1957	IE	The first stored program computer in the country was a Holerith 1200 series machine installed by the Irish Sugar Company in Thurles
1960	IE	The Agricultural Institute (An Foras Taluntais) installed an Elliott 803 around 1960. This is actually the first computer in a HEAnet institution.
1960	IE	The first IBM computer here, an IBM 650, went in to the ESB
1962-03	IE	First computer installed in UCD, an IBM 1620, first computer in a University
1962-06	IE	First computer installed in TCD, an IBM 1620
1965	IE	IBM 1130 installed in TCD
1968	EU	First packet switching network in operation in NPL (UK)
1968-11	IE	IBM 360/44 installed in TCD, and "officially" opened on 9 January,1969, by the then Minister of Education, Brian Lenihan. This was the first time-sharing system in the country although off-line data transmission and on-line transaction processing systems were in use for some years by Aer Lingus. All the TCD terminals were "local" connected by both multi-core and co-ax cables but sometime around 1970, an IBM 1050 was installed by the B of I OR department in Hume House on a leased P&T line. In use until 7-Dec-1979
1969	IE	An 360 RJE service was provided by TCD to UCD in 1969 pending the delivery of the 360/50. It used a "packet" protocol. The packets contained punched cards and the carrier was the UCD President's Mercedes operated by his chauffeur, Jimmy Roche. However, due to financial pressures, the Merc was replaced by a van before the end of the project - cut-backs are not new.
1970-01	IE	IBM 360/50 installed in UCD and connected to an RJE station in Merrion Street via a 2400 baud synchronous line a couple of weeks later.
1970	USA	Alohoanet implemented in Hawaii
1973	USA	Bob Metcalfe at Xerox Parc invents the Ethernet protocol for connecting computers across a local area network.
1973	USA	Vinton Cerf and Robert Kahn present the first paper describing TCP/IP
1975	USA	Bill Gates and Paul Allen establish Microsoft in Albuquerque, New Mexico
1976	UK	Donald Davies coins term "Packet", up to this the term had been "datagrams"
1976	EU	CCITT approves the first guidelines for X.25, a network protocol using virtual circuits. Networks such as SERVnet and EPSS in the UK start to use X.25.
1976	USA	uucp developed at Bell Labs, added to Unix distribution in 1977
1976	USA	Steve Jobs and Steve Wozniak establish Apple Computer
1977	IE	DEC-20 Installed in TCD
1978	IE	DEC-20 Installed in UCD
1978	IE	Following the initial limited exchange of computer work by UCD, Maynooth and TCD, proposals have been agreed, subject to the availability of funds, for the provision of fast dial up facilities at each university computer centres as a further step towards the formation of a Irish Universities computer network. (Never happened)
1978	IE	Sneakernet in operation UCD-TCD
1979	IE	Euronet X.25 service in operation (2723)
1979	IE	Proposal to set up the IUN linking TCD UCD and the NBST
1979	IE	VAXs installed in UCC and TCD

1980	IE	First "SUN" like machines in operation in TCD, precursors of production SUNs
1980	IE	TCD DEC-2040 and UCD IBM 4331 (later 4341) connected
1980	IE	TCD installs its first Ethernet, 3Mb using CATV black cable, connecting SUN-like machines from Stanford
1981	IE	Development of IUN UCD-NBST-TCD
1981	USA	BITNET (Because It's Time Network) starts to connect computer centres worldwide, using mostly 9600 bps leased lines, which are at this time a cost-effective alternative to ARPANET's 56Kbps links. It uses a protocol called NJE that emulates punched cards, but it delivers mail and some other services
1981	USA	Kermit is an extensible file transfer protocol first developed at Columbia University in New York City
1982	EU	EUnet (European UNIX Network) begun by Teus Hagen, Peter Collinson, and Keld Simonsen at the April EUUG (European UNIX User's Group) meeting in Paris, to use UUCP to provide mail and USENET news service. EUnet quickly spread throughout Europe.
1982	IE	A working party setup to look at networking between the Irish universities.
1982	IE	The experimental packet-switched network developed by TCD collaboration with UCD and the NBST became available for practical use during the summer providing access to EURONET and UCD.
1982	USA	Sun Microsystems established.
1983	IE	Big concerns about third party traffic, Telecom Eireann turned a blind eye to what was going on
1983	IE	Funding sought from IBM for an EARN/BITnet node in Ireland
1983	IE	Irish Unix User Group connects to EUnet (uucp)
1983	IE	The experimental NBST/TCD/UCD network operated throughout the year although its reliability was disappointing. In general, it was not heavily used and most of the limited traffic arose from activity on the part of computer staff in both colleges. Some use was made of the facility to access computer installations abroad via the network's EURONET connection.
1983	USA	ArpaNet host protocol changes from NCP to TCP/IP
1984	IE	Eirpac launched and replaces Euronet (2724)
1984	IE	Telecom Eireann set up as a semi-state company.
1984	IE	Unofficial response to the formalisation of X.400 ADMD for Ireland was that anything that threatened the security of the postal system was illegal.
1984		JANET, the Joint Academic Network, is established in the U.K., partly from the former SERCnet. It uses the Coloured Book protocols, which are in some way similar to and influenced both ISO-OSI and TCP/IP.
1985	IE	BITNET (EARN) Node in UCC
1985	IE	BITNET (EARN) Node in UCD, initially to Darmstadt and later to Rutherford
1985	IE	Dennis Jennings of UCD works on sabbatical at the US National Science Foundation (NSF) and leads the development of NSFNet. This work was fundamental to the shaping of the future Internet.
1985	IE	HEAnet in operation via X.25 4.8Kb Eirpac connections
1985	IE	X.25 network in use as terminal concentrators
1985-05	EU	First European Networkshop in Luxembourg
1985-06	IE	Complaints about the catering facilities at the HEAnet technical meetings. It appears that some of the HEAnet working groups used to go out to generous lunches whilst the frugal TWG had to make do with bought in sandwiches in a stuffy basement in TCD, eaten whilst continuing business.
1985-10	IE	Edinburgh Black-Boxes (protocol converters delivered to UCC and UCD)

1985-11	IE	Discussions on OSI migration in HEAnet
1985-11	IE	HEAnet formally adopts naming scheme like "IRL.HEA.NIHEL.VAX1"
1986	IE	Eirpac bill for HEAnet £31,702
1986	IE	EUnet (uucp) connection to TCD, dialup modems at 2400 baud, augmented by IUN connection. Special 7 bit protocol developed for connection.
1986	USA	Cisco Systems founders, husband and wife team Leonard Bosack and Sandra Lerner, sell their first router.
1986	USA	NSFNet goes "live" using 56Kb lines and is saturated within 4 weeks.
1986	IE	Larry Landweber organised a world networking conference in Malahide which set the framework for the subsequent INET conferences and the formation of the Internet Society (ISOC).
1986-02	IE	HEAnet launched officially. Minster for Education Gemma Hussey did not launch it. Email sent to all university presidents and other notables using VAX/VMS mailer over X.25.
1986-05	EU	RARE founded in Amsterdam
1987	EU	RARE Networkshop, Valencia May 1987
1987	IE	Eirpac bill for HEAnet £38,853
1987-05	USA	UUNET, the first organization to sell UUCP and USENET access, begins with initial funding from the USENIX Association. Its founder is Rick Adams, who had long been active in USENET, UUCP, and the Internet while running the node seismo. UUNET has Internet connectivity from the beginning, and gateways mail and news between UUCP, USENET, and the Internet. UUNET later becomes independent, and also starts providing IP connectivity, using the network name AlterNet.
1987-06	IE	Joint university computer centre conference including HEAnet working group meetings. NIHEL 17th June
1987-09	IE	Discussion of RARE working groups at HEAnet technical meeting
1987-09	IE	HEAnet - uucp (EUnet) gateway in operation
1987-12	IE	Technical group of HEAnet agreed to reverse domain names, use .ie and not to implement a second level scheme such as .ac.ie This was approved by the HEA.
1988	EU	COSINE Project
1988	EU	COSINE WG1 - X.400 and Messaging - Tom Wade
1988	EU	COSINE WG3 - Directories and Naming - Peter Flynn
1988	EU	COSINE WG4 - Lower Layers Victor Reijs, Michael Nowlan
1988	EU	COSINE WG8 - Gordon Young
1988	EU	RARE workshop, Les Diablerets, May 1988
1988	IE	Discussion of OSI migration and implementation of X.400 email system (EAN)
1988	IE	Montrose meeting agreed to change domain ordering, up to this HEAnet had used the UK format and had use the three letter code for Ireland so IRL.TCD.VAX1
1988	IE	Traffic exchange between EUnet and HEAnet
1988	IE	DECUS the Digital User Society had a dialup network in operation in Ireland using the PMDF package.
1988-03	IE	It was noted that JANET did not approve of the reversal of the addressing scheme in HEAnet.
1988-06	IE	Joint meeting of HEAnet working groups in Buswells Hotel and UCD
1988-06	IE	Usenet News starts to be distributed
1988-09	IE	Gardai contact HEAnet sites about security of X.25 network
1988-11	World	Morris Worm unleashed taking advantage of bugs in sendmail and fingerd
1989	EU	Berlin Wall falls. The Cold War ends, but one technology it spawned continues to spread, now extending far beyond any government control.
1989	EU	RARE Networkshop, Trieste, May 1989. RARE still refusing to talk about IP, shutting down any mention of it. Much of the RARE funding was coming from the EC in the guise of the COSINE project.

1989	EU	RIPE (Reseaux IP Europeens) established as a coordinating body for IP networks in Europe.
1989	IE	EUnet backbone in Ireland moves to TCD
1989	World	Lottor reports 80,000 hosts on the Internet in January 1989.
1989	USA	NSF specifies its Acceptable Use Policy (AUP), which essentially says the Internet Backbone shall only be used for research or education, or in support of research or education. This AUP is widely misinterpreted to mean that the Internet is non-commercial, but it actually applies only to one backbone network in the Internet, and other backbones quickly start appearing.
1989	USA	PSI (Performance Systems International) incorporated.
1989-01	IE	Add-on CMU TCP/IP package appearing for VAX machines in HEAnet. This had to be purchased as a layered software package, No built in TCP/IP networking, only DECnet.
1989-01	IE	Cork RTC connected to EARN
1989-06	IE	Joint university computer centre conference including HEAnet working group meetings. NIHED 14th June
1989-09	IE	Talking about ISO migration, maybe using DECnet Phase V, definition of DECnet Phase IV addressing scheme for HEAnet
1989-10	World	The W.COM Worm affecting VAX VMS Systems, brought worldwide DECnet to its knees
1990	IE	BITNET (EARN) Node in RTC Carlow
1990	World	The archie indexer of anonymous FTP archives invented at McGill University in Montreal by Alan Emtage and Peter Deutsch. The Internet is suddenly readily usable by people without personal login accounts on more than one machine, since archie can find a file for you and anonymous FTP can retrieve it.
1990	World	WAIS (Wide Area Information Servers) invented by Brewster Kahle, backed of Thinking Machines, Inc., and others. WAIS permits distributed document servers with documents indexed by multiple methods and searched by various techniques
1990-01	IE	IP address space assignments being made in HEAnet
1990-01	USA	AlterNet begins operations. PSInet begins operations. These are privately owned IP backbone networks or at least national scale.
1990-05	EU	RARE - EARN Networking Conference in Killarney connected via X.25 (Eirpac) and VAX./VMS email 15-17 May 1990
1990-05	IE	Telecom Eireann proposal for X.25 VPN at 64k for HEAnet sites
1990-06	IE	DIT Connected to X.25
1990-06	IE	HEAnet "Futures" committee formed to look at the next 5 years of HEAnet
1990-12	IE	HEAnet adopts the policy of connecting campus LANs together rather than just machines.
1990-12	IE	John Boland appeared on the scene representing DCU
1991	EU	EUnet decides to commercialize, and incorporates the next year. In addition to its traditional role as a UUCP provider, it becomes the largest IP provider in Europe, connecting dozen member countries, including North African countries such as Algeria and Tunisia and Near Eastern nations such as Turkey and Israel.
1991	EU	First connection IXI
1991	EU	Hosts on the Internet in Europe increase by a factor of four, as Europeans grow tired of waiting for OSI protocols to be specified and implemented and turn to TCP/IP instead.
1991	IE	Direct 64k circuit TCD-UCD for TCD's 400 anniversary
1991	IE	Discussions with RTCs, DIT, Eolas looking at a 3rd level network "EINET"
1991	IE	Dundalk RTC connects to EUnet
1991	IE	HEAnet uses Eirpac VPN (not volume charged) Agreement ends at end of 1992 but was extended to March 1993.
1991	IE	Installation of cisco routers in all universities
1991	IE	Installation of Satlecom X.25 switches to replace the Camtec boxes in UCD and TCD

1991	IE	Ireland's first commercial Internet service provider, Ieunet http://www.ieunet.ie/, established as a campus company in Trinity College Dublin.
1991	IE	Most universities using VAX/VMS with PSI X.25 networking, some usage of CMU TCP/IP, a limited amount of Unix in place, DECnet used extensively
1991	IE	UCD Computing Services group starts to administer the .ie top level domain as a public service.
1991	IE	Universities use 64k Eirpac VPN
1991	USA	Gopher invented at the University of Minnesota by Paul Lindner and Mark P. McCahill.
1991	USA	Mike Schwartz of the University of Colorado at Boulder invents netfind, for locating people, and the term Resource Discovery to refer to it and related protocols such as archie, WAIS, Gopher, and WWW.
1991-03	IE	Camtec X.25 boxes being phased out in favour of Setlecom switches
1991-03	IE	HEAnet "Futures" committee reports and proposes a router based network carrying several protocols (mostly TCP/IP) over X.25 HEAnet-2
1991-04	IE	Offer from SURFnet in NL to connect Ireland to internet via IXI at RARE WG8 meeting
1991-06	IE	9.6k line to the internet from TCD. This was operated by EUnet in cooperation with TCD and connected both LANs to the internet via Canterbury (UKC) and EUnet in Amsterdam. Enormous delays were encountered in purchasing appropriately approved modems and the leased line itself. Even in duopoly UK there was no real competition for lines at this stage. There is a copy of the email that was sent out the next day announcing the availability of the service.
1991-06	IE	TCD & Ieunet directly connected to internet UCD connected via IXI around the same time, it is thought that the TCD/Ieunet connection was ahead by a matter of weeks
1991-08	IE	".ie" domain management moved from Harvard to UCD where it stayed until spun off as a UCD Campus Company, the IEDR.
1991-09	EU	Ebone began in September 1991 when representatives of several European academic and research networks met to resolve long-standing European connectivity problems. Their approach was to evaluate existing available links, to look for opportunities to bring these links together quickly under a unified approach, and to make plans to enhance these links. This was documented in the initial Ebone proposal. [EBONE-92]
1992	EU	OSI is clearly dead, although vestiges of it, such as X.400 (mail) and X.500 (directory) services live on in pockets.
1992	IE	Ireland Online connects to EUnet
1992	IE	TCD IP connection 64 Kb
1992	IE	Tender document for NOC operation, awarded to UCD
1992	IE	Universities taking large feeds of Usenet News.
1992	World	Gopher traffic increases approximately six fold, leaving traditional services such as FTP behind (in growth rate; not in absolute traffic).
1992	World	World-Wide Web (WWW) invented by Tim Berners-Lee and others at CERN (European Nuclear Research Centre). This protocol and related software permits distributed hypertext across the Internet.
1992	IE	Carlow RTC IP connected to UCD at 9600 baud
1992-02	IE	Extension of routed protocols, dropping of Coloured Books, standardisation on SMTP mail transfer.
1992-04	EU	Ebone in operation with core 256K and 512K lines and 1.5M+2*512K to the US
1992-05	IE	First discussion of a direct HEAnet-Janet connection
1992-09	EU	EBONE is completed in forming a pan-European IP backbone; this was done as a cooperative venture, without significant initial government backing or funding.
1992-09	IE	First discussions with Telecom Eireann on use of a Dublin MAN
1992-11	IE	First fulltime employee of HEAnet, Mike Norris
1992-11	IE	The Euristix report on a National Research Network
1992-11	USA	Digital launch the Alpha range of processors

1993	IE	3 staff in HEAnet, one in HEA and 2 in UCD NOC
1993	IE	Experimental connections to Telecom Eireann's MAN TIRONET
1993	IE	HEAnet Ireland's academic and research network commences operations at University College Dublin.
1993	IE	TCD IP connection 128 Kb
1993	IE	Universities move to 128K DASSnet links to NOC in UCD, HEAnet-3
1993	World	CERN declares that its HTML-based World Wide Web technology would be freely usable by anyone.
1993	USA	Marc Andreesen, a university student, develops the NCSA Mosaic browser.
1993	USA	U.C. Berkely connected to internet at 3Mb
1993	World	The year of Mosaic and WWW
1993-03	EU	JANET still using X.25/OSI but IP creeping in, planning for JIPS
1993-03	IE	HEAnet-3 in operation based in UCD, routing IP, IPX, DECnet, X.25 used locally for X.25 type traffic. This is based on leased digital circuits rather than X.25
1993-03	IE	LAN Comms formed
1993-04	World	200 sites on the web
1993-04	IE	Euristix report on a national network NREN
1993-04	IE	Proposal for a HEAnet archive server to replace the "Dalkey Archives"
1993-07	IE	curia.ucc.ie listed on web directory
1993-07	EU	RARE Operational Unit starts in Cambridge RARE-OU
1994	EU	IXI link increased to 256K
1994	IE	HEAnet links increased to 256K
1994	IE	Mosaic in use in TCD
1994	IE	X.500 directories project, precursor to LDAP
1994	USA	Netscape Communications Founded
1994-01	IE	RTCnet connects to HEAnet, managed by UCD NOC
1994-04	IE	Eurovision Song Contest on web
1994-04	IE	RTC Cork connects to RTCNET managed by UCD, other RTCs follow
1994-07	IE	HEAnet connected to EuropaNet (EMPB) at 64K, IP and X.25
1994-08	IE	Internet Eireann starts up as an ISP connected to Canada at 24Kb, ceases in Feb 1996
1994-08	IE	Start of discussions on the formation of what turns out to be the INEX
1994-10	EU	EARN and RARE merge to become TERENA, the Trans-European Research and Education Networking Association.
1994-10	IE	UCG terminate direct X.25 connection
1994-11	IE	Genesis Project starts as an ISP in Cork as well as Belfast
1994-11	IE	NCIR joins HEAnet
1995	IE	Contract to set up and run NIS at BTIS in Limerick
1995	IE	Telecom market opens up a bit, multiple bidders for new transatlantic capacity for HEAnet. Following the selection of a supplier there was a long drawn out period when the line was just about to be installed, subsequently the initial order was cancelled and an alternative put in place very quickly.
1995	USA	Funding for NSFNet backbone in the US ceases.
1995-01	IE	Talk of setting up HEAnet formally as a limited company
1995-01	USA	Microsoft buys shares in UUNET, the parent of AlterNet. MCI begins offering Internet access. This is significant in that Microsoft had consistently stated that they say little future for the internet.
1995-02	IE	HEAnet contract with UCD is renewed
1995-03	EU	TEN-34 starts to be talked about, migrated to TEN-155 and then Geant
1995-05	IE	CAO connects to HEAnet
1995-05	IE	Joint meeting of HEAnet working groups, maybe the first conference, working groups terminate handing over to professional staff at HEAnet
1995-08	IE	INEX RFP posted
1995-11	IE	ISP Indigo launched

1996-01	IE	2Mb link to Janet in operation
1996-01	IE	TCD IP connection 512 Kb from 128Kb
1996-01	IE	Wind down of DECnet and IPX on HEAnet
1996-06	IE	Tender for dialup
1996-07	IE	HEAnet gets a Telecom Operators License
1996-10	IE	RTCnet reconfigured to link through Tallaght
1996-10	IE	Fast track proposal to form a company, rent offices, relocate HEAnet NOC and staff, recruit a Director and appoint an interim triumvirate directorship. The "Three Wise Men".
1997	IE	TCD IP connection 2 Mb
1997-04	IE	Advertisement for Director of HEAnet
1997-08		Lease signed for Marine House offices
1997-10	IE	HEAnet arranges a special deal with Telecom Eireann for dialup access Tinet)
1997-10	IE	HEAnet CEO takes up position
1997-10	IE	Indigo sold to Telecom Eireann
1997-11	IE	HEAnet incorporated
1998	IE	TCD IP connection 2 Mb
1998-01	IE	Final meeting of HEAnet Management Committee
1998-01	IE	HEAnet Board meetings and AGM
1998-03	EU	EUnet International bought by Qwest
1998-06	EU	Ebone bought by GTS
1998-12	IE	End of Telecom Eireann's home phone monopoly
1999	IE	TCD IP connection 5 Mb
1999	IE	At least one Irish ISP is still supporting email delivery via uucp.
1999	USA	Two Princeton graduate students invent Google search engine
1999-01	EU	KPN forms joint-venture with Qwest, formerly EUnet
1999-01	IE	HEAnet Board meetings and AGM
1999-02	IE	ATM pilot in Dublin
1999-03	IE	Article in ireland.com calling spam a legitimate marketing tool
1999-03	IE	Launch of HEAnet ISI service
1999-06	IE	"Ocean" start to provide "free" dialup access
1999-06	IE	HEAnet connected directly to TEN-155
1999-06	IE	IPO of Telecom Eireann, now Eircom
1999-09	IE	Esat purchase PostGem and IOL
1999-11	EU	KPN-Qwest IPO
1999-12	IE	Y2K :-)
2000	IE	Dennis Jennings departs from UCD
2000	IE	TCD IP connection 8 Mb
2000	IE	Year dominated by the applications of networking
2000-01	IE	BT buys out ESB part of Ocean, merges into ESAT/BT
2000-06	IE	HEAnet officially joins Dante
2000-07	IE	Lease on Marine House premises expired
2000-09	IE	Tenders out for new connections to NI, Europe, Internet-2 and general internet
2001	IE	TCD IP connection 30 Mb
2001-03	IE	Foot and Mouth disease
2001-06	IE	HEAnet moves from Marine House to Brooklawn House
2001-06	World	PSInet files for Chapter 11
2001-06	IE	Eircom Board approves Valentia offer for Eircom
2001-09	IE	IP V6 arrives (whatever happened to IP V5 ?)
2001-09	World	Tests of network resilience
2001-10	EU	Ebone sold by GTS to KPNQwest

2001-11	IE	1st HEAnet Networking conference in Thurles
2002	IE	TCD IP connection 40 Mb
2002-02	World	Global Crossing goes into Chapter 11
2002-05	World	Teleglobe files for bankruptcy protection
2002-04	World	FLAG Telecom files for Chapter 11
2002-05	World	KPNQwest files for Chapter 11 leaving several European NRENs in serious trouble including UKERNA in the UK.
2002-06	IE	TERENA Networking Conference in Limerick
2002-07	World	WorldCom files for Chapter 11.
2002-11	IE	2nd HEAnet Networking conference in Kilkenny
2003	IE	TCD IP connection 1 Gb
2003-09	IE	Irish Stamp issued in honour of Wicklow born Captain Robert Halpin who was master of the vessel which laid the first telecommunications cables.
2003-11	IE	HEAnet 3rd annual conference in Kilkenny. Keynote speakers were Brendan Touhy from the DCMNR and Dai Davies from Geant. Special celebrations were held to honour the imminent retirement of the founder of HEAnet and Secretary of the HEA John Hayden.
2003	USA	U.C. Berkely connected to internet at 3Gb
Sources		Current and past HEAnet people especially John Boland and Mike Norris
		University Computer Centre people, especially John Moriarty, Dennis Jennings, Gordon Young, Michael Walsh
		John Quarterman's histories
		Carl Malamud's books
		Ken Gordon's notes from the TWG
		Michael Nowlan's personal records