ECTA Response to European Regulators Group Consultation

Regulatory Principles of Next Generation Access
ERG (07) 16

June 2007

Summary

1. ECTA globally agrees with the analysis and conclusions reached in the ERG consultation document. We particularly support the proposed revisions to the Recommendation on Relevant Markets (to ensure technological neutrality) and the ERG's conclusions on the modifications of the ladder of investment to ensure continuity of investment and competition in an NGA environment.

2. Whilst we support these evolutions, it is important to note that – according to the ERG's own conclusions – NGA developments are considered likely to exacerbate problems associated with economies of scale and scope. It cannot therefore be expected that substantial further investment up the ladder will be efficient or viable in all areas. Rather the 'ladder' should be seen as providing a complementary suite of products that will enable investment as far is feasible – this may run to the customer premise in some areas whilst in others, unbundling or wholesale broadband access are likely to remain the only viable means to ensure competition in the medium term.

3. In order for wholesale products in the 'NGA suite' to be usable and effective – and vitally – to ensure that existing competitive investments are not undermined due to unsuitability of successor products – the pricing principles (e.g. for sub-loop unbundling and associated facilities) need to be revisited to ensure that they are economically viable, and reflect the substantial cost-savings and efficiencies that have been attributed to them by incumbents in financial presentations. History and current developments also show that it is not reasonable to expect any significant increase in ARPU as a result of network upgrades and additional services.

4. ECTA supports action to mandate access to dominant operators' ducts where practicable and where it would help to lower barriers to entry. However, this should be a remedy to address dominance on Market 11 – given that dominance in the local loop in some part derives from historic ownership of ducts. It should not be a symmetric obligation disconnected from dominance. In particular, there is no justification for extending such remedies to operators that have invested in ducts on a 'greenfield' basis, often overcoming substantial rights of way barriers. Moreover, in practice the competitors have already engaged in considerable investment sharing (co- trenching, sales and leases of ducts, etc.). More generally, it may be useful for national Governments to examine access to other (non-telecoms) ducts which have been funded through public subsidy, although this is likely to be outside the scope of the telecoms Framework.

5. In order to monitor how NGA guidelines are approached by NRAs, the ERG should in tandem with its Common Position produce measurable 'best practice guidelines' on similar lines to those developed for traditional broadband.

6. It is clear from the consultation document that NRAs do not have sufficient information on incumbent NGA plans. The Common Position should recommend that all NRAs report to the ERG on actions they have taken to ensure full disclosure and deal with any developments (for inclusion in the annex) and to highlight any perceived problems preventing them from taking all necessary measures.

7. The architectures designed by dominant operators for NGAs may be motivated by a desire to limit the prospect for competition (e.g. through making unbundling difficult) and not just economic interest. Whilst regulators cannot dictate technological architecture, they can make clear ahead of any architecture being adopted that dominant players must respect the unbundling mandate, and are required to provide access which meets certain criteria (e.g. to further investments at the deepest level possible and to allow controllability/differentiation of services by competitors) in the most efficient manner possible, and will be compensated on this basis. This would provide clarity for all parties and might encourage more pro-competitive architectures from the outset.

8. Reliance upon state aid, when in breach of EU law, remains a serious barrier to competitive investment in NGAs by competitors as well as incumbents. ECTA advocates further coverage of this issue with detail as to the circumstances in which state aid would be appropriate and the access measures that should be applied in state aid cases. The country reports should also include state aid measures

9. Multicast is an inherent feature of all NGA platforms examined in the ERG's consultation document. ECTA's position regarding multicast is that, where wholesale broadband access is mandated by the NRA, the SMP operator must make available, on a non-discriminatory basis, ALL technical capabilities embedded in its NGA, so as to enable the alternative operators to define their own products, their own downstream and upstream speed profiles, their own QoS, etc. Multicast capability is simply one such technical capability. If the dominant operators' NGA is a 'best effort' network, then rules may need to be agreed/defined to manage any contention issues that may arise.

1. Introduction: *Do you agree/disagree with the general approach?*

ECTA welcomes the ERG's initiative to examine the implications of FttCab and FttB/H. These evolutions of access networks are now an operational reality in several EU Member States, and are being actively planned in many other Member States.

ECTA's main message in response to this consultation is that the ERG's key focus, and in fact all relevant institutions' focus, should be on creating the conditions for Next Generation Access, in all its variants, to be developed in a truly competitive environment, learning the lessons from the stalled development of broadband, and ensuring that investments made since then are not undermined and can provide the foundations for further competitive development.

ECTA supports the ERG's general approach, with some caveats, and encourages the ERG to develop, before the end of 2007, and if possible before the publication of the revised Recommendation on Relevant Markets, a comprehensive ERG Common Position on Regulatory Principles of Next Generation Access (NGA) – and importantly – in tandem, best practice guidance which can be monitored in a similar manner to the guidance recently adopted on traditional broadband.

This ERG work should inform the analysis currently under way in a number of countries, but it is important that the timing of this exercise does not delay NRAs from taking immediate action where appropriate to address tangible or prospective NGA developments that negatively affect competition.

Reinforcement of bottlenecks in local access networks

On the basis of practical experience from its members, who are actively having to take investment decisions in markets where NGA developments are occurring or are planned, ECTA agrees with the ERG that upgrading the existing access networks is likely to exacerbate existing legacy advantages and economies of scale, and hence reinforce existing bottlenecks and incumbent operator advantage.

As a result, new, and more creative, forms of regulatory intervention are needed to continue the drive towards achieving effective competition and efficient investment in the telecommunications sector and to avoid the very real risk of a reduction of competitive intensity, and consequential damage to European consumers and professional users of telecommunications services.

Improvement needed of foreseen technical/economic access solutions/conditions

Whilst ECTA supports the ERG's proposals for technology-neutral solutions including sub-loop unbundling and access to SMP operators' ducts, initial information on the costs of own build by alternative operators, costs of duct access, costs putting fibre in such ducts and associated costs of opto-electronics, make it most unlikely that alternative operators will be able to take up these new access solutions on any significant scale unless the conditions are radically improved.

There is a significant risk that the ERG and NRAs may assume and give the impression that they have NGA developments under control, and are taking progressive new measures to address new challenges arising from NGA, whilst the objective economic reality, under the prevailing economic assumptions relied upon by NRAs suggest infeasibility for alternative operators in the majority of cases. It should be remembered that the initial conditions for LLU effectively prevented take-up of LLU in a number of countries and that, in most Member States, it took several years for LLU to become an operational reality. Now that investments have already been made on the basis of improved LLU conditions in many cases, it is imperative that NGA-associated offers are made from the outset with conditions that allow their effective use.

This means that a radical re-thinking is needed, which should lead to a correction of existing/envisaged charges for wholesale inputs, taking into account the objective differences in costs for incumbent operators and alternative operators in FttCab and FttB/H scenarios. We note in this context that KPN and Telecom Italia have announced to the investor community that their NGA roll-outs would reduce costs or be cost-neutral, whilst access fees for alternative operators are scheduled to increase dramatically, revealing a suspicious 'disconnect'.

Assumption of increased ARPU

Whilst ECTA supports the ERG's overall analysis, we are very concerned that the ERG seems, at least implicitly (e.g. section 3.2.2.3), to go along with assumptions that average revenue per user (ARPU) will (have to) increase substantially.

ECTA considers this to be an extremely risky assumption (contradicted by retail NGA-based service pricing in Scandinavia, announcements of Free and NeufCegetel in France, and VDSL and FttX-based services in Asia, and a damaging precedent in the UMTS licensing process). To the extent that any assumptions are made, the starting point should be that, as in the past, telecoms services will continue to evolve whilst prices remain stable – or even decline.

Local loop definition; inside wiring

The ERG consultation document makes statements about the definition of 'local loop' (e.g. page 44), discusses sub-loop unbundling and 'shortened local loops' in the context of the metallic access network, and uses the 'local loop' terminology also in the context of FttB/H, including FttH inside wiring.

It is clear that fair sharing mechanisms need to be defined as quickly as possible for access to new inside wiring, so as to ensure NGA development in a truly competitive environment.

In ECTA's opinion, an objective decision must be taken, country-by-country, by NRAs, especially for the FttB/H scenarios (in this context FttB and FttH represent distinctly different scenarios), of the conditions under which pre-existing and new inside wiring can be used by any operator.

For example, ARCEP has recently announced that it will launch a public consultation to explain the main conditions necessary for the terminal part of a fibre network to be effectively shared by the various very high speed operators under reasonable technical and economic conditions.

Country case studies are limited; NRA initiatives should also be listed in Common Position

ECTA welcomes the ERG's initiative to include, in Annex 2, a set of country case studies. However, this Annex 2 illustrates how little information NRAs have been able to gather from dominant operators with regard to next generation access (effective roll-out or plans).

The same problem can be observed with regard to the question as to whether or not incumbents intend to phase out Main Distribution Frame (MDF) locations. The phasing out of locations has been publicly announced by KPN in The Netherlands, which (rightfully) triggered a public discussion. In other countries, there is no significant discussion, and a severe risk of alternative operators and regulators being confronted with a 'fait accompli'. At a seminar in Germany, a representative of Deutsche Telekom indicated that Deutsche Telekom would phase out MDFs, whereas ERG(07)16 states, on page 8: *'In Germany, according to Deutsche Telekom press releases, the parallel copper infrastructure between the cabinet and the MDF is kept'*. If the NRAs have to rely on press releases, or voluntary (selective?) information from dominant operators, they will not be able to carry out their duties!

ECTA insists that NRAs should take decisive action, using all powers available to them (and publicly raise a flag if they do not have sufficient powers) to obtain full details on dominant operators' NGA plans, including technical and economic aspects, timeframes, and especially any intentions or plans to phase out or otherwise affect existing regulated access products such as local loop unbundling and wholesale broadband access (and in fact retail products as well, to enable NRAs to exercise their duties relating to users' protection). A tool that is currently available to NRAs to prevent unexpected architecture changes and breaches of the unbundling mandate is the inclusion of network architecture descriptions in the reference offers (for local loop unbundling, wholesale broadband access and interconnection) and to apply the principle that any change to the reference offer is subject to prior NRA approval.

In addition, ECTA suggests the ERG to include, in the final Common Position, a comprehensive overview of individual NRA's existing and planned actions relating to NGA, and not only information on operators' plans.

2. *Do the scenarios describe the relevant roll-out alternatives for NGA?*

ECTA appreciates the ERG's focus on the most prevalent NGA roll-out models, and we agree that the analysis should focus in the first instance on the models adopted by operators that are in a position to leverage an existing dominant position and/or assets acquired under monopoly conditions, and bottleneck facilities in general.

Looking beyond the roll-out by dominant telecommunications operators, we wish to attract the attention of the ERG to municipal/regional FttH initiatives (which may raise state aid issues where they are situated in areas already subject to competition or where competition is developing). Although many municipal/regional fibre networks have an 'open access' philosophy, and irrespective whether open access is granted or not, where state funding leads to overbuild of networks that were financed by private capital, there is a serious risk of market distortion.

We emphasize that competition, at the deepest level possible, should be promoted, including by examining and addressing structural advantages, and ensuring a level playing field by means of regulated (corrective) access where appropriate.

We expect that other interested parties will refer to wireless access as an alternative. ECTA is on record in supporting the European Commission's initiatives in the areas of technological neutrality of spectrum usage, spectrum liberalisation and spectrum trading, and we hope that these initiatives will enable stronger competition in the future. However, at the present time, and for the foreseeable future, ECTA does not consider that wireless access will provide a sufficiently capable or sufficiently ubiquitous next generation access platform. Therefore, we recommend the ERG to reject any claims to the effect that (future) availability of wireless access would justify forbearance from addressing objective competition issues in wired NGA.

FttCab is a simplification; all NGA options need to be addressed

It should be noted that incumbent network operators' passive metallic cable distribution systems situated closer to end-users than the Main Distribution Frame are not always located in street cabinets, but are often placed in operators' own small buildings, public buildings, in cellars of third party buildings, in technical rooms of third party buildings, underground, etc. at a variety of locations.

The ERG should ensure that any analysis made by NRAs, and remedies defined, addressing access to (metallic or optical) cable distribution systems, and any remedies (including co-location, DSLAM/MSAN/line card access, duct access, dark fibre access, wavelength access, transmission capacity, etc.) should not be restricted to 'street cabinets', but to any relevant cable distribution systems, irrespective of their technology, form or location.

Metallic network spectral interference needs to be addressed

Incumbent telecommunications operators are the only ones with a predilection for the deployment of VDSL(2) from street cabinets (or equivalent – FttCab is a simplification), whereas no alternative operator has adopted this approach. However, several alternative operators have deployed VDSL(2) from building cellars/technical rooms directly on indoor cabling of multi-tenant housing units and equivalent locations.

The incumbent operators' approach has numerous consequences, including issues of spectral interference.

ECTA hereby expresses its surprise at the fact that the ERG has only cursorily mentioned spectral interference on metallic loops, whereas this is objectively a serious problem, which requires immediate and intensive attention by all NRAs.

Indeed, VDSL/VDSL2 deployed from street cabinets (even with PSD shaping activated) clearly affects ADSL2+ deployed from the MDF locations, principally by degrading the bandwidth that can be delivered using ADSL2+.

ECTA is concerned that only a few NRAs appear, until now, to have seriously developed a strategy to ensure that metallic loop interference (generated by incumbents or by alternative operators) is addressed in a pro-competitive manner. In ECTA's opinion, the ERG should ensure that all NRAs have a process in place to take decisions on these issues (which may involve prohibiting or conditionally authorising xDSL technologies for example through the approval process of the reference unbundling offer (including the incumbents' own use), metallic spectrum utilisation, mitigating measures on roll-out schedules/geography, mandated power output restrictions, mandated PSD shaping, etc.)

ECTA invites the ERG to include a chapter on spectral interference in the final ERG Common Position on Regulatory Principles for NGA.

3. *Do you agree/disagree with conclusions on economics and business cases?*

ECTA broadly shares the ERG's analysis of the effect of NGA deployment by incumbent operators, i.e. a reinforcement of economies of scale and scope, resulting in an enduring economic bottleneck in most locations in both the FttCab and FttB/H scenarios. However, ECTA disagrees to some extent with the conclusions that are drawn by the ERG (which could be paraphrased as: 'same competition challenges; extend traditional remedies to new access points'), given the elements explained below.

Comparative costs for incumbent operators and for alternative operators

As regards the cost-side, we regret the very traditional approach that is taken to perform cost assessment and wholesale charge definition in the studies (e.g. costs of fibre access and fibre backhaul, costs of migrating from full loops to sub-loops, costs of installation/power/cooling of street cabinets or equivalent + presumed wholesale charges for sub-loop/fibre activation/migration, presumed wholesale charges for sub-loop/fibre rental, presumed wholesale charges for street cabinet co-location, presumed wholesale charges for various backhaul options, etc). A major flaw is that costs and resulting wholesale charges are examined in isolation from the cost savings that can be achieved by incumbent operators.

We note in this context that the Dutch OPTA is effectively proposing to follow such a traditional and disjointed approach (e.g. the proposed recurring sub-loop rental charges are not corrected by any savings that can be achieved by KPN, and are substantially higher than put forward in the

corrected Analysys model, and are in fact very near the existing rental charges for full local loop unbundling). The European Commission's Article 7 Task Force has not commented on this.

Please allow us therefore to state very clearly that, in our view, it is necessary to consider the overall economics for incumbents (in the case of KPN, a very moderate capex per line for a nation-wide roll-out of VDSL2 NGA from street cabinets and including capex of NGN core, compensated by sale of MDF buildings and massive opex reductions, leading to an overall cost reduction for KPN), and the corresponding overall economics for alternative operators (fees for activation and rental of fibre access/sub-loop unbundling in the same ballpark as local loop unbundling, multiplication of the number of co-locations by a factor of 20-40, corresponding backhaul costs/charges, etc.) In contrast to incumbents, alternative operators have no opportunity to sell buildings (typically purchased/built during the historic monopoly period with state support). We also note that alternative operators had to make up-front payments to transform incumbent buildings, have no opportunity to reduce opex because they already have efficient systems/organisations (due to their more recent start-up date and competitive pressure for efficiencies), and will be faced with the stranding of not yet amortised assets (capex for transforming incumbent buildings, capex for electronics, capex for backhaul, etc.).

If a disjoined approach is followed, it is clear that costs for incumbents will go down, whilst these same incumbents will be allowed to charge more to the alternative operators than they charged before.

Comparative revenues for incumbent operators and for alternative operators

In section 1 above, we already challenged what seems to be the ERG's assumption , (e.g. section 3.2.2.3), that average revenue per user (ARPU) will (have to) increase substantially.

In this section, we simply wish to reiterate that this is an extremely risky assumption, contradicted by evidence.

In addition, the ERG should bear in mind that, in order to attract and retain customers, alternative operators are in nearly all cases compelled to offer retail prices that are substantially lower than those of incumbent operators – to overcome a historic switching inertia. Therefore, any hypothetical increase in ARPU for incumbents may not translate to a corresponding increase in ARPU for alternative operators. Taking the examples of Scandinavia, France and Asia, alternative operators moving towards triple/quadruple play, and rolling-out NGA, have increased broadband speeds, added services and features, but kept retail prices static or even reduced them.

This further underscores ECTA's opinion that it would be a fundamental error for the ERG or NRAs to make any such assumption of (across the board or not) increased ARPU.

Interim conclusion

Based on what is stated above, ECTA confirms its opinion that there is a great likelihood of exacerbation of economic bottlenecks, and that there are serious questions over 'replicability' under the assumptions put forward by the studies and seemingly endorsed by the ERG.

In ECTA's view, competition challenges of NGA may be similar as those encountered before, but the assumption of a mere extension of traditional remedies (especially with disjointed cost/cost savings assumptions) is likely to result in the definition of access options that alternative operators may, in most locations, be unable to viably utilise. Therefore, ECTA strongly believes that radical re-thinking is needed, which should lead to a correction of existing/envisaged charges for wholesale inputs, taking into account the cost savings for incumbent operators, and correcting objective differences in costs for incumbent and alternative operators in FttCab and FttB/H scenarios.

4. *Opinion on regulatory implications and ladder of investment*

4.1 Ladder of investment

ECTA has systematically defended the position that local loop unbundling and bitstream access are - and will remain - complementary, geographically as well as in time. We have systematically argued that both options need to be included in a carefully crafted ladder of investment, which also includes own infrastructure, in which economic incentives to make efficient investments at the deepest level possible are promoted, whilst not excluding the use of other rungs of the ladder, in circumstances where own infrastructure would not be efficient. The use of 'no eviction tests' to structure the ladder of investment is a useful approach.

This position is informed by the fact that customer demand is not uniform and that fixed alternative operators are – by extension - not homogenous. In particular, some of our members are focused solely on the business market which has different demand and supply characteristics compared to the residential market. A competitive market should enable the needs of all customers to be met and this means that means that each alternative operator needs to be able to select, based on its own strategic imperatives, customer locations, etc. how to position itself, including where it will use its own infrastructure (always the preferred solution), or various wholesale access inputs.

Next generation access developments do not change this. If anything, they even provide further validation of a long held ECTA position, i.e. that alternative operators will – inevitably – be simultaneously positioned on different rungs of the ladder of investment, geographically and in time.

Therefore, our view is that regulatory intervention is necessary, and that unbundling (technology-neutral) and wholesale broadband access (technology-neutral) should be included in a coherently crafted ladder of investment, subject to ex-ante 'no eviction' tests at all levels, so as to enable alternative operators (which are diverse) to purchase the wholesale access products that make technical and economic sense for them, in view of their customers' locations. This means that, in ECTA's view, a wide portfolio of wholesale access products needs to remain and become available, to cater for the diversity of wholesale demand expressed by alternative operators.

ECTA strongly supports the 'NGA Ladder of Investment' put forward by the ERG on page 42 of the consultation document; insofar as it is clear that:

a) Diversity of wholesale demand is taken into account (see for example the recent BTGS document[1], which emphasises the specific access requirements of an operator focused on serving large corporate customers across a wide multi-country geography). This means that different rungs of the ladder of investment will be occupied by different operators in different geographies at different points in time, as part of a mix that is unique to meet the needs of a given alternative operator.

b) The wholesale charges for access products are defined in such a way as to correct inequalities between incumbent and alternative operators (otherwise it will be most unlikely that the 'new parts of the ladder' will ever be taken up on a significant scale by alternative operators), and incumbents' objective costs, including their cost savings, are duly taken into account in setting wholesale charges.

[1] www.btplc.com/Thegroup/Regulatoryinformation/Consultativeresponses/BTdiscussionpapers/Electronic/Economicbenefits.pdf

4.2 Implications for regulation

ECTA shares the ERG's view that the regulatory regime needs to be updated to address challenges posed by NGA development, and that efficient investment must be promoted at the deepest possible level, coupled with the definition of new wholesale access solutions, to be defined as part of a revised ladder of investment, subject to the conditions set out above, in particular economic viability of the new access options for alternative operators.

In line with this, ECTA supports further evolution of the regulatory framework including technological neutrality in market 11 (we expressed this in the context of our response on the 2006 Review) and a power for NRAs to mandate functional separation (a remedy which could be extremely helpful in providing clarity for all operators (incumbent and alternative) on the regulatory treatment of NGAs.

Addressing the ERG consultation document's chapter 4 can best be done by formulating ECTA's own 'preliminary minimum set of remedies in the context of NGA, which is introduced in section 4.2.1 below, highlighting differences for the FttCab and FttB/H scenarios. We include specific points on FttB/H in section 4.2.2, and, given that we also have a few punctual comments on chapter 4 of the ERG consultation document, these are addressed in section 4.2.3 below.

4.2.1 Preliminary 'minimum set of remedies (FttCab and equivalent[2] and FttB/H)

ECTA hereby formulates a preliminary minimum set of actions that need to be taken by NRAs, and remedies that need to be defined. We have indicated in *red* (FttCab) and *green (FttB/H)* where they are particularly relevant to a specific scenario, or to both scenarios.

1) Transparency, essential information and pre-notification (FttCab/Eq and FttB/H)

The ERG consultation document painfully reveals how little information NRAs have been able to gather from dominant operators with regard to next generation access (effective roll-out or plans).

We urge the ERG to re-affirm that NRAs have information gathering powers under the EU regulatory framework (and to openly communicate if NRAs do not have such powers or do not consider that they have such powers). We also urge the ERG to publish, in the Common Position an additional Annex which indicates the actions that NRAs have taken to obtain information and to intervene where appropriate (e.g. by ensuring that the unbundling mandate is not breached). In addition, we request the ERG to publicly state, in its Common Position, that NRA powers should be used to the full extent necessary by NRAs to discharge the mandate given to them by Art 8 of the Framework Directive.

Furthermore, the forthcoming ERG Common Position could usefully emphasize that NRAs should require the inclusion of the mandatory pre-notification of network architecture modifications in existing reference offers for unbundling, bitstream access and interconnection. This pre-notification requirement should cover the overall network architecture as well as individual sites, and be associated with the need for prior approval by the NRA before executing modifications that would result in breaches of existing regulatory obligations (e.g. unbundling obligations) or which would be detrimental to competition. The powers should include the possibility for NRAs to require modifications to the project (e.g. to facilitate co-location, unbundling, real bitstream access, etc.).

[2] VDSL is often assumed to be systematically deployed from street cabinets. The ERG and analysts usually refer to the 'FttCab' scenario. Please note that VDSL is also deployed from underground boxes, and from a variety of buildings. Any remedies should not be expressed only as 'street cabinet access/co-location', but should encompass all other types of remote DSLAM/MSAN deployment.

2) Spectral interference (FttCab/Eq)

VDSL deployed from street cabinets (or their equivalent) can cause severe upstream interference affecting ADSL2+ and other xDSL technologies deployed higher in the network hierarchy, typically at the MDF. This effect is somewhat mitigated with 'PSD shaping', introduced in the VDSL2 standard, but remains an issue that requires attention.

ECTA observes that only a few NRAs have taken a real interest in spectral interference, not to mention set-up processes to intervene where necessary. Spectral interference (generated by incumbents or by alternative operators) can be harmful to competition. This topic is quasi-absent from the ERG consultation document.

We urge the ERG to include, in the final Common Position, an additional Annex setting out the powers of NRAs, and actions (if any) taken by NRAs, and a statement of best practice, with regard to interference issues. These issues should not be a matter decided upon solely by the owner of the metallic infrastructure, but should be covered by the mandate of the NRA.

3) No phasing out of MDFs until alternative operator investment is amortised (FttCab/Eq)

ECTA members have invested heavily in constructing 'middle mile' fibre infrastructure to reach MDF sites in which they have co-located xDSL equipment (and additionally incurred one-off building transformation and co-location fees, incurred capex for equipment, etc.). Our members continue to invest in this roll-out in several Member States. It should also be foremost on the ERG's and NRAs' minds that this investment is only starting now in Greece, and in the new Member States...

When, in mid-2005, KPN announced that it would phase out MDFs (and consequently terminate MDF access), this had an extremely chilling effect on the investment by alternative operators. Indeed, no geographic extension of local loop unbundling has occurred since that time in The Netherlands, and OPTA has recognized this as a problem. This is now being addressed, although the outcome remains unknown.

ECTA's position on this matter is clear: any phasing out of MDF access should be subject to (i) pre-announcement of modification of the reference offer(s), subject to NRA approval, (ii) agreement by alternative operators which have co-located on the site; (iii) the definition of a timeframe which enables alternative operators to amortize their investment, (iv) a financial compensation for any accelerated schedule, and (v) the availability of fully fledged alternatives to local loop unbundling from the MDF (see below) which do not strand alternative operators' assets, and are technically and economically equivalent or superior, and economically viable for alternative operators, in order to sustain competitive provision to the benefit of end-users.

4) Migration (FttCab/Eq and FttB/H)

If MDFs are allowed to be phased out, or if FttB/H leads to substitution of metallic loops by fibre access, it is clear that procedures need to be put in place to ensure a technically smooth, and economically viable, migration path to fully-fledged alternatives.

As an example, in France, France Telecom decided at the end of 2004 to migrate some of its ADSL network equipment from MDFs to small buildings enhancing some street cabinets, in the framework of a plan designed to develop its "broader band" services on the business market. Free asked ARCEP to take safeguard measures demanding that France Telecom:

- Informs Free with substantial notice of the precise location of the MDF from which FT wishes to migrate.

- Implements in the smaller buildings only the technologies allowed for the sub-loop, as defined by a committee of experts, in order to avoid any risk of interference that would downgrade the services of Free.

- Provides to Free the optical links between MDFs and smaller buildings.

In this specific case, Free could continue its development, thanks to the speed of ARCEP's intervention.

5) Fully-fledged alternatives (sub-loop unbundling, fibre access, co-lo, backhaul, WBA) (FttCab/Eq and FttB/H)

As discussed above, ECTA has systematically defended the implementation of a coherent ladder of investment, in which local loop unbundling and (real) bitstream access are - and will remain - complementary, geographically as well as in time.

Next generation access developments confirm a long held ECTA position, i.e. that alternative operators will – inevitably – be simultaneously positioned on different rungs of the ladder of investment geographically and in time, with different technologies, including metallic and fibre network sections.

We agree with the ERG that new rungs on the ladder of investment must be defined by regulatory intervention, and we confirm our view that a wide range of regulated access inputs (where appropriate) must be made available by dominant operators, in order to provide fully-fledged alternatives which will enable alternative operators to continue to deliver product innovation and price competition.

Our view is that the fully-fledged alternatives should comprise a wide range of regulated access inputs (where appropriate), including at least:

- Sub-loop unbundling on technically and economically viable terms (FttCab).

- Inside wiring when under control of a dominant operator (FttCab/*FttB/H*), which does not preclude voluntary arrangements for sharing investments or access on commercial terms.

- Building cellar/underground/street cabinet (or equivalent) co-location (to consolidate distribution cabling of metallic and fibre access networks) on technically and economically viable terms, to enable competitors who use a downstream third party access network segment to connect their own equipment to their network. Another option is the leasing of cards in the DSLAM/MSAN of the VDSL operator (line card access).

- Backhaul from building cellar/underground/street cabinet (or equivalent) locations, in the form of duct access, dark fibre or at least wavelength access, and transmission capacity to the (former) MDF and other suitable locations. We emphasize that we believe that all of these backhaul options should be available simultaneously (and not, as in the BNetzA proposal, apparently determined by the incumbent's view on availability of duct access), in such a manner that alternative operators can determine which option they take up on a case-by-case basis

  'From where to where?' raises two key issues:

  - <u>In the context of backhaul:</u> In ECTA's view, interim measures must be taken to ensure backhaul from building cellar/underground/street cabinets (or equivalent) to the MDF locations (where connection to further backhaul options must be possible). If MDFs are to be dismantled (see above), a full set of alternatives must be mandated, to ensure that the investments of alternative operators are not stranded. A full alternative means duct, dark fibre, wavelength and transmission capacity options to the (former) MDF

location or to an alternative point, agreed by the parties, with a possibility for regulatory arbitration in case of disputes about the 'from where to where issue' and the terms and conditions and timeframe of supply.

- In the context of intra-building cabling: In ECTA's view, it needs to be clarified that inside wiring, especially in the FttH scenario, may in some cases represent a bottleneck facility. The status of inside wiring will depend on circumstances (it could be installed by the building owner or by an operator), but it is clear that arrangements need to be made to ensure reasonable access. Whether payment is due for use of intra-building cabling (and if applicable, the amount) depends on the circumstances.

- Wholesale broadband access (FttCab/*FttB/H*), 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.).

- Reference offers (FttCab/*FttB/H*) for all elements listed above (including migration if applicable), and including clearly defined processes for on site technical intervention, processes for adding capacity, service level agreements, etc.

This preliminary minimum set of remedies will not be enough to solve all the economic problems created by the migration towards VDSL from street cabinets (or equivalent) and FttB/H, but should allow competitors to retain the possibility of investing where it is sensible to do so[3].

*6) Review (also of fully fledged alternatives) in case of significant change of circumstances (*FttCab/*FttB/H*)

ECTA is formulating this preliminary minimum set of remedies, being aware that (expected or unexpected) events may occur, and that circumstances may change (e.g. technology may change, the economics of technology deployment may change, incumbents may adjust their plans, alternative operators may adjust their plans, demand patterns may change, etc.). In this context, we propose that when a significant change in the environment occurs (which may include announcements or discoveries) this should trigger the NRA to re-visit the market analyses (or at least consider re-visiting these by means of a public consultation). It seems self-evident that such re-visits should jointly cover Market 11 and Market 12 on a technology neutral basis, as well as any other affected markets (e.g. where some elements of backhaul fall within Markets 13 or 14). In this context, we also refer to ECTA's position on functional separation.

[3] The biggest difficulty faced by a prospective sub-loop unbundler or mass market FttB/H operator is the limited economies of scale that it is able to achieve. Whereas an alternative operator targeting the mass market with a representative share of the DSL market today might expect to gain 500 or more residential customers at a major exchange using local loop unbundling, it may only be possible for such an operator to gain 10–20 residential customers at a single street cabinet or in a single building. This is a tiny number of lines over which to recover the costs of a dedicated DSLAM/MSAN, in-building fibre and transmission equipment, co-location and backhaul. For an alternative operator targeting the business market, this number is likely to be nearer to 1 (if this operator would not pre-sub-loop unbundle or build fibre speculatively, it would incur long lead times when responding to business customer tenders).

4.2.2 Specific issues for FttB/H

In the FttB/H case, the necessary investments are much larger than in the VDSL scenario. In ECTA's view, initiatives are needed to lower the barriers to entry for all players, alternative operators and incumbents alike.

Those barriers consist mainly in the cost of civil engineering works, which accounts for 70-80% of the total cost of a network. The crucial point is that incumbent operators enjoy the clear advantage of owning a key asset, namely ducts or reusable copper lines, which they have inherited from their former monopoly situation.

In this regard, the French Competition Council has stated[4] :

« The Competition Council wonders about the role that could be played in the development of competition by the ducts the incumbent operator could have at its disposal. It is indeed constant that the fact to own such ducts reduces substantially the cost to lay down optical fibre. Hence, were it established that France Telecom has at its disposal a large number of empty ducts laid down at the time of the monopoly on telecommunications, and that it knows their location, it would then not be excluded that they [the ducts] could fall, according to the rules of competition law, under a qualification of the same nature than that of the local loop made of copper pairs. It would not be excluded either that, under the aforementioned hypothesis, the fact that France Telecom reserves those ducts to its sole use would assume an anti-competitive nature. »

Keeping with the French example, where the FttH development is the most mature, we observe that the plans for next generation access roll-out announced by alternative operators such as NeufCegetel and Free, as well as France Telecom, are legitimately focused on densely populated areas, especially those where alternative conduits or ducts exist, such as the sewers in Paris. That is why the initial forecasts are of 20% of homes passed in 2012.

To go further, it is of the utmost importance to avoid duplication of efforts, by allowing the use by all operators of existing passive infrastructures such as the ducts of the incumbent telecommunications operator or access to its fibre cables when the ducts are unavailable or granting access is impractical or uneconomic.

ARCEP has initiated a workstream to evaluate the advisability and feasibility of regulating access the incumbent's ducts, considering that such regulation would help to stimulate operator investments and enable a reduction of regulation on higher layers. In ECTA's view, this initiative may be over-optimistic, firstly because many of the incumbent's ducts might be saturated, secondly because neither the regulator, nor the competitors have information related to the true available capacity in these ducts. Creating a suitable ladder of investment also requires making available the wholesale access products that make technical and economic sense for competitors, in the specific geographic circumstances of their customers' locations.

This is why ECTA strongly supports the ERG proposals, i.e. imposition of duct access (among other remedies) as an associated facility relating to a widened Market 11, encompassing metallic and optical local access networks. ECTA does not believe that it is realistic to define a separate relevant market for ducts/access to ducts (point 4.4.3.1 of the consultation document).

Whatever the architectures and the technologies retained in each Member State, regulation must facilitate the development of high-speed services and the roll out of next generation access and networks without creating a new digital divide.

[4] Opinion n° 06-A-10 of 12 May 2006, in response to a request by ARCEP pursuant to article L. 37-1 of the code of posts and electronic communications, in the context of the analysis of wholesale and retail leased lines.

4.2.3 Punctual comments on chapter 4 of the ERG consultation document

1) NGA and Market 11

ECTA fully agrees that Market 11 needs to be defined in a technology-neutral manner. We trust that interpreting Market 11 in a technologically-neutral manner should already be possible under the existing Framework.

We support the ERG's interim reliance upon the Access Directive 200/19/EC (reference to 'physical circuit' on a technology-neutral basis), and we fully expect that the forthcoming revised Recommendation will amend the definition to be comprehensively and unequivocally technology-neutral.

2) NGA and Market 12

ECTA fully agrees that Market 12, as defined, covers or should cover all forms of bitstream access, irrespective of the underlying network/network protocol. This is the case irrespective of FttCab and FttB/H scenarios (which is not very clear in the ERG document).

We emphasize that bitstream quality of service and economics must enable alternative operators to define their own innovative services as well as replicate dominant operators retail offers. Bitstream access must in particular not be designed so as to prevent the provision for example of VoIP and/or IPTV.

In ECTA's view, the provision of Ethernet VLANs is possible, and effectively occurs, across metallic and fibre networks. Ethernet DSLAMS/MSANs exist for deployment at the MDF, at street cabinets, at other locations, including in building cellars.

3) Duct access

ECTA agrees that duct access is an essential associated facility going forward – bearing in mind however that it will serve to lower entry barriers in a subset of those areas where local loop unbundling is feasible and is not a panacea for infrastructure competition. A key question in this context is 'from where to where'.

We would see duct access as an associated remedy for dominance in various parts of the network, e.g. Market 11, bearing in mind that ownership of historic ducts has contributed to this dominance being particularly entrenched. Defining a separate relevant market for ducts or instituting a symmetrical duct sharing obligation on all operators (given that competitors have built ducts in a 'greenfield' scenario without state support and often in the face of considerable rights of way barriers and costs) seem difficult to reconcile with the basic philosophy of the EU regulatory framework. We do not believe that non-telecom ducts will prove very useful to reach street cabinets or new optical distribution nodes, save for some exceptional circumstances. However, access to such non-telecoms ducts – in particular those funded through state subsidy – could nonetheless be examined at a national level.

5. *Multicast capabilities and their regulatory treatment*

Some ECTA members provide multicast-enabled bitstream access to other operators today. This validates that it is technically and economically feasible to provide multicast capabilities on a wholesale basis.

ECTA understands that the Next Generation Access platforms addressed in the ERG's consultation document (VDSL2, FttB, FttH) inherently support IP-multicasting, unless this feature would be deliberately removed.

Given the above facts, and taking into account ECTA's overall position on Next Generation Access, we consider that, where wholesale broadband access is mandated by the NRA, the SMP operator must make available, on a non-discriminatory basis, ALL technical capabilities embedded in its NGA, so as to enable the alternative operators to define their own products, their own downstream and upstream speed profiles, their own QoS, etc. Multicast capability is simply one such technical capability, and as such it does not require special regulatory treatment, unless dominant operators erect artificial barriers to seek to prevent multicast access or levy undue charges for multicast access. If the dominant operators' NGA is a 'best effort' network, then rules may need to be agreed/defined to manage any contention issues that may arise.

6. *Do you agree/disagree with the conclusions?*

Europe's leaders in next generation access networks are ECTA members. This does not prevent the association and its members to be humble, and recognize that, save for a few areas, it is unlikely to be viable, efficient or desirable for competitors to duplicate every physical connection to every household and business.

In making that statement, ECTA expresses its broad agreement with the analysis made by the ERG of the challenges posed by NGA (FttCab and FttB/H) developments. As already stated above, we also explicitly agree with the framing of NGA in an evolving ladder of investment, and we support the proposals to modify the Recommendation on Relevant Markets in order to allow technology-neutral analyses and remedies on Markets 11 and 12, as expressed in our 'preliminary' minimum set of remedies'. However, we are not convinced that the simple definition, in a traditional way, of the additional remedies put forward by the ERG will be sufficient to promote actual take-up of sub-loop unbundling and to promote roll-out new fibre access networks on a significant scale. For this to occur, further corrective measures are necessary, notably to address the differences in costs/cost savings for incumbents and alternative operators.

Overall, ECTA considers that the solution is for all operators to have assurance of a fair return on efficient investment.

- For incumbents: return reflecting risk.

- For competitors: guarantee that any bottlenecks will be vigorously addressed through non-discriminatory access regardless of the technology or network architecture.

Market definitions, and market analyses, must be completely technologically neutral. There is no place in today's environment for references to 'metallic networks', 'public telephone networks', 'local loops' or 'emerging markets'. The only relevant questions should be: 'is there a bottleneck or not?', 'are there structural advantages or not?', 'are economies of scale and scope a factor or not?'.

Legacy bottlenecks will, unfortunately, remain. The ERG and NRAs should be attentive to movement and enhancement of bottlenecks, and to new bottlenecks that could arise, in particular as a result of the technology and architecture choices of dominant operators.

Passive infrastructures (trenching, ducts + copper or fibre) represent 70-80% of the cost of an access network (legacy or new). Duct access is important to facilitate infrastructure replication wherever this is feasible, but it is not a silver bullet. In many cases fibre/wavelength access, transmission capacity, and wholesale broadband access will be necessary.

Taking into account geographic diversity, it is essential to maintain and enhance (and in some countries – actually introduce) regulation of bitstream offers, in order to allow, on the one hand, a consistent ladder of investment (failing that, the incumbents would have the opportunity to de-average their wholesale bitstream charges in more competitive areas to prevent their competitors from replicating that wholesale offer at attractive prices whilst over-charging elsewhere). Bitstream access may also be the only mechanism to provide high speed services outside densely populated areas and where sub-loop unbundling and associated backhaul is not feasible for any reason.

We hope that the ERG will take into account these key points and will build on its own proposals and on ECTA's 'preliminary minimum set of NRA actions and remedies' in order to issue a Common Position on Regulatory Principles of Next Generation Access (and accompanying best practice principles) before the end of 2007. In the meantime, attention is needed to tangible developments, and we reiterate our major concerns about the conditions of sub-loop unbundling put forward by OPTA.