

Communications Cooperative International
Leading sustainable, community-based ICT solutions

Bottom Up, Community-based Solutions for Reducing the Digital Divide

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About CCI

- USAID-funded, not-for-profit
- Dedicated to expanding access to ICTs in rural and underserved areas through private sector service delivery, especially through enterprises that are
 - Locally owned and managed
 - Based on sustainable business models
 - Can operate in context of policy environment that is – or can become – reasonably favorable
- Technology neutral
- Promotes policy, regulatory changes and sector reform needed to enable private sector participation
- Guides communities in designing, planning, financing, operating sustainable ICT businesses
- Guides communities in developing and implementing desired applications using appropriate technologies



A Dramatic Change in the Landscape

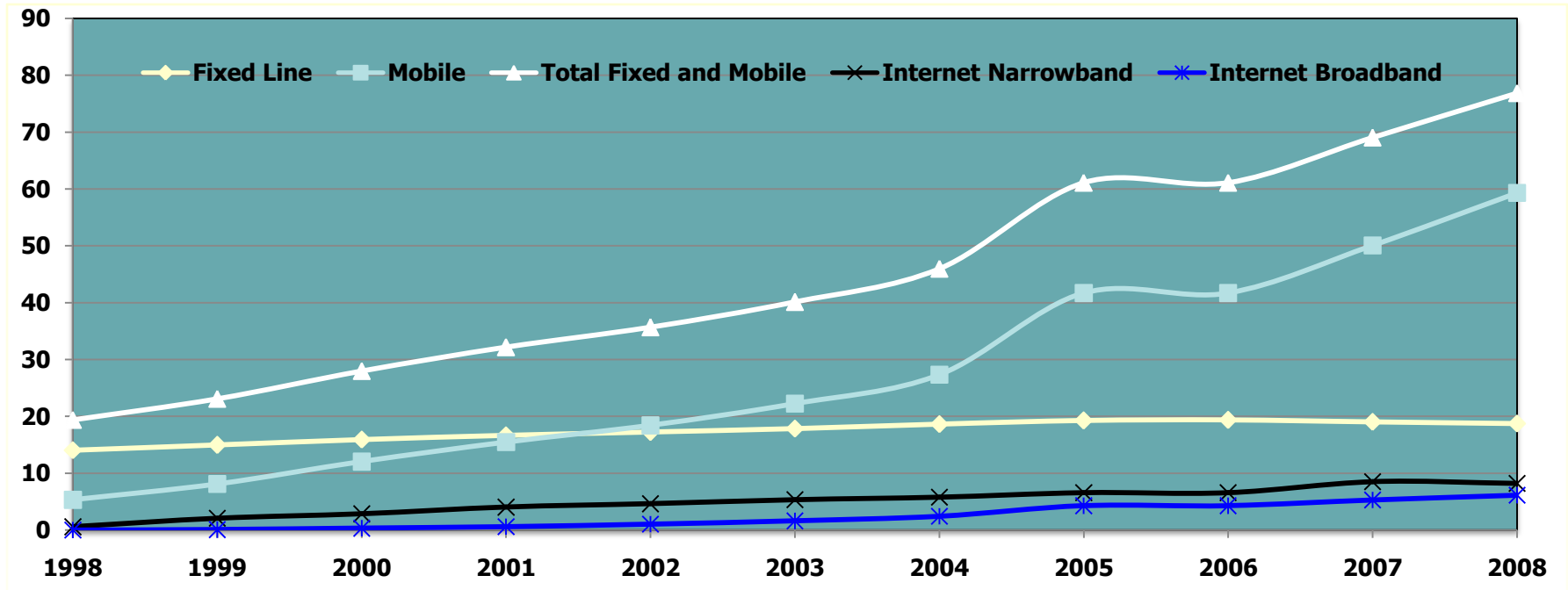
Subscribers Worldwide, per 100 Population (ITU)

	Fixed Line	Mobile	Total Fixed + Mobile	Internet Narrowband	Internet Broadband
1998	14.07	5.34	19.40	.59	.02
1999	14.97	8.13	23.10	2.09	.10
2000	15.93	12.06	27.99	2.87	.35
2001	16.68	15.50	32.18	4.06	.61
2002	17.25	18.43	35.68	4.64	1.05
2003	17.85	22.27	40.13	5.37	1.63
2004	18.66	27.34	46.00	5.80	2.46
2005	19.28	41.71	61.12	6.59	4.30
2006	19.38	41.71	61.12	6.59	4.30
2007	19.05	50.08	69.08	8.52	5.30
2008	18.76	59.32	76.86	8.22	6.15

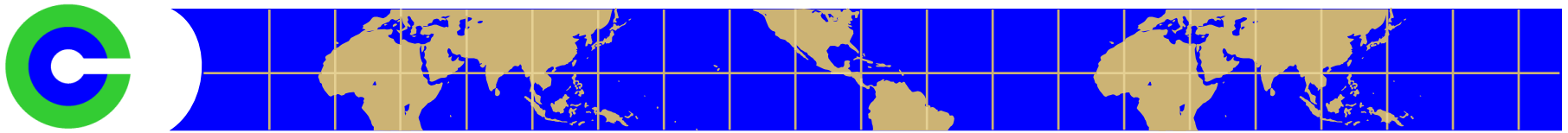
In 10 year span, telephone subscribers on the planet went from 19% to almost 77% due to of mobile phone technology



Subscribers Worldwide, per 100 Population (ITU)



- ✓ Internet, broadband growth rise very significantly from 1998 levels; enormous room for growth
- ✓ Fixed line growth was more or less flat in the period
- ✓ Mobile phones overtake fixed lines in 2002; thereafter proliferate exponentially



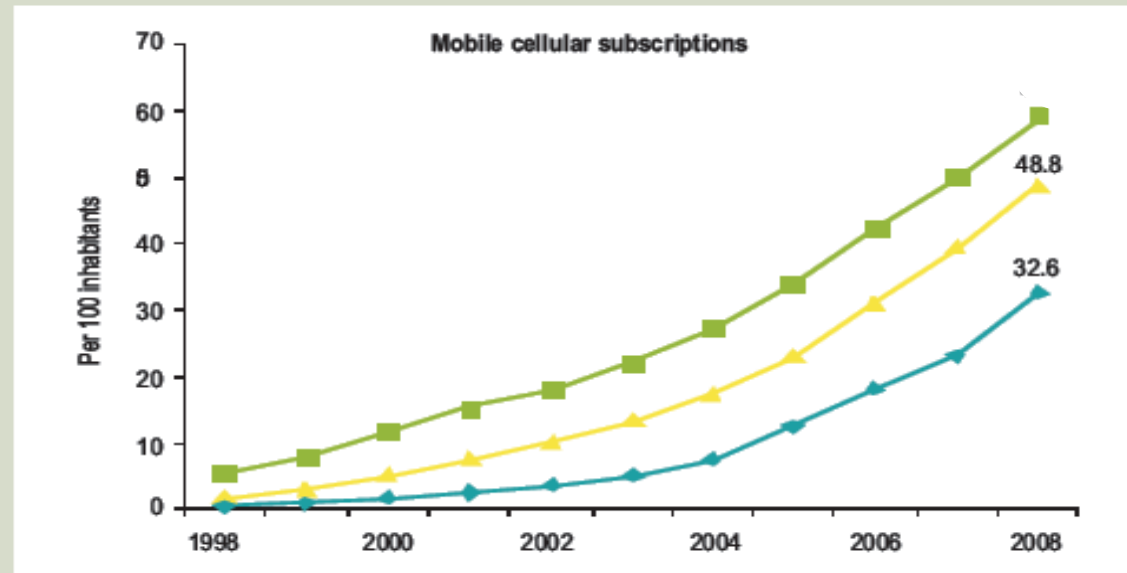
Mobiles in the Developing World

Chart 1.5



Source: ITU World Telecommunication/ICT Indicators database.

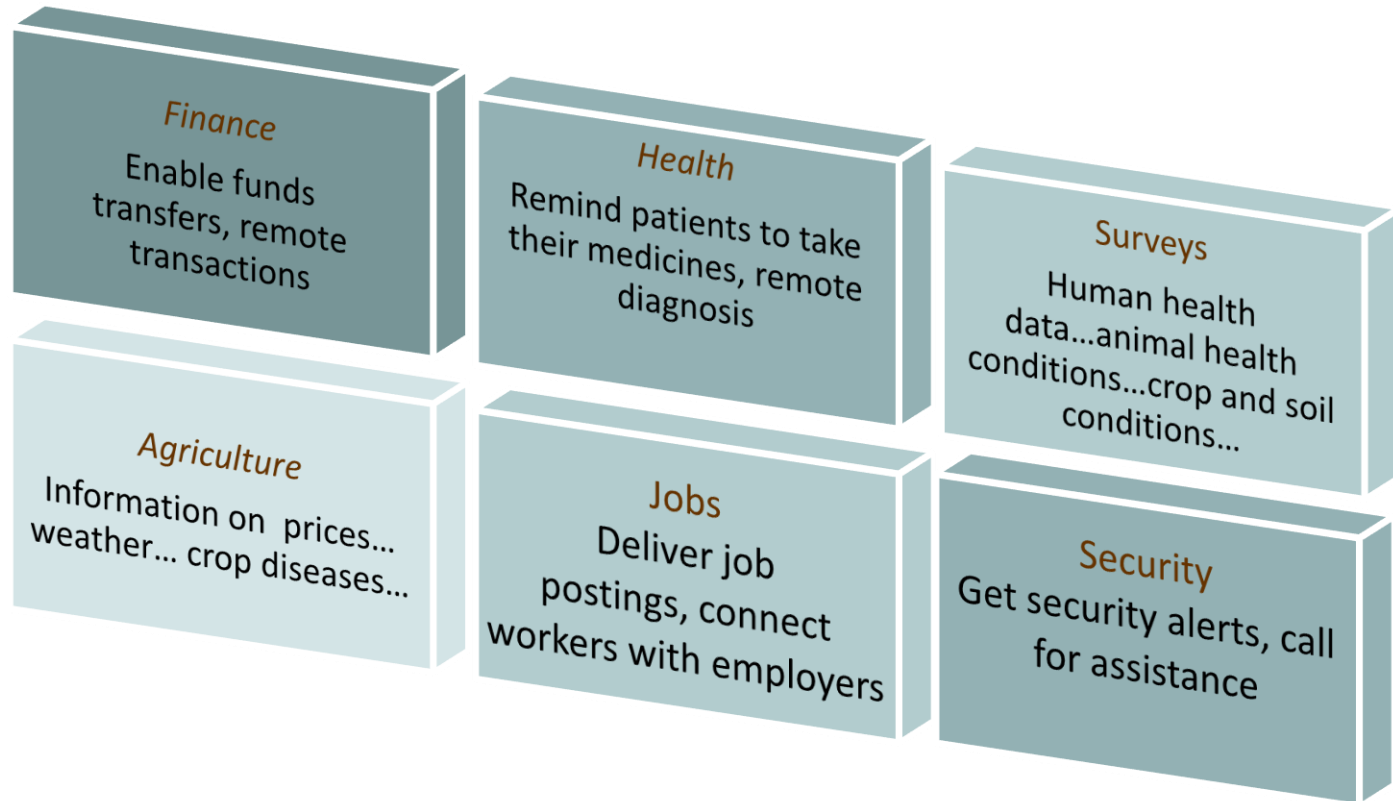
Mobile cellular penetration, 1998-2008



- ✓ Mobile penetration has had dramatic impact in developing countries, which have account for 80% of worldwide mobile phones
- ✓ Africa , largest growing mobile market in the world, accounts for 55%
- ✓ Because how poor people quickly and innovatively deploy ICTs when they have access



Some “Pro-Poor” Applications



Poised to offer full internet access in the coming years, encouraging more mobile applications utilizing the web



But Access Barriers Are Alive and Well

- Even mobile technology presents three barriers to access: coverage, cost of handset, cost of service
- Growth of ICTs heavily concentrated in urban areas that are easier to serve while providing greater ROI
- Digital divides: (a) developed/developing countries; (b) richer/poorer within developing countries
- The challenge: how to deploy necessary infrastructure to enable access in relatively poor, rural isolated areas, economically
- Alternative approaches needed



One Powerful Alternative: Community-based Solutions

- Enterprises owned/controlled by persons, business or other entities that produce or use enterprise's products or services (cooperative model)
- Locally-owned and managed enterprises backed by investors committed to the community and its development (local investor business model)
- Hybrids
- Chosen approach dependent on prevailing culture, laws



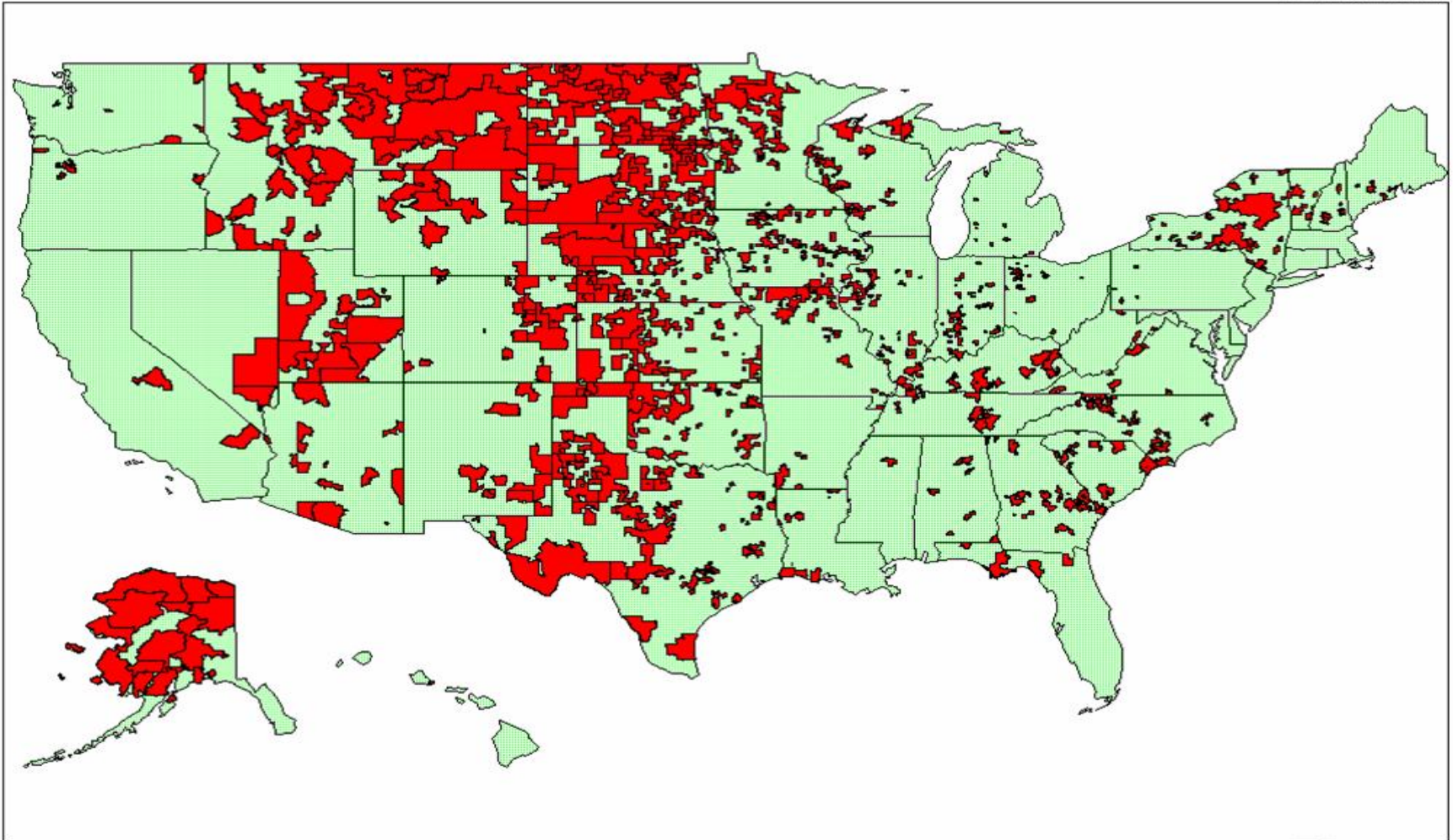
Cooperative Business Model

Characteristics: Users own, control, benefit

- Open membership
- Member owners
- One member, one vote
- Service vs. profit
- Limited return on investment
- Surplus is reinvested in growth
- Eventually surplus is returned to members



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Source: NTCA

Community-based US Telecom Systems (Commercial and Cooperative)



Some Other Countries with Successful Telecom Cooperatives

- Argentina
- Bolivia
- Canada
- Finland
- Micronesia
- Netherlands
- Philippines
- Poland

Some successful community-based telecenters

- Ukraine
- Albania
- Ethiopia
- South Africa



Basic Requirements

- The activity is permitted by law
- Local commitment, investment
- Fee-based service delivery
- Funding for technical assistance (donors)
- Funding for start-up costs (USF, but...)
- Private sector participation, financing – favorable terms...(vendors, service providers...)



Going Forward

- Community-based solutions work well (cf scale)
- New technologies keenly increase their relevance; e.g., wireless presents
 - Comparatively low initial investment
 - Scalability
 - Relatively simple technical deployment
 - Low-cost, open standards
 - Adaptability to voice and data requirements
- One example: WiFi, WIMAX with satellite backhaul as “first mile” solution
- Impact of now-emerging fiber optic rings in developing countries



Thank you!

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