

Broadband Deployment and Spectrum Management in the EU-12

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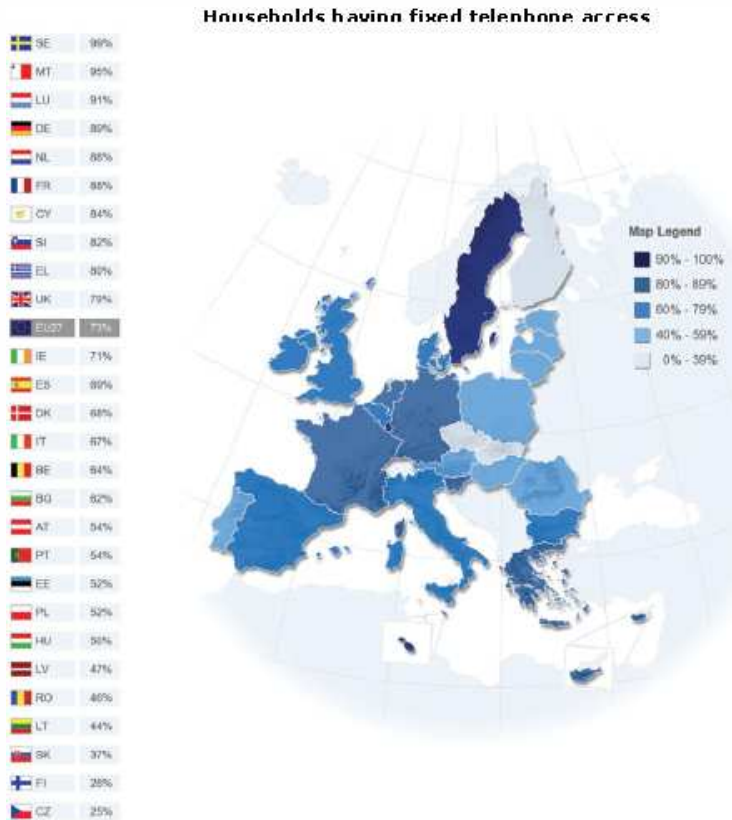
Broadband Deployment and Spectrum Management in the EU-12

- Broadband deployment and adoption
- The European regulatory framework and broadband adoption in the EU-12
- Spectrum management in the EU-12

Broadband deployment and adoption in the EU-12

- Former East bloc countries tend to have less than full coverage for wired phone networks.
- Cable plays a substantial role in many EU-12 Member States (MS), including HU, PL, RO, BG, and also Malta.

Broadband deployment and adoption in the EU-12



- The fixed network in former East Bloc countries is limited.
- HH with fixed telephone access:

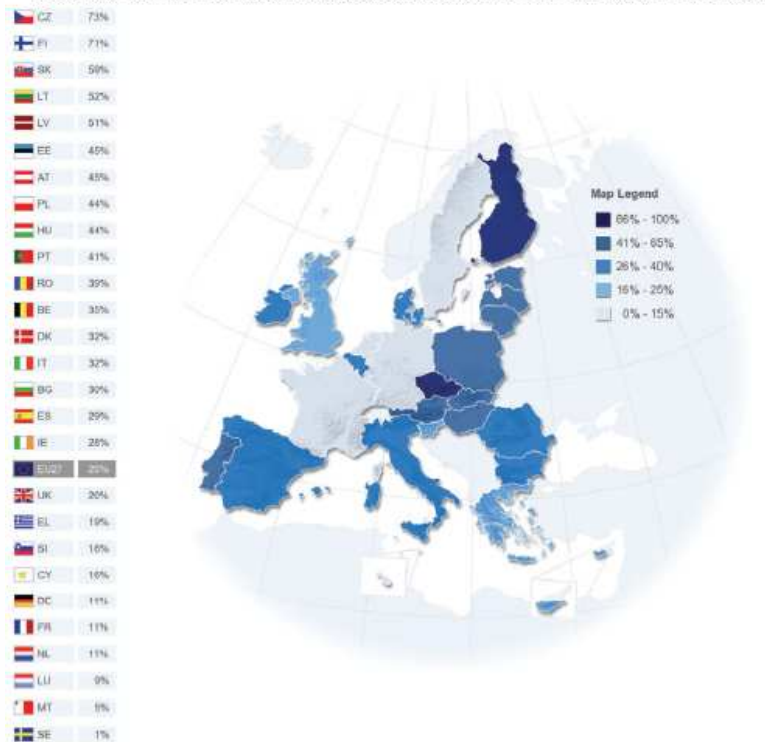
- PL 52%
- HU 50%
- RO 46%
- CZ 25%

BUT

- MT 95%
- CY 84%

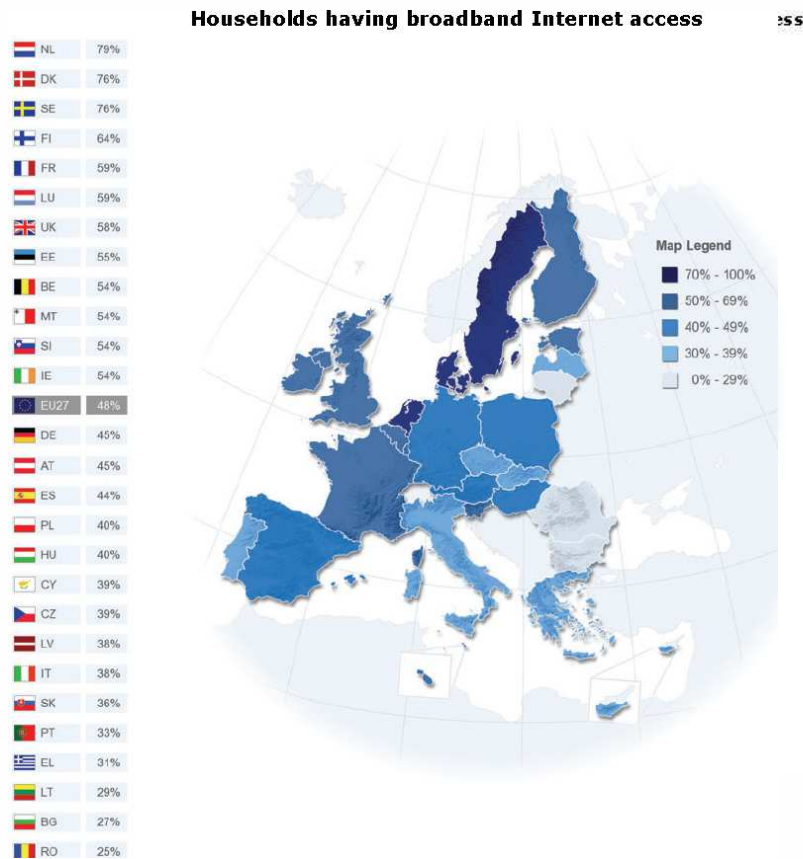
Broadband deployment and adoption in the EU-12

Households having mobile telephone access but no fixed telephone access



- The fixed network in former East Bloc countries is limited.
- Mobile only households:
 - 25% of all EU HH.
 - 21% of EU-15 HH.
 - 46% of EU-12 HH.

Broadband deployment and adoption in the EU-12



- Broadband penetration is lower in many EU-12 Member States.

- RO 25%
- BG 27%
- LT 29%
- SK 36%
- HU, PL 40%

BUT

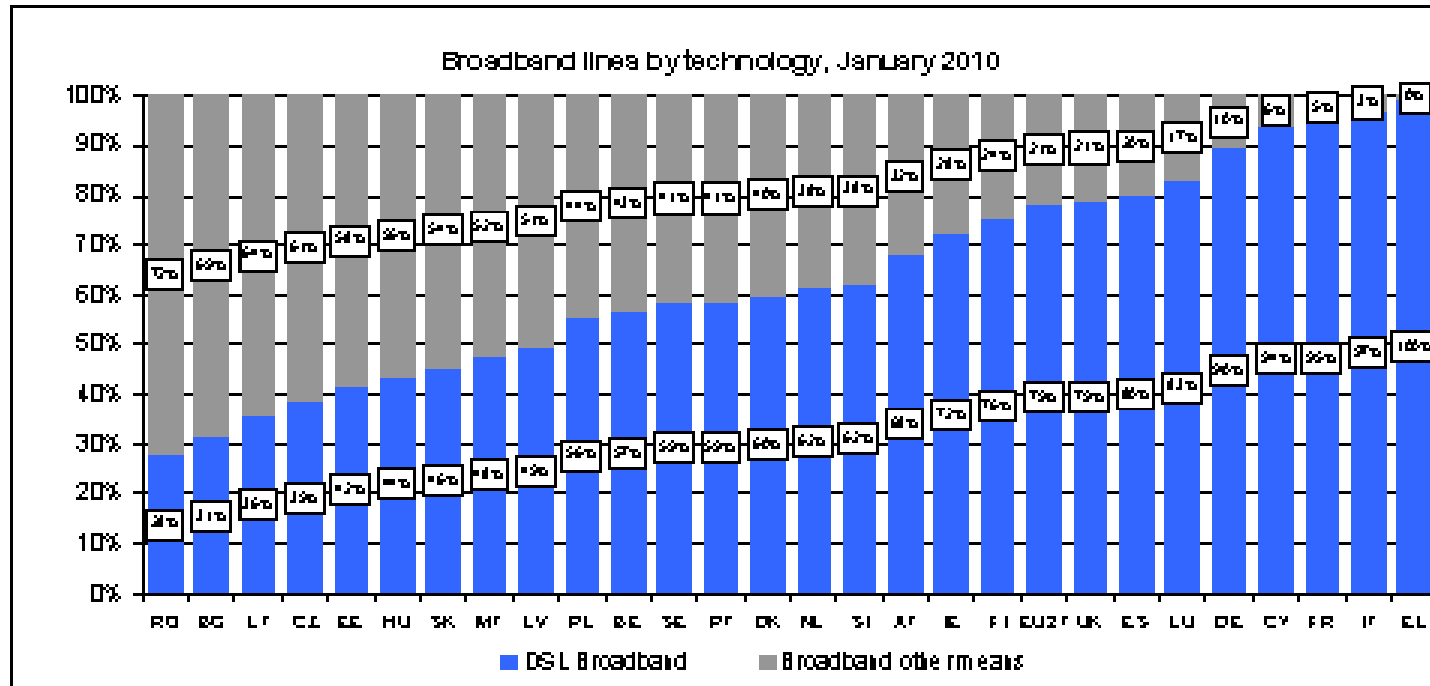
- MT, SI 54%
- EE 55%

Broadband deployment and adoption in the EU-12

- Cable, however, plays a large role in many EU-12 Member States.
 - 34% of HH in the EU-27 as a whole receive television via cable.
 - RO, MT, HU 64%
 - BG 62%
 - SI 54%
 - EE 45%
 - LV 46%
 - PL 36%

Broadband deployment and adoption in the EU-12

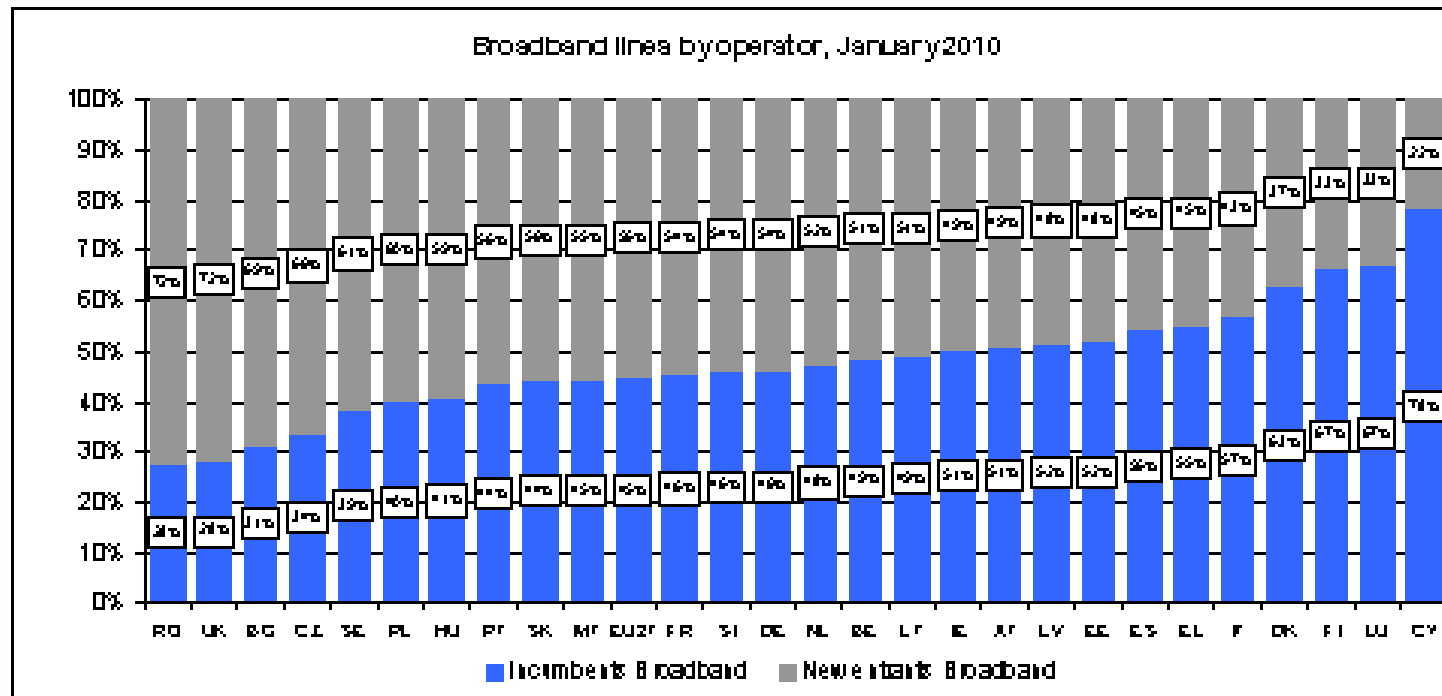
Figure 93: Fixed broadband lines by technology (January 2010)



- Cable and other media play a large role in many EU-12 Member States.

Broadband deployment and adoption in the EU-12

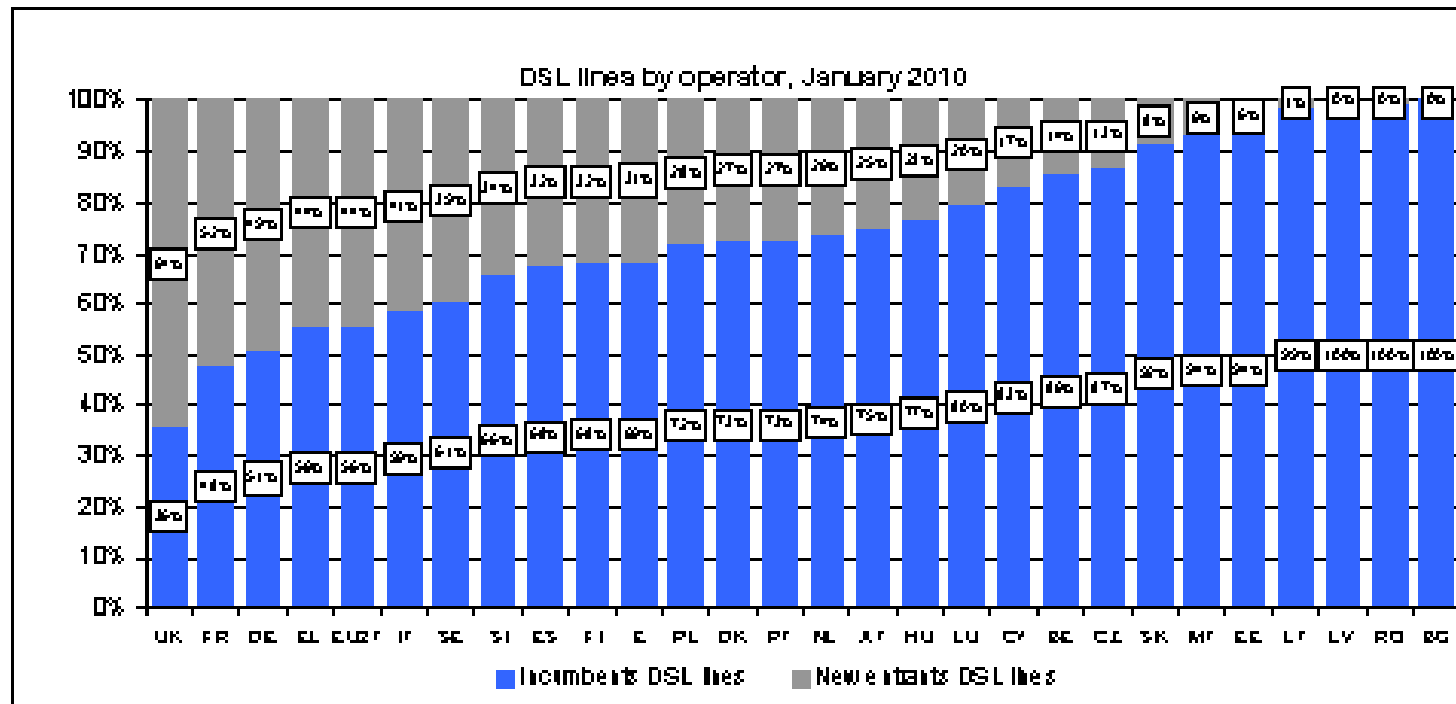
Figure 94: Fixed broadband access lines by operator (January 2010)



- Incumbents may play a smaller role than in the EU-15 due to the availability of other forms of broadband.

Broadband deployment and adoption in the EU-12

Figure 96: DSL access lines per operator (January 2010)



- Incumbents continue, however, to provide a high proportion of DSL access lines in most EU-12 MS.

The Regulatory Framework and Broadband

- Definition of markets susceptible to ex ante regulation
- Identification of undertakings with Significant Market Power (SMP) on those markets
- Imposition of proportionate remedies to address the likely competitive harms

The Regulatory Framework: Market Definition

- The Commission identifies two broadband markets susceptible to ex ante regulation (markets 4 and 5):
 - **Local loop:**
Wholesale (physical) network infrastructure access (including shared or fully unbundled access) at a fixed location.
 - **Wholesale Broadband Access (WBA):**
This market comprises non-physical or virtual network access including 'bitstream' access at a fixed location.

The Regulatory Framework: Market Definition

- The Commission *does not* (since 2007) identify a market associated with cable as being susceptible to ex ante regulation.
 - Cable is not viewed as part of the wholesale market unless there is a wholesale offer.
 - Cable should, however, be considered
 - In the analysis of the retail market; and
 - in conjunction with competitive effects.

The Regulatory Framework: Determination of SMP

- Cable BB market shares are such that cable alone is unlikely to be unilaterally dominant in an entire MS.
- Joint dominance might possibly exist in some MS, or in regions of some MS, but is difficult to establish.

The Regulatory Framework: Broadband

- The Commission has in recent years advocated a sequence of analysis for broadband markets where:
 - One begins by asking if there are problems at the retail level.
 - One considers all broadband markets through a single procedure.
 - One assesses loops prior to WBA (bitstream).

The Regulatory Framework and the EU-12

- The European regulatory framework is well suited to MS with a single incumbent based on a single technology.
- Some refinement may be needed to adapt the regulatory framework to MS where:
 - Many users are reachable with more than one truly competing (fixed) broadband technology.
 - Much of the real competition is bundle versus bundle, rather than service versus service.

The Regulatory Framework and the EU-12

- This could be a concern not only in several EU-12 MS, but also in NL and Flanders.
- It is also relevant to the United States and Canada; *however*, the US approach is not a good model for the EU-15 or the EU-12.

Spectrum management in the EU-12

- A somewhat different historical tradition
 - Western Europe: NATO
 - Eastern Europe: Warsaw Pact
- Harmonisation of spectrum allocations has for the most part been dealt with long since.
- Many EU-12 countries are on the edge of Europe, and thus potentially confront intense spectrum interference issues.

Spectrum management in the EU-12

- Refarming of former broadcast spectrum freed by the digital broadcasting switch-over can be impacted if high power broadcasting continues in an adjacent country.
- Poland had proposed to delay analogue switch-off until 2015; currently July 2013.

Wrap-up

- The EU-12 are not all alike.
- Some EU-12 MS differ from the EU-15 in:
 - A less than fully deployed fixed network
 - Substantial cable deployment.
 - Less success to date of wholesale remedies
 - Broadband competition has more to do with competing bundles on competing platforms.
 - Need for tinkering with the EU framework?
- Spectrum management at the edge of Europe, and with an East bloc history.