domain.wire

Issue 1, 2004

Tribute to Liikanen

What is WHOIS?

Helping to grow the Internet

Internationalising Internet Addresses

Centr

Welcome to domain.wire!

"You affect the world by what you browse".

Sir Tim Berners-Lee, widely recognised as the inventor of the World Wide Web, is right: the Internet is changing the world day by day, with each new user bringing their own knowledge, culture and desires to the "Internet Community". As a platform for innovation and individual user freedom, the Internet community encompasses a diverse range of interests.

The very existence of this community justifies the work of the members of Council of European National Top Level Domain Registries (CENTR). Because of each Registry's special duty to their local Internet communities, and their extensive participation in the global community, CENTR members are in touch with most of the relevant technical, political, and economic issues of the Internet. This newsletter has been developed as a way to share some of this with a greater number of people, and as a catalyst for dialogue between members of all our communities.

With a view on the political implications of the Internet – like the one expressed for years by European Commissioner Erkii Liikanen (*see opposite*) – as well as the technical and administrative issues that affect the Internet, CENTR hopes this newsletter will prove to be a barometer of the evolution of the Internet and also as a tool to better understand the many facets of the Domain Name System.

We think this first issue embodies this philosophy and truly hope you find it useful!

Paul M. Kane
Chairman

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The *Council of European National Top Level Domain Registries* - CENTR for short - is an international association of Internet Country Code Top-Level Domain Registries (ccTLDs) such as .uk in the United Kingdom and .es in Spain. CENTR has currently over 40 ccTLD Members which altogether hold around 15 million registered domain names. CENTR members represent more that 95% of the total domain names registered worldwide.

Created by European ccTLDs in March 1998, CENTR was legally established in the UK in 1999. Funded by membership fees, CENTR's activities take place all over the world, including attending relevant meetings to support the interests of local and global Internet Communities. To ensure the best European presence, CENTR staff are located in three offices located in Brussels, Oxford and Salzburg.

CENTR acts as a channel of communication between Internet related bodies and other organisations including governments, promoting the interests of its ccTLDs members and their respective local Internet communities. CENTR is honoured to count the European Commission as an official observer with which exchanges have always been fruitful.

Four times a year, CENTR General Assemblies bring ccTLD management together for intense discussion, development of policy and best practice, as well as gathering of information through specific meetings of Legal and Technical communities.

Thanks to the diversity of its members, CENTR combines the highest expertise and experience in the domain name industry. Closely following international affairs, CENTR offers its broad knowledge and its advice to the international delegations - such as the World Summit on Information Society.

CENTR members share the same belief that involvement of the private sector is essential to ensure the stability and continued growth of the Internet. CENTR's wish is to continue working closely with governments to make sure the legislative framework maintains a fine balance between public sector, business entities and the civil society.

Over time, CENTR's scope has expanded far beyond its original European context, and new members from around the globe are being welcomed all the time. Whilst preserving a strong European focus, input from other regions has made CENTR an essential forum for ccTLD development.

PHOTO: EUROPEAN COMMISSION

A Successful Partnership

CENTR pays tribute to Commissioner Liikanen

Since the beginning, CENTR has sought to build on the dynamic and multi-cultural diversity of the domain name system, by promoting a distinctive European identity within the global Internet community.

The underlying vision has been of a Europe capable of exploiting its diversity to create cooperative European networks of excellence that deliver world-class services to European users.

The results so far have been impressive – European ccTLDs are acknowledged world-wide as leaders in the field and set the standard in international benchmarks. Such co-operation of course needs to be reinforced by public authorities that share this vision and commitment of ensuring that Europe is at the forefront of the Information Society.

In this respect, no one in the public sector has personified this commitment better than European Commissioner Erkki Liikanen who will leave his functions as Member of the European Commission responsible for enterprise and information society later this year.

e is the key

Throughout his term as Commissioner, Mr Liikanen has tirelessly championed the Information Society, not least through his *eEurope* initiative. In his first speech on the topic in January 2000, Commissioner Liikanen outlined ten strategically important goals for an "eEurope".

The "eEurope 2005" action plan was subsequently launched by the Commissioner at the Seville European Council in June 2002, with the aim to develop modern public services and a dynamic environment for electronic business. Key elements to assist this would be widespread availability of broadband access at competitive prices, as well as a secure infrastructure for information exchange.

Since the initiative was first announced, the progress made has been impressive: Internet usage in Europe has seen an unparalleled growth of 97.2%. By September of last year, an impressive 13.1 million European children were using the Internet. Forrester predicts a €5.3 trillion value for ecommerce by the end of this year, and thanks to increased competition, broadband access is expected to deliver annual growth of 22% for the next 5 years.

Much of this progress has been stimulated and promoted by the efforts of Commissioner Liikanen as he focussed the minds of Europe's policy makers on the need for Europe to become a leading and truly knowledge-based economy. ▶

Liikanen, continued

Understanding and helping the Private sector

Importantly, the other hat worn by Mr Liikanen in Brussels is that of Commissioner for Enterprise policy, promoting entrepreneurialism and competitiveness in European industry. This role has won him wide-scale respect within the private sector as a champion of business and the market economy.

In times when European technocracy is blamed for almost everything, he has always been an advocate of a liberal, self-regulatory approach, notably in the Information Society world. He backs "self-regulation as a flexible, efficient and cost-effective alternative to regulation in many areas - achieving the same results without the delays of a time-consuming lawmaking process".

It was not surprising then to hear him during the Preparatory Committee meeting of the World Summit on the Information Society, a key meeting held in Geneva last December. There, he defined the summit as an opportunity for an "Information Society for all [which] opens new perspectives for private-public partnerships to develop new technological solutions and new models for encouraging the take up of those solutions." He stressed that the Political Declaration agreed by the Summit be based on "A pro-competitive legal and regulatory framework [which] can mobilise investment and foster growth and development, based on market forces".

Commissioner Liikanen has always shown a great understanding of the importance of private sector investment and initiative in the Internet. In December 2003, he stated: "The Internet has been a wonderful story. It is very important that we guarantee [its] stability", adding "Putting governments in charge of the Internet isn't the solution, we have to keep the Internet running and secure".

In order to use European public sector co-operation to further this aim, he has recently proposed an EU High Level Group on Internet Governance. CENTR hopes that a better understanding of how the Internet operates will help governments appreciate the success of self-regulation to date and to develop strategies to support those who currently manage the Internet's infrastructure.

The Commissioner's involvement with the DNS has extended to initiatives such as the launch of the .EU Top Level Domain which will hopefully become active later this year and will, according to Mr Liikanen, "give European citizens and businesses the possibility to acquire a European identity on the Internet". More recently, he also published a set of recommended actions Europe should take to combat against spam.

These are just a few of the initiatives taken by Mr Liikanen that we could talk about, but it is clear that his contribution to the development Europe's Information Society over the last 5 years has been immense. In particular, CENTR members recognise his support and commitment to European Internet infrastructure operators during his term, and wish him well in all his future endeavours. As the United Nations launches its own debate on Internet governance, it is to be hoped that Mr Liikanen's legacy of Internet growth and promotion thorough private sector initiative with public sector support will not be forgotten.

CENTR Executive Committee meets with Commissioner Liikanen, February 2004. L-R: Michael Niebel (EC), Sabine Dolderer (.de), Paul Kane (.ac), Erkki Liikanen (EC), Bart Boswinkel (.nl), Alf Hansen (.no), George Papapavlou (EC).

If it works, don't break it!

How to help and maintain the growth of the Internet

Many CENTR members have been part of this industry since at least the middle of the 1980s, and so much has changed since those days when domains were just used to connect a few universities together. Today, CENTR members are responsible for over 15 million domain names, as the Internet has evolved from a research project to an essential tool for millions. However, one thing has remained unchanged in the process – country-code top level domains (ccTLDs) are still, for the most part, run by non-government entities in the public interest.

In retrospect, that should come as no surprise: unhindered competition has always played a substantial role in the evolution of the Internet, and on several fronts. Web applications have been created in a competitive marketplace, with a growing number of features that result in a better experience to the users. In turn, these give access to a vast choice of online content, ultimately morphing the World Wide Web into a medium that competes with television and print publications to entertain and inform. Choice in email and instant messaging software has considerably increased as well, creating an opportunity to communicate easily all over the world, even in countries where free information exchange is not always granted. As the basis of all these examples one finds the free market thinking that underpins the Internet.

As with the telephone system a decade ago, many opportunities arose thanks to new players from the private sector, that ultimately benefited the consumer. The success of ecommerce illustrates one of the most striking results of this approach. In France, online transactions grew 69% in 2003, while in Germany the value of electronic transations should reach €300 billion by the end of this year. Obviously, domain names play am unforgettable role in this evolution. A web address is often the only information potential customers have to reach ecommerce sites – some are even used as the company's sole brand. ccTLDs, in particular, are considered valuable in local communities as they give an immediate indication of the origin of the web site.

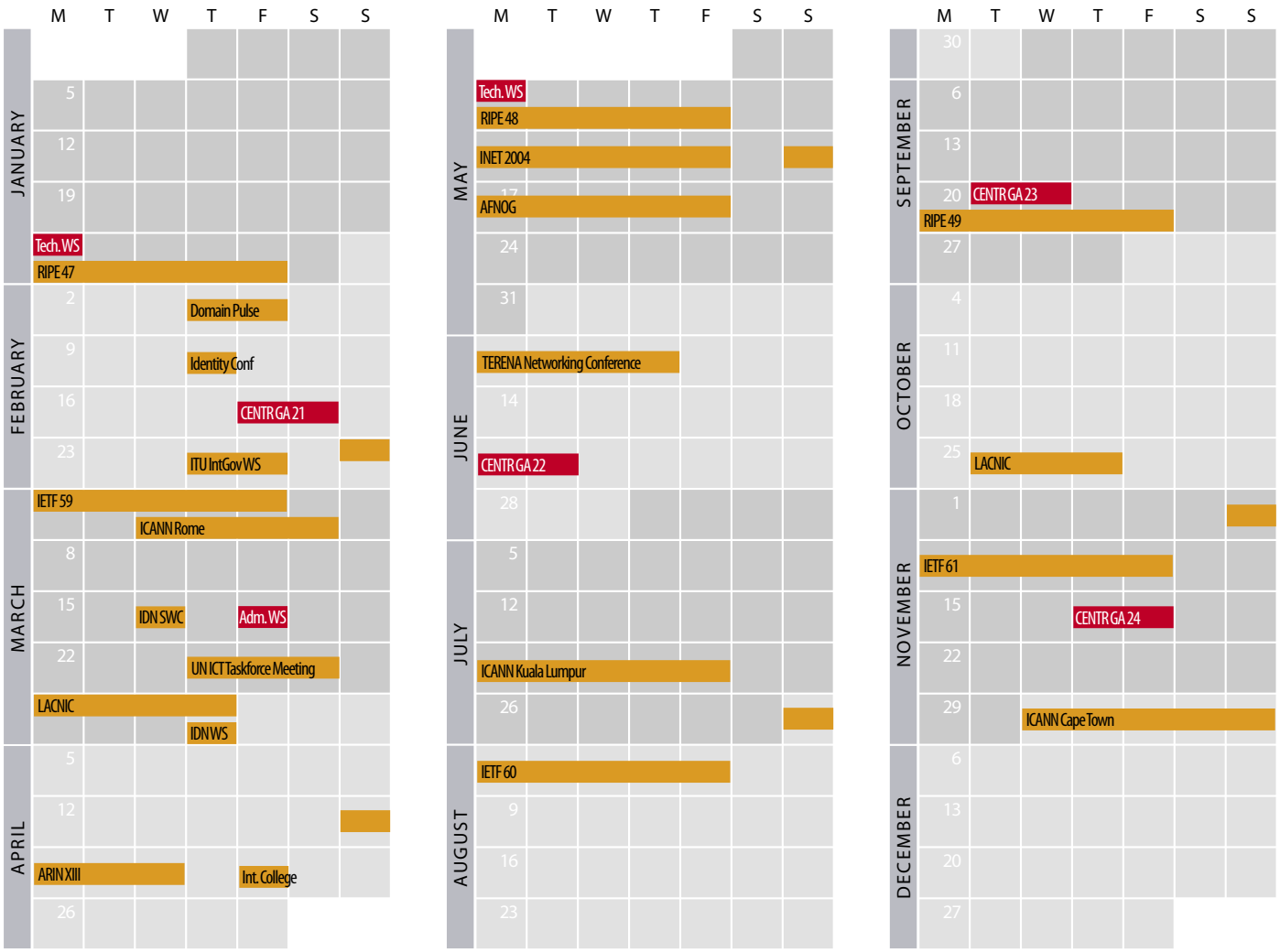
This is, in part, why CENTR members want to support and maintain the role of the private sector on the Internet. That is not to say they oppose the involvement of governments, rather they aim to work with them to promote the aims of the global and local Internet communities they represent. Contrary to some commentary – notably during the World Summit of the Information Society held last December – governments and private sector are not fighting over "power". All have the interests of the Internet at heart, because in the end the Internet benefits everyone.

Partnership between the private sector and governments is essential when it comes to the Internet, and governments around the world are starting to appreciate the importantance of liberalising their regulatory regimes to stimulate inward investment and economic growth. Whilst Canada - according to a recent Accenture study – is still the leader in e-government with its "five-year goal to become the world's most citizen-connected government", the recent initiative of the French government, called "The Internet is of Public Interest", involved many stakeholders from the private sector. These suppliers gave computers, software, expertise and Internet access, all areas where the government had no interest in replacing the existing providers. Furthermore, the French government used the event to support de-regulation and private sector investment, and as a direct result is seeing an impressive 60% growth of ecommerce in only one year.

The Internet as we know it would have little to gain, if anything at all, by moving from the current self-regulatory approach, to an increase of government regulation. Private sector must listen to public officials, and bridges must be built or consolidated. But in turn, public officials have to recognize the essential and ongoing role of the independent initiatives that have resulted in the Internet as we know it today.

CENTR General Assembly 21. ccTLD managers meet regularly to discuss best practice and develop policy.

Calendar of Events



February – 5-6: **Domainpulse** (Zürich, CH), 12: **Identity, Confidence, Security in Internet** (Paris, FR), 19-20: **CENTR GA** (Salzburg, AT), 26-27: **ITU Int. Gov. WS** (Geneva, CH), 29-5/3: **IETF** (Seoul, KR).
March – 2-6: **ICANN** (Rome, IT), 17: **IDN Software Consort** (Seoul, KR) 19: **CENTR Admin. WS** (Warsaw, PL), 25-27: **UN ICT TF** (New York, US), 29-1/4: **LACNIC** (Montevideo, UY)
April – 1: **IDN Forum** (Cologne, DE), 1: *.at,.de,.ch,.hu launch IDNs*, 7: *.ru turns 10,* 15: **SIDN Conf.** (Den Haag, NL),18-21: **ARIN** (Vancouver, CA), 22: *DENIC turns 10,* 23: **Inter'l College** (Paris, FR)
May – 3-7: **RIPE** (Amsterdam, NL), 10-14: **INET** (Barcelona, ES), 16-21: **AFNOG** (Dakar, SN). 22: *.fr liberalisation*.
June – 7-10: **TERENA** (Rhodes, GR), 21-22: **CENTR GA** (Stockholm, SE).
July – 1: *.is launch IDNs,* 19-23: **ICANN** (Kuala Lumpur, MY).
August – 1-6: **IETF** (San Diego, US).
September – 20-24: **RIPE** (Manchester, UK), 21-22: **CENTR GA** (Yerevan, AM).
October – 26-28: **LACNIC**.
November – 7-12: **IETF**, 18-19: **CENTR GA** (Zürich, CH).
December – 1-5: **ICANN** (Cape Town, ZA).

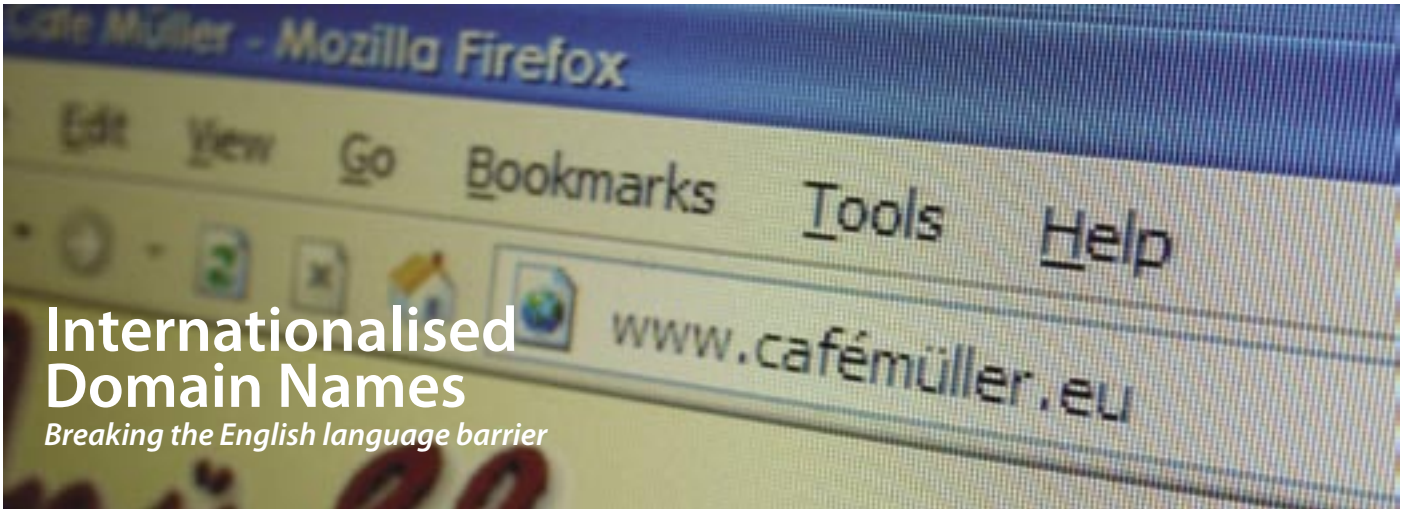
What is WHOIS?

The WHOIS service plays an important role in the operation of a domain name registry, but is not well known by most Internet users. Designed as a lookup tool to allow network engineers to contact each other quickly in case of network problems, the protocols use is now dominated by its use to identify who owns a domain name.

On some occassions it is important to find out if a domain name is currently registered and by whom. It can also be a way for customers to make sure that the company behind an ecommerce site is legitimate, and the name and address of the company that registered a domain name can provide a good indication of this.

CENTR members usually provide a WHOIS service using the conventional WHOIS protocol, as well as via a gateway on their website. This provides a simple mechanism for Internet users to fill in a form and get answers on a specific domain name.

As the WHOIS services display personal information on the registrant of the domain – such as the name, address and phone number – privacy issues can arise. ▶



Internationalised Domain Names

Breaking the English language barrier

The latest technical innovation for domain names has recently launched in a big way within Europe - the ability to register domains with a larger choice of characters than the standard A to Z.

Traditionally, the domain name system has only allowed the 26 letters of the Latin alphabet, numbers, and hyphens in a domain name. With the growing use of the Internet worldwide, there has been a demand to use domain names that reflect local writing styles. "Internationalised Domain Names", or IDNs for short, provide this ability.

Whilst IDNs will provide the possibility for the Germans to use eisbär.de instead of eisbar.de, the greatest benefits will be in countries that do not use a Latin based character set for their writing. In Asian countries, for example, the use of Latin scripts has always been difficult in Internet communications. Using IDNs will enable users to more seamlessly use the Internet using characters they better understand.

At a technical level, IDNs work by adding an extra layer to the DNS. Characters from non-Latin character sets are represented in the Unicode standard, and then encoded in a special way. This extra conversion layer means that the domain name remains in an ASCII format, and means that all the DNS servers around the world can continue to operate unchanged. Internet providers, for example, don't need to make any technical changes to their servers to support IDNs.

The ASCII encoded format is always prefixed with "xn--", and therefore are easily identifiable. During launch, registrars and ISPs will likely deal with this form. The domain "eisbär.de" would be represented as "xn--eisbr-jra.de", for example.

The conversion between these two forms happens in software – for example, your email client or web browser. When you type in eisbär.de into your software, it will immediately convert it to xn--eisbr-jra.de for checking in the DNS.

Therefore, to implement IDNs, most of the Internet is ready to go. The only two changes required is in domain registries, which must provide registration options to allow IDNs, and in computer software, which must be updated to support the IDN conversion step.

Computer software has quickly been updated to support IDNs in late 2003. The latest versions of the Mozilla, Netscape, Opera and Safari have IDN support. Whilst Microsoft's Internet Explorer and Outlook do not have IDN support yet, a free software plugin which adds the functionality is available from the web. It is hoped Microsoft will natively support IDNs in the next releases of their software.

The matter of allowing IDNs in a ccTLD registry is a little more complex. Whilst deploying IDNs is not a difficult technical task, policies on domain name eli- ▶

CENTR is currently developing best practices to ensure the rights of the registrant are protected. If the registry is based in a European Union country, it is subject to the European Directive on Data Privacy. The principles of this directive can also be found in legislation in other countries, such as Argentina, Canada and Japan.

The first of these principles is that the registrant has the right to access, modify or remove any personal data contained in the registry. The registrant should also be able to refuse the publication of certain types of data (such as their phone number, or email address). Every registry remains responsible for its own data privacy policy, but CENTR believes by having its members define a set of basic principles could be useful to protect registrants and help build confidence in electronic commerce.

As another measure to enhance privacy, some registries provide simple "availability checks" which allow anyone to determine if a domain name is registered or not, without accessing any possibly sensitive personal data. By providing such a service – which accounts for a substantial amount of WHOIS use – access to more sensitive information can be further restricted.

gibility and well as administrative processes must be reviewed and adapted.

The key policy of interest to registrants is likely to be which characters are permitted. Most registries will likely restrict registrations to only those characters needed to represent local languages. This would limit the administrative difficulties for the registry, registrars and ISPs – who only have to process requests in languages which they are familiar with. Without these kinds of restrictions, there would likely be considerable difficulty for an Italian registrar to handle a request for a domain written in Russian Cyrillic or Thai.

The rollout of IDNs varies from country to country, but the first European countries to allow IDNs began registrations in late 2003. Poland and Sweden were amongst the pioneers, with other countries like Germany, Austria, Hungary and Iceland coming on board in early 2004.

European countries have taken various different approaches to their policy.

Sweden, for their launch, have only allowed registrations with five additional letters needed to express their language (åääöéü), whereas the German speaking countries will add an additional 92 characters needed for most western and central European languages. The Polish registry has been one of the most liberal to date - permitting a collection of Latin, Cyrillic, Hebrew, Arabic and Greek.

It is unclear how popular IDNs will become. In Europe, many have become accustomed to simply being restricted to the letters A-Z, and perhaps are happy to stick to this combination. Without all the major web browsers and email programs supporting IDNs properly, there is little incentive to use IDNs yet – as they will not work for everyone. However, domain registries are prepared so that when community demand for IDNs improves, systems are in place to deal with it in a stable and predictable way.

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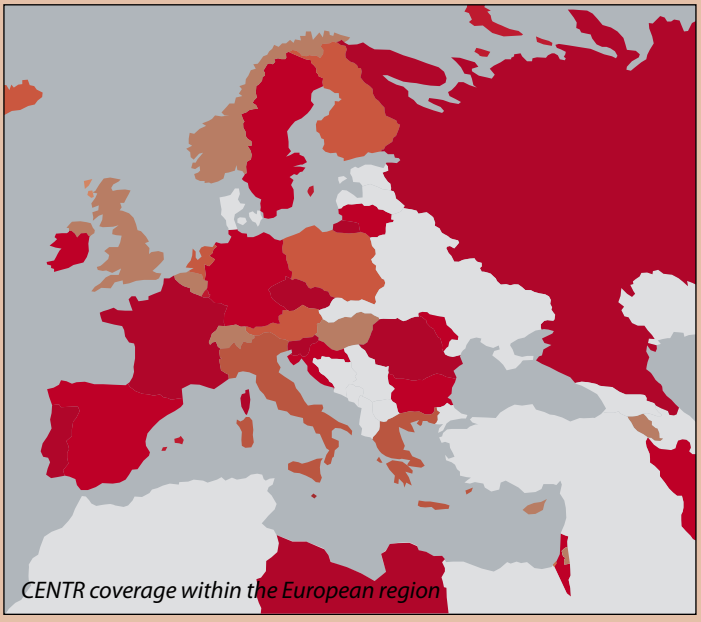
CENTR's Global Membership

STA Andorra (.ad); **ISOC.AM** Armenia (.am); **NIC.AC** Ascension Is. (.ac), Diego Garcia (.io), St Helena (.sh); **NIC.AT** Austria (.at); **DNS Belgium** Belgium (.be); **Digital Systems** Bulgaria (.bg); **CIRA** Canada (.ca); **CARNet** Croatia (.hr); **UCY-DNS** Cyprus (.cy); **CZ.NIC** Czech Republic (.cz); **DENIC** Germany (.de); **FICORA** Finland (.fi); **AFNIC** France (.fr), Mayotte (.yt), Reunion (.re), St. Pierre & Miquelon (.pm), Wallis & Futuna Is. (.wf); **GibNet** Gibraltar (.gi); **GR-Hostmaster** Greece (.gr); **Island Networks** Guernsey (.gg), Jersey (.je); **CHIP** Hungary (.hu); **IEDR** Ireland (.ie); **IPM** Iran (.ir); **ISNIC** Iceland (.is); **ISOC-IL** Israel (.il); **IT-NIC** Italy (.it); **NIC.LY** Libya (.ly); **LITNET NOC** Lithuania (.lt); **RESTENA DNS-LU** Luxembourg (.lu); **NIC Malta** Malta (.mt); **MoldData** Moldova (.md); **SIDN** Netherlands (.nl); **NORID** Norway (.no), Bouvet Is. (.bv), Svalbard & Jan Mayen Is. (.sj); **Palestinian Registry** Palestine (.ps); **NASK** Poland (.pl); **FCCN** Portugal (.pt); **RNC** Romania (.ro); **Ros-NIIROS** Russia (.ru); **RED.ES** Spain (.es); **ARNES** Slovenia (.si); **IIS** Sweden (.se); **SWITCH** Switzerland (.ch), Lichtenstein (.li); **Nominet UK** United Kingdom (.uk).
Associate members — **JPRS** Japan (.jp); **NIC-Mexico** Mexico (.mx); **ISOCNZ** New Zealand (.nz); **NeuStar** United States of America (.us); **VeriSign** (.com, .net); **Afilias** (.info); **Public Interest Registry** (.org). *As at March 2004.*



CENTR coverage within the European region