

Internet organizations

WHAT IS THE INTERNET?	2
Capitalisation and enunciation	2
World Wide Web	3
Electronic mail	3
INTERNATIONAL INTERNET ORGANISATIONS	3
Internet Society - ISOC	3
IETF	3
IESG	4
IAB	4
IRTF	4
RFC Editor	4
ICANN	4
IANA	5
Verisign	5
RIPE	5
InterNic	5
World Wide Web Consortium	5
NATIONAL INTERNET ORGANISATIONS	6
ISOC-SE	6
II-stiftelsen	6
NDR	6
NIC-SE	6
ATF	6
TU-stiftelsen	6
Netnod AB	7
Autonomica	7
SOF	7
SUNET	7
KTHNOC	7
NUNOC	7
NORDUnet	7
SNUS	8
The IT Commission	8
PTS	8
SSNf	8
BitoS	9
SNIF	9

What is the Internet?

(From Wikipedia)

The **Internet** is the world's largest computer network and a system for easy and efficient communication of text, sound and images. The World Wide Web, e-mail and file sharing are popular areas of use for the Internet. It has facilitated communication on a worldwide basis and has been very significant to transnational and multinational companies.

The Internet comprises many computer networks that are joined together at nodes with connections to neighboring networks and backbone networks that have a very high transfer capacity. The networks can be run as:

- Company networks that link a company's computers
- Supplier networks that link paying customers
- University networks.

Individual homes are often connected to a network by means of telephone or cable TV network. Until the end of the 1990s, the most common way of linking a home computer was to use the analogue telephone modem. This provides links that are technically limited to a data transfer speed of around 100 kbps per second. Many Internet users have subsequently changed over to using ADSL, which gives a significantly higher transfer speed over telephone lines. It has also become more common for homes to be linked via LAN. Somewhere around the end of the century, it became even more common to have mobile telephones that could connect to the Internet.

Most of the Internet traffic uses the TCP/IP protocol with IP version 4 (IPv4). Since there will soon be a shortage of IP addresses, a new version of IP, version 6, has started to be used. IPv4 had an adequate number of bits for 2^{32} (around 4.3 billion) addresses, while IPv6 gives access to 2^{128} (around 340 sextillion) addresses. (Due to technical factors and scaling problems, the actual number of machines that can be addressed in both cases is significantly smaller.)

IPv6 also has several other benefits. These include improved support for traffic prioritization and mobile IP. When communicating with a mobile node (which a computer or router is called using IPv6 terminology), the traffic can be sent directly to the recipient without needing to go through the home node, which is the case with IPv4. *Stateless autoconfiguration* gives the option of plug 'n' play for networks; a network prefix that is given by the router is automatically combined with a suffix that is structured on the basis of the link layer address which, for Ethernet, is the MAC address. It results in the same address each time as opposed to temporary addresses that are given out via DHCP.

Capitalization and enunciation

The Internet is actually a proper noun, but some language purists maintain that the word has lost the character of a proper noun. The Swedish News Agency therefore prescribes starting with a lowercase letter, for example.

However, as opposed to *intranet*, Internet cannot be used in the definite form¹ or made plural, and the Swedish Computer Terminology Group therefore prescribes a capital letter to start with, even if it does also accept starting with a small letter. In contexts where a capital letter is used, internet

¹ Translator's note: in English, the Internet is commonly referred to in the definite form.

with a small “i” is a general designation of a computer network with different link layer technicians.

Internet enunciations are usually spoken with the emphasis on *Inter-*, like in English. The emphasis can also be placed on *-net*, like in *interval*.

The word has been formed from *inter*, which means between, and *net* for network. *Intra* in intranet means within.

World Wide Web

The World Wide Web, *WWW* or *the Web*, is one of the Internet applications that has been disseminated the most. You can use the Web for services such as forums, communities, blogs, e-commerce and wikis. WWW was the phenomenon that made the Internet popular among the public. Before the WWW made an impact, the Internet was something that was used mostly at universities and to some extent in major companies, but it was little known in the media.

The World Wide Web is used with a Web browser as client software. In the 1990s, Netscape was dominant, but when Microsoft developed its Internet Explorer Web browser into a fundamental component of its Microsoft Windows operating system, it took over the majority of the Web browser market and therefore rapidly developed into the one that was used the most. Other alternatives such as Firefox and Opera have become popular in the 21st Century.

The Safari browser is the primary one used in the Mac family. Under Linux and other UNIX-like operating systems, Firefox is the dominant Web browser.

Electronic mail

E-mail is the oldest application on the Internet (Arpanet 1971). You send a one-way message that is stored by the recipient and read when he has his e-mail software active. Originally, it was possible to send only the text message, until the option of sending appendices in the form of files, including HTML documents was added later.

International Internet organizations

Internet Society - ISOC

[Internet Society](#), also called ISOC, is the organization that comes the closest to being “the one that makes decisions regarding the Internet”. ISOC, which was formed in 1992, is a non-profit association and is formally registered in the USA. Its secretariat is in the city of Reston, near Washington D.C., in the USA. In line with the fact that the association is growing, national sub-departments, known as chapters, have been formed in many countries. The Swedish chapter is ISOC-SE. ISOC works with both the Internet’s technology and its social effects. An important part of the technical work concerns developing the Internet’s “architecture” and technical standards for the Net. This takes place through ISOC being the organizational host for the groups that are in charge of developing standards for the Internet, IETF for example.

IETF

The Internet Engineering Task Force (IETF) is not an organization in the formal sense, but rather a process with a number of rules of conduct. The aim of the process is to draw up standardization documents for the Internet. These are published as RFCs (Requests for Comments). Not all RFCs are standard specifications, however.

The main part of the work in the IETF process is taken care of in working groups (wgs). Work in these groups mainly takes place through a mailing list to which anyone at all can link up. This

mailing list has a regulation and a purpose that are established when the group is started. When this purpose (often the publication of an RFC) has been fulfilled, the group is discontinued.

IETF also arranges conferences where the participants meet face to face. However, the decisions that are made at these times are not more important than those that may be made on the mailing list – quite the opposite. Decisions are made through rough consensus, i.e. virtually all participants on the mailing list must give their consent or at least not object to a proposal. IETF has a secretariat with employees who primarily arrange the conferences and keep a registry of Internet Drafts, i.e. proposals for RFCs.

IESG

Internet Engineering Steering Group (IESG) can be said to be the IETF's management. Its main task is to examine that which the working groups agree on and other proposals for RFCs. It is enough to have two of the group members against something for IESG to stop a proposal for an RFC. One very important task for IESG is to ensure that various standards do not conflict with one another.

IESG consists of what are known as Area Directors (ADs). Each one is chosen for two years to be responsible for a specific subject area such as security or routing. At the moment, there are eight areas. One area manager is formally selected by IAB but, in practice, IAB always approves the proposals from the special election committee NomCom.

IAB

Internet Architecture Board (IAB) is ISOC's advisory body in technical matters. IAB has the task of ensuring the uniformity of the Internet's development and is something of the spider in the web for the different more or less independent groups and processes that work with maintaining and developing the Internet's technical systems.

IAB signs agreements with such bodies as RFC Editor and IANA regarding the tasks that these handle and also constitutes a "board of appeal" if someone thinks that the IETF process has not been carried out correctly. IAB appoints the representatives in IESG, and has IRTF as a direct sub-body. Members of IAB are formally selected by ISOC but, in practice, the same process is used as the one to select members of IESG and NomCom.

IRTF

If IETF concerns itself with application protocol and solving specific problems, the task of the Internet Research Task Force (IRTF) is to be in charge of long-term fundamental research within the Internet area. Work is conducted in research groups (rg, research group). IRTF reports to IAB.

RFC Editor

RFC Editor is one or more persons whose main task is to decide in cooperation with IESG which Internet Drafts will become RFCs. RFC Editor must also ensure that all RFCs are set up in a uniform way and that there is a reliable archive of all RFCs. RFC Editor is given its task by IAB. At the moment, IAB has a contract for this assignment with the ISI department at the University of Southern California (USC).

ICANN

Internet Corporation for Assigned Names and Numbers (ICANN) is an international non-profit-making organization that was formed in 1999 to take over the responsibility of developing a policy concerning the allocation of IP numbers and domain names on the Internet. ICANN is also responsible for the policy concerning the registration of other parameters that are required in Internet standards. ICANN is led by a board with members from different parts of the world. The

organization's head office is in California, USA. ICANN does not deal with the operative work of registering IP numbers and domain names, but delegates these tasks to different companies and organizations. IANA is an operative part of ICANN.

IANA

Internet Assigned Numbers Authority (IANA) has the task of keeping an eye on all of the parameters and values that are needed in various Internet standards. The most important is the allocation of IP numbers and domain names. IANA is a technical function within the ICANN organization, which now **assigns to IANA**. The technical management as regards to the Internet protocol remains with IETF/IESG/IAB, however. IANA's work is described in RFCs and an MOU (Memorandum² of Understanding) between ICANN and IETF.

Verisign

The American company Verisign (formerly NSI or Network Solutions) was split into two different functions in 1999. They are Network Solutions, an agent where you can register domain names in many top domains, and Verisign Global Registry System (VGRS) that handles DNS for “.com” and “.net”.

RIPE

Réseaux IP Européens (RIPE) is a joint organization for Internet operators in Europe, parts of the former Soviet Union, western Asia up to and incl. Afghanistan, and Africa to around the equator. RIPE aims to coordinate the work so that the Internet's European portion functions efficiently.

The main part of the work takes place in various working groups. An important part of RIPE's operations is the creation of instructions for the regional registry that exists within RIPE's area, RIPE NCC.

Other registries exist in North America (ARIN), South America (LACNIC), Asia (APNIC) and Africa (AFRINIC). IANA gives them the responsibility of allocating IP numbers within their area. RIPE NCC allocates to approximately 1,000 local registries, which in turn give IP numbers to end users.

InterNic

InterNic was the name of a project that was run by the American “research council” NSF until the autumn of 1998. Within InterNic, the companies NSI and AT&T took care of different parts of the catalogue services for the Internet in the USA.

World Wide Web Consortium

World Wide Web Consortium (W3C) is an international body with the aim of developing the World Wide Web. One university in each of the USA, Europe and Japan jointly host the consortium. W3C was formed in 1994 and is thereby a significantly younger phenomenon than IETF.

² Translator's note: the original text should say Memorandum, not Memory.

W3C works with producing common protocols for the Web and plays an important role as the archive for specifications of things such as all different versions of the Web's code language HTML and its different commands. For example, W3C handles XML, SOAP and thereby the basis for many Web services. W3C also produces software that demonstrates new opportunities on the Web. The consortium also organizes meetings and conferences. Only organizations and companies can be members of W3C

National Internet organizations

ISOC-SE

ISOC-SE is the Swedish branch of Internet Society (ISOC). ISOC-SE is a non-profit-making association that issues the newsletter Nytt På Nätet [News on the Net], and organizes member meetings and conferences. Other important tasks are to act as a referral body and actively monitor more important reports. A number of working groups monitor specific subjects and the association cooperates with other Internet-related (sic). ISOC-SE has been actively involved in work with building up an organization for domain names handling in Sweden, and appoints two of the members of the II-stiftelsen [Internet Infrastructure Foundation, IIS] board.

II-stiftelsen

The Internet Infrastructure Foundation, II-stiftelsen, has two main tasks: to run and develop the Internet's Swedish top domain .SE and to otherwise promote the development of the Internet's infrastructure in Sweden.

II-stiftelsen was formed for these purposes in 1997 at the initiative of ISOC-SE, when the .SE domain began to grow far more quickly and needed a stable organization that could take long-term responsibility. At the same time, the foundation started the wholly-owned operating company NIC-SE to take care of the day-to-day operational and administrative running of .SE.

NDR

The Committee for Domain Name Rules in Sweden (NDR) was formed in 1998 by II-stiftelsen to administer and develop the rules system required for the domain names handling to function. When II-stiftelsen transferred over to a simpler rule system in 2003, the committee was discontinued.

NIC-SE

Network Information Centre Sweden (NIC-SE) AB was established in 1997 and was the operating company that administered and ran the Swedish domain names registry .SE under the instruction of its owner II-stiftelsen. The operating company NIC-SE was discontinued as a legal entity in 2006 and the business was integrated into II-stiftelsen.

ATF

ATF stands for "alternative dispute solution procedure". The alternative dispute solution procedure was administered by II-stiftelsen and can be utilized in clear cases of misuse where the domain name holder is not entitled to, or has no justified interest in the designation that constitutes the domain name, and where the domain name has been registered or used in bad faith. If a domain name holder loses a dispute within ATF, the domain name can be either deregistered or transferred to the party who brought the case. The alternative dispute solution is taken care of by independent lawyers and is administered by II-stiftelsen

TU-stiftelsen

The Foundation for the Development of Telematics (TU-stiftelsen) is the owner of the Internet exchange point company Netnod Internet Exchange i Sverige AB.

Netnod AB

Netnod Internet Exchange in Sweden AB (Netnod) establishes and runs Internet exchange points for the exchange of traffic on the Internet between various operators' sub-networks. Netnod was formed to act as a competition-neutral and independent head of these Internet exchange points. Netnod AB is owned by TU-stiftelsen. Netnod consults on all important matters with the Internet operators who have national coverage in Sweden. This takes place through cooperation in SOF, for example.

Autonomica

Autonomica is the company that sees to the running of the Internet exchange points in Sweden at the request of Netnod. The company is owned by Netnod. Autonomica is also occupied with developing a number of common, competition-neutral services in the Swedish branch of the Internet. Those working at the company include several experts on the DNS system and on advanced routing.

SOF

Swedish Operators' Forum (SOF) is a cooperation body for the main operators on the Internet in Sweden. SOF works primarily with issues concerning national Internet exchange points, peering and other functions and operating issues that are necessary for the Internet to function well in Sweden. SOF has worked informally for several years but has been a non-profit-making association since May 1999. SOF is represented in II-stiftelsen and has been a reference body for Statskontorets Internetutredning [the Swedish Agency for Administrative Development's Internet Investigation]. SOF can also be said to be Netnod's counterpart, the company that handles the national Internet exchange points in Sweden.

SUNET

SUNET stands for Swedish University Computer Network and is the Swedish university computer network that links the country's universities and technical colleges. SUNET is led by a board that has mainly technical college representatives. In terms of administration, SUNET sorts under the Swedish Research Council. Umeå University's task is to be responsible for coordinating and developing SUNET and responsibility for SUNET's information service.

KTHNOC

KTH Network Operation Centre (KTHNOC) was a competence centre within the Royal Institute of Technology in Stockholm. KTHNOC was responsible for the operation and development tasks at the request of the Swedish university computer network SUNET from the start, and the Nordic equivalent, NORDUnet, up until 2007. KTHNOC was very significant to the development of the Internet in Sweden, primarily in that it was responsible for the operation of the first operator Internet exchange point in the country for a number of years.

NUNOC

Nordunet Network Operations Centre is a monitoring organization for the latest SUNET version, OptoSunet, which was put to use in March 2007. NUNOC was established by [NORDUnet](#) and operates at Tulegatan 11 in Stockholm.

NORDUnet

SUNET is a part of the Nordic university computer network NORDUnet that links the Nordic countries' university computer networks with one another with high capacity links. These are then connected to the rest of the Internet. As well as the fundamental Internet services, NORDUnet runs a DNS root name server along with Netnod.

SNUS

Swedish Network Users Society (SNUS) is a non-profit-making association for Swedish network users. The aim is to increase the network knowledge in Sweden. SNUS is primarily aimed at the technical aspects of network use. SNUS works with spreading knowledge, primarily through working groups, seminars, test reports and a membership magazine. The aim is to increase the understanding of network technology, promote the development of peering and cooperation within the area and to test which technical solutions actually function in reality.

The IT Commission

The IT commission - formally the Commission for the analysis of information technology's influence on social development – is the Government's adviser on overall and strategic IT issues. This means, among other things, that the Commission must take the initiative in development endeavors, control and coordinate the development work that is ongoing, and ensure that the knowledge on information technology is disseminated to all parts of society. It must also provide concrete proposals for the way in which the information technology can be used to increase growth and employment and the way in which the technology can be made more accessible.

The Commission consists of around eight members who are appointed by the Government and are led by the Minister for Industry, Employment and Communications. The Commission has a secretariat with five secretaries, one information manager and a Chief Executive. A number of observatories were established within the framework of the IT Commission.

PTS

The Swedish Post and Telecom Agency (PTS) is a governmental authority that works with the objective where everyone in Sweden will have access to efficient, value-for-money and secure communication within the telecoms, IT, radio and postal areas. PTS is working on following the development, issuing directions and allocating licenses, checking that the laws are being complied with and providing users and the public with information. The authority has around 200 employees and is spread among different places of business in Sweden.

PTS is participating in the planning of the IT expansion in Sweden in cooperation with authorities and industries. By allocating resources to the expansion work, PTS ensures that the networks are robust and that the consequences of strains on society are minimized. The Government has also given PTS the task of working with protection against IT incidents, e.g. computer virus attacks.

The function that is called Sweden's IT incident centre, Sitic, must register and analyze IT incidents and systematically collect information to be able to quickly provide information on new problems that may disrupt IT systems.

SSNf

The Swedish Urban Network Association (SSNf) is an independent industry organization for network owners that work actively with the expansion of the broadband infrastructure. The association was formed in 1998 and its members are local authorities and companies that own or run communication networks that are available to everyone. Members are also found within the operator and supplier section of the telecoms and data communications industry.

SSNf monitors the network owners' interests as regards working towards an alternative, independent infrastructure for the telecoms and data communications market that stimulates the competition between service suppliers throughout Sweden. The association also monitors the network owners' interests as a referral body in legal and standardization matters, and follows the development within technology and market. The association also gives its members the option of

exchanging experience in matters such as operation and maintenance, operation reliability and documentation.

BitoS

The industry association for content and service suppliers on the online market in Sweden (BitoS) collects companies who develop and sell services via the Internet and other electronic environments. BitoS' work takes place primarily through various working groups that must finance their operations themselves. The association's task is to work towards clear, flexible and technology-independent rules and regulations that facilitate a free competition market based on open solutions.

The association also works towards its members being able to comply with good business practice. BitoS represents and markets the content industry and functions as a referral body. The association has (by collecting names, among other methods) run a campaign against the Swedish Personal Information Act and the threat to freedom of speech on the Net that this Act constitutes. Another important issue for BitoS is to create instruments to measure visits to Web pages and other values that are important to developing the Internet as a medium for business.

SNIF

The purpose of the Swedish Network Info Association (SNIF) is to constitute a competition-neutral arena for discussions on the Swedish information landscape. There are a number of information nodes and competence centers (companies, organizations, institutions and associations) that have knowledge of available information within their respective business areas. These recognize the need for network-based information and want to work towards the dissemination and use thereof.

SNIF provides an arena for debate and the exchange of information concerning questions that are common to these players. The association has both organization members, such as the National Archive, the National Library of Sweden and VINNOVA, and individual people who are subscription members.