

Irish National IPv6 Centre

The Irish National IPv6 Centre is situated at the Telecommunications Software & Systems Group (TSSG) at Waterford Institute of Technology.

The vision of the Centre is to establish an open collaboration on IPv6, linked to an industrial base, working on research and development issues in Ireland.

What is IPv6?

Every time you use the Internet you use an Internet Protocol (IP) - a set of rules for communication between computers. Internet Protocol Version 6, or IPv6 as its more commonly known, is an upgrade to the most currently available Internet Protocol, IPv4.

IPv4 was designed a long time ago in computer terms -about 1980, and since then, there have been many requests for enhanced capabilities. Currently IPv4 serves what could be called the computer market, the driving force behind the growth of the Internet.

Each computer has an address called an IP address that allows other computers to communicate with it.

But there is a growing shortage of IPv4 addresses, which are needed by all new machines added to the Internet. The development of pervasive computing, where everyday machines such as fridges and cookers will contain computing devices connected wirelessly to the Internet compounds this need for more IP addresses. The main driving force for the deployment of IPv6 therefore, is its ability to expand the address space of the Internet. IPv6 will also bring many other improvements to IPv4 including routing and network auto-configuration.

This new Internet Protocol plays a fundamental role in the deployment of 3G mobile networks and the new generation of multimedia services and applications.

The Centre's Objectives

The centre supports the local and global IPv6 community providing technical depth and engagement with the research community and political influence through strategic international partnerships, in particular with the global IPv6 Forum and the worldwide network of the IPv6 taskforces.

One of the key roles of the National IPv6 Centre is to support the efforts of the Irish IPv6 Taskforce in promoting the uptake of IPv6 in Ireland; offering its services to the Task Force to help implement its decisions and support its initiatives.

Another key activity of the centre is to drive research and innovation projects in the area of IPv6 at an Irish and European level. For example the Sixth Framework funded Security Internet project SEINIT (<http://www.seinit.org>) and the Pervasive Services project DAIDALOS (<http://www.ist-daidalos.org/>).

IPv6

Irish National Centre

Consortium

The Irish National IPv6 Centre consortium comprises a number of partner institutions each with its own IPv6 expertise.

Each partner is actively involved in promoting IPv6 take-up both nationally and globally.

The partners are:

**TSSG, Waterford
Institute of Technology**

**Hamilton Institute (NUI
Maynooth)**

HEAnet

BT Ireland



Telecommunications Software & Systems Group

IPv6

Irish National Centre

Partners in the Centre:

The TSSG at Waterford Institute of Technology



BT Ireland



HEAnet



Hamilton Institute (NUI Maynooth)



Department of Communications, Marine & Natural Resources

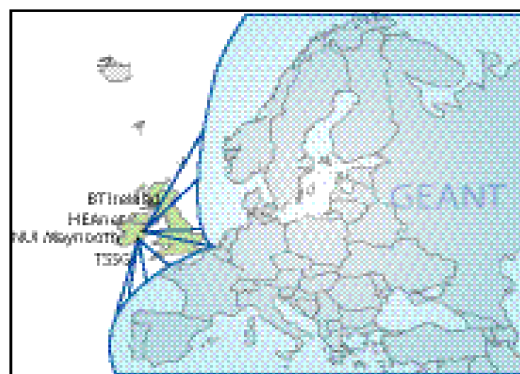
The Department of Communications, Marine & Natural Resources, as current Irish IPv6 Taskforce leaders, are committed to promoting the deployment of IPv6 in Ireland.

As part of this commitment, they issued a call proposal for a National centre of excellence where research and development of new products and services based on IPv6 could be carried out and where a portal on IPv6 information could be hosted. This new Irish National IPv6 Centre is the result of a successful response to that call.

Technical Infrastructure for the Centre

The activity of the Centre is supported by the active networking equipment and software prototypes that make up an integrated testbed in the TSSG.

The testbed interconnects to the partner sites via HEAnet, the Irish National Research and Education Network. HEAnet also have both IPv4 and IPv6 connectivity to the European research network GÉANT and to other National Research & Education Networks (NRENs) peering at its Points of Presence (PoPs) in New York, such as Internet 2, Ca*net, SINET and TWAREN. It also exchanges IPv6 traffic with Internet Service Providers at INEX (Ireland Neutral Exchange).



In addition HEAnet has negotiated a dual-stacked (IPv4 and IPv6) transit service from a major Tier 1 provider operating in Dublin.

All of this provides a platform for wider trials & demonstrations.

BT Ireland provides access to the BT Exact testbed laboratories in UK that can provide more fully featured tests and trials.

For more information contact:

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Telecommunications Software & Systems Group