

# ARDnet: Provisioning future network services

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# Outline

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- National developments (Eoin...)

# Proposed ARDnet project

- Services of ARDnet...
- Why possible now?...
- Progress into ARDnet...
- Conceptual design...
- National status...

# Services of ARDnet

- IP transit connectivity (IPv4/IPv6, uni/multicast)
- Intra-site p2p connections (e.g. LAN interconnect)
- Inter-site p2p connections (e.g. IP transit, projects)
- Speed: 10/100, 1000 Mbit/s (ethernet framing)
- National and international
- Physical diversity (if feasible)

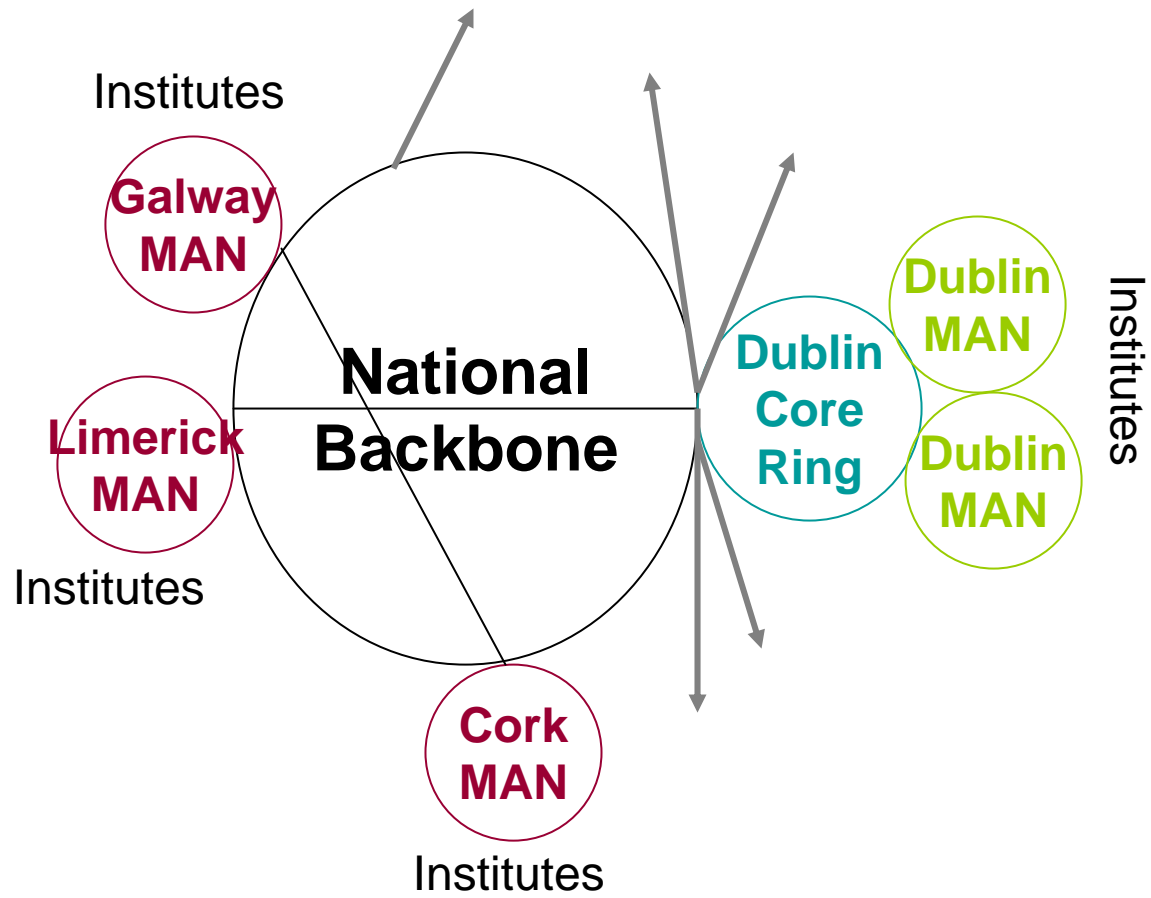
# Why possible now?

- HEAnet can utilize dark-fibre and thus define network services in its own pace
- If no fibre available, services of telcos will be incorporated
- Flexible/cheap services are emerging on the market
- A demand is emerging from clients (e.g. LAN interconnect) and end-users (e.g. Grid projects)
- Ethernet framing is emerging as a LAN-MAN-WAN technology

# Progress into ARDnet

- First MAN meeting: 1999 (radio links of DIT)
- Talks with service providers: 2001 - ...
- ESB Telecoms national fibre project: 2001
- First project proposal to DCMNR: 2002
- DCMNR regional MANs CfT: 2003
- Dublin based User show case: 2003 - 2004
- Management entity for regional MANs: 2004
- Updated proposal to DCMNR: 2004 - ...

# Conceptual design of ARDnet



# National status

- Project proposal to DCMNR
- In case grants become available, we need equipment chosen, so a CfT has been done:
  1. Dublin Core Ring (replaces 4 trunk links in the Dublin)
  2. National Backbone (replaces the 4 national 1 Gbit/s links)
  3. Cork, Dublin, Galway and Limerick MANs
- Cost comparison between ARDnet design and telcos services
- Investigate outsourcing of layer1/2 operational management
- Dublin based User show case (Eoin...)

# International developments

- DANTE runs the GN2 project:
  - implement the GÉANT2 network
  - research on Bandwidth on Demand (GN2-JRA3)
- Global Lambda Initiative Forum (GLIF)
  - Testing worldwide services based on p2p links
- In NGI-project a north-west link was planned, under INTERREG this becomes perhaps feasible (utilizing ARDnet).
- First worldwide user empowered Lightpath between Taiwan and Ireland (Eoin...)