ECTA Workshop
Next Generation Access
Policy and Practice

Analysis of Regulatory Approaches in EU Member States

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Introduction

- Most NRAs have – until now – remained silent on NGA
- Some NRAs have initiated consultations/hearings/working groups on NGA (e.g. Denmark, Spain, Austria consultations; Ireland working group) + list below
- A few NRAs have stated a (preliminary) position on certain aspects of NGA (e.g. Netherlands, Germany, UK, France, Italy)
- Very few NRAs have taken action on certain aspects of NGA (e.g. Belgium + Netherlands and Germany in the pipeline for 2007)
- ERG is stepping up with ERG(07)16
- European Commission has formally requested ERG input by 14 Sep 2007
- Revised Recommendation on Relevant Markets in the pipeline for 2007

Overview

Examples of areas of NRA regulatory intervention (or planned intervention)

3. xDSL interference (e.g. VDSL from street cabinets vs ADSL2+ from MDF)

4. MDF closure, Sub-Loop Unbundling and Street Cabinet Co-Location

6. Backhaul (e.g. duct access, dark fibre access)

8. Wholesale Broadband Access (e.g. Ethernet VLANs)

10. Key instruments for NRAs

11. Q&A and Discussion

Belgium – xDSL interference (1)

- Task Group Spectrum Management (industry group chaired by BIPT) debated interference between ADSL2+ (deployed from MDF) and VDSL in 2003/2004
- On 30 March 2004, Belgacom formally notified its intention of rolling-out VDSL(1) including from street cabinets
- The Belgian regulatory framework contains relevant elements
  - Reference unbundling offer is subject to approval of BIPT, and BIPT has (and has exercised) unilateral modification powers
  - Reference unbundling offer contains an Annex C which lists the permissible xDSL technologies and the modalities for their utilization (applicable to ALL operators, including the incumbent), which is subject to BIPT powers
  - Royal Decree on public telecommunications networks requires 6 months pre-notification of intent of modifying the reference unbundling offer
  - Interface specifications of public telecommunications networks must be published

Belgium – xDSL interference (2)

- BIPT opened a public consultation on roll-out of VDSL
  - Incumbent sought to prohibit/restrict ADSL2+ from MDF
  - Altnets sought to prohibit/restrict VDSL(1) from Street Cabinet
- BIPT verified whether Belgacom VDSL interface specifications are *"compatible with real and equitable competition"*
  - EC Regulation 2887/2000, Art 4.3 was invoked by BIPT:

    The national regulatory authority may, where justified, intervene on its own initiative in order to ensure non-discrimination, fair competition, economic efficiency and maximum benefit for users.
- BIPT Council issued a Communication on 28 October 2004
  - Recognised serious interference issues and announced BIPT supervision
  - Belgacom instructed to behave as a 'good housefather', i.e. Belgacom must anticipate on likely deployment of ADSL2+ and eShDSL as and when authorised by BIPT, including overlap in the 1.1-2.2 MHz spectrum
  - Belgacom instructed to 'power down' VDSL from street cabinets in such a way that the power output does not exceed the power output if VDSL had been deployed from the MDF or LDC
  - VDSL band plan 998 approved; DMT approved

Belgium – xDSL interference (3)

- Belgacom effectively launched VDSL-based services, with VDSL(1) deployed from street cabinets, in November 2004; 5500+ (out of 26000) street cabinets equipped (but roll-out was halted at the end of 2005)
- Annex C of the Reference Unbundling Offer modified repeatedly thereafter; various legal challenges (e.g. ADSL2+ annex M with enhanced upstream)
  - *VDSL is only allowed for deployment by Belgacom in some subloops (not in the loop from a LEX) with the frequency plan 998 and the modulation code DMT (discrete multitone). The subloops where this is allowed are defined to be from a KVD where the attenuation of the feeding cable pairs at 800 Hz between the LEX and the concerned KVD is above 2.0 db. A list of all KVD with the attenuation of the feeding cable pairs at 800 Hz between the LEX and the concerned KVD is published by Belgacom on the personal page of the BRUO part in the Belgacom web site. In case of multiple feeding cables, the minimum attenuation is to be given, and this minimum attenuation is the one which is to taken into consideration for applying the 2.0 db rule. Installed VDSL which shouldn't be allowed in this framework, but which were installed before the date of 15.11.2005 are allowed the stay in service.*
  - *Attention of the Beneficiary is drawn to the future deployment by Belgacom of the technology VDSL2 that bring about potential interference for other ADSL(2plus)-technologies. However Belgacom will act with due diligence (as a "bonus pater familias") to minimize these ones to ensure synchronization by means of spectrum shaping. In particular Spectrum Management issues will be agreed within the Task Group Management before any deployment with the objectives to minimize interference between VDSL2 and other DSL technologies.*
- Draft BIPT Market 12 analysis: regulated bitstream access, including over VDSL

Netherlands - MDF closure (1)

- KPN's "All-IP" Plan (announced Oct 2005) is the most radical, and best-documented among incumbents, notably because KPN puts forward a clear position on costs, and plans to adopt a voluntary 'open wholesale' approach
  - VDSL2 roll-out in 24-28000 (= almost ALL) Street Cabinets 2007-2010
  - Planned CLOSURE/SELL-OFF of ALL (1300+) local exchanges except 193 (metro nodes), expected to compensate for *incremental* Core NGN+NGA CAPEX (€~0.9bn – reduced from €1.5bn), alongside massive OPEX (incl. staff) reductions
  - i.e. THE END OF LOCAL LOOP UNBUNDING AT MDF level (except metro nodes)
  - Voluntary KPN commitment to
    - sub-loop unbundling (from street cabinets, including multi-operator street cabinets); approval of reference SLU offer by OPTA imminent
    - wholesale broadband access (Ethernet VLANs) at metro nodes
    - (backhaul is proposed to remain subject to 'commercial negotiations')
- OPTA has consulted, has issued a Position Paper (incl. timetable to phase out MDF access), has engaged Analysys (assessment of viability of SLU as an alternative to LLU) and NERA (relevance of separation), has consulted again (backtracked?)…

Netherlands - MDF closure (2)

- OPTA, is (still) welcoming the KPN plan, and has requested market participants to find a negotiated solution for MDF closure etc. (due 15 June 2007)

- Deadline has been pushed back to 15 July 2007 (OPTA believes there will be some results)

- Results will be taken on board of revised M11/12 market analyses (KPN is incentivised by the promise of possible lighter touch regulation if an adequate solution is found which is acceptable to altnets)

- If no solution is proposed on 15 July 2007, OPTA will publish draft M11/12 analysis decisions on 15 October 2007. If a solution is proposed, OPTA will investigate impact on its draft market analyses and the conclusions are expected for the end of 2007

- “Two is not enough” (Chris Fonteijn – OPTA Chairman 19 June 2007), see also OPTA’s Economic Policy Note, no. 6, September 2006

Netherlands – Street Cab Co-Lo

- Street Cabinet collocation offered voluntarily by KPN
- OPTA included this in draft M11 SLU tariff decision

- **SDF Access Collocation – one-off and monthly fees**
  - Costs are projected based on offers made by suppliers and KPN estimates. OPTA is of the opinion that these costs are too unpredictable to adopt a multi-annual regulation at this stage. The tariff ceiling will be established annually

- **SDF Collocation – Power usage**
  - The EDC cost report assumes a periodic compensation for power use as an advance payment, which is recalculated after establishment of real usage

Netherlands – Street Cab Co-Lo

- OPTA measures the usage of space in height-units
- If a second party wishes to collocate and if they supersede the amount of space available, a second cabinet will have to be installed
- OPTA is of the opinion that all parties (including KPN) will have to contribute to the cost of the second cabinet
- If an operator does not participate in the first rollout, this can cause extra costs
- These extra costs are to be charged for 50% to the operator who has not participated and for 50% to the one-off cost of the height-units (spread over multiple years)
- If KPN does not want to roll out to a particular cabinet but an alternative operator does, other tariffs should be applicable, but these should not be fixed by OPTA

Netherlands – Street Cab Co-Lo

- Draft OPTA M11 SLU tariff decision (27 April 2007)
- EC Art 7 TF 'no comments' letter (7 June 2007)

Service	Unit	Tariff ceiling
One-off tariff per telco cabinet		
Surcharge for non-initial rollout	Euro	1.000
Tariffs per height-unit		
One-off charge per collocation unit	Euro	499
Periodic charge per collocation-unit	Euro / month	4,20
One-off tariffs for optional items per Telco per cabinet		
48V back-up battery	Euro	601
Line sharing splitter unit per 24 ports	Euro	450
Additional S-cable/CDF (50'')	Euro	239

Analysys calculated differently and made comments…

Netherlands - SLU Activation

- Draft OPTA M11 SLU tariff decision (27 April 2007)
- EC Art 7 TF 'no comments' letter (7 June 2007)

SLU Activation (OPTA)

Service	Tariff ceiling in Euro (OPTA)
VTL- Line Charges (unshared)	
Access Line Connection	44,59
VSL- Line Charges (shared)	
Access Line Connection	44,13

SLU Activation (Analysys study for OPTA)

Service	Tariff ceiling in Euro (Analysys)
VTL- Line Charges (unshared)	
Access Line Connection	47,12
VSL- Line Charges (shared)	
Access Line Connection	50,27

Analysys made comments…

Netherlands - SLU Migration

	Execution format	One service provider migrates	More service providers migrate in same project
		One-off compensation per line in EUR excl. VAT	One-off compensation per line in EUR excl. VAT
MDF xTL> SDF VTL Physical "sipstift" migration	Basic/Day Special Day Basic Night	28,72 44,58 57,95	23,34 44,58 57,95
MDF xTL> SDF VSL Physical "sipstift" migration	Basic/Day Special Day Basic Night	43,08 58,93 76,61	38,15 58,93 76,61
MDF xTL> SDF VTL Physical Telco Telco migration	Basic/Day Special Day Basic Night	28,72 44,58 57,95	23,34 44,58 57,95
MDF xTL> SDF VSL Physical Telco Telco migration	Basic/Day Special Day Basic Night	43,08 58,93 76,61	38,15 58,93 76,61

Apart from the above mentioned tariffs, the migration service taker pays €5907 per project. If several service takers migrate in one project, this amount is divided among all the migrating parties

Netherlands - SLU Recurring

- Draft OPTA M11 SLU tariff decision (27 April 2007)
- EC Art 7 TF 'no comments' letter (7 June 2007)

Tariff ceilings for SDF access lines (multi-annual) valid until 1 April 2009			
Service or service element	Unit	July 2007 to June 2008	July 2008 to April 2009
SDF line fully unbundled monthly rate (unshared)	euro / m	**7,28**	**7,11**

Periodical tariff ceilings for lines (one year)		
Service	Unit	Tariff ceiling
SDF line fully unbundled monthly rate (unshared)	euro / month	**0,77**
SDF line fully unbundled monthly rate (shared)	euro / month	**5,40**

For full SLU, OPTA draft recurring tariff = €8,05/month (Analysys model €8,33)

Current regulated full LLU from MDF = €8,35/month

For shared SLU, OPTA draft recurring tariff = €5,40/month (Analysys model €2,62)

Current regulated Shared Access from MDF = €0,74/month

Analysys made comments…

But Analysys concluded…

- *Based on the current interconnect and wholesale offers from KPN, we have calculated that the use of SLU by an alternative provider is not economically viable as an alternative to continuing to use LLU, except under certain conditions. We estimate that a business case for SLU with similar economic viability to that of continuing use of LLU for 60% of the population would require both:*
  - *a <u>market share greater than 55%</u> of all broadband lines (including cable) in areas served*
  - *our <u>highest estimate for incremental revenue</u> (which assumes an increase in ARPU across all broadband users of EUR10 per month by 2016)*

But Analysys concluded…

- *Should OPTA wish to influence the prices offered by KPN to make the SLU option more viable, the prices which affect the viability of an alternative operator's business plan the most are those for the line rental, SDF co-location and SDF–MDF link.*

- *Furthermore, our assessment of the cost of building a competitive network to provide backhaul to street cabinets indicates that unless very substantial revenue streams can be generated from services other than SLU backhaul, then it will not be possible for a third party to provide such backhaul at prices at the same level as, or below, the current offer from KPN*

→ OPTA is awaiting the outcome of negotiations between KPN and alternative operators to decide whether it will express a position and/or make a decision on backhaul

Germany – SLU

- BNetzA new analysis of Market 11 – notified to EC on 25 May 2007
- Proposed 'traditional' remedies (confirming, but slightly amending, the 1st round Market 11 Analysis)
  - Fully unbundled access to the local loop, in the form of copper loops "at the MDF or a point closer to the network termination point " (e.g. street cabinet, end distributor - APL) as well as to shared access to the network termination point by means of the division of the usable frequency spectrum
  - To the required extent, bundled access to the network termination point in the form of copper loops, including the variants OPAL/ISIS at the MDF
  - For the purpose of 1 and 2 above, to grant collocation as well as, in the context of a request from either the requesting party or their mandated representative, access to these installations at any time
  - In the context of the execution of the obligation as stipulated in 3 above, to allow possibilities for co-operation between the undertakings that have a right to access in such a way that such undertakings can connect with each other the collocation spaces they rent from the SMP undertaking and which are at the same MDF location, if an undertaking can guarantee one or several other undertakings the access to its self-provided or leased transmission pathways
  - Contracts with regard to access according to 1-4 above must be objective, must grant equivalent access and must fulfill the imperatives of equal opportunity and fairness
  - The fees for access according to 1-4 above are subject to approval of the regulatory authority BNetzA

Germany - Backhaul

- BNetzA's proposed 'additional' remedies
  - For the purpose of access to the network termination point, grant access to the cable conduits between the cable distributor (street cabinet or other local building) and the MDF, insofar the required empty space is available
  - In case that, for technical or capacity reasons it is not possible to grant access to the cable conduits, to allow access to unlit fibre strands (dark fibre)
  - Contracts with regard to access according to 1-2 above must be objective, and must grant equivalent access and must "fulfill the imperatives of equal opportunity and fairness";
  - The fees for access according to 1-2 above would be subject to approval of the regulatory authority BNetzA
  - DTAG would also be required to publish a reference offer covering the points listed above.
- "Chapeau Document" (3 pages) also contains suggestions on bitstream

Germany – EC Comments

- Extracts from European Commission Press Release IP/07/876 of 25 June 2007

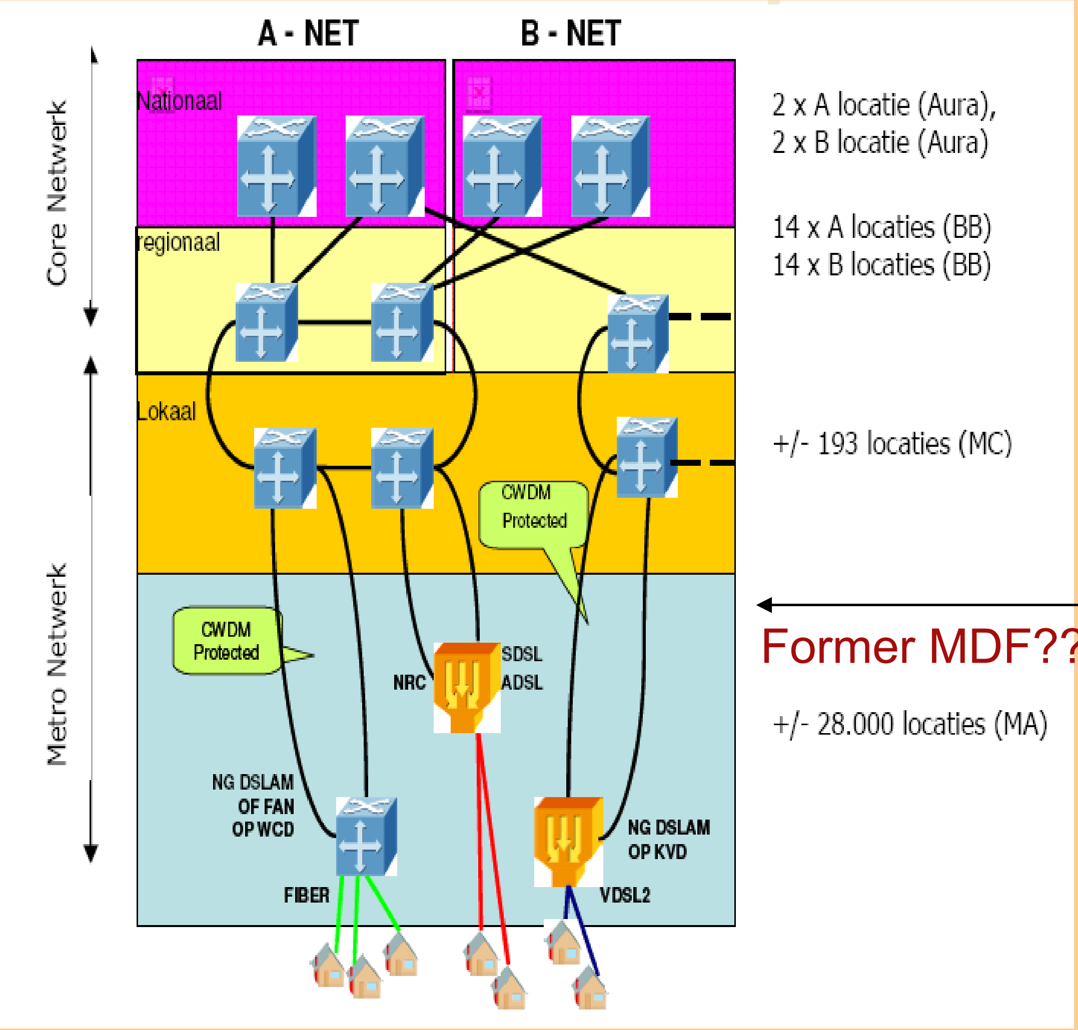
The European Commission has today requested the German regulatory authority BNetzA (Bundesnetzagentur) to secure adequate access and ensure a level playing field in the transition to high bandwidth Next Generation Networks (NGN). BNetzA is also asked to complete its market analysis for access to NGN without further delay.

In a letter sent to BNetzA on 25 June, the Commission did not challenge the market definition of local loop unbundling by BNetzA, but raised a number of issues on regulatory remedies.

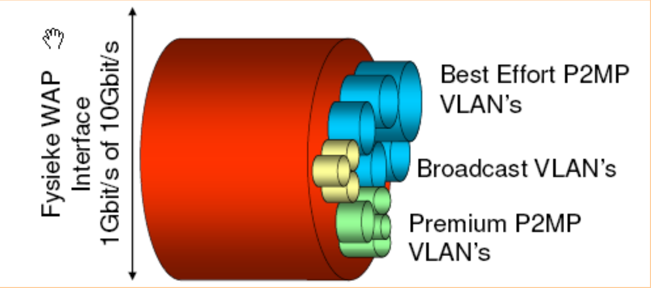
Therefore, the Commission has requested the German telecom regulator to guarantee that access to Deutsche Telekom's existing copper network by its competitors remains efficient during the roll-out of Next Generation Networks. BNetzA is therefore asked to ensure that competitors have economically viable access to Deutsche Telekom's ducts and fibre network, if appropriate, in order to deploy, their own networks down to the street cabinets and so that the necessary equipment can be installed in those cabinets.

In many cases there would no longer be a business case for alternative operators to extend their network down to the street cabinets. Therefore, the Commission stresses the importance of ensuring appropriate alternative access solutions as Next Generation Networks are deployed and urges BNetzA to complete its market analysis for access to such Next Generation Networks without further delay.

KPN Voluntary Wholesale Broadband Access



Former MDF??



Ethernet VLANs – logical solution but... single or multiple VLAN per street cabinet or per user??

The real discussion is, where is what to be provided...

NRAs may have to adopt 'no eviction tests' rather than 'cost-orientation' if they plan to prevent stranded assets and preserve economic incentives

Wholesale Broadband Access ECTA Response ERG(07)16

Wholesale broadband access (FttCab/FttB/H) is essential:

→ From building cellars/underground/street cabinet (or equivalent) locations to MDF locations and other concentration points

→ This wholesale broadband access should be technically and economically suitable for alternative operators to develop any services of their choice

→ This means that transparent multiple Ethernet VLANs (IEEE 802.1ad standard with 1534 byte frames) must be made available, enabling alternative operators to determine their own throughput and QoS on a line-by-line / VLAN-by-VLAN basis (multiple VLANs per line with no naming constraint, in order to enable separate channels for voice, Internet, IPTV, business-class data services, etc.)

Key Instruments for NRAs

- **Approval/Modification of Reference Offers**
  - **Preventing interference / breach of unbundling mandate**
  - **Requiring transparency on NGA plans**
  - **Requiring prenotification of phasing-out of existing wholesale access products**
- **Revision of Market Analysis Decisions**
  - **Tailoring/extension of remedies (“associated facilities”)**
    - **Incl. revision of fees to preserve ladder of investment?**
  - **New remedies?**
    - **Duct access, dark fibre/wavelength backhaul?**
    - **Line card access?**
    - **Functional separation?**

All information from third-party sources shown in this presentation was publicly available on the Internet on 25 June 2007 and is assumed to be unrestricted

Q & A and Discussion

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