



**BELGIAN INSTITUTE FOR POSTAL SERVICES AND  
TELECOMMUNICATIONS**

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**CONSULTATION BY THE BIPT COUNCIL  
ON  
NEXT GENERATION NETWORKS “NGN”  
AND  
NEXT GENERATION ACCESS “NGA”**

**PUBLIC VERSION**

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# Contents

|   |    |
|---|----|
| Introduction.....   | 3  |
| What is NGN / NGA? .....  | 4  |
| NEXT GENERATION NETWORK (NGN).....  | 4  |
| NEXT GENERATION ACCESS (NGA).....   | 5  |
| European Context.....   | 6  |
| EUROPEAN COMMISSION .....   | 6  |
| <i>The regulator's role.....</i>  | 6  |
| <i>Dealing with Next Generation technologies.....</i>                                     | 7  |
| ERG OPINION .....   | 8  |
| THE NETHERLANDS .....   | 8  |
| Belgian context .....   | 11 |
| THE BELGIAN MARKET SITUATION.....   | 11 |
| ANNOUNCEMENTS .....   | 15 |
| <i>Phasing out of ATM Core Network .....</i>  | 15 |
| <i>VDSL2 in the access network .....</i>  | 16 |
| <i>Fibre to the home? .....</i>   | 16 |
| IMPACT ON THE BELGIAN MARKET .....  | 17 |
| BUSINESS PLANS FOR VDSL2 UNBUNDLING .....   | 19 |
| <i>International studies.....</i>   | 19 |
| <i>The situation in Belgium .....</i>   | 20 |
| Analysis of additional measures .....   | 22 |
| TRANSPARENCY REGARDING FUTURE NETWORK DEVELOPMENTS.....                                   | 22 |
| <i>Problem definition.....</i>  | 22 |
| <i>Remedy .....</i>   | 22 |
| <i>Justification .....</i>  | 22 |
| CLOSEDOWN OF THE ACCESS POINTS TO THE LOCAL LOOP OR SUBLOOP.....                          | 23 |
| <i>Problem definition.....</i>  | 23 |
| <i>Remedy .....</i>   | 23 |
| <i>Justification .....</i>  | 23 |
| <i>Risk.....</i>  | 24 |
| COST ORIENTATION DURING CLOSEDOWN OF THE ACCESS POINTS TO THE LOCAL LOOP OR SUBLOOP ..... | 24 |
| <i>Problem definition.....</i>  | 24 |
| <i>Remedy .....</i>   | 24 |
| <i>Justification .....</i>  | 25 |
| CO-LOCATION AT STREET CABINET LEVEL .....   | 25 |
| <i>Problem definition.....</i>  | 25 |
| <i>Remedy .....</i>   | 25 |
| <i>Justification .....</i>  | 26 |
| NEW BITSTREAM OFFER INSTEAD OF ATM .....  | 27 |
| <i>Problem definition.....</i>  | 27 |
| <i>Remedy .....</i>   | 27 |
| <i>Justification .....</i>  | 27 |
| BITSTREAM VDSL1 .....   | 27 |
| <i>Problem definition.....</i>  | 27 |
| <i>Remedy .....</i>   | 28 |
| <i>Justification .....</i>  | 28 |
| Procedure .....   | 28 |
| NATIONAL CONSULTATION .....   | 28 |
| <i>Legal basis.....</i>   | 28 |
| <i>The practical side of the national consultation .....</i>                              | 29 |
| Taking effect .....   | 29 |
| appeal procedures .....   | 29 |
| Annex: schematic network presentation .....   | 30 |

## INTRODUCTION

These past few weeks Belgacom has thrown light on the introduction of new technologies in its network.

- In a joint press interview with Bloomberg mid-October Belgacom's CEO Didier Bellens and Executive Vice-President of Operations Scott Alcott have announced the end of the ATM network by 2012.
- During the broadband Internet world congress on 10 October 2007 in Berlin Belgacom announced to the press that VDSL2 technology is to be available to 60% of the population by spring 2008.

Since these new elements have a considerable impact on the market and on the regulated wholesale products, BIPT wishes to examine the different implications of these recent announcements by means of this national consultation.

Based on this analysis, BIPT wants to examine whether certain aspects of the analyses of markets regarding access to the local loop and bitstream access<sup>1</sup> are due for urgent revision as a consequence of these new developments in order to ascertain itself that the introduction of new technologies does not upset the market and cause irreparable damage to the Belgian telecoms market if adequate measures are not taken instantly.

From 25 October 2005 until 23 December 2005 the Institute held a public consultation concerning the analyses of markets 11 and 12 and in March 2006 it consulted the Competition Council. After ratification and taking effect of the cooperation agreement these market analyses were sent to the community media regulators and notified to the European Commission. The Institute is planning to finalise these market analyses at the beginning of 2008. In these analyses BIPT already announced that it will consult the sector about the NGNs when sufficient information is available.

The importance of this consultation for the Belgian telecommunications market is not to be underestimated. The Institute waited, however, for certain elements to become clear before submitting this document for consultation. The need for transparency and the importance of an informed debate with the beneficiaries is also stressed by the ERG opinion on Regulatory Principles of NGA:

*“Transparency can prompt an informed debate amongst communications providers on the potential characteristics and requirements of planned NGA deployments. Following such a debate the NRA can decide on its regulatory approach to any SMP operator found in the relevant markets and thereby provide certainty and predictability to market players and investors.”*

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<sup>1</sup> The markets regarding access to the local loop and bitstream access are also known as markets 11 and 12. In the new recommendation these are called markets 4 and 5.

## **WHAT IS NGN / NGA?**

Before going more deeply into the matter, the Institute wishes to clarify what is meant in this document by the terms NGN and NGA.

### **NEXT GENERATION NETWORK (NGN)**

Next Generation Network (NGN) refers to the development of the current network infrastructure. The purpose of this network development is to reduce the operational costs and enable new high-speed innovative services for end-users.

On the one hand new technological insights allow us to converge into a single dynamic network (based on IP or Ethernet) that will be the basis for different services (telephony, Internet, digital TV, ...). This brings about greater efficiency and reduces costs as currently different networks exist alongside each other for example to offer telephony and Internet, each using its own means in terms of bandwidth.

On the other hand the network structure will change radically leaving only a certain number of aggregation points in which all traffic will be bundled. This will allow for a large number of the currently present exchanges to be closed and sold, which will generate additional income for the incumbent operator. Closing down some of the exchanges could generate sufficient income to finance the network adaptations.

An overview of the network changes is attached to this document.

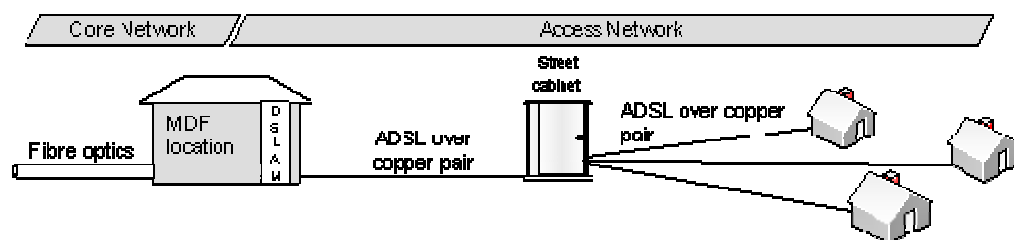
## NEXT GENERATION ACCESS (NGA)

The current access network using copper wire between the end-user and the exchange (LEX or LDC) will change radically over the coming years since bandwidth (download and upload speed) will be limited to the length and the quality of the copper wire. To achieve higher speed the copper wires must also be completely or partially replaced by optical fibres.

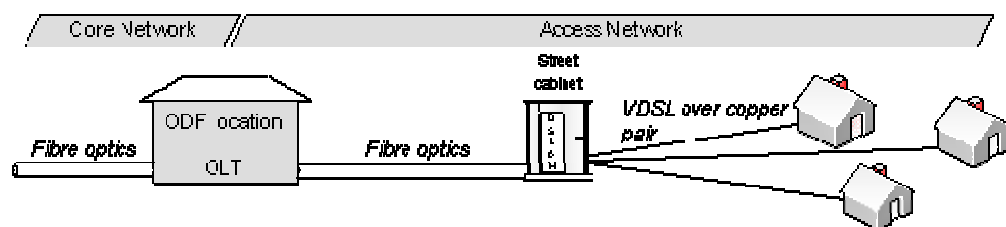
Certain operators choose to install optical fibre straightaway in each living room (Fibre to the home) but due to the high investment costs this entails, most European operators choose a middle course installing optical fibre until the street cabinet (SC) and copper wire for the “last mile” between the cabinet and the end-user (Fibre to the cabinet). The active ADSL equipment which used to be placed in the exchanges (LEX/LDC) is then installed in the street cabinet. This causes some exchanges to become redundant or at the very least the necessary space per exchange is considerably reduced.

Belgacom has chosen the latter scenario and has made massive investments over the past few years to install optical fibres until the street cabinets. According to press releases Belgacom would be ready to connect 60% of the population through these adapted street cabinets by spring 2008.

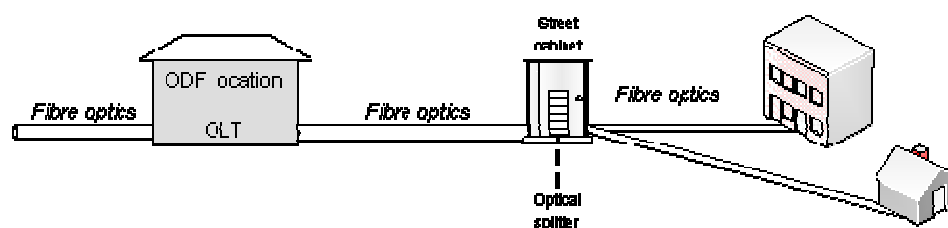
### Current situation access network



### Scenario Fibre to the cabinet



### Scenario Fibre to the home/building



Picture 1. Overview of the access network's development (Source: Cullen, 2007)

## EUROPEAN CONTEXT

Before going more deeply into the Belgian situation, the Institute wishes to give an overview of what has been said and advised concerning NGN and NGA on European level. In this chapter, BIPT will moreover discuss the situation in the Netherlands where NGN/NGA are topics that have been discussed at length.

### EUROPEAN COMMISSION

#### The regulator's role

In its "Explanatory note: Accompanying document to the Commission Recommendation on Relevant Product and Service Markets within the electronic communications sector susceptible to ex ante regulation in accordance with Directive 2002/21/EC of the European Parliament and of the Council on a common regulatory framework for electronic communications networks and services" of 13 November 2007 the Commission stresses the ex ante part of the regulator concerning NGNs:

*"In applying remedies, regulators need to find ways to promote the deployment of new and more efficient network architectures while at the same time recognising the investments made by new entrants on the basis of current architectures. National authorities will need to carefully follow and evaluate developments in order to ensure that appropriate access remedies are maintained for the forward-looking periods for which competition is judged to be ineffective, and to avoid undermining or discouraging efficient entry".*

It is in the light of this statement that this consultation is launched.

In her speech of 26 November 2007 in Budapest Vivian Reding, European commissioner, emphasised the importance of the role the regulator plays in the Next Generation Networks.

*The treatment of Next Generation Networks is one of the most important regulatory issues facing us over the coming years. I want regulation to encourage investment in future networks. Regulatory holidays are not the solution, what we need is "appropriate" regulation that safeguards competition whilst creating new incentives for investment. But what do we mean by appropriate regulation?*

*If we can cooperate and arrive at a consistent answer, we will have done our businesses, consumers and the wider EU economy a great service because consistency will level the playing field across the Community, consistency will reduce uncertainty. I don't need to tell you that increased certainty is a necessary precondition if you are contemplating large-scale investments, especially if you are venturing into a new market. It means reduced risk and that means reduced capital costs.*

## Dealing with Next Generation technologies

In the document “*Explanatory Note to the Commission Recommendation on relevant Products and Service markets*” of 13 November 2007 the European Commission states the following regarding Next Generation Core Networks:

*Because of the large investments in NGNs, some incumbents have called for a firm date to be set for the withdrawal of sector-specific ex ante regulation; others for 'regulatory holidays' for major new investments. Incumbents particularly criticise mandated access to their infrastructure and the price at which this is imposed (which they usually consider to be too low). On the other hand, new entrants fear that incumbents would be able to limit the availability of access, undermining existing investment. They therefore see that ex ante regulation and open access provisions on incumbents' networks correlate strongly with increased investment and innovation.*

*In general, migration to next generation core networks has fewer regulatory implications. The EU's market-based approach to the regulation of services is independent of the technology used in the core network. To the extent that the new 'all-IP' core networks continue to support existing services, those services will be regulated as before; to the extent that next generation core networks allow new markets to be developed based on new products and services, those new markets will be treated in accordance with the procedures set out in the regulatory framework.*

In that same document the Commission notes the following about Next Generation Access:

*In the case of VDSL and fibre to the street cabinet, the number of street cabinets is an order of magnitude greater than the number of MDF sites, and this can pose both economic and technical difficulties for competitors that currently offer broadband services using ULL and ADSL equipment at the MDF site. Their ability to roll out infrastructure similar to that of the incumbent is limited. In the local access network, costs are concentrated in civil engineering works. These works can amount to 50%-80% of the total cost per customer depending on the deployed solution and specific local characteristics (such as customer density, availability of ducts, labour cost and digging conditions). Incumbents and cable TV companies can use their existing ducts and rights-of-way to minimise these costs. Other competitors a priori do not have the same advantages, except in rare cases where they may be granted access to other utilities' facilities.*

*Deployment of NG access networks modifies the competitive environment in a number of markets, in particular LLU and wholesale broadband access. However, as long as competitive conditions have not changed, the move to NGNs does not provide an opportunity to roll back regulation on existing services. For some time, competitors will have an ongoing need for access to copper at the MDF level or to bitstream type services at different levels in the network.*

*Planned changes in the access network may potentially make it more difficult to continue to carry forward regulated remedies such as local loop unbundling (at established access points), that are designed to address the lack of effective competition in the provision of broadband services.*

*In applying remedies, regulators need to find ways to promote the deployment of new and more efficient network architectures while at the same time recognising the investments made by new entrants on the basis of current architectures. National authorities will need to carefully follow and evaluate developments in order to ensure*

*that appropriate access remedies are maintained for the forward-looking periods for which competition is judged to be ineffective, and to avoid undermining or discouraging efficient entry. Remedies such as duct sharing, access to dark fibre, mandated backhaul from the street cabinet, and new forms of bitstream access, could be considered where these are appropriate, bearing in mind that, in line with Article 8 of the Framework Directive, remedies should aim, inter alia, at stimulating economically efficient investment in infrastructure. This may call for some transitional arrangements to be considered, to allow time for adaptation of existing business models.*

The Commission intends to publish a specific recommendation regarding the way in which NGNs are to be dealt with by mid-2008.

## **ERG OPINION**

The ERG (European Regulatory Group) studied the emergence of the NGNs and the sector was consulted at European level. BIPT is participating actively in this working group.

The ERG's work finally resulted in the opinion statement "ERG Opinion on Regulatory Principles of NGA". A joint opinion of all European regulators that was formulated at the request of European commissioner Viviane Reding (letter of 30 April 2007) to help the European Commission with the Framework Review.

This ERG opinion contained the following recommendations to absorb the impact on the unbundling and bitstream markets and to guarantee competition.

- For unbundling in the light of a changing network infrastructure with reconfiguration or closing down of MDF sites, a balance is needed between commercial freedom of SMP operators to further develop their network and services and the role of the regulator to stimulate competition. This is possible through the definition of a suitable migration path and the terms for an SMP operator to close down an MDF site.
- Since subloop unbundling (SLLU) is a part of market 11 it ensues from the access obligation that SLLU must be offered in all Member States.
- Unbundling of the shortened local loop implies the need for co-location at street cabinet level.
- Unbundling of the shortened local loop entails the need for backhaul provisions from the street cabinet until the operator's network node and/or the provision of duct sharing.
- Wholesale bitstream reference offers (incl. SLAs) must be supplied if necessary to allow high-quality service offers and to adapt to the changes in the SMP network.

In 2008 the ERG will evaluate the implementation of the ERG opinion on NGA.

## **THE NETHERLANDS**

At the end of 2005, KPN announced that over the next few years it wants to migrate its network to a so-called 'Next Generation Network'. The migration to an NGN is intended to give KPN a cost-effective broadband IP network that will allow it to provide tomorrow's electronic communications services. KPN's plans include the realisation of unbundled access at the street cabinet level. To this end, that section of the access network to the street cabinet is to be provided using fibre optics.

KPN also wants to phase out the functionality of the main distribution frames (MDFs) and phase out almost all of its so-called 'MDF locations'. These locations and this functionality will become superfluous in KPN's modernised network. KPN is calling this operation the migration to 'All-IP'.

OPTA published its market analysis decisions on unbundling and bitstream on 21 December 2005. In these decisions OPTA finds the following:

- The retail market for broadband internet access is effectively competitive.
- The wholesale market for low quality broadband access is effectively competitive, because there is an intense competition between the available bitstream offers. Service providers can purchase wholesale broadband access from KPN (voluntary offer of KPN), alternative DSL-providers and in some cases cable operators. Indirect pricing constraints disciplined competitors in the retail markets.
- The wholesale market for unbundled access to the local loop is not effectively competitive and KPN has significant market power. Regulation includes access and price regulation.

In the framework of All-IP, KPN intends to restructure its network in such a way that a significant part of the regulated service provision in the market for unbundled access, namely MDF access, will be phased out. In light of a number of other developments, OPTA views this intention as sufficient motivation for conducting new market analyses in the short term in order to determine what (potential) competition problems (could) arise in the various relevant markets and what other access options there must be in such a case to mitigate the effects of phasing out MDF access.

In its position paper on All-IP<sup>2</sup> OPTA elaborates on a fully-fledged alternative for MDF access. The starting point is that a fully-fledged alternative replaces the connectivity from the subnetwork to the networks of other suppliers. An MDF access customer currently purchases this connectivity from KPN. Ideally other suppliers will realise this connectivity, just as KPN does, by installing their own infrastructure or purchasing this connectivity. However, OPTA foresees obstacles to a further roll-out, given the speed and the scope at which other parties must realise this. OPTA does not see any clear ex ante authority for imposing collective cable installation or installing extra capacity in cable channels for duct sharing.

The fully-fledged alternative for the current applicable obligations could consist of the following components:

- A regulated offer from KPN for unbundled access to the subnetwork, as well as the related facilities such as co-location at the street cabinet for purchasing Subloop Unbundling (SLU).
- Phase-out conditions for the withdrawal of MDF access already granted. OPTA expects these conditions to be part of the ultimate set of new obligations.
- A regulated wholesale bitstream offer from KPN for the areas where KPN does not yet offer SLU and/or SDF (Subloop Distribution Frame) backhaul and the MDF locations are phased out.
- A regulated offer for the delivery of glass fibre and/or glass-fibre routes by KPN, as well as the related facilities such as co-location on the Metro Core Locations and the street cabinet for installation and delivery of backhaul by third parties. and/or
- A regulated offer from KPN for SDF backhaul, as well as the related facilities such as co-location on the Metro Core Location and street cabinet for purchasing backhaul from KPN or delivery of backhaul by third parties.

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<sup>2</sup> OPTA (2006), Position Paper KPN Next Generation Network ALL-IP, 23 October 2006

The study Analysys<sup>3</sup> conducted on the business case regarding subloop unbundling for the Dutch regulator OPTA shows that

- it is economically viable for an alternative operator with a 10% market share to offer SLU in the most densely populated street cabinets provided that the wholesale tariffs for SLLU line rental, co-location and SDF backhaul drop considerably (-50%) and the Average Revenue Per User (ARPU) increases by approximately € 9 per user per month; this could be a feasible strategy for business clients;
- SLU is economically viable as an alternative to LLU if an alternative operator has a market share of 25% and the ARPU increases by €5 on average by 2016;
- the use of a commercial wholesale bitstream product in the Netherlands is considerably more expensive than to continue to offer access through LLU.

In the beginning of 2007 OPTA has called on KPN to produce a solution, which is acceptable to all parties involved, for KPN's proposed phase-out of MDF Access as part of its All-IP plan. This call was answered by KPN by starting talks with the three largest MDF customers. The talks resulted in three signed Memoranda of Understanding (MoUs) on 13 July 2007. The MoUs contain conditions under which MDF customers are willing to co-operate with moving out of the MDF locations. One of these conditions is that KPN will maintain MDF access for a coverage of 50% of Dutch households. Another condition is that KPN will develop an adjusted wholesale bitstream offer, which gives market parties the opportunity to continue their MDF Access business model.

On 1 October 2007 KPN launched a public offer with exit points upon migration from the MDF. In this framework, however, KPN and market parties are still discussing further details regarding high-quality wholesale broadband access.

OPTA will publish a draft decision on SDF Backhaul by the end of 2007 at the latest. The new market analysis decision on bitstream access is not expected before 1 March 2008 to give the market players the opportunity to draw up MoUs with KPN by 15 December at the latest which OPTA might then integrate in the market analysis.

During the ECTA conference KPN announced on 30 November 2007 that these MoUs will contain the following elements:

- MDF access maintained if possible by moving co-location towards the cellars, with compensation for the alternative operator.
- Compensatory mechanisms for migrations towards bitstream access with the same service options for exchanges where co-location is no longer possible.
- Providing for the possibility to unbundle the subloop and sufficient transparency on which street cabinets will be installed to ensure a joint roll-out.

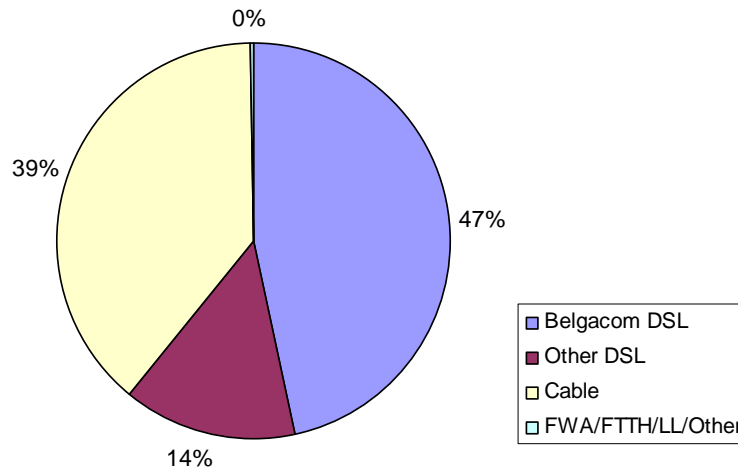
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<sup>3</sup> Analysys (2007), The business case for subloop unbundling in the Netherlands, Final Report for OPTA, January 26, 2007.

# BELGIAN CONTEXT

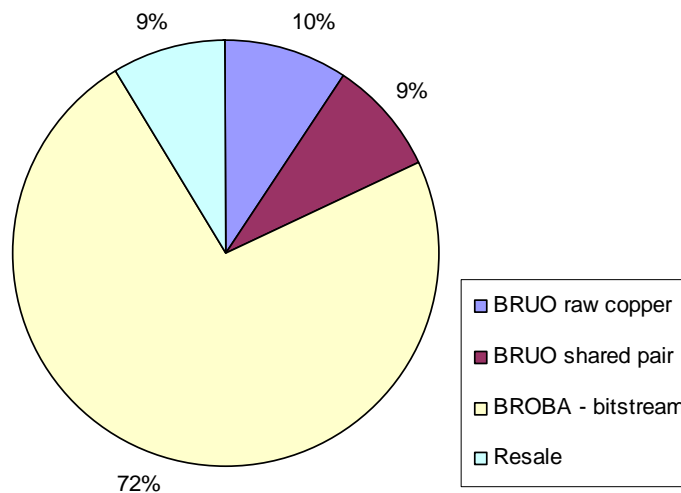
## THE BELGIAN MARKET SITUATION

The Belgian broadband market comprises Belgacom that offers broadband services through its copper cable network, the cable companies and finally the alternative operators who have been allowed to provide broadband products to the end-user via Belgacom's wholesale services since 1 January 2001. Other technologies such as wireless, fibre to the home, rental lines... are also possible but have a low penetration rate.



**Picture 2. Distribution of broadband lines in Belgium according to technology (Source: BIPT)**

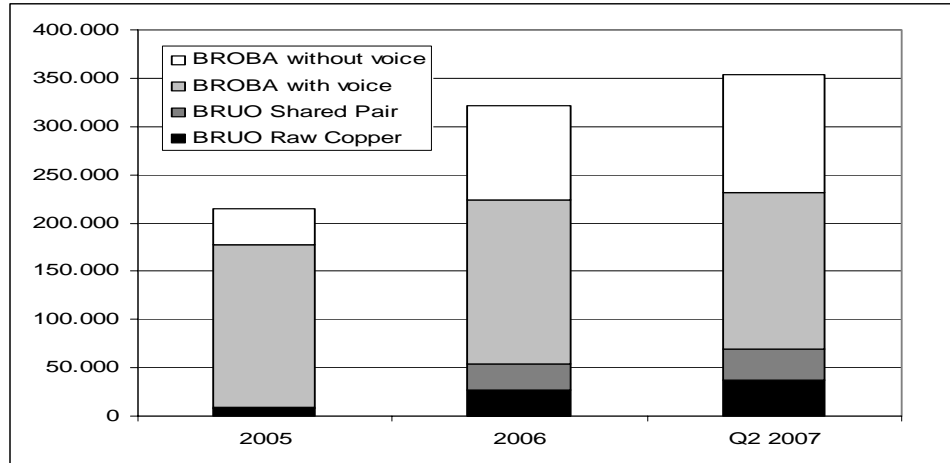
On wholesale level in Belgium, bitstream lines are most strongly represented: 284,395 lines early July 2007 compared to 267,328 lines at the end of 2006. At European level Belgium consequently has the lead in terms of bitstream access: 18.6% of the xDSL broadband lines are based on bitstream access.



**Picture 3. Distribution of number of wholesale lines per wholesale product (Source: BIPT)**

These last few years a positive development can be noticed in the growth of alternative operators.

|                     | 2005    | 2006    | Q2 2007 |
|---------------------|---------|---------|---------|
| BRUO Raw Copper     | 7,376   | 26,575  | 36,948  |
| BRUO Shared Pair    | 1,854   | 27,145  | 32,986  |
| BROBA with voice    | 168,878 | 169,605 | 161,958 |
| BROBA without voice | 36,215  | 97,723  | 122,401 |

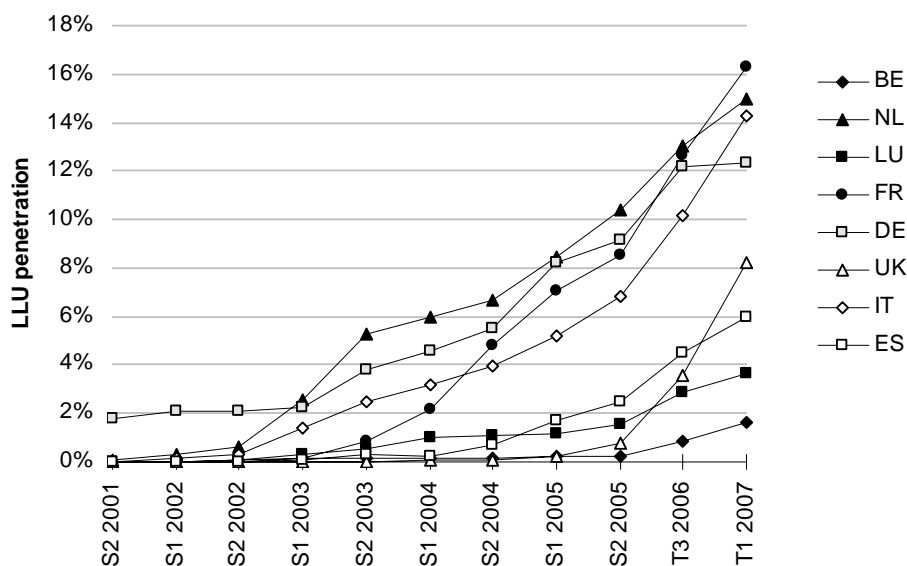


**Picture 4. Evolution of the regulated wholesale product volumes**  
(Source: BIPT)

The number of BRUO lines has increased sharply these last 2 years which indicates that the alternative operators have invested heavily in their own network infrastructure through unbundling (LLU).

Thanks to fully unbundled lines (BRUO raw copper) alternative operators can offer double play or triple play services. The alternative operators can develop solutions that are from an economic and operational point of view more interesting than bitstream access while they can generate more profit and allow greater creativity in offering all kinds of subscriptions. Finally it also allows broadband infrastructure competition at low prices. Consequently LLU must offer end-users maximum advantage as regards choice, price and quality; it is therefore important that the competition on this market is encouraged in order for the broadband internet retail tariffs to drop.

LLU penetration in Belgium is very low as compared to other countries. Operators invest less in the development of their own network which disables them from enjoying the various LLU advantages.



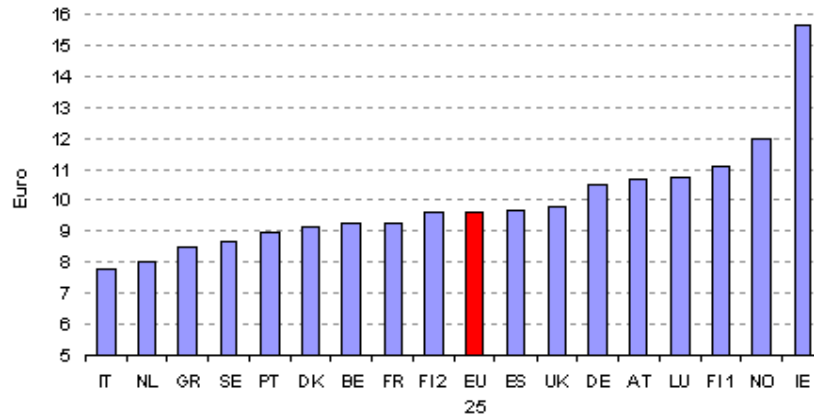
Picture 5. LLU penetration as percentage of xDSL broadband lines  
(Source: BIPT, Analysis, ECTA, 2007)

As of 1 July 2007<sup>4</sup> the monthly rental fee for the connection to the end-user has been reviewed (BRUO offer). This entailed a price drop of about 2 euros (-18%) for the lines that lack Belgacom telephony and a drop of about 1 euro (-67%) in the other cases.

|                  | New tariff | BRUO 2006                            |
|------------------|------------|--------------------------------------|
| BRUO Raw Copper  | € 9.29     | € 10.58 (type 1)<br>€ 11.26 (type 2) |
| BRUO Shared Pair | € 0.52     | € 1.61                               |

BIPT disposes of indications that different alternative operators are ready to switch to BRUO in the largest exchanges since this creates scale effects. These operators expect, however, to do this at cost-based tariffs. The BIPT approved price reduction mid-June has improved Belgian raw copper tariffs in the European benchmark, which will encourage competition.

<sup>4</sup> Decision by the BIPT Council of 13 June 2007 regarding the BRUO rental fee



**Picture 14: European benchmark for raw copper tariffs**  
**(Source: Cullen International, 2007)**

To ensure that these planned investments are unhindered, it is of great importance that the plans of Belgacom and the intentions of BIPT regarding network evolutions are clarified as soon as possible.

In addition, the Institute has to ensure itself that the investments in own network infrastructure made by the alternative operators these past few years are not annulled by Belgacom's NGN/NGA plans and that there is a correct assessment of the need for Belgacom to develop the network in order to offer higher-quality and faster services and the competition on the Belgian broadband market.

## **ANNOUNCEMENTS**

Below an overview is given of the recently made announcements before examining the implications for the market.

### **Phasing out of ATM Core Network**

The Institute notes that Belgacom has included the following formulation regarding the phasing out of the current ATM network in its BROBA 2008 proposal of 29 September 2007:

*Belgacom informs the Beneficiary that ATM is susceptible of being gradually out phased in the Belgacom network and replaced by other technology starting 1st January 2009. As a consequence the current BROBA offering could cease to exist.*

The Institute asked Belgacom for an explanation as to its phase-out plans but Belgacom denied that there already existed an actual phase-out planning and that the clause is only meant to inform the beneficiaries beforehand to provide enough transparency.

However, the Institute had to find out through the newspapers mid-October 2007 that Belgacom's CEO Didier Bellens and Executive Vice-President of Operations Scott Alcott had confirmed in a joint press interview with Bloomberg that the analogue network will cease to exist by 2012.

During the BROBA 2008 consultation the alternative operators unequivocally stated that it is unacceptable that the incumbent operator imposes the time schedule to the regulator and the sector. According to them Belgacom must enter into discussions with all players in order to achieve consensus regarding this important matter without jeopardising the investments and activities of the alternative operators.

The Platform sent a letter to Belgacom on 5 November 2007 since it has no overview whatsoever of Belgacom's plans so far and since it wishes to engage in a constructive dialogue about the phasing out of the ATM network.

*With reference to the ERG's opinion on Next Generation Access, the operators who are a member of the Platform wish to insist upon more transparency regarding the exact projects Belgacom is planning to launch.*

*The Platform is thus asking an open and proactive deliberation with all parties involved, including the regulator, to determine the aspects that impact the regulated access services in the short or medium term. A migration path must be outlined including comprehensive procedures to determine the consequences of a gradual phasing out of the network or parts of the existing network, both in the overlapping phase and in the substitution phase.*

*This is the only way to find a balance between the commercial freedom of an SMP operator to develop his network and the regulator's goals, who must ensure more competition in the electronic communications sector.*

In the BROBA 2008 decision of 21 November 2007 BIPT notes that Belgacom cannot simply suspend a legally imposed and regulated service without the Institute having approved transitional measures since this entails major consequences for the broadband market.

## **VDSL2 in the access network**

On several occasions during the past few months the Institute asked Belgacom for clarification as to its VDSL2 plans and explained that VDSL2 technology must first be approved by the Task Group Spectrum Management. BIPT's first letter is dated 13 March 2006 and this message was repeated in the letters of 8 January 2007 and 2 May 2007. It was not until 24 September 2007 that Belgacom offered to provide the Institute with more information during a meeting on 15 October 2007.

At the broadband Internet world congress in Berlin on 10 October 2007 Belgacom announced to the press that it intends to launch high definition television on its network during the first half of 2008. Based on the VDSL2 technology Belgacom will offer its clients a 20 Mbps bitstream, which is sufficient for two HDTV signals. VDSL2 can also be used to provide other new services such as high-speed Internet or closed circuit security. Belgacom stated in the press that VDSL2 should be available to over 60% of the population by spring 2008.

On 24 October 2007 Belgacom submitted a proposal to the Task Group Spectrum Management (TGSM) relating to the spectrum rules for the use of VDSL2 technology and asked the Institute for its approval by 1 February 2008. The Institute launched a separate consultation on the matter on 28 November 2007. These spectrum rules have to ensure minimum interference between VDSL2 and the already present signals so that sufficient capacity remains to offer the same services to the current customers.

According to the press release of 14 December 2007 Belgacom will unquestionably lodge an appeal against a BIPT decision that opens up the VDSL network for competition.

## **Fibre to the home?**

Belgacom has not yet mentioned the "Fibre to the home" (FTTH) projects. In the competition struggle with cable and the pursuit of higher speed and wider services, fibre to the home is the next logical step after fibre to the cabinet (FTTCab).

The Dutch incumbent operator KPN admitted during the ECTA conference on 30 November 2007 that the idea of fibre to the home is being looked into. The Institute thus presumes that this is also, or will shortly be, the case in Belgium.

Taken into account the different possibilities for FTTH roll-out and consequently different impacts on regulation, it is necessary for the regulator to be informed of these developments as soon as possible in order to analyse the consequences for the market.

## IMPACT ON THE BELGIAN MARKET

BIPT first wishes to point out that the Institute has already taken into account different elements that arise now so that no adaptations are required:

- It has been possible since 2001 to ask subloop unbundling at street cabinet level. The offer is described as such in the Main Body & Product description of the BRUO reference offer.
- The obligation to provide a VDSL/VDSL2 bitstream offer was already included in the draft decision for the market analyses that has now been notified to the European Commission<sup>5</sup>:

*The day a high-speed retail offer is introduced on the market, Belgacom must adapt its bitstream access offer in such a manner that its competition is able to duplicate the new Belgacom retail offer (ADSL2, ADSL2+, SDSL, VDSL, VDSL2). This obligation also applies to the current offers for which there are at the moment no equivalent wholesale offers (such as the VDSL services for broadband Internet access).*

- The cost orientation for VDSL and VDSL2 bitstream tariffs at wholesale level was also already provided for in the draft decision regarding the market analyses, which is now submitted to the European Commission for notification:

*Regarding VDSL and VDSL2 the Institute suggests to impose a broadband access wholesale price that encourages investment, namely by distancing itself from a purely cost-based concept and by switching to a concept based on reasonable costs, combined with a price squeeze test regarding an efficient operator who has drawn up a broadband access wholesale offer based on unbundling. It is noted, however, that the concept of cost orientation as traditionally applied by the national regulatory authorities, already provides for a compensation of the capital invested by taking into account the capital cost (WACC). This means that the regulated tariffs must enable the SMP operator to compensate his creditors but also his shareholders, according to the risk.*

*As regards VDSL and VDSL2, BIPT will operate based on a hybrid concept, combining cost orientation with the necessity to avoid a price squeeze and to encourage investment. The price squeeze would be assessed in relation to a hypothetical efficient alternative operator who develops a broadband access wholesale offer based on unbundling. This would result in a higher access price at purely cost-based level, encouraging investment.*

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<sup>5</sup> Draft decision relating to markets 11 and 12, submitted to the European Commission and the other NRIs.

The introduction of new technologies can entail the following implications for the market:

- Because of the closing down of several exchanges by Belgacom the alternative operators may not recover the investments they have made to develop their proper network.
- Unbundling at street cabinet level requires high investment since the alternative operator has to be present at more locations compared to earlier when DSLAMs were still installed in the exchanges.

There is a real risk that subloop unbundling will not become a fully-fledged alternative at LEX level because the business case does not prove viable or because practical problems arise. It is possible that there is no more space in or around the street cabinet to install the alternative operator's equipment or that the municipality is not prepared to authorise the installation of an additional street cabinet.

- The difference in timing and cost price between jointly rolling out fibre optics and installing VDSL2 in a street cabinet is considerable, increasing the importance of scale effects and making it more difficult for smaller operators to remain competitive.
- There arises a large demand for additional support services at street cabinet level (such as ducts, unused fibre optics or backhaul) to transport the data traffic from the street cabinet to the aggregated network node. Financially speaking it is very hard for an alternative operator to provide for backhaul to all street cabinets if there is no duct sharing option and a joint roll-out is not possible.
- If the bitstream offer is not adapted to the network changes and cannot provide the same quality of service (QoS) as at retail level, the alternative operator will not be able to compete with the incumbent operator.
- The question is raised which tariff should be applied for regulated products at cost-based tariffs if Belgacom no longer uses the network elements itself and what the tariffs are if two parallel access networks remain operational.

## **BUSINESS PLANS FOR VDSL2 UNBUNDLING**

Since VDSL2 requires LEX and all associated SCs to be available in order to reach all clients, major investments have to be made in new material (IP DSLAM) and IP backhaul to accomplish a VDSL2 roll-out. Consequently the financial feasibility for an operator to make these major investments is questioned.

### **International studies**

Several international studies into the business plans for roll-out of VDSL technology show that the feasibility depends on the penetration, the market share and the possibilities to obtain a larger revenue per customer.

- A WIK study<sup>6</sup> concludes that the feasibility of a VDSL roll-out by the incumbent operator strongly depends on the demand for VDSL access. Recuperation of investment (break-even situation) would be possible when between 14% and 31% of all families that can be connected, choose VDSL access.
- Analysys<sup>7</sup> has conducted a Dutch study on the feasibility of subloop unbundling (SLLU) on the basis of the KPN wholesale offer which shows that SLLU is no economical alternative for LLU except in cases that require a considerable market share or sharp increase of the revenue per customer. Taken into account the highly local importance of scale effects, a 50% wholesale tariff decrease would not suffice to consider SLLU as an economically viable alternative for LLU on the mass market.
- The JP Morgan study<sup>8</sup> states that a two-digit market share and a large demand for premium services are required to justify a new operator rolling out VDSL.
- The costs for installing fibre optics are considerable and vary between 50% (Paris)<sup>9</sup> and 80% of the total costs per user line. The costs for civil work are inversely proportional to the population density in that area and also depend on the already present structure (ducts, sewers, ...) that can be used to install fibre optics and limit the necessary investments.

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<sup>6</sup> WIK (2006), Michael Brinkmann, Dragan Ilic, Technische und ökonomische Aspekte des VDSL-Ausbaus – Glasfaser als Alternative auf der (vor-)letzten Meile, WIK-Diskussionsbeitrag No 281, October 2006.

<sup>7</sup> Analysys (2007), The business case for subloop unbundling in the Netherlands, Final Report for OPTA, January 26, 2007.

<sup>8</sup> JP Morgan (2006), The Fibre Battle – Changing Dynamics in European wireline, October 4, 2006.

<sup>9</sup> Cf. Arcep (2006), IDATE (2006), JP Morgan (2006)

ARCEP (2006), Very high-speed Points of reference and outlook, Press points, 10 November 2006

## **The situation in Belgium**

The willingness and possibilities for an operator to invest in a further roll-out of the network to the SC depends on the number of customers that he can reach with this offer and the costs related to this investment.

Scale and width effects become more important than with LLU because the critical mass to keep certain business plans viable is not so readily found at street cabinet level as at LEX level. This restricts the alternative operators' options. BIPT believes that Belgacom is currently the only operator that is capable of a national roll-out of VDSL2 based on its scale and width effects.

### **The alternative operators**

In the national consultation regarding the VDSL2 spectrum rules the alternative operators noted that the following elements are necessary to carry out a business case study themselves and to verify whether VDSL services can be offered:

- LEX-VDSL2 coverage
  - o Percentage of customers that can be reached from the LEX through VDSL2.
- SC-VDSL2 coverage
  - o Which SCs allow VDSL services and how is the SC co-location organised operationally so that the operational and technical impact can be assessed.
  - o The co-location cost price at SC level.
- What are the alternatives in other SCs and at what price?
  
- The cost price for interconnection with the SC: How can the alternative operator's network be connected to the SC (duct sharing, dark fibre, backhaul) and at what cost?

Additionally the technical description and the cost price of the following elements are required according to the alternative operators:

- the introduction of fibre optics cable in the SC;
- the rental of a location for the VDSL modem;
- the installation of the tie cables.

### **Belgacom**

Below follows an overview of Belgacom's reaction on the national consultation regarding the VDSL2 spectrum rules. This point of view of 14 December and 17 December 2007 contains further clarifications about the subloop unbundling costs.

Belgacom notes that it is possible to ask subloop unbundling at KDV level since 2001. The offer is described as such in the Main Body & Product description. However, Belgacom explains that it is a complex and specific matter that differs from situation to situation and that it cannot be generalised, which means that it is a case-by-case offer and it requires studying.

Subloop unbundling is in fact possible at each SC. Depending on the status of this specific SC and the volume of blocs and tie cables asked, one of the following scenario's will unfold, disabling a univocal price indication according to Belgacom:

- there is still room to place the required blocs;
- there is no room but extension is possible;
- there is no room and extension is not possible; the box needs to be replaced.

The equipment can cost up to several hundreds and thousands of euros<sup>10</sup>, and on top of that there are specific study costs and additional operational and administrative costs if existing pairs need to be adjusted.

Belgacom does not bring fibre optics into the SC. The SC is a passive element in the network in which blocs and tie cables are installed. [confidential]

The installation of tie cables has to be defined case by case and depends on the blocs in the SC and the solution used. In addition trenching and equipment costs come up and the cost price depends on the position of the OLO box in which this operator has installed its network elements. Belgacom does not provide for a possibility for rental of “a location for the installation of a VDSL modem”.

[confidential]

Furthermore, Belgacom wishes to note the following:

- The BRUO cost is definitely not the most essential cost with regard to unbundling for an alternative operator and is therefore not the starting point for a business case.
- If an operator has a project including subloop unbundling as a technical solution for the network requirements, nothing stops this operator from having Belgacom estimate the costs for the realisation of his project. Such a study is not for free of course.

### **BIPT position**

Alternative operators must be able to check for themselves whether a VDSL2 business plan through unbundling in certain areas is financially feasible. Therefore Belgacom needs to be sufficiently transparent as to which cost factors are connected to unbundling at street cabinet level, the operational and technical implications and the VDSL services coverage.

To provide for more clarity Belgacom is asked to draw up an exemplary offer for 2 to 3 common scenarios giving a clear image of the costs incurred with regard to subloop unbundling.

Subloop unbundling at SC level already exists in the BRUO offer and if there are elements missing or more details are required, the alternative operator can, if he actually needs these additional elements, always ask Belgacom and BIPT for additional adaptations to the BRUO offer. Belgacom will have to respond as soon as possible under the supervision of the Institute.

Finally it must be possible to check the presence of VDSL2 equipment via the SC tool in order for an alternative operator to be able to verify whether a specific SC VDSL2 roll-out is possible.

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<sup>10</sup> Above-mentioned amounts are communicated with reservation of an actual study of an actual demand.

## **ANALYSIS OF ADDITIONAL MEASURES**

The Institute has to ensure itself that the investments in own network infrastructure made by the alternative operators these past few years are not annulled by Belgacom's NGN/NGA plans and that there is a correct assessment of the need for Belgacom to develop the network in order to offer higher-quality and faster services and the competition on the Belgian broadband market.

Moreover, it must be looked into what additional measures are necessary to continue to sufficiently stimulate competition in an NGN-NGA context.

Below the different above-mentioned problems are studied and different solutions are proposed that imply adaptations of the market analysis document regarding markets 11 and 12<sup>11</sup>. The text under the headings 'remedy' and 'justification' must therefore be added to the market analyses decision.

### **TRANSPARENCY REGARDING FUTURE NETWORK DEVELOPMENTS**

#### **Problem definition**

In the chapter on announcements it was already revealed that the Institute has asked Belgacom for more clarity over the past few months (even years) regarding network developments, but has never received this clarification. Belgacom always waited until the last minute to inform the Institute about the plans for future network developments. The Institute is still in the dark about the possible phasing out of exchanges by Belgacom.

An extreme example of lack of transparency is the phasing out of the ATM network: the Institute had to read in the newspaper that this network is to disappear completely by 2012 while a couple of days earlier Belgacom still refused to communicate a final date to this effect.

This way the Institute tails along behind the facts and it is hard to anticipate Belgacom's plans causing certain elements of great importance to market competition to be already set without the possibility to change them.

#### **Remedy**

The Institute suggested the following transparency measure:

Belgacom will provide BIPT and the alternative operators with its plans to develop high-level networks (increase of the number of distribution frames, sub-distribution frames, cable distribution frames, technology used, network structure...), per region over a 5-year period.

#### **Justification**

On the one hand 5 years is necessary for alternative operators as this period coincides with the indispensable visibility to make major investments in networks.

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<sup>11</sup> Markets 4 and 5 in the new recommendation

On the other hand the regulator must have a good overview of the coming changes to assess the consequences for the market competition. This role is emphasised by the “Explanatory note” of the European Commission<sup>12</sup>:

*“In applying remedies, regulators need to find ways to promote the deployment of new and more efficient network architectures while at the same time recognising the investments made by new entrants on the basis of current architectures. National authorities will need to carefully follow and evaluate developments in order to ensure that appropriate access remedies are maintained for the forward-looking periods for which competition is judged to be ineffective, and to avoid undermining or discouraging efficient entry”.*

In case Belgacom decides to roll out “fibre to the home” (FTTH) for example, the regulator must be informed as soon as possible about these developments in order to be able to assess the consequences for the market because the different possible FTTH scenarios each have an entirely different impact on regulation.

## **CLOSEDOWN OF THE ACCESS POINTS TO THE LOCAL LOOP OR SUBLOOP**

### **Problem definition**

The technological development of the access networks to the NGAs can push Belgacom to close a number of access points to the local loop or subloop as KPN intends to do in the Netherlands.

Because of the closing down of several exchanges by Belgacom the alternative operators may not recover the investments they have made to develop their proper network.

### **Remedy**

The Institute believes that the possible closedown of co-location space must be anticipated and proposes the following transparency measure:

If Belgacom decides to close down a site for access to the local loop or subloop, Belgacom has to leave this point open for at least five years after the announcement to the Institute and the BRUO offer beneficiaries if an unbundling offer still applies to that location.

If no operator has invested in an unbundling offer for that distribution frame, sub-distribution frame or cable distribution frame, Belgacom may close it down one year after the announcement.

### **Justification**

Belgacom has to continue operating the access point depending on a distribution frame, sub-distribution frame or cable distribution frame for at least 5 years after the announcement of the closedown to enable the alternative operators to:

- find an alternative solution after the decision to close down the operation by Belgacom, ensuring the continuity of service to the end-user;
- have a 5-year overview on investments relating to the choice of interconnection with a Belgacom network element;

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<sup>12</sup> “Explanatory Note to the Commission Recommendation on relevant Products and Service markets” of 13 November 2007

- this 5-years period corresponds to the depreciation period for investments that the Institute used for its BRUO and BROBA cost models. The BROBA 2007 decision of 29 November 2006 reads:

*As to the precise period the Institute maintains its former approach of depreciating the DSLAMs over a 5 year period. The Institute considers this to be a right balance between the depreciation period as applied in accounting (which is probably shorter) on the one hand and the real (technical) life that can be observed for certain types of assets (in the meantime clearly more than 5 years).*

- 1 year is proportional to find an alternative solution and to guarantee service if no co-location is present in that exchange.

### **Risk**

BIPT notes that the scenario in which a distribution frame closedown is announced 5 years in advance involves risks as this could be an incentive to Belgacom to announce the closedown of as many distribution frames as possible much too soon in order to prevent the alternative operators from investing in unbundling. As there is a risk that Belgacom does not close down a distribution frame contrary to its announcement, BIPT would have no other choice but to impose a fine on Belgacom in order to prevent such abuse.

The risk that the announced closedown of a distribution frame does not take place, would decrease if BIPT obliges Belgacom to make the announcement 3 years in advance and to let the alternative operators continue to provide their services through that distribution frame until two years after its closedown. This scenario, however, would be discriminating against Belgacom retail.

## **COST ORIENTATION DURING CLOSEDOWN OF THE ACCESS POINTS TO THE LOCAL LOOP OR SUBLOOP**

### **Problem definition**

The question is raised which tariff should be applied for regulated products at cost-based tariffs if Belgacom no longer uses the network elements itself and what the tariffs are if two parallel access networks remain operational.

The different steps Belgacom has to take to close down different access points to the (sub)loop should not have competition-distorting effects on the price.

### **Remedy**

To provide the sector with sufficient transparency, the Institute wishes to anticipate the phasing out of certain exchanges as of today and to propose the following remedy during the transition period between the old network structure and the new one.

The prices of offers for unbundled access depending on a distribution frame, a sub-distribution frame or cable distribution frame that is no longer being operated by Belgacom for its own use (but is temporarily still operated by alternative operators) are equal to the prices of the offers for unbundled access depending on a distribution frame, a sub-distribution frame or cable distribution frame that is being operated by Belgacom for its own retail services.

## **Justification**

The obligation to maintain identical prices for offers regarding unbundled access depending on a distribution frame, a sub-distribution frame or cable distribution frame that is not or no longer being operated by Belgacom for its own use, is necessary to ensure that the alternative operators have a good overview of the cost-effectiveness of their investments. If this obligation is not imposed, Belgacom could apply differentiated tariffs that are clearly higher for access depending on network elements that Belgacom is no longer operating for its own retail services and the obligation for Belgacom to maintain access to these services would lose strength.

## **CO-LOCATION AT STREET CABINET LEVEL**

In the context of the ERG working group on Next Generation Access it was shown that co-location and access to that co-location are important elements that contribute to the success of unbundling.

## **Problem definition**

It is acknowledged<sup>13</sup> that the costs and administrative steps necessary for the civil engineering works and the installation of street cabinets are two important factors that slow down the infrastructure-based competition.

The costs for civil work are inversely proportional to the population density in that area and also depend on the already present structure (ducts, sewers, ...) that can be used to install fibre optics and limit the necessary investment costs.

For the installation and/or connection of fibre optics on Belgacom sites (distribution frame, a sub-distribution frame or cable distribution frame (street cabinet)) a difference must be made between a situation of simultaneous installation with the alternative operators and successive installation (in which case the operators can each carry out the installation at a different pace).

It is considerably faster and cheaper if the alternative operator can roll out fibre optics and install VDSL2 in a street cabinet together with Belgacom. Scale effects become much more important and it is a lot more difficult for the smaller operators to remain competitive if they cannot roll out simultaneously or do not have access to the infrastructure already present.

A high level of demand for additional support services at street cabinet level (such as ducts, unused fibre optics or backhaul) arises to transport the data traffic from the street cabinet to the aggregated network node causing the costs for VDSL2 roll-out to drop considerably. Financially speaking it is very hard for an alternative operator to provide for backhaul to all street cabinets if there is no duct sharing option and a joint roll-out is not possible.

## **Remedy**

It is absolutely necessary to divide the work and related costs in order to create a competitive market in the context of new technologies with a large bandwidth.

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<sup>13</sup> J.P.Morgan: "The Fibre Battle"; Analysys: "The business case for subloop unbundling in the Netherlands"; OVUM: "FTTCab: an investment assessment"; WIK: "Technische und ökonomische Aspekte des VDSL-Ausbaus – Glasfaser als Alternative auf der (vor-)letzten Meile"; Ontwerp van gemeenschappelijk standpunt "Regulatory principles of NGA" ERG (07)16

The corresponding remedies, proposed by the Institute, in terms of transparency, non-discrimination and cost-orientation are:

- Simultaneous installation

for each connection of a new site or the placement of fibre optics ducts on existing sites, Belgacom will propose to the operators to divide the work for the placement of the fibre optics ducts on the parts that are useful for access to the LEXs, LDCs and SCs. Likewise, Belgacom will suggest to the operators to divide the distribution frame where its DSLAM will be installed. The administrative, technical and financial terms will be included in an appendix to the co-location offer. To enable the beneficiaries to adapt their implementation plans, Belgacom will announce the corresponding plans at least 3 months in advance before the fixed proposal for shared use is sent; the beneficiaries will have 1 month to respond to this proposal.

The access tariff will be cost-oriented and will take into account the risk the alternative operator takes by investing simultaneously with Belgacom, and also the cost reduction thanks to the division of infrastructural work.

- Successive installation

Regarding the already connected sites, Belgacom will offer to divide the ducts (duct sharing), to lease "dark fibre" or to provide for backhaul options from every co-location space in the local loop up until the LEX, LDC and SC. The administrative, technical and financial terms will be included in an appendix to the co-location offer.

The access tariff will be cost-oriented but the calculation of the costs will take into account the risk Belgacom takes by being the first to invest, as well as the costs for the work necessary to prepare the co-location.

The tariffs that Belgacom invoices to the alternative operators for complementary services (i.e. co-location) must be cost-oriented. BIPT will use a bottom-up type of cost model. In accordance with article 62, § 2, subsection 2, BIPT should take into account the costs related to efficient service, including a reasonable investment return.

Apart from dark fibre or rental lines it is possible to connect the MSANs or DSLAMs of the street cabinets through an Ethernet or IP loop. If Belgacom adopts such an architecture with equipment that is independent of the MSANs or DSLAMs, it will have to provide a corresponding backhauling (Ethernet VLAN or IP/PLS) as an ancillary service in the context of non-discrimination.

### **Justification**

The obligation to provide co-location, also at the level of the ducts for fibre and sub-distribution frames, is necessary to ensure efficiency of the obligation concerning non-discrimination between the alternative operators and the proper subsidiaries and services of Belgacom. The practical rules regarding co-location must take into account the following elements:

- the necessity to stimulate efficient investment by Belgacom and the alternative operators. The latter must be motivated to climb higher on the investment ladder. Especially concerning the new investments Belgacom makes, it should be verified that the price for access takes into account the risk level that Belgacom and the alternative operator incur by investing. An alternative operator who decides to invest

simultaneously with Belgacom, will be granted more advantageous terms than an alternative operator who wishes to invest later and will thus be exposed to a lesser risk. These more advantageous terms will among other things stem from the division of infrastructural work.

- The necessity, in accordance with article 12 of the Framework Directive, 2002/21/EG, to stimulate the shared use of infrastructure.

Without these access obligations the only option left for the alternative operator to provide an ultra high-speed broadband service that is a match for Belgacom's service, would be to carry out the civil engineering work himself. In the vast majority of the cases it will not be possible to carry out this work under the same circumstances as Belgacom considering the access Belgacom has to rights-of-way and existing infrastructure as well as its scale effects in the civil engineering works negotiations. The Institute must also stimulate the mutual division of infrastructure to keep the civil engineering work to a minimum and to encourage efficient investment.

## **NEW BITSTREAM OFFER INSTEAD OF ATM**

### **Problem definition**

The technological evolution towards NGNs (Next Generation Networks) and NGA (Next Generation Access) will cause the current ATM/xDSL network of Belgacom to be replaced by a network, the characteristics of which have not yet been disclosed.

### **Remedy**

The Institute thinks it absolutely necessary to anticipate this development by adding the following remedy regarding non-discrimination:

As this concerns a technological development and not the rise of a new market (the use of other protocols does not entail changes as to the product the end-user receives), Belgacom will have to negotiate with the beneficiaries and will have to submit for approval by BIPT and publication a reference offer adapted to the new Belgacom network and offering at least the same level of service as the bitstream offer valid at the time of submission.

This offer must allow the beneficiaries to enjoy Belgacom's retail services and use the new network at the same time. The technical specifications must be defined 6 months before the commercial opening of that network at the latest.

### **Justification**

Not imposing this measure would lead to discrimination between Belgacom and the other operators since Belgacom only uses a technology for itself. Not providing a bitstream version of the ATM successor comes down to nonobservance of the access obligation as the access is then terminated upon phasing out of the current ATM/xDSL network.

## **BITSTREAM VDSL1**

### **Problem definition**

Nor BIPT nor the sector have yet been informed about the future roll-out plans for VDSL2. It is not clear whether this technology will replace the existing VDSL1 installations. If that is indeed not the case, Belgacom would be able to provide national coverage based on a mixed

technology of VDSL1 and VDSL2, while the alternative operators would only be able to offer partial VDSL2 coverage.

## **Remedy**

Consequently, and contrary to the fact that the Institute acknowledges the importance to limit the use of VDSL1 to a minimum given the corresponding spectrum interferences, the Institute proposes to add the following remedy regarding non-discrimination:

The bitstream offer will include access to the use of the VDSL1 technology on the subloop networks installed and where VDSL2 technology is not available.

## **Justification**

Bitstream access to VDSL1 is necessary contrary to the remedies for the unbundling market (where it is not advisable to install new VDSL1 DSLAMs given the interference) taken into account the possibility that Belgacom will have national coverage during a certain period based on a mixed VDSL1 and VDSL2 technology.

Not imposing this measure would lead to blatant discrimination between Belgacom and the other operators and would give rise to unfair competition as in certain areas only Belgacom would be able to provide VDSL services to the customer and would therefore be the first to haul in the customers.

## **PROCEDURE**

This draft decision is first submitted to the sector for national consultation. Afterwards the Competition Council, the community regulators and the European Commission can give their advice before BIPT's Council will make a decision regarding this draft decision.

## **NATIONAL CONSULTATION**

### **Legal basis**

The national consultation is based on article 6 of Directive 2002/21/EC<sup>14</sup>:

*Except in cases falling within Articles 7(6), 20 or 21 Member States shall ensure that where national regulatory authorities intend to take measures in accordance with this Directive or the Specific Directives which have a significant impact on the relevant market, they give interested parties the opportunity to comment on the draft measure within a reasonable period. National regulatory authorities shall publish their national consultation procedures. Member States shall ensure the establishment of a single information point through which all current consultations can be accessed. The results of the consultation procedure shall be made publicly available by the national regulatory authority, except in the case of confidential information in accordance with Community and national law on business confidentiality.*

It is organised pursuant to articles 139 and 140 of the Act of 13 June 2005:

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<sup>14</sup> Directive 2002/21/EC of the European Parliament and of the Council on a common regulatory framework for electronic communications networks and services (Framework Directive) Official Journal of the European Union L108/33 of 24 April 2002.

*Art 139. In application of this Act, the Institute can organise a public consultation in accordance with article 14 of the Act of 17 January 2003 on the status of the regulator of the Belgian postal and telecommunications sectors.*

*Art 140. Insofar as one of the Institute's draft decisions may have considerable consequences on a relevant market, the Institute organises a preliminary public consultation with a maximum duration of two months, taking into account the rules regarding confidentiality of the corporate data.*

*All information with regard to the current public consultations are centralised at the Institute.*

*The results of the public consultation are published, taking into account the confidentiality of the corporate data.*

*Upon advice of the Institute, the King lays down the terms of the public consultation and of the publication of the results thereof.*

### **The practical side of the national consultation**

Reactions to this document are to be sent by electronic way only and by 29 February 2008 at the latest to the following e-mail address: [reinhard.laroy@bipt.be](mailto:reinhard.laroy@bipt.be)

Confidential parts in this document should be clearly indicated.

### **TAKING EFFECT**

This BIPT decision on Next Generation Networks (NGNs) and Next Generation Access (NGA) will take effect one month after its publication on the Institute's website except for the remedies or elements for which another term is imposed.

### **APPEAL PROCEDURES**

According to the Act of 17 January 2003 on the status of the regulator of the Belgian postal and telecommunications sectors you have the possibility to lodge an appeal against this decision with the Brussels Court of Appeal, Poelaertplein 1, 1000 Brussels, within sixty days of its notification. The higher appeal is lodged by 1° serving a bailiff's notification upon the opposing party; 2° filing an application, in as many copies as there are parties involved, with the office of the higher court; 3° sending a registered letter to the court registry; 4° by statement of claim, addressed to each party involved or represented in the case. Except for the case in which the appeal is lodged by statement, the bailiff's notification will include the stipulations of article 1057 of the judicial code under penalty of nullity.

M. VAN BELLINGHEN  
Member of the Council

G. DENEFF  
Member of the Council

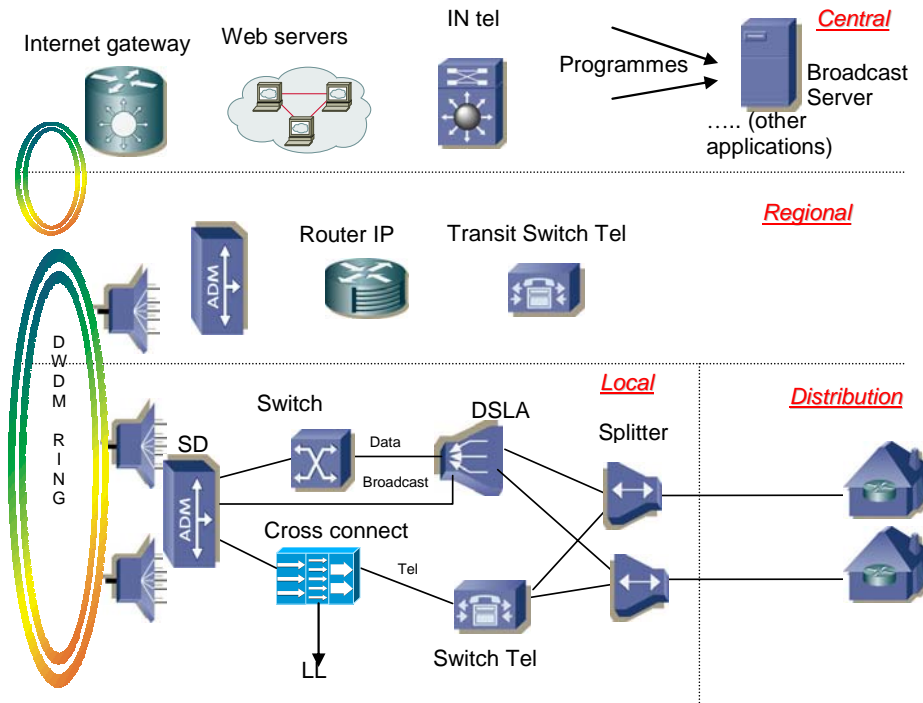
C. RUTTEN  
Member of the Council

E. VAN HEESVELDE  
Chairman of the Council

## ANNEX: SCHEMATIC NETWORK PRESENTATION

The schematic presentations below give a synthetic overview on the NGNs development. These are theoretical schemes that by no means anticipate the technological solutions that Belgacom will implement.

The current network:



An NGN network:

