

Views from the Written Submissions

Some of the views from the 46 written submissions on *Consultation Paper on Next Generation Broadband* are listed in this document.

The written submissions were of a very high standard and continue to inform policy on Next Generation broadband, particularly on initiatives such as the one-stop-shop, National Broadband Scheme and Fibre to New Premises. The written submissions also informed and assisted the formulation of the Department of Communications, Energy and Natural Resources regulation policy on Next Generation broadband.

Please note that some of the points listed below may have been raised by only one respondent to the Consultation Paper and may not represent the majority view.

- 1. The Government will target **capital investment** to address the digital divide and maximise regional competitiveness. To this end, investment of €435m has been earmarked for the period 2007–13 under the National Development Plan.*

Almost all commentators agreed with this objective. Some of the points raised are listed below;

- Targeted Government initiatives, outlined in the Paper, are necessary, but not sufficient to achieve the Government commitments and position Ireland as a leading digital and knowledge economy.
- Government investment should ensure open access at the base infrastructure level to all players.
- Next Generation Broadband should not be identified as solely a terrestrial technology or a spectrum technology. Respondents generally welcomed a technology neutral approach on this issue.
- Avoiding a digital divide will be a significant challenge. If left to market forces some rural areas will be left behind.
- Government should swiftly encourage and facilitate the roll out of Next Generation Networks.
- Government should focus on clusters of very high speed network capability around R&D facilities or centres of economic activity, spreading out in time to the broader community.

A common theme was that widespread Next Generation Networks objectives will be achieved only through an appropriate mix and application of technologies - including likely significant use of wireless technologies.

2. The Government pledges that we will have universal access to broadband by end 2009/early 2010. By 2012, our broadband speeds will equal or exceed those in comparator EU regions

There was general agreement with this objective. A few additional comments and caveats were made.

- In today's 21st century world, broadband communications must be viewed as a utility. This is a simple but profound point.
- Although ubiquity of broadband coverage is a basic economic necessity we should look beyond ubiquity as a sole target, and include speed, quality and price as equally important metrics in measuring the success of implementing the strategy. Quality of service is as important as speed.
- While Next Generation Networks may be considered a bonus today, they are an absolute must for tomorrow's applications.
- The importance of open access was stressed.
- Some scepticism was expressed that present Government policy, as outlined in the consultation paper, will achieve this goal and believe that an even more ambitious goal is warranted.
- A proposal in one of the submissions was that all licensed operators providing a service in rural areas should be required to do so at a benchmark level, which at a minimum matches the prevailing speed, capacity and reliability of the National Broadband Scheme. When an operator cannot meet these requirements, the National Broadband Scheme should be extended to these areas.
- Open access networks needs to be balanced with the need for operators to generate revenue from network investment. In the context of a true Next Generation Network consideration needs to be given to the investment required to build these networks to support advanced services and the likely revenue streams for the investing telecom company.
- The National Broadband Scheme solution implemented must be cognisant of competing providers and must ensure that these providers, regardless of access technology used are not disadvantaged or that their assets become stranded as a result of the scheme
- There needs to be competition in services rather than infrastructure.
- Government should develop a Public Private Partnership that will ensure this admirable objective is achieved in a way that supports rather than distorts market forces. i.e. the use of Public Private Partnerships should be considered in order to facilitate widespread Next Generation Networks deployment within the regions.
- Specific consideration needs to be given to an option whereby the State, in consultation with operators, develops a shared network vision and delivery roadmap for a single open access network.
- Functional separation is required in the marketplace – splitting the infrastructure from service delivery. There is no economic argument for building multiple network infrastructures in Ireland. A single infrastructure accessible on equal terms by all service providers would stimulate

innovation in services and quality of service. It should be prices per metre with the same price for Donegal as Dublin 4.

3. In the context of the Government's investment in broadband infrastructure, connectivity to schools, in particular, will benefit. Accordingly, it is the aim that, on a phased basis, second level schools in Ireland will be equipped with 100 Mbits per second of broadband connectivity and Local Area Networks (LAN) installed. This would enable students to learn and collaborate online simultaneously.

All respondents welcomed this policy action, and some wished to see it extended to primary schools. A general view was that the procurement process should be technology neutral. Other views expressed in the written submissions are outlined below

- While 100 Mbits per second is a good idea, schools would be better off if the students/teachers had the facilities to make use of this connectivity as part of learning and day to day school life. i.e. investment in the e-learning tools, teacher training and curriculum reform, which can utilise these higher broadband speeds, is crucial or it may be wasted investment. This should be prioritised above setting target connectivity for each school.
- It was suggested that a final deadline for completion must be set and that a three- year-period would be reasonable.

4. Future investment will be determined in accordance with the findings of the value for money review of the Metropolitan Area Networks (MANs) programme, which is being published next week.

Most respondents supported the position that any further investment in the MANs or a similar type of market intervention should be governed by the conclusions of the Value-for-Money report on Phase 1 of the MANs. This report highlights the difficulty in making a commercial return on this type of fibre configuration outside of the main urban areas. Some of the views from the submissions are listed below.

- The Value-For-Money study of Phase 1 of the MANs project endorsed the key concerns of private operators on Government investment in infrastructure duplication.
- 'Value-for-Money' on its own is not an adequate judgement on the validity of a particular MAN, as there are many intangible and indirect benefits that were not included in the appraisal.
- The MANs – managed by e|net – combined with the existing available ESBT network and access to the CIE network would provide a significant all-fibre core network on which alternative operators could build Next Generation Networks
- The MANS could do better under a different “not for profit” management.

- A suggestion was to encourage the Government to investigate an amortised charging model for connecting to MANs whereby these high initial costs can be factored into recurrent rental charges.
- Continued support for the MANs programme was essential as these networks are a valuable part of the open access connectivity jigsaw in the future. However, others believed that these networks will only be effective if associated backhaul issues are adequately addressed.
- Many of those who responded believed the Department of Communications, Energy and Natural Resources should avoid potential market distortion.

5. The Government will also ensure Ireland's continued high level of international connectivity. To this end, we will build on the success of the Global Crossing project by identifying requirements and implementing recommendations to take Ireland to the next level of international connectivity.

It was agreed by almost every respondent that there is enough international connectivity in the country though one respondent noted that there should be continued commitment to address regional disparities in relation to international connectivity.

6. Backhaul networks provide the connection from local service providers to national and international networks. Extensive ducting already exists along publicly owned energy, transport and other infrastructure, which could provide backhaul connections. The Government will facilitate network operator's access to these assets on commercial terms, reducing the costs of fibre roll-out. The Government will establish a one-stop-shop to provide service providers with flexible and open access to existing and future ducting infrastructure.

This is something that all respondents seemed to find a very good idea. Some of the points raised are outlined below.

- The Government should open up all publically owned state infrastructures. (Infrastructure to include waterways/vertical real estate/sewers/street furniture/lamp posts) The public agencies providing suitable underground ducting along roads, water pipes, sewerage, rail and other utility lines, and renting them to operators on an open access and non-discriminatory basis (using the one-stop-shop approach mentioned in the paper).
- The one-stop-shop should be not-for-profit and carrier neutral. Some respondents stressed that this must be technology neutral.
- The pricing should be flexible and innovative.
- There should be equality of access, quality of service and cost to all citizens in urban and rural areas. This will require, as well as FTTC/H in urban areas, FTTF (Fibre to the Farm) in all rural areas. This latter could be encouraged through imaginative partnerships and community schemes, such as the public agencies providing suitable underground ducting along roads, water pipes, sewerage, rail and other utility lines, and renting them to

- operators on an open and non-discriminatory basis. Promoting indoor pre-cabling for all new buildings (extending current proposals) and facilitating farmers to lay fibre themselves in their own land, from public fibre connection points to their homes and their neighbours.
- Government should provide funding and technical assistance to local Government and the National Roads Authority to integrate dark fibre into civil works where appropriate.
 - Planning policy directives should incorporate requirement for new builds to include discrete roof level mounting for wireless antennae.
 - There is a need to ensure interoperability of standards and devices which would have the result of ensuring their seamless use.
 - Government's position should be not to undermine private investment in network infrastructure by forcing commercial entities to compete with state funded infrastructure
 - While simple in theory, practical implementation of this project would be difficult. This point was made by many respondents

7. New premises in Ireland will be required to install open-access fibre connections, where practicable. The Departments of Communications, Energy and Natural Resources and the Environment, Heritage and Local Government will work together to ensure this regulation is in place by the end of this year.

This was an action that was generally very well supported by most respondents. A number of suggestions, many technical were listed. A number of these are below:

- It could be useful to establish a workshop so that a standard future-proof specification can be agreed.
- As there is currently no standard for fibre connectivity in the home it may be better to have regulation to ensure open ducting.
- The ducting should include the provision of sub-ducts to allow for separation of different carriers' fibre. Given the increasing reliance on broadband access, all Greenfield developments should be provided with primary and secondary ducting running in different directions from the building. This will support options for providing increased resilience and diversity of critical broadband access.
- The routing of new duct infrastructure should be recorded on Geographical Information Systems (GIS) used by utility companies to facilitate ease of access by service providers and minimise accidental damage.
- Fibre is not the only technology to deliver 100 Mbits (Eurodocsis 3.0 etc) Government policies should be technology neutral.
- Any new regulation mandating open access ducting in new developments must not undermine past or future infrastructure investments by private operators
- Government will have to give consideration/guidance on who is responsible for ongoing management/maintenance of fibre.

- Short run priority should be given to installing fibre from the backbone to the kerb. The installation of fibre connections between the kerb and individual houses or businesses can be installed at a date in the future.
- The nature of ICT in the modern world is that no sooner has one technology been installed when it is then rendered outdated by a more advanced technology. From that perspective, it would be unwise of the Government to get directly involved in the actual provision of a Next Generation broadband service or indeed to partner with one particular service provider.
- Any initiatives around the building codes which lowered the cost of deploying Fibre to the Home (FTTH) would be helpful. Specifically the encouragement of higher density multi-dwelling units (high-rise) and the development of building codes around the provision, access and maintenance of in-building infrastructure necessary to support high-speed broadband.
- The difficulty surrounding the planning and rules (commercial and technical) as to what might constitute “open access fibre connections” should not be underestimated. The speeds, at which the benefits become available, particularly in an economic downturn, are difficult to quantify.

8. ComReg will maintain the regulatory framework necessary for telecoms operators to compete in a fair and transparent manner across a range of platforms. ComReg will also work proactively in the allocation of spectrum to encourage the trialling and development of flexible new mobile technologies and digital applications.

All respondents agreed that the regulatory framework was hugely important for the success or otherwise of Next Generation Networks. Respondents agreed 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.

- There is a need for a more predictable regulatory framework and a more considered and holistic approach to regulatory intervention.
- A process must take place involving the Government, ComReg and potential investors to develop a policy and regulatory framework which provides for a credible regulatory framework for Next Generation broadband that provides potential investors with a reasonable assurance that the rewards from investment will be commensurate with the risks.
- A swift and orderly processes for copper network phase-out alongside Next Generation broadband investment to avoid the need to run legacy and Next Generation Networks side by side.
- The development of a flexible end-to-end bit stream access product compatible with next generation broadband to foster innovation, and prevent fragmentation and Balkanisation of the access market which would hamper development of new applications and services.

- A revised regulatory approach to Next Generation Networks that recognises that this phase of the evolution of the market is based on a new business model and that the regulatory approach required must facilitate sustainable competition and investment in the long term which allows those companies making the investments an opportunity to realise a fair return.
- At present, there is a new trend towards convergence of technologies. Companies operating in a variety of regulatory environments are competing with each other to provide similar services. Therefore, similar services should be treated similarly, so that providers of internet service, by whatever means, are treated the same.
- A regulatory framework was not in itself sufficient to deal with Digital Divide and direct Government intervention was necessary.
- There was support for policies that promote investment and competition in the broadband marketplace, such as those that foster advanced network deployment and facilities-based competition and create a minimal regulatory environment for VoIP and other IP-enabled services.
- A failure to ensure the appropriate regulatory environment will almost certainly be doomed to failure, the Government's aspirations in relation to developing a world class knowledge society is the single most important aspect of Government policy in this area.

In terms of spectrum the approach to the allocation of spectrum for trialling of new technologies is generally seen to be the correct one and some respondents recommend that this be balanced with market needs and that the allocation of any available spectrum is on the basis of maximum overall economic benefit.

- Successful liberalisation of the GSM 900/1800 MHz bands will be essential as well as the release of digital dividend spectrum.
- Improvements in spectrum management and broadband access will significantly promote technical innovation, foster competition, and benefit consumers and businesses nationwide.
- Government should advocate global harmonisation of spectrum allocations for new services on a technology-neutral basis, as well as the clearing of underutilised spectrum for new, more valuable services.

9. The Government will use its purchasing power in order to stimulate demand, create economies of scale and better public services for the Irish citizen.

This was a well received action which was welcomed by the majority, some of whom suggested a number of additional actions:

- The Government could best contribute to infrastructural development by working with the private sector, for example through Public Private Partnerships, rather than directly investing, owning and managing the infrastructure.

- The Government should look more towards alternative operators.
- The Government needs to seriously adopt e-Government practices as this has not moved at the pace required.
- Demand stimulation proposals were welcomed by some, with the assertion that they are likely to provide one of the core drivers in Next Generation Broadband. They did point out, however, that the level of government purchasing from dominant suppliers is higher than usual in the developed world
- It was generally felt that developing a coherent and committed approach across government departments to aggregate demand for broadband services outside of the main urban centres was important.

10. The Government will work with ComReg and the Economic Social Research Institute (ESRI) to establish a specialised research programme to monitor developments in this fast-changing area and provide evidence-based policy advice.

There was complete unanimity amongst respondents. All thought this was a vitally important action and commended it. A few made additional comments.

- Forfás or Department of Communications Energy Natural Resources would be better suited than ComReg.
- Evidence based research should focus on in-the-field experimental approaches.
- Value-for-money reviews and specialised research in this area are vital tools which will ensure that policy making is conducted in a rational and coherent manner.
- Telecom operators should be included in the initiative.
- The Government need to take a more proactive role than simply monitoring developments. Ireland needs action to be taken. Monitoring developments is not enough. As 'the development of a world class communications infrastructure is critical to Ireland's economic and social prosperity' the Department of Communications, Energy and Natural Resources must get directly involved.
- In the coming years funded Next Generation broadband initiatives have an important role to play in guiding policy decisions and providing the evidence base required for any follow-on interventions in Next Generation broadband development.
- Department of Communications Energy and Natural Resources and other relevant Departments and agencies such as ComReg should implement a rigorous methodology for regular monitoring and analysis either, on the state of broadband communications and associated services in Ireland from a technical and consumer perspective by city, region, and rural areas and comparatively with the other EU member states.
- Evidence based research and some brave decisions will be needed.

- Establishing a dedicated unit in the Government, fully-resourced and empowered to coordinate the activities of both public sector authorities and other government initiatives in the telecommunications market would be a good idea.

Other Comments arising:

- Recommendation that the development of national broadband awareness programmes run in conjunction with operators to inform and educate citizens.
- The introduction of Next Generation Networks is far too important to be left to market forces. A next generation infrastructure cannot be hindered by fleeting commercial concerns.
- High Speed Next Generation Networks are the 5th Utility; failure to have it will damage foreign direct investment.
- Other Alternative Operators need a range of options and should not have to contribute to universal service.
- Some commentators were concerned about the emphasis placed by Department of Communications, Energy and Natural Resources on the importance of fixed broadband. Mobile broadband is as good as if not superior to fixed broadband and it has the advantage of mobility.
- A tax credit akin to that offered in respect of health insurance or refuse bills would be appropriate as regards broadband.
- Next Generation Networks on its own won't bring about the knowledge economy: - other factors include education, industrial policy, taxation etc.
- There is uncertainty around appropriate wireless technologies for broadband delivery in rural areas and some state sponsored trials in this area would be useful.
- Local Authorities have an important role to play in evolution of Next Generation Networks. County and local development plans should attach same importance to development of Next Generation Networks as traditional infrastructure. e.g. determining locations for wireless transmission facilities.
- The term "open access" needs to be more clearly defined.
- It is possible to think about Next Generation broadband network design from an energy usage perspective and to design sustainable networks that can be responsive to the varying demands of users.
- The state gets a greater return from investment in communications than does the industry. The industry must obtain a return through revenue generated therein and there is globally an issue with the adequacy of this revenue.

