

# MOBILE BROADCASTING

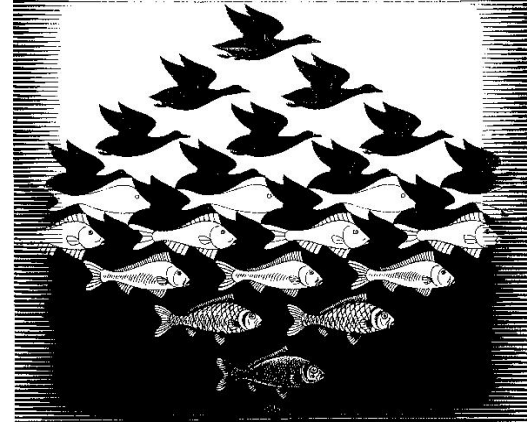
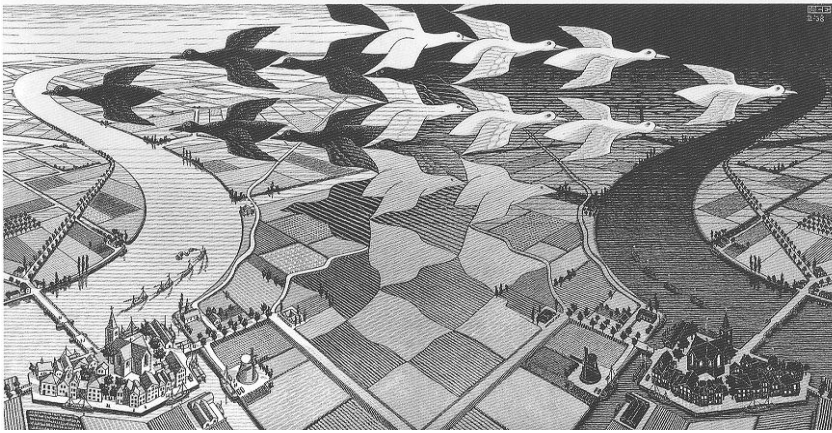
## OPTIONS FOR EUROPE

***GLOBAL FORUM @ Hotel de Ville de Paris***

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# UMTS: Paired *and* unpaired frequency channels for mobile terminals in EU+



- Europe's 3G frequency plan (UMTS) includes unpaired 5 MHz-channels for (broad- en multi- casting to) mobile terminals. EU has yet to agree and adopt a convincing **common strategy** for this.
- Member states and neighbours of EU have not (yet) agreed joint technology standards for mobile broadcasting and/or multicasting via these unpaired channels.

# INCUMBENTS' TRAFFIC CHANGES

## 2004, RELATIVE TO 2003 (Source: OVUM)

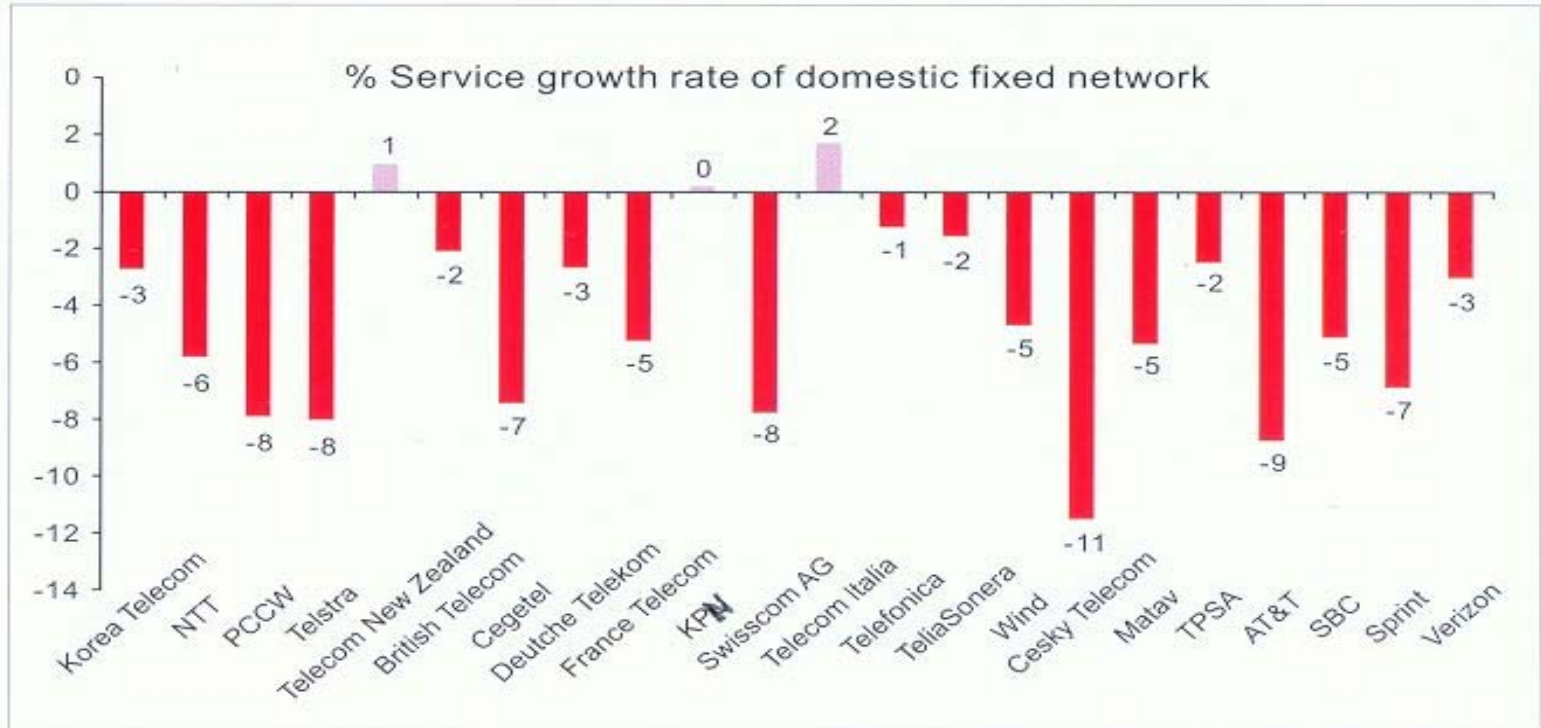


Figure 1 Service growth rate of global fixed network operators

# BT's Next Generation Network (fixed!):

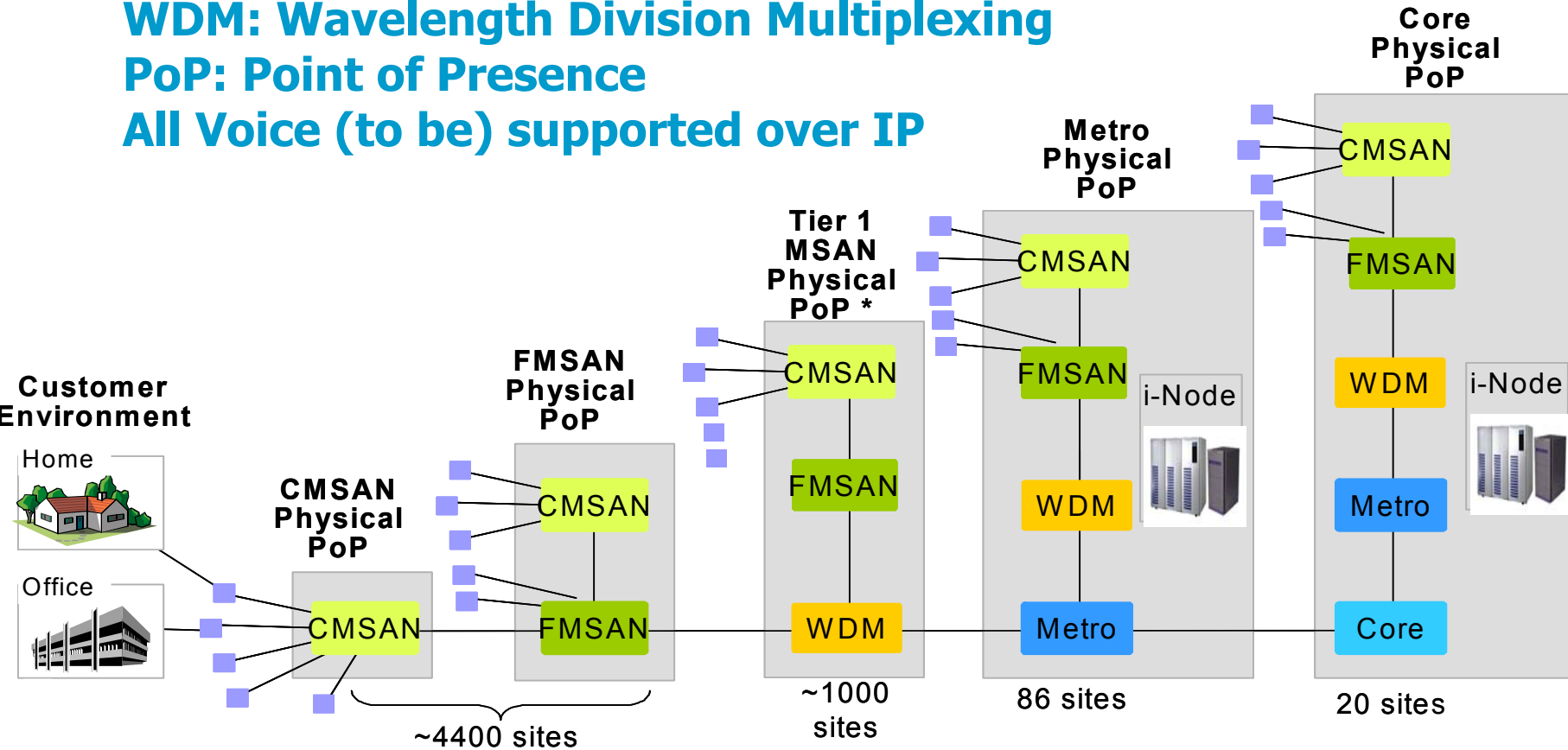
**CMSAN: Copper Multi-Service Access Node**

**FMSAN: Fibre Multi-Service Access Node**

**WDM: Wavelength Division Multiplexing**

**PoP: Point of Presence**

**All Voice (to be) supported over IP**



# MANY MOBILE OPTIONS CONSIDERED IN EU, BUT NO FINAL STANDARD AS YET..(1)

- GSM vendors favour Digital Video Broadcast (*DVB*), modified for low-power *handheld* terminals: *DVB-H*
- TDtv is a prospective solution for mobile operators using the TD-CDMA features of the 3GPP standard in the unpaired UMTS channels for multimedia broad- and multicast services (*MBMS*). Can deliver up to
  - 50 channels for standard cell phones, *or*
  - 15 QVGA channels (for higher-quality cell phones)
- Find & expand international “zones” in the UHF-band and L-band (?) to reap *common digital dividend*...

# MANY MOBILE OPTIONS CONSIDERED IN EU, BUT NO FINAL STANDARD AS YET..(2)

- MediaFLO\* is an impressive US outsider, offering multicasting with shorter channel selection time (to assist “zapping” between digital channels). It
  - is designed for markets with dedicated spectrum (as in UMTS) and high(er) power, reducing number of antenna sites to cover a region.
  - uses advanced coding schemes
  - plans field trials planned in some regions of Europe

\*) *FLO => "Forward Link Only"*

# BRIEF CONCLUSION & RECOMMENDATION

- The emerging patchwork of different mobile multi- and broadcasting systems in EU is risky and sub-optimal, **if**
  - it reduces or annihilates the “Digital Dividend” of flexible solutions for serving Europe’s highly pluralistic culture(s);
  - national choices were to result in “standardised” patchworks or technologies based on incongruent regional interests across Europe
- EU should become more conscious of its *need* to maximize the “Digital Dividend” by judicious choices of (common) open technology standards