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Comparing Domain Name Administration in OECD Countries

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COMPARING DOMAIN NAME ADMINISTRATION IN OECD COUNTRIES

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FOREWORD

In December 2002 this report was presented to the Working Party on Telecommunications and Information Services Policy (TISP) and was recommended to be made public by the Committee for Information, Computer and Communications Policy (ICCP).

The report was prepared by Mr. Masayuki Matsui of the OECD's Directorate for Science, Technology and Industry. It is published on the responsibility of the Secretary-General of the OECD.

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Introduction

The domain name system (DNS) assists users to navigate the Internet. Domain names are used to translate Internet Protocol (IP) addresses, which are represented by numbers, into letters for the convenience of Internet users. All computer hosts connected to the Internet have IP addresses and these addresses are nearly always represented by domain names. The aim of this paper is to provide comparative information on the administration of domain names across the OECD area.

Domain names have a hierarchical structure under the DNS.[1] The highest level of the DNS, indicated by the last right part of the domain names punctuated by the dot ("."), is called the top level domain (TLD). For example, the domain name of the OECD is "oecd.org" and ".org" is the TLD. The following level of the DNS is called the second level domain (SLD) (*e.g.* "oecd" in "oecd.org"). The TLDs are divided into two classes, one is the generic top level domains (gTLDs) (*e.g.* ".com" or ".org") and the other is the country-code top level domains (ccTLDs). The ccTLDs have been designated to countries or regions in the world, expressed in two letters country codes based on the ISO 3166-1 standard (*e.g.* ".au" or ".fr").[2] While the gTLDs, which do not have a geographic or country designation, are governed by rules set up by the Internet Corporation for Assigned Names and Numbers (ICANN)[3], the ccTLDs are governed by rules made by each ccTLD authority.[4] With regard to the administration of ccTLDs, there are principles suggested by the Governmental Advisory Committee (GAC) of ICANN[5] to assist in the development of best practice for the delegation and administration of ccTLDs.[6] The main purpose of these principles is to contribute to the development of models of a communication between the relevant government or public authority and ICANN, between ICANN and the registry and between the relevant government or public authority and the registry.

Summary of current status of ccTLDs

The number of domain name registrations under major gTLDs and the ccTLDs of the OECD member countries has increased rapidly over recent years. The major gTLDs grew from 17.4 million in July 2000 to 28.7 million in July 2002 (**Table 1**). At the same time the number of registrations in the ccTLDs of the OECD member countries more than doubled from 6.7 million to 15 million.

Table 1. Number of domain names registrations

	cc	Registrations July 2000	Registrations July 2002	Publicly available
Australia	.au	148 539	250 000	No
Austria	.at	157 387	252 441	Yes
Belgium	.be	32 709	206 989	Yes
Canada	.ca	60 000	300 000	Yes
Czech Republic	.cz	66 555	119 145	Yes
Denmark	.dk	208 300	397 552	Yes
Finland	.fi	17 603	36 210	No
France	.fr	89 097	155 554	Yes
Germany	.de	1 732 994	5 666 269	Yes
Greece	.gr	18 670	55 000	No
Hungary	.hu	..	81 804	Yes
Iceland	.is	3 300	8 200	Yes
Ireland	.ie	15 506	29 920	Yes
Italy	.it	417 609	735 156	Yes
Japan	.jp	190 709	482 644	Yes
Korea	.kr	494 074	479 643	Yes
Luxembourg	.lu	11 404	15 454	Yes
Mexico	.mx	49 947	71 590	Yes
Netherlands	.nl	532 596	748 510	Yes
New Zealand	.nz	67 777	111 000	Yes
Norway	.no	45,541	150 000	Yes
Poland	.pl	56 708	150 812	Yes
Portugal	.pt	14 394	26 158	Yes
Slovak Republic	.sk	..	57 091	Yes
Spain	.es	29 590	40 952	Yes
Sweden	.se	45 241	102 785	No
Switzerland	.ch	262 822	456 539	Yes
Turkey	.tr	..	37 822	Yes
United Kingdom	.uk	1 938 740	3 635 585	Yes
United States	.us		269 233	Yes
ccTLDs Total		6 707 812	15 130 058	
.com		13 721 175	21 198 557	Yes
.net		2 305 075	3 586 124	Yes
.org		1 449 775	2 328 690	Yes
.biz		..	700 962	Yes
.info		..	864 457	Yes
.name		..	77 448	Yes
Major gTLDs total		17 476 025	28 756 238	
Total		24 183 837	43 886 296	

Note 1:   ".gr" registrations relate to 31 March 2000 rather than July 2000.

Note 2:   Information on growth in ".se" registrations is available on NIC-SE's website.

Source: OECD, Compiled from country and generic NICs, August 2002.

Table 2.   ccTLD registries in all OECD countries

	cc	ccTLD registries	Status	URL
Australia	.au	auDA (.au Domain Administration)	Not-for-profit company	http://www.auda.org.au
Austria	.at	Nic.at	ISP association	http://www.nic.at
Belgium	.be	dns.be	Non-profit organisation	http://www.dns.be
Canada	.ca	CIRA (Canadian Internet Registration Authority)	Not-for-profit Canadian corporation	http://www.cira.ca/
Czech Republic	.cz	CZ-NIC	Special interest Association of Legal Entities (z.s.p.o.)	http://www.nic.cz
Denmark	.dk	DK Hostmaster	A limited company, which is 100% owned by Dansk Internet Forum (DIFO)	http://www.dk-hostmaster.dk
Finland	.fi	FICORA (Finnish Communications Regulatory Authority)	A general administrative authority for issues concerning electronic communications and information society services.	http://www.ficora.fi
France	.fr	AFNIC	non-profit organisation	http://www.nic.fr
Germany	.de	DENIC eG	Registered as "Genossenschaft" (cooperative).	http://www.denic.de
Greece	.gr	GR Hostmaster	A part of the Institute of Computer Science of the Foundation for Research & Technology Hellas	https://grweb.ics.forth.gr
Hungary	.hu	nic.hu		http://www.nic.hu
Iceland	.is	ISNIC		http://www.isnic.is
Ireland	.ie	IEDR	Independent not-for-profit organisation	http://www.iedr.ie
Italy	.it	Registration Authority Italiana	Institute of Informatic and Telematic of the National Research Council (IIT-CNR).	http://www.nic.it/RA/index.html
Japan	.jp	JPRS	Private company	http://jprs.jp
Korea	.kr	KRNIC	Non-profit foundation	http://www.nic.or.kr
Luxembourg	.lu	RESTENA Foundation	The national network for education and research of the Grand Duchy of Luxembourg	http://www.dns.lu
Mexico	.mx	NIC-Mexico	Administration by the Center for Information and Registration Services on Internet, ITESM - Campus Monterrey (Instituto Tecnológico y Estudios Superiores de Monterrey)	http://www.nic.mx
Netherlands	.nl	SIDN (Stichting Internet Domeinregistratie Nederland)	The Foundation for Internet Domain Registration in the Netherlands	http://www.domain-registry.nl/sidn/flat/Home
New Zealand	.nz	Domainz	Wholly New Zealand-owned company	http://www.domainz.net.nz/Domainz.asp
Norway	.no	Norid	Non-profit organisation run by UNINETT FAS AS	http://www.norid.no
Poland	.pl	NASK (Naukowa i Akademicka Sieć Komputerowi)	Company with a status of research and development unit	http://www.nask.pl
Portugal	.pt	FCCN (Fundação para a computação Científica Nacional)	Private non-profit institution	http://www.fccn.pt
Slovak Republic	.sk	SK-NIC	EuroWeb Slovakia a.s.	http://www.sk-nic.sk
Spain	.es	ES-NIC		http://www.nic.es
Sweden	.se	NIC-SE		http://www.nic-se.se
Switzerland	.ch	SWITCH	Swiss Academic and Research Network. A non-profit foundation established in 1987 by the Swiss federal government and the eight university canton.	http://www.switch.ch/id
Turkey	.tr	METU	Middle East Technical University	http://dns.metu.edu.tr
United Kingdom	.uk	Nominet UK	Not-for-profit company with more than 2000 members such as ISPs.	http://www.nic.uk
United States	.us	NeuStar	Private company	http://www.nic.us
Major gTLDs	.com	VeriSign, Inc	Private company	http://www.verisign-grs.com/
	.org	Public Interest Registry (PIR)	Not-for-profit organisation	http://www.pir.org/
	.net	VeriSign, Inc	Private company	http://www.verisign-grs.com/
	.biz	NeuLevel	Private company	http://www.neulevel.biz/
	.info	Afilias, LLC	Private company	http://www.nic.info/gateway/
	.name	Global Name Registry, LTD	Private company	http://www.nic.name/

At present there are 243 ccTLDs in the world and each ccTLD is administered by its ccTLD registry.[7] The list of ccTLDs registries of the OECD member countries is provided in **Table 2**. Among OECD member countries, most ccTLDs are administered by non-profit organisations, which are often called network information centers (NIC). These organisations are usually formed by ISPs and Internet-related organisations. There are several countries such as Finland, Mexico, Switzerland and Turkey where the ccTLDs are administered by academic organisations or government organisations. In Japan and the United States, private companies administer the ccTLDs.

The registries of the ccTLDs provide applicants for domain names with necessary information on registrations through their Web sites. Moreover, relevant policies or rules about their ccTLDs are provided online. As shown in **Table 1**, most registries in member countries provide statistics on their ccTLDs such as the number of registrations.

The ccTLD registries manage and register domain names based on applications under their own ccTLDs. In the OECD member countries, some 18 registries have direct registration to the public and 12 registries accept the registration from the public only through registrars **(Table 3)**. In some countries where registries do not make a direct registration of domain names, registries provide the list of registrars which they have accredited. Applicants seeking domain names under those ccTLDs can choose a registrar from those that have been accredited. Among those 18 countries where registries directly accept applications from the public, seven countries also accept applications through registrars. In some cases, registries encourage applications through registrars with different levels of pricing for direct and indirect registration. In the other countries with direct sales, registries only accept applications from the public. These registries, therefore, also act as registrars.

Table 3. Domain names registration by the registries

	cc	Direct registration to the public
Australia	.au	No (through the accredited registrars)
Austria	.at	Yes
Belgium	.be	No (through the accredited registrars)
Canada	.ca	No (through the accredited registrars)
Czech Republic	.cz	Yes
Denmark	.dk	No (through the accredited registrars)
Finland	.fi	Yes
France	.fr	No (through the accredited registrars)
Germany	.de	Yes (can be also registered by registrars.)
Greece	.gr	Yes
Hungary	.hu	No (through the listed registrars)
Iceland	.is	Yes
Ireland	.ie	Yes (recommended to register through ".ie" registrars.)
Italy	.it	Yes (can be registered through contracted registrars.)
Japan	.jp	Yes (recommended to register through registrars)
Korea	.kr	Yes
Luxembourg	.lu	Yes
Mexico	.mx	No (through ISPs)
Netherlands	.nl	No (through registrars admitted by the registry)
New Zealand	.nz	Yes (can be also registered by registrars.)
Norway	.no	No (through registrars)
Poland	.pl	Yes
Portugal	.pt	Yes (recommended to register through ".pt" registrars.)
Slovak Republic	.sk	No (through registrars)
Spain	.es	Yes
Sweden	.se	No (through the accredited registrars)
Switzerland	.ch	Yes
Turkey	.tr	Yes
United Kingdom	.uk	Yes (recommended to register through .uk registrars.)
United States	.us	No (through .us-accredited registrars)

Policy comparison in ccTLD operations

The gTLDs are operated under rules set by ICANN and the agreements by ICANN with registries and registrars. For example, some major gTLDs, ".com" and ".net", are currently operated by VeriSign, Inc. under the Registry Agreements between ICANN and VeriSign, Inc.[8] ICANN also made agreements with the gTLD registrars.[9] These registrars are called ICANN-Accredited registrars and listed on the ICANN home page.[10]

The ccTLDs are separately operated under rules of each ccTLD. The rules and policies used to administer ccTLDs domain names vary significantly. The following section provides comparative information on a number of rules and management practices of ccTLDs in OECD countries. These include:

- Whether there is a local presence or related requirement to qualify for the right to register a domain name **(Table 4)**.

- Whether there is a limit in the number of domain names for which any single entity can apply **(Table 5)**.

- Whether there is an explicit policy in regard to trademark issues **(Table 6)**.

- Whether a "WHOIS?" database is publicly available **(Table 7)**.

Location requirements

Across the OECD area, the registries of 17 ccTLDs have location requirements for registrations **(Table 4)**. On the other hand, the ccTLDs of 13 countries do not require any local presence. Among the 17 countries which require local presence, there are two types of requirements. These involve nationality and local address. Nationality requirements mean that applicants, when acting in a private capacity, must hold the nationality of the country where they want to register a ccTLD domain name. For applications that are not made by individuals, such as for organisations or corporations, the requirements generally specify that the entity must be registered under the relevant laws of the country. Local address requirements mean that applicants must have legal and current residency in the country. Some 11 countries impose nationality requirements and 12 countries impose local address requirements.

In Ireland, Spain and the United States, either the nationality or local address requirements need to be satisfied for registration. On the other hand, Norway requires both nationality and residency for applications from organisations.[11]

France, Hungary and Korea place different requirements on applications from individuals and organisations. In France and Hungary, private applicants can register domain names under their ccTLDs if they have either nationality or residency, but applicants of organisations must be registered under the legal system. Korea requires both nationality and residency for organisations, but it only requires a residency for private applicant.

In Hungary and Iceland, foreign applicants can register under their ccTLDs if they have trademarks registered by their patent offices. Italy has a nationality requirement but it is broader than some countries as it only requires that applicants hold the nationality of EU member state.

Table 4.   Registry location requirements for applicants

	Local presence (Yes/No)	Location requirements
Australia	Yes	Applicants must be Australian. Domain name licenses may only be allocated to an applicant who is Australian, registered or incorporated in Australia as defined under the eligibility and allocation rules for each 2LD.
Austria	No	No local presence required.
Belgium	No	No local presence required.
Canada	Yes	Canadian citizens, corporations under the laws of Canada or any province or territory of Canada, Canadian trademark holders, educational institutions, associations, partnerships, unions, political parties, libraries and archives/museums can register domain names.
Czech Republic	No	No local presence required.
Denmark	No	No local presence required.
Finland	Yes	Registrants must be judicial persons and properly registered in Finland. (No private person or foreign companies can be registered.)
France	Yes	A domain name within the ".fr" naming zone can be attributed to any requesting body officially registered in France or to any natural person living in France or of French nationality.
Germany	Yes	If the domain holder does not have his residence in Germany, the admin-c at the same time is the person authorised by him to accept service under the aspect of §§ 174 f. ZPO (Code of Civil Procedure); in this case he in turn must have his residence in Germany and has to state his serving address.
Greece	No	No local presence required.
Hungary	Yes	1) Registrants of the .hu public domain can be any Hungarian citizen or any natural person with permission to reside in Hungary, or any organisation or enterprise with a geographical address in Hungary, or an owner of a trademark registered by the Hungarian Patent Office - even if he/she is not a Hungarian citizen. 2) Registrants of a second level public domain can be any Hungarian or foreign natural or legal person or an organisation with no legal personality.
Iceland	Yes	All domestic legal entities properly registered in Iceland are eligible to apply for a domain. Foreign applicants who are not domiciled in Iceland can apply for an .is domain on the basis of: 1) Owning a registered trademark at the Icelandic Patent Office. Only one domain may be applied for on the basis of each trademark. The trademark must consist of letters or numerals exclusively. The applicant must specify an Icelandic agent administrative contact for the domain. 2) Holding an international legal status or being internationally regarded as having such status. Examples are foreign embassies, organisations constituted under international law and international sports federations. The applicant must specify a Icelandic agent administrative contact for the domain.
Ireland	Yes	1) An applicant who is a natural person, and can show documentary evidence or reasonable proof of a correspondence address within the 32 counties of Ireland (the island of Ireland) along with adequate documentary evidence of the applicant's legal name *e.g.* a copy of the applicant's passport or birth certificate, shall be deemed to have a real and substantive connection with Ireland. 2) An applicant which, at the time of application, is a body corporate incorporated under the laws of Ireland shall be deemed to have a real and substantive connection with Ireland. or 3) An applicant which, at the time of application, is a body corporate incorporated outside Ireland and which has either established a "place of business" within Ireland which it has registered under Part XI of the Companies Act 1963, or has established a "branch" in Ireland which it has registered pursuant to the European Communities (Branch Disclosures) Regulations, 1993 shall be deemed to have a real and substantive connection with Ireland.
Italy	Yes	Domain names within the ccTLD ".it" can be assigned to subjects belonging to a member state of the European Union. Associations without VAT numbers or fiscal code (or equivalent) and persons not owning a VAT number (or equivalent) can register a single domain name only.
Japan	Yes	Any single person, group or organisation that has an address within Japan is eligible. Second level JP domains, such as ".co.jp" have additional requirements. (*e.g.* ".co.jp" can be registered by incorporated companies (*kabushiki*), limited companies (*yugen*), *gomei, goshi, sogo, tokushu*, and other companies; credit associations; foreign companies that are registered in Japan.)
Korea	Yes	Registrants must have an office or domiciles in the Republic of Korea. If the applicant is a company, a certificate for business registration is needed in order to register a domain name.

Table 4.   Registry location requirements for applicants (cont'd)

	Local presence (Yes/No)	Location requirements
Luxembourg	Yes	The administrative contact has to be established in Luxembourg. Domain name holders which are established outside Luxembourg are therefore obliged to give valid power to an agent who is established in Luxembourg for the registration and the management of their domain name.
Mexico	No	No local presence required for .com.mx. (But local presence is required in the other classifications.)
Netherlands	No	No local presence required.
New Zealand	No	No local presence required.
Norway	Yes	The applicant must be an organisation registered in the Enhetsregisteret (the Central Coordinating Register for Legal Entities). The organisation must have a Norwegian post address. Individuals may register domain names only under "priv.no".
Poland	No	No local presence required.
Portugal	No	No local presence required.
Slovak Republic	Yes	The company needs to have its representation in the Slovak Republic. Domain can be used only in relation to networking in the Slovak Republic.
Spain	Yes	Assignment of a regular domain name will be to Spanish or foreign natural persons with legal residency in Spain and organisations with their own legal personality constituted according to Spanish Law, registered with the corresponding public Spanish register.
Sweden	Yes	NIC-SE only registers domain names for organisations and individuals with permanent business or operation within Sweden.
Switzerland	No	Any entity may register domain names, independent of the location of the entity. It is, however, recommended to register or reserve second level domain names below CH top level domains only for entities located in Switzerland.
Turkey	No	No local presence required.
United Kingdom	No	No local presence required.
United States	Yes	One of the following eligibility requirements must be met: 1) A natural person *i)* who is a citizen or permanent resident of the United States of America or any of its possessions or territories or *ii)* whose primary place of domicile is in the United States of America or any of its possessions, or 2) Any entity or organisation *i)* that is incorporated within one of the fifty (50) U.S. states, the District of Columbia, or any of the United States possessions or territories or *ii)* organised or otherwise constituted under the laws of a state of the United States of America, the District of Columbia, or any of its possessions or territories, or 3) An entity or organisation (including federal, state, or local government of the United States, or a political subdivision thereof) that has a bona fide presence in the United States.

Application limits

Registries in some 20 OECD member countries do not place any restrictions on the number of domain registrations that may be made under their ccTLDs. Registries in a further six countries place some limits on domain name registrations. For example, in Greece, Korea and Netherlands, private applicants can have only one domain name. Organisations, on the other hand, can register an unlimited number of domain names in those countries. In Japan, second level domains such as ".co.jp" or ".or.jp" are limited to one per organisation. Under the general-use domain name ".jp", users can register an unlimited number of second level names. In Iceland there is a difference between domestic applicants and foreign applicants. Domestic applicants can register an unlimited number of domain names but foreign applicants are limited to one name. In Italy, associations without VAT numbers or a fiscal code (or equivalent) and persons not owning a VAT number (or equivalent) can only register a single domain name.

In 1997, when the OECD last looked at comparative rules in this area, there were only 12 countries without number restrictions on registrations[12]. By 2002, this number has increased to 26, including countries which partially allow unlimited registrations.

Table 5.   Registry restrictions on number of domain applications

		Restrictions on number of domain application
Australia	No	
Austria	No	
Belgium	No	
Canada	No	
Czech Republic	No	
Denmark	No	
Finland	Yes	Registrants can only get one domain name per registered name.
France	No	
Germany	No	
Greece	Yes	There is no limit for companies and freelance professionals. Private citizens can only have one domain name.
Hungary	No	
Iceland	Yes	A domestic applicant may register a unrestricted number of domains. A foreign applicant may register one domain.
Ireland	No	
Italy	Yes	Associations without VAT numbers or fiscal code (or equivalent) and persons not owning a VAT number (or equivalent) can register a single domain name only.
Japan	Yes	The number of domain names under .jp is not limited for registration purposes. The number of the domain names under second-level domains such as ".co.jp" or ".or.jp" is restricted to one per an organisation.
Korea	Yes	For personal domain names, only one domain name may be applied for per person.
Luxembourg	No	
Mexico	No	
Netherlands	Yes	There is no limit to the number of names for corporate domain names. For personal domain names the registrant only can register one domain name.
New Zealand	No	
Norway	Yes	Each organisation may at any time have up to 15 domain names directly under .no. In addition, an organisation may have up to five domain names under each geographic domain to which the organisation belongs, and five domain names under each generic domain to which it belongs.
Poland	No	
Portugal	No	
Slovak Republic	Yes	Up to five domains can be registered by one business.
Spain	No	
Sweden	Yes	Only one domain name can be registered per enterprise name.
Switzerland	No	
Turkey	No	
United Kingdom	No	
United States	No	

Trademark policies

The registries in all OECD member countries provide some trademark policies **(Table 6)**. The majority of registries explicitly stipulate that registrants must take all responsibilities related to trademarks and other rights of third parties in domain name registrations. This is because the most common rules for domain registrations are "first come, first served" basis and they do not check whether applications violate trademarks or other third party rights. In addition, in case of a conflict between a registrant and the third party, registries will not get involved in a resolution of a conflict. However, most of registries provide dispute resolution policies of domain names and they reserve a right to take necessary actions, for example cancelling registrations, according to results from regulated resolution processes.

Registries in several OECD member countries provide detailed conditions for appropriate domain names. Australia and Ireland provide very clear conditions for domain names. In Australia, the registered domain names must *i)* match the name of the registrant; or *ii)* be an acronym or abbreviation of the name of the registrant; or *iii)* be otherwise closely and substantially connected to the registrant. In Finland, Hungary and Sweden, domain names for organisations must be the registered names of organisations under their legal systems.

JPRS, the Japanese registry of ".jp", use a "first come, first served" basis policy for domain name registrations. However, when the general-use domain name ".jp" was introduced for the first time in 2001, in addition to the existing second-level domain names (such as "co.jp", "or.jp" etc.), JPRS introduced a preliminary registration application system in order to prevent possible domain name disputes.[13] During the one month preliminary registration period, copyright holders of trademarks and registered names besides existing domain names holders under second level domain names could apply for new domain names prior to other general applicants. With this system, there were only 10 disputes concerning the introduction of second level registrations under ".jp".[14]

Table 6. Registry trademark policy for applications

	Trademark policy
Australia	Domain names must: i) match the name of the registrant; or ii) be an acronym or abbreviation of the name of the registrant; or iii) be otherwise closely and substantially connected to the registrant.
Austria	The registrant undertakes to comply with the relevant legal provisions and, in particular, not to infringe other parties' right to a trademark or to other sings or rights under the law on competition.
Belgium	Registering the domain name will not infringe or otherwise violate the rights of a third party.
Canada	It is the applicant's responsibility to ensure that the applicant has the right to use the domain name which is the subject of the registration request and that the registration or use of the domain name to which the registration request relates does not violate any third party intellectual property rights or other rights, does not defame any person and does not contravene any applicable laws including Canadian federal, provincial and territorial human rights legislation and the Criminal Code (Canadi), R.S.C. 1985, c.C-46, as amended from time to time.
Czech Republic	The CZ.NIC does not analyze the rightfulness of the application of the applicant for the domain name registration in terms of rights or rightful interests of third-party persons. The applicant acknowledges that the domain name registration does not mean protection from protests of third-party persons against the registration or use of the given Domain Name.
Denmark	The applicant must assure that the registered user's use of the domain name will not violate a third party's name or trademark rights or can otherwise be assumed to conflict with Danish legislation, and as an acknowledgement that the registered user will comply with DIFO's rules applicable at all times.
Finland	A domain name must be on grounds of: - a registered firm name, a parallel firm name, a supplementary firm name or a translation of the supplementary firm name. - a Finnish trademark registered to the applicant.

Table 6.   Registry trademark policy for applications (cont'd)

	Trademark policy
France	The applicant must verify that the request, and in particular the choice of wording to be used for the domain name, does not infringe the rights of third parties, such as (but not limited to) copyright, trademarks, human rights, etc.
Germany	Registrants are responsible for compliance to trademark and other laws when choosing a domain name. By registering a domain, registrants affirm that they do not violate the rights of third parties.
Greece	Anyone can apply for a domain name that is available, as long as they state that they are not infringing on the rights of another party. If a registration does infringe on a third party's rights, the Hellenic legal system is fully capable of handling the matter.
Hungary	Domain names to be registered must be: i) full or short name of the registrant organisation as defined in the official registration document of the court, or in case of an organisation established by an Act, full or short name of the organisation as determined by the Act, or b) a trademark as a character string (word, words) registered by the Hungarian Patent Office for the Registrant.
Iceland	The domain holder is responsible for ensuring that the use of the domain is within the limits of current Icelandic law at any time.
Ireland	The proposed domain name must be derived from the full legal name with which the applicant is incorporated. A well established abbreviation, acronym or other appropriate contraction of the elements of the applicant's name may be used instead of the full legal name.
Italy	According to the naming rules, a domain name is a Web address and does not imply any reference to trade names or other commercial rights.
Japan	First come first served basis.
Korea	1. Should there arise any infringement of the rights of third parties, unfair trade practices or unjust competitive practices in relation to the application, registration, or use of the domain name, the Center shall not assume any responsibility for these infringements or practices. 2. The registrants shall assume all responsibility in connection with the registration and use of the domain name selected by the registrants.
Luxembourg	Entities registering domain names are fully responsible for their right to said name. They have proceeded to every required verification concerning potential conflicts with notably trademarks, names of legal entities, etc., and hence certify to the RESTENA Foundation that neither the registration of the domain name nor the manner in which the domain name is directly or indirectly used infringes the legal rights of a third party.
Mexico	The applicant must ensure that the registry of the domain name does not infringe nor violate any rights of the third party. The applicant does not acquire rights of registered trade names. It is the responsibility of the applicant to make sure that it is not violating any registered trade names, reserved rights, reserve of names or any other reference to intellectual property or in general the national and international legal ordering relevant to this matter.
Netherlands	Upon a registration process, SIDN does not check with, for example, the Benelux Trademarks Office or the Chamber of Commerce to ascertain whether anyone else is already trading under that name or using it in some other context. SIDN is not liable if the registration of a name that someone else is using leads to legal proceedings. When you apply to register a domain name, you are required to sign a statement indemnifying SIDN against such an eventuality.
New Zealand	Registration is carried out on a first come, first served basis and confers no property rights. Where conflict arises between registrants over a domain name, registrants must resolve the issue independently and Domainz will not be involved in the resolution of that conflict. If the registrant's choice of name leads to anyone claiming against Domainz, the registrant will be responsible for any costs incurred by Domainz in dealing with those claims.
Norway	Prior to submitting an application, the applicant must sign a statement certifying that, to the best of his or her knowledge, registration or use of the name does not violate any third party's registered or unregistered rights to the name, and does not violate Norwegian law, in that, for example, the name is considered an illegal profanity or considered discriminatory, defamatory, pornographic or otherwise illegal.
Poland	In the registration application form the applicant states that he/she has the right to select the domain name. And the applicant is solely subject to the liability for the legal effects of filing a fictitious declaration regarding the authority to use a domain name or giving false data in the application.

Table 6.   Registry trademark policy for applications (cont'd)

	Trademark policy
Portugal	The domain name may not correspond to names that may mislead or confuse vis-à-vis its ownership, especially by coinciding with well-known or distinguished brand names belonging to someone else. In the case of legal persons, the domain name must be the same as the company name or designation appearing on the Legal Person Identity Card (CIPC) issued by the Registo Nacional de Pessoas Colectivas [National Registry of Legal Persons] (RNPC) or equivalent document.
Slovak Republic	Domain should not match with registered trademark of other legal body, unless this body gives written permission. A company can request removal of a domain if the domain is identical with a registered trademark in the Slovak Republic in the case that the registration of the trademark was submitted before the domain was registered.
Spain	Domain names should be the full organisation name as it appears in its deed or constitution document. An acronym will be allowed if it reasonably or intuitively matches up with organisation's official name.
Sweden	The domain name has to reflect the name of the organisation. If the domain name refers to a company, this must be registered with the Swedish Patent and Registration Office (PRV) or have been allocated a corporate identity number by another Swedish authority. If the domain name refers to a trademark, this must be registered under the .tm.se SLD.
Switzerland	Entities registering domain names are fully responsible for their right to said name. Entities statements in the application form are required to be true and entity is required to have the right to use the domain name as requested in the application.
Turkey	The party requesting name registration certifies that, to her/his knowledge, the use of this name does not violate trademark or other statutes.
United Kingdom	Registrants must ensure that by registering or using the domain name (in whatever manner) they will not knowingly infringe the intellectual property rights of a third party, that they are entitled to register the domain name, and that they have not registered the domain name in breach of trust.
United States	The registrant represents and certifies that, to the best of the registrant's knowledge and belief, *i)* neither the registration of the Registered Name nor the manner in which it is directly or indirectly used infringes the legal rights of any third party, and *ii)* registrant qualifies to register to use a registered name.

Information availability

For the gTLDs, ICANN asks its accredited registrars to provide public access to data on registered names in the Registrar Accreditation Agreement.[15] Registrars of the gTLDs collect necessary information to register domain names from applicants. This includes, for example the name of applicants, administrative contacts and technical contacts, and those data are stored into the gTLDs databases. These databases are publicly accessible by the "WHOIS?" services.

The "WHOIS?" service enables inquirers to find contact information on registered domain names. The information provided by the "WHOIS?" services can define who is responsible for the registered domain names. The clear indication of responsibility can help to resolve any technical problems and this information is used in relation to a number of areas such as consumer protection in electronic commerce and other Internet transactions, trademark disputes, and other legal issues.

Because the ccTLDs are not directly subject to rules created by ICANN, information availability policies regarding contact information for the ccTLDs depend on each authority of the ccTLDs. However, in the majority of OECD member countries, registries of the ccTLDs provide the "WHOIS?" service (**Table 7**). One reason registries provide the "WHOIS?" service on their Web sites is as the first step for applicants to determine the status and availability of domain names.

Table 7.   Registry "WHOIS?" service

	cc	"WHOIS?" publicly available	URL
Australia	.au	Y	http://whois.ausregistry.net.au/
Austria	.at	Y	http://www.nic.at
Belgium	.be	Y	http://www.dns.be/eng/index.shtml
Canada	.ca	Y	http://www.cira.ca/en/home.html
Czech Republic	.cz	Y	http://www.nic.cz/en/index.html
Denmark	.dk	Y	http://www.dk-hostmaster.dk/dkhostcms/bs?pageid=23&action=cmsview&language=en&
Finland	.fi	Y	http://cgi.ficora.fi/wwwbin/domains.pl?language=eng
France	.fr	Y	http://www.nic.fr/cgi-bin/whois
Germany	.de	Y	http://www.denic.de/servlet/Whois
Greece	.gr	Y	https://grweb.ics.forth.gr/english/index.html
Hungary	.hu	Y	http://www.nic.hu/domainsearch/
Iceland	.is	Y	http://www.isnic.is
Ireland	.ie	Y	http://www.domainregistry.ie/frameset/?mid=117&URL=http://213.190.149.196/search/whois.html
Italy	.it	Y	http://www.nic.it/RA/en/viaWhois.html
Japan	.jp	Y	http://whois.jprs.jp
Korea	.kr	Y	http://whois.nic.or.kr/
Luxembourg	.lu	Y	http://www.dns.lu/domain-registration/whois.html
Mexico	.mx	Y	http://www.nic.mx/nic/plsql/busquedas.whois
Netherlands	.nl	Y	http://www.domain-registry.nl/sidn/flat/Domeinnamen/Is_de_naam_nog_vrij_/index.shtml
New Zealand	.nz	Y	http://www.domainz.net.nz/Domainz.asp
Norway	.no	Y	http://www.norid.no/domenenavnbaser/whois/index.en.php
Poland	.pl	Y	http://www.dns.pl/cgi-bin/en_whois.pl
Portugal	.pt	N(1)	http://www.fccn.pt/cons_dns/usrpck_call.pesquisa
Slovak Republic	.sk	N(2)	http://www.sk-nic.sk/cgi-bin/registratori.cgi
Spain	.es	Y	http://www.nic.es/cgi-bin/consulta.whois
Sweden	.se	Y	http://www.nic-se.se/domregsearch.shtml
Switzerland	.ch	Y	http://www.switch.ch/search/whois_form.html
Turkey	.tr	Y	http://whois.metu.edu.tr/form.html
United Kingdom	.uk	Y	http://www.nic.uk/
United States	.us	Y	http://www.whois.us/
Major gTLDs	.com	Y	http://www.netsol.com/cgi-bin/whois/whois
	.org	Y	http://www.netsol.com/cgi-bin/whois/whois
	.net	Y	http://www.netsol.com/cgi-bin/whois/whois
	.biz	Y	http://www.netsol.com/cgi-bin/whois/whois
	.info	Y	http://www.netsol.com/cgi-bin/whois/whois
	.name	Y	http://www.netsol.com/cgi-bin/whois/whois

Notes:

(1) Information only on registered domain names can be publicly accessible.

(2) The list of registered domain names is publicly accessible.

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Comparison of policies regarding the "WHOIS?" service

Available information on the "WHOIS?" service

Although the "WHOIS?" service is available in most OECD member countries, the detailed contents of services vary. **Table 8** shows what kind of information is publicly available through the "WHOIS?" service. In the Registrar Accreditation Agreement of ICANN, there are eight items which must be publicly available from registrar's databases and those items are:

- The name of the registered name.

- The name of the primary name server and secondary name server(s) for the registered name.

- The identity of registrar (which may be provided through Registrar's Web site).

- The original creation date of the registration.

- The expiration date of the registration.

- The name and postal address of the registered name holder.

- The name, postal address, e-mail address, voice telephone number, and (where available) fax number of the technical contact for the registered name.

- The name, postal address, e-mail address, voice telephone number, and (where available) fax number of the administrative contact for the registered name.

According to the best practice principles for ccTLDs, established by GAC, the registry should make accurate and up-to-date registration data continuously available to ICANN for purposes of verifying and ensuring the operational stability of the ccTLD. The registry should also make a commitment to abide by ICANN developed policies concerning interoperability of the ccTLD with other parts of the DNS and Internet, operational capabilities and performance of the ccTLD operator, and the obtaining and maintenance of, and public access to, accurate and up-to-date contact information for domain name registrations.

Most of the ccTLDs registries in the OECD member countries provide "WHOIS?" services in the same form in which the gTLDs registrars provide such services. However, there are different treatments among the registries regarding contact information such as administrative and technical contacts, which contain personal information. In several OECD member countries the contact information provided by the "WHOIS?" service is either insufficient or does not meet the ICANN checklist. Just over 10 million domain names have their contact details available through the various "WHOIS?" services among ccTLDs of the OECD member countries. This number is about 70% of the total domain names under ccTLDs in the OECD area. This percentage does not seem high enough even though they are not obliged to follow GAC principles. On the other hand, privacy regulations may be an issue in whether or not such information is made available.

Table 8.   Available information on the "WHOIS?" service

	cc	Accessible	1	2	3	4	5	6	7	8	others
Australia	.au	Y	Y	Y	Y	N	N	N	N(*i)	N(*i)	last update
Austria	.at	Y	Y	Y	N	N	N	Y	Y	Y	last update
Belgium	.be	Y	Y	Y	Y	Y	N	Y	Y	Y	
Canada	.ca	Y	Y	Y	Y	Y	Y	Y	Y	Y	last update
Czech Republic	.cz	Y	Y	Y	N	Y	N	Y	Y	Y	
Denmark	.dk	Y	Y	Y	N	Y	N	Y	Y	Y	
Finland	.fi	Y	Y	N	N	N	N	N	N	N	
France	.fr	Y	Y	Y	Y	N	Y	Y	Y	Y	last update
Germany	.de	Y	Y	Y	N	N	N	Y	Y	Y	last update
Greece	.gr	Y	Y	Y	N	Y	N	Y	Y	Y	
Hungary	.hu	Y	Y	Y	Y	Y	N	Y	Y	Y	last update
Iceland	.is	Y	Y	Y	N	Y	N	Y	Y	Y	last update
Ireland	.ie	Y	Y	Y	N	N	N	N	N	N	
Italy	.it	Y	Y	Y	N	Y	N	Y	Y	Y	last update
Japan	.jp	Y	Y	Y	N	Y	Y	Y	Y	Y	last update
Korea	.kr	Y	Y	Y	Y	Y	Y	Y	N	Y	last update
Luxembourg	.lu	Y	Y	Y	N	N	N	Y	Y	Y	billing contact
Mexico	.mx	Y	Y	Y	N	Y	N	N	N	N	last update
Netherlands	.nl	Y	Y	Y	Y	N	N	Y	Y	Y	last update
New Zealand	.nz	Y	Y	Y	Y	Y	N	Y	N	Y	last update
Norway	.no	Y	Y	Y	Y	Y	N	Y	Y	Y	
Poland	.pl	Y	Y	Y	N	Y	N	Y	N	N	last update
Portugal	.pt	N	Y	N	N	N	N	N	N	N	
Slovak Republic	.sk	N(*b)	Y	N	N	N	N	Y	Y	Y	
Spain	.es	Y	Y	Y	N	N	N	Y	Y	Y	
Sweden	.se	Y	Y	Y	N	Y	N	Y	Y	Y	
Switzerland	.ch	Y	Y	Y	N	Y	N	Y	N(*c)	N	last update
Turkey	.tr	Y	Y	Y	N	N	N	Y	Y	Y	
United Kingdom	.uk	Y	Y	Y	Y	N	N	Y	N	N	last update
United States	.us	Y	Y	Y	Y	Y	Y	Y	Y	Y	last update, trademark info
Major gTLDs	.com	Y	Y	Y	Y	Y	Y	Y	Y	Y	last update, billing contact
	.org	Y	Y	Y	Y	Y	Y	Y	Y	Y	last update, billing contact
	.net	Y	Y	Y	Y	Y	Y	Y	Y	Y	last update, billing contact
	.biz	Y	Y	Y	Y	Y	Y	Y	Y	Y	last update, billing contact
	.info	Y	Y	Y	Y	Y	Y	Y	Y	Y	last update, bill, trademark
	.name	Y	Y	Y	Y	Y	Y	Y	Y	Y	last update, billing contact

1. The name of the registered name.

2. The name of the primary name server and secondary name server(s) for the registered name.

3. The identity of registrar (which may be provided through registrar's Web site).

4. The original creation date of the registration.

5. The expiration date of the registration.

6. The name and postal address of the registered name holder.

7. The name, postal address, e-mail address, voice telephone number, and (where available) fax number of the technical contact for the registered name.

8. The name, postal address, e-mail address, voice telephone number, and (where available) fax number of the administrative contact for the registered name.

*a. Only e-mail address is available.

*b. The list of registered ".sk" domain names with contact details is available.

*c. Email address and telephone number are not available.

"WHOIS?" information availability and privacy regulation

The administrative and technical contact information that defines responsibilities for any registered domain name may be useful and important for the security and stability of the Internet. However, there are also privacy issues to be considered and some countries do not allow personal data to be publicly available on the "WHOIS?" service based on their legal requirements.

The Australian registry of ".au", .auDA does not provide the street address, telephone and facsimile numbers of registrants in order to comply with Australian privacy legislation.[16] Only an e-mail address of the registrant is provided for the purpose of ensuring any necessary contacts related to technical problems or possible complaints against the registrant. According to the .auDA "WHOIS?" policy, creation, renewal and expiry dates of registered domain names are not disclosed because the disclosure of those data caused serious problems of unsolicited renewal notices sent by some members of the domain name industry. In Ireland, the ".ie" registry IEDR restricts the amount of information displayed on the public "WHOIS?" service to attempt to prevent the abuse of this information, for example, by people transmitting unsolicited bulk mails. Therefore, the "WHOIS?" service of IEDR does not show any contact information.

The "WHOIS?" service by NIC-Mexico, the ".mx" registry in Mexico, does not disclose precise information on technical contacts and administrative contacts because of the federal law on Consumer Protection. It only provides the name of the city where those contacts exist. A written authorisation from the registrant or a legal requirement from the Mexican authority is necessary to obtain those data. In Poland, the ".pl" registry NASK does not provide a technical contact and an administrative contact on its "WHOIS?" service, because data of a private person such as the name and the address are protected by the Personal Data Protection Act of 29 October 1997.

Some member countries have introduced different deals between private registrants and business registrants in the disclosure of the "WHOIS?" data. In Denmark, a registrant can, if he or she wishes, by applying to DK Hostmaster, the ".dk" registry, have his or her personal information concealed for the public according to the Danish Act on Processing of Personal Data. However, this policy only applies to individuals and single person firms.

In the United Kingdom, the ".uk" registry Nominet UK has only ever allowed minimal information to be publicly available because of privacy concerns. However, in order to make "WHOIS?" service more effective and useful, Nominet is implementing the new "WHOIS?" policy.[17] Taking into account particular concerns about the display of personal addresses, the new policy distinguishes business registrants from non-trading individuals. The "WHOIS?" data of business registrants, including their names and address details, will be publicly available from December 2002. On the other hand, non-trading individuals, who are not using or intending to use their domain names in the course of a business, trade or profession, are allowed to opt out of the "WHOIS?" service so that address details are not displayed. Instead, the address field will state: "This individual has chosen to opt out of the "WHOIS?". Contact via agent."

The accuracy of the "WHOIS?" data

The "WHOIS?" data is an important information source for identifying domain name registrants. However, the "WHOIS?" database would not be useful if the data in this database is incomplete or inaccurate and there is a strong concern for the inaccuracy of the "WHOIS?" data. According to the research by the "WHOIS?" Task Force by ICANN, 44% of survey respondents had been harmed or inconvenienced by inaccurate, incomplete, or out of date "WHOIS?" data by its survey.[18] The two groups impacted most were ISPs and business users. Some 58% of ISPs responding reported they had been harmed or inconvenienced. The adequacy of the "WHOIS?" database is a concern for the TISP because of network interoperability. The original reason for having the "WHOIS?" database was so that network

operators could contact each other to ensure efficient connectivity between networks in order to cope with connectivity problems. ISPs and network operators continue to use "WHOIS?" in dealing with day to day network operations and in responding to Denial of Service (DOS) attacks.[19]

This inaccuracy of the "WHOIS?" data is caused mainly by a fictitious registration by registrants. Some registrants, who do not want to make contact details publicly available on the "WHOIS?" database, register their domain names with fictitious names or addresses. Most registries have the policy that the registry can terminate fictitious registrations **(Table 9)**. However, it is difficult to check and find those fictitious registrations especially given the current trend of increasing domain name registrations. In order to have effective measures for fictitious registrations, the periodical verification may be useful. In Australia, the .auDA requires registrars of ".au" to contact their registrants at least every six months to verify current data according to its "WHOIS?" policy.[20] Software may also be available to automatically check for cases of obviously misleading or false information.

Several considerations are at work in the rules and policies applied to the availability of "WHOIS?" information. Some registrants, such as cybersquatters or persons using the Internet for fraudulent purposes, do not want to reveal their true information lest they face legal action. On the other hand, some registrants may provide false information because they believe this will enable them to avoid being harassed or revealing their personal data. One option, to deal with this issue is to create a category of names where registrants can elect to not have their details disclosed through "WHOIS?". In France, individual registrants under 'nom.fr' can choose to have their details made 'unlisted. In this case no personal information is revealed but technical information is available such as the ISP and DNS servers.[21]

Table 9.   Registry policies on inaccurate or false registration

		Policies on inaccurate or false registrations
Australia	Yes	.auDA reserves the right to revoke the domain name license.
Austria	Yes	Nic.at may deny and/or revoke the delegation of the domain.
Belgium	Yes	DNS BE may terminate the license of the domain name.
Canada	Yes	CIRA may cancel a domain name registration.
Czech Republic	Yes	The CZ.NIC is entitled to terminate the domain name registration independently.
Denmark	Yes	A domain name can solely be registered for implementation if the information in the registration is correct.
Finland	No	There are no precise rules for an inaccurate or a false registration. However, only properly registered judicial persons can register ".fi" domain names.
France	Yes	The registrant must ensure that the information supplied to the registrar is correct and undertake to bring it up to date if necessary. And if it is not the case, the AFNIC reserves the right to suspend any domain name or request.
Germany	Yes	DENIC may terminate the agreement without meeting any deadline for compelling reasons if the domain information is wrong.
Greece	No	A document must be attached with the application to prove the details stated in the application form.
Hungary	Yes	The domain registration will be suspended or withdrawn if the data provided by the registrant were not real, and these data influenced the decision regarding the application.
Iceland	No	There are no precise rules for an inaccurate or a false registration. However, only properly registered legal entities can register ".is" domain names.
Ireland	Yes	Where the IEDR becomes aware that an accepted request was seriously or fundamentally incorrect, either intentionally or unintentionally, it shall have the right to terminate the registration after giving due notice.
Italy	Yes	The registration authority Italiana can annul the assignment of a domain name.
Japan	Yes	JPRS can terminate the domain name registration.
Korea	No	If the applicant is a company, a certificate for business registration is needed in order to register a domain name.
Luxembourg	Yes	The registration of domain names may be erased.
Mexico	Yes	Contacts for each domain will have to maintain the data updated. If inaccurate or false data are found, NIC-Mexico can suspend and eliminate the domain name.

Table 10. Registry policies on inaccurate or false registration

		Policies on inaccurate or false registrations
Netherlands	Yes	The Foundation has the right to deny the use of the relative domain name and cancel the domain name registration, if the registration was accomplished by means of fraud or deception in the application.
New Zealand	Yes	Domain names can be cancelled by Domainz.
Norway	Yes	The registration of the domain name can be removed. The owner of the domain name shall be given an opportunity to respond prior to removal.
Poland	Yes	If the applicant gives incomplete or false data in the application, NASK will deny the application to register the domain name. The applicant is solely subject to the liability for the legal effects of filing a fictitious declaration regarding the authority to use a domain name or giving false data in the application.
Portugal	Yes	The domain name will be removed by the FCCN if insufficient and/or incorrect information has been supplied, preventing the FCCN from establishing contact.
Slovak Republic	N/A	N/A
Spain	Yes	The domain registration may be deleted if the data provided is false, both in the initial registration as well as in the information provided after the registration.
Sweden	No	Registrants cannot register a domain name with false information because they must have a Swedish corporate identity or in the case of an individual, a Swedish social security number by PRV in Sweden when they register.
Switzerland	N/A	N/A
Turkey	N/A	N/A
United Kingdom	Yes	Nominet may cancel or suspend the registration of the domain name by providing the registrant with notice in writing if Nominet receives independent verification that the registrant has provided grossly inaccurate, unreliable or false registrant contact details, or failed to keep such contact details up to date.
United States	Yes	The registration authority (RI) may terminate the agreement of the registration at any time upon written notice in the event that the registrant willfully or negligently *i)* provides RA inaccurate or unreliable information or *ii)* fails to promptly update information provided to RA pursuant to the agreement.

ICANN's efforts to improve the accuracy of the "WHOIS?" data

ICANN has a strong concern for the accuracy of the "WHOIS?" data and ICANN recently took several measures to improve the accuracy of the "WHOIS?" data. On 10 May 2002, ICANN issued an advisory in order to assist ICANN-accredited registrars in understanding their obligations under the Registrar Accreditation Agreement (RAI) regarding the accuracy of the "WHOIS?" data.[22] In this advisory ICANN outlined the relevant provisions of the RAA and suggested steps registrars can take to ensure their obligations with respect to the "WHOIS?" data accuracy.

On 3 September 2002, ICANN announced additional steps to improve the accuracy of the "WHOIS?" data[23]. Those steps are *i)* improved facilities for receiving and handling reports from the public about incomplete or inaccurate "WHOIS?" data and *ii)* commencement of formal contract enforcement steps against a registrar.

ICANN-accredited registrars are required to take necessary steps to investigate reports of inaccurate "WHOIS?" data and to correct any inaccuracies they find by the RAA[24] To make these steps more effective, ICANN has implemented a centralised on line form[25] for reports about inaccurate or incomplete "WHOIS?" data. This centralised on line form allows any Internet users who find inaccurate or incomplete "WHOIS?" data to report to the appropriate registrar. At this moment, this reporting system is available only for names ending in .com, .net, and .org, but ICANN has announced its intention to extend this system to other gTLDs such as ".biz" and ".name".

In addition to this voluntary monitoring system, ICANN started to apply a formal enforcement of RAA with registrars. In September 2002, ICANN sent a formal notice to VeriSign Inc. to state it was in violation of the RAA. According to this notice, VeriSign has 17 specific episodes of violation of its

obligations to provide complete "WHOIS?" data and to investigate and correct reported inaccurate "WHOIS?" data. Based on the RAA 5.3.4, 15 working days were given to VeriSign to correct the breaches. If VeriSign fails to correct the breaches, the RAA of VeriSign can be terminated by ICANN.

In other developments the "WHOIS?" Task Force of the ICANN Domain Name Supporting Organisations (DNSO) Names Council issued their Interim Report on "WHOIS?" in October 2002, based on its survey and continuous research. [26] This report addresses following four key areas including recommendations for ICANN regarding "WHOIS?" policies:

- Accuracy of the data contained in the "WHOIS?" database.

- Uniformity of formats and elements across various TLDs and registrars, including ccTLDs.

- Better "searchability".

- Better protection of data subjects from marketing use of the data contained in the "WHOIS?" database.

Regarding the accurate "WHOIS?" database, the report suggests a method of graduated sanctions or enforcements against parties who breach the requirement to provide accurate information and to maintain an accurate "WHOIS?" database. Graduated sanctions consist of both financial penalties and imperative revocation of accreditation. In addition, the report introduces mandatory periodic revalidation of "WHOIS?" data as one important technique for improving data quality.

The result of the survey conducted by the task force indicates that Internet users are interested in the uniformity and consistency of data elements and formats in the "WHOIS?" database. Taking into account that there is a great diversity of the number of registrations of ccTLDs, and differing national laws, the Task Force recommends that ICANN should continue to encourage ccTLDs to enter into contractual agreements[27] and should take the steps necessary to incorporate "WHOIS?" policies into the obligations assumed by ccTLDs upon entry into such agreements.

The report also recommends centralised search services across all TLDs. The task force expects a new Cross Registry Information Service Protocol (CRISP), on which Verisign is working with others in an Internet Engineering Task Force (IETF)[28] Working Group, will be helpful for centralised search services. According to the report, this new protocol may provide new ability for role-based access to "WHOIS?" information and may help to address many of the concerns and policy issues regarding centralised "WHOIS?" services.

The positive actions taken by ICANN and other show there is a serious intention and efforts to make the "WHOIS?" data more accurate and reliable. That being said the "WHOIS?" data must be accurate and reliable in both gTLDs and ccTLDs. Therefore, it is also important for ccTLDs to take this issue seriously and to take all appropriate steps toward the best practice principles established by the GAC.

Conclusion

In contrast to gTLDs, which are commonly used throughout all countries of the world and governed by ICANN, ccTLDs are resources which are allocated to the each country or region. Therefore, the management and policies of the ccTLDs need to be in line with the legal requirements of those countries or regions. At the same time, accurate and reliable "WHOIS?" services are important for the security and stability of the Internet and a range of public policy concerns to governments in relation to electronic commerce. Accordingly, where possible ccTLDs, and gTLDs, should also meet the best practice principles established by the GAC. This paper has aimed to provide a comparison of the administration of domain names in respect to some of those best practice principles as well as providing a general overview of the different approaches applied across ccTLDs in the OECD area.

NOTES

[1]   The DNS is based on RFC 1591 on March 1994, available at http://www.isi.edu/in-notes/rfc1591.txt

[2]   The list is available at http://www.iso.org/iso/en/prods-services/iso3166ma/02iso-3166-code-lists/list-en1.html

[3]   ICANN is the non-profit corporation that was formed to assume responsibility for the IP address space allocation, protocol parameter assignment, domain name system management, and root server system management functions previously performed under U.S. governments. Information on ICANN is available at http://www.icann.org

[4]   ICP-1 is the basic guideline on ccTLD administration and delegation, available at http://www.icann.org/icp/icp-1.htm

[5]   Information on GAC is available at:
        http://www.noie.gov.au/projects/international/Representing_Australia/gac/

[6]   The suggested principles by GAC, Principle for the delegation and administration of country code top level domains (23 February 2000), is available at: http://www.icann.org/committees/gac/gac-cctldprinciples-23feb00.htm

[7]   For the list of ccTLD registries, refer to http://www.iana.org/cctld/cctld-whois.htm

[8]   For example, .com Registry Agreement, refer to http://www.icann.org/tlds/agreements/verisign/com-index.htm

[9]   For the sample of the Registrar Accreditation Agreement, refer to http://www.icann.org/registrars/ra-agreement-17may01.htm

[10]   Refer to http://www.icann.org/registrars/accredited-list.html

[11]   In Norway, a private person can register domain names only under the SLD of "priv.no".

[12]   OECD, "Internet Domain Names: Allocation Policies", OECD/GD(97)207, p.34.
        http://www.oecd.org/pdf/M000014000/M00014302.pdf

[13]   See, http://jprs.jp/en/GUJP-Eng.files/frame.htm

[14]   Ibid.

[15]   Ibid.

[16]   The .auDA WHOIS policy is available at http://www.auda.org.au/docs/auda-2002-06.pdf

[17]   Refer to http://www.nic.uk/ref/whois3.html

[18]   The draft final report of the WHOIS Task Force is available at
         http://dnso.dnso.org/dnso/notes/whoisTF/20020625.TFwhois-report.pdf

[19]   The interest of the Working Party TISP in DNS and "WHOIS?" was explained in "Potential Co-operation
         Between OECD and ICANN" (DSTI/ICCP(2002)16)

[20]   Ibid.

[21]   This option is described at: http://www.nic.fr/english/register/charter-fr.pdf

[22]   Refer to http://www.icann.org/announcements/advisory-10may02.htm

[23]   Refer to http://www.icann.org/announcements/announcement-03sep02.htm

[24]   Refer to ICANN Registrar Accreditation Agreement 3.7.8

[25]   Available at http://www.internic.com/cgi/rpt_'WHOIS?'/rpt.cgi

[26]   Refer to http://www.dnso.org/dnso/notes/20021015.NCWhoisTF-interim-report.html

[27]   Registries of Australia and Japan made ccTLD sponsorship agreements with ICANN. Refer to:
         http://www.icann.org/cctlds/au/ and http://www.icann.org/cctlds/jp/

[28]   The information on IETF is available at: http://www.ietf.org/