COST 605

The new EU Guidelines for Public Aids in the Deployment of NGN

Perspectives and potential impacts (Part I)

Claudio Feijóo[1]
José-Luis Gómez-Barroso[2]

[1]Universidad Politécnica de Madrid, Spain
cfeijoo@cedint.upm.es
[1]Universidad Nacional de Educación a Distancia, Spain
jlgomez@cee.uned.es

Access the presentation at:
http://upm-es.academia.edu/ClaudioFeijoo
Access the presentation at:
www.cost605.org

Source: NASA/GSFC

COST Action IS0605: Econ@Tel
5th Meeting of the Management Committee
Athens, 16-17 February 2010

EU Guidelines for Public Aids in NGN

COST 605

Index

1. Background. A **new framework** for electronic communications in the EU
2. The **state** of NGN in the EU. The role of telecomm **operators**
3. The **public** involvement. Opportunities and challenges
4. The new EU **guidelines for public aids** in the deployment of broadband and NG networks. An overview
5. Some conclusions and a call for **action**

EU Guidelines for Public Aids in NGN

2

1. Background. A new framework (1/3)

EU Guidelines for Public Aids in NGN

Policy goals and challenges for a new framework

- Last 10 years in telecommunication sector have been devoted to develop effective competition -> price declines, new services, innovation, improved quality, benefit to consumers and users
- Need to adapt the framework (for the 3rd time) to refocus regulation on remaining competition problems ("first substantial deregulation")
- "Market review procedures rationalised and simplified" and "Strengthen EC oversight to improve consistency"
- New issues (broadband networks, triple play, mobile communications, new consumer issues). In particular, positive results from competition are being challenged by characteristics of next generation access technologies
- Public funding of NGN while avoiding distortion of competition

3

1. Background. A new framework (2/3)

EU Guidelines for Public Aids in NGN

2 Directives amending the *"Telecom package"* of April 2002

- **Framework Directive / Better Regulation Directive** 2009/140/EC:
  - Amending Framework, Access, and Authorisation Directives
  - The Industry Committee (ITRE) led the amendment proposals
- **Citizens' Rights Directive** 2009/136/EC, amending the:
  - Universal Service Directive, and ePrivacy Directives
  - Internal Market Committee (IMCO) led the amendment proposals

1 Regulation decision establishing

- Body of European Regulators for Electronic Communications **(BEREC)**

4

1. Background. A new framework (3/3)

EU Guidelines for Public Aids in NGN

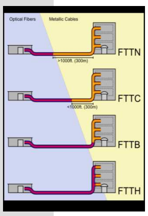
- **The newly approved framework will be completed by other regulation acts on:**
  - **Spectrum management**
  - **Net neutrality**
  - Intellectual property in the electronic communications
- **No specific agenda**
  - ITRE rapporteur, Catherine Trautmann announced it would be in the next months…
- **Additional regulations**
  - Guidelines for regulation of **Next Generation Access**
  - **Guidelines for Public funding of NGN**
  - Coordination with Audiovisual Media Directive (2007/65)

5

2. State of NGN (1/4)

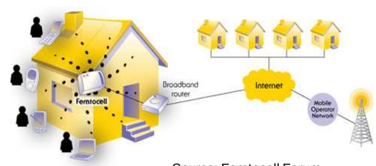
EU Guidelines for Public Aids in NGN

+ fiber (FTTH)



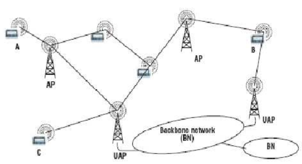
Source: Wikipedia

fixed-mobile convergence



Source: Femtocell Forum

+ spectrum (4G and beyond)

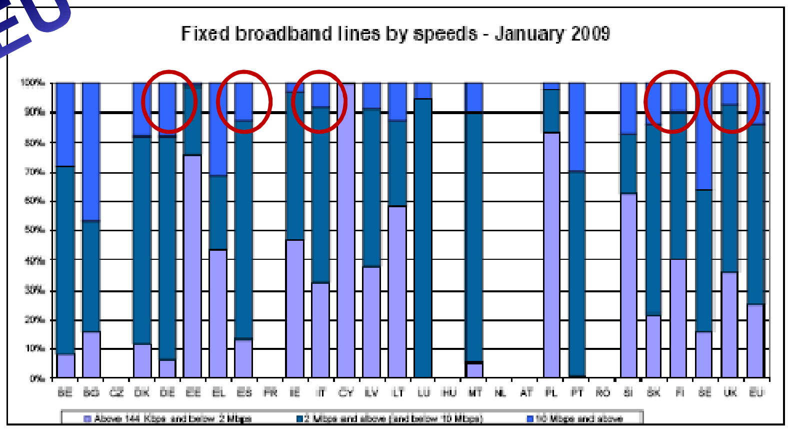


Source: IPTS

- Current infrastructures not enough for **future demands**
- **Ubiquitous** “ultra-**broadband**”
- First time in (telecomm) history that huge investments for new infrastructures take place in **competition**
- How to ignite the virtuous circle of investment – **innovation**?
- Which is the situation of **EU**?

2. State of NGN (2/4)

EU



Source: 14th Implementation Report (EC, 2009)

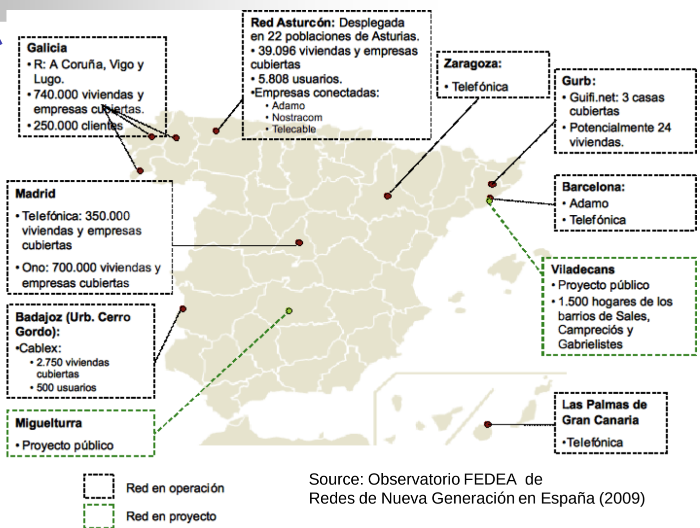
- ➔ Only **1,4 %** of EU broadband users with **100 Mb/s or higher**
- ➔ Several EU countries with 0,0% of FTTH deployment

EU Guidelines for Public Aids in NGN

7

2. State of NGN (3/4)

Spain



Source: Observatorio FEDEA de Redes de Nueva Generación en España (2009)

- ➔ Just **45 %** population covered in **2023** with FTTH (CMT, 2009)

EU Guidelines for Public Aids in NGN

8

COST 605

CeDInt POLITÉCNICA

POLITÉCNICA

2. State of NGN (4/4)

EU Guidelines for Public Aids in NGN

France

en millions, en fin de trimestre

	T3 2008	T4 2008	T1 2009	T2 2009	T3 2009**
Nombre d'abonnements haut débit et très haut débit sur réseaux fixes	**17,289**	**17.819**	**18,360**	**18,699**	**19,145**
dont nombre d'abonnements haut débit	**17,147**	**17,647**	**18,154**	**18,472**	**18,890**
dont abonnements ADSL	16,323	16,804	17,309	17,515	18,030
dont autres abonnements haut débit	0,824	0.843	0,845	0,857	0,860
Dont nombre d'abonnements très haut débit	**0,141**	**0.173**	**0,206**	**0,226**	**0,255**
dont abonnements FTTH*	0,036	0,043	0,048	0,055	0,060
dont autres abonnements très haut débit	0,105	0,130	0,158	0,172	0,195

évolutions du nombre total d'abonnements haut et très haut débit sur réseaux fixes

en millions sur un an	2,351	2,268	2,096	2,010	1,856
en % sur un an	16,7%	14,6%	12,9%	12,0%	11%

*y compris les abonnements en FTTB qui constituent une part minoritaire. La totalité de la croissance de cette rubrique est liée à la croissance du nombre d'abonnements en FTTH.

**résultats provisoires.

Source: L'observatoire du haut et très haut débit sur réseaux fixes

- ➔ Similar situations for similar **geo-demographics**
- ➔ Different **definition** of ultra-broadband (France > 50 Mb/s)
- ➔ France: **30.000 million € for 100% population coverage** with fibre, 15.000 million € for 80% population coverage (ARCEP, 2010).

9

COST 605

CeDInt POLITÉCNICA

POLITÉCNICA

2. The role of telecomm operators (1/2)

EU Guidelines for Public Aids in NGN

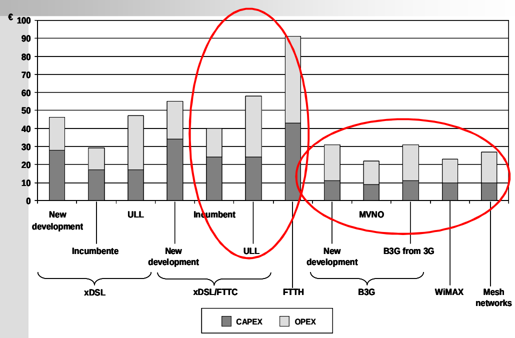
A: high density urban – urban

B: suburban

C: rural – remote rural

- ➔ **Cost** of deployment per user inversely proportional to **population density**
- ➔ Areas type **A**: Will have **NGN** and competition "level-3" (fixed + cable + bb mobile + others) to "level-2" (fixed + bb mobile). **Market** approach
- ➔ Areas type **B**: Will have NGN (in due time) and competition "level-1.5" (fixed + mobile). **Enough competition**?
- ➔ Areas type **C**: No NGN and competition "level-1" (fixed / mobile universal service) to "level-0". **Equity**?

2. The role of telecomm operators (2/2)



Comparison of costs of technologies for NGN access.
Source: de Antonio, Feijoo, Gomez et al (2005)

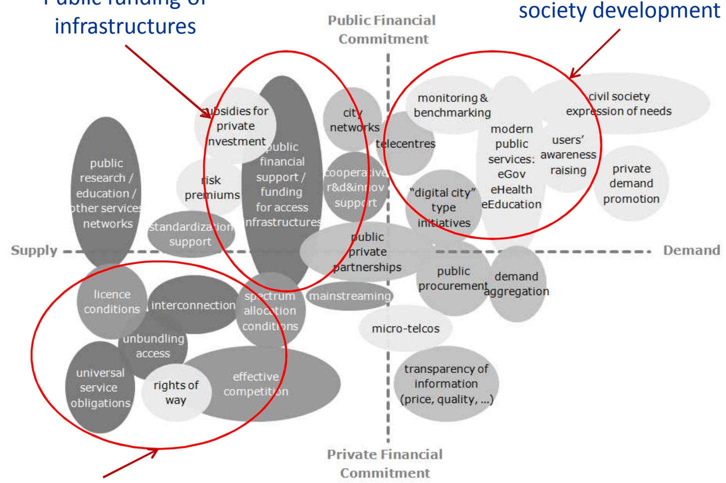
- Operators have **slowly** started to invest in NGA. Fiber (FFTH) roll-out is **delayed** in the EU with regard to USA and Japan/Korea. Credible roadmaps for **4G** (LTE flavour) roll-out from 2010-11 onward. **Public role**?
- Operators doubt about whether the applications and services offered over a NGN can provide a sufficient **return on investment** and, at present, they are not sure which **killer application**, if any, will provide new revenues stream. **Net neutrality?**
- From about 2012 there will more **mobile** broadband connections than fixed ones.

3. The public involvement

EU Guidelines for Public Aids in NGN

Public funding of infrastructures

digital agendas for information society development



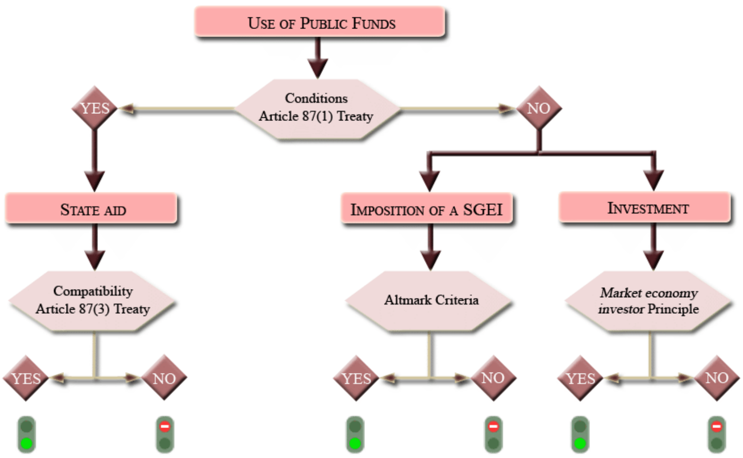
Source: Milne & Feijoo (2008), Gomez & Feijoo (2009)

traditional regulation

12

4. Guidelines for public funding of NGN
(1/2)

EU Guidelines for Public Aids in NGN



Source: Gomez & Feijoo (2010, forthcoming)

➔ A **patchwork** of (public funded) NGN?

4. Guidelines for public funding of NGN
(2/2)

EU Guidelines for Public Aids in NGN

➔ Two types of networks:
- **conventional broadband** networks
- **NGN: wired** and higher throughput than copper networks -> FTTH, FTTN, Docsis 3.0, but not 4G (WiMax or LTE)

➔ Three types of areas:
- **White**: no networks and no deployment project in 3 years (green light)
- **Grey**: one network and no new deployment project in 3 years (yellow light, first other regulatory measures)
- **Black**: two or more networks now or in 3 years (red light, no state-aid)

14

5. Some conclusions …

COST 605

CeDInt POLITÉCNICA

POLITÉCNICA

EU Guidelines for Public Aids in NGN

A summary of the impacts of NGN

- ICT **capital investment** raises output and labour productivity, leads to innovations and, from here, sustainable growth and employment

… and its consequences

- **Market approach will not suffice** in the short term, but …
- … **lack of experience** in direct **public funding**
- The objective should be the opportunities for **innovation** … which require also a right **structural framework** (i.e., regions with a high proportion of ICT-intensive industries), an adequate **institutional framework** (market behaviour, regulations, venture capital, business culture, access to human capital, etc), and mind a **time lag** due to the need to raise investments in human capital (training, education, motivation, competences, etc) in knowledge capital (research and development) and to introduce organizational innovations.

15

5. … and a call for action

COST 605

CeDInt POLITÉCNICA

POLITÉCNICA

EU Guidelines for Public Aids in NGN

- The unknown results and effects of the use of public funding in the deployment of broadband and next generation networks calls for **rigorous studies and contributions**
- **COST Econ@Tel** should be a leading force in such contributions due to its focus and expertise
- How? … We propose a **book / special issue** (call for chapters/papers to be announced … **expressions of interest welcome**!!)

16

COST 605

POLITÉCNICA

The new EU Guidelines for Public Aids in the Deployment of NGN

Perspectives and potential impacts (Part I)

Claudio Feijóo[1]
José-Luis Gómez-Barroso[2]

[1]Universidad Politécnica de Madrid, Spain
cfeijoo@cedint.upm.es
[1]Universidad Nacional de Educación a Distancia, Spain
jlgomez@cee.uned.es

Access the presentation at:
http://upm-es.academia.edu/ClaudioFeijoo
Access the presentation at:
www.cost605.org

Source: NASA/GSFC

COST Action IS0605: Econ@Tel
5th Meeting of the Management Committee
Athens, 16-17 February 2010

1

EU Guidelines for Public Aids in NGN