



A Whirlwind Tour of Ireland's Internet History *(from INEX's perspective)*

Barry O'Donovan

@barry079 / @ComePeerWithMe

HEAnet National Conference
November 2019



- Born in Cork, matured in Galway and married into Dublin
- Maths Graduate of NUI, Galway, 2001
- NetEng, SysAdmin, PHP Coder, VoIP
- INEX since 2007
- Co-founder of Island Bridge Networks

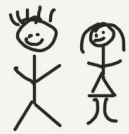


Barry O'Donovan
@barryo79

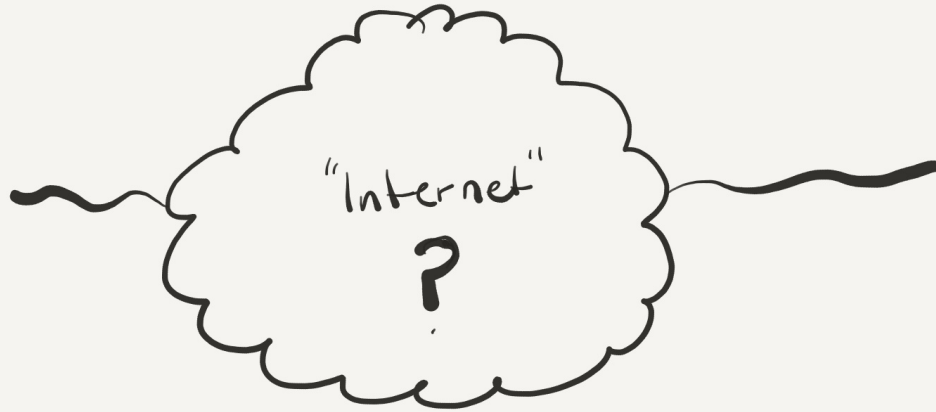
Husband, dad, network engineer, geek, sci fi fan, political anorak, founder @IslandBridgeNet, packet shepherd @ComePeerWithMe, PHP @ixpmanager #andacyclist

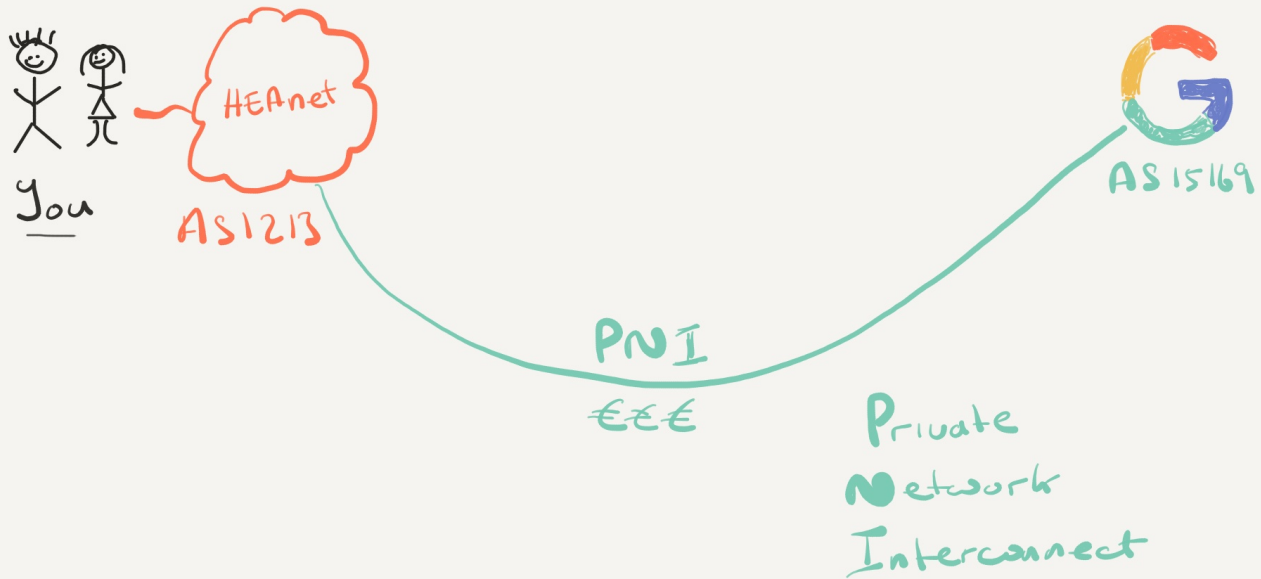
📍 Dublin, Ireland

🌐 barryodonovan.com

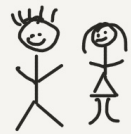


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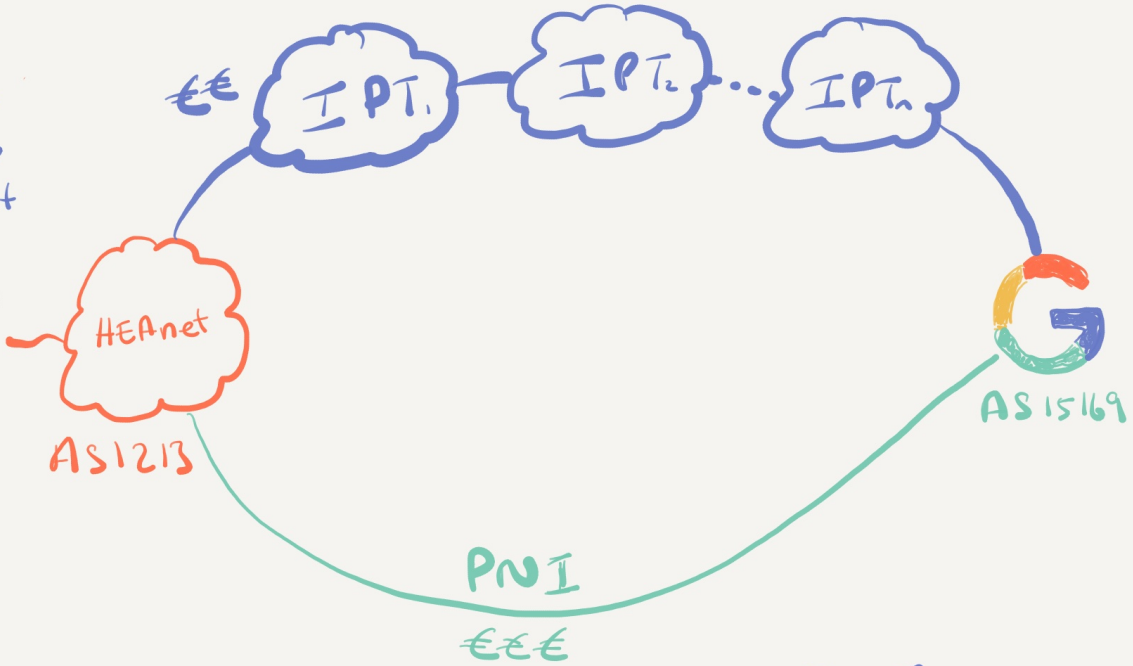




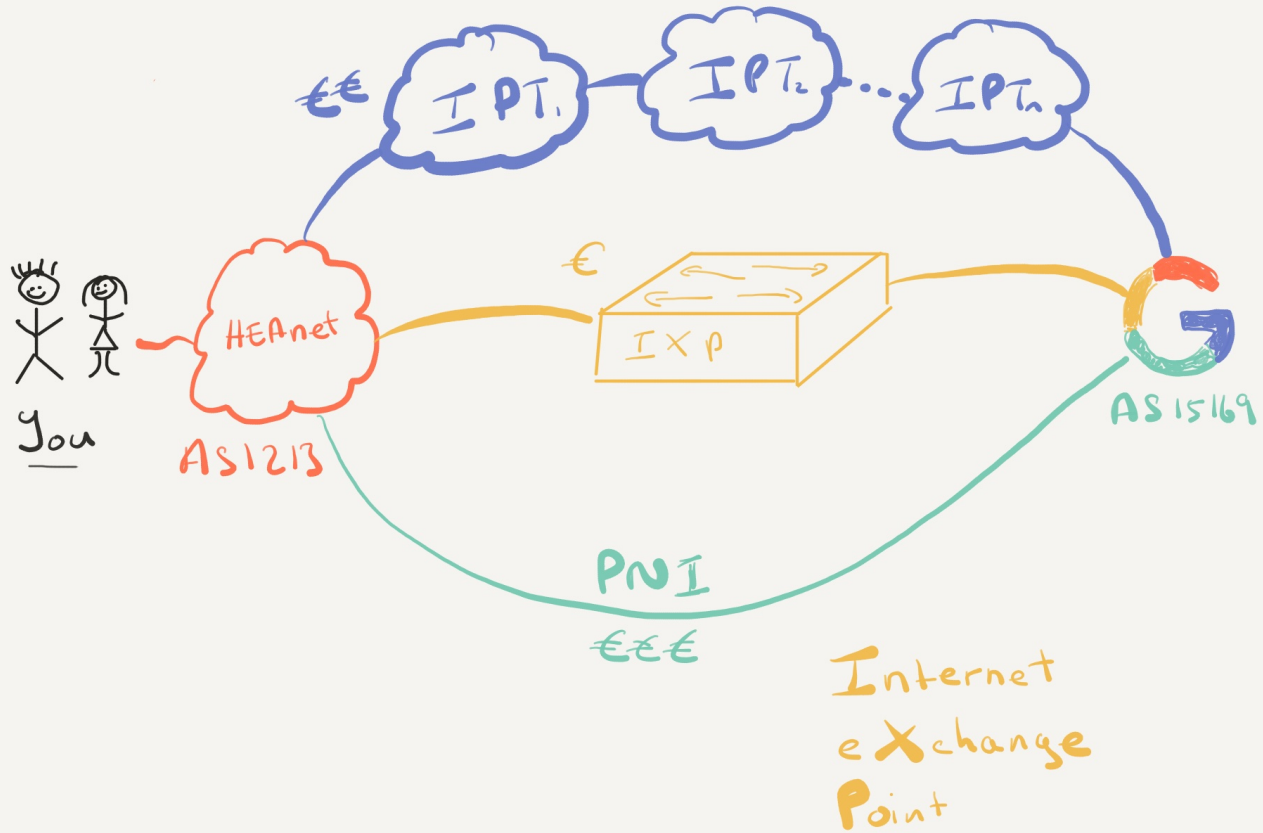
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NTT
Tata
Telia
Zayo
Cogent
HE

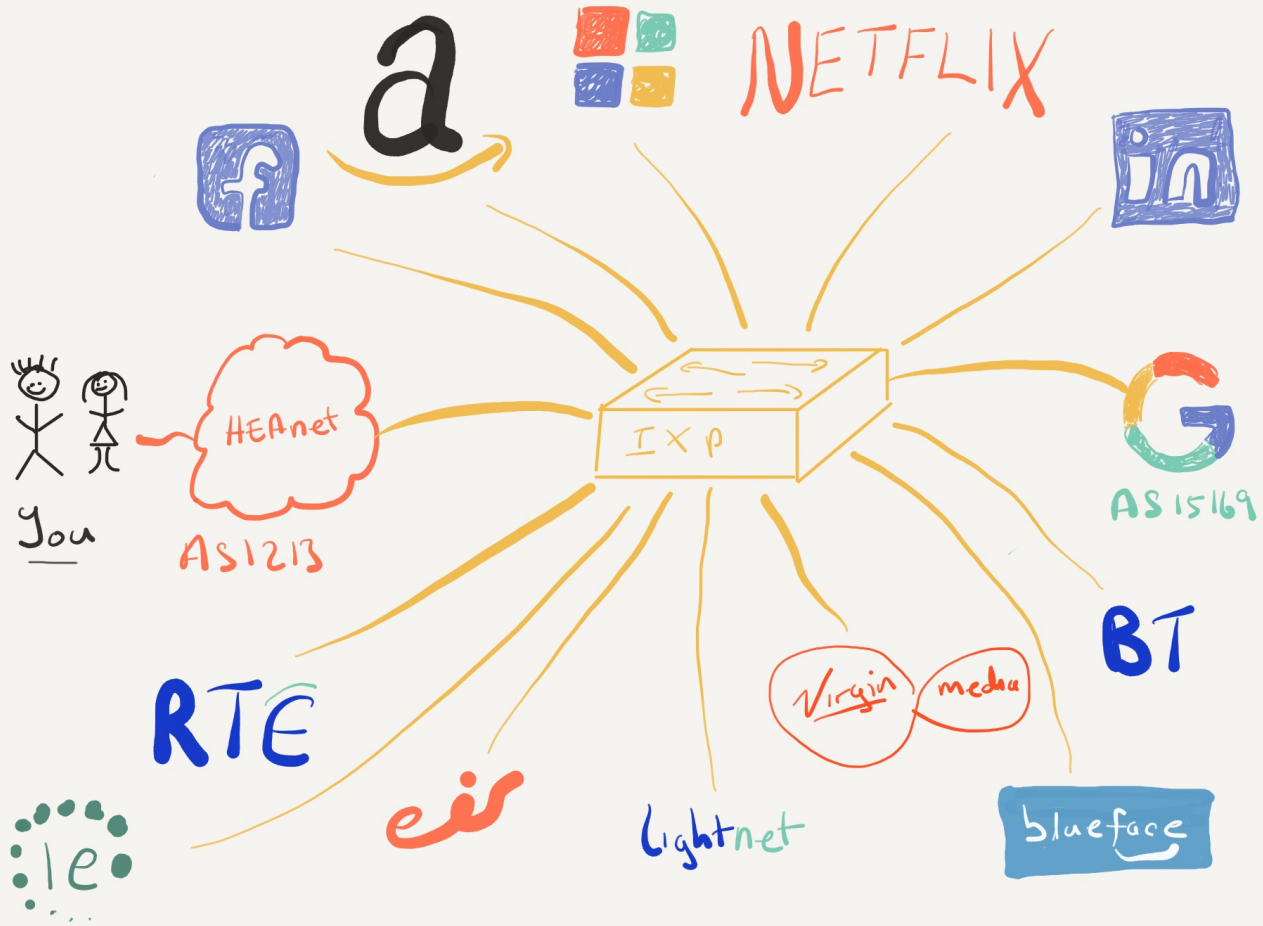


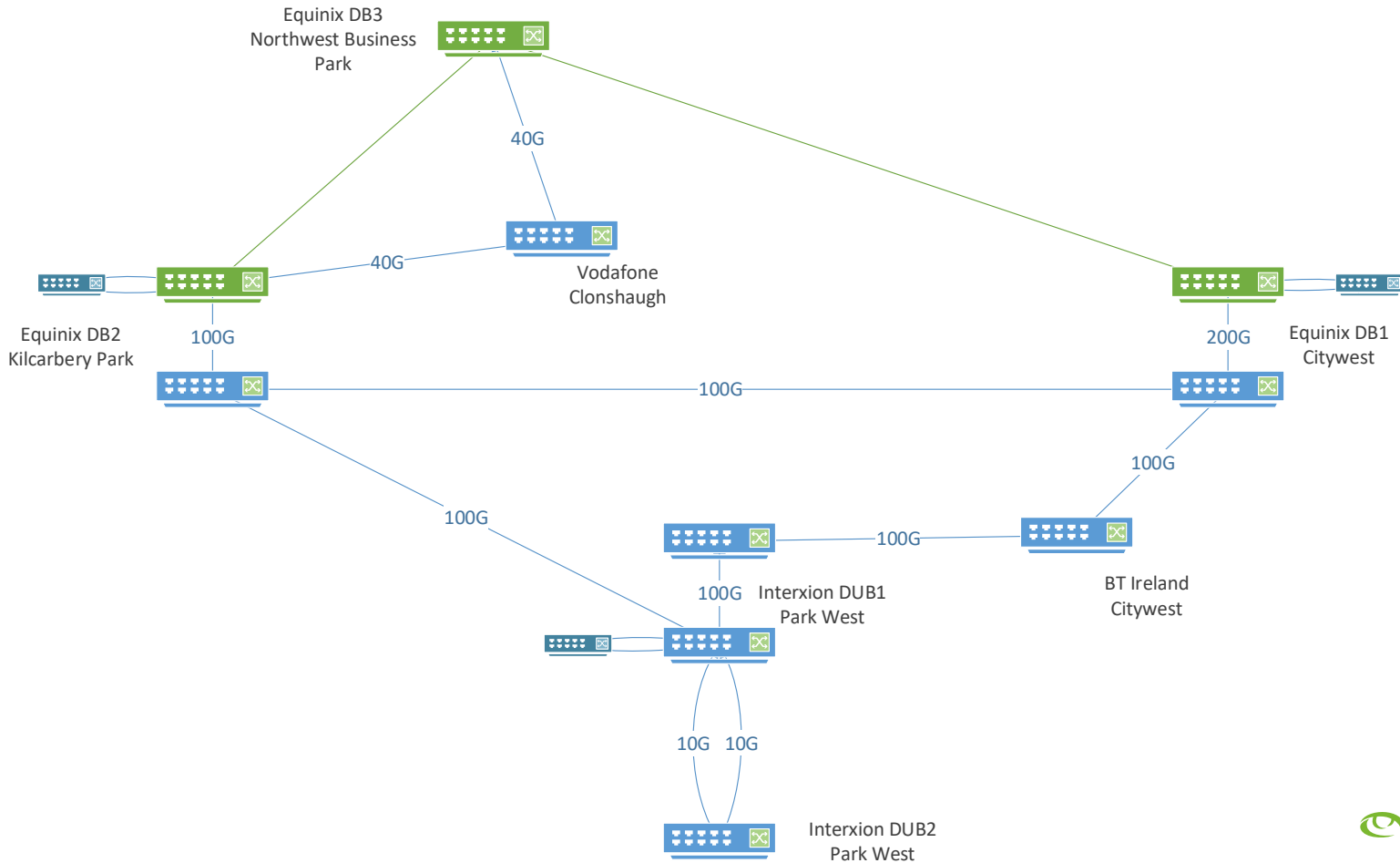
You



IP Transit









DIAL-UP

Back To Where It All Began...

DIAL-UP



Dialup Modem: https://en.wikipedia.org/wiki/Dial-up_Internet_access#/media/File:Modem-usr-courier-v34-front-online.jpg (cropped)



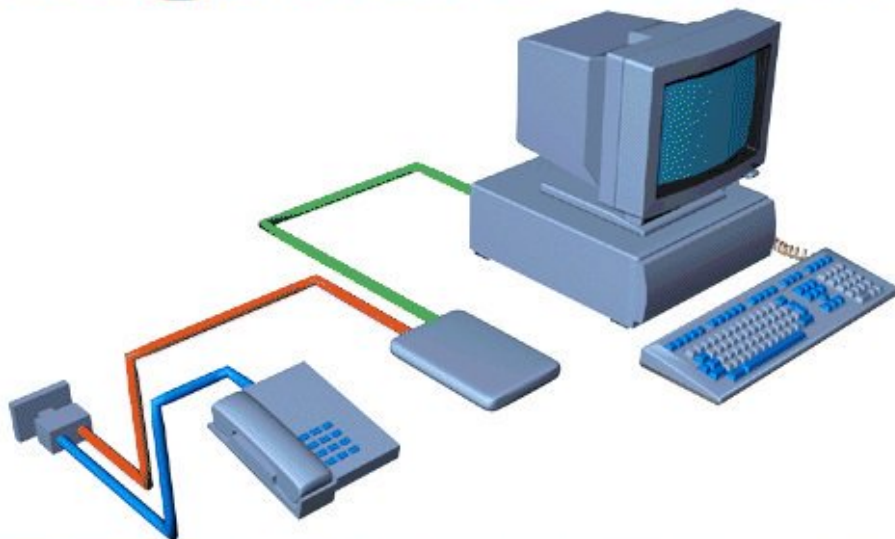
T E L E C O M iNTERNET

Beginners Guide

equipment
needed

Connecting
the Modem

About Modems



Main Menu

Go Back

Quit

The Internet

100 Million people
via electronic mail

8900 subjects on the
USENET news

10 Million Megabytes
World Wide Web

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the world in minutes
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phone call.

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Articles in over 8900
categories that anyone
can post an article to
be read the world over



World Wide Web

Multimedia Hypertext
pages provide point &
click access to around
10 Million Megabytes
of information stored
around the world. On
subjects as diverse as
Astronomy and the
World Cup. You can
even shop on it.

File Transfer

Transfer files to your
computer from any of
thousands of archives
around the world.

Chat

Real time conversation
with another person on
the Internet. Each sees
what the other types.

Telnet

Open a terminal onto
another computer on
the Internet. Used for
BBS, databases, etc...

Internet Relay Chat

Like chat, with many
people talking together
The Internet version
of a conference call.

Archie

An information finder
that searches for files
on the file archives and
locates them.

Gopher

An information search
and retrieve system.
Gopher is an easy way
to find and get files.

There are many other services on the Internet, from playing chess with someone in Russia to commercial databases.

Ireland On Line	Nodes in Galway and Dublin. Well established. Very nice windows interface or normal internet access. SLIP/PPP also available, no ISDN as yet.	£25 registration and charges from £10/month for up to 20hrs/month, £20/month unlimited access.
IEUNET	The main internet backbone in Ireland. Nodes in Dublin, Cork, Galway and Shannon.	Charges £3/hr (£1.50/hr off peak).
Internet Eireann	New provider. The intention is to provide a straight no frills internet access similar to Demon in the UK. Node in Dublin.	£15 registration and then £10/month for unlimited use.

<http://www.ibiblio.org/gaelic/Eire/7.11.6.html>

DIAL-UP



**EUnet
Ireland**



First INEX Peering Members - Apr 1997

PostGEM

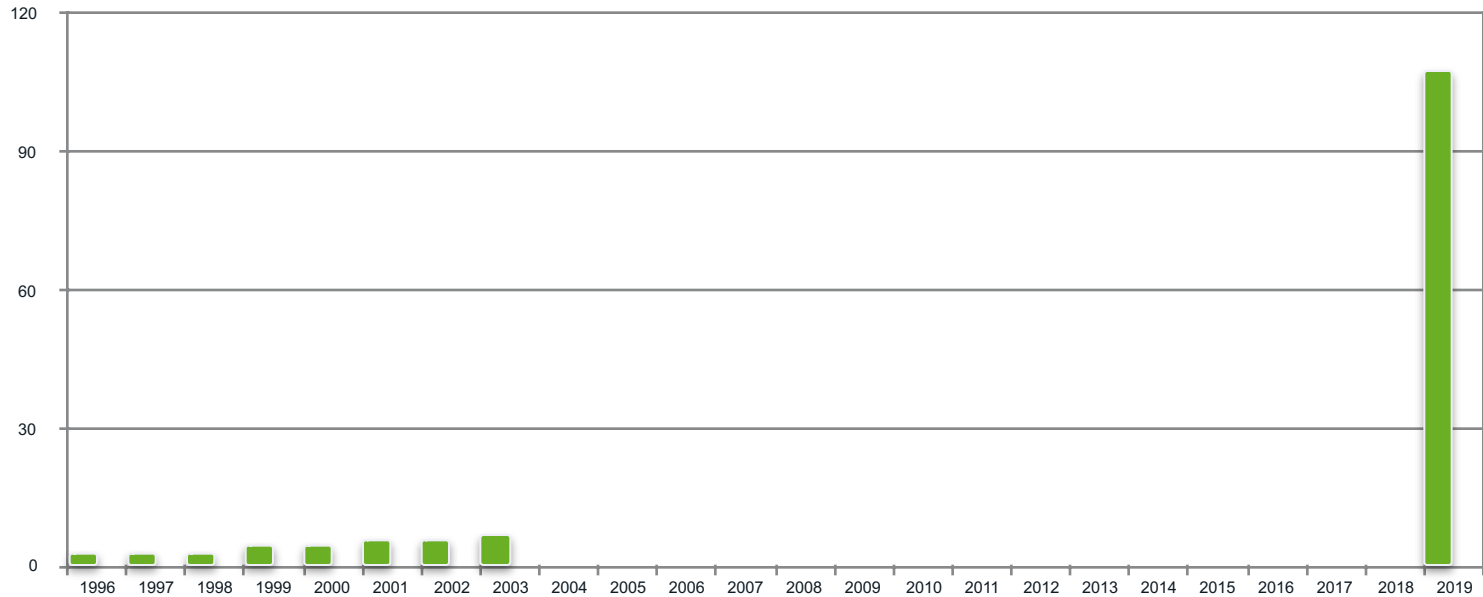


ireland on-line

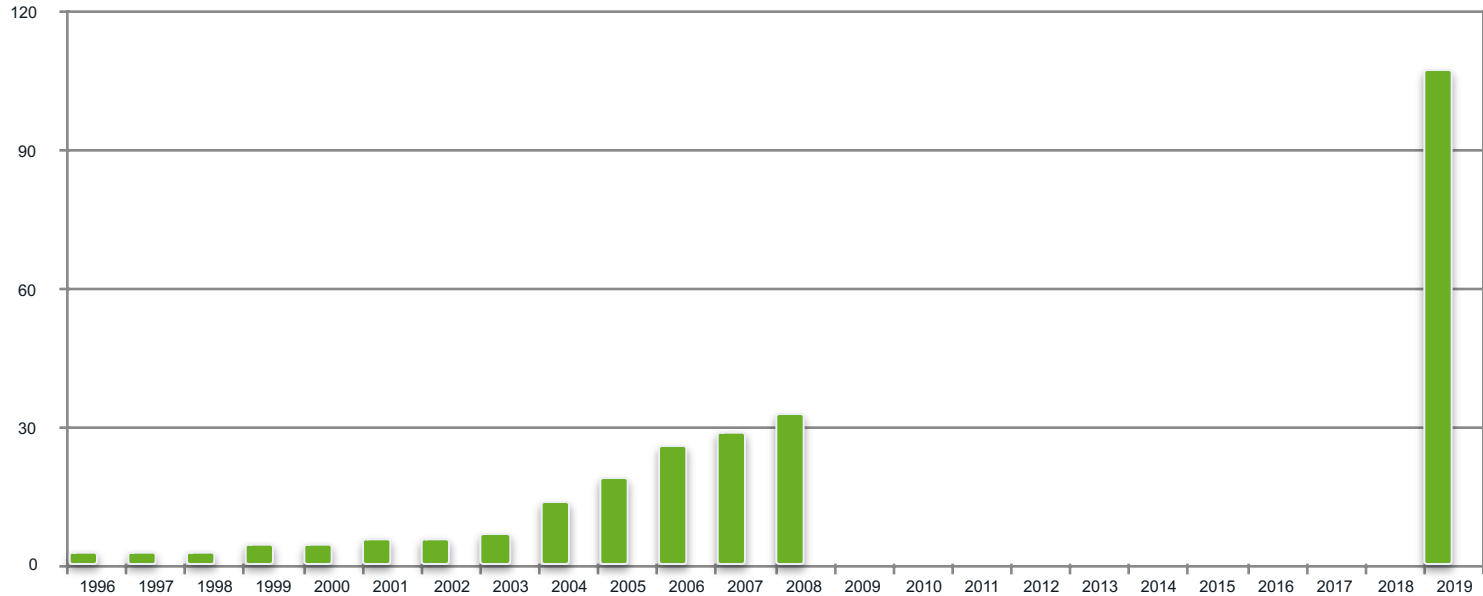


DIAL-UP

Membership Growth - 1996 - 2003

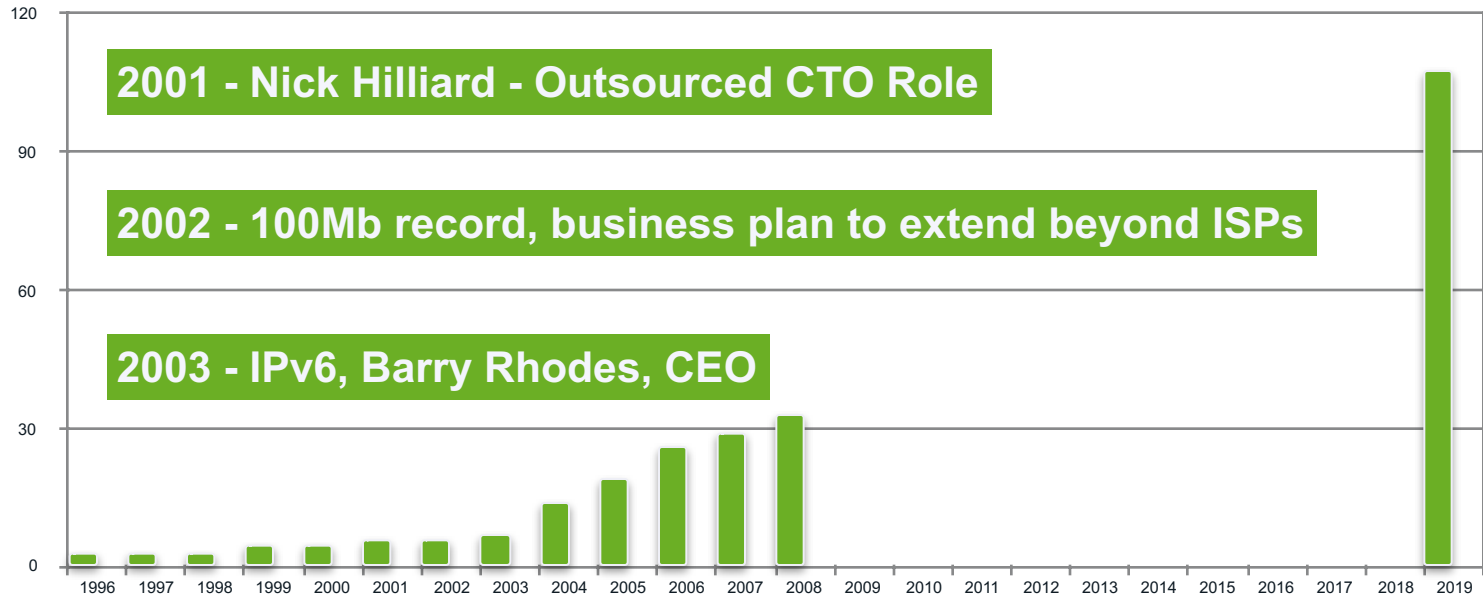


Membership Growth - 1996 - 2008



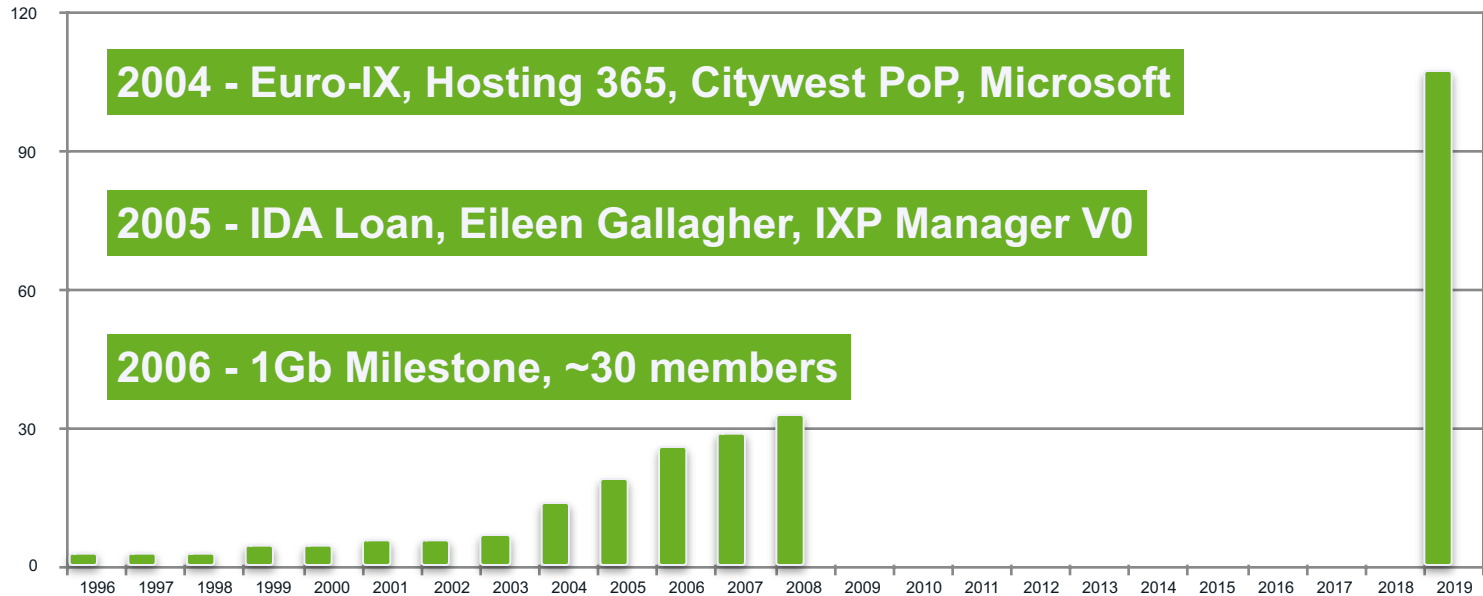
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Membership Growth - 1996 - 2008



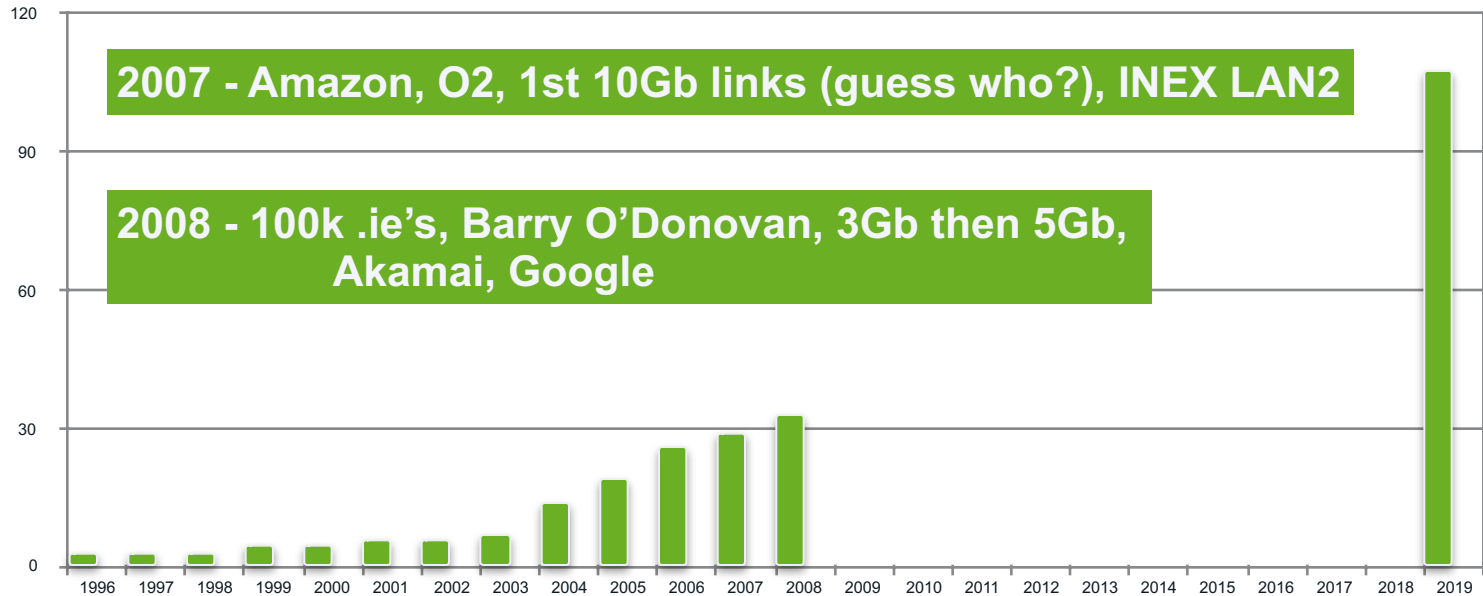
DIAL-UP

Membership Growth - 1996 - 2008



DIAL-UP

Membership Growth - 1996 - 2008





ADSL

After Dial-up Internet Access, We Got ADSL

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by joining ONLINE today

€20 by joining online

€20 credit will be applied to the first invoice value for broadband orders submitted through www.imagine.ie

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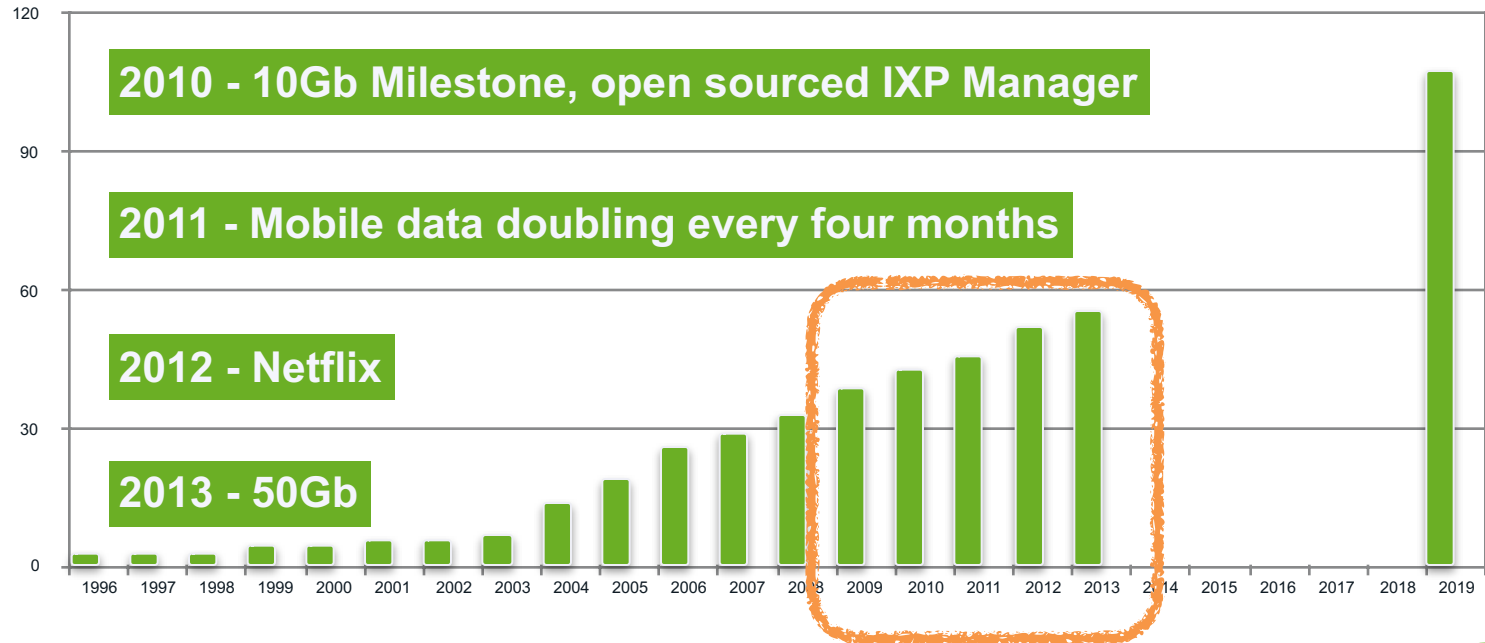
per month

1890 92 92 92

**TEST YOUR
LINE >**

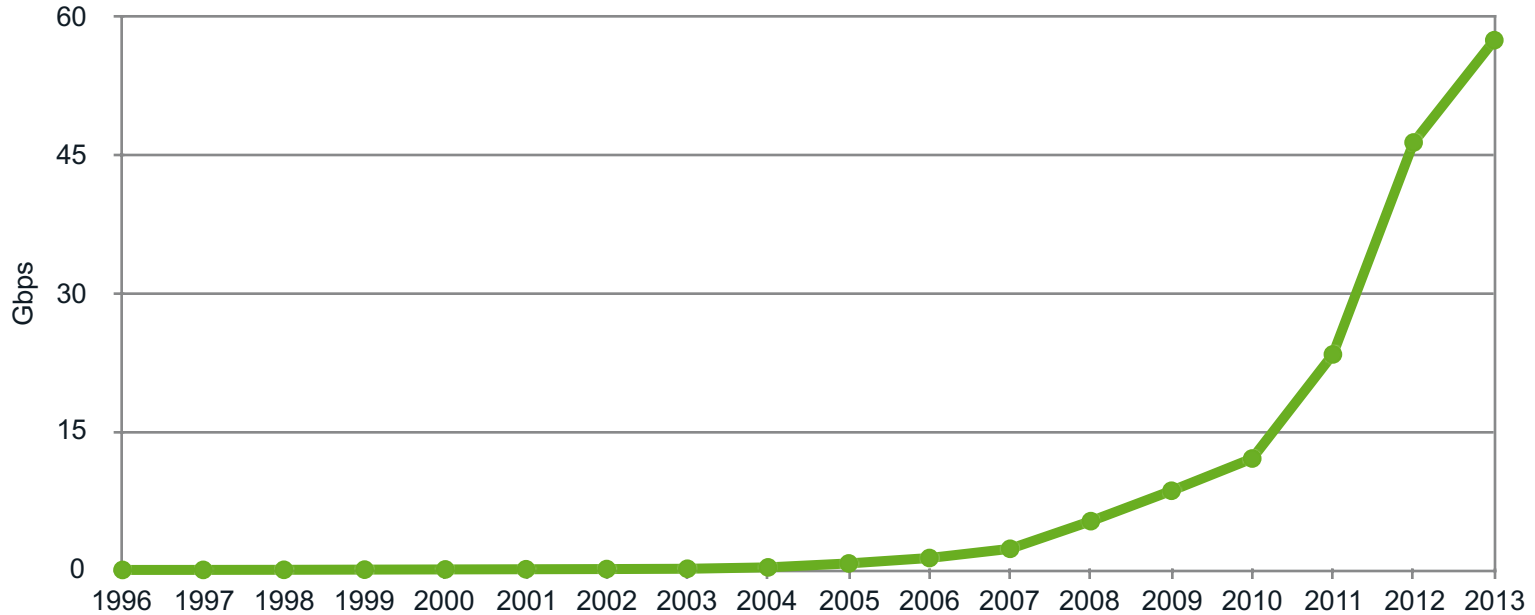
ADSL

Membership Growth - 1996 - 2013



ADSL

Traffic Peaks- 1996 - 2013



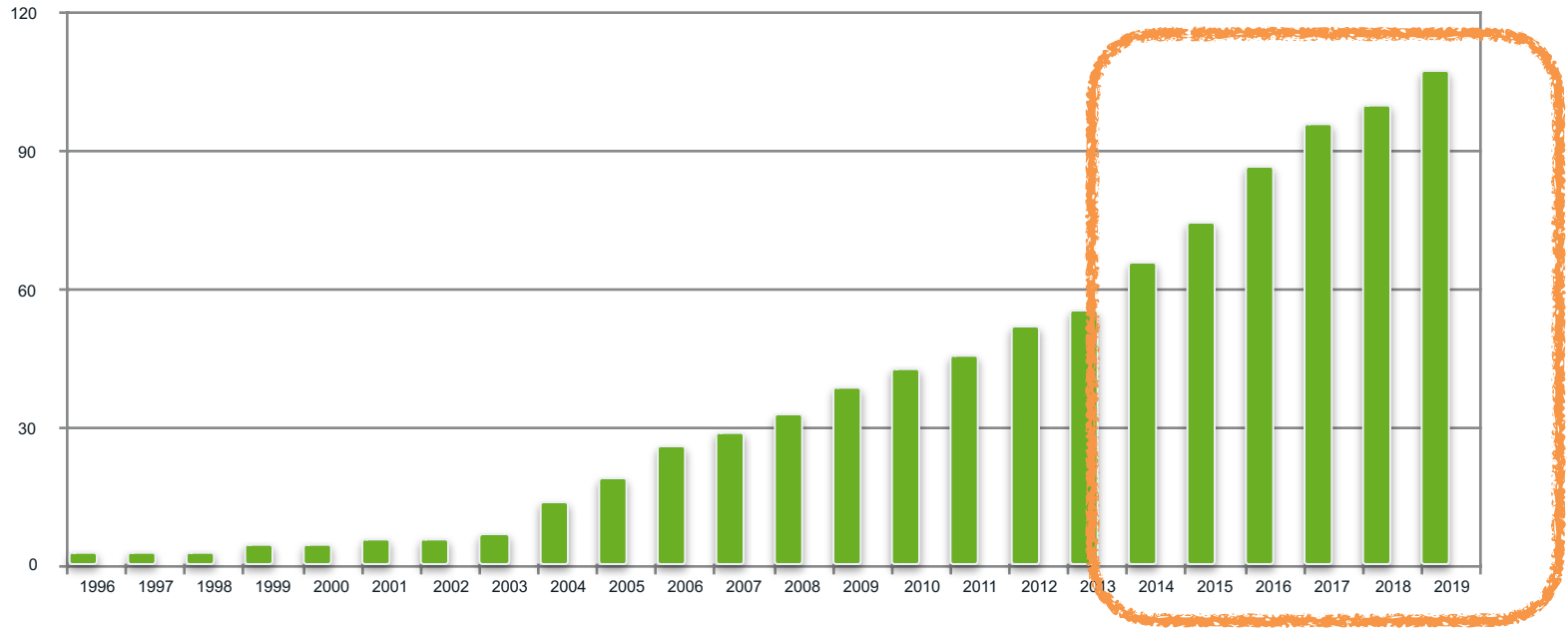


ADSL

From ADSL to VDSL, Mobile, Cable, FTTx - “NGN”

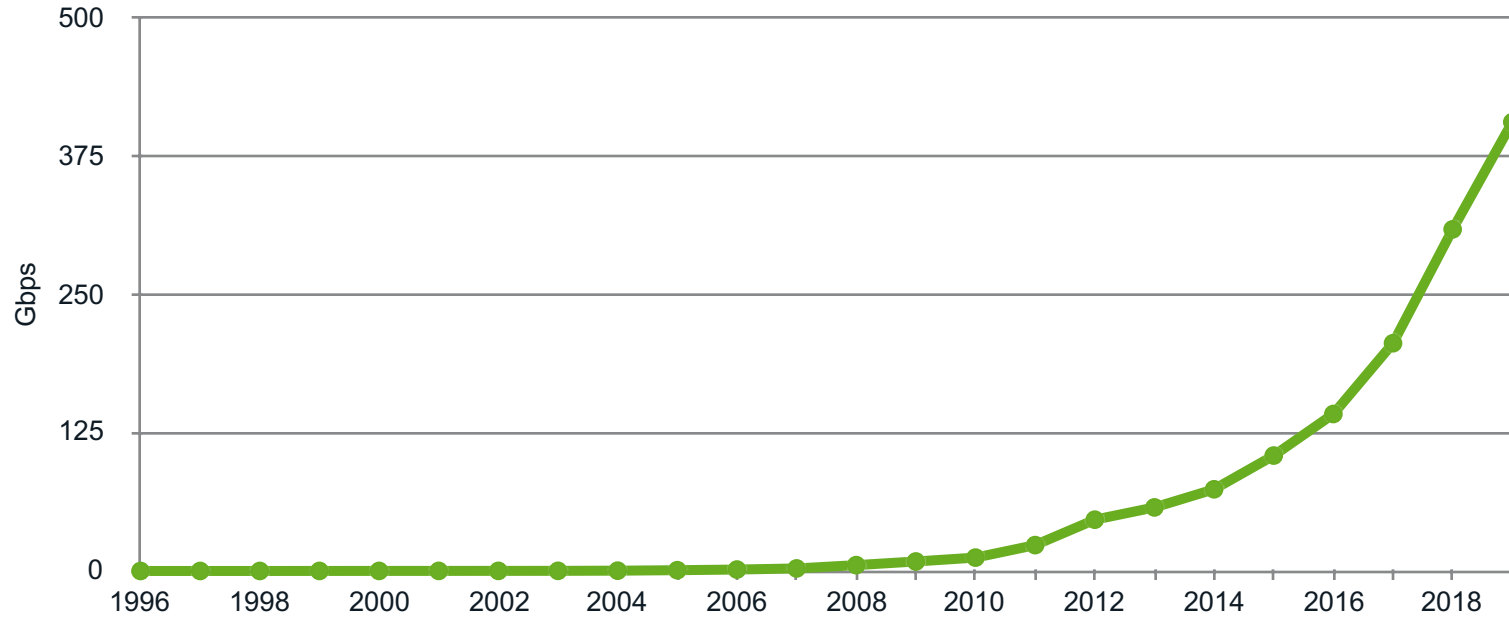
“NGN”

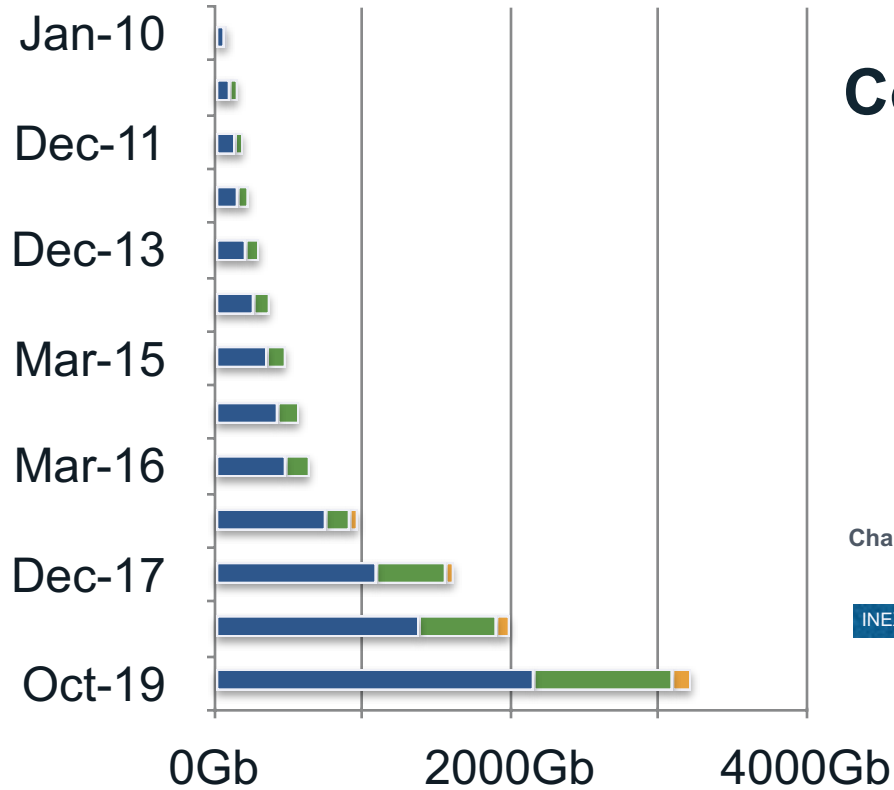
Membership Growth - 1996 - 2019



“NGN”

Traffic Peaks- 1996 - 2019





Connected Edge Capacity

Chart Descriptions

INEX LAN1

INEX LAN2

INEX Cork



INEX

- Peering point for the island of Ireland, member owned association, not for profit, founded in 1996
- ~110 members (inc. ~98% of eyeballs)
- >400Gbps of IP data exchanged at peek
- Dual infrastructure, 8 PoPs, own dark fibre
- Opened INEX Cork in 2016
- IXP Manager / Salt / Napalm automation
- Home of IXP Manager



IXP Manager is a full stack management system for Internet eXchange Points (IXPs) which includes an administration and customer portal; provides end to end provisioning; and both teaches and implements best practice.

Powering 81 IXPs

GitHub

@ixpmanager

<https://github.com/inex/IXP-Manager>



THANK YOU

Any Questions?

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[@barryo79](#) / [@comepeerwithme](#)

<https://www.inex.ie/>



REFERENCES

INEX History Project: <https://www.inex.ie/about-us/history/>

The History of the Irish Internet: <http://internethistory.ie/>

TechArchives: <https://techarchives.irish/> and
<https://techarchives.irish/how-the-internet-came-to-ireland-1987-97/>