



**Irish Internet
Association response to
the Ministers
Consultation Paper on
Next Generation
Broadband**

The Irish Internet Association is the professional body for those conducting business via the internet from Ireland. It has been and remains one of the driving forces behind the adoption of the medium. Established in 1997, the IIA provides leadership to enterprises and society conducting business in Ireland. The IIA is a strong voice for its 550 plus company members. The aim of the Association is to Connect, Inform and Promote.

This response was prepared by the Infrastructure Working Group who aim is to influence the development of a global class physical internet infrastructure for Ireland. Our membership comprises a cross section of Teleco's, ISP's, Hosting businesses, Infrastructure providers and Government users.

Executive Summary

Government ICT Policy

The broadband consultation document lacks the context of an overarching ICT policy. In countries such as Sweden and Japan broadband delivery is one of a number of goals within a broader policy framework and thus it is easier to make decisions on broadband and to justify investment.

The IIA believes that the development of this ICT policy, of which the broadband delivery will be one element, is a fundamental element of our preparation for the emerging business, social and environmental opportunities that the rapid growth of the global digital economy is driving.

We are behind on this one and we cannot afford to be - in one way or another it will underpin the majority of industrial growth for the next 20 or 30 years.

Through our Infrastructure Working Group we are offering the Government access to a pool of expertise which is supplier neutral and draws on global experience.

Justification

The justifications for investment in broadband are clear:

The state, it can be argued, gets a greater return from investment in communications than does the industry. The industry must obtain a return through revenue generated thereon and there is globally an issue with the adequacy of this revenue. The state obtains a multi faceted return on this type of investment, to name but a few;

- 1.The improvement in international competitiveness enhances Foreign Direct Investment, helping to retain existing employment and attract new jobs
- 2.The improvement in ICT infrastructure can be used to deliver significant policy improvements in a highly efficient way
 - a.The use of tele-working helps reduce traffic and carbon emissions
 - b.The use of remote health care reduces the strain on the hospital and day care facilities
 - c.The deployment of advanced ICT solutions in education improves the quality of the workforce and enhances international competitiveness
- 3.A more competitive market for telecommunications improves the value to the state as a consumer of services
- 4.Widely available communications infrastructure helps manage population spread more efficiently

None of these benefits accrue to private sector service providers and, as such, if we are to rely on private sector investment alone, these benefits may be difficult, or in some cases impossible, to liquidate.

Separation of Infrastructure from Service Delivery

Functional separation is required in the marketplace – splitting the infrastructure from service delivery. There is no economic argument for building multiple network infrastructure 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 D4.

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.

IIA Response

Summary

No matter what is going to be done – flag it clearly and quickly so that the State’s inaction does not inhibit private sector decisions on investment. Do it and/or get out of the way.

It is also worth noting in light of the recent €400 billion commitment to the finance sector that 2% of that figure could bring fibre to every household and office in Ireland - giving us a global competitive advantage and definable economic, social and environmental paybacks in both the short and medium term.

State investment in communications infrastructure is necessary but it must be well targeted and clearly flagged.

Necessary

It is necessary in that it seems almost certain that the sum total of industry investment will not add to an outcome that will be satisfactory to the Irish Consumer or to so called Ireland Inc. A quick analysis of the current investment plans of all major network owners would suggest that there will be fibre and other high capacity broadband solutions available at some point yet to be determined in the future to a significant proportion of homes and businesses in Dublin and a small number of other urban centres. Beyond that there are significant plans amongst fixed and mobile wireless providers to deliver radically enhanced solutions but it is not clear that they will be sufficient to deal with the requirements of residential and commercial users, nor is it clear that there is sufficient core network capacity to deal with this traffic.

Targeted

The state must target all investment in areas where there is market failure, that is to say markets where there is a need for investment but for which the investment is not financially justified. Intervention should be limited to closing the gap for the market to take over as with the MANs programme where public capital funding is operated by a private entity to provide the services.

In order to target investment the state must be clear on those areas of the country and those network elements in which industry is prepared to invest and to close the gaps. This involves a three stage process

1. Establish and agree with industry the desired national network outcome in terms of coverage and elements
2. Establish rules for investment and interoperability that allow investors a return on the one hand and that also allows the market full use of the network on the other
3. Seek commitments (in return for value) from private sector entities for as many of the network elements as are available

When that process is concluded then fund the gap and only the gap.

Well Flagged

State investment, if not well flagged, can halt market investment as companies wait to see the level and nature of investment. This “counter-productive” effect must be mitigated. The state must create three investment flags and categorise the network and elements into one of the three

1. Definitely no state investment under consideration
2. State investment under consideration
3. State investment forth coming

Having categorised the elements the state must move to reduce category 2 as a priority. The state must provide the co-ordination that will ensure the combined output of state and market deliver the best possible solutions.

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

IIA Response:

Summary

Our comparator countries should be the leading performers in the EU and elsewhere – they are our direct industrial competitors and broadband gives countries a competitive advantage. The focus on speed needs to be developed to take quality of service metrics into account.

Price is also a key factor in developing demand and this should be included in the mix.

The IIA is wary of this goal given that it has been announced several times over the last number of year. We are conscious that figures have previously been used of the percentage population that broadband is “available” to only for a myriad of excuses to come into play. We are not confident that the current NBS will yield the required results.

The comparator countries for Ireland are the UK, the Benelux and Scandinavian countries as these are the countries that Ireland Inc. competes against. Therefore all comparisons must be benchmarked against these countries.

Speed is only one measure by which Ireland should judge itself. There are clearly serious issues around contention and congestion within networks which advertise themselves as broadband but are unable to offer this to a user. Any goals set should be for the country as a whole with no urban/rural divide. There are social and economic advantages in having a core broadband service available anywhere in the country.

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.

IIA Response:

Summary

There is directly relevant experience in Northern Ireland of an integrated programme to bring relevant technologies into Education. The experience of the C2K programme (<http://www.c2kni.org.uk/index.htm>) is available to the Government with the programme managers available to share their approach and experience. The Broadband for schools project needs to be part of an overall managed service similar to the C2K programme.

This in itself is a laudable goal – no-one can argue against the benefits of providing schools with next-generation broadband infrastructure. The problem arises when taken in the context of a phrase that has repeatedly cropped up when discussing broadband in Ireland: the “digital divide”.

Logically, those schools near existing fibre networks will be the first to avail of services—schools in Dublin, Cork, Limerick, Galway... the list of place names is depressingly familiar to those in less urban parts of the country. On the other hand, to this list will be added those smaller towns that have MANs—assuming those MANs have backhaul available.

Once the fibre-endowed schools have been provisioned, the question of those schools which are not so lucky arises. Even apart from those schools in smaller towns like (say) Foxford or Belmullet, we're also talking about larger towns without MANs, such as Castlebar. The most likely scenario is that these schools will have dedicated radio links built to provide the required 100Mb/s — which creates a digital divide within the town itself, with a school availing of next-generation connectivity, while the town remains unable to attract industries that require even a fraction of this bandwidth.

Consider the use of the installed broadband infrastructure during school holiday periods (principally summer) when there may be uses of it for other purposes/groups.

This was a criticism levelled at the original schools broadband project also—the lack of joined-up thinking involved. Rather than address the systemic problems in the nationwide provision of broadband services, each school was approached in isolation. One result of this was the fact that a huge percentage of these schools were stuck with satellite-based broadband solutions, which have proved totally inadequate for their needs.

Within the school the availability of a broadband connection without the required equipment and infrastructure internally is pointless. This needs to be addressed with the Department of Education. See summary!

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.

IIA Response:

Summary

The Value for Money review does not give a very flattering review of MAN'S. This does not mean that we shouldn't progress with MAN's, just don't follow the same path as before.

The idea that Local Authority MANs were developed based on their readiness rather than their suitability is madness. Following this logic the busiest Local Authorities would not get a Phase I MAN. The mere fact that there is no MAN in Kildare is testament to the fact that the selection criterion for Phase I was misjudged.

KPIs for Phase II and III of MANs should reflect the potential usage rather than length of fibre or political geographic concerns. Decisions have to be made to place the fibre on one side of the road or the other, towns that were dug up to lay fibre in the middle of the road are now suffering more digs to get from there to the edge of the road. "Meet Me" Chambers should be placed at major conurbations.

Every town that wants a MAN shouldn't get one, clear criteria have to be set up for this. Certain Phase I MANs are still unlit and as such prove the madness in delivery of MANs to smaller towns just because they were ready.

There seems to be a huge need on eNet to make a profit on the MAN, it is still cheaper in most towns to get Fibre from anyone but eNet as they have the high CapEx and the dig cost to recover.

An approach for MANs II and III would be to learn from Phase I and see what has worked, what hasn't and best practice across the country. An allied evangelism on the need for broadband may be required.

There are stories that SME's don't want or need fibre, they want what they can get affordably and what makes sense.

It may be necessary to look at what fibre can deliver in term of services rather than just trying to sell fibre because we have it.

It should be considered to work with Local Authorities (as shareholders) where their employees would be well placed to be co-ordinated local evangelists working across the county to sell content, context and the need for connectivity.

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.

IIA Response:

Summary

There is no major deficiency in international connectivity to and from Ireland. There is no shortage of capacity, there is a competitive marketplace and pricing is in line with that of other European countries.

There are two main concerns;

1. Practically all connections from Ireland pass through connection points or Telehouse facilities in London Docklands
2. Service providers are finding it increasingly difficult to accommodate customer requests due to the 10 Gbit/s Ethernet bandwidth constraints of their network core.

Ireland's International Cable Connectivity:

Ireland – USA cable

Hibernia 'D' CVC: Dublin – Halifax, Boston, New York

Ireland – UK cables:

Hibernia 'C' CVC: Dublin – Southport

Sirius South (NTL): Dublin – Southport

BT-TE1: Dublin – Holyhead

Esat 2: Dublin – Southport

Global Crossing 2: Blackwater Bank – Bude, Wales

Global Crossing 1: Kilmore Quay – Lands End

Esat 1: Kilmore Quay – Lands End

Solas (C&W): Kilmore Quay – Oxwich, Wales

Celtic: Kilmore Quay – Lands End

There are rumours of a planned fibre connection between Wales and Ireland as part of an international gas or electricity supply agreement.

Ireland – Iceland cable:

Hibernia Atlantic has a projected cable to Reykjavic, Iceland.

Ireland – Northern Ireland Connectivity:

Project Kelvin. In July 2008 Communications Minister, Eamon Ryan, T.D., announced that DCENR and DETI (Northern Ireland) issued a tender to procure direct international telecommunications connectivity to the North West of the island of Ireland. With an estimated cost of €30 million in INTERREG Cross Border funding, the project will provide international connectivity between the island of Ireland and North America, as well as between mainland Europe and the North West of Ireland.

The Armagh Monaghan Digital Corridor (AMDC) project. This link between Armagh and Monaghan, which went live in mid October 2006, is a cross-border business corridor linking the counties of Armagh and Monaghan with a 1 GB broadband service.

Niran/HEAnet. The entire education and research network in the Republic [HEAnet] is now connected to Northern Ireland's JANET network [NIRAN] following a grant to link the HEAnet network in Letterkenny to the NIRAN presence in Derry.

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 access to these assets on commercial terms, reducing the costs of fibre roll-out. Major public infrastructure projects will, in future, install duct at the construction stage to facilitate network 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.

IIA Response:

The ducting which is already in existence needs to be made accessible. The government should establish a mechanism to achieve this goal.

There are potential issues with 2002 legislation which may give priority to duct users over the National Roads Authority – this needs to be addressed urgently.

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.

IIA Response:

Summary

The detail of this proposal needs to be worked though (see below). It will only make sense when combined with a functional separation of the PTT and a regulatory framework which drives a quality broadband service infrastructure.

The IIA's working interpretation is –

“New premises in Ireland will be required to install open access infrastructure.”

[While the focus of the statement is on fibre the real focus should be on ducting infrastructure which is the most costly aspect (a fact noted in the report itself – civil works account for most of the cost of installing fibre).]

During their construction all new premises will be required to have installed ducting to a cable chamber accessible to all-comers at a location adjacent to public roads or other accessible location. The ducting should include the provision of sub-ducts to allow for separation of different carriers' fibre. Given the increasing reliance on broadband access IIA proposes that all greenfield developments are 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.

In the case of business parks, developers should provide ducting to the entrances of the development (at least 2) from the buildings across the campus. In the past some developers have sought fees from telecoms carriers in order to gain access to developments. The Department should strongly discourage this approach as these costs ultimately are paid for by the end user and will act as an inhibitor to broadband take-up. We support the Department's position of open access of this infrastructure to all-comers.

In locations where the new building or development is in an area served by the Department's Metropolitan Area Networks (MAN), developers should provide a fibre connection to these facilities from their premises if the distance is less than 500 meters.

In all of the above instances we strongly recommend that the routing of new duct infrastructure is recorded on Geographical Information Systems (GIS) used by utility companies to facilitate ease of access by service providers and minimise accidental damage.

In the context of NGN networks, there is a requirement to provide electrical power in cabinets situated remotely from telephone exchanges in order to power 'sub-loops' i.e. fibre is delivered near a location such as a housing estate but the final delivery to the houses uses copper cable. In such configurations the equipment transmitting the broadband signals will require power feeds. Due to the nature of the location of these cabinets (roadside, under ground etc) the safe provision of power can be problematic.

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 applications.

IIA Response:

Comreg's role would be significantly enhanced by the development of a clear policy framework within which they could operate.

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.

IIA Response:

Summary

The Government has had success in shared procurement in Hardware, Software and connectivity areas and should be able to create economies.

The best time to make hard decisions is during a recession. This is the time to manage all government expenditure in this area and make savings. An innovative approach is required, not only to look at direct government expenditure in this area, but also government controlled expenditure. The Department of Social and Family Affairs pays for the Telephony Rental for 10s of 1000s of citizens (up to 400,000). This should immediately become a concession tender with conditions.

Condition 1 - Each of these Government Accounts must be part of a LLU Exchange

This would force the tender winner to LLU each exchange, but would be compensated over a 5 year period for this.

Condition 2 - Flat Rate Internet and Data for each Citizen as part of the scheme

A dedicated flat rate means no surprises on either side.

Condition 3 - 5 Year deal, Guaranteed Revenue for the Concession winner

5 Years would be enough with the scale of this for a supplier to come in to this sector.

Government should also look at where they have excess supply in areas of high demand. That excess could be sold off to community or educational usage in the evenings.

Some great work is already happening with Government Networks to aggregate the demand in each town to extract value from the market. There may be opportunities to include HEANet in government aggregation and build on their economies too.

The UK professional procurement service is a relevant reference point here: <http://online.ogcbuyingsolutions.gov.uk>

10. The Government will work with ComReg and the ESRI to establish a specialised research program area and provide evidence-based policy advice.

IIA Response:

The industry has been remiss in this area and needs to work with the Minister and relevant Dept/Agencies to assist them with this research.

The IIA Infrastructure Working Group would be happy to offer this assistance on the basis of being supplier neutral and would pull on the experience from leading countries around the world.