Commission for
Communications Regulation

Information Notice

ComReg's Response to DCENR Consultation on Next Generation Broadband

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Contents

1   Introduction

ComReg welcomes the opportunity to respond to this consultation paper on Next Generation broadband.   The benefits that broadband can bring to consumers, businesses, the national economy and society as a whole are clear and ComReg is committed to ensuring that the regulatory landscape is such that broadband roll-out is both facilitated and encouraged.

ComReg's major objectives are to promote innovation and competition as well as to ensure that consumers are both informed and protected.   Broadband is a service that requires action at all of these levels.   A healthy, competitive broadband retail market will be underpinned by a competitive wholesale market, served by a variety of technologies.   Cross-platform competition will ensure that more consumers are able to get broadband services and therefore will stimulate more demand.   ComReg is committed to encouraging and facilitating this competition.

ComReg notes that the Department is in a position to influence several important demand and supply side factors that will affect the evolution of the telecommunications access network in Ireland.   From the perspective of demand, the development of the next generation of e-government services will, in all likelihood, bring opportunities for intervention by both government and industry to stimulate demand for high-speed broadband services.   From a supply-side perspective, there will be further opportunities for the government to facilitate the roll-out of a multi-platform access or "last-mile" network.

2   Broadband in Ireland today

According to ComReg's most recent Quarterly Report[1], there are over one million active broadband subscriptions in Ireland at present (up from just under seven hundred thousand[2] a year ago.)   Although this shows that the requirement for broadband services is healthy, it is clear that there will be further demand from a variety of sources, such as demand for high-speed Internet connectivity for small businesses to consumer demand for new bandwidth hungry entertainment services, such as the proposal from RTÉ's to launch an equivalent to BBC's iPlayer, the RTÉ Media Player.

There are a number of different sectors that need high-speed Internet access and these can be broadly categorised into large and medium corporates, SMEs and the residential markets.   These sectors have clearly different requirements for Internet access.   For instance, it is clear that the large and medium corporate sectors have a clear demand for very high speed Internet access, and it is also clear that this demand can be and is being satisfied by commercial arrangements, regardless of the speed or capacity required.   However, there may be limitations in respect of supplying the other sectors with the speed and quality of broadband required.

High-speed Internet services are dependent on the underlying delivery mechanism, and in some parts of Ireland, both urban and rural, there can be both practical and/or

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[1] S3.3 ComReg document 08/75 "Irish Communications Report – Key Data Report – Q2 2008"

[2] S3.3 ComReg document 07/67 "Irish Communications Report – Key Data Report – Q2 2007"

economic difficulties in ensuring that this delivery mechanism is sufficiently advanced to supply the required broadband services. Broadly speaking these difficulties are caused by Ireland's dispersed population profile. The roll-out of the National Broadband Scheme will go a long way to addressing these issues and ComReg is currently working closely with the Department to ensure that this scheme is a success. However, the availability of speeds in excess of 25Mb/s within the next five years are likely, without some form of intervention, to be limited to the larger urban areas.

In order to determine the next steps that we should take, we need to be clear what the ultimate aim of rolling out high-speed broadband really is and how this might be best achieved. Current retail broadband products on the market, which are in general used by SMEs and the residential market, have broadly similar characteristics, offering a range of download speeds from 1 to 24Mb/s, with varying upload speeds, contention rates and download limits.

In the ComReg Business ICT Services Survey[3], it was found that 88% of small businesses have Internet connections, and of these 83% were broadband connections. The chief reason for those still using narrowband connections, was the perceived lack of availability of, rather than a lack of demand for, broadband.

The speed of available broadband services is an important factor when considering how these services can be provided in the coming years and what can be done to facilitate such provision. As noted in the consultation paper, current typical broadband speeds delivered are generally either 1 or 2 Mb/s. These speeds are adequate for e-mail access and Internet browsing. Heavy Internet use (for example Video on Demand or IPTV) will require speeds in excess of this up to and perhaps beyond 25Mb/s, depending on the actual service.

The speed available to consumers is a function of the technology used to deliver the service, and the physical medium that connects the consumer to the serving network. DSL technology, which is the predominant broadband technology in service in Ireland today, can offer speeds of up to 25Mb/s under the best conditions. To a certain extent, the actual speed of the service required will dictate the type of underlying delivery infrastructure. If a medium-speed service is required, then this could be provided using most of the existing access network. (In this case, the access network can be considered to comprise the copper local loop, cable TV, wireless and satellite networks.) It is likely that these access network providers will upgrade their networks to maximise the investment that they have already made. However if higher speed services are required (e.g. to facilitate the delivery of bandwidth-intensive services such as IPTV), then it is likely that the underlying access network, as well as associated equipment, will need to be upgraded. This is certainly not to disregard the significant existing digital TV footprint in Ireland, served by both cable and satellite providers. For instance, a strategic decision to upgrade the existing cable network to support DOCSIS 3.0 would enable speeds of up to 100 to 150Mb/s for around a third of the population. In addition, the forthcoming roll-out of "free-to-air" Digital Terrestrial Television (DTT) services will augment this. Aside from the existing physical access network, wireless

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[3] ComReg document 08/26 "ComReg Business ICT Services Survey Wave 1 2008"

broadband technologies are improving in terms of the speeds that can be delivered, and it is likely that an upgrade by mobile operators of their 3G networks to facilitate maximum speeds of 7.2 and/or 14.4Mb/s will further enhance choice for these consumers over the next few years.

Outside of these developments further deployment of technology capable of delivering very high speed broadband is likely to be expensive and challenging. This is because, as mentioned previously, the population dispersal is such that the economies of scale of such a deployment would be quite low, and the business risks quite high.

However it also needs to be taken into account that all of the network and not just the "last-mile" needs to be able to support these speeds for all customers. It is also important that the transition of the core/transport network to an entirely fibre network needs to be completed in order to service higher speeds across the entire access network.

3   NGN developments here and abroad

As noted in the consultation paper, a number of international telecoms companies are in the process of rolling out Next Generation Networks, both in the core and access networks. These are being rolled out in a variety of competitive environments. That said, it should be noted that, the roll-out plans of some of the European telecoms operators are characterised by cautious timelines and restricted urban implementations, in an attempt to minimise the perceived risk involved in such a venture.

In general, ComReg has a strong role, and actively participates, at a European level to ensure that its understanding of international developments can constructively inform the debate in Ireland. The European Commission has recently launched a consultation on a draft Recommendation on regulated access to NGA networks. This raises a number of interesting issues, including on one hand, the need for regulatory certainty for those companies interested in investing in NGA, and on the other hand, the need for the availability of a wide range of remedies which can be applied as circumstances require. ComReg agrees that regulatory certainty is an important principle that should be maintained as far as possible in order to allow telecoms operators to plan investment into their networks while reducing risk. This EC consultation also introduces the idea of a risk premium, which would be attached to specific NGA projects, particularly the roll-out of fibre to the home. ComReg agrees that this is something that bears further consideration.

Closer to home, as noted in the consultation paper, there are a number of Irish companies currently either planning and/or rolling out Next Generation Access networks, and these include fixed, cable, mobile and wireless companies. However, there are large parts of the country where it may be economically challenging to roll-out Next Generation Access networks, regardless of the platform involved. Given the extent of the State's existing fibre network assets, together with both the existing and proposed associated passive infrastructure (such as ducts), ComReg agrees that there are significant assets under the control of the State's agencies which could be leveraged to facilitate the roll-out of fibre-based broadband.

ComReg is committed to ensuring that competition in the broadband services is rooted across as wide a range of technological platforms as feasible. The concept of the "ladder of investment" is an important tool that can be used to facilitate robust competition through the different wholesale and retail markets, and ComReg is committed to ensuring that options are available to telecom operators at all appropriate levels of the ladder. A healthy, competitive market will encourage investment in NGA, and ensure that consumer demands are satisfied. Consumer demand will define the infrastructure investment and the services that are ultimately provided, although ComReg agrees that all efforts should be made to prevent a digital divide from occurring.

4 Opportunities and challenges in Ireland; possible policy approaches

Ireland has a number of valuable opportunities that can facilitate the roll-out of NGA. One of these opportunities is in the area of spectrum, and an important role is played by ComReg in this regard.

ComReg agrees with the consultation paper where it is noted that the potential "digital dividend" (which will result from the availability of large swathes of spectrum when analogue TV is switched off) is hugely significant. In order to maximise the potential that could accrue to this dividend, ComReg recently started a debate by holding a conference that focused on the development of ComReg's Strategy for the Digital Dividend. One of the potential uses of this spectrum is for the provision of broadband services. In order to further this debate, ComReg proposes to hold a public consultation in the final quarter of 2008 on its Digital Dividend Strategy.

ComReg has also been active in ensuring that spectrum is available using the test and trial licensing regime, allowing international developers to use Ireland as a test-bed for innovative services.

On the other hand, Ireland faces a number of strong challenges to the roll-out of fibre based broadband, and it is important to recognise these. As stated in the consultation paper, the population density and geographic topography of Ireland does not lend itself easily to such a roll-out. The National Broadband Scheme (NBS), which ComReg welcomes, will ensure that at least the minimum level of broadband services will be available across the State. The roll-out of this scheme should be "future-proofed" to the greatest extent possible. Once this is rolled out, it is likely to encourage consumer demand for more broadband-based services and thereafter for faster broadband connections.

The development of new network technology to operate these NGA is an opportunity to ensure that the competitive problems associated with former monopolistic networks. Open access standards and technology will allow multiple operators equivalent access to the "last-mile". This will allow those operators who roll-out NGA to maximise revenue by selling wholesale as well as retail access to this network.

ComReg agrees that there a number of valuable opportunities that should allow the State to facilitate the roll-out of a world-class NGA in Ireland. The possible

approaches set out by the Department in this consultation paper contain useful strategies that will encourage this roll-out. Access to those State assets such as ducts, trenches and other infrastructure that could be used for fibre roll-out would be valuable for those operators who do not have a national network footprint, by reducing the costs associated with the civil engineering costs of fibre roll-out.

The establishment of a "one-stop" shop that would allow operators who wish to use State assets such as fibre and/or ducts deal with one entity rather than multiple departments and councils, could be especially useful. Nonetheless it is important to recognise the practical implications involved in the co-ordination of multiple administrative organisations, infrastructure types and owners. There are also ongoing practical issues of security and access to ducts that will need to be considered in the context of operator duct sharing. While such issues can be overcome, they are quite significant in terms of complexity.

Ensuring that easily accessible ducting is installed at the construction stage of new major public construction projects as well as new-build private developments could be a very useful method of perpetuating the roll-out of fibre deeper into the States general infrastructure.

Aside from those opportunities on the physical access side, ComReg also believes it is especially important to ensure that there is regulatory certainty. This allows those contemplating entering into or expanding in this (or indeed any) telecoms market plan their investment correctly. In line with the current European Regulatory Framework, there are a number of remedies that ComReg can apply, in appropriate circumstances.

5   Conclusions

ComReg welcomes this further the debate on the future of broadband services in Ireland. There has been phenomenal growth in the broadband markets over the last several years here, but there is much more to do to ensure that our knowledge society is encouraged and developed in a complete and efficient manner. The proposals made by the Department in this consultation paper are very useful and can assist the development of a competitive market, underpinned by a wide range of technologies, ensuring the availability of broadband services to the different categories of consumers – residential, corporate, SME, public and others. Important issues such as ensuring the proper exploitation of existing physical assets, and that easily accessible physical assets are rolled out in conjunction with major infrastructure projects, are useful tools for incrementally improving access to those areas of the country where investment in the access network might otherwise be difficult. ComReg, as regulator, has an important role to play in these areas, and looks forward to continuing to work with the Department to further its objectives in this matter.