like DG Competition must make sure that markets remain competitive and encourage innovation for the benefit of consumers.

The **Q&A** following the presentation referred to the impact of the directive concerning Television without Frontiers on the competition in this area. Mr. Hellström answered that this directive is an example of the ex-ante regulation issued by the European Commission but it will not preclude DG Competition from intervening in case of competition issues.

XIAOHUA ZHAO, Partner, Akin Gump Strauss Hauer & Feld LLP, USA, provided a fascinating insight on the

China Convergence

In 2008, the Chinese Government issued a lot of rules and regulations concerning the telecom and broadcasting industry. Thus, the telecom operators are allowed to enter partly on the broadcasting market, which represents a great breakthrough. A clear legal framework for IPTV was also put in place, containing the necessary administrative procedures. The threshold for foreign capital investment in the Chinese telecom market was lowered from 2 to 1 billion Yuan for nationwide projects. At a provincial level, the requirements are cut to half. For the service providers, the requirements stay the same: 1.5 million USD for a national product and 150,000 USD for a provincial one. Although restrictions still exist, these new rules send out an optimist message and encourage competition and investments.

China is also restructuring its governing bodies although the telecom and the broadcasting industries have kept their separate regulatory bodies, respectively the Ministry of Industries and Information Technology and the State Administration of Radio, Film and Television.

In China, broadcasters have their own networks and infrastructures all over the country completely separated from telecom operators. Before January 2008, foreign broadcasters had a hard time entering the market, as from their point of view a broadcaster is only a content provider needing a transmission system provided by telecom operators. Their business model is based on a regulatory framework that did not exist until then. The new rules break down some barriers between the two sectors and will eventually enhance foreign investment.

One of the biggest problems of the Chinese market is the lack of content as content providers were prevented from entering the broadcasting system. The new IPTV rule offers the possibility for new creative ways of entering the market such as digital movie theatres or TV available in fast moving trains through wireless technology. Converging regulations and technologies led to an increasing business activity in this field.

In conclusion, for foreign companies, a successful business model for the Chinese market implies a good understanding of a complex situation formed by the regulatory issues, the government structure and the market reality.

In the **Q&A** part, the moderator asked if there is the possibility of triple play services proposed by telecom operators in the near future. Mrs. Zhao answered that a few services are already available and although there is no known agreement, negotiations are taking place between the two sectors. They will eventually lead to a joint venture between broadcasters and telecom operators.

MAKOTO YOKOZAWA, Dr., Nomura Research Institute, Professor of Joint Research Unit, MOIS Labo., Kyoto University, Japan, made an impressive speech about the Japanese developments in the field of

Participative Innovation in Media and Contents

From a technical point of view, the network infrastructures are following their traditional development from All IP to IPv6 and NGNs, but the future will belong to a different network architecture called GENI (Global Environment for Network Infrastructure) that is being prepared by researchers in the USA and Japan. The future developments of media and contents depend on the understanding of the technological aspects. From this perspective, some consider IPTV as the new killer application although its proliferation is accompanied by a lively debate on network neutrality. In Japan, in order to solve this problem, the three main telecom operators are using IPv6 closed network services for consumers but they have open networks for PDA use.

Efforts are also made in Japan to find a regulatory solution for convergence. Traditionally, there is a telecom regulation for different application layers and a broadcasting regulation. The ongoing discussions aim to simplify the regulation structure after convergence with content regulations applicable to both telecom operators and broadcasters.

3D virtual worlds are another business opportunity that interests the industry, not only because of their endless fields of application but also because they sometimes converge with the real world and create large scale social effects. Media is a new way to create value and a relevant example is the Haruhi girl who was originally a TV animation character. The users' participative behaviour led to the creation of a new business for similar clothing used in costume plays, to people dancing the Haruhi dance on the streets of Tokyo or in prisons. Through participative innovation, new CGMs appear like the videos of the vocaloid and robot singing and dancing the Haruhi dance.

To conclude, both the legislative convergence and the multidimensional convergence between fixed and mobile, virtual and real worlds, software and hardware, etc must foster the competitiveness of the industry as the only way to distinguish valid solution.

For the **Q&A** part, the moderator asked about the parties that will benefit from this new trend which is a perfect example of user empowerment and user generated content. Mr. Yokozawa answered that it will depend on the provider's business model. YouTube and similar services earn money from traditional advertisement but in the Haruhi case, the TV broadcasters benefit from higher watching rates and the sales of by-products so their interest is to increase the value of the content with the participation of the public.

STÉPHANE GRUMBACH, INRIA, French Director of the Sino-French IT Lab LIAMA Beijing, China, outlined with great enthusiasm some very interesting features of

Internet in China

China's development attracts a lot of interest, but as far as Internet development is concerned, the focus is mainly on political aspects related to it. The western media is covering essentially the censorship aspect and this may lead to the impression that there is not much Internet content. The reality is that the Chinese online community is one of the largest in the world and expanding very fast, on an industrial level companies are very active and in certain sectors the leaders are Chinese firms and finally, the social impact at all levels is tremendous.

The number of people online grows exponentially, and the penetration rate is still rather low and in 2009 it will reach 320 million people, which is more than the US population. This will have an impact on the linguistic presence on the Internet and furthermore on the content. Asia will influence the way Internet is handled because it has more than half of the world's population and many countries in the region have become very active on the Internet. With a reasonable bandwidth, more IP addresses than Japan and 12 million .cn domains, the Internet environment is growing fast. There is a very strong fixed-mobile convergence and the number of people having a mobile phone is 6 times higher than the ones having a PC. Most of the services are accessible through mobile phones including mobile TV and IPTV.

The pattern of the Chinese web is quite different from other countries. Entertainment prevails, as users are extremely young, the development of online news expresses the strong interest and the change of habits, there are several hundreds TV channels online, some with P2P systems, people chat much more than in the USA and they always answer their mobile phone. Blogs and forums are very popular. E-Commerce is quite low because the payment is still a problem. In many sectors, the leading companies are Chinese like the search engine Baidu that holds 60% of the market or Alibaba.com leading online shopping and they have their own business models. An example is Dongdong, the equivalent of Amazon, with the difference that payment is only at delivery because of a trust issue and of the difficulties related to online payment.

With more than 50 million blogs, forums and personal web pages, the virtual community has changed the way politics is going on in China. Many debates on social issues take place on the net like the case of the poisonous powder milk after which the website of the manufacturing company has been removed from search engines. Another interesting Chinese particularity is the human flesh search meaning that people will search and identify things or persons on the net. An example is the Liaoning girl who put a video on the web in which she declared that she did not care about the victims of the earthquake. The human flesh search led to her identification and arrest. Such stories raise debates on the ethical issue, but also on the privacy issue and the frail legal framework in this field.

To conclude, Internet development in China presents many specific aspects with interesting questions on the political issues, the legal or the social ones, worth of more attention from the western medias.

The **Q&A** part, raised the question of the future of Chinese companies providing chat services and already having as many clients as MSN, Google, Skype and AOL together and their possible openness to western countries. Mr. Grumbach answered that Chinese companies deal with 17 billion SMS for the Chinese New Year and people are generally

always connected. The huge national market supports company development but they intend to go on the global markets too. Some Chinese people already consider Google as the American Baidu.

THOMAS NOGUES, Director of Technology EMEA, Motion Picture Association, Belgium, delivered an excellent presentation and shared his valuable insights and experiences in dealing with convergence:

Seeking Convergence in Content Protection

Nowadays video content is distributed through different channels: cinema, television, digital format, IPTV, mobile TV, open Internet content distribution. From the format point of view, we got from 35mm films to high definition for digital cinema and we have plenty of choices for the devices. However, even in a convergent world, the relationship remain bipolar, between the content provider and the consumer. The content industry is glad to use all possible distribution channels with viable business models and demands the protection from unauthorised use. The consumer wants to be able to choose the content, the form and the device.

Trust is the dimension missing from this relationship. Content owners need to trust DRM as they wish to protect the content and control the functionalities of different usage models: acquisition, moving, storing, display. For consumers, trust means privacy, security but also trusting the devices and their interoperability. Standardisation will help achieve the interoperability demanded by the users at the security level demanded by content owners. As it is impossible to have one technology and one standard, industry has found two ways to address this: vertical interoperability allowing a piece of content to be distributed through different channels according to business agreements between service providers; and horizontal interoperability where a standard allows the content to flow between devices belonging to the same household. Proprietary technology providers could decide to interoperate with standardized platform enabling business models. The consensus originating DVB CPCM Project enables this kind of interoperability.

Fostering trust among digital media distribution is closely related to achieving convergence. There are three main ways to interoperability: a mythical uniformity, the vertical approach and the horizontal one, the DVB-CPCM platform seems to be an answer for the horizontal one.

In the **Q&A** section, a question came up about the major's decision to sell music without DRM and the possibility of having the same kind of decision in the movie industry. Mr. Nogues answered that music business is different in many ways from the film industry. Motion pictures professionals will use DRM technology to come up with interesting legitimate offers that will provide new services to the user and will help compete against the pirated content. Another question referred to the competition between Digital Cinema Initiative (DCI) and DVB Project as different standardization bodies. Mr. Nogues answered that DVB is focusing on the consumer electronic environment while DCI is addressing a very different environment. DCI is a standard for digital cinema that is developed within a consortium while DVB develops open standards through the consensus of 290 companies.

ANNE-LISE THIEBLEMONT, Director Government Affairs Qualcomm, USA, [www.qualcomm.com] provided an excellent speech about another trigger for convergence: wireless technology in a

Convergence Case Study: Mobile Digital Multimedia

The figures confirm that today's world is very mobile and this creates perfect opportunities for convergence. The most widely used devices, cell phones, are the optimal outlet to monetize entertainment, advertising, commerce and information and new wireless services in general in the perfect stage for convergence.

A key point is the digital transition because digital networks mean more services provided while using less spectrum. The quality and quantity of the content and services depend on good practices in matters of regulation and spectrum policy. For companies it is important to assess the capital needed for investment but also to anticipate consumers' needs and thus to have certainty on how to introduce new businesses enabled by technology and services innovations. Technology providers like all stakeholders have a role to play in the regulatory process.

The content value proposition to customers must be innovative and diverse. Various multimedia platforms exist today to allow for such a wide array of choices. A cell phone offers HD-like quality through QVGA live streaming video and content may be linear as well as non-linear (time-shifted, pushed, etc.). Mobile broadcasting is a very efficient "pipe" and the content flowing through it will evolve according to consumer demands and mobile multimedia content services value proposition. For the user, the platform must be intuitive, easy to use and provide all the desired multimedia functionalities. Offers have to include free content that will trigger faster consumer adoption and drive devices as well as some premium content with subscription fees for quality services thus generating revenues that will allow new investments in the network, the platforms and content production.

In January 2008, the USA auctioned the remaining 700 MHz of spectrum in the valuable spectrum range UHF after having established the analog switch-off date of February, 17th 2009. This auction generated significant interest from the wireless and services industry and Qualcomm purchased 6 MHz spectrum in 5 major markets covering 68 million people. Earlier in 2003 and 2004, Qualcomm acquired a similar spectrum block which licenses cover the entire country. The most important point is that the FCC has unlocked the 700 MHz spectrum in a continuous fashion and under very flexible regulation since the FCC has not imposed the kind of services to be provided aside the frequencies reserved for public safety. MediaFLO is an example of a mobile multimedia service that required significant investments and commercial partnerships with content providers and mobile operators.

Qualcomm's example brings several suggestions: digital multimedia over a mobile broadcast network is a new opportunity due to its dedicated spectrum allocation along with a flexible regulation. Industry can asses the market opportunities and adapt their offer of free and pay premium–quality services to trigger consumer adoption and generate revenue.

In the **Q&A** part, the moderator asked about the sector that will become the source of future developments. Mrs. Thieblemont answered that the future will depend on the market evolution but new commercial services must come from alliances and partnerships between all stakeholders of the entire ecosystem. Each player in the value chain should be able to participate in the building of new markets: networks demand important capital investments and content production and rights acquisition are likely to impose significant costs as well.

JEAN-FEANÇOIS TOURNU, Chairman of the Regional TV Channel TV8 Burgonde, France, presented with great wisdom some of the

Challenges a Local TV Channel Must Face Nowadays

Up until lately, the French counties had their news through the PQR (Regional Daily Press) and the public television with local programs FR3. Internet will bring more choices as almost one third of the French population has an ADSL connection. But the landscape changed with the digitalization and the new offers of services on the Internet. Local television broadcasting using Internet will be able to provide new services with a content adapted to each region. The reception and image processing technologies will allow local TV channels to be closer to events and relate them faster to their public.

Television, papers and Internet will be complementary. The coming out of the new local channel in Burgundy, TV8 Burgonde, wants to converge all these medias. An example of these complementarities is a sport event that can be broadcasted live by the TV channel on the Internet and mobile devices. A sport specialist writing a column on this event, does not necessarily have to be on the field but he can watch the live broadcasting. This collaboration is economically interesting for both medias because they can share the costs and advertising revenues. TV8 Burgonde is an example of such economical convergence.

The **Q&A** part, raised the question of the budget balance when launching a new local television today and in this logic of convergence. Mr. Tournu answered that this kind of project must live on its advertising incomes because in France there is a clear distinction between public and commercial television. Complementary services may be another source of revenue.

LUIS RODRÍGUEZ-ROSELLO, Head of Unit Networked Media Systems, DG Information Society & Media, European Commission, focused on the major trends of a converging world and a regulator's role in enhancing research in this area

Networks and Media: Trends and Prospects in EU Research

The content remains at the core of convergence and of all developments of networks and medias. Professionals and users are creating huge amounts of content and we need better search tools as this is the privileged way of accessing it. The different dimensions of media, such as broadband connectivity, storage, seamless access, mobility, virtual – real world convergence are changing the way content is created, stored, distributed and consumed.

Several trends can be identified in this media revolution. With 70% of the digital universe created by individuals and a potential growth by 10 times in the next five years, a major trend is the user controlled collaborative usage. Another trend is the demand for increasing service quality, e.g. Digital Cinema, HDTV. If 75% of the content is produced today in Europe and the USA, the Asia Pacific region will grow strongly in the next period. If the early web was based on access and find functions and the second phase web on sharing and collaboration, mass collaborative usage will take us to the next phase of user participation and creation. The paradox is that among the tens of millions of websites, only 100 of them are reaching 90% of the audience and 10 of them reach 93%. A web dominated by media giants is a real danger.

From an R&D perspective, we have today an Internet of services, of things, different networks, 3D and media Internet and issues related to trust and security. From the content perspective, the future media Internet must be based on content-centric networks, multifunctional devices allowing always-on connectivity, open access to public content, interactive environments and simulated multi-dimensional physical processes.

The next step is moving from social networks, games, e-commerce to 3D immersive web where virtual and real worlds converge and global media processing with heavily distributed server farms that provide content. These new developments must be promoted through research on intelligent networks able to adapt to different applications, on 3D media Internet, on new search functions based not only on words but also on images and sounds, as well as on higher quality services for new immersive media experiences. The European Commission is supporting this kind of research throughout the world. On the market, in the confrontation between giants, the media revolution may provide opportunities for Europe to regain ground in the Internet technological and economical spheres by putting forward its strong points like mobility, broadcast content production and consumer electronics.

As **commentator**, Mrs. **KATHRYN C. BROWN, Senior Vice-President for Public Policy Development & International Government Relations, Verizon**, USA, [www.verizon.com], added with great knowledge of the subject that Internet usage is changing fast due to financial and creative efforts around the world concentrating on building convergence. Investments are very important but platforms must have an inner intelligence that will allow them to deal with the proliferation of new media and content. The regulation must evolve so that it will be able to support and oversee the new global network. All stakeholders have to be part in the elaboration of the regulatory framework because it should protect citizens' rights but also allow markets to work correctly and encourage investments.

Mr. **THOMAS ROSCH, Commissioner at the Federal Trade Commission – FTC**, USA stated with his usual brilliance and foresight that a new kind of competition is arising from the business models adopted in the Internet world. Free content turned Internet into the most important communication and information media in the world and advertising made this possible. Companies are interested because through Internet, they can target their audience more specifically and this can lead to online sales. The competitive landscape has changed lately because Google, Yahoo, Microsoft, AOL and others make efforts to acquire other forms of media and thus capture this advertising market. Google dominates the online advertising market but the display market is still disputed by advertisers and intermediaries. FTC in the USA and the European Commission look into anti-trust issues like the alliance between Google and Yahoo. Companies are no longer merging or acquiring their direct competitors, they have a vertical strategy of leverage like in the Google – DoubleClick case. Another problem is that privacy is not yet considered an anti-trust issue but a dimension of the quality issue. Tracking online usage can be a good thing but it can compromise privacy. Both USA and Europe realized the danger and begin taking it into account.

The **chairperson** of this session, **DESPINA ANASTASIADOU, Director Southeastern Europe Telecommunication & Informatics Research Institute (INA)**, Greece, welcomed the panellists and opened the session with an inspiring presentation on

eGovernance Development in Southeastern Europe: Coordinating Efforts and Seizing Opportunities

INA was set up in 2000 on the initiative of the Federation of Industries of Northern Greece. INA is an organization designed to facilitate investment in the South-Eastern Europe (SEE) telecom and informatics markets by analysing regional market trends, enhancing the exchange of technological expertise and facilitating the development of a harmonised regulatory framework. Through the established INA Academy network INA organizes conferences, workshops and training seminars on ICT issues. Another of INA's action lines are the initiation, management and support of collaborative R&D ICT programmes as well as assistance concerning funding opportunities for the development of ICT.

The "SEE ICT Monitoring Review" is INA's online information service designed to reflect the developments that shape the ICT Sector in South Eastern Europe. The service monitors 10 countries in the region including Albania, Bosnia-Herzegovina, Bulgaria, Croatia, the Former Yugoslav Republic of Macedonia, Moldova, Montenegro, Romania, Serbia and Turkey. The online service consists of three elements: "The Indicators' Database" allows quick and easy filtering through the large catalogue of indicators monitored by the service, giving the user value-added flexibility in data selection and output display in easily handled reports. "Country Profiles" is an online presentation of 10 ICT sector country profiles. Each country profile contains detailed analysis and data on the country's economic, political and regulatory environment, up-to-date information on its competitive ICT environment, including telecom statistics as well as profiles of the key market players. The "News Service" provides business, political and economic information related to the 10 SEE countries monitored by the Review. The service is updated with news, analyses, comments, information research, and related documents on a daily basis.

INA is also involved in the Centre for eGovernance Development (CeGD). CeGD is a non-profit, public private partnership, created this year with the aim to support and promote e-Governance programs within the SEE region. CeGD will represent a single regional co-ordination point for the creation and transfer of knowledge in the field of e-Governance. CeGD operates as a decentralized extended network of programs and training nodes, enhancing co-ordination, avoid duplication of efforts. The network will be open and inclusive to all similar initiatives and projects and provide a free and accessible online Knowledge Database of available resources on e-Governance.

INA Academy has managed to get the support of the Hellenic Ministry of Foreign Affairs for a co-funded 12-month programme to support the CeGD activities. Project beneficiaries target countries are those of the Western Balkans. Its main activities will be the elaboration of e-Readiness Assessment Reports for e-Governance, carrying out ICT case studies of the target countries, setting up a database of e-Governance experts and institutions, the

development of e-Governance curricula in collaboration with CeGD stakeholders, the organization of training seminars and the realization of an e-Learning web portal linked to CeGD portal.

The moderator of the session **DANIEL VAN LERBERGHE, President & Executive Director POLITECH - Political Technologies**, Belgium, welcomed the attendees and conducted the session with great ease. Before introducing each of the speakers, he gave a brief overview on the session's organisation. Session 8 is divided into two parts – with the first part focussing on partner projects of the MOMENTUM initiative, and the second part focussing on specific experiences in the field of e-Democracy.

The main objective of MOMENTUM, [www.ep-momentum.eu], a Specific Support Action funded under the e-Participation programme of the EC, is to strengthen political, social, scientific, and technological excellence in e-Participation by integrating results and practices of relevant initiatives building upon the ICT research capacities of individuals and organisations spread across Europe.

DEMETRIOS SARANTIS, Management and Decision Support Systems Laboratory, National Technical University of Athens, Greece, gave a very clear and concise

Overview of Electronic Participation Projects in the European Union
The MOMENTUM Project

MOMENTUM is an e-Participation Support Action aiming to promote the output of European Union e-Participation projects and initiatives towards stakeholders in the various Member States and internationally; to process and disseminate the results and achievements of the projects in a way that citizens can understand in order to further strengthening the public participation in electronic decision-making applications; to interact with existing projects, utilising their already developed networking and knowledge management infrastructures; and to become a connecting network, towards ideas, innovations and state of the art and state of practice examples concerning e-Participation advancements in Europe.

MOMENTUM proposes a novel methodology, supported by a proper tools infrastructure and information capturing templates for systematically assessing European e-Participation projects. The project provides consolidated reports on the projects achievements and challenges as well as on the overall impact of electronic participation pilots in EU Member States. MOMENTUM organizes common dissemination activities for the e-Participation projects, e.g., an information day at the European Parliament will be held in November.

Currently, MOMENTUM gathers the following eParticipation pilot projects:

DALOS (Drafting Legislation with Ontology-Based Support), Legese (Easing eParticipation in Legislative Processes), LEX-IS (Enabling Participation Of The Youth In The Public Debate Of Legislation Among Parliaments, Citizens And Businesses In The European Union), LexiPation (An advanced ICT Tool for enhancing Citizen's Participation in the Legislative Process), SEAL (Smart Environment for Assisting the drafting and debating of Legislation), TID+ (Enabling citizens' initiative to eParticipation), CitizenScape (eParticipation in Legislation Implementation), Demos@Work (Enable European-wide discussion on the harmful effects of smoking between elected representatives and civil society), eCommittee (Online participation of citizens in EP Committee activities), FEED (Federated eParticipation

Systems for Cross-Societal Deliberation on Environmental and Energy Issues), IDEAL-EU (Integrating the Drivers of e-Participation at Regional Level in Europe), VEP (Virtual European Parliament), and VOICE (Giving European People a Voice in EU-Legislation).

A first Deliverable on "The eParticipation Projects Baseline" is already available. The target of the eParticipation Projects Baseline Definition is to assist in the creation of mechanisms that will ensure proper monitoring and co-ordination of the European e-Participation projects. The deliverable contains a detailed analysis of the 13 monitored projects' based information templates, communicated and filled-in by the project co-ordinators as well as a detailed qualitative and quantitative analysis of the gathered data.

"The eParticipation Projects Baseline" contains a set of conclusions and recommendations:

There is a significant fragmentation in the deliberation subjects and a lack of explicit definition of the specific legal elements. The projects are engaging both stakeholders at a local and regional level, but also the European Parliament and its Members. The engagement of stakeholders should be done in a joint and organized manner. Most projects are currently targeting the first legislation phases (legislation formation and drafting) and further EU initiatives are needed for covering later legislation phases. Some of the projects have a very innovative orientation and such practices should be made available.

As some of the projects deploy commercial products where OSS exist, and vice versa, specific directions for the utilisation of OSS could be helpful. There is a fragmentation of dissemination channels and measures towards co-ordinating dissemination channels and participation in relevant events are needed.

Collaboration between the projects is still at a quite low level. It will be important to reuse knowledge, with the assistance of the EC project review and assessment schemes as well as the MOMENTUM knowledge base. There is an absence of indicators for measuring project progress, adoption and overall impact. A definition of such indicators is recommended.

CHRISTOS CHRYSOS, Project Manager IDEAL-EU, Project Manager Open Technology Services S.A, Greece, delivered an excellent talk on a highly innovative and participative project:

Integrating the Drivers of e-Participation
at Regional Level in Europe

The IDEAL-EU project intends to support the efforts of the European Parliament to raise awareness on climate change, and to propose the appropriate policy responses at all institutional levels (including Member States and Regions). Three specific regions will be deploying and disseminating an innovative Social Networking Platform to support the distribution of thematic information and the realization of deliberative discussions among citizens and stakeholders.

In close correlation with the activities of the Temporary Committee on Climate Change, the first virtual pan-European town meeting on climate change will be organized in November 2008 in order to let European citizens discuss and vote on the issues at stake and the related recommendations to policy.

With the objective to support EU legislation and to integrate e-Participation into administrative process, three specific regional communities (Tuscany, Italy; Poitou-Charentes, France; Catalonia, Spain) will deploy the Social Networking Platform to support the distribution of thematic information and the realisation of deliberative discussions among citizens and stakeholders.

The two main project components are a Social Networking Platform and an electronic Town Meeting allowing citizens to participate in a virtual debate on the Climate Change and the European Policy Making on this subject.

On 23 May 2008 the Social Networking Platform on climate change was going online at www.ideal-debate.eu. The Platform is in English for all EU citizens as well as in the mother tongues of the three participating regions.

On 25 June 2008, the project was officially presented to the European Parliament and Regions.

On 15 November 2008, three Town Meetings on climate change will be held simultaneously in the 3 participating regions. A fourth one – entirely virtual – will be open to all EU citizens.

The anticipated impact of the project is threefold: 1) increasing the visibility of the latest evidence on climate change, with a special respect to new and ongoing initiatives and priorities in the struggle against CO2 pollution in urban environments; 2) organizing a bottom-up and more integrated reflection on climate changes issues at all levels of the European constituency (including EU and national institutions and agencies, the academia, the business and civil society, regional and local administrations, etc.); as well as 3) presenting recommendations to European policy making in the context of the "Kyoto II" negotiation rounds.

FENARETI LAMPATHAKI, WEB- DEP Project Partner, Management and Decision Support Systems Laboratory, National Technical University of Athens, Greece, provided a brilliant introduction in an impressive and ambitious European project:

Systems and Services for eParticipation in News Creation and Distribution: The WEB.DEP Project

The primary aim of WEB.DEP is to establish an important communication and information management network hosted by the national news agencies of three Western Balkan countries. The project involves policy makers and stakeholders from Western Balkans such as relevant governmental and local authorities, public news agencies and citizens into the e-Democracy processes, supported through a unified web based environment, under a set of specified procedures and a common code of ethics.

As media organizations, news agencies act as go-between government and citizen. In this case, they should use a conscious code of ethics to present the news "unedited" and "uncommented" (i.e., presenting facts not opinions), involve stakeholders (e.g., government and experts), or to moderate discussion forums. New democratic context and the changing relationship between governments and citizens represents a big change for news agencies.

The project started on 1 January 2007 and will end on 31 March 2009. The communication network is currently established in the three Western Balkans Countries, involving in total 3

national news agencies, 18 governmental organizations, about 30 journalists, and a large number of citizens in each Western Balkan country.

The main features of the WEB.DEP communication environment are three WEB.DEP Local News Portals (one in each Country) providing news by date and category through a News Management System, a photo gallery and e-Polls; three WEB.DEP Local Forums (one in each Country) that enable discussions by date, category and linked to news in the News Portal, e-Polls and that provide the results of closed discussion; and a WEB.DEP Central Forum located in Greece that enables discussions and e-Polls and that provides the results of closed discussion. All portals and forums are interconnected. The thematic areas covered are art and culture, economy and business, education, environment, human rights, labor, life style, regional development, science and technology and social issues.

WEB.DEP has the demanding target of contributing to the development of infrastructures and permanent bodies that will facilitate co-operation and mutual understanding in the Western Balkans Region and to the convergence of the region to the rest of Europe in terms of democratic practices and adoption of the aquis communautaire. Through the successful deployment of the thematic portal, WEB.DEP will apply measures and deploy infrastructures for improving the situation in the region as far as relations within and between countries are concerned, promoting thus e-Democracy and electronic co-operation. WEB.DEP can assist in developing social cohesion in the region and competitiveness of the Regional economies.

Within a next step, WEB.DEP will expand its dissemination activities in order to promote the WEB.DEP into a wider users' community. Moreover, the project will organize three national workshops: October in Tirana; November/ December in Skopje, November/ December in Belgrade.

ROLF LÜHRS, PET-NET Project Co-ordinator, Head of Department for Interactive Communication TuTech Innovation GmbH, Germany, gave an excellent presentation on

PEP-NET – The Pan-European eParticipation Network

PEP-NET will be a European network of all stakeholders active in the field of e-Participation. PEP-NET therefore already includes public bodies, solution providers and citizen organizations as well as researchers and scientists. The network is open to all organizations willing and actively trying to advance the idea and use of e-Participation in Europe.

The project's main objectives are a) to create cross-border links between local and/or regional e-Participation projects; b) to develop a network of expertise, to share experiences, approaches and tools, raise awareness and to actively contribute to the European good practice exchange portal and other e-Participation activities; c) to create awareness for the topic among all relevant stakeholders; d) to build synergies with actions supported in particular by the Commission concerning the Information Society and regional development policies; and e) to facilitate co-operation and business relationships among the members.

The project aims to help overcome fragmentation and promote best practice by connecting established and experienced e-Participation players and networks throughout Europe as a critical first step. The objective of this project is to achieve critical mass for the establishment of a Pan European eParticipation Network (PEP-NET). Such a network will act as a repository and disseminator of good practice and exchange of experience, and be a visible resource for all interested parties across the European Union.

PEP-NET is a steadily growing network: The project started with 20 partners and envisages to gather 30 partners after 12 month, 45 partners after 24 months and 70 partners at the end of the project duration.

PEP-NET will ensure wider access to European e-Participation projects and permit more effective dialogue between e-Participation experts, researchers, practitioners, public administrations, civil society organisations and the interested public with the ultimate goal of facilitating knowledge transfer, encouraging further e-Participation trials and establishing European leadership in this field. To do so, PEP-NET will seek to showcase participatory technologies "in action" by leveraging the full potential of popular Web 2.0 and 3.0 tools such as Facebook, Twitter, YouTube or Digg.

Ultimately, PEP-NET will use these new social networking tools to increase the availability of ICT-based solutions for public participation, thereby helping to achieve one of the main objectives of the ICT PSP work programme.

EFTHIMIOS TAMBOURIS, DEMO-net Partner, Researcher CERTH/ITI and University of Macedonia, Greece, provided with great expertise a clear and outstanding picture of

e-Participation Research and Practice

DEMO-net (www.demo-net.org) is a Network of Excellence (NoE) project funded under the European Commission's sixth framework programme: Information Society Technologies IST. The project, which is co-ordinated by the University of Leeds, started 1 January 2006 and will be funded for 4 years.

The aim of an NoE is to "to strengthen scientific and technological excellence on a particular research topic by integrating at European level the critical mass of resources and expertise needed to provide European leadership and to be a world force in that topic".

The overarching objective of DEMO-net is to strengthen scientific, technological and social research excellence in e-Participation by integrating the research capacities of individuals and organisations spread across Europe. The intention is to advance the way research is carried out in Europe with respect to quality, efficiency, innovation and impact to overcome the currently fragmented approach to e-Participation in this important European research area. The network with this overall objective will provide a major contribution to the strategic goals set by the European Council.

Today, DEMO-net has more than 130 members. A Community of Practice, which includes special interest groups, government executives, politicians, and NGOs, has been established. DEMO-net provides training of young researchers and other stakeholders. Training material is under preparation and will be soon available through an online e-Learning system. The project's website became a valuable resource for researchers and other stakeholders. DEMO-net regularly publishes a newsletter with all e-Participation events.

An International Conference on e-Participation will be organized in 2009 within the DEXA conference cluster. Moreover, DEMO-net will launch an International Journal on e-Participation in 2009. Training Material on e-Participation will be soon made available and

DEMO-net's eParticipation Network has been legally established to continue the work after the EC funding phase.

Another e-Participation research activity is the European eParticipation Study (www.european-eparticipation.eu). Its main objectives are to identify the legitimate and appropriate roles of e-Participation at the European level and the barriers to adoption. Further objectives are to construct an analytical framework for e-Participation, to study good practice, to support dialogue and networking with stakeholders (via workshops) and to prepare recommendations for EU level actions in the field of e-Participation. A first round of relevant studies has been issued and is available online.

--- ✦✦✦ ---

The **moderator** of the second part of the session, **HUGO KERSCHOT, Managing Partner of indigov**, Belgium, emphasized that this part of the session is dedicated to concrete examples and case studies related to e-Democracy and e-Participation. Mr Kerschot conducted the session with his valuable remarks and with great interaction from the participants. He opened this second part by reflecting the question of

eDemocracy and eParticipation in the Flemish Region:
Where is the "Demand Site"?

Indigov was established in 2003 by Jo Steyaert as a spin-off of the K.U.Leuven. The company has specialised in research and advice in the field of e-Government/ e-Paricipation, 360° Communications and Interactive media.

In the last years, a lot of e-Democracy/ e-Participation initiatives have been launched (EU-projects, studies, conferences, …). But, what about the actors of Democracy? And, what are the instruments of e-Democracy, best practices etc.?

In 2006, the Flemish Parliament, commissioned Indigov to carry out a study on the phenomenon "eDemocracy" in Flanders. The result was a scientific report which, for the first time in Flanders, provided a systematic understanding of the attitudes and knowledge of the various stakeholders. The study clearly shows that, for each stakeholder in Flanders, there is a big divide between the current and desired levels of citizen participation in all its forms (information, consultation, active participation, co-decision-making). Moreover, it showed that participation is more important at the local level than at any higher level. There is room for more e-Democracy initiatives. There is a need for a well developed framework. There is a need for an e-Democracy toolkit and there is a need for positive case studies and examples.

e-Democracy is not a priority for many Flemish citizens and many Flemish politicians have an ambivalent attitude to e-Democracy. However, given the findings of the study, the Flemish Parliament wants to build bridges to encourage citizens to participate by employing a multi-channel approach. Moreover, the Parliament is working on improving the quality of legislation as well as the quality of the participation process in order to involve individual citizens more directly in political thinking.

The Flemish Government has launched the Initiative "Flanders in Action" with the aim to position Flanders as one of Europe's five top regions by 2020. The initiative places a central focus on the topics talent, logistics and mobility, innovation, and internationalisation. This

policy plan will also concentrate on sustainability and an efficient and customer-oriented government.

In preparation for this initiative, a broad and open dialogue is organized by the Flemish Government. In December 2007, 154 people between 20 and 30 years old discussed online simultaneously in 5 sessions more than 60 minutes on the topics of the initiative. People where recruited as a representative sample of the Flemish population. In August/September 2008, 117 Flemish people living abroad and 100 non-Belgians living in Belgium have been invited to discussed the theme “Flanders in the international scene” in online discussion Fora. In 2008 workshops will be organised drawing on direct input from the online discussions with stakeholders and experts. The outcomes of the workshops will be translated into policy proposals.

VASSILIS GOULANDRIS, Strategic Planner, City of Trikala, Greece, gave an attention-grabbing presentation on

Lessons From e-Deliberation
The e-dialogos Project in Greece

Trikala, being recognized first Digital City in Greece, has installed 14 Wi-Fi nodes providing free wireless Internet to 5,000 citizens and businesses. About 30 km of fibre optic offers broadband access as well as the basis for the provision of new services. “Dimosthenis” is a citizens’ multi-channel complaint system assisting citizens in reporting functional problems that they encounter on a daily basis. Through “Dimosthenis”, complaints are directed to the responsible service, and the rectification of reported problems is monitored.

An integrated Intelligent Transportation System provides information about parking spaces, monitoring of the Municipal vehicle fleet, and state-of-the- art inductive loops, for the study of the city’s traffic data. The first telematic medicine application is being completed successfully. An integrated controlled parking system allows drivers to use the municipal parking. Charging is facilitated by the verification of times of arrival and departure through text messages by mobile phone.

Following an initiative by the Municipality of Trikala a Cooperation Protocol was signed by a number of municipalities of Central Greece. The municipalities agreed to establish the first digital community in Greece, in order to implement the “Creation and Operation of Digital Technology Administration Systems Aimed at the Remote Provision of Services to Citizens”.

e-dialogos is an innovative and fully fledged e-Democracy platform for the citizens of Trikala to participate in the decision making processes of the city. The innovation of the project lies in its holistic and fully integrated approach to e-Participation, combining online deliberative and voting processes. e-dialogos is based on a unique and original methodology of e-deliberation based on worldwide best practices and consistent with the current political theory of democracy and models of deliberation.

The platform comprises the following tools: A top-down e-Survey system, where the municipality can ask citizens to respond to specific issues of interest to the municipality; a bottom-up e-Petition system; an e-Forum for an direct moderated dialogue; and a fully fledged e-Deliberation process. The latter is a serial process within a specific time-frame with 5 well-defined concrete steps embedded in each deliberative cycle. It is a process where different e-Tools (combining online information, surveys, petitions, deliberative and voting

processes) are assigned to a particular and appropriate use in order to enable engaged and informed citizens from start-to-end.

The City Counsels proposes a set of potential topics for deliberation The suggested issues is put to an online voting process where citizens can decide which two topics will finally be part of the deliberative process. Then, the selected topics are discussed among citizens in professionally moderated online forums. The results of the online discussion are forwarded to the City Council, which will discuss and decide on these issues in a dedicated session. The (Interactive) City Council Meeting is webcasted and allows real-time participation of the citizens.

In order to succeed, the project needed a strong commitment from the policy makers to seriously engage in the process. It was of crucial importance to have definite decisions and outcomes at the end of the process to prove to the citizens that they are heard. High interest discussion issues, a multi-channel communication plan to attract and sustain participation, providing training for citizens, moderators and officials as well as the design of a user-friendly and intuitive interface are further critical success factors.

ERIC LEGALE, Managing Director of Issy Média, City of Issy-les-Moulineaux, France, provided a highly interesting insight in

GCD Members' Experiences with Mobiles Services

In May 2008, the Global Cities Dialogue (GCD), an international non-profit making association for local elected representatives on the Information Society, published a report on mobile services implemented by the network members. Each city has made its own experiences and has focused on different aspects. The mobile services, their uses and the ways of financing them differ from a city to another. Some examples are:

A community SMS news program – Alô Cidadão! (Hello Citizen!) – brings information about jobs, educational and cultural events, and local news to low-income people in Belo Horizonte in southern Brazil. The messages have been overwhelmingly popular – over 90% of subscribers forward the SMS to family or friends and rely on the text messages for daily information.

Through its mDubai portal, bi-directional communication services have been made available to the citizens of Dubai. By dialling 4488 and sending a text message from a mobile phone connected to Wi-Fi, citizens can have access to a range of services. For example, they can seek information on flights from the Department of Civil Aviation or verify the status of their transactions at the Dubai Economic Department. The administration through the same means of communication can let citizens know about developments, happenings, etc .

In Amsterdam, the state-owned enterprise of public transport, De Lijn, has begun selling train and tram tickets through SMS since September 2007. Nearly 40,000 tickets were sold in this manner during the first three months. More than 600 passengers pay for their tickets through SMS. A mobile user who wishes to buy his ticket through SMS has to first register by sending a message to a short digit number (4884). After a few seconds, he receives a SMS message, confirming his registration. This is equivalent to a ticket.

In Luxembourg, citizens can pay for all their transport related tickets (bus and train, public as

well as private transport) by micro payment through the SMS4Ticket scheme. The user sends an A by SMS and receives a pre-validated ticket which he shows to the ticket controller. The sum is debited from his telephone subscription or from the prepaid telephone card of the cell phone owner.

Helsinki's bus, tram and metro passengers can pull up route schedules on their phone screens. With the Local Traffic Timetable Service passengers in Helsinki's buses, trams, metro and commuter trains can view timetables by mobile phone. Passengers can use the service by writing or picking from the list the number of the bus line or address of the bus stop. The service returns the timetable in question and informs about possible traffic exceptions. Users can also save their own favourite timetables to the service after registration. Real-time passenger information provides passengers a forecast of the time in minutes when the next bus or tram arrives.

The Guro-gu Public Health Centre in Korea developed the u-Healthcare Chronic Disease and Health Management System to offer quality medical services to the medically vulnerable population (low-income group, the disabled and elderly persons living alone) – without limitation to time or space. For instance, a visiting nurse can send information about the patient's blood-sugar level to the doctor through a PDA. Once the doctor receives the information, the result of the blood-sugar level is sent directly to the patient so he/she could take the necessary measures.

GABRIELA FELDER, National Centre of Competence in Research: "Challenges to Democracy in the 21st Century" (NCCR Democracy), Zurich University, Switzerland, presented with great knowledge of the subject ground-breaking developments in the area of e-Democracy with

Profiling Websites - Bringing Elections Closer to Citizens?
The Case for the European Parliament Elections 2009: 'EU Profiler'

There are many challenges to democracy in Europe, in particular a break down of traditional mechanisms of representation (e.g., decreasing trust, decreasing electoral turnout, decreasing party identification). However, increasing the transparency of a party's candidate and the party's position might increase trust and better knowing the positions to personally important issues might increase the political interest and the motivation to go to the polls. Voters often have great difficulties to identify those parties representing their interests. In electoral systems with open party lists (e.g. Luxembourg) or single transferable vote (e.g. Ireland) where they choose even among the candidates, this is even more challenging. It is the moment of ICT giving the interested public the chance to learn more about parties, candidates, public opinion, political behaviour or campaign dynamics.

In June 2009, more than 300 million voters will have the possibility to elect the 736 Members of the European Parliament. For these elections, the Florence-based European University Institute (EUI) is launching, in co-operation with the Amsterdam-based Kieskompas (www.electoralcompass.com), and the Zurich-based NCCR Democracy/Politools Network (www.smartvote.ch), the 'EU Profiler'. EU Profiler (www.euprofiler.eu) is the first ever European wide party profiling website for the European Parliament elections. It will be available in all national languages of the EU and will be customised to each country's national campaign context.

Designed by an international team of scientists, the party-profiling website combines high quality information on party positions and state-of-the-art technology. The EU Profiler helps voters to make their own preferences explicit and to position themselves in a “European political landscape”. Voters can scan the positions of the various political parties and relate their own preferences to those of the parties running in the elections.

The EU Profiler will also enable the team of academics to shed new light on public opinion, voting behaviour, campaign dynamics, party cohesion and political participation across the continent. For the first time ever, it will be possible to systematically do this on the European level.

The EU Profiler provides information on the elections for the European Parliament in an innovative, unique and comprehensible manner and is easily accessible to a wide range of users. It will go online in May 2009 and cover the most important part (the last four weeks) of the campaign.

By answering a simple questionnaire, users will obtain a presentation of their policy preferences which allows them to compare their preferences with the positions of all national, as well as European, parties. The EU Profiler provides multiple options for further analysis of the position of the user. The results are displayed in a party match (i.e. percentage of user preferences and positions matching those of parties), in a two-dimensional graph (‘compass’) as well as in a multidimensional spiderweb graph (‘smartspider’).

The tool enables the user to reflect, discuss and analyse his or her political choices and to position him- or herself in the European political landscape. The quality of the information is scientifically grounded. The selection of the political issues and statements as well as the positioning of the parties is done according to strict academic standards by a group of leading academics.

MARIANNA POSFAI, Leader of the e-Hungary Project, Hungary, gave a captivating presentation on the

eHungary Program 2.0

Upon Hungary’s accession to the European Union, the Hungarian Government has adopted the “Hungarian Information Society Strategy”, highlighting the fact that Hungary’s main aim is to fight for equal digital opportunities for all and better living conditions for its citizens.

Approximately 80% of the general population in Hungary does not possess even the most basic digital knowledge. Therefore, the Hungarian Ministry of Economy and Transport has developed the eHungary Program with the goal of ensuring ICT access, tools and knowledge for everyone, everywhere, regardless of race, gender, age or social class, and thus successfully fight the digital divide in Hungary.

1,500 Internet community access points (eHungary points), have been successfully installed within the framework of the eHungary Program 1.0. These eHungary Points were established in various community locations, such as libraries, telecentres, cultural centres, etc. All Points received a minimum of two computers and free Internet access. However, this was just an initial phase in which merely the infrastructure was established.

Based on the pilot phase of the eHungary Program 1.0. it has become clear that there is an acute need for the actual development of the program, since it proved that giving tools

without the knowledge to use them is not an entirely successful strategy. Therefore, the eHungary Program 2.0 (eHuP 2.0) has been launched in 2007. The main goals of this second stage are the following: Narrowing the digital divide; provision of equal opportunities in the Information Society; assisting disadvantaged communities and marginalized groups (e.g., Roma); strengthening the economic competitiveness of underdeveloped regions.

The three pillars of these ambitious plans are: Intense local promotion of and awareness-raising about e-Government services and e-Knowledge; guidance and personalised assistance for the usage of e-Services with e-Counsellors; and providing quality-ensured e-Services in all small settlements of the country.

e-Governance is a critical element of the puzzle. There are 2,863 small rural communities in Hungary with only 167 regional centres that have access to administrative services. The government has recognized the acute need to make changes in order to ease the process by ensuring the availability of almost all of the 20 e-Government services required by the EU. The eHungary Program 2.0 addresses this problem through the promotion of e-Government service. e-Counsellors offer training on the usage of the e-Government Portal.

The e-Counsellor network is a service through which trained local professionals provide personalised assistance to the citizens in the effective usage of electronic information, services and knowledge. Generally, the e-Counsellors can be people who have graduated from a higher education institution, meaning that they possess at least a college degree. Ninety percent of the e-Counsellors are librarians, social workers and teachers who are carefully selected and thoroughly trained for this position. They are required to practice their counselling outside of their regular working hours so that they are able to concentrate entirely on their mission. The path to becoming an e-Counsellor consists of the following steps: 60-hours training, a practical module, teaching, field-work and an exam. 1,000 people are currently being trained and the 200 people who graduated last year are now completing their practical experience within the framework of the pilot phase of the program. The goal is to ensure at least one eHungary point per community and two e-Counsellors per eHungary point – this means that there will be 3,000 e-Counsellors by the year 2010.

The third pillar of the program is offering quality-ensured e-Services co-ordinated by the eHungary Center. The eHungary Centre operates in Budapest under the Ministry of Economy and Transport. The eHungary Centre tasks are project co-ordination, organisational issues, legal, professional counselling for e-Counsellors, the co-ordination of the e-Counsellor Network, advertising and promotion, round-the clock help desk for citizens and customer service for the Counsellors, and quality control and branding.

IAN WHITE, Business Development Director - Public Sector - EMEA, Oracle, UK, [www.oracle.com], provided a remarkable presentation on

e-Services as a Means to Transform Government
The UK Experience

In November 2005, the Cabinet Office launched its “Transformational Government” strategy, which aims to use technology more effectively in the delivery of public services. The Government now launched its second report on “Transformational Government – our progress in 2007” showing where Government has made progress towards designing and delivering public services around the needs of the citizen.

The key UK Government Ministries in implementing e-Services for citizens are the Department for Work and Pensions (DWP) in charge of employment, social security benefits and pensions and the Home Office (or Ministry of the Interior) responsible for issuing passports and identity cards. The key Government Ministries with respect to e-Services for businesses is Her Majesty's Revenue and Customs (HMRC) responsible for the collection of corporate and income taxes, customs and other national revenues.

Both citizens and businesses will benefit from a programme launched to rationalise and improve the over 700 Government Contact Centres. Over 70% of UK citizens use the phone to call public services – this is the highest percentage in Europe. Too many calls are "avoidable" – they deliver no value to either party. The aim is to halve this figure by April 2011. Another programme aims at rationalising and reducing the number of Government websites with the aim to migrate 95% by April 2011.

A lot of progress has been made in the context of government e-Services: As regards citizens, the focus was on developing e-services belonging to the DWP. Citizens can use the single web portal Directgov, which is the official government website for citizens providing easy access to wide ranging public services and information. Directgov is the largest cross government initiative, joining up central and local government's service delivery. Moreover, the newly redesigned National Identity Register holds biographical data from the DWP and biometric data from passports.

As regards businesses, the focus had been on developing e-services in the HMRC. The Businesslink website, a portal of action-focused information for SMEs, provides a dedicated channel for businesses. Businesslink links to all relevant ministries and departments. Th UK is the first country in the world to accept e-Accounts from companies

The use of web portals is continuously increasing: Directgov now attracts around 60 million visits per year (compared to 5 millions in 2004). Businesslink counts about 9 millions of visits per year in 2007/2008 (compared to about 7 millions 2 years ago).

The Government just published the third edition of "Better Practice Guidelines for Government Contact Centres". This Government Guidance on Good Practice in Contact Centres highlights the importance of meeting citizens' needs and delivering positive outcomes for them, while at the same time running an efficient operation that can attract and retain the right staff.

Good customer relationship management (CRM) is a management philosophy that looks at what data/information you have on the citizen, how this can be analysed and how it can be acted upon to develop the "business rules'" for longer-term communication strategies that service the citizen. Many organisations have found to their cost that implementing a CRM system alone does not enhance customer experience. A true CRM system is designed to support the collection and analysis of customer-relevant information and make it available to the appropriate people within the organisation across all channels. CRM systems aim to deliver a single, integrated view of the customer, which allows customer contact rules to be developed that can trigger event-based specific strategies for servicing customers.

Challengers related to "contact management" as a new profession are the difficulty to contact directors, the accreditation of contact centres, the need for better CRM systems, and the putting in place of a performance measurement. Working across organisational boundaries requires data sharing, security of personal data and joined-up business processes. Governance arrangements have to become more effective.

The governance objectives for e-Services are improving public trust in the government, the separation of duties to prevent fraud, controlling access to personal data, and keeping personal data secure. Current key trends in the UK are the convergence of websites, the implementation of standards for contact centres, and the improvement of governance arrangements.

As **moderator** of the session, **JAY EDWARD GILLETTE, The Human Factor Institute, Professor at the Center for Information and Communications Sciences**, USA, welcomed the attendees and expressed his delight about the very distinguished panel. Mr Gillette then moderated the session with eloquence and a high degree of professionalism.

As **chairperson**, **SHIGEHIKO NAOE, Professor Chou University, Faculty of Policy Studies, R&D Division**, Japan, started the session with a most excellent presentation of the Japanese experience in the field of

Mobility – Migrations to Future

Today we are moving toward a digital world and we experience 3 types of migrations in communications: we are moving from telephony to Internet, from narrowband to broadband and from fixed and wireless services to FMC services. From this point of view, Japan is a very good example because it is considered as the Galapagos of the mobile technologies and has the most developed mobile market.

Among 30 million subscribers, half of them already have FTTH and on the mobile market, some 85% of the subscribers are already using 3G technology. Adapting to these changes implies moving from the legacy of the telephone business using rental fee and call fees to a new business model where we talk about access, service provider, portal, applications and content suppliers.

The Japanese mobile market has been established by DoCoMo which is using a particle integration business model from content to infrastructure. With 84% of the 3G users already using IP services, Japanese people are eager to get to the next generation: 3.5G, 4G and beyond. The change will be not only technical, the business model is challenged by outsiders like Google, Apple, Microsoft, and in a context where each layer will be open to competition, the issue will be to find the model that works.

SASCHA HASELMAYER, General Director Living Labs Global, Spain / Denmark, outlined with great enthusiasm and energy some brilliant ideas on the uses of mobility:

Your Market for Mobility

Living Labs Global is a non-profit organization dedicated to build a market for mobility, in particular digital services that are mass-customised to user-needs. For example, the maps for mobile phones which are available in roaming for the same price as the paper maps can represent a possible market and help save the environment. But the high price for the access to this kind of digital service is an obstacle for public acceptance and large scale use. Interested parties may contribute to lower the price and this means a change in business models (e.g. hotels may participate to tourist maps and information delivered on mobile phones).

Roaming costs are becoming a strategic issue and local governments should act to reduce the great differences existing among countries and thus encourage mobility. In Stockholm an initiative called “Talk of the Town” brought free audio guide and tourist information for each foreign visitor using roaming. The second phase brought wireless network providing free telephony and media services to the citizens and visitors of Stockholm in 350 hotspots. This is not a technical achievement but an example of a working business model based on mobility.

Although there is not enough research on the health risks related to mobile technologies users demand more and more high value services. In Europe there are many communities offering excellent services to their citizens but these services do not migrate. Good ideas have a hard time spreading (e.g. mobile parking service from Estonia) and in different cities several dozen projects work on the same solution. The local protectionism has good intentions but many negative side effects too.

Students are a target offering great potential for mobile services. Today they do not beneficiate of dedicated digital services although they represent a resource of economic growth for communities and a strategic market as future professionals. The high value added services need a good collaboration between universities, student unions and municipalities and generally, this complexity prevents companies from investing. Living Labs has mobilized a business case to address 12 applications to 18 million students in Europe in 30 universities. This created a demand on the market and eventually a growth opportunity for the companies involved and the project will move to a global scale soon.

GIORGIO PRISTER, President of Major Cities of Europe, Italy provided a first-rate presentation of some outstanding initiatives in the field of

Municipal Wireless:
New Opportunities for Better City Management

Major Cities of Europe (MCE) is an independent community of European Local Government CIOs sharing their experiences on ICT use for public administration. One MCE initiative is a workgroup of large cities including Birmingham, Paris, Lyon, Barcelona, Madrid, Rome, Milan, Vienna and Hamburg focusing on the key issues of municipal wireless: deployment strategy, the kind of services delivered and to which users, choosing a business model and the appropriate technology, the regulations to comply with, but also financial and environmental aspects.

An interesting example is Barcelona where 4 kinds of digital services are being provided: WiFi indoor for city buildings, WiFi outdoor for nomadic municipal employees and street devices, citizen WiFi delivered according to the European laws, in more than 100 hotspots in public buildings and parks and finally private citizen WiFi provided by the private telecom operators. The network can be shared and thus everybody can create its own business model. The outdoor WiFi brought many benefits to the municipality by providing more services to the mobile devices of the city workers, allowing them to communicate through VoIP and not 3G telephony which is far more expensive. Internet of things is a reality due to the broadband connection of traffic lights, surveillance cameras or remote sensors. Undoubtedly, this project has many economic and social benefits: cost reduction, gain of productivity, pervasive digital services, remote elderly support, etc.

Birmingham is a similar example, only that the local government mixes together different technologies: WiFi, WiMax, 3G with the aim of having complete wireless coverage of the city. Each municipality has chosen its own strategy. More information about their experiences is available on the website www.majorcities.eu.

EVIKA KARAMAGIOLI, Deputy Director Gov2U, Greece, [gov2u.org] made a very interesting presentation of a European project using ICT to improve citizen mobility:

Interoperability: A Key Component for the Delivery of Efficient and Effective eGovernment Services in Europe.

The public and their political representatives now expect public administration to be as efficient and effective in achieving its goals as the enterprise sector. This requires government to provide both information and services that are developed from a 'customer-centric' viewpoint. Interoperability is a fundamental requirement, from both economic and technical perspectives, for the development of such efficient and effective e-Government services at both the national and pan-European levels, including the regional and local ones.

Interoperability is defined as the means by which the inter-linking of systems, information and ways of working, whether within or between administrations, nationally or across Europe, or with the enterprise sector, will occur. Interoperability allows organizations to share and re-use information both internally and with their business partners and for their business processes to cooperate in achieving agreed objectives, thus helping public and enterprise sector organizations to be more effective in the achievement of their goals.

Interoperability is vital if e-Government services are to be rolled-out in a shorter time, at a lower cost and be delivered in a seamless way across Europe's borders to all of Europe's citizens and enterprises. Ever since the adoption of the Interoperability Decision of the European Council and the European Parliament in July 1999, the European Commission has focused on the pan-European dimension of e-Government and on the interoperability requirements for its implementation. One of the conclusions of the conference on pan-European e-Government services at Sandhamn, Sweden, was that: "… to implement e-Government services an agreed interoperability framework for Europe is a prerequisite. This is required to underpin the fast and efficient development of eServices. In addition to technology, this framework must also address both procedures and content".

The "i2010 – A European Information Society for growth and employment" initiative launched by the European Commission on 1 June 2005 as a framework for addressing the main challenges and developments in the information society and media sectors up to 2010 stated that eID solutions will be key enablers of secure and seamless access to modern public services.

Currently most European countries have an official policy on the use of electronic identity (eID), as it is widely recognised that it is vital to assure that electronic services work together and are delivered electronically. At the same time few countries have been implementing interoperable eID in their services.

IDABC (http://ec.europa.eu/idabc/en/home) is a Community programme managed by the European Commission's Directorate-General for Informatics. IDABC stands for Interoperable Delivery of European eGovernment Services to public Administrations, Business and Citizens. It takes advantage of the opportunities offered by information and communication

technologies: -to encourage and support the delivery of cross-border public sector services to citizens and enterprises in Europe, -to improve efficiency and collaboration between European public administrations and, -to contribute to making Europe an attractive place to live, work and invest. To achieve its objectives, IDABC issues recommendations, develops solutions and provides services that enable national and European administrations to communicate electronically while offering modern public services to businesses and citizens in Europe.

The programme also provides financing to projects addressing European policy requirements, thus improving cooperation between administrations across Europe. National public sector policy-makers are represented in the IDABC programme's management committee and in many expert groups. This makes of the programme a unique forum for the coordination of national e-Government policies. By using state-of-the-art information and communication technologies, developing common solutions and services and by finally, providing a platform for the exchange of good practice between public administrations, IDABC contributes to the i2010 initiative of modernizing the European public sector.

GERALD SANTUCCI, Head of Unit "Enterprise Networking and RFID", DG Information Society & Media of the European Commission, delivered a captivating presentation as well as an interesting perspective of the Commission's activities on the evolution

Towards the Internet of Things

The Internet of Things is a matter of great interest for the European Commission who has initiated in 2008 a public online consultation on the subject. RFID is the main gateway to the Internet of Things but the debate on the latter must take place within the broader perspective of the Future Internet i.e. will the Internet of the Future be a mere evolution of present Internet, for instance through massive deployment of IPv6, or will it require a completely new Internet architecture ("clean slate" design of the Internet architecture).

It is obvious that the real world and the digital one will become more integrated. The digital world is growing fast: in 2007 it represented 281 billion gigabytes. If divided, this information means that each person on Earth provided 45 gygabytes of digital information. It is for the first time in 2007 that the overall size of digital content went beyond the total storage capacity – according to IDC, by 2011 the digital universe will be 10 times the size it was in 2006 and only one half will be stored. These fantastic figures will actually be exceeded if the Internet of Things spreads wider and wider. We are moving rapidly from the First Generation RFID (Passive RFID) to the Second Generation RFID (Real Time Locating Systems) to the Third Generation RFID (Wireless Sensor Networks). The last step refers to the seamless integration of physical things into information networks, which should be an opportunity for livelier engagements of the citizens and an improvement of the quality of life.

The Internet of Things – a network of networks which enables to identify digital entities and physical objects, whether they are inanimate or animate, directly and without ambiguity, via standardized ID systems and wireless mobile devices, and thus make it possible to retrieve, store, transfer and process data relating to them, without discontinuity between the physical and virtual worlds – will soon become a reality thanks to the inexpensive sensor technology, the ongoing miniaturization and integration and the pervasive wireless communication. The objects will interact with their environment and the information systems. If today we have only about 5 of the 4,000 to 7,000 objects surrounding us, which are connected to the Internet,

IPv6 will provide in a few years identification, location and communication capability to hundreds of them.

The Internet of Things raises a wide range of issues like security, privacy, governance, standards, interoperability, social impact, because objects will be able to upload, download, and disseminate information in different applications. The European Commission is organizing events and public consultations on all these aspects and experts are invited to give their opinions and share their experiences on the European Commission's websites.

PHILIPPE SCHEIMANN, Chief Technologist Politech Institute, CEO Ayala Alternative Organizational Consulting, Israel and **EYAL BLOCH, Co-Founder and Co-Director Educational Institute for Sustainability, the David Yellin Academic College of Education**, Israel delivered with great enthusiasm a very interesting presentation on

Sustainable e-Inclusion in a Mobile World

Education is a field of major interest for the new mobile Internet applications as well as a powerful mean for e-inclusion. Sustainable e-School is a project based on interdisciplinary learning and multicultural dialogue. It combines English as a foreign language, computer literacy and a chosen subject as backbone for the program. A dialogue can be established between communities with shared interest, the shared interest can vary from environmental issues, classic literature or a conflict between the two communities such as the Israeli and Palestinian one.

The Dialogue is based on understanding what shapes the identity of a person today. Traditionally we speak about the I (ego) today but we must take into account the e-Idendity (e-Id) as well. The e-Id is our virtual I, it shapes and influences the "Normal" I. The e-Id is made from three parts:

The conscious e-Id is the way we choose to build our profile on the Internet, the profile that we created in Social Networks such as Facebook, Second Life etc, and the second part is the unconscious part that is created by others: entities such as governments or business. The last part is the mobile phone that becomes an integral part of the youth.

The e-dialogue was developed in order to fill a void in today's education systems and is designed to integrate and develop the I & e-ID take. The first step of the e-Dialogue requires the student to present himself and his community. "Hot" or sensitive subjects like the Holocaust for Israeli and Germans, will open the student to question about his roots, exploring his society through a lively dialogue with the other side. In the program "Michael's dialogue" between German and Israeli youth our chosen subject was the Holocaust. The leading question was "how will the memory of the Holocaust look like in twenty years?" This led the participants to check their own family biography and share it via the Internet. The subject that seems as an untouched one among the German family became an open debate that draws the parents of both sides to become part of the e-dialogue. That was an e-inclusion between generation and communities with a past with deep wounds.

Another example of digital world is Relationet (www.relationet.net) where Israeli and Polish high school students are looking for relatives and friends among the Holocaust survivors. The Israeli students collect testimonies from survivors and make them available on the dedicated blog. The Polish students collect photos, videos, interviews. Then, an on-line visit of Poland is possible and history becomes interesting and interactive.

The e-inclusion projects contribute to shape the future because the e-ID will be a way for the individual to interact with his community and the rest of the world. The sustainable e-inclusion and the developments it implies, encounter obstacles like the sense of preservation. Building the future must start from existing systems and programs which is the basis of sustainability.

The Politech Institute is originating an initiative to create a Sustainable Civil Society. There is actually a need to train the trainers and civil activists since a change of habits and mentalities is needed. The Global Forum is sustaining this initiative together with Howard Rheingold, Guru of Virtual Communities, professor at Stanford University in social media and developer of the open source platform socialmediaclassrom.com and the International Janusz Korczak Association but all interested parties are welcome to join and visit the site: www.sustainable-eschool.net.

ALAN SHARK, Executive Director, Public Technology Institute, USA, gave a very impressive speech about

Mobility in a Digital World

PTI is a non profit association created by and for the local governments working to identify opportunities for technology research, to share solutions and develop best practices that impact local government, affiliated to NLC, NACo, ICMA. In the USA two major mistakes have been done in the last two years which are being corrected today: very often mobility has been confused with wireless and the technology has been more important than the applications and their users.

In the last years, manufacturers have struggled to come up with devices capable of doing all things, just like a Swiss knife. A modern phone is a perfect example of today's convergence because it has more than 40 different functions from a simple phone to a web browser, a GPS, a medical monitoring or a biohazard detector. Apple has raised the bar even higher with their new iTouch technology and iPhone.

Local governments will be transformed by broadband deployment which will impose a system refocus in public safety, public works or intelligent transportation thus gaining in productivity and efficiency. Another major trend is the influence that 4G technologies will have on our personal, professional and public lives. The third trend is social networking beyond e-government which creates for local governments a lot if interfaces with the public.

Local governments can provide mobile services to their citizens without having necessarily a wireless connection like it is the case of the kiosks opened in hardware stores in Washington DC to obtain city permits. City managers must have a customer-focused way of thinking starting from where the people go, what kind of devices they have and ending with the service that can make their lives better. The books published by PTI contain more examples of mobility use for e-government services and they contribute to experience sharing among technology executives and experts are invited to contribute.

In conclusion, efforts must continue to increase mobility in all its fields of application (e.g. traffic, e-vote, weather alerts, e-health and social equity) because it will lead to greater citizen empowerment, improved security, productivity and quality of life. The starting point should be the consumer, his needs and implication, then pilot projects should be put in place and the innovation should be encouraged and backed up by suitable legislation. Sharing best

practices is a way to gain time and money in service deployment because this is all about leadership and communication and not about technology.

--- ✦✦✦ ---

For the **Q&A** part following the presentations, the moderator, masterfully led a discussion about mobility related to tracking people and objects. Mr. Santucci explained that things will not only be tracked and traced but their history will be embedded and they will become content providers themselves. Therefore, we will assist not only to a technological breakthrough but also to a change in the way we live. Mr. Scheimann outlined the idea that we do not own and do not control the content we receive on our mobile devices and this leads to the question of privacy vs. people empowerment. Mr. Shark said that in his opinion people should have different choices according to their openness to these new services. A flexible control is needed because being careless is not danger free and different generations have different attitudes towards mobile services and Internet, i.e. generally, young people are much more opened than the elderly. Ms. Karamagioli added that in the future, the major concern will be Internet regulation and the organizations that should deal with this at international and national level. This has been the key question at the Forum for the Future of Democracy held in Madrid. Mr. Haselmayer emphasized that private companies search for personal information for marketing reasons, governments like the Danish one look for information on revenues and expenditures of their citizens and this can get quite frightening. Considering that the only major step since voice call was the SMS invented 25 years ago, there is a possibility that the IoT will not create a revolution of our way of life, simply because people will neglect it. Efforts should be concentrated on local, smaller levels where the value is and users show some interest: local media, local information and history, etc. Mr. Naoe added that in Japan, IP traffic represents 70-80% but it only generates 20-25% of the revenues which means that companies still depend on voice telephony. The technology is there but the problem of sustainability is not yet solved. Mr. Bloch drew the attention on a sociological problem that IoT may lead to, because people are in danger of socializing less and less. A proper use of Internet and mobility is needed to prevent this from happening. Mr. Gillette ended the debate by thanking the audience and the Global Forum that has been considered “the Davos of IT” due to the quality of its panels and also the audience.

CONFERNCE DOCUMENTATION

All conference documentation, including programme, presentations and slides, speakers' profiles, participant's testimonials, and related information on the Global Forum 2008 are made available for download on the website of ITEMS International www.items-int.com.

HAVE A QUESTION OR COMMENT?

Please do not hesitate to contact ITEMS International if you need any help to get in touch with the participants of the Global Forum.

ITEMS International
– Global Forum –
6, rue Jean-Baptiste Potin
92270 Vanves
France

Tel: +33 (0) 1 46 42 48 76

Sylviane Toporkoff, President of the Global Forum: stoporkoff@items-int.eu
Sébastien Lévy, Vice President of the Global Forum: slevy@items-int.eu

Your feedback is important to us and we would be pleased to receive your comments on this year's Global Forum as well as suggestions for the upcoming Global Forum 2009.

The team of ITEMS International will be pleased to answer any question and to provide you with more information about the Global Forum 2009.

Please make sure to check our website regularly for updates.

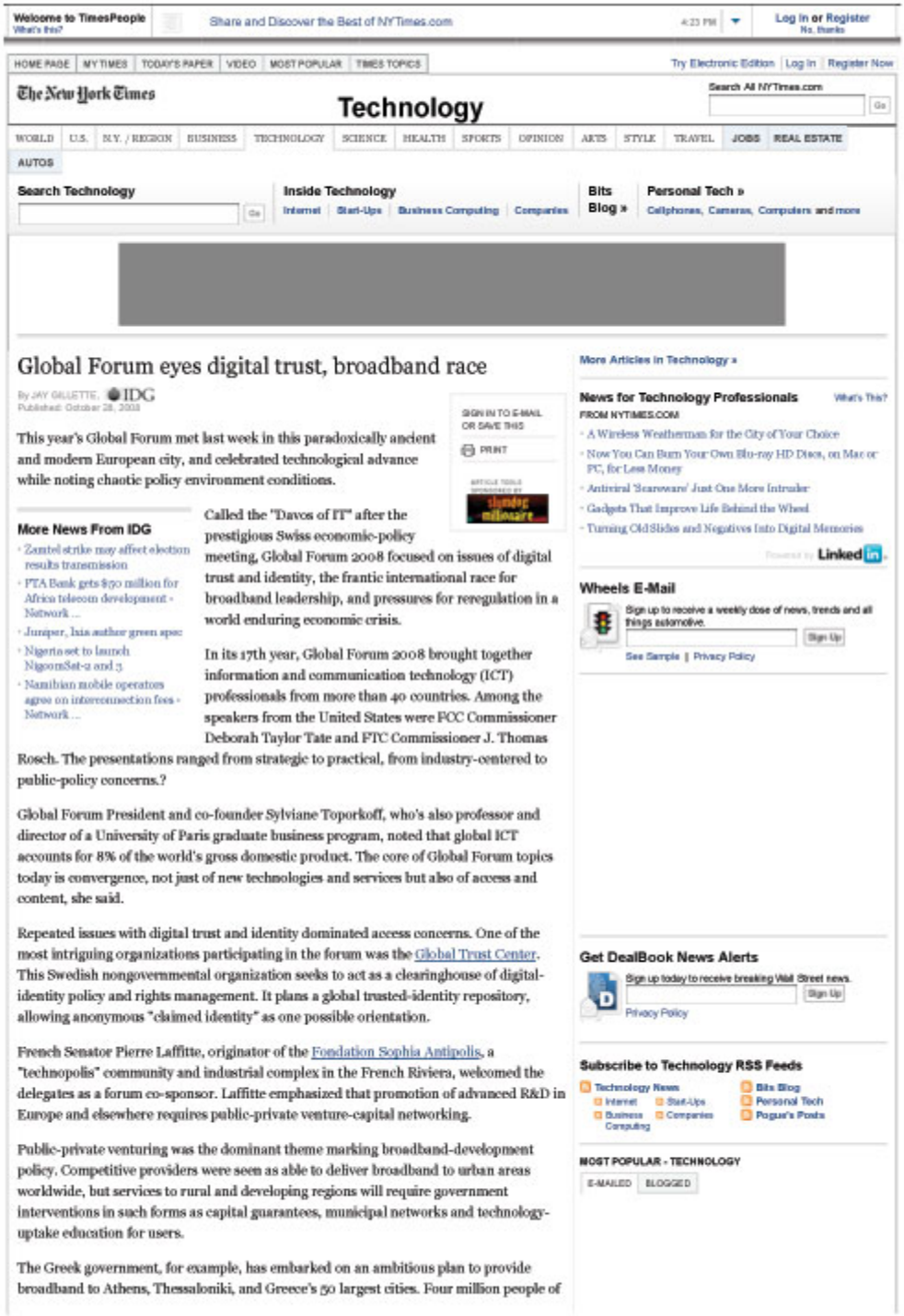
ADSL	Asymmetric Digital Subscriber Line
ARPU	Average Revenue Per User
ASP	Application Service Provider
AWS	Advanced Wireless Service 3
BPI	Broadband Performance Indicators
BPR	Business Process Reengineering
CAGR	Compound Annual Growth Rate
CeGD	Centre for eGovernance Development
CEN	European Committee for Standardization
CENELEC	European Committee for Electrotechnical Standardization
CFIUS	Committee on Foreign Investment in the United States
CGM	Consumer Generated Media
CHR	Clinic Health Record
CIO	Chief Information Officer
CRM	Customer Relationship Management
DCI	Digital Cinema Initiative
DG	Directorate General
DG Infso	Directorate General Information Society and Media
DKK	Danish Krone
DMCA	Digital Millennium Copyright Act
DoD/VA	Department of Defense/Department of Veterans Affairs
DRM	Digital Rights Management
DSL	Digital Subscriber Line
DTV	Digital TV
DVB	Digital Video Broadcast
DVB-CPCM	Digital Video Broadcasting - Content Protection and Copy Management
DVD	Digital Versatile Disc / Digital Video Disc
DWP	Department for Work and Pensions
EC	European Commission
ECO analysis	Effective Competitive Opportunities analysis
e-ID	Electronic Identity
EHR	Electronic Health Record
EMEA	Europe Middle East and Africa
EPR	Electronic Patient Record
ERA	European Research Area
ERDF	European Regional Development Fund
ESO	European Standards Organisations
ETSI	European Telecommunications Standards Institute
EU	European Union
EU-25	European Union of 25 (Member States)
EUR	Euro
EV-DO	Evolution - Data Optimized

FCC	Federal Communications Commission
FiOS	Fiber Optic Service
FMC	Fixed - Mobile Convergence
FMCA	Fixed - Mobile Convergence Alliance
FP7	7th Framework Programme of the EC
FTC	Federal Trade Commission
FTTH	Fibre To The Home
FTTP	Fiber To The Premise
GDP	Gross Domestic Product
GHz	GigaHertz
GNP	Gross National Product
GTC	Global Trust Center
HD	High Definition
HDTV	High Definition TV
HMRC	Her Majesty's Revenue and Customs
HTTPS	Hypertext Transfer Protocol Secure
ICAO	International Civil Aviation Organisation
ICMA	International City County Managers Association
ICT	Information and Communication Technologies
ICT PSP	ICT Policy Support Programme
IDABC	Delivery of European e-Government Services
IMS	Internet Protocol Multimedia Subsystem
IF	Infrared
IGF	Internet Governance Forum
IMF	International Monetary Fund
IoT	Internet of Things
IP	Internet Protocol
IP	Intellectual Property
IPR	Intellectual Property Rights
IRU	Indefeasible Right of Use
ISF	Information Security Forum
ISP	Internet Service Provider
ISSS	Information Society Standardisation System
IST	Information Society Technologies
IT	Information Technologies
LLU	Local Loop Unbundling
LME	Loi de Modernisation de l'Economie
LTE	Long Term Evolution
Mbps	Megabits per second
MDF	Metallic Distribution Frames
NACo	National Association of Counties
NATO	North Atlantic Treaty Organization
NGA	Next Generation Access
NGN	Next Generation Network
NGO	Non-Governmental Organizations
NHIN	Nationwide Health Information Network
NHR	National Health Record
NHS	National Health Services
NLC	National League of Cities
NoE	Network of Excellence
NRA	National Regulation Authority

NSA	Network Security Agreements
OECD	Organisation for Economic Co-operation and Development
OSS	Open Source Software
PDA	Personal Digital Assistant
PDR	Policy Development and Research
PHR	Personal Health Record
PKI	Public Key Infrastructure
PON	Passive Optical Networks
PPP	Public Private
P2P	Peer-to-Peer
P4P	Proactive Network Provider Participation for P2P
Q&A	Questions and Answers
R&D	Research and Development
R&D&I	Research and Development and Innovation
RF	Radio-frequency
RFID	Radio-frequency Identification
ROI	Return of Investment
RPM	Remote Patient Management
RSA algorithm	Rivest Shamir Adleman algorithm
RTD	Research and Technological Development
SEE	South-Eastern Europe
SME	Small and Medium-sized Enterprises
SMP	Significant Market Power
STTH	Services To The Home
SWF	Sovereign Wealth Funds
TCO	Total Cost of Ownership
TDT	Terrestrial Digital Television
TV	Television
UGC	User Generated Content
UHF	Ultra High Frequency
UK	United Kingdom
UN	United Nations
US	United States
USA	United States of America
USC	Unites States Code
USD	US Dollar
WiFi	Wireless Fidelity
WSIS	World Summit on the Information Society
WTO	World Trade Organization
W3C	World Wide Web Consortium
VoIP	Voice over Internet Protocol
VoD	Video on Demand
XBRL	Extensible Business Reporting Language
XML	Extensible Markup Language
ZB	Zeta Byte (2^{70} bytes)
3D	Three Dimensional
3G	Third Generation
3GPP	Third Generation
4G	Fourth Generation

annexe 1: press

The New York Times (Online):



Welcome to TimesPeople
What's this?
Share and Discover the Best of NYTimes.com
4:23 PM
Log in or Register
No, thanks

HOME PAGE | MY TIMES | TODAY'S PAPER | VIDEO | MOST POPULAR | TIMES TOPICS
Try Electronic Edition | Log In | Register Now

The New York Times
Technology
Search All NYTimes.com
Go

WORLD | U.S. | N.Y. / REGION | BUSINESS | TECHNOLOGY | SCIENCE | HEALTH | SPORTS | OPINION | ARTS | STYLE | TRAVEL | JOBS | REAL ESTATE | AUTOS

Search Technology
Go

Inside Technology
Internet | Start-Ups | Business Computing | Companies

Bits Blog »

Personal Tech »
Cellphones, Cameras, Computers and more

Global Forum eyes digital trust, broadband race

By JAY GILLETTE, IDG
Published: October 28, 2008

SIGN IN TO E-MAIL OR SAVE THIS
PRINT

This year's Global Forum met last week in this paradoxically ancient and modern European city, and celebrated technological advance while noting chaotic policy environment conditions.

More News From IDG
- Zantel strike may affect election results transmission
- PTA Bank gets $50 million for Africa telecom development - Network ...
- Juniper, Isis author green spec
- Nigeria set to launch NigcomSat-1 and 3
- Namibian mobile operators agree on interconnection fees - Network ...

Called the "Davos of IT" after the prestigious Swiss economic-policy meeting, Global Forum 2008 focused on issues of digital trust and identity, the frantic international race for broadband leadership, and pressures for reregulation in a world enduring economic crisis.

In its 17th year, Global Forum 2008 brought together information and communication technology (ICT) professionals from more than 40 countries. Among the speakers from the United States were FCC Commissioner Deborah Taylor Tate and FTC Commissioner J. Thomas Rosch. The presentations ranged from strategic to practical, from industry-centered to public-policy concerns.?

Global Forum President and co-founder Sylviane Toporkoff, who's also professor and director of a University of Paris graduate business program, noted that global ICT accounts for 8% of the world's gross domestic product. The core of Global Forum topics today is convergence, not just of new technologies and services but also of access and content, she said.

Repeated issues with digital trust and identity dominated access concerns. One of the most intriguing organizations participating in the forum was the Global Trust Center. This Swedish nongovernmental organization seeks to act as a clearinghouse of digital-identity policy and rights management. It plans a global trusted-identity repository, allowing anonymous "claimed identity" as one possible orientation.

French Senator Pierre Laffitte, originator of the Fondation Sophia Antipolis, a "technopolis" community and industrial complex in the French Riviera, welcomed the delegates as a forum co-sponsor. Laffitte emphasized that promotion of advanced R&D in Europe and elsewhere requires public-private venture-capital networking.

Public-private venturing was the dominant theme marking broadband-development policy. Competitive providers were seen as able to deliver broadband to urban areas worldwide, but services to rural and developing regions will require government interventions in such forms as capital guarantees, municipal networks and technology-uptake education for users.

The Greek government, for example, has embarked on an ambitious plan to provide broadband to Athens, Thessaloniki, and Greece's 50 largest cities. Four million people of

More Articles in Technology »

News for Technology Professionals What's This?
FROM NYTIMES.COM
- A Wireless Weatherman for the City of Your Choice
- Now You Can Burn Your Own Blu-ray HD Discs, on Mac or PC, for Less Money
- Antiviral 'Scareware' Just One More Intruder
- Gadgets That Improve Life Behind the Wheel
- Turning Old Slides and Negatives Into Digital Memories

Powered by LinkedIn

Wheels E-Mail
Sign up to receive a weekly dose of news, trends and all things automotive.
Sign Up
See Sample | Privacy Policy

Get DealBook News Alerts
Sign up today to receive breaking Wall Street news.
Sign Up
Privacy Policy

Subscribe to Technology RSS Feeds
Technology News | Internet | Start-Ups | Business Computing | Companies | Bits Blog | Personal Tech | Pogue's Posts

MOST POPULAR - TECHNOLOGY
E-MAILED | BLOGGED

Welcome to TimesPeople
What's this?
Share and Discover the Best of NYTimes.com
4:23 PM
Log in or Register
No, thanks

Yet Greece intends to provide broadband at 100Mbps downstream and upstream to all these cities early in the next decade, starting as early as 2010. These are goals met today only by Korea and Japan, the world's leaders, the general focus of which historically has been on the largest urban areas.

The European Union's 2008 average broadband-penetration rate is more than 21%. Eight member states are ahead of the United States' broadband-penetration rate. Europe has 99 million broadband access lines. The United States has 75 million broadband subscribers and a penetration rate of about 25%.

China has the largest total online population, with 250 million people online overall, but not necessarily using broadband. Forty percent of access, for example, is from Internet cafes, 30% from mobile phones.

In terms of IP addresses, China is second globally with about 6% of the world's total, following the first-place United States' 57%. China's IP-address growth is 34% annually. Mandarin Chinese is now the second-largest linguistic group on the Internet at 19%. English is first, at about 29%. while Spanish is third, at about 8.5%.

The U.S. FCC's presentations, along with the FTC's talk, emphasized deregulation and the encouragement of private capital investment in infrastructure deployment. The growth of U.S. broadband was noted, with spreading competitive conditions after statewide franchise deregulation at the state level.

Both FCC presentations repeated the set of four principles released in 2005 as continuing the FCC's recommended guidelines for broadband policy (consumers' right of content access; choice of legal applications and service; right to connect legal and nonharmful devices; and right to competitive service providers). According to the speakers, these nonbinding principles address issues of network neutrality, which the FCC followed in its recent decision against Comcast network-management practices.

The Global Forum 2008 program will be accessible at the organization's Web site. The speakers had only brief periods to make their points. This enforced a fast-paced and intense burst of information from each presenter.

Because the conference took place just before U.S. elections, there was an intense and knowledgeable discussion by delegates on the presidential race. A nonscientific sample indicated overwhelming support for Barack Obama's candidacy among these international professionals.

Global Forum 2009 will be held in Bucharest, Romania, the first time the event will take place in an Eastern European venue.

Jay Gillette is professor of information and communication sciences at Ball State University, director of its Human Factors Institute, and a senior research fellow at the Digital Policy Institute.?

Copyright 2008 IDG. All Rights Reserved.

More Articles in Technology »

All the latest world sports, news and results - iht.com/sports

INSIDE NYTIMES.COM

3. Basics: Wirelessly, Home Security Becomes a D.I.Y. Project
4. Netflix and TiVo to Partner on Movies
5. Antiviral 'Scareware' Just One More Intruder
6. Google Settles Suit Over Book-Scanning
7. Sony's Profit Shrinks by 72%, Pressured by Strong Yen and Slow Markets
8. Bits: TV Prices Falling Faster
9. Pogue's Posts: Tech Tips for the Basic Computer User
10. Basics: You Know About Backups. Now, Do It Online.

Go to Complete List »

The New York Times POLITICS
nytimes.com/politics

Create your own election night scenario
Also in Politics:
- Photos from the campaign trail
- Compare the candidates' TV ads
- Continuous coverage of the 2008 election

ADVERTISEMENTS

Get Times Reader Free. A Digital Newspaper That Reads Like The Real Thing.

Get Times Reader Free. A Digital Newspaper That Reads Like The Real Thing.

The New York Times STORE

Margaret Mee Botanical, Plate 3
Buy Now

Browse Local Business Services

Find businesses near you on The New York Times Business Services Directory

Advertising & Marketing » | Business & Financial Services »
Business Cash Advance » | Home Remodeling »
Legal Services » | Limousines »
Miscellaneous » | Nightlife Entertainment »
Public Relations » | In partnership with DirectoryM

Organisers

Under the auspices of

Organisers

Main Sponsors

Supporting Sponsors