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Commission for
Communications Regulation

Future Delivery of Broadband – One Year On

NIRSA Broadband Conference - Maynooth

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29th January 2003.

Future Delivery of Broadband – One Year On

1. Future Delivery of Broadband - Review

2. Current Market Situation

3. Outstanding Issues

3. Conclusions

Report Objective: To inform and enthuse broadband debate.

- Reasons for FDBB Report:
 - ▶ OECD Broadband Tables (Ireland ranked 27th out of 30);
 - ▶ Policy objectives at both European and National level;
 - ▶ Heavy focus on the supply side, but limited understanding of demand;

- Report sought to put the current state of the Irish market in context and present new data by independent experts.
 - ▶ Ovum - To review cost of broadband supply at 512k, 2MB, and 5MB.
 - ▶ MRBI – To review market segments and attitudes to broadband, Internet access, pricing, etc...

- Ultimate Goal: To facilitate a better understanding of the issues involved and provide a platform for informed debate.

FDBB Report: Main Findings – Market Dynamics

- Mkt Size – Irish broadband still at early stage of development
 - ▶ Approx. 4,000 Broadband users – mostly business users

- Mkt Competition – Most broadband connections delivered over the incumbent network.
 - ▶ DSL and leased lines: *eircom* dominant player.
 - ▶ Cable modem: Potential challenger, but network upgrades expensive.
 - ▶ Wireless solutions: Limited use, but future tech. developments could create significant growth opportunities.

- Mkt Development – Not yet focused on mass market adoption.
 - ▶ DSL pricing levels focused on business/SME market (€90 per month)
 - ▶ No entry level product (512k min. bandwidth).

FDBB Report: Main Findings – Cost of Supply and Level of Demand

- Ovum Study: ‘Boxes and wires’ costs – not full business case analysis:
 - ▶ 512k is an attainable goal - even to 85% availability.
 - ▶ 2MB - Feasible in urban areas. However beyond this costs begin to rise steeply
 - ▶ 5MBit/s – Currently not feasible option. However, tech. advances should bring this cost down in time.
 - ▶ Current backbone capacity is broadly sufficient. Future investment should concentrate on bottlenecks closer to the user.

- MRBI Mkt Research: Demand Factors - Usefulness and pricing.
 - ▶ A sizable proportion of both Irish SMEs and households are now online
 - ▶ For those online, cost is not the predominant reason for not using the Internet more, a lack of perceived benefit has a large role to play. Nevertheless, strong interest in fixed rate Internet product.
 - ▶ Reasonable interest in broadband, but take-up will depend greatly on price. Residential users - €40 upper price limit.

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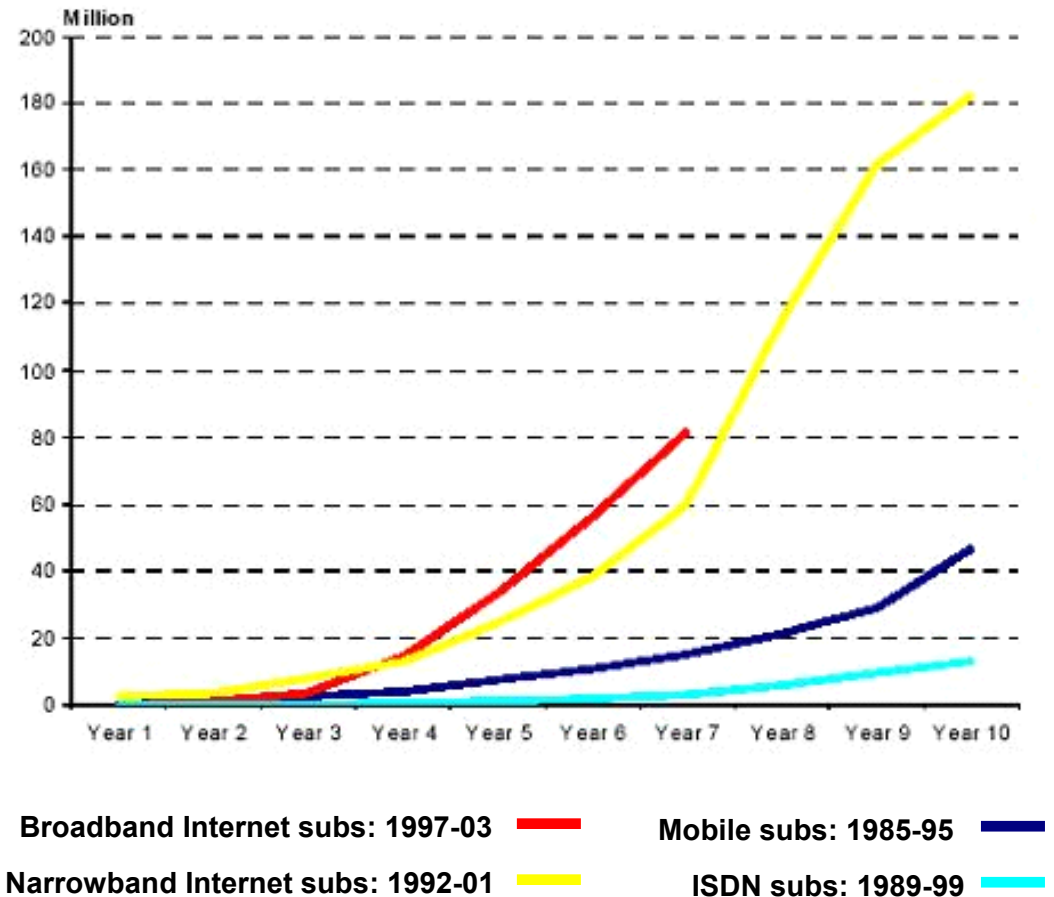
4. Conclusions

Competition is key to driving mass adoption of new ICTs.

- For many ICTs, mass market adoption only takes hold once competition between several service providers catches on
 - ▶ “Sufficient evidence to suggest that competition is the best way to diffuse new technologies rapidly” (OECD 2002).

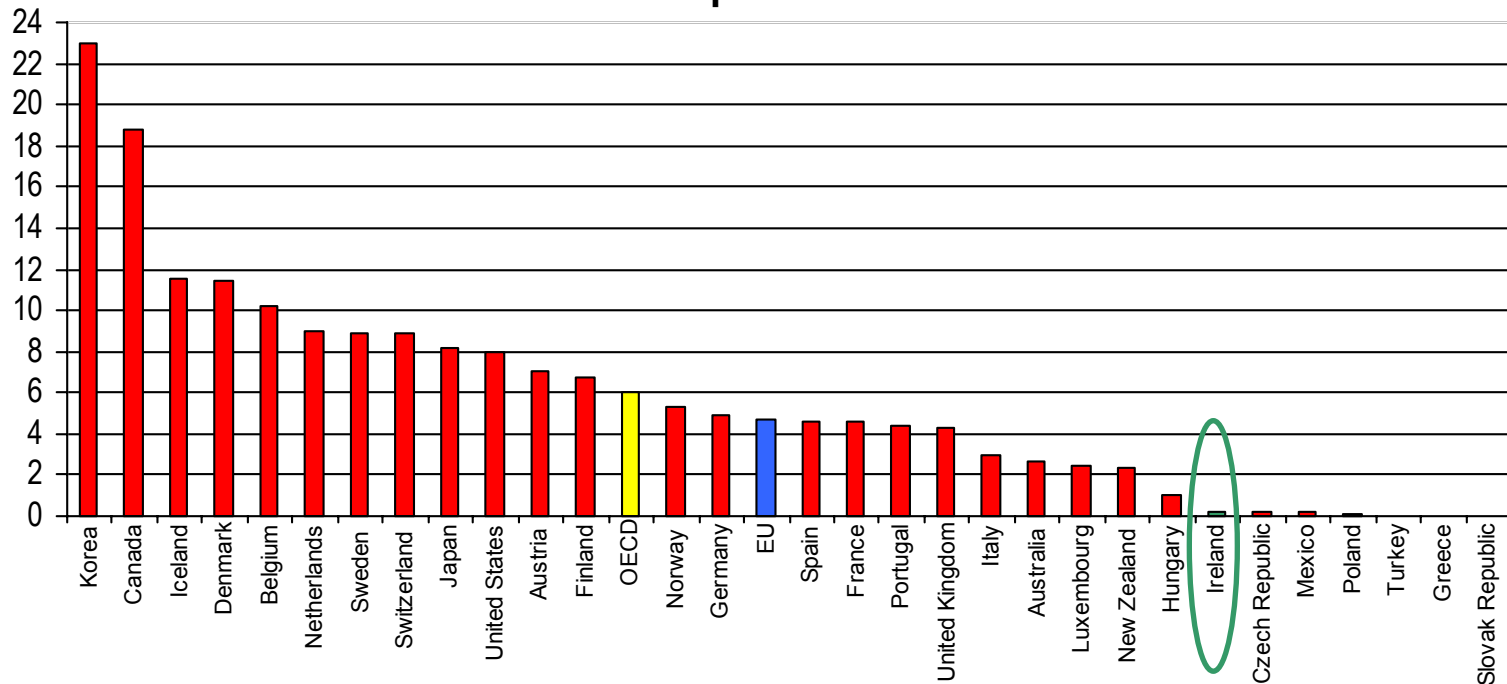
- Unlike mobile and dial-up Internet in their early years, competition to the incumbent is driving widespread broadband adoption across much of the OECD.

Take-up of Communications Technologies during initial years after commercial launch



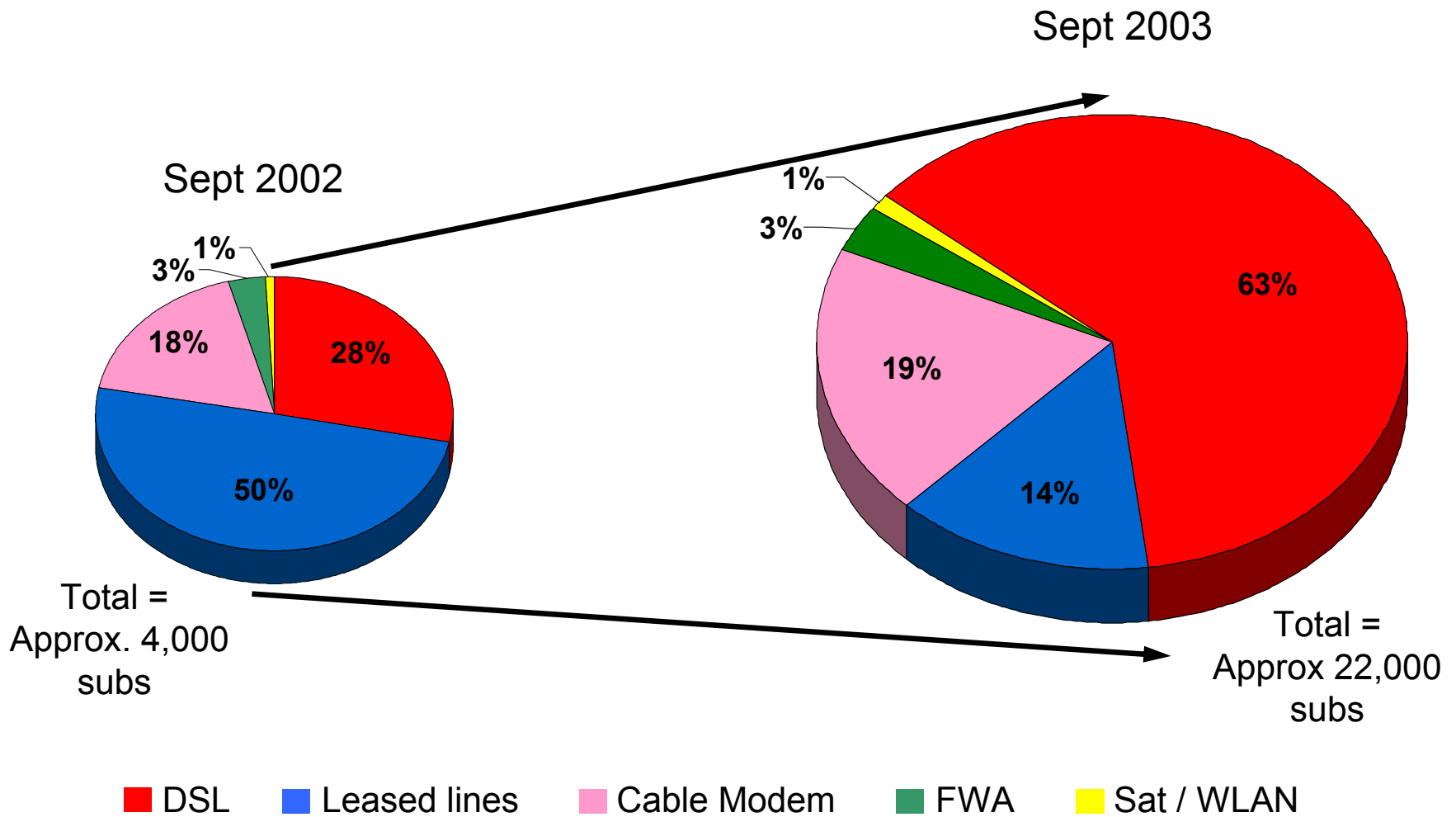
Lack of competitive threat from cable has not helped Ireland's broadband penetration

Broadband subscribers per 100 inhabitants - June 2003



- OECD rankings: 24th out of 30.
- With growth in cable broadband not likely in the short term, most of Ireland's broadband connections are likely to be provided via DSL and wireless solutions.
- Affordable pricing and innovative marketing needed to drive mass market take-up.

DSL's share of broadband connections has grown strongly over the last 12 months.

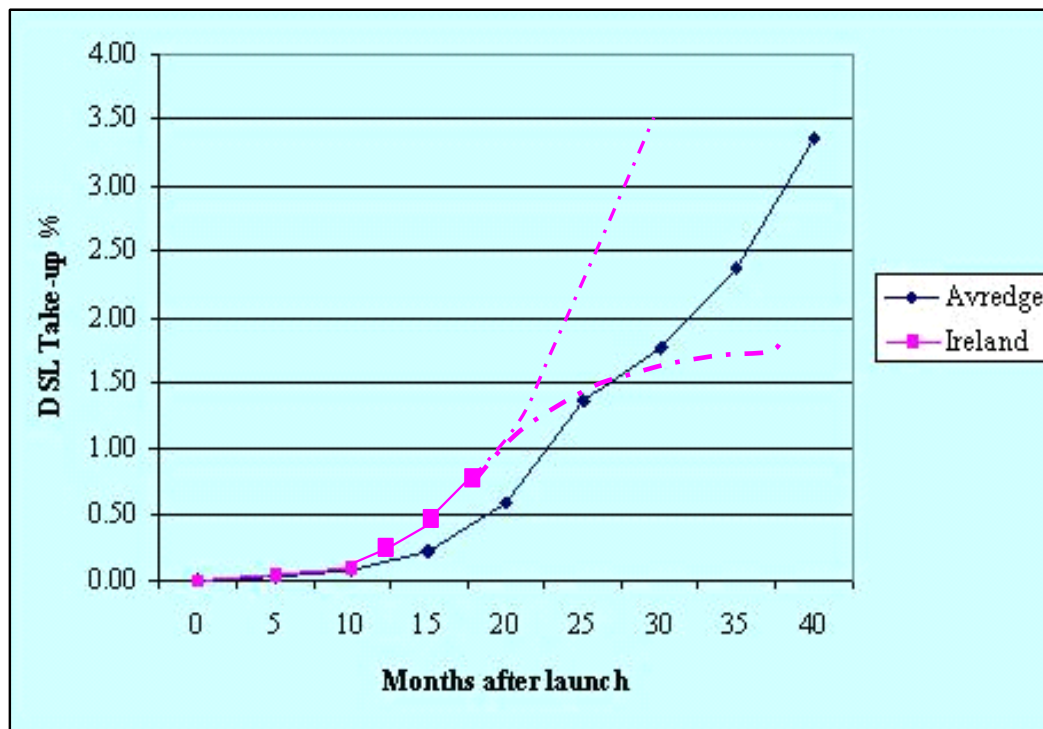


In Ireland DSL take-up is slightly ahead of the curve, but it is still early days yet...

- After a slow start, DSL adoption is beginning to pick up
 - ▶ At the end of Sept 03, there were some 13,350 installed DSL.
 - ▶ Penetration rate of approx. 0.85% of all PSTN lines.

- However, to ensure the recent momentum in DSL growth is maintained, greater competition to the incumbent will be crucial.

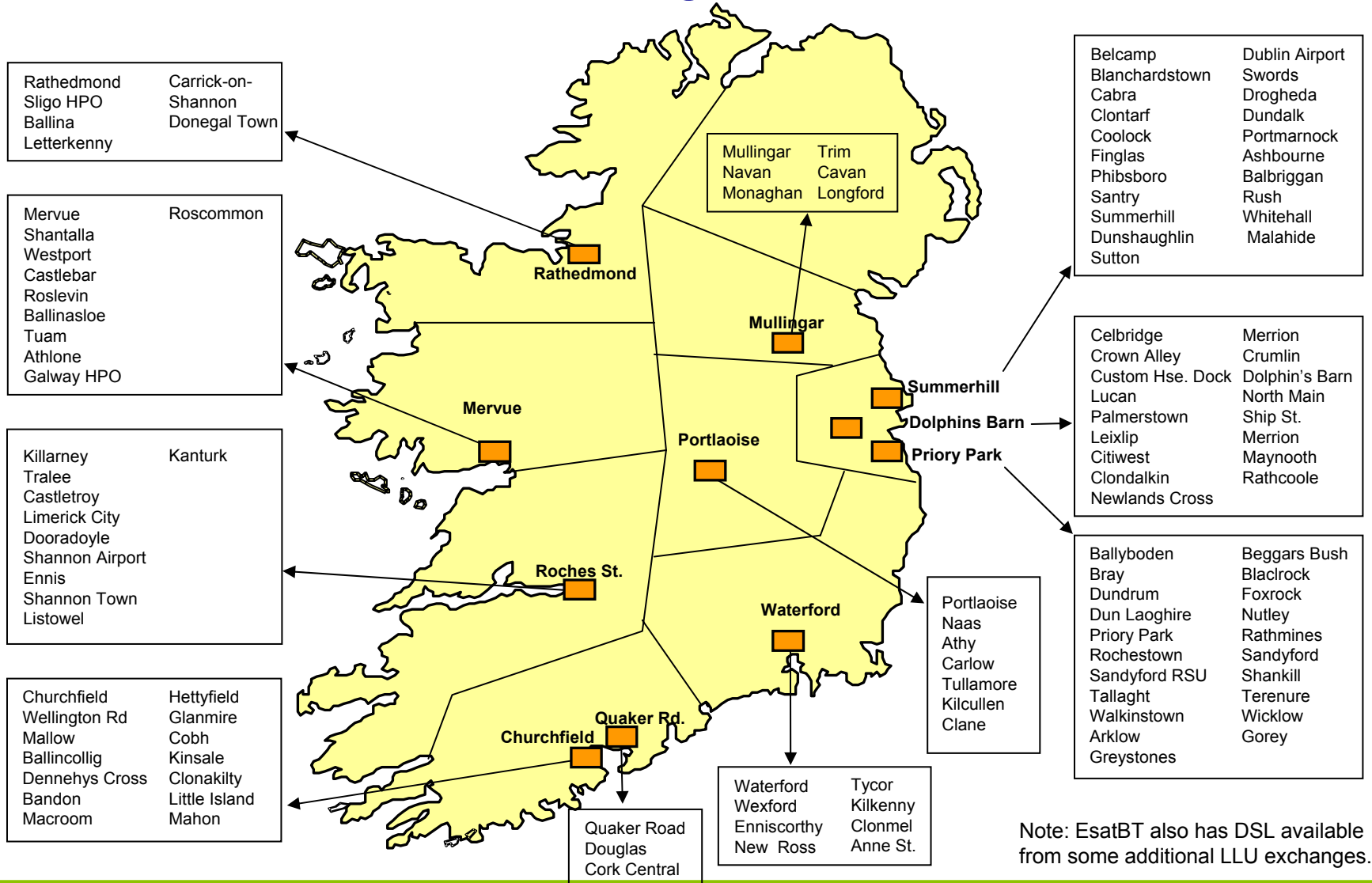
Adoption Curve for DSL Take-up



Source: Norcontel, Broadband Telecommunications in Ireland – Benchmark Study, Update Report Mar. '03.

NB: The benchmark is based on the average growth curves of five unspecified top countries rebased to a common starting point, and plots the growth of DSL in Ireland relative to that curve

Substantial increase in DSL availability - over 60% of lines are now connected to DSL-enabled exchanges

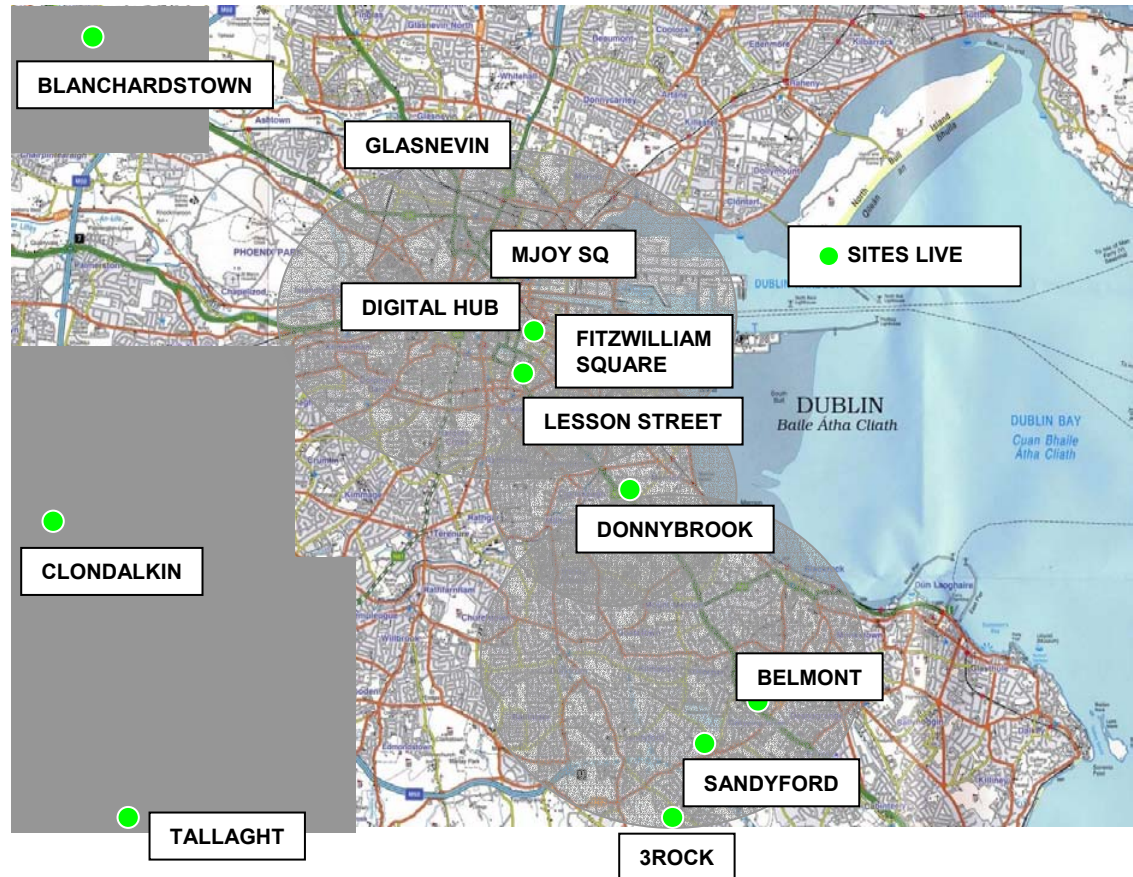


Note: EsatBT also has DSL available from some additional LLU exchanges.

With the upgrading of cable networks delayed, increasingly the threat to DSL providers is coming from alternative wireless players.

- The recent issuing of FWALA licenses, coupled with technological advances is opening up opportunities in the fixed-wireless space.
- To date, however, most FWA providers have tended to concentrate on the larger markets in the main urban areas.

Irish Broadband's Current FWA Network in Dublin

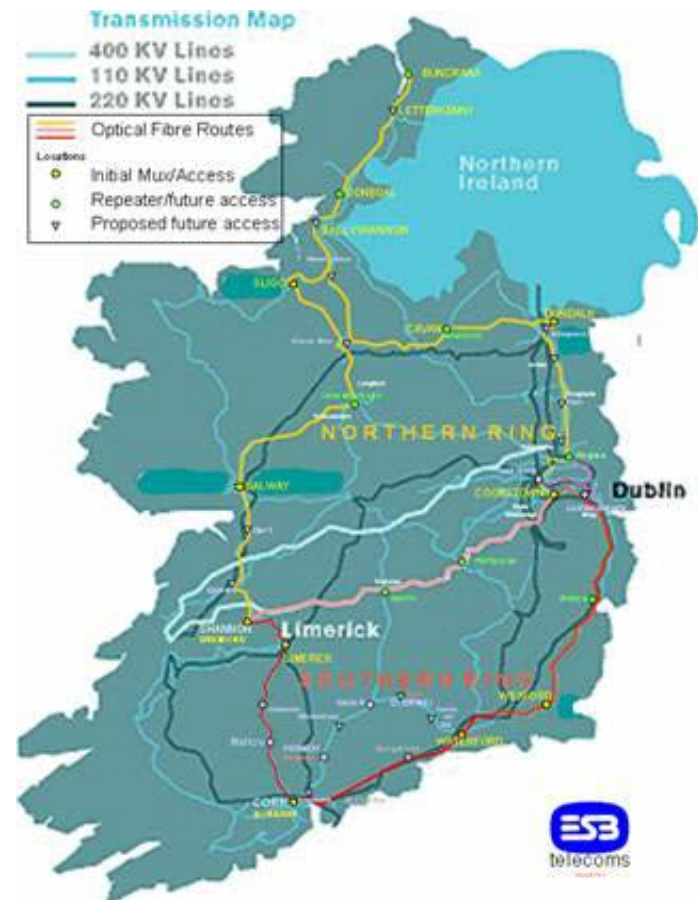


Competitively priced backhaul should substantially reduce the cost of provisioning broadband in the regions.

- In December '03 Minister Ahern announced that the ESB Telecoms would offer backhaul at greatly discounted rates on its new national network:
 - ▶ 34MB @ €50k per annum
 - ▶ Ethernet 100MB @ €50k per annum.
 - ▶ STM-1 @ €100k per annum.
 - ▶ STM-4 @ €400k per annum

- In areas where the ESB's network is not available, EsatBT said they would also offer wholesale capacity at a much reduced prices.
 - ▶ 2.5G wavelength @ €150-200k per annum

ESB Telecoms Network Roll-out



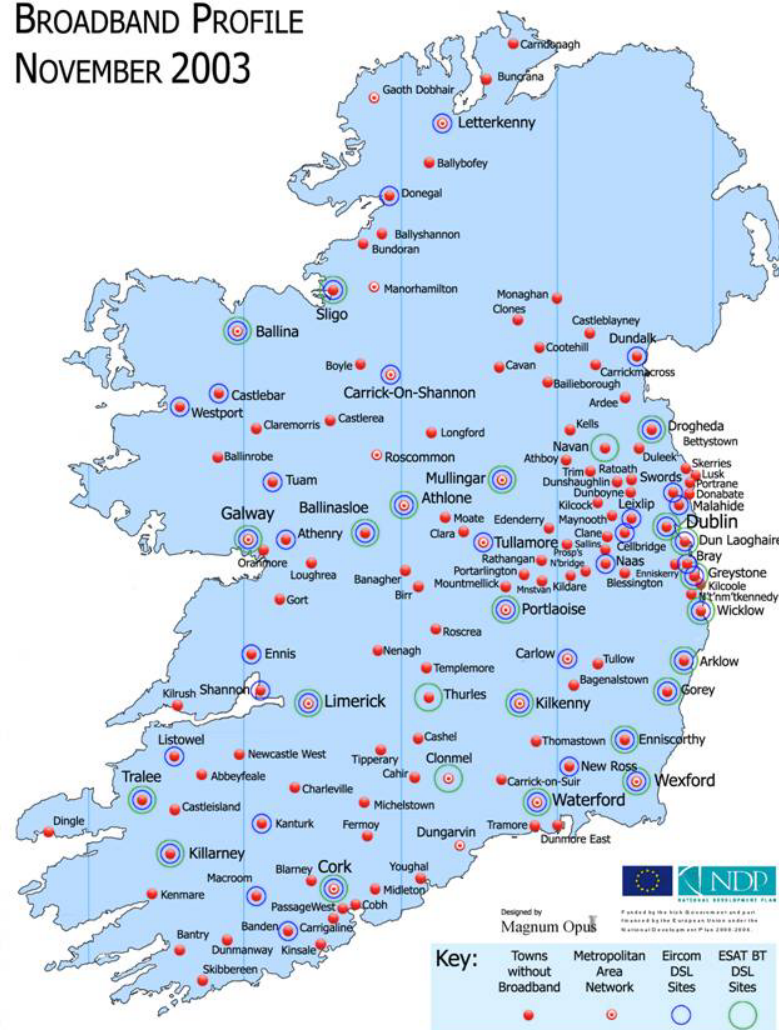
The Government's MANs initiative should also further boost competition

- MSE entity to manage access and secure the lighting of fibre:
 - ▶ Provision of wholesale access to all MAN infrastructure.
 - ▶ Possibility of lit services – wholesale market only.

- In December the Govt announced the extension of the MANs initiative from the original 19 towns to a further 88.

- In response *eircom* said they were going to run out DSL to all towns of 1,500+ by March 2005.
 - ▶ Also announced trigger scheme once 200-700 registrations achieved.

BROADBAND PROFILE
NOVEMBER 2003



Summary: Current Market Situation

- Growing reliance on DSL and to a lesser extent fixed wireless solutions.
- Availability and supply-side issues are being address. Focus increasingly needs to be on the demand side (pricing, marketing, usefulness, content etc...)
 - ▶ *eircom*'s objective: 100k broadband customers for Ireland by Dec. 2004
- Recent positive moves on backhaul and Govt. MANs should lower entry barriers for smaller players.
- However, *eircom* very determined and will be looking to build on their strong position in the Internet market to date.

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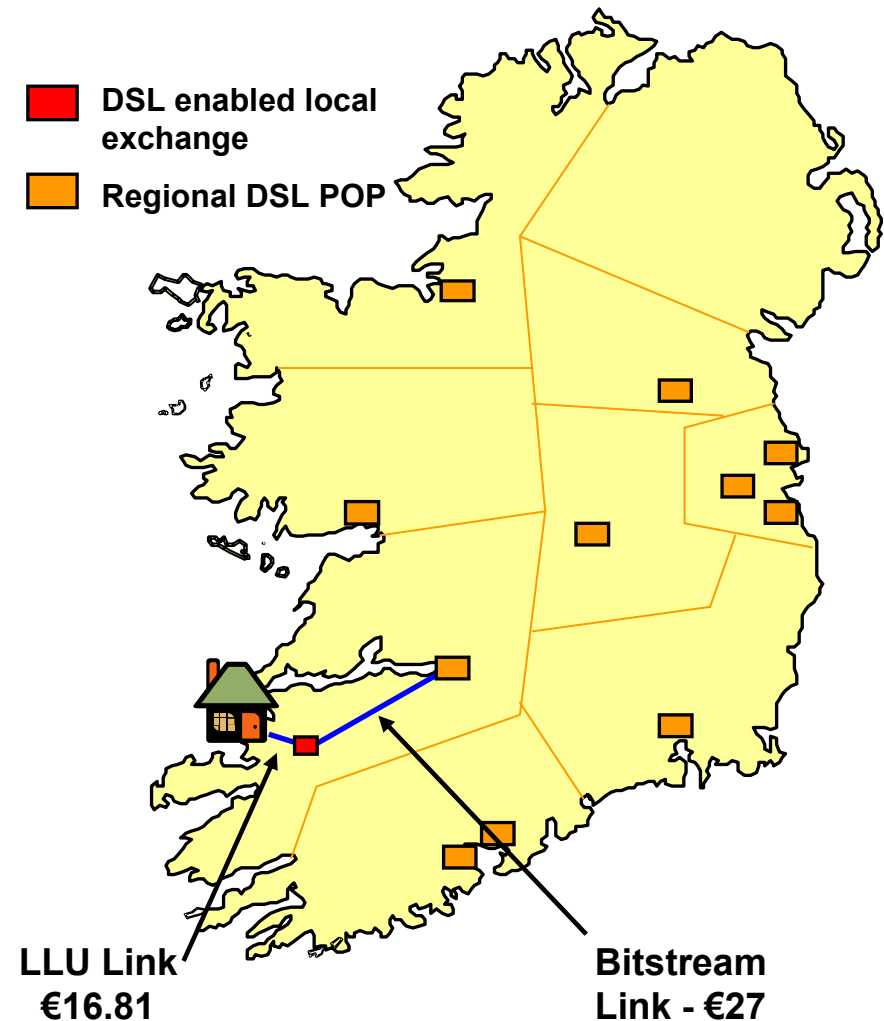
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Competition problems in the 'Last Mile' will still have to be overcome

- LLU: Facilitates a high level of independence from incumbent, but requires a high upfront investment.
 - ▶ EsatBT – 40 exchanges.
- Bitstream: Less control over product features, but lower upfront costs facilitate easier market entry.
 - ▶ Predominant means by which new entrants enter the DSL market in Ireland and abroad.
- Delicate balancing of incentives between LLU, bitstream and retail prices required!



There are still issues to be addressed in relation to DSL line failures

- Several reasons why a line test might fail:
 - ▶ Line length (currently 4.5km)
 - ▶ Carrier systems/pair gain devices ('splitters')
 - ▶ Interfering systems
 - ▶ Weather

- Under its non-discrimination obligation eircom is required to provide ComReg with updates on its line test failure rates.

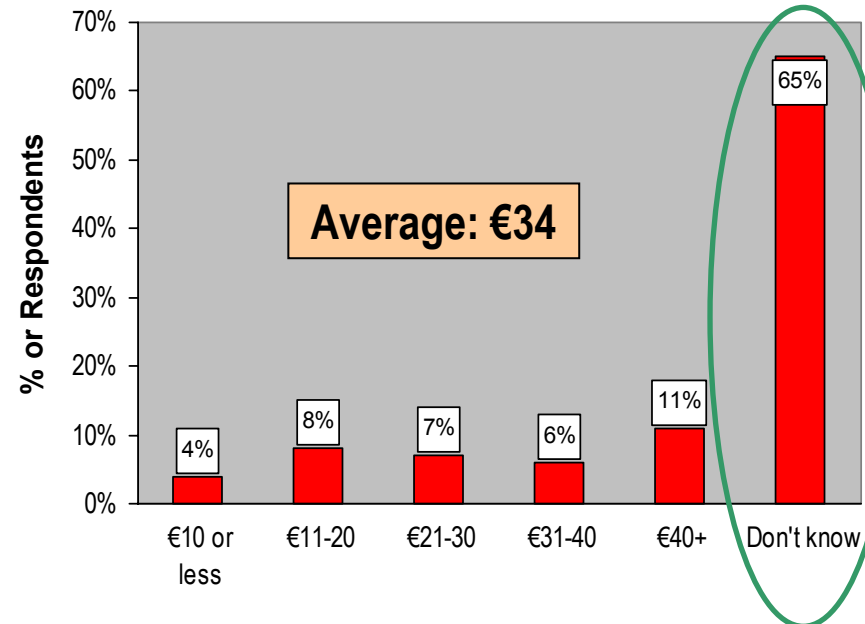
- Currently, there is no obligation on eircom to provide the customer with the reason why their line failed. Lack of transparency?

- Under the new USO framework, eircom is required to meet "*any reasonable request to provide ...a fixed line connection... capable of providing data communications at data rates that are sufficient to provide functional Internet access*".
 - ▶ However, under the Directive FIA has been limited to speeds up to 56k.

Finally, consumers also have to be sold the benefits of broadband!

- With broadband prices coming down, to maximise take-up it is important that consumers are aware of the benefits of broadband:
 - ▶ Voice and data calls at same time.
 - ▶ Increased speed:
Anxious Time → Timeless Time
 - ▶ 'Always-on':
Users can enjoy experience without feeling 'watched and counted'.

How much would you expect your household to pay for an ADSL service?



- Pricing, innovative marketing and compelling content/services are all issues that broadband providers need to consider if consumers are to view broadband as an attractive value proposition.

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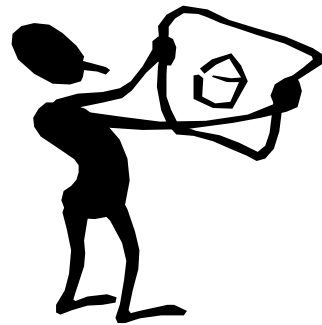
- Significant progress over the last year
 - ▶ Greater broadband availability;
 - ▶ Renewed interest in potential of FWA/WLAN business case.

- Spurred by price reductions DSL take-up is gathering momentum;
 - ▶ 50% DSL price reduction; indication of willingness to cut DSL prices further.

- Wholesale prices (esp. bitstream price) will be critical for competition and future development of market.

- Ultimate Goal – To develop a vibrant level of competition between different networks and between networks with different technologies

Questions ?



Thank You.