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# **COMMUNICATIONS COMMITTEE**

# **Working Document**

### Subject: Broadband access in the EU: situation at 1 July 2011

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### **Explanatory note**

The Commission has been publishing data on the number of broadband lines in the Member States gathered in the context of COCOM since 2003.

The COCOM broadband report has been expanded to keep up with the technological changes of this dynamic market, and now includes information on mobile broadband and speeds, as well. The information on speeds is especially relevant now, since the broadband targets of the <u>Digital Agenda for Europe</u> are expressed in terms of speeds.

The report consist of :

- A 'Word' document with the analysis of the data collected from the relevant ministries and regulatory authorities and with annexes on other broadband-related statistics published by the Commission (data on coverage, retail and wholesale prices and the broadband state aid cases)
- Two additional 'Excel' documents presenting the data tables
  - A document containing all the data for all Member States that allows to construct graphs by market share, technology and speed
  - A document that allows to access all data on a specific Member State and to easily construct graphs on its broadband market.

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# 1. Executive Summary

- Fixed broadband penetration (lines per 100 inhabitants) continued to grow in the last six months and reached 27.2 % in the EU in July 2011. This is, however, the lowest growth rate since the beginning of the COCOM data collection in 2003. Penetration increased by only 0.6 p.p. in the last six months, and by 1.5 p.p. in the last twelve months.
- Leaders are the Netherlands (39.3 %), Denmark (38.5 %), France (33.9 %) and Germany (32.7 %). On the other hand, there are five Member states below 20%: Romania (14.6 %), Bulgaria (15.6 %), Poland (16.4 %), Slovakia (17.0 %) and Latvia (19.3 %).
- The slowdown is a cause for concern, because the EU is still far from saturation (which can be accounted to correspond to approximately 40 lines per 100 inhabitants). At the end of 2010, only 60.8 % of households in the EU had a broadband subscription.<sup>1</sup>
- The highest increase in penetration over the last twelve months was recorded in France, Austria, Greece and Lithuania.
- Nevertheless, the Netherlands and Denmark together with Switzerland and Norway are still the world leaders in fixed broadband penetration. The European Union on average is slightly behind the US and Japan (by 1.1 p.p. and 0.1 p.p. respectively), but closing the gap.<sup>2</sup>
- As for competition on the fixed broadband market, **the market share of incumbent operators continued to decline very slightly**, and stood at 43.0 % in July 2011. New entrants had 70.5% of net additions in the first half of 2011. The market share of incumbent operators was the highest in Finland (79 %), Cyprus (73 %) and Luxembourg (72 %) and the lowest in the UK (29 %), Bulgaria (29 %) and Romania (30 %).
- DSL remained the most common broadband technology with a market share of 76.8 % in the EU in July 2011, which has been decreasing very slightly (by 4.1 p.p. since January 2006). The share of DSL was below 50 % in eight Member States (Bulgaria, Czech Republic, Estonia, Latvia, Lithuania, Hungary, Romania and Slovakia), all of which joined the EU in 2004 or 2007. At the same time, the market share of DSL was above 90 % in Greece (100 %), Italy (98 %) and France (93 %).
- Cable modem was the second most common fixed broadband technology with a market share of 16.2 % in the EU in July 2011. Cable internet is especially widespread in Belgium (46 %), Hungary (44 %), Malta (44 %), Romania (44 %), the Netherlands (41 %) and Portugal (40 %).
- Broadband connections are getting faster, but ultrafast internet access is still rare in the EU. Looking at headline speeds, almost half (42.2 %) of fixed broadband lines

<sup>&</sup>lt;sup>1</sup> Source: Eurostat Community Survey on ICT Usage in Households and by Individuals, 2010.

<sup>&</sup>lt;sup>2</sup> Data used in international comparison are as of end 2010, souce: OECD and Commission services.

were providing speeds of at least 10 Mbps download in July 2011 as opposed to 38.9 % six months ago. 88.0 % of fixed broadband lines are at least 2 Mbps download. At the same time, only 6.5 % of fixed broadband connections were at least 30 Mbps, and 0.9 % at least 100 Mbps download. This indicates that the EU is still far away from achieving the high-speed targets of the Digital Agenda for Europe<sup>3</sup>, which are 100 % coverage of broadband access technologies at minimum 30 Mbps, and 50 % of European households subscribing to at least 100 Mbps in 2020.

- As for Next Generation Access, the EU is lagging behind Japan, South-Korea and the US. In comparison with the US, South Korea, Japan and China, the EU has the lowest number of FTTH connections, and according to the forecast of Screen Digest, there will only be a modest growth in the coming years in the EU. In the EU, an estimated 2.0 % of broadband connections are FTTH.
- Mobile broadband has been the fastest growing segment in the broadband market, although growth has slowed down in the last six months. The penetration of large screen mobile broadband subscriptions (using dedicated data cards or USB modems) increased from 7.1 % to 7.5 % between January and July 2011. Mobile broadband use on large screens is by far the highest in Finland (34.0 %) followed by Sweden (20.2 %), Austria (19.8 %) and Denmark (15.2 %). Looking at all active mobile broadband users (including smart phone users, too), mobile broadband penetration reached 34.6 % in July 2011 as opposed to 26.8 % six months before.
- From 1 January until 8 December 2011 the European Commission took 15 decisions regarding broadband projects involving public funding. The total amount of the aid approved was approximately €1.7 bn. The majority of the cases concerned NGA deployment.

<sup>&</sup>lt;sup>3</sup> <u>http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:52010DC0245R(01):EN:NOT</u>

# 2. Broadband take-up

Fixed broadband penetration continued to increase in the first half of 2011, although at a lower rate than ever before. Penetration reached 27.2% in July which is 0.6 p.p. higher than six months ago. The number of added lines per day was 18 855, which is about one third of the highest growth rate recorded in the second half of 2005.

Looking at the sharp slow down, a significant change in the trend is needed to at least approach full penetration of fixed broadband. A full penetration would mean approximately 40 lines per 100 inhabitants as opposed to the current 27.2.



Figure 1 Fixed broadband penetration at EU level, January 2004 – July 2011

Figure 2 Fixed broadband lines growth per day at the EU level



Looking at the Member State level, the fixed broadband market shows a mixed picture. The Netherlands and Denmark are already close to maturity with a penetration rate of 39.3 % and 38.5 % respectively, whereas those at the bottom of the list are well below 20 %.

Nevertheless, the gap between the best and worst performing Member States has slightly decreased (24.7 p.p. in July 2011, 24.9 p.p. in January 2011). The highest growth in the last twelve months took place in France (2.4 p.p.), which is especially remarkable given that France has a relatively high penetration. With 2.1 p.p. annual increase, Greece is no longer among the worst performing countries in the EU, which is a large achievement taking the economic situation into consideration. Poland, Slovakia and Romania, at the same time, did not manage to get closer to the EU average with lower than average growth rate.



Figure 3 Fixed broadband penetration, July 2011

Figure 4 Fixed broadband penetration and speed of progress, July 2011



DSL takes more than three quarters (76.8 %) of the market, and its market share is stable, decreasing only very slightly. The share of DSL in net additions is still above 50 %, although it is substantially lower than before 2010.

Cable modem broadband takes around 1/6 of the EU broadband markets. Its market share has been very slightly increasing over the past three years. Cable is a major competitor of DSL in Belgium, Hungary, Malta, the Netherlands and Portugal.

Contrary to DSL, the growth of the cable market has been more stable over the past 5 years. Average net additions per day for cable were in the range of  $5\ 000 - 9\ 000$  as opposed to 10  $000 - 50\ 000$  for DSL.



Figure 5 Fixed broadband lines by technology at EU level, January 2006 - July 2011

Figure 6 Fixed broadband lines, technology market shares at EU level, January 2006 - July 2011





Figure 7 Fixed broadband net adds by technology at EU level, January 2006 - July 2011

Figure 8 DSL lines and market growth in the EU, January 2006 - July 2011







Fibre to the Home (FTTH) is still marginal in Europe with a share of only 2%.



Figure 10 FTTH as a % of total fixed broadband lines, January 2008 – July 2011

## 3. Market shares

The competitive landscape has not changed significantly. Incumbent operators have an overall market share of 43.0 %, which is 4.7 p.p. lower than five years ago. Given the relatively low growth in the total market, no major change is expected in market shares in the coming years despite the fact that new entrants take the majority of net additions.



Figure 11 Fixed broadband lines by operators at EU level, January 2006- July 2011

Figure 12 Fixed broadband lines – operator market shares at EU level, January 2006-July 2011



New entrants are more active in acquiring new customer with a share of 70.5% of net additions in the first half of 2011.



Figure 13 New additions market share per day at EU level, January 2006 - July 2011

Figure 14 Fixed broadband lines growth per day by operator at EU level, January 2006 - July 2011



Looking at the Member State level, incumbent market shares vary greatly with the highest rates in Finland (79 %), Cyprus (73 %) and Luxembourg (72 %), and the lowest in the UK (29 %) and Bulgaria (29 %) and Romania (30 %). At the EU level incumbent operators' market share declined by 0.9 p.p. in the past twelve months, the largest declines were observed in Ireland (-3.5 p.p.), Poland (-3.7 p.p.) and Greece (-4.7 p.p.). At the same time incumbents substantially improved their market position in Finland (+10.5 p.p.), Malta (+6.5 p.p.) and Latvia (+4.6 p.p.).



## Figure 15 Fixed broadband lines – operator market shares, July 2011

Figure 16 and 17 shows a slightly different picture of market share by showing resale DSL lines separately. In case of resale DSL lines incumbent operators still have a direct control over end-users.

# Figure 16 Fixed broadband lines – operator market shares at EU level (resale shown separately), July 2011



# Figure 17 Fixed broadband lines – operator market shares at EU level (resale shown separately), January 2006 – July 2011



Looking at the DSL market, incumbent operators still have a share of more than 50 % of subscriptions.



Figure 18 DSL lines – operator market shares at EU level, January 2006 - July 2011

In Malta, Lithuania, Latvia, Romania and Bulgaria, there is virtually no competition in the DSL retail market. At the same time, in the UK, France and Greece, new entrants have the majority of DSL subscriptions.



## Figure 19 DSL lines – operator market shares, July 2011

Local Loop Unbundling (LLU) is the main form of competition in the DSL market. The share of unbundled lines (either full LLU or shared access) in new entrants DSL stood at 65.2% in July 2008, and now represents more than three quarters (76.4 %).

Figure 20 New entrants' DSL lines by type of access at EU level, July 2010





Figure 21 New entrants' DSL lines by type of access at EU level, July 2008 - July 2011

Cable modem broadband is almost exclusively provided on new entrants' networks except for Denmark, Finland and Hungary, where incumbent operators have a significant presence on the cable market, as well.



Figure 22 Cable internet lines – operator market shares at EU level, July 2011

## 4. Speeds

As of July 2011, 42.2 % of broadband lines were at least 10 Mbps (download), and only 12.0 % below 2 Mbps (download).



Figure 23 Fixed broadband lines by speed at EU level, January 2008 - July 2011





However, the EU is still weak in very high speed broadband, as only 6.5 % of fixed broadband lines are at least 30 Mbps (download), and only 0.9 % at least 100 Mbps (download).

This report refers to advertised speeds and not to actual speeds. The European Commission has recently commissioned a study to monitor actual speeds in each EU Member State.

Figure 25 Fixed broadband lines by speed at EU level (Digital Agenda categories), July 2011



Belgium, Bulgaria, Lithuania, the Netherlands and Romania are the most advanced Member States in very high speed broadband with more than 20 % of lines being at least 30 Mbps (download). In Belgium and the Netherlands, very high speed broadband is driven by strong infrastructure competition; while Lithuania, Bulgaria and Romania seem to be leapfrogging legacy broadband.



Figure 26 Fixed broadband lines by speed (Digital Agenda categories), July 2011



Figure 27 Fixed broadband lines by very high speed per Member State, July 2011

## 5. Mobile broadband

Mobile broadband remained the fastest growing segment of the broadband market. The total number of active mobile broadband users went up by 55.4 %, where as the market of large screen mobile broadband users increased by 25.4 % in the last twelve months.

Mobile broadband is extremely popular in the Nordics with a penetration of 92.9 % in Sweden, 78.6 % in Finland and 72.6 % in Denmark.



Figure 28 Mobile broadband penetration – all active users, July 2011

There has been a slowdown in the growth of mobile broadband use on large screens (dedicated data service cards, modems, keys only), the penetration rate has even declined in a few countries (Bulgaria, Poland and Portugal) in the last six months. In Finland, Sweden, Austria and Denmark mobile broadband penetration on large screens is above 15 %. In these countries, mobile broadband may be substituting fixed broadband.

Figure 29 Mobile broadband penetration – dedicated data service cards/modems/keys only at EU level, January 2009 - July 2011



# Figure 30 Mobile broadband penetration – dedicated data service cards/modems/keys only, July 2011



## 6. International comparison

Fixed broadband penetration in the EU was 26.6% at end 2010, which is 1.7 p.p. than the OECD average and 1.1 p.p. below the US. Four European countries are the world leaders in fixed broadband penetration (The Netherlands, Switzerland, Denmark and Norway).

However, the EU is lagging behind South-Korea, Japan and the US in very high-speed broadband.

Figure 31 OECD Fixed (wired) broadband subscriptions per 100 inhabitants, by technology, December 2010



Source: OECD and Commission Services (EU average)



Figure 32 FTTP broadband access connections (000s)

Source: Screen Digest

# 7. Definitions

- **Fully unbundled lines**: Fully unbundled lines supplied to other operators, excluding experimental lines. In the case of full unbundling, a copper pair is rented to a third party for its exclusive use.
- Shared access lines supplied by the incumbent to new entrants: Shared access lines supplied to other operators, excluding experimental lines. In the case of shared access, the incumbent continues to provide telephony service, while the new entrant delivers high-speed data services over that same local loop.
- **Bitstream access supplied to new entrants**: Bitstream access refers to the situation where the incumbent installs a high-speed access link to the customer premises and then makes this access link available to third parties, to enable them to provide high-speed services to customers. Bitstream depends in part on the PSTN and may include other networks such as the ATM network, and bitstream access is a wholesale product that consists of the provision of transmission capacity in such a way as to allow new entrants to offer their own, value-added services to their clients. The incumbent may also provide transmission services to its competitor, to carry traffic to a 'higher' level in the network hierarchy where new entrants may already have a broadband point of presence.
- **Simple resale**: In contrast to bitstream access, simple resale occurs where the new entrant receives and sells on to end users with no possibility of value added features to the DSL part of the service a product that is commercially similar to the DSL product provided by the incumbent to its own retail customers, irrespective of the ISP service that may be packaged with it. Resale offers are not a substitute for bitstream access because they do not allow new entrants to differentiate their services from those of the incumbent (i.e. where the new entrant simply resells the end-to-end service provided to him by the incumbent on a wholesale basis).
- **Incumbent's DSL lines**: Provided to end users by the incumbent, its subsidiaries or partners (for example an associated company such a joint venture providing ISP services).
- WLL: Internet broadband connections by means of wireless local loop (sometimes referred to as fixed wireless access).
- Cable modem: Internet broadband connections by means of cable TV access.
- L.L. (other traditional wireline access): Internet broadband connections by means of dedicated capacity (Leased Lines) provided over metallic copper pairs, including tail ends or partial circuits. "Incumbent's leased lines" includes only retail lines and excludes lines provided to other operators. "New entrants' leased lines" includes all retail lines provided to end users, even if based on wholesale lines supplied by the incumbent.

- **Retail access**: Access provided to end users.
- **Incumbent**: An organisation enjoying special and exclusive rights or *de facto* monopoly for provision of voice telephony services before liberalisation, regardless of the role played in the provision of access by means of technologies alternative to the PSTN.
- New entrant: Telecommunications operator, as well as internet service providers (ISPs) other than the incumbents.
- **Broadband capacity**: Downstream capacity equal to or higher than 144 Kbit/s.
- **Mobile Broadband all active users:** Number of users that made at least one mobile broadband transaction within the last 90 days. A mobile broadband transaction is defined as an access to advanced data services such as web/internet content, online multiplayer gaming content, VoD or other equivalent advanced data services (excluding SMS and MMS).
- **Mobile Broadband dedicated data services via cards/modems/keys only**: Number of mobile broadband users that made at least one mobile broadband transaction within the last 90 days via data cards/modems/keys (i.e. excluding mobile handset users).

## 8. Methodology

The data in this document have been collected by the European Commission, Information Society and Media Directorate General, from national ministries and regulatory authorities except when noted. The definitions have been agreed in the Communications Committee (COCOM).

Throughout the document broadband lines are defined as those with a download capacity equal to or higher than 144 Kbit/s.

Data refer to 1 July 2011.

In some cases information for some types of access is not available. In a number of countries certain figures are estimates, as the National Regulatory Authorities had not received consolidated data from operators. It should also be noted that in some cases information only refers to major broadband access providers and that broadband access lines provided by small operators are not included.

This report includes information from all 27 Member States.

Data should be interpreted taking the below comments of Member States into consideration:

#### Austria

*Incumbent wholesale lines*: Incumbent activated main lines as well as wholesale DSL lines (Bitstream access: network lines & network agreements) supplied by the incumbent to new entrants are estimated numbers.

*Retail lines*: Incumbent's DSL lines, 3G and Fibre lines and new entrants' access lines by other means than DSL as well as the total number of new entrants are estimated numbers.

Retail lines by speeds: All numbers are estimates.

*Mobile broadband*: All numbers are estimates. Only products which include at least 250 MB data volume per month were considered; prepaid voice/data tariffs are included.

#### Belgium

Incumbent wholesale lines: Lines sold by Belgacom to Scarlet are excluded.

Retail lines: Incumbent includes Scarlet.

#### **Czech Republic**

Retail lines: CDMA 2000 430 MHz access provided in fixed location included.

*Mobile broadband*: Data concerning CDMA 2000 430 MHz access provided in fixed location are not included.

#### Germany

*Incumbent wholesale lines*: Incumbent activated main lines: Excluding public payphones, bitstream access and simple resale.

*Retail lines*: Incumbents and new entrants DSL included FTTC (VDSL). New entrants' own network DSL figures are based on NRA estimates. Full ULL includes wholesale DSL lines (bitstream access, DSL resale) supplied by alternative operators to other alternative operators on the basis of unbundled local loops provided by the incumbent. Bitstream access includes only bitstream access lines supplied by the incumbent to new entrants. For resale only DSL resale lines supplied by the incumbent to new entrants are included. For FWA number of subscribers are reported. In case of cable modem, lines on cable infrastructures based on FTTB/FTTH are excluded. Other traditional wireline access supplied by the incumbent and alternative operators refers to the estimated number of leased lines. Fibre lines refer to Fibre lines (FTTB/FTTH) including cable operators.

Retail lines by speeds: Some figures are based on NRA estimates.

Mobile broadband: Figures are based on NRA estimates.

#### Finland

*Mobile broadband*: Figures for previous data collections have been revised. All active users includes i) mobile broadbands with monthly fee and no data caps (1.825.400), ii) mobile broadbands with monthly fee and data caps (1.154.400) and iii) others active data users (1.242.900) (three months criterion). Mobile BB dedicated data services include only mobile broadband with monthly fee and no data caps regardless of the type of terminal.

#### France

*Retail lines by speeds*: Figures are estimations

Mobile broadband: All numbers are estimates.

#### Lithuania

*Retail lines*: New entrants' DSL lines by shared access includes incumbents' ULL lines used in retail level by new entrants for the provision of either other data transmission services (e.g. VPN) or broadband Internet access services (50 lines).

Retail lines by speeds: Speed is defined as downstream speed rates that are ensured.

*Mobile broadband*: All active users refer to the number of active subscribers, who have used the UMTS data transmission services at least once during 3 months; estimated numbers.

#### Portugal

Retail lines: Public access WIFI Hotspots: Data as of 31.12.2010

*Mobile broadband*: Actual usage: Number of subscriptions which have made a mobile broadband connection in the last 30 days. Mobile BB dedicated data services: Number of subscriptions which have made a mobile broadband connection via cards/modem/keys in the last 30 days. New series based on a new questionnaire launched in Q1 2010.

## 9. Annexes

# ANNEX 1: Retail prices as of February 2011

## Figure 33 Fixed broadband prices (1)



#### Least expensive offer (All ISPs): Basket "4096kbps-8192kbps (incl.)", 5GB or 20 hours/month Total cost/month in €/PPP (VAT incl.)

#### Figure 34 Fixed broadband prices (2)



Least expensive offer (All ISPs) (followed): Basket "4096kbps-8192kbps (incl.)", 5GB or 20 hours/month Total cost/month in €/PPP (VAT incl.)

Source: Van Dijk for the European Commission

#### **ANNEX 2: Prices of the local loop**

This annex illustrates the cost of connection and monthly rental for both Fully Unbundled Access (full LLU) and Shared Access (SA) to the loop. Monthly rental and connection fees are presented as well as the total average monthly cost, which is calculated as the monthly fee + the connection fee distributed over three years.

Unless otherwise stated, connection fees include the technical expertise to assess the speed that can be conveyed through and disconnection fees (where applicable). Furthermore, only the price for a single line is presented here (charges may be different in the case of subsequent access). It is assumed that the loop is active and it will be used to provide both telephony and DSL services. Unless otherwise stated, figures exclude a whole range of additional one-off costs that may exist in some Member States.

The following charts illustrate the monthly total cost for the full Local Loop Unbundling and Shared Access (connection and monthly fees) based on the assumption that the loop is used for three years. The EU average since 2005 is also shown.



Figure 35 LLU monthly average total cost at EU level, 2005 - 2010



### Figure 36 LLU monthly average total cost, 2005 - 2010

For methodological remarks please see: <u>http://ec.europa.eu/information\_society/digital-agenda/scoreboard/docs/pillar/electronic\_communications.pdf</u> (Section 4.6).

**ANNEX 3: DSL Coverage** 



Figure 37 DSL national and rural coverage, December 2010

Source: IDATE for European Commission

Figure 38 EU coverage of DSL and 3G networks, 2005 - 2010



Source: Commission services based on IDATE

#### **ANNEX 4: Broadband state aid developments**

From 1 January until 8 December 2011 the European Commission took 15 decisions regarding broadband projects involving public funding. All of these were found to be compatible with the Treaty (article 4(3) decision types). The total amount of the aid approved was approximately €1.7 bn. The majority of the cases concerned NGA deployment.

In 2010 the European Commission took 19 decisions regarding broadband projects involving public funding. The total amount of the aid amounted to about €2 bn.

Regularly updated information on all Broadband State aid decisions can be found here: <a href="http://ec.europa.eu/competition/sectors/telecommunications/broadband\_decisions.pdf">http://ec.europa.eu/competition/sectors/telecommunications/broadband\_decisions.pdf</a>

#	Decision name	MS	Decision Date	Aid amount (million €)	Decision type	Туре
1	N 451/2010 Creation of Next Generation Access Infrastructure in Landkreis Rotenburg	GER	24/01/2011	15	Article 4(3)	NGA
2	SA.30317 High-speed broadband in Portugal	PT	19/01/2011	106	Article 4(3)	NGA
3	SA.31851 (N499/2010) Broadband Marche, Italy	IT	11/04/2011	8	Article 4(3)	Basic
4	SA.32203 Breitband Egenhofen, Germany	GER	20/05/2011	1	Article 4(3)	Basic
5	SA.31687( N436/2010) Broadband in Friuli Venezia Giulia (Project Ermes)	IT	23/05/2011	47	Article 4(3)	NGA
6	SA.32309 Amendment of the Federal framework programme on duct support (Case N53/2010)	GER	8/06/2011	50	Article 4(3)	NGA
7	SA.33221 - Amendment of State aid broadband scheme N30/2010	SWE	25/07/2011	22	Article 4(3)	NGA
8	SA.32037 (2011/N) Broadband development in Västra Götaland, Sweden	SWE	22/08/2011	38	Article 4(3)	Basic + NGA
9	SA.33420 (2011/N)* Breitband Lohr am Main	GER	19/09/2011	1	Article 4(3)	Basic
10	SA. 31316 Programme national « Très haut débit » Article 4(3)	FR	19/09/2011	750	Article 4(3)	NGA
11	SA.32829 Rural Broadband Project in Devon and Somserset	UK	27/10/2011	1	Article 4(3)	Basic
12	SA.33077 (2011/N) Northumberland Uplands Rural Community Broadband	UK	8/11/2011	1	Article 4(3)	Basic + NGA
13	SA.33324 Next generation network for rural areas of Latvia	LV	9/11/2011	119	Article 4(3)	NGA
14	SA.32866*EL*Broadband development in Greek rural areas	GR	10/11/2011	201	Article 4(3)	Basic + NGA
15	SA.33438, SA.33440, SA.33441, SA.33439, SA 30851 Broadband network project in Eastern Poland	PL	10/11/2011	352	Article 4(3)	NGA
			SUM 2011	1712		