

THE EXPERIENCE OF NGA DEPLOYMENT IN PORTUGAL

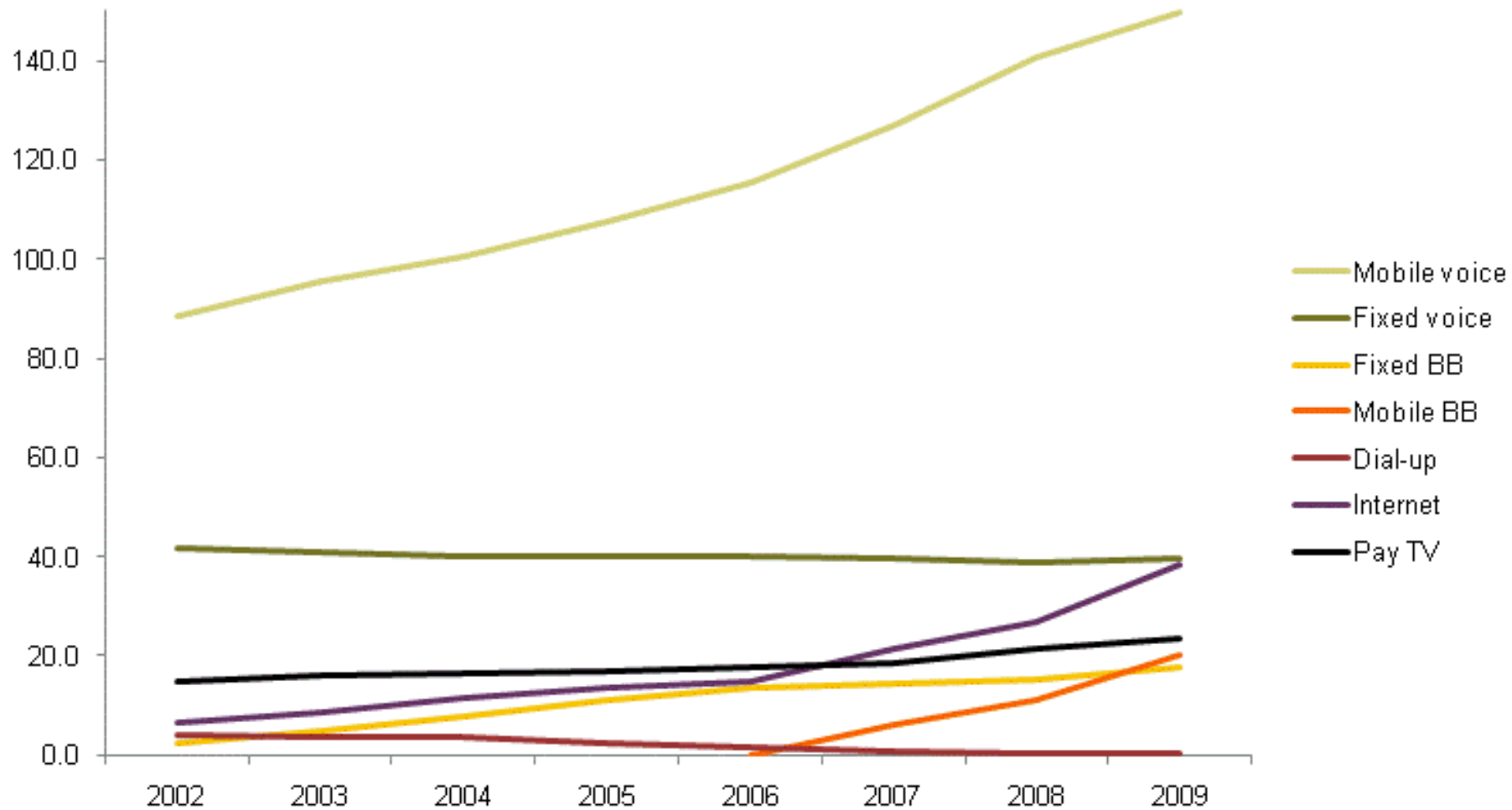
Next Generation Access Networks

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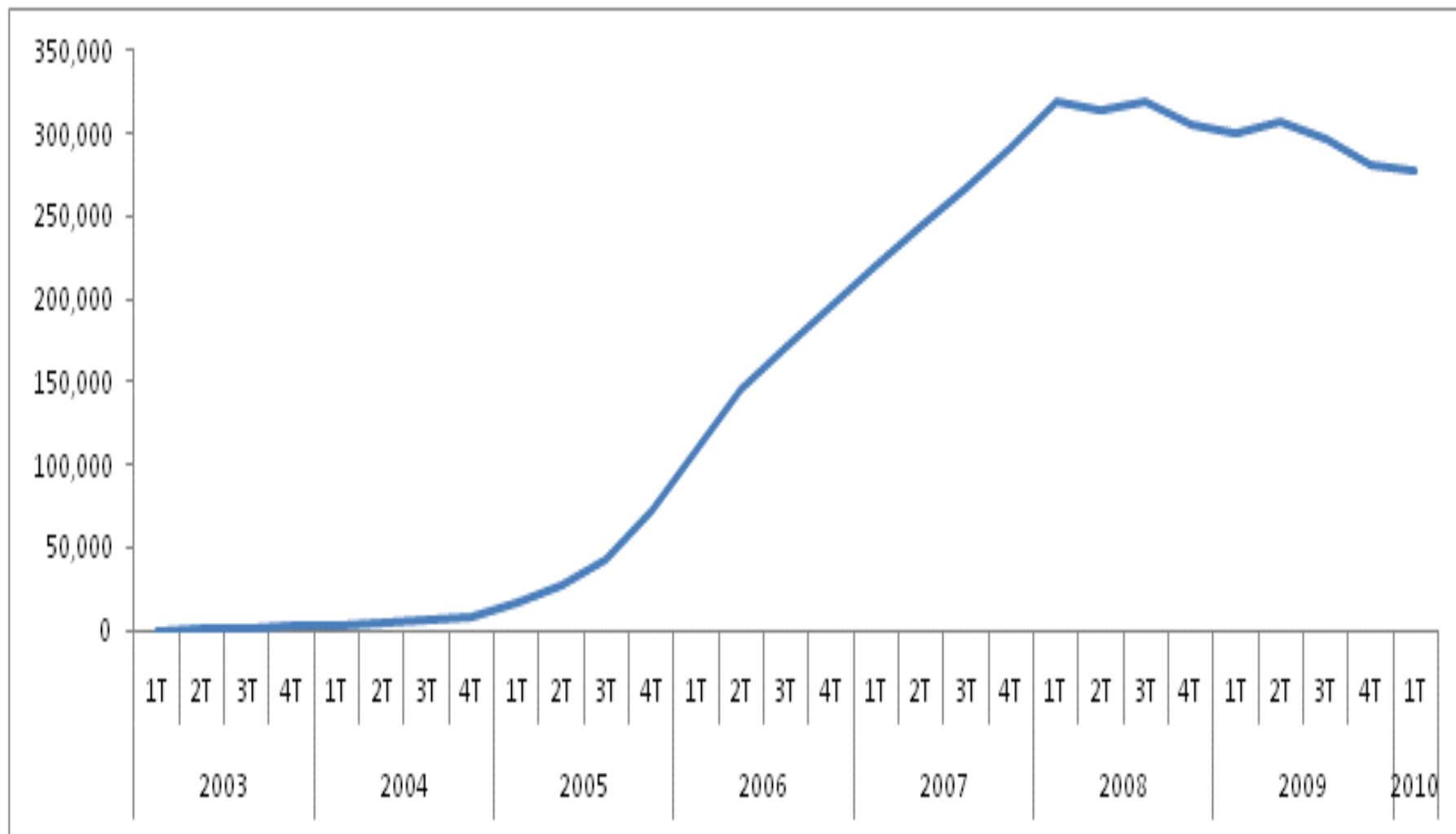
- 1. THE PORTUGUESE COMMUNICATIONS SECTOR;**
- 2. SPECIFIC FEATURES OF THE PORTUGUESE SITUATION;**
- 3. NGN RECENT DEVELOPMENTS;**
- 4. CHALLENGES.**

1. THE PORTUGUESE COMMUNICATIONS SECTOR

Penetration per 100 inhabitants



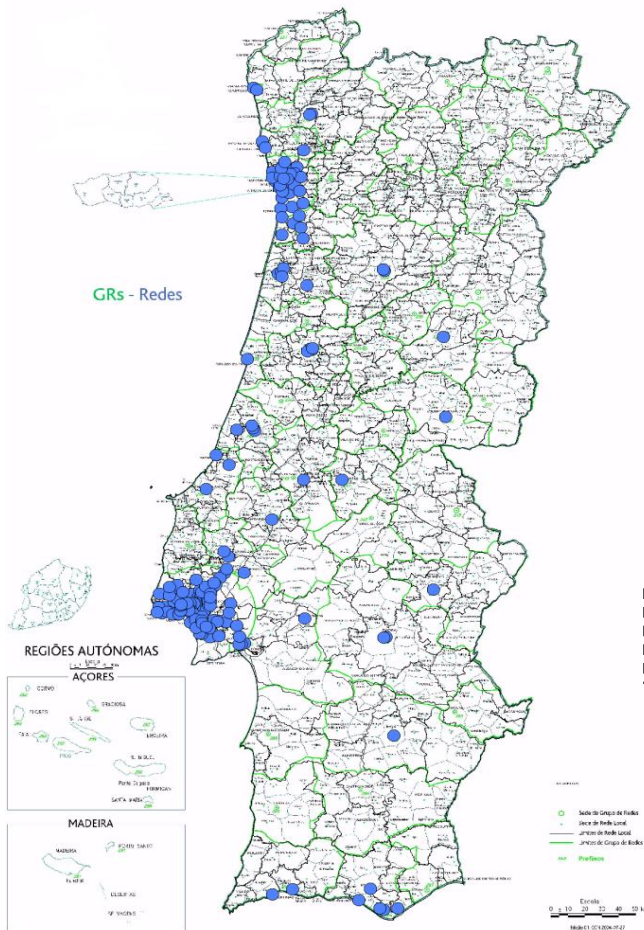
LLU Evolution



2. SPECIFIC FEATURES OF THE PORTUGUESE SITUATION

- ▶ Enabling historic operators' ducts reference offer since 2004.
- ▶ Infrastructure competition facilitated by “voluntary” “spin-off” between cable and copper operators of PT Group at the end of 2007 - contributed to explain the swift evolution of DOCSIS 3.0.
- ▶ Public tenders for NGA in rural areas.
- ▶ Fair and predictable regulation of broadband markets.

The decision approved by the EC in January 2009 concluded that in a significant number of geographic areas (representing circa 3/5 of the total broadband clients) broadband markets are competitive.



Bitstream obligations removed after a 1 year transitory period.

	LLU	Bitstream
"C Areas"	✓	x
"NC Areas"	✓	✓

3. NGN RECENT DEVELOPMENTS

▶ Decree-Law 123/2009

- Scope: Legal regime governing construction and access to networks and infrastructures;
- General Principles: Competition, open access, equality, non-discrimination, effectiveness, transparency, technological neutrality and absence of cross-subsidisation between sectors.
- Central Information System (SIC): ANACOM must design and manage SIC based on a principle of sharing information to facilitate implementation of networks.

▶ ITED

- Open and non discriminatory access to buildings with at least a dual fiber optic cable per dwelling and a point for sharing infrastructure in the building or surroundings.

▶ ITUR

- Replicates, *mutatis mutandis*, ITED for blocks of buildings

► Protocol

- The Portuguese government signed a protocol with operators.
- The protocol sets out government commitments, including:
 - ✓ Legislative measures that lead to the maximum possible removal of horizontal and vertical barriers;
 - ✓ Encourage investment in remote areas or with low demand, particularly through tax benefits;
 - ✓ Promote the establishment of a credit line of at least EUR 800 million available to investors in NGN;
 - ✓ Benefits and incentives: only for networks that guarantee open access, transparent and non discriminatory access to all the parties involved.

- ▶ The need to resource to infrastructure supported on historical networks for NGA developments, contributes to a certain degree of asymmetry;
- ▶ The conditions for access and use of passive infrastructure are and will be decisive for development process of NGA and improvement of services supported on those networks;
- ▶ The importance of access and use of ducts might lead to:
 - Lack of available space on the ducts;
 - No economic viability when installing multiple optical fibre infrastructure in certain geographic areas, due to social, economic and demographic reasons.
- ▶ Transition from LLU to NGA should be guaranteed to fulfill past expectations of operators, contributing to NGA evolution and market competition.
- ▶ NGA obligations – Ducts Access in C and NC areas and access to fibre / bitstream access in NC areas.

4. CHALLENGES

- ▶ Swift evolution, at the end of 2009, of FTTH/B and EuroDOCSIS 3.0:
 - 21 households passed with FTTH/B per 100 households;
 - 50 households passed with EuroDOCSIS per 100 households;
 - 1,6 residential clients of high-speed networks per 100 households.

- ▶ 3rd Draft EC Recommendation on Regulated Access to NGA:
 - Overall a sensible evolution;
 - A positive contribution to promoting regulatory certainty and coherence.

- ▶ What about technology neutrality?
 - Fiber vs EuroDOCSIS vs LTE

- ▶ How to ensure a sound business model whilst promoting competition?
 - Including namely in scarcely populated / low income areas?