Management of the PS Top-Level Domain

Market Access Program/Development Alternatives Inc.
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PREFACE

This report was prepared for Development Alternatives Inc. (DAI), the prime contractor of the Market Access Program (MAP). MAP is financed by the US Agency for International Development (USAID) to improve the competitiveness of Palestinian business, promote and support new commercial initiatives, and build a more competitive Palestinian economy.

The report is based on two workshops, meetings and assessments conducted by the consultants assisted by the MAP Team on the implications of the newly awarded .ps domain. The objective of the report is to identify and recommend options and actions that the Palestinian team might implement in order to setup the Palestinian Top Level Domain (TLD).

EXECUTIVE SUMMARY

The request for the delegation of .ps Top Level Domain for the Palestinian Territories was started in February 1997. At that time the two letter code for the Palestinian Territories was not inserted in the list of country codes ISO 3166 which is the basis to assign the country codes Top Level Domains. Therefore, IANA (Internet Assigned Numbers Authority) could not proceed in awarding the .ps Domain to the Palestinian Territories at that juncture.

In October 1999 the code .ps had been added to the ISO list and following representation from Dr. Nabil Shaath, Minister of Planning & International Cooperation of the Palestinian Authority, IANA/ICANN came to the conclusion that "the .ps" top level domain should be delegated as requested.

The Government Computing Center (GCC) was deemed the designated organization, with Dr. Ghassan Qadah as the designated administrative contact and Dr. Yaser Doleh as the designated technical contact for the .ps Domain.

The USAID through DAI immediately responded to a request for support from the GCC to develop an action program for the establishment of .ps domain management based on sound business, marketing and financial plan for the initial period of three year timeframe of .ps registry.

To accomplish this task, two consultants were engaged; Dr. Robert Krause from USA and Dr. Stefano Trumpy from Italy in order to prepare that plan, in cooperation with Mr. Denis Gallagher, the IT portfolio manager of DAI/MAP.
In order to assist the consultants in their work and to assure a plan of interviews with the key representatives of the Internet community in the West Bank and Gaza, an ad hoc committee had been appointed with the following participants:

- ❖ Dr. Ghassan Qadah as the designated administrator of .ps by IANA/ICANN
- ❖ Dr. Yaser Doleh as the designated technical contact for .ps designated by IANA/ICANN
- ❖ Omar Al-Sahili, IT Sector Coordinator , DAI
- ❖ Sam Bahour of Applied Information Management / Private Sector
- ❖ Dr. Najeh Jasrawi of Birzeit University

An intensive series of meetings were organized in order to allow the consultants to receive opinions, guidance and feedback from the IT business community, from the universities, from the ISPs, and from the government.

Two workshops were organized with broad invitations to the Palestinian public and private sectors; the first to introduce the key issues to be addressed and the second to present the findings and recommendations of the consultants.

After such an intensive consultation process the basic **recommendation**s are the following:

- ❖ The target start up date for the operations of .ps registry is September 1st 2000.

- ❖ It is of the utmost urgency to legitimize a decision making structure called **Naming Authority** which should include representatives of the main constituencies of the Local Internet Community;

- ❖ It has been suggested to Minister Shaath that he provides legitimacy to such a structure in order to meet the target date to start operations;

- ❖ The recommended structure to host the registry should be a Not-for-Profit Organization (NPO);

- ❖ The Naming Authority could act as the Board of Directors of the NPO which would host the registry;

- ❖ The other main component of the NPO will be the Registration Service;

- ❖ The consultants gave a number of recommendations concerning the naming rules and policies in such a way that the Registry may meet the targets established in the business plan;

- ❖ Those recommendations are based on best practices established by CENTR (European Center for Top-Level Naming Registries) for running ccTLDs, the experience of Dr. Trumpy in running the .it registry (Italy) and his deep knowledge of the situation in other countries;

- ❖ The .ps should be an open registry and promoted in such a way to attract mainly those individuals/organizations globally who are interested in Palestinian economic and cultural development;

- ❖ A business plan has been prepared which envisages setting up a "Center of Excellence". The Center will provide the basic registry service and to start up value added services which will be beneficial for an ordered evolution of the Internet in the Palestinian territories;

- ❖ A minimal plan has been also prepared with no value added services.

- ❖ As financially there is no difference in the two plans, due to the fact that in both cases the situation of cost recovery for the services is foreseen to be achieved in the third year of operations, the consultants strongly advise to adopt the first solution- "Center of Excellence";

- ❖ In order to facilitate the start up of operations, the **consultants suggest** having simplified rules and procedures in a first phase and to host temporarily the registry in an organization offering adequate reliability while waiting for the constitution of the NPO.

BACKGROUND

The Internet is rapidly transforming the ways in which companies throughout the world are doing business. The Gartner Group projects the business-to-business (B2B) Internet market to grow from $145 billion in 1999 to $7.3 **trillion** in 2004. Companies world-wide are now reinventing themselves to stay competitive, and business functions are being transformed across the spectrum – from sales, marketing, and distribution channels to manufacturing and purchasing.

The Palestinian Territory was recently awarded the Internet domain of "PS". This awarding of the Top Level Domain (TLD) is recognition that the Palestinian economy must be included on the Cyber Map of the world. Dr. Ghassan Qadah (Director –Government Computing Center) and Dr. Yaser Doleh (New York-based computer scientist) were assigned as the Administrative and Technical contacts to run the Palestinian TLD.

Internet domain support is an initiative of DAI and USAID to help ensure that the "PS" TLD (Palestinian Top-Level Domain) manager is able to manage the "PS" domain in a way that effectively increases Internet access and usage. Effective management of the "PS" TLD requires financial sustainability through the establishment of sound business, marketing and financial plans for the initial 3-year timeframe.

Achieving sustainability should be the overarching objective of support to the "PS" TLD.

1- THE WORK OF THE CONSULTANTS

1-1- Cooperation with the Ad Hoc Working Committee

An ad hoc working committee was established in May 2000 having the scope to assist the consultants by providing them information and materials concerning the situation of the Internet in the West Bank and Gaza. The primary objective of this committee was to give guidance to the consultants, Dr. Stefano Trumpy and Dr. Robert Krause, and to ease the establishment of consultation meetings with the principal constituencies of the Local Internet Community (LIC).

The Committee held a meeting prior to the arrival of the consultants in order to arrange the work plan during the presence in of the consultants in the Palestinian Territories (4 - 22 June, 2000) and had been in continuous contact with them during that period.

The Adhoc committee consisted of:
- Dr. Ghassan Qadah as the designated administrator of .ps by IANA/ICANN
- Dr. Yaser Doleh as the technical contact for .ps designated by IANA/ICANN
- Omar Al-Sahili, IT Sector Coordinator , DAI
- Sam Bahour of Applied Information Management / Private Sector
- Dr. Najeh Jasrawi of Birzeit University

In particular, Dr. Krause met Dr. Doleh in the US before leaving to West Bank/Gaza and Dr. Doleh was then kept informed of the work in progress via e-mail. The ad hoc committee proved to be very beneficial to the work of the mission and served its purpose in the best way.

1-2- The Consultation with the Representatives of the Local Internet Community and with the Government Representatives

The consultation steps with the constituencies of the Local Internet Community (LIC) have been the following:
- ❖ Workshop 1 that was open to the public and described the objectives of the mission, introduced the main issues and sought support from the LIC to make the plan to activate the .ps registry;
- ❖ Workshop 2 at the end of the mission discussed the findings and the recommendations of the consultants;
- ❖ Meetings with representatives of the Palestinian Authority, in particular with Minister Nabil Shaath (MOPIC) and with Minister Imad Falouji (Minister of Post and Telecommunications)
- ❖ Meeting with the Palestinian Information Technology Association (PITA)
- ❖ Meeting with the ISPs in Gaza & West Bank

- ❖ Meeting with representatives of the universities
- ❖ Meeting with lawyers for Intellectual Property Rights and disputes resolution.

From the above, it can be derived that a strong effort was made in order to receive inputs from all the major players constituting the Local Internet Community. In particular, the invitations to the workshops have been as broad as possible, resulting in good attendance (50-60 people) in each workshop from a broad cross-section of the LIC.

Furthermore, during the second workshop those present recognized that a great effort has been made in a short period of time to let all interested parties express their concerns and opinions. This fact constitutes a significant step forward to start the organization of the LIC. This precedent should help in the future consensus building on different issues in a democratic way and in the real spirit of the Internet.

2- VISION

2-1- .ps As One Of The Facilitators To The Internet And Economic Growth in The Palestinian Territories

A business model that supports effective management of the .ps domain is a critical component for realizing the vision for the Internet and economic growth in the West Bank & Gaza. Looking out over the next 3-5 years, our vision focuses on:

- Sharply increased Internet usage and access;
- Sharply expanded development of the Palestinian web content;
- Accelerated broadband utilization of the Internet; and
- Rapid growth of Business-to-Consumer (B2C) and Business-to-Business (B2B) e-commerce.

The Center of Excellence at the core of the .ps domain is only one catalyst for realizing this vision, but its promotional and educational activities are extremely important to the Internet growth. With well defined and market driven activities, the .ps domain and its Center of Excellence becomes an important element of the overall strategic support plans for the overall IT sector growth strategy. Specifically, the .ps domain becomes one of the leading vehicles for building utilization.

The vision and strategy help us set clear economic targets for Internet growth:

- 300,000 Internet users by 2005;
- 30,000 registered names by 2003; and
- 100,000 registered names by 2005.[1]

As the optimal business model for the .ps domain is based upon this vision, this strategy and these economic targets, it provides for the establishment of a Center of Excellence. A minimal solution would exclude a Center of Excellence and its promotional / educational activities. Without those promotional activities, the economic targets would be slashed substantially.

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[1] The figure of 100,000 is a mere prediction as technology transforms and grows very rapidly.

3- DECISION CRITERIA

Before coming to their recommendations, the consultants have taken into account the following elements:

- The inputs received by the Local Internet Community

- The reference documents attached to this report and in particular the best practices for running the ccTLDs prepared by CENTR (Annex 9-5), by WIPO (Annex 9-7), and by ICANN (Annex 9-8 and 9-9) and ICANN/GAC (Annex 9-4). The best practice recommendations are also coming from de facto general orientations widely adopted by the ccTLDs;

- The intention of proposing a business model suited to contribute significantly to the growth of the Internet in the West Bank and Gaza;

- The experience, knowledge and judgment of Dr. Stefano Trumpy on the matters concerning the "Internet Governance", deriving from the following roles he plays:

  a) Italy ccTLD former manager

  b) Head of the International Relations for the .it registry

  c) Italy representative in CENTR

  d) Italian representative to GAC (Governmental Advisory Committee) of ICANN

  e) VP for Policy in ISOC Advisory Council

  f) President of ISOC chapter in Italy

  g) Member of the "Internet experts" committee of the Italian Cabinet Presidency

4- ELEMENTS OF THE RECOMMENDED SOLUTION

4-1- Definitions

Registrants: those individuals/organizations applying for registering a domain name. After the registration, they become "domain name holders".

ISPs: Internet Service Providers; among them it is common practice to distinguish between the access providers and the content providers such as (web hosting); both are eligible to become Registrars.

Registry: the organization responsible for developing and implementing the rules and procedures for domain names registration and maintaining an up-to-date, accurate and public available database of the name space.

Registrars: those ISPs having contract relations with the Registry to collect and prepare information for data entry for the Registry database. The functions of Registrars are realized in different ways. The gTLD Registrars have to

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comply with the rules established by ICANN, while in the ccTLDs environment the accreditation may be less formal. Furthermore, different approaches are in use referring to the possibility for the registrar to enter directly on the database of the Registry; the latter case is applied for the gTLDs; A technical solution for running a shared database has been realized by Network Solutions Inc. (and others). In the case of .ps the **consultants advise** to defer to a later period the solution to register directly into a shared database.

4-2- How the Registries Compete

The volumes of registered names and consequently of the financial aspects of the ccTLDs depend on the following items:

- **Response Time:** defined as the average time beginning with the receipt of correct information from the registrant and/or registrar and ending when the name is registered in the database (which implies being active for usage by the domain name holder);
- **Simple Rules and Low Bureaucracy:** the registrars who act on behalf of the registrants for providing data to register the requested name have to become familiar with the rules and procedures of the ccTLDs that they have in their portfolio. These rules and procedures are quite different from country to country, and it is easily understood by the market that the ccTLD having simpler rules and procedures will be preferred. If a registry is allowing direct registration by the registrants, this aspect gives even a greater competitive edge.
- **Level of Service:** the registrars will be attracted by those registries providing a superior level of service including help desk via e-mail and telephone, a well designed and reachable web service and an efficient and rapid management of contractual aspects. In addition, the most competitive ccTLDs are developing value added services such as training courses and technical information available through the network, software packages to authomatise specific function and services, providing advice on technical and organizational matters, etc.;
- **Fees Applied:** this aspect is important but, provided that a registry is not significantly out of the range in price to that applied by other registries, is not weighting as much as the other mentioned factors;
- **Promotion:** this aspect is obviously important but it will have a relevant effect only if the previous elements allow the development of a competitive registration service.

Having in mind those parameters, the consultants are confident that the target of reaching 30,000 names registered after the three years period with a sequence per year (3000, 10000, 17000) will be met and on this assumption the business plan has been conceived.

4-3- The Recommended Structure Of The Registry

The consultants have considered as options to host the Registry

functions the following organizations:

- Government Computer Center (GCC) as envisaged in the IANA delegation
- ISPs
- Universities/research institutions
- Non profit organizations

The **consultants recommend**, from best practice of ICANN, that the registry should be constituted as a **not-for-profit entity** (foundation, company limited by guarantee or whatever is best suited for the Palestinian laws and regulations), having the function of running the registry as its main activity.

The registry should perform two main functions: (1) the Naming Authority and (2) the Registration Service.

The **Naming Authority** - should be composed by experts in the field of DNS (Domain Names System of the Internet) having the task of defining the rules for naming and the annexed procedures. The Naming Authority should act as the board of directors having the task to set policy and provide direction for administration of the Registry or could designate a standing committee of the NA for that specific task. The chairman of the Naming Authority could act as the administrative contact in relation to IANA/ICANN.

The Naming Authority has very important policy functions such as:

- Defining the rules and procedures for registering the names;
- Defining the contracts with the registrars and an eventual procedure for their accreditation;
- Defining instruments to ease the solution of disputes and limiting the cases that finally go to court;
- Keeping contact with the international organizations to conform to international best practices.

The Registration Service will:

- Maintain the database of the names in a secure way;
- Make available the information on the registered names (WHOIS service) in respect with the norms adopted for privacy protection;
- Register the names on the database following the rules and procedures defined by the naming authority;
- Run a local area network, workstations and i/o as needed to provide an effective service and assure a good connection with the internet for worldwide access;
- Set up a web service, a help desk and related activities in order to assure a good level of service toward the users;
- Organize educational courses for the registrars and for the domain names holders;

- Manage the contracts, billing and administrative matters of the registry;
- Maintain contacts with the international organizations for the technical aspects.

4-4- Naming Authority as the Representation of the LIC

The Naming Authority should be composed of representatives of the main constituencies of the Local Internet Community. From best practices adopted by ICANN and considering the constituencies of the DNSO (Domain Names Supporting Organization), the **consultants advise** the Naming Authority to be composed of representatives of:

- Business users
- Non-commercial users (including universities, research institutions, NGOs, etc.)
- Internet Service Providers (registrars)
- Registration Service
- Law / Intellectual Property Rights (IPR)
- ICANN members at large *(see www.icann.org)*
- Government

In the medium term, the structure and the representatives of the Local Internet Community should derive from a democratic expression of the constituencies (with a guarantee that the members appointed will have high professional profile and commitment to the task). As a start up, while the LIC consolidates its organization, a governmental intervention should provide a formal legitimacy to the Naming Authority structure as proposed.

The **consultants recommend** that the Naming Authority, as soon as legitimized and activated, establish working groups to prepare the necessary elements for rapid decision making; an initial set of working groups could be devoted to the following aspects:

1. Structure	4. Business Model
2. Technical	5. Legal
3. Policy	6. Value added services

4-5- The Role of the ISPs and their Function as Registrars; their Relations with the Registrants and with the Registry

Concerning this aspect, there are not best practices recommended by ICANN or CENTR for the ccTLDs. The relations between registrants, registrars and registries have a high degree of variation and depend of the local situation of the market and of the agreements between the ISPs and the registry. The following considerations are deriving from the experience of .it registry - Italy (Annex 9-10) and could be taken as a

possible operational example:

4-5-1- An ISP To Become A Registrar Has To Sign A Contract With The Registry   Which Should Include:

- Forwarding to the registry all necessary technical data on behalf of the registrants;
- Updating the data relative to the domain name holders in the database of assigned names maintained by the registry;
- Transferring the expertise related to the use of the domain name to the registrants to ensure a correct use of the same;
- Keeping an archive of the letters of assumption of responsibility signed by the registrants (see below a possible model of that letter);
- Paying to the registry the agreed amount per name.

In instances where the gTLD is in operation (Annex 9-9), a specific accreditation procedure is needed in order to become a registrar since assurance is needed that the registrar has adequate professional skills and managerial and financial robustness. Some ccTLD have applied a similar procedure and many others do not have such a procedure in operation.

4-5-2- Responsibility of the Registrants

The registrant has to sign a letter of assumption of responsibility (LAR) declaring to take full civil and criminal responsibility upon himself concerning the use of the domain name.

Therefore, in the LAR, it should declare:

- The identification data of the registrant
- The knowledge of the fundamental principles that rule the internet resources
- The knowledge of the naming authorities rules and procedures
- The knowledge and the respect of the principles of netiquette

The ISPs contracts in place for Internet services with their clients will allow them to include the names registration under .ps as a value-added service. Taken together with the price charged to the registrants, there will be clearly a competition among the registrars.

From the above, it can be expected that not all the ISPs will have the ability or inclination to register the names on behalf of their clients; because either the administrative burden involved and/or the presumably low profitability of this service.

The Consultants advise that the .ps Registry take into consideration the following:

- Register the names only through the registrars (no direct registrations for the registrants);

- Establish a uniform contract scheme to be signed by the registrars with clauses that, when accepted, constitutes a de facto accreditation;

- The Naming Authority issue a letter of assumption of responsibility to be signed by the registrants;

- The registrars keep the archive of the letters of assumption of responsibility ready to be transferred, on request, to the registry.

5- RECOMMENDED RULES

5-1- CLOSED VS. OPEN

Definition:

- A *Closed ccTLD* is intended to assign domain names only to registrants legally based only on the country/territory identified by the two letter ISO code (in our case .ps);

- An *Open ccTLD* is intended to assign names to a registrant coming from anywhere in the world;

  Between the two categories there are a number of variations applied by different ccTLDs, and ICANN **recommends** that those open ccTLD that explicitly advertise as gTLDs adopt the rules and recommendations established for the gTLDs.

  As far as the operations of the registry are concerned, the solution of open ccTLD implies a stronger structure for the following reasons:

    - a larger user base implying more workload for the registration service;
    - users coming from different countries will be attracted by simple and non bureaucratic rules and procedures; therefore the Naming Authority will have to consider that aspect in defining the rules and procedures;
    - the necessity of considering having registrars based in different countries (this may be valid also in case of a closed registry);
    - the necessity to address disputes coming from domain name holders and/or registrars based in different countries.

  After consultation with the constituencies of the LIC, the **experts recommend** .ps to be "open" with a specific promotion campaign directed toward registrants coming from the "large or virtual Palestine", including expatriates from any country in the world.

  Promotion should encourage registering under .ps to all those organizations and individuals having interest in the Palestinian commercial, business and cultural aspects. It will be a cornerstone of the three-year business plan of the Naming Authority.

  This will as a consequence attract a larger user base and the experts recommend avoiding as much as possible discrimination on the nature or domicile of the registrants. This approach toward an "open .ps registry" will also avoid the need to follow the rules governing the administration of gTLDs as recommended by ICANN.

5-2- FLAT VS. INTRODUCING SECOND-LEVEL DOMAINS (SLD)

Definition:

- *Flat* is a registry that registers names *only in the second level;* in other words, which does not distinguish any category of names in the database records.

- *SLD* are in use by many registries which have *second level domain* names to distinguish categories of users or type of activities. As an illustration of the different solutions adopted, we mention the following:
  - Use as SLDs the gTLD names, more frequently (.gov, .mil, .org, .edu and .com);
  - Introducing SLDs to indicate physical persons, professional orders, trademarks, etc (France for instance has 46 SLDs within its Registry);
  - Some registries recommend the registrants to adopt the SLD they feel more suited for them;
  - Some registries allow registration under SLDs only on show of an appropriate documentation that the registrant belongs to that category;
  - Some registries defer to an organization in charge of the category referred to in the SLD the responsibility of defining an appropriate naming structure and to render this mandatory (**Chartered Domains**)

In the practices adopted by the ccTLDs, there are variations and combinations of the cases mentioned above. The considerations that lead the consultants to advise to limit as much as possible the adoption of SLDs and if required by the LIC to adopt only a limited number chartered SLDs are the following:

- Commercial and business users, which constitutes the majority of domain name holders, prefer to have domain names as short as possible, and therefore they have a preference to see their name directly under the country code;

- The idea to define categories is theoretically a good one, leading to the extreme idea to build the yellow pages for the Internet with a large number of SLDs. If registrants are able to choose the SLD which they think appropriate, there is a risk of losing the rationality and integrity of the whole system. This is likely to result in the registry imposing on the registrants criteria to show appropriate documentation that demonstrates their right belong to that category. This is the window for bureaucracy and, if introduced, will certainly stimulate a lot of contentious cases;

- The problem of trademarks is not solved by SLDs, although in some cases a special SLD for trademarks has been introduced (as in France, for example). In real terms, however, nothing prevents the owner of the trademark, if he is convinced that another subject holding the same name under another SLD is damaging him, from raising a dispute claim.

From the above, **the consultants concluded** that introducing SLDs in the Palestinian Territories to divide the domain name holders in categories will lead to a complication of the rules and is likely to introduce procedures that act as obstacles to the business plan that was conceived. Rather than providing any real commercial or competitive advantage, the introduction of SLDs, which is increasingly being called into question in more developed markets, may damage economic and

business benefits expected of the Internet in the Palestinian Territories.

The belief that many domain names holders who are accustomed to working within a gTLD structured as a SLD will demand the same arrangement is not particularly valid, as these domain names holders will soon be a minority with respect to the Palestinians registered under .ps. They could In any case, maintain the two names in parallel until they feel appropriate to select one over the other.

Concerning the possible **Chartered Domains**, the consultants considered the particular case of the government where a chartered SLD ".gov" might make sense under these conditions:

❖ A body of the government defines a naming scheme for all government institutions and communicates to them on how they should be named in the Internet. The same body could act as a registrar thus implying that all the government institutions have to register through that body.

❖ An alternative hypothesis for managing the ".gov" SLD is that all the accredited registrars know the naming scheme prepared by the body of the government and act accordingly when approached by a registrant belonging to the government. Similar reasoning could be made for the universities and research institutions but their small number should not in our opinion justify a special SLD, and same is applied for an eventual .mil.

❖ In any case, the Naming Authority will decide the possible organization and methodology of the Chartered SLDs. The **consultants recommend** the Naming Authority consider and decide the SLD issue as a matter of urgency in order not to create a situation that later, if changed, will create problems with the already registered names in a completely flat environment.

5-3- Number of Names per Registrant

The extremes are:

- One name per registrant
- An indefinite number per registrant

The situation in the ccTLDs is very scattered; a large number of ccTLD allow only one name per registrant and, in some cases, the more restrictive also impose that the registered name is coinciding with the trademark or the name of the organization involved.

Other registries allow the organizations to register as many names as they want. In these cases, normally the registrant is warned to be careful not to infringe the rights of third parties. This situation existed in Italy since December 15th,1999 and has provoked phenomenon as:

- *Cybersquatting*: is registering names equal or similar to famous names or de facto trademarks in order to sell them to the interested parties or to damage their image, or to prevent a

registration by them or to create confusion in the Internet community;

- *Warehousing*: is the massive registration of names potentially appealing for the public in order to subsequent speculation.

After six months, the workload of the .it registry is still so high compared to the previous period to have caused a relevant degradation in the quality of the service, especially for what concerns the response time. Only very recently the response time returned normal.

Different registries impose a limit which may vary from a fixed number (10 is in the average) to special cases for companies holding trademarks or other form of protected (and formally registered) names; in the latter case, normally there is no limit.

From the above, the **consultants recommend** adopting the limit of 10 fixed for all the organizations. Extending the number of names to the trademarks owned by a company is feasible but defining other categories of protected names might imply bureaucratic burden that is better to avoid. The suggested number is clearly arbitrary and might be reviewed by the Naming Authority as the demand evolves and the structure of the Registration service is consolidated so to may absorb workload peaks.

5-4- Physical Persons

In using the term "physical persons" we mean individuals not holding a commercial or professional license nor any recognized individual independent activity under Palestinian civil administration. Regarding physical persons, the **consultants advise** to allow only one name per person.

The approach in different ccTLDs is scattered:

- Physical persons are not allowed to register any name (quite common);
- Physical persons are allowed to register only their name, as it results from a valid ID;
- Physical persons are allowed to register only one name not necessarily coinciding with their name; in those cases, there is a warning not to register other's persons names;
- Physical persons are allowed to register more or even an indefinite number of names.

The consultants recommend adopting the second or the third hypothesis above.

5-5- Excluded Names

Excluded names are those that should be precluded from being available for registration under any circumstances.

An ideal registry should be able to rely on lists of excluded names that might be searched in real time when entering the name requested.

The following are some categories of the excluded names as applied by other registries examined:

- ❖ Trademarks: In some limited cases the registries have access to a public updated database of trademarks In such cases, if a requested name is coinciding with a trademark, the registry should verify if the request came from the trademark owner or not. If not, the name is assigned only if the trademark owner has signed a letter to delegate the registrant to register that name;

- ❖ Geographic names: Many registries exclude the possibility of registering geographic names. If geographic names refer for example to the municipalities, it is relatively easy to build up a database of excluded names which in this case, could be registered only by the municipality itself. However, if by geographical names we mean any type of geographical names, then the question is more complex and even not feasible. In the West Bank and Gaza for example, different names for the same location are in use. In addition, it will be difficult to decide which entity could be entitled to register the name of a mountain or of a river;

- ❖ Offensive or Obscene names: it is obvious that it is almost impossible to make an exhaustive dictionary of such names. As a consequence, in the letter that the registrant has to sign in order to assume the responsibility of his request, it should be stated that a name which is considered offensive or obscene by the registry itself or by complainants showing up later, could be not registered or revoked;

- ❖ Famous names: These names may be of various nature and, at least in an initial phase and it seems difficult to create such a dictionary;

- ❖ Common names: These kinds of names are forbidden in some registries and in other (especially those allowing to register more names) are allowed. It is almost impossible to generate a database of those names. This raises a very fundamental question of whether   names in the Internet are to be considered free expression or should be related to the activity of the registrant. The most experienced registries are insisting on the fact that the names in the Internet are only string of characters which is true but they also are aware of that, because of the economical value that the names gained through e-commerce, legal implications should be prevented as much as possible. Common names in Italy, for example, are allowed.

From the above, **the consultants advise the .ps Naming Authority** to compile

lists of excluded names which may be easily verified at the moment of registration and to clearly warn the registrants about their responsibility toward third parties in registering certain categories of names. Then, a procedure to resolve quickly the inevitable disputes should be in place as an ongoing core business issue of the Naming Authority.

6- TECHNICAL MATTERS

In this paragraph general **recommendations** are provided concerning the technical infrastructure to allow the proper running of the registry. In (Annex 9-1), the IAT/CNR team responsible for the technical infrastructure provided more specific recommendations as a base for a procurement process.

6-1- Hardware

The basic components of the hardware are:

- the computers to run the primary DNS and the secondary DNS service;
- a firewall;
- a server for running the services provided by the registry;
- a suitable number of workstations for the manager, for the system engineers, for input of data on the domain names database and the other functions in the registry organization; and
- an adequate I/O equipment (printers, fax, etc.).

All these components are standard and easily to be purchased.

6-2- Networking facilities

A LAN has to be installed for connecting all the working locations in the premises of the registry. If the organization that will host the registry is already equipped with a LAN, that part of the described components is not needed. Due to the requirement to protect the registry database from intrusions from the network, a firewall could be installed to separate the service machines from the "ordinary" work. This function might be performed by the router, which will be necessary in any case for the connection of the LAN to the Internet. A connection (leased line or frame relay) to the Internet is needed, possibly to a point where the ISPs are executing peering agreements; a router is then needed to access the Internet. All the components are standard; for the technical solution to establish a 128Kbit/sec or 256 Kbit/sec link to the Internet and the best offer of a local provider should be taken.

6-3- Software

The software components are:

- The operating systems
- The software for running the DNS servers
- Application software to run the registry functions
- Application software to be developed locally

6-4- Staffing

The recommended staffing for the first year is the following:

- 1 General Manager - responsible for Center of Excellence activities and business development;
- 1 Systems Engineer – Internet networking (DNS, routing, and basic Internet services);
- 1 Systems Engineer – database management, data retrieval systems, and web interfaces;
- 1 Administrative / Legal Support;
- 2 Data Entry Support Personnel;
- 1 Secretary.

The selection of well-qualified and committed persons to fulfill the above mentioned jobs will be a key element for the success of .ps registry; the **consultants recommend** to put particular care in the selection of the employees. The personnel will be increased in the second and third year following the business plan. In case the workload proceeds as planned. If the workload will be higher or lower than planned, the evolution of the personnel will be adapted accordingly. It is worth noting that the workload of the ccTLD registries is normally growing quite fast and that the dedicated personnel is not increasing proportionally, and that's due to the introduction of more efficient automatic tools and to the capacity of the structure to absorb more workload without having to make major changes in the organization.

6-5- Training

An initial period training (intense and short) will be essential if we take into account the intention to start the operations by September 1st. The training may be done through visits to the premises of other registries with the possibility of a "hands on" experience or through organized courses to be held at the site of the new .ps registry. Both ways may be pursued. The **consultants** verified the availability and willingness to help in the training by CENTR (Oxford, UK) and by Israel and Egypt registries: registry (Tel Aviv). Concerning the Italian registry, in the present time the workload of .it registry has increased so much that there is not the availability for an on site, hands on, training. Other form of contribution like organizing special courses in the Palestinian territories will be taken into consideration.

6-6- Dispute Resolution

The WIPO document for dispute resolution (Annex 9-7) was approved with the scope to be used by complainants having registered the names under generic TLDs. Furthermore, the procedure has been adopted by those ccTLDs being open and advertising as gTLDs; these are today:

- .AC (Ascencion Island)
- .IO (British Indian Ocean Territory)
- .NU (Niue)
- .SH (St. Helena)

- .TT (Trinidad and Tobago)
- .TV (Tuvalu)
- .WS (Western Samoa)

The .ps does not fall into this category and therefore the WIPO procedure should not to be adopted as is; the **consultants recommend** adoption of basic principles such as the definition of the cases of registration in bad faith. Looking at the practices in use by the ccTLDs for dispute resolution, it may be observed that very different approaches are in place. It is good practice for open ccTLDs to set up a mechanism for alternate dispute resolution in the country and then to establish links with international dispute resolution services as the one established by WIPO to ask help in solving difficult cases involving foreign parties. The consultants indicate, as a good example, a procedure similar to the one adopted by Nominet (the .uk registry).

6-7- Investigation

The registry will seek to establish whether a mutually acceptable resolution to the dispute can be found by the impartial intervention of staff of the registry. In case the two parties find an agreement to change the domain name holder, the registry, upon receiving a signed letter by both parties, changes the record in the database.

6-8- Administrative procedures

Under the rules established by the Naming Authority, the registry may suspend delegation of an Internet Domain Name in circumstances such as a third party notify that, in their view, a Domain Name is being used in a manner likely to cause confusion to Internet users. If the suspension, or not suspension of the delegation is not accepted by one of the parties involved, the registry, at that party's request, refer the suspension to an independent expert for a recommendation that the registry should confirm or revoke its decision.

6-9- Mediation service

If either party is dissatisfied with the registry final decision on suspension of delegation of the Domain Name, the registry will suggest that party refer to an accredited mediation service. If one of the parties refuses to enter into a mediation agreement (or mediation does not resolve the dispute), the dissatisfied party will remain in a position to seek advice from its lawyers about pursuing its case by litigation in the courts.

6-10- Higher Level Policy Items

There are other aspects that a registry should take into consideration in defining the rules and regulations and in running the registration service such as:

- Conforming to the privacy regulations in the publications of the data contained in the database (service WHOIS);

- Assure the Intellectual Property Rights;
- Conforming to the recommendations of ICANN in the management of the names database for the aspects of keeping it up-to-date, open for public review and following security standards;
- Prepare a set of recommended use of the network and a list of not allowed misbehavior (netiquette) and make this known to the wider public.

6-11- Linkages to International Organizations

The **consultants** highly recommend the .ps registry to establish links to the following organizations and to consider the costs involved as an integral part of the service provided to the holders of a contract with the registry. Participation in the listed below organizations will have the following benefits:

- Training of technicians
- Active participation in the global / regional planning of the domain name system of the internet
- Establishing collaborations
- Dealing with international disputes arising in an open ccTLD as the .ps.

Global organizations

6-11-1- ICANN (Internet Corporation for Assigned Names and Numbers)

ICANN was established in 1998 to take over the tasks fulfilled by IANA. And that's after the US government decided to render the previously US government-funded structure in charge of the "Internet Governance", IANA.

Within ICANN there are a number of activities of interest for the ccTLDs. These are conducted in the ccTLD constituency of the DNSO (Domain Names Supporting Organization) and in the GAC (Governmental Advisory Committee).

Recently, ICANN launched a campaign to recruit the "at large members". The **consultants advise** the Naming Authority to encourage those persons (ideally professionals) more interested in the Internet governance on a global scale to apply for membership of ICANN. In this initial phase to be member is free of charge thanks to a donation of a US foundation. The at large members of ICANN elect 9 of the 18 members of the Board of Directors of ICANN. The next election will take place at the end of next September.

6-11-2- ISOC (Internet Society)

ISOC is the umbrella organization for IETF (Internet Engineering Task Force), of IAB (Internet Architectural Board), of ISTF (Internet Societal Task Force) and other bodies. Within ISOC, a number of chapters have

been created on a geographical scale. The chapters have the scope to promote the association of individual and organizational members to ISOC, to help spreading the Internet culture locally and to consolidate opinions of the Local Internet Community. The **consultants advise** those involved in the activation of the .ps registry to consider promoting the creation of a Palestinian chapter of ISOC as an instrument to ease the organization of the Local Internet Community and to accelerate the diffusion of the Internet culture.

In Europe

6-11-3- CENTR (Council of European TLD Registries).

This organization, based in UK has, as main task, to create common views in an enlarged Europe for the establishment of best practices for the structure and organization of the registries, for the technical instruments, for dispute resolution, for legal issues and for the delegation and re-delegation of the registries. The **consultants recommend** that the .ps registry (possibly through the administrative contact appointed by IANA/ICANN) join CENTR as soon as possible. The same organization has already communicated the wish to have .ps among its members and the intention to help the new registry.

6-11-4- RIPE and RIPE/NCC (Roseau IP Europeens and Network Coordination Centre).

RIPE is the organization where the principal Internet operators in Europe meet to discuss technical matters concerning the management of the Internet. The working groups that are presently active are:

Anti - Spam Working Group	Fighting the problem of "spam" on the internet.
Database Working Group	The Database working group deals with all issues related to the RIPE NCC Database.
EIX Working Group	European Internet Exchange's related issues and problems.
European Operators Forum	European technical network operation related issues and problems.
IPversion6 Working Group	IPv6 related issues and questions.
DNS Working Group	Domain Name System questions and issues.
Local IR Working Group	Issues and questions related to registration services and Local Internet Registries
Net News Working Group	NetNews related topics.

Routing Working Group	Issues dealing with routing architecture for the European Internet.
Test - Traffic Working Group	Discussion of the Test Traffic project.

The working groups on DNS and on the local IR are the ones more focused on the interest of a registry but other working groups deserve to be followed by those interested in assuring an ordered and self-regulating Internet environment. In particular, the DNS working group has developed and made available, for free, the software that fulfills the main functions of the registries.

The **consultants recommend** .ps registry to establish close links with the more relevant RIPE working groups. This activity may be followed in real meetings but also by participating in the working groups mailing lists. Joining RIPE activities has no cost, apart the travel to participate in the meetings.

RIPE/NCC is an independent company that offers for a fee the allocation of IP numbers to the European ISPs. The registries normally do not have necessity to interact with RIPE/NCC while the registrars of medium and large size normally establish contracts with such an organization.

7- BUSINESS MODEL

7-1- Attributes of the Business Model to Meet Economic Targets

As an "open" domain, it is anticipated that the .ps domain will compete with other ccTLDs for the registration of new names. Given that worldwide Internet users are now doubling every 100 days, and given that one new domain name is generally associated with every 20 users, the .ps domain registration "product" has a tremendous growth potential if designed well and supported by a globally competitive business model. Moreover, the current growth trend is projected to rise even more steeply over the next several years, particularly as both wireless and broadband Internet usage grows.

In order to take advantage of this market opportunity, the .ps domain business model has the following "product design" attributes:

- ❖ Quick response time (target – 2 days or less);
- ❖ Clear and simple rules (according to ICANN standards);
- ❖ Low bureaucracy in response and authentication;
- ❖ High level of service (help desk and contracts with registrars);
- ❖ Low costs;
- ❖ Competitive prices (fees to registrars);
- ❖ ICANN best practices to lower dispute resolution costs;
- ❖ Aggressive promotion to local and global markets; and
- ❖ Quality value added services through the Center of Excellence.

It should be noted that the first four attributes (quick response, simple rules, low bureaucracy, high service) constitute the "core" design needs. These are the primary benefits sought by the registrants and registrars. If these attributes are applied, the fees may be value priced (competitive but not necessarily lower than other ccTLD fees). Also, aggressive promotion will only produced desired results if the four "core" attributes are in place.

7-2- Revenues

In order to provide quick response, we recommend that registrations be made only through the contracted registrars. (For the initial start-up period, it is recommended that the registrars collect and send registrant information to the registry for entry on the database, but the "product design" calls for direct entry on the database via the multiple registration software as soon as practicable.) This process, of course, makes it very important for clear and simple rules that can be understood and applied effectively by the registrars.

We recommend an initial fee of $35 to be paid by the registrars to the registry for each name registered. This price is based upon a value pricing model (what the customers are likely to be willing to pay). The value pricing model, in turn, is based upon competitive factors (e.g., Jordan's fee of $70 for the first year and $35 per year thereafter; UAE's annual fee of $55 plus a one-time registration fee of $14; and Network Solutions' fee of $35 per generic TLD

name).

For reasons of simplicity and reducing billing costs, we recommend against applying both a one-time registration fee and an annual fee. The fee the registrars may charge to the registrants is left up to the registrars themselves to set according to their own market calculations – those fees could be greater than, equal to, or less than the $35 fee to the registry, depending upon product bundling and other market considerations. The Naming Authority, of course, could review and amend the recommended fee at any time, but the following revenue projections are based upon the $35 figure.

REVENUES ($) – OPTIMAL SOLUTION

	YEAR 1	YEAR 2	YEAR 3
REVENUES	105,000	455,000	1,050,000
# NEW NAMES	3,000	10,000	17,000

Revenues for each year include the annual fees for the new names as well as the annual fees for names previously registered.

7-3- Costs

Fixed and operational costs include those for human resources, hardware & networking, software, site / space, training, Naming Authority support, travel, and Center of Excellence activities. The cost categories are scalable to respond to increasing demand. The total costs are projected to reach full cost recovery in Year 3.

TOTAL COSTS ($) – OPTIMAL SOLUTION

	YEAR 1	YEAR 2	YEAR 3
Human Resources	225,000	280,000	375,000
Hardware / Network	160,000	100,000	125,000
Software	50,000	50,000	50,000
Site / Space	20,000	30,000	40,000
Training	**30,000**	**40,000**	**70,000**
Naming Authority	20,000	25,000	30,000
Travel	20,000	20,000	25,000
Center of Excellence	20,000	50,000	85,000
TOTAL	**545,000**	**595,000**	**800,000**

The projected costs for human resources in Year 1 include the following:

- ❖ 1 General Manager ($50,000) – responsible for Center of Excellence activities and business development;
- ❖ 1 Systems Engineer ($45,000) – Internet networking (DNS, routing, and basic Internet services);
- ❖ 1 Systems Engineer ($45,000) – database management, data retrieval systems, and web interfaces;
- ❖ 1 Administrative / Legal Support ($30,000);
- ❖ Data Entry Support ($40,000 total);
- ❖ 1 Secretary ($15,000).

The projected costs for hardware and networking in Year 1include the following:
- ❖ primary and secondary DNS servers (~10K$);
- ❖ 1 main server (~35K$)
- ❖ work stations (~16K$);
- ❖ PCs (~9K$);
- ❖ 1 Firewall (~20K$);
- ❖ I/O equipment, fax (~20K$);
- ❖ 1 router (~5K$)
- ❖ LAN (~25K$)
- ❖ Internet connection (~20K$)

Notes:

- The projected costs for software in Year 1 include software licenses plus some application packages development.
- The projected costs for site / space in Year 1 are based upon a requirement for 100 square meters.
- The projected costs for training include both in-country training and training at other ccTLD sites (particularly for the systems engineers).
- The projected costs for Naming Authority support include expenses to support of the activities of the Working Groups (Structure, Technical, Policy, Business Model, Legal, Value Added Services).
- The projected costs for travel include expenses for travel to ICANN, CENTR and RIPE meetings.
- The projected costs for the Center of Excellence include expenses for promotional and educational activities. These costs are projected to increase each year as the Center becomes more involved in promoting Internet access, usage, and content in cooperation with the Local Internet Community.

7-4- Capitalization

Funds will be needed to capitalize the start-up of the .ps domain. Projected Year 1 costs exceed projected Year 1 revenues by $440,000, and projected Year

2 costs exceed projected Year 2 revenues by $140,000. The combined two-year shortfall amounts to $580,000.

We recommend that the non-profit organization (foundation) that is created for the Registry be capitalized in the amount of the two-year shortfall ($580,000). As revenues are projected to exceed costs by $250,000 in Year 3, further capital funding is not projected.

We **recommend** that USAID and possibly other donors invest in the foundation for the start-up of the Registry (including both the Naming Authority and the Registration Service). Foundation members coming from the Local Internet Community might also invest by cash and/or in-kind contributions. The latter might include an in-kind provision of space.

Although the initial capitalization should amount to $580,000, the immediate start-up funding requirements are approximately $410,000 (first nine months of Year 1 costs).

Given the Year 3 income projections (revenues less costs), the initial capitalization investments could be returned after Year 3 or re-invested for expanded activities on behalf of the Local Internet Community through the Center of Excellence. Reinvestment would bolster efforts to realize the vision and meet strategic objectives for Internet growth.

7-5- Minimal Solution

A minimal solution would entail no Center of Excellence. We do not **recommend** it, as the Center of Excellence is key reaching the vision, strategic objectives, and economic targets.

If implemented, a minimal solution would have marginally lower costs (primarily the elimination costs for the general manager and the Center's activities) and markedly lower revenues (through the lack of aggressive promotion). Without aggressive promotion, the projected number of registered names would be at least 50% less than those achieved under the optimal solution. Projected revenues and costs for a minimal solution are shown below.

REVENUES ($) – MINIMAL SOLUTION

	YEAR 1	YEAR 2	YEAR 3
REVENUES	52,500	227,500	525,000
# NEW NAMES	1,500	5,000	8,500

TOTAL COSTS ($) – MINIMAL SOLUTION

	YEAR 1	YEAR 2	YEAR 3
Human Resources	175,000	200,000	225,000
Hardware / Network	140,000	90,000	100,000
Software	50,000	50,000	50,000
Site / Space	10,000	20,000	20,000
Training	30,000	40,000	40,000
Naming Authority	15,000	15,000	15,000
Travel	15,000	15,000	15,000
Center of Excellence	0	0	0
TOTAL	**435,000**	**430,000**	**465,000**

Under a minimal solution, the projected shortfalls would be $382,500 in Year 1 and $202,500 in Year 2. Full cost recovery in Year 3 could only be attained by fully constraining all cost categories, allowing only for a minimal increase in human resources to help meet increased demand. The combined shortfall for Years 1 and 2 would amount to $585,00 (about the same of the optimal solution).

Due to the negative revenue effects of a .ps domain without a Center of Excellence, the minimal solution is not cost-effective.

7-6- Term-Limited Contract Scenario

Given the tight timeline for establishing the Registry as a foundation that can have a Registration Service open for business by September 1, it might be necessary for the Naming Authority to commence registration services through a term-limited contract (nine months). If so, contract provisions should be made according to the optimal revenue and cost projections of Year 1. Total income projections should not change from those of the optimal solution, as the General Manager should still be implementing the activities of a Center of Excellence.

8- PROVISIONS FOR START UP OF THE OPERATIONS

8-1- Start Up Of The Naming Authority

It is of the utmost urgency to activate the Naming Authority as the body representing the Local Internet Community which, in the first phase, will monitor the activation of the registry as planned. The MOPIC, Ministry of Planning and International Cooperation, is expected to legitimize the Naming Authority based on the IANA delegation of .ps domain. The composition of the Naming Authority was presented by the consultants in the second workshop and a broad consensus was achieved on the following structure of the Naming Authority:

Constituencies		Representatives
• .ps admin contact	1	Dr. Ghassan Qadah
• .ps technical contact	1	Dr. Yasser Doleh
• Business users	2	PITA, Paltrade, others
• Non commercial users	2	universities, research institutions, NGOs
• ISPs (registrars)	2	licensed Palestinian access and content ISPs
• Registration Service	1	Administrator / Manager
• Low / IPR	1	Palestinian Bar
• ICANN members at large	2	Individuals registered as ICANN at large members
• Government		Ministries observers

The **consultants suggest** that the MOPIC to legitimize with a decree of any other formal act the composition of the naming authority asking to this body to do all is needed to be ready to start operations by September 1st, 2000. The nomination of the individual members of the Naming Authority should be left to the mentioned constituencies.

Concerning the government representation in the Naming Authority, the **consultants** feel that a status of observers of the representatives of the interested administrations should be more appropriate than having governmental voting members inside the Naming Authority. The **consultants** by the way, have no specific **recommendation** on the form of representation of the government other than the number of representatives should be low.

8-2- Recommended Rules And Procedures

In order to have a smooth take off of the registry activity, a number of measures have to be taken before the structure to run the registry consolidates. The **consultants** then suggest that the Naming Authority should approve initial rules and procedures envisaging:

- The registry to be initially closed (accept registrations only by residents in the West Bank and Gaza territories)
- The registry to be flat (no second level domains with possible exception for few chartered SLD)
- Only one name per registrant
- No registration for physical persons
- Broad exclusion of protected names
- Contracts with the registrars should be established but billing deferred

These initial restrictions should be progressively relaxed as the Naming Authority develops and the target rules are established.

Rule changes should be transparent, open to public review and communicated to ICANN.

8-3- Start Up Of The Registry Structure And Hosting The Registration Service

The **consultants recommend** the interested parties to do their best in order to have the Non Profit Organization (NPO) in place by Sept 1st 2000. If this target will be met, the NPO should be in condition to start the registration service.

If this will not be possible, the **consultants recommend** that the Naming Authority establish the start up Registration Service under a term limited contract (9 months)

8-4- Contracts With Registrars

The **consultants recommend** the Naming Authority:

- ❖ To have contract in place by Sept 1st according to ICANN best practices
- ❖ To limit to Palestinian licensed ISPs
- ❖ To instruct registrars how to collect data and prepare information to be sent to the registry for entry on the database

8-5- Recommended Time Line And Concluding Remarks

The time from now to the target date of October 1st, 2000 is very short and therefore a very tight timeline is proposed

Aug 15, 2000	Naming Authority Legitimized
Aug 15 - Oct 1st, 2000	Initial rules and contract with the registrars are established
Oct 1st , 2000	Registration Service Launched

Oct 15th, 2000   Foundation Created

In order to meet this timeline it is essential that the MOPIC may start the Naming Authority ASAP, that the LIC component nominate their representatives, that the NA start working intensively, that starts the most important working groups and that the global plan presented here is adopted formally with engagement for funding by DAI and engagement to follow the objectives by the Naming Authority.

9- ANNEXES

Annex	Title	www
9-1	Technical recommendations for setting up the .ps Registry by Maurizio Martinelli - IAT/CNR in charge of the technical systems of .it Registry	
9-2	The evolution in the management of Top Level Domains: ".it" as a case study V. Casarosa, M. Martinelli, R.Rossi, S. Trumpy, D. Vannozzi presented at the TERENA Networking Conference 2000. May 2000	http://www.terena.nl/tnc2000/proceedings/6B/6b3.html
9-3	IANA report on Request for Delegation of .ps Top Level Domain	http://www.icann.org/general/ps-report-22mar00.htm
9-4	PRINCIPLES FOR THE DELEGATION AND ADMINISTRATION OF COUNTRY CODE TOP LEVEL DOMAINS	http://www.noie.gov.au/projects/international/DNS/gac/library/ccdocs/ccTLD.doc
9-5	Best Practice Guidelines for ccTLD Managers	http://www.centr.org/meetings/ga-6/bp-draft-1.1.html
9-6	SECTION D: RULES FOR DOMAIN NAME REGISTRATION (Q1 to Q6)	
9-7	World Intellectual Property Organization Supplemental Rules for Uniform Domain Name Dispute Resolution Policy	http://arbiter.wipo.int/domains/rules/supplemental.html
9-8	Uniform Domain Name Dispute Resolution Policy Adopted: August 26, 1999 Implementation Documents Approved: October 24, 1999	http://www.icann.org/udrp/udrp-policy-24oct99.htm
9-9	NSI-Registrar License and Agreement	http://www.icann.org/nsi/nsi-rla-04nov99.htm

Technical recommendations for setting up the .ps Registry

by Maurizio Martinelli - IAT/CNR

in charge of the technical systems of .it Registry

1. Local Area Network

It is required to provide an integrated solution for a structured cabling system for the new centre hosting the .ps Registry.

The proposed solution should conform with the following specifications:

1.1 General

The supplier is required to perform a site visit to make all the necessary measurements to provide its complete solution. Detailed information about the building will be provided during the site visit.

The tenderer should quote a price per meter for the cables and plastic ducts (including installation) and an overall price for the proposed cabling architecture.

A structured cabling system should be based on UTP/STP/FTP cat. 5 for 100Mb/sec operation.

The system design and cabling paths should be provided in the form of detailed drawing layouts with clear cable labelling and identification.

Offers should be supported with two copies of catalogues in English and spare part lists.

1.2 Outlets

Outlets should be RJ45 UTP cat. 5 standard 8 pin configuration, according to EIA/TIA 568 (STP or FTP are valid options).

All outlets should be wall mounted with the installation of all necessary face plates with dual ports.

Each outlet should be provided with all necessary accessories and proper grounding.

1.3 Patch panels, plastics ducts, cabinet and hubs

The supplier should provide an overall design with necessary plastic ducts. All plastic ducts should be of high quality brand and fireproof. The location of the concentrator room should be identified.

Patch panels and a cabinet should also be provided. The cabinet should be equipped with front glass door with a key lock. The cabinet should be either wall mounted or stand-alone. It should have standard size (19") with enough space for the hubs as well as other accessories (cooling fans, power supplies, router, etc.).

An adequate amount of autosensing Fast Ethernet hubs 10/100 Mb/sec should be provided for connecting all the units in the centre. It is suggested to have at the beginning at least 2 Ethernet hubs with 24 ports each.

1.4 Internet router

It should have two Ethernet ports at least conform with IEEE 802.3 protocol and two serial ports for WAN access. It is suggested to choose a modular router managed via SNMP protocol.

The router should support different protocols like HDLC, LAPB, PPP, X.25, DDN, Frame Relay, TCP/IP Header Compression and the following routing protocols: RIP, OSPF, BGP, EGP, static routing, etc.

It should be equipped with router software and all necessary cables.

1.5 Internet connection

An Internet connection (leased line or frame-relay) has to be established with a local Internet Service Provider. It is suggested to set-up, at the beginning, a 128Kbit/sec or a 256Kbit/sec at least.

2. *.ps Primary Nameserver*

It should run on a fully dedicated machine and all other services except of *named* (i.e. the nameserver process) should be deactivated (telnet, ftp, e-mail, rsh, rlogin, etc).

Supported Operating Systems: the most widely used DNS implementations are supported by all the major operating systems (i.e. AIX, Solaris, FreeBSD, BSDI, HP-

UX, Linux, WinNT, etc.). Anyway it is strongly suggested to choose a very popular UNIX system, like Solaris, BSDI, AIX). Linux could be a very good choice (it's a public domain software and it runs on a PC) but it requires a special attention by the system administrator, due to the continuous upgrade of the system releases and to the discovering/fixing of dangerous system bugs. For this reason we think that during the first phase of the .ps ccTLD setting up, a "more stable" UNIX operating system (like Solaris) could be a better solution.

There are commercial and public domain DNS implementations. The most used DNS implementation is **BIND** (Berkeley Internet Name Domain) which is a public domain software. It has been released by the Internet Software Consortium (ISC) and the last available release is the bind-8.2.2P5. BIND can be retrieved from http://www.isc.org
There are some commercial implementations worth to note:
MacDNS, QuickDNS Pro and the DNS distribution of WinNT server 4.0.

It is strongly suggested to install the BIND implementation, which is very stable and well supported by ISC.

A suggested machine for running the .ps primary nameserver could be the following.
System Chassis with 1 CPU slot, 4 memory slots, 3 PCI I/O slots, and 1 EIDE disk bay, including:

- 360 MHz UltraSPARC-II CPU, 256K E-cache
- 256 MB RAM
- 2x 8GB 7200 RPM EIDE disk drive
- 32X CD-ROM
- Solaris 2.6 installed and including CD and documentation
- 2 Fast Ethernet cards (it is suggested to have two instead of one for redundancy)
- Dual Disc Mirror (DDM) program, in order to allow the second disk to take over operations in the event of a head-crash on one of the disks of a pair. An example of such a software can be looked at:

    http://www.twincom.com/dualdisc.html

- 17-inch color monitor
- North American UNIX style keyboard and mouse

3. Secondary Nameserver Service

The secondary nameserver service for domain names registered under the .ps ccTLD, could represent one of the added-value services provided by the .ps Registry to customers requiring it.

A machine with the same technical specifications of that one dedicated to the .ps primary nameserver service, could represent a valid solution.

4. Domain Names Databases

According to the general guidelines followed by most of the world wide Registries, and in order to have a common tool and database accessible by widespread and largely used user clients, it is strongly suggested to run a WHOIS database for storing information regarding .ps domain names and related contact persons.

WHOIS database is a public domain software developed by RIPE-NCC and it is written in PERL language. Additional information about it can be retrieved at:

<div align="center">

http://www.ripe.net/ripencc/pub-services/db/

ftp://ftp.ripe.net/ripe/dbase/software/

</div>

The last release of the WHOIS database is *ripe-dbase-2.3.2.tar.gz.*

Once the software has been downloaded, it has to be configured, intalled and customized according to the .ps needs. This means that some new domain/person attributes can be added, modified or deleted.

An example of an Italian domain name registered in the WHOIS database follows:

> whois -h whois.nic.it nic.it

```
domain:       nic.it
x400-domain: c=it; admd=garr; prmd=nic;
org:          Registration Authority Italiana
descr:        Italian 2nd-level domain
descr:        Registration Authority Italiana
descr:        Italian Network Information Center
descr:        c/o IAT - CNR
descr:        Via Alfieri 1
descr:        I-56010 - Ghezzano, PISA
```

```
descr:          Italy
admin-c:        FD317-RIPE
tech-c:         DV73
tech-c:         MM13-RIPE
postmaster:     DV73
postmaster:     MM13-RIPE
zone-c:         DV73
zone-c:         MM13-RIPE
nserver:        193.205.245.5  dns.nic.it
nserver:        193.205.245.8  dns2.nic.it
nserver:        194.119.192.34  nameserver.cnr.it
remarks:        Fully-managed
mnt-by:         RA-MNT
created:        19970827
changed:        Stefano.Trumpy@iat.cnr.it 19991102
changed:        hostmaster@nic.it 20000317
changed:        hostmaster@nic.it 20000405
source:         IT-NIC
```

and here is an example of person entry:

>whois -h whois.nic.it maurizio martinelli

```
person:         Maurizio Martinelli
address:        Registration Authority Italiana
address:        c/o CNR-Istituto IAT
address:        Via Alfieri 1
address:        I-56010 Ghezzano - PISA
address:        Italy
phone:          +39 050 3139811
fax-no:         +39 050 542420
e-mail:         martinelli@nic.it
nic-hdl:        MM13-RIPE
notify:         martinelli@nic.it
changed:        hostmaster@nic.it 19980414
changed:        martinelli@nic.it 19990917
changed:        martinelli@nic.it 20000110
source:         IT-NIC
```

In addition to the WHOIS database, it is suggested to develop an other database for internal use. This database should contain the history of a domain name, i.e. its daily updated situation, starting from the first request to the last event generated on it. Infact, WHOIS database it's not suitable for storing such a information. The only attribute provided for this purpose by WHOIS is the "changed" attribute, but it is mainly designed for storing when the last update has been done and by who. Information concerning when the request has been received by the Registry, eventual

errors in the request, changes of Provider during the life of the domain, disputes on the domain name, deletions and new requests for the domain name, are just few kinds of information that are useful to store for running a ccTLD Registry.

Such a database should be developed by the .ps technical staff, in order to be free to update and customize it according to the arising needs. According to our experience, the mysql database, together with the PERL programming language, are excellent public domain softwares which could accomplish to the purposes.

Information on the PERL language are available at:

http://www.perl.com/

Information on Mysql database is available at:

http://www.mysql.com/

5. *Main .ps server machine*

Main .ps Registry services, like e-mail, Web site, anonymous FTP, and domain name databases, may run, at the beginning all on the same machine. When the number of the .ps domain name requests will reach very high levels and the load of the procedures will start slowing the machine, it is suggested to split services on different ones.

All the above main services can be provided using free software downloadable from the network. For example, anonymous FTP can be provided using the Washington University FTP public software (the original wu-ftpd home is wuarchive.wustl.edu, but at this moment wuarchive no longer supports or maintains wu-ftpd and the correct location at this moment for wu-ftpd is ftp://ftp.wu-ftpd.org/pub/wu-ftpd/); the Apache software, which includes also the SSL security package, can be used for the Web server (see http://www.apache.org); electronic mail can be provided using sendmail (see http://www.sendmail.org), and so on.

A suggested configuration for running such a services, could be the following.

System Chassis with 2 CPU slots, 16 memory slots, 4 PCI I/O slots, and 2 Ultra SCSI disk bays including:

- 2 x 450 MHz UltraSPARC-II CPU, 4MB E-cache
- 1 GB RAM

- 2x 18GB 10000 RPM Ultra SCSI disk drive hot swappable
- RAID level 1
- 32X CD-ROM
- Solaris Server Right-To-Use (RTU)
- Solaris PC Netlink 1.1
- 2 Fast Ethernet cards
- 19-inch screen color
- North American UNIX style keyboard and mouse
- PGX32 8-bit and 24-bit color

6. *Firewall machine*

In building construction, a firewall is designed to keep a fire from spreading from one part of the building to another. In theory, an Internet firewall serves a similar purpose: it prevents the dangers of the Internet from spreading to your internal network. A firewall serves multiple purposes:

- it restricts people to entering at a carefully controlled point;
- it prevents attackers from getting close to your other defenses;
- it restricts people to leaving at a carefully controlled point.

An Internet firewall is most often installed at the point where your protected internal network connects to the Internet. All traffic coming from the Internet or going out from your internal network passes through the firewall.

Logically, a firewall is a separator, an analyzer. The phisical implementation of the firewall varies from site to site. Most often, a firewall is a set of hardware components, a router, a host computer, or some combination of routers, computers, and networks with appropriate software. There are various ways to configure this equipment. The configuration will depend upon a site's particular security policy, budget, and overall operations.

The following two figures represent two different firewall architectures: the first one based on the *packet filtering system*, and the latter based on a *dual-homed host*.

Packet filtering systems route packets between internal and external hosts, but they do it selectively. They allow or block certain types of packets in a way that reflect a site's

own security policy. The type of router used in a packet filtering firewall is known as a screening router.

Here are some examples of ways in which you might program a screening router to selectively route packets to or from your site:

- block all incoming connections from systems outside the internal network, except for incoming SMTP (electronic mail) connections;

- block all connections to or from certain systems you distrust;

- allow email, FTP and WWW services, but block dangerous services like TFTP (Trivial FTP), the X-Window System, RPC, and the "r" services (like rlogin, rsh, rcp, etc.).
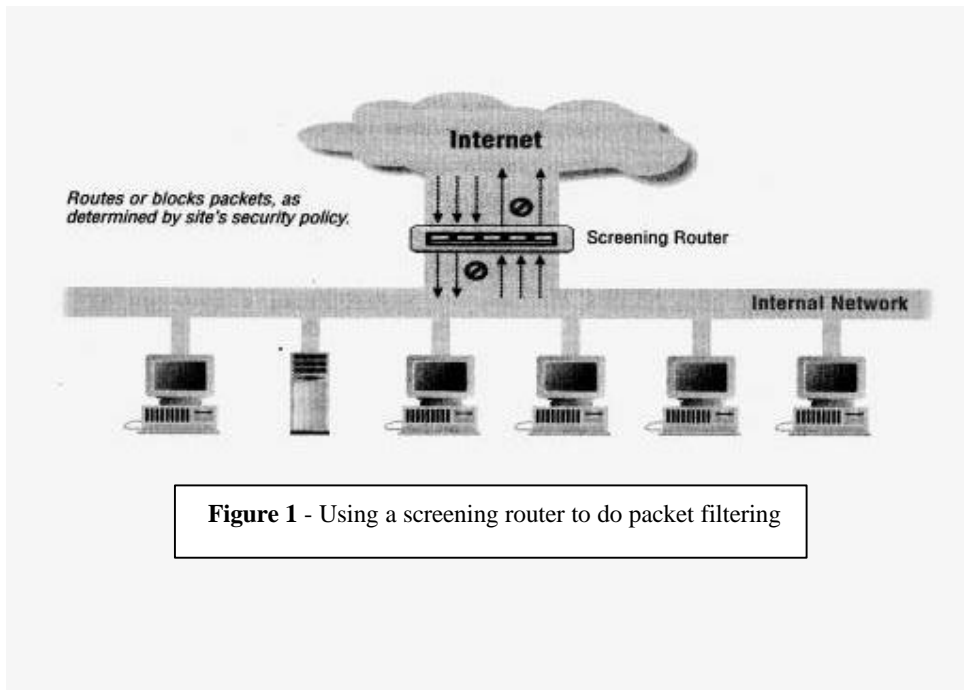
Figure 1 - Using a screening router to do packet filtering

A dual-homed host architecture is built around a dual-homed host computer, a computer which has at least two network interfaces. Systems inside the firewall can communicate with the dual-homed host, and systems outside the firewall (on the Internet) can communicate with the dual-homed host, but these systems can't communicate directly with each other. IP traffic between them is completely blocked. The network architecture for a dual-homed host firewall foresees that the dual-homed host sits between, and is connected to, the Internet and the internal network (see Figure 2).

Figure 2 - Dual-homed host architecture
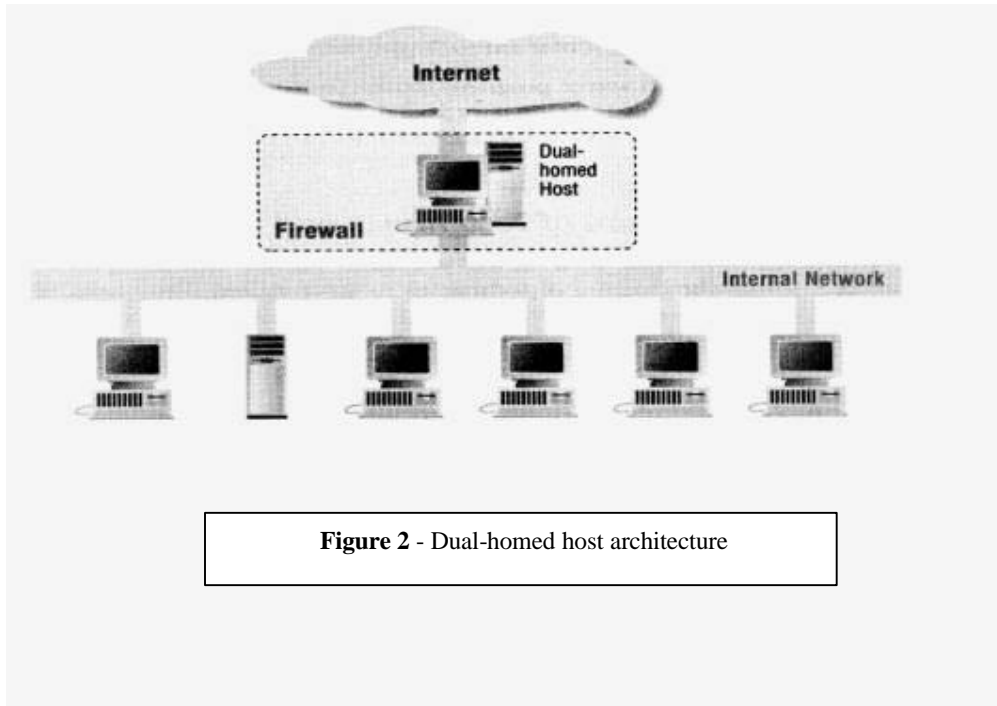
A dual-homed host can only provide services by proxing them, or by having users log into the dual-homed host directly.

Anyway, as already discussed before, there are many other ways of realizing firewall architectures, for example combining the two above mentioned solutions, and so on.

If the screening router solution is adopted, there is no need for additional hardware and software equipment except of the router mentioned in 1.4.

If another solution including the dual-homed host or a bastion host is chosen, an additional machine equipped with appropriate firewall software is needed.

The main technical features of the machine could be the following:

- 1 x 450 MHz UltraSPARC-II CPU, 4MB E-cache
- 512 MB RAM
- 2x 9.1GB 10000 RPM Ultra SCSI disk drive hot swappable
- RAID level 1
- 32X CD-ROM
- 2 Fast Ethernet cards
- Solaris 2.6 Operating System

- 17-inch screen color

- North American UNIX style keyboard and mouse

Firewall software should accomplish to the following main technical characteristics:

- Active Security Integration, to allow centralized policy management and event correlation through event management systems;

- User-Friendly GUI Interface;

- Anti-Spam and Anti-Relay features;

- Support of all the major authentication systems, such as RADIUS, SecureID, S/Key, CryptoCard and ActiveCard, etc.;

- Fully integrated Virtual Private Network (VPN) support;

- OS Hardening, Network Address Translation, Packet Filtering, URL Filtration, Virus Scanning, Trasparency, SNMP Agent;

- Proxies supported services: HTTP, FTP, SMTP, Telnet, Oracle SQL*Net, LDAP, Streaming Multi-Media, SNMP, NNTP, Rsh, Rlogin, X11, POP3, SSL, Whois, Gopher, Finger, etc.

According to the above, the Gauntlet UNIX Firewall is a suggested choice.

Staff Equipment

Four workstations, with the same hardware/software features specified in paragraph 2, but with 19-inch screen color and PGX24 graphic adapter, could be a good choice for the technical and operational staff. Additional 3 PCs equipped with Windows 2000 (or MacOS) will be needed for the other staff.

Other equipment

Some additional equipment should be purchased for carrying out the standard activities ot the .ps Registry:

- 2 Laser Printers B/W;

- 1 color Printer;

- 1 scanner;

- 1 copy machine;

- 1 fax machine;

- 1 plotter.

Pisa, 4th July, 2000   Dott. Maurizio Martinelli

PRINCIPLES FOR THE DELEGATION AND ADMINISTRATION OF COUNTRY CODE TOP LEVEL DOMAINS

1. PREAMBLE

In the five years since the issuance of RFC 1591, the Internet has evolved from a tool reserved for computer and networking research, to a global medium for commerce, education, and communication. The new realities of the Internet, including its increased importance as a vehicle for national economic growth, and the expanding and more diverse nature of the Internet community necessitated evolution in the traditional means of managing and administering Internet technical functions.

As a result, DNS functions, including the administration of the DNS root server system, the development of policies for the registration and allocation of domain names, the coordination of Internet Protocols, and the delegation of Internet Protocol numbers are becoming more clearly delineated and formalised through the ICANN process. Similarly, the procedures and framework of accountability for delegation and administration of ccTLDs need to evolve into a more robust, certain, and reliable system as well.

While evolution is needed, the principle of RFC 1591 remains sound: the manager of a ccTLD performs a public service on behalf of the relevant local community and as such the designated manager has a duty to serve this community. The designated manager also has a responsibility to the global Internet community. By 'global Internet community' we do not mean any specific legal or international entity, but rather we interpret the term to refer to all of those who are affected by, now or in the future, the operation of the relevant TLD, because such operation may impinge on more than one jurisdiction and affect the interests of individuals and entities from both within the relevant country or territory and elsewhere. This is our interpretation of the meaning of 'global Internet community' as it is used in RFC 1591.

2. OBJECTIVE OF THIS DOCUMENT

The objective of this document is to suggest principles that will assist in the development of best practice for the delegation and administration of ccTLDs. These principles are intended to contribute to the development of models of:

- a communication between the relevant government or public authority and ICANN;

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- a communication between ICANN and the delegee; and
- a communication between the relevant government or public authority and the delegee.

3. DEFINITIONS

For the purposes of this document, the following definitions apply:

3.1 'Alternative Dispute Resolution' (or 'ADR') means any system of resolving a dispute other than by court litigation, and includes arbitration, mediation, conciliation and processes of administrative dispute resolution.

3.2 'Communication' should include a law, regulation, agreement, document, contract, memorandum of understanding, or any other written instrument, as appropriate.

3.3 'Country code top level domain' or 'ccTLD' means a domain in the top level of the global domain name system assigned according to the two-letter codes in the ISO 3166-1 standard, 'Codes for the Representation of Names of Countries and Their Subdivisions.'

3.4 'Delegation' means delegation by ICANN/IANA of responsibility for administration of a TLD in the DNS root.

3.5 'Delegee' means the organisation, enterprise or individual designated by the relevant government or public authority to exercise the public trust function of a ccTLD and consequently recognised through a communication between ICANN and the designated entity for that purpose. The delegee for a ccTLD may be the relevant government or public authority itself or an oversight body designated by the relevant government or public authority, inasmuch as the administrative and management functions for a ccTLD may be contracted out by the delegee to another party and hence not performed by the delegee itself.

3.6 'Designation' means designation by the relevant government or public authority of the delegee.

3.7 'DNS' means domain name system.

3.8 'ICANN' means the Internet Corporation for Assigned Names and Numbers.

3.9 'Relevant government or public authority' means relevant national government or public authority of a distinct economy as recognised in international fora as those terms are used in the ICANN Bylaws and GAC

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Operating Principles.

3.10 'Relevant local community' means the local community in the context of the ISO 3166-1 code. This definition is specific to the purposes identified in this document and not broader.

3.11 'Top Level Domain' or 'TLD' means a domain in the top level of the global domain name system.

4. ROLE OF DELEGEE

4.1 The delegee of a ccTLD is a trustee for the delegated domain, and has a duty to serve the residents of the relevant country or territory in the context of ISO 3166-1, as well as the global Internet community (as that term is interpreted in the Preamble to this document). Its policy role should be distinguished from the management, administration and marketing of the ccTLD. These functions may be performed by the same or different entities. However the delegation itself cannot be sub-contracted, sub-licensed or otherwise traded without the agreement of the relevant government or public authority and ICANN.

4.2 No private intellectual or other property rights should inhere in the ccTLD itself, nor accrue to the delegee as the result of delegation or to any entity as a result of the management, administration or marketing of the ccTLD.

4.3 Tradable goods and services may arise in the performance of other management and administrative functions attached to the ccTLD.

4.4 The delegee should recognise that ultimate public policy authority over the relevant ccTLD rests with the relevant government or public authority.

4.5 The delegee should work cooperatively with the relevant government or public authority of the country or territory for which the ccTLD has been established, within the framework and public policy objectives of such relevant government or public authority.

4.6 The delegee, and the delegee's administrative contact, should be resident or incorporated in the territory and/or jurisdiction of the relevant government or public authority. Where the delegee, administrative contact or technical contact are not resident or incorporated in the territory and/or jurisdiction of the relevant government or public authority, it should nevertheless operate in a way that is consistent with the laws and public policy of that relevant government or public authority.

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5. ROLE OF GOVERNMENT OR PUBLIC AUTHORITY

5.1 The relevant government or public authority ultimately represents the interests of the people of the country or territory for which the ccTLD has been delegated. Accordingly, the role of the relevant government or public authority is to ensure that the ccTLD is being administered in the public interest, whilst taking into consideration issues of public policy and relevant law and regulation.

5.2 Governments or public authorities have responsibility for public policy objectives such as: transparency and non-discriminatory practices; greater choice, lower prices and better services for all categories of users; respect for personal privacy; and consumer protection issues. Considering their responsibility to protect these interests, governments or public authorities maintain ultimate policy authority over their respective ccTLDs and should ensure that they are operated in conformity with domestic public policy objectives, laws and regulations, and international law and applicable international conventions.

5.3 It is recalled that the Governmental Advisory Committee (GAC) to ICANN has previously adopted the general principle that the Internet naming system is a public resource in the sense that its functions must be administered in the public or common interest.

5.4 The relevant government or public authority should ensure that DNS registration in the ccTLD benefits from effective and fair condition of competition, at appropriate levels and scale of activity.

5.5 To give effect to governments' or public authorities' public policy interests, governments or public authorities should ensure that the terms outlined in Clause 9 are included in their communications with delegees.

5.6 In making a designation for a delegee, the government or public authority should take into consideration the importance of long term stability in the administration and management of the ccTLD and in the DNS. In most cases, such stability may be best served through the designation of an organisation or an enterprise rather than a specific individual.

6. ROLE OF ICANN

6.1 A primary function of ICANN is to establish, disseminate, and oversee implementation of the technical standards and practices that relate to the

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operation of the global DNS. In this capacity, ICANN administers a range of technical Internet management functions, including:

- establishment of policy for IP number block allocation;

- administration of the authoritative root server system;

- creation of policy for determining the circumstances under which new TLDs would be added to the root system;

- coordination of the assignment of other Internet technical parameters as needed to maintain universal connectivity on the Internet; and

- other activities necessary to coordinate specified DNS administration functions.

6.2   Specifically in relation to the administration and operation of ccTLDs, ICANN's role is to develop and implement policies that fulfil the provisions of Clause 10 below.

7. PRINCIPLES RELATING TO DELEGATIONS

7.1   Where a communication between the relevant government or public authority and the delegee is in place, when ICANN is notified by the relevant government or public authority that the delegee has contravened the terms of the communication, or the term of the designation has expired, ICANN should act with the utmost promptness to reassign the delegation in coordination with the relevant government or public authority.

7.2   Notwithstanding the urgent need for a communication-based regime for ccTLD designation, delegation and administration, in the absence of such communication between the relevant government or public authority and the administrator of the ccTLD, ICANN should, upon the tendering of evidence by such government or public authority that the administrator does not have the support of the relevant local community and of the relevant government or public authority, or has breached and failed to remedy other material provisions of RFC 1591, act with the utmost promptness to reassign the delegation in coordination with the relevant government or public authority.

7.3   When ICANN notifies the relevant government or public authority that the ccTLD is being operated in a manner that threatens the stability of the DNS or of the Internet, or has otherwise breached and failed to remedy other material provisions of the communication between ICANN and the delegee, as outlined in Clause 10, the relevant government or public authority should cooperate with ICANN to remedy this situation or effect the reassignment of the delegation for the ccTLD.

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7.4 With respect to future delegations or reassignment of delegations, ICANN should delegate the administration of a ccTLD only to an organisation, enterprise or individual that has been designated by the relevant government or public authority.

7.5 Delegees should enjoy, in the execution of their responsibilities, the appropriate rights under applicable law, and should not be subject to discriminatory or arbitrary practices, policies or procedures from ICANN or the relevant government or public authority. In the event of a reassignment of delegation, registrants in the ccTLD should be afforded continued name resolution, or a reasonable period in which to transfer to another TLD.

8. PRINCIPLES CONCERNING THE COMMUNICATION BETWEEN THE RELEVANT GOVERNMENT OR PUBLIC AUTHORITY AND ICANN

8.1 The communication between the relevant government or public authority and ICANN, as outlined in Clause 2, should include a designated point of contact within the relevant government or public authority, as well as the name and contact details of the recognised delegee and duration of this recognition. Either as part of this communication, or through a subsequent communication, the relevant government or public authority should copy to ICANN any communication established between it and the delegee, setting forth the terms and conditions of the designation and/or concerning the execution of the delegee's role and the management of the delegation.

8.2 The relevant government or public authority should communicate to ICANN how it will require the delegee to abide by the terms and conditions outlined in Clause 9 below.

8.3 Recognising ICANN's responsibilities to achieve consensus in the creation of any new generic TLDs, ICANN should avoid, in the creation of new generic TLDs, well known and famous country, territory or place names; well known and famous country, territory or regional language or people descriptions; or ISO 639 Codes for representation of languages unless in agreement with the relevant governments or public authorities.

9. PRINCIPLES CONCERNING THE COMMUNICATION BETWEEN THE RELEVANT GOVERNMENT OR PUBLIC AUTHORITY AND THE DELEGEE

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9.1 The communication between the relevant government or public authority and the delegee should include the following provisions, a copy or summary of which should be forwarded to ICANN:

    9.1.1 Term, performance clauses, opportunity for review and process for revocation.

    9.1.2 A commitment by the delegee to operate the ccTLD in the interest of the relevant local community and the global Internet community.

    9.1.3 A recognition by the delegee that the management and administration of the ccTLD are subject to the ultimate authority of the relevant government or public authority, and must conform with relevant domestic laws and regulations, and international law and international conventions.

    9.1.4 Confirmation that the ccTLD is operated in trust in the public interest and that the delegee does not acquire property rights to the ccTLD itself.

    9.1.5 Conditions to ensure the transfer of all relevant DNS data to a nominated replacement, if, for any reason, a reassignment to a new delegee is necessary.

    9.1.6 Conditions for the efficient and effective resolution of disputes arising from domain name registration. In so far as ccTLD registration policies allow or encourage registrations from entities or individuals resident outside the relevant territory, then the delegee concerned should implement dispute resolution policies that ensure that the interests of all registrants, and of third parties, including those outside their territory and in other jurisdictions, are taken into account. Dispute resolution policies should, to the greatest extent possible, follow common principles, including due regard for internationally recognised intellectual property, consumer protection and other relevant law, and be implemented by all delegees. The delegee should, so far as possible, implement alternative dispute resolution procedures conducted online, without precluding access to court litigation.

    9.1.7 The delegee's commitment to abide by ICANN developed policies as set forth in Clause 10.

    9.1.8 Where ccTLD registration policies allow or encourage registrations from entities or individuals resident outside the relevant territory, the delegee commits to observe all ICANN policies applicable to

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such ccTLDs, not otherwise provided for in Clause 10, except where the delegee is prohibited by law from, or instructed in writing by the relevant government or public authority to refrain from, implementing such other ICANN policies.

9.1.9 The above terms and conditions shall apply to delegees, including delegees who are resident and/or incorporated outside the territory of the relevant local community.

9.2 A delegee should not sub-contract part or all of the technical operations of the ccTLD registry without ensuring that the sub-contractor has the technical qualifications required by ICANN, and informing ICANN.

9.3 In any sub-contracting of the technical operations of the ccTLD registry or administrative and management functions of the ccTLD, the sub-contract must state that the delegation itself is an exercise of a public right, not an item of property, and cannot be reassigned to a new delegee except in accordance with the provisions of Clause 7.

10. PRINCIPLES CONCERNING THE COMMUNICATION BETWEEN ICANN AND THE DELEGEE

10.1 The communication between ICANN and the delegee should contain ICANN's commitment to:

10.1.1 maintain, or cause to be maintained, a stable, secure, authoritative and publicly available database of relevant information for each ccTLD (see below);

10.1.2 ensure that authoritative and accurate root zone information is generated from such database and ensure that the root servers are operated in stable and secure manner;

10.1.3 maintain, or cause to be maintained, authoritative records and an audit trail regarding ccTLD delegations and records related to these delegations; and

10.1.4 inform the delegee in a timely manner of any changes to ICANN's contact information.

10.2 The communication between ICANN and the delegee should contain the

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delegee's commitment to:

10.2.1 cause to be operated and maintained in a stable and secure manner the authoritative primary and secondary nameservers for the ccTLD, adequate to resolve names within the ccTLD for users throughout the Internet, and any sub-domains over which they retain administrative authority, and ensure that the zone file and accurate and up-to-date registration data is continuously available to ICANN for purposes of verifying and ensuring the operational stability of the ccTLD only;

10.2.2 inform ICANN in a timely manner of any changes to the ccTLD's contact information held by ICANN;

10.2.3 ensure the safety and integrity of the registry database, including the establishment of a data escrow or mirror site policy for the registry data managed by the delegate. The escrow agent or mirror site should be mutually approved by the relevant government or public authority and the delegee and should not be under the control of the delegee;

10.2.4 ensure the transfer of all relevant DNS data to a nominated replacement, if, for any reason, a reassignment to a new delegee is necessary;

10.2.5 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 registrants; and

10.2.6 ensure the payment of its contribution to ICANN's cost of operation in accordance with an equitable scale, based on ICANN's total funding requirements (including reserves), developed by ICANN on the basis of consensus.

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SECTION D: RULES FOR DOMAIN NAME REGISTRATION (Q1 to Q6)

				QUESTIONS		
REGISTRY	**In which languages are rules, policies and information published?**	**Does the registry operate a policy of flat registration under the top-level?**	**Are there any circumstances under which registrations under the top level are allowed?**	**List sub-domains under which registrations are accepted, and brief description of rules applying for each.**	**With reference to who can apply for a Domain Name, does the registry impose restrictions under the top-level, or open sub-domains?**	**Are there any restriction on the number of Domain Names a business or individual can register?**
AC	English	Both	registrations from non-residents are in the top level, registrations from residents can be in specific pre-defined SLD ie COM.AC, GOV.AC etc	AC COM.ac is for Ascension commercial, for-profit organizations/individuals; CO.ac is for Ascension commercial, for-profit organizations (similar to .COM.sh); ORG.ac is for Ascension miscellaneous, usually, non-profit organizations; NET.ac is for Ascension network infrastructure machines and organizations; EDU.ac is for Ascension Educational establishments; GOV.ac is for Ascension national and local government agencies; MIL.ac is for Ascension Defence establishments;	No	No
AD	National Language(s), English	Yes	N/A	N/A	Yes, National Businesses, Foreign Businesses with a substantial presence in the country, Resident	No

					Individuals	
BE	English	Yes	N/A	N/A	Yes, National Businesses, Foreign Businesses with a substantial presence in the country, Others, Foreign businesses when registering a trademark they own and that is valid locally.	No
CH	National Language(s), English	Yes	N/A	N/A	No	No
DE	National Language(s)	Yes	N/A	N/A	Yes, National Businesses - the applicant for a domain name has to have his legal domicile in Germany (their main site in Germany). Or, a German subsidiary. Resident Individuals, Minor - If they have their legal domicile in Germany, if their parents consent. Even on that conditions minor under the age of 18 can't register a domain name because under German law they	No

					can't enter into contracts at all. Public institutions such as cities, authorities of the German states and of the Federal Government, universities, schools.	
ES	National Language(s)	Yes	N/A	N/A	Yes, National Businesses, Foreign Businesses with a substantial presence in the country, Others, Public Administration: State, Autonomous and local entities. Professional colleges. Official Chambers (of Commerce, Industry and Navigation) Political parties. Syndicates. Registered associations. Foundations. Universities. Churches and religious communities. Non profit entities.	Yes, The Registry allows only one domain per organisation.
FI	National Language(s),	Yes	N/A	N/A	Yes National Businesses	Yes Section 5.3 in the regulation: principal

	English				Foreign Businesses with a substantial presence in the country	rule one/applicant, deviations for weighty reasons. Common weighty reasons: avtivities in several branches of business with different registered trade names, services of public national or local authorities in both national languages etc.
FR	National Language(s), English	No	.fr only for companies/institutions	6 generic SLD asso.fr for association/organization com.fr open SLD for "communication" nom.fr for private person prd.fr for Research & Developpement Programs presse.fr for ISNN documents tm.fr for trademarks plus some sectorial SLD dedicated to the professional authorities barreau.fr to the lawyers (ordre des avocats) cci.fr to the chambres of commerce gouv.fr to the government pharmacien.fr to the chemists (ordre des pharmaciens)	Yes National Businesses, Foreign Businesses with a substantial presence in the country, Resident Individuals	Yes, max: 3 domain names
GR	National Language(s)	Yes	N/A	N/A	Yes National Businesses, Foreign Businesses with a substantial presence in the country (Greek VAT required),	Yes, One domain name for individuals, two for freelancers and ten for companies

					Other foreign businesses (Greek Trademark or World Wide known brand name required), Resident Individuals, Non-resident Individuals (Greek people living abroad or anyone with a Greek VAT number)	
HU	National Language(s), English	No	Any Hungarian natural person, legal entity or organization without legal entity may be a Registrant, as well as owners of a trademark registered by the Hungarian Patent Office (the latter may be also from abroad). If the Registrant is an organization, it should indicate its taxation number or, if it does not have one, its official registration number on the Application form	CO RECOMMENDED FOR COMPANIES ORG RECOMMENDED FOR ORGANIZATIONS INFO RECOMMENDED FOR INFORMATION SERVICES PRIV RECOMMENDED FOR PRIVATE PERSONS SPORT RECOMMENDED FOR SPORT CLUBS ETC. TM ONLY FOR REGISTERED TRADEMARKS	Yes, National Businesses, Resident Individuals, Minor	No
IE	English	Yes	N/A	N/A	Yes, National Businesses, Foreign Businesses with a substantial presence in the country, Resident	Yes, Each entity may hold only one domain name but the same entity may apply under various categories for other domains, for example, a limited

					Individuals, Minor	company may hold only one domain name in respect of itself but it qualifies to hold as many domain names as it holds/owns subsidiary companies, Registered Business Names, Trade Marks, Publications etc.
IL	English	No	No	co.il Open. Intended for commercial entities. org.il Open. Intended for non-commercials entities. net.il Restricted: Licensed ISPs. ac.il Restricted: Academic institutes approved by the Higher Ed Comm. gov.il Restricted: this zone is delgated to the government. muni.il Restricted: Municipal Government. Approved by mayor or equivalent. k12.il Restricted: Kindergartens/Schools. Approved by MoEd. idf.il Restricted: Military.	No	Yes, 10 per one legal entity
IT	National Language(s), English	Yes	N/A	N/A	National Businesses, Foreign Businesses with a substantial presence in the country (only EU countries), Other foreign businesses (only EU countries), Resident	Yes, Individuals can register only one name; no limit for organizations of any type

					Individuals, Non-resident Individuals (only EU countries)	
LT	National Language(s), English	Yes	N/A	N/A	No	No
NL	National Language(s), English	Yes	N/A	N/A	Yes, National Businesses, Foreign Businesses with a substantial presence in the country. Within a few months individuals are allowed to register at third level	No (businesses), Yes Individuals just 1 for the near future
NO	National Language(s), English	Yes	N/A	N/A	Yes, National Businesses, Foreign Businesses with a substantial presence in the country, Foreign Businesses with presence in the country	Yes, 1 per organisation
NSI	English, Today. The NSI Registry is reviewing mechanisms for providing multi-lingual documentation as the number of international registrars grows	Yes	N/A	N/A	No	No

PT	National Language(s), English	Yes	WE ARE UPDATING OUR RULES	com.pt Free org.pt Organizations net.pt Networking companies int.pt International organisations, embassies indiv.pt Individuals publ.pt Publications	Yes, National Businesses, Foreign Business with a substantive presence in the country, Resident Individual (IN THE NEAR FUTURE)	No
RO	National Language(s), English	Yes	N/A	N/A	No	No
SE	National Language(s), English	No	Registrations under .tld is allowed under the circumstances ruled in the "rules for registrations" se	.pp.se -> private persons .org.se -> organisations .press.se -> papers, magazines .parti.se -> political parties .tm.se -> trademarks .countyletter.se severals)	Yes, National Businesses, Foreign Businesses with a substantial presence in the country, Resident Individuals, Minor	Yes, Depends on the number of tradenames/trademarks registered by the registrant.
SI	National Language(s), English	Yes	N/A	N/A	Yes, National Businesses, Foreign Businesses with a substantial presence in the country	Yes 1/org
UK	English	No	Pre-Nominet names only	.co.uk Nominet rules .plc.uk for UK plc companies .sch.uk Nominet rules .org.uk Nominet rules	No	No

SECTION D: RULES FOR DOMAIN NAME REGISTRATION (cont. Q7 to Q12)

REGISTRY	State any requirements with which Domain Names must comply, in addition to technical requirements of RFCs?	Do the Registry policies prohibit, in the TLD or open sub-domains, any of the following?	Is there a sub-domain specifically designated for private individuals to register Domain Names?	Are there specific rules to identify individuals?	Are there specific rules to identify individuals?	Are there any other restrictions?	Are there any other reasons for which a registration may be denied
			QUESTIONS				
AC	AC All NEW second and third level domain requests will conform to RFCs 1034, 1035, 1122, 1123 and any subsequent replacements. For designated zones the requests may be handled by a robot. This robot will apply the appropriate RFCs, the rules and a check against the list of existing domain names. It may also check that operating nameservers exist for the request. If the rules are changed in the future, some names approved under one set of rules might be rejected under the revised rules. No rule change will ever affect the status of a name which has been approved	Prohibit NO, have safeguards against ... YES Our registry is passive, ie it makes no determinations. Prohibit: Obscene or pornographic words Safeguards against (ab)use: Geographical words (place names, rivers, etc..), Famous names or well known marques, Names which equate to other TLDs such as .com.se.	yes	Have to be paying taxes to the government of Ascension or have been granted right to reside on Ascension	See rules and regulations	See rules and regulations	

	before the change unless sound technical reasons require this. MANDATORY RULES FOR SECOND LEVEL DOMAINS. An applicant may reside in any legal jurisdiction and shall have obtained a professional or academic qualification, or hold valid membership of an Institute or Trade Association. Single or two letter or number domain names are not allowed. Two letter ISO 3166 country codes and Country names are reserved. There shall be at least two nameservers for the domain (with addresses specified in the request) operating at the time the request is submitted. There is no requirement for the nameserver to be physically located on Ascension. There is no restriction on the IP address of these nameservers.					

	MANDATORY RULES FOR THIRD LEVEL DOMAINS						
	An applicant must be resident on Ascension.						
	Two character names within an Third LD are allowed. i.e. 3x.com.ac						
	All second level names used by NIC.AC are banned from being used as third level names. e.g. com.com.ac would be banned as it is a second level name.						
	All top level domains are banned from being used as third level names. e.g. net.org.ac and org.com.ac are not allowed.						
	All One Letter domains (i.e.[a-z].xxx.ac) are reserved to cater for possible future sub-domain usage. The owner shall still maintain it unless they volunteer to relinquish it.						
	There shall be at least two nameservers for the domain (with addresses specified in the request) operating at the time the request						

	is submitted. At least one nameserver must be physically located on Ascension. There is no restriction on the IP address of these nameservers. APPROPRIATE USE No .AC domain may be used, directly or indirectly, for any purpose that is sexual or pornographic or that is against the statutory laws of any Nation. In the event of NIC.AC being advised by any party that a specific site breaches this condition then NIC.AC reserves the right to immediately deactivate the offending registration. The applicant may seek the reinstatement of any suspended domain name by seeking a determination by an Arbitrator appointed by the World Intellectual Property Organization. Anti-Spam Mail Policy In the event that any .AC domain is used either directly or indirectly for the purpose of directing						

	unsolicited electronic mail ("spam mail") either as the originator of the spam mail or as the address to which readers of spam mail are referred, then nic.AC reserves the right to send a cease and desist letter to the registered Administrative Contact of the specified AC domain name. Should the Administrative Contact of the AC domain name fail to adhere to the conditions contained in the warning letter, then nic.AC reserves the right to suspend the operation of the offending .AC domain name until the necessary assurances are obtained from the Administrative Contact.					
AD	No reply	Geographical words (place names, rivers, etc..), Generic words (e.g. medicine, football), Names which equate to other TLDs such as .com.se	No	N/A	No	No reply
BE	DNS Belgium will only accept requests for domain names from a commercial legal	Obscene or pornographic words, Geographical words (place names, rivers,	No	N/A	Yes, The current rules should prevent most cases of	No

entity, a public or private institute or organisation, an association with a reasonable, demonstrable and legal activity in Belgium. Such organisation, further referred to as the applicant, must be located or effectively represented in Belgium. DNS Belgium does not accept names for individuals (for non-commercial purposes) or informal groups. Acceptable domain names must conform to all of the following criteria : The proposed domain name must conform to the syntax rules for domain names. A domain name agrees with the syntax rules if it contains only "a-z", "A-Z", "0-9" and "-", and does NOT start with "-". The proposed domain name is different from already assigned names. If the name is already registered, a new name has to be	etc..), Generic words (e.g. medicine, football), Names which equate to other TLDs such as .com.se Names that are not accepted are: generic names two letter names referring to a country code according to the ISO-3166 list. two letter codes unless the applicant has a long history using such an abbreviation names referring to a sector or profession, unless requested by the relevant representative professional organisation names referring to IT / internet specific terminology (such as gTLDs amongst others) famous and well known trademarks if the applicant is not the holder of the intellectual property rights names of cities, regions, communities etc.. unless requested by the representative local authority			cybersquatting. Theapplicant signs a letter in which he/she states that : "The party requesting registration of a domain name certifies that, to her/his knowledge, the use of this name does not violate trademark or other statutes. The applicant must demonstrate that the proposed name satisfies the criteria for acceptable domain names Registration of a domain name does not confer any legal rights to that name and any disputes between parties over the rights to use a particular name are to be settled between the contending parties using normal legal methods (see RFC 1591)."		

	chosen. The proposed domain name must be a good identification for the applicant. There should be a reasonable and demonstrable relationship between such name and the activity or history of the applicant. Acceptable names are : the full name of the organisation, company or association a trade name (related to the activity or history of the applicant). an existing or new abbreviation of the name of the organisation, association or company a trademark held by the applicant or with the explicit approval of the holder (if the trademark is valid in Belgium - trademarks can be requested at The Benelux Trademarks Office)	names that are considered to be insulting, offending, against public morality, or discriminatory on the basis of race, language, sex, religion or political view. If the acceptance of a name according to one specific rule results in a domain name that would not have been accepted on the basis of other rules, then such a domain name will not be accepted. These restrictions apply to the names that pass through the "allowed names" filter.				
CH	24 chars max	Obscene or pornographic words (indecent)	No	N/A	No	No reply	
DE	A domain name can only consist of letters,	Names which equate to other TLDs such	No	N/A	No, It probably can't be called a	No	

	numbers, and hyphens. A hyphen is not allowed at the beginning or the end of the second level. The name has to contain at least one letter. It has to have no less than three and no more than 63 digits. Existing TLDs must not be registered as second level domains. Also German license plate abbreviations (which stand for geographic regions such as CUX for Cuxhaven) are not allowed, because DENIC wants to keep the option to use them as SLDs and register third level domains under them. According to the terms of contract the applicant for a domain name has to check whether the domain name infringes the (e. g. trade mark or name) rights of third parties and whether it is conformable to the law. Moreover by applying for a domain name the applicant declares that he has complied with this rule and that to the best of his knowledgement the domain name does not	as .com.se, See answer to D7.1			real policy, but regarding the direct registrations, the employees dealing with them can deny the registration on a case to case basis if they conclude that an application totally obviously does not conform to the law. E. g. a domain like "kill-all- lawyers.de" (hopefully ;->) would not be registered. No besides of what the answer to D7.1 states, that is.		

	infringe rights of third parties and is not in conflict with the law.					
ES	Minimum: 3 characters. (5 recommended), Maximum: 63 characters. (24 recommended) The domain must be the name of the registered business or its acronym or the name of a registered trademark	Obscene or pornographic words, Geographical words (place names, rivers, etc..), Famous names or well known marques, Generic words (e.g. medicine, football), Names of famous individuals, Names which equate to other TLDs such as .com.se, Other restrictions: A combination of geographical terms, generic words or internet applications unless they are registered as trademarks. Names with suffixals such as "net" or prefixes such as "inter" with no relation with the name of the registrant. Names that can be easily associated with other organisations. Names or surnames that aren't registered as trademarks. Domains only composed of a sequence of numbers unless they are registered as a	No	N/A	Yes, The Registry checks out the information at the Trade Register and at the Patent and trademark Office before the Domain Name is activated.	The administrative contact must belong to the organisation.	

		trademark. Names that equate internet applications and terminologty. ("www" "email"...)					
FI	Domain must: A: section 5.2: 'individualize its holder' = be based on a registered or well established name of applicant. (Established? Has to be proved by applicant.) Generic terms, common family names and christian names, geographical names are not usually individualizing. The words that are used in many registered names are not usually individualizing because they are not distinguishable any more. B: section 6.1: must not excessively limit the possibility of other entities to have an individualizing domain Example 1: Tellus Car Ltd cannot register tellus.fi without a consent if there is mere Tellus Ltd. Tellus Ltd has priority right to	Geographical words (place names, rivers, etc..), Famous names or well known marques, Generic words (e.g. medicine, football) See D7.1	No	N/A	Yes, a) The domain has to based on a registered or well established or official name (it can however be an abbreviation of a name or part of it). b) Registry checks ex officio registred names in different registries. c) Number of domains is restricted.	No reply	

tellus.fi. Example 2: Holder of trademark 'Lexus' Toyota Ltd cannot register domain lexus.fi without a consent if there is a trade name=company name Lexus Ltd. If the latter was 'Lexus Hair Ltd' it would be first come first served. C: section 6.2: must not violate another's right to certain names (a name, firm name, parallel firm name, supplementary firm name, trade mark, subsidiary symbol, mark, abbreviation, domain name, work related to the law of copyright or some similar object of protection or the right of a public association to its name or abbreviation). Registry checks ex officio if there are any obvious conflicts. Example: even if yemo.fi is a logical abbreviation of Yellow Mountain Ltd, it may violate Yemo Trading Ltd. If YEMO was well established (has to be						

proved) abbreviation as subsidiary symbol it would be first come first served. D: section 6.3: must not be mistaken for the object of protection referred in 6.2. Example: finprofile.fi is not granted for Finprofile Trading Ltd without a consent if there is Finnprofil Ltd. finnprofil.fi and finprofil.fi would not both be granted side by side without a consent. E. section 6.4: must not be contary to good practise nor must it be misleading Example: serialkiller.fi has been granted anyway for Cancer Association of Finland for a campaign against tobacco. Deciding factor was that according the regulation of Ministry of Social Affairs and Health there has to be on tobacco products a sentence that says (something like) 'tobacco kills' anh thus killer was not deemed						

	to be contrary the good practise. Example: com.fi was recently rejected because it was not considered to be individualizing in the Internet world without acronym rf that tells it is a accociation. It was considered to misleadingly evoke an impression of a neutral subdomain. Applicant is 'Com r.f.' (r.f. = registred association) and they have appealed the decision, appeal is pending. F: section 5.1: may comprise maximum 60 characters (a-z, 0-9 and -) Minimum in principal 2, in practise 3 characters. 2-letter domain granted only exceptionally if applicant is extremely well known with acronym in whole country.					
FR	2 characters domain name and some generic names are not allowed	Obscene or pornographic words, Geographical words (place names, rivers, etc..), Generic words (e.g. medicine, football), Names of famous individuals, Names which equate to other TLDs such	Yes	family name (or familyN-freetext) registered under nom.fr	Yes naming charter prevents cyber squatting	No reply	

		as .com.se					
GR	No reply	Obscene or pornographic words, Geographical words (place names, rivers, etc..)	No	N/A	Yes No transfer of the ownership of a domain name without a prior deletion of the domain name. A domain name cannot be sold or used by a third party.	No reply	
HU	4. Formal rules of choosing a name 4.1 Domain names should consist of at least 2 characters and no more than 24. Names consisting of at least 5 but maximum 10 characters are recommended. 4.2 The following characters can be used in domain names: a) lower case letters of the Latin ABC (a-z) without accent marks, b) numbers (0-9) c) hyphen (-). 4.3 The first and last characters of a name can only be a letter or a number. 4.4 The use of names beginning with a numerical character is not recommended in RFC 1035, therefor the Registrar or Administrator refuses to accept the	Obscene or pornographic words, Geographical words (place names, rivers, etc..)	Yes	No reply	Yes ALL NON PRIORITY APPLICATIONS HAVE TO WAIT 2 WEEKS AND THERE IS A PUBLIC SITE WHERE EVERYBODY CAN SEE WHICH APPLICATIONS ARE UNDER REGISTRATION. A PRIORITY APPLICATION (REGISTERED TRADEMARK OR COMPANY NAME) HAS PRIORITY IN THE REGISTRATION PROCESS DURING THIS 2 WEEKS. 13. Handling applications with priority 13.1 An	5. Choosing a domain name 5.1 Registrants may choose the name of a domain to be delegated for them by themselves, within the limits determined by the Rules. 5.2 Registrants are responsible for the choice, meaning and usage of a domain name, and take the consequences. 5.3 Registrants may not choose a Reserved Name. 5.4 In case it is discovered that the choice and/or usage of an already delegated name conflicts	

				application is given priority if the chosen name a) is identical with the officially registered, whole or abbreviated name of the Registrant organization as indicated on the certificate of official registration (e.g. registry certificate), or in case of an organization established by a legal measure, as indicated in the legal measure b) is a series of characters (word, words) of a trademark registered by the Hungarian Patent Office for the Registrant as authorised owner. 13.2 Registrants should submit the copies of the documents mentioned in clause 13.1 to the Registrar (e.g. registry certificate,	with the Rules, its Registrant has to choose another name, or the delegation will be cancelled. 5.5 In case of a disagreement between the parties determined in the Rules concerning the appropriateness of a name, the opinion of the Registrar or the Administrator should be accepted. In case of a disagreement between the Registrar and the Administrator, the opinion of the Administrator should be accepted. 5.6 Registrants are not allowed to choose and use domain names that, concerning their meaning and/or usage, are probably a) unlawful,	
	responsibility for their operability and for any damages derived from their use.					

					authorised registry certificate). 13.3 In the case of applications with priority, the domain name should be identical (from character to character, without accent marks) with the name indicated in the documents mentioned in clause 13.1. Names consisting of more than one word may be used as a domain name without spaces or divided by hyphens. Words and abbreviations showing the type of the organization or professional field may be omitted. 13.4 Applications with priority are processed in chronological order, without public fore-announcing. 14. Handling of	b) shameful or frightening, c) deceptive. In this case Registrants should choose another name for the identification of their domain. At the same time, neither the Administrator, nor the Registrars take responsibility for identifying all such cases.	

					applications without priority 14.1 An application is not given priority if the applied domain name is not documented with certificates mentioned in clause 13.1. 14.2 Applications without priority are publicly fore-announced: a) Applied domain names are published on the Web Server, together with the date of publication. b) Within two weeks after their publication other Registrants may apply for the same domain name, if their application meets the requirements mentioned in clauses 13.1 - 3, or their registration according to 13.1 is dated earlier then the publication mentioned in clause 14.2.a. 14.3 If there is a		

					Registrant whose application meets the requirements of clause 14.2.b, the domain is delegated to it. (If there are more than one such Registrant, the date of their application is concerned.) Otherwise the domain is delegated to the original Registrant.		
IE	Must be three characters +, Must be reasonably close to name of applicant	Obscene or pornographic words, Geographical words (place names, rivers, etc..) Famous names or well known marques, Generic words (e.g. medicine, football), Names of famous individuals, Names which equate to other TLDs such as .com.se	No	N/A	The applicant must prove entitlement to the name requested	The applicant must prove a real & substantive connection with the Irish Republic - Northern Ireland is excluded. Personal names may only be initials & digits.	
IL	Minimum 3 characters, and not the string "www" or names which equate to other TLDs	Obscene or pornographic words, Names which equate to other TLDs such as .com.se	No	N/A	Yes, No more than 10 domains can be held by a legal entity	No	
IT	According to the technical requirements of RFCS, minimum number of characters: 3; maximum: 64. No	Certain geographical names such as regions, provinces, and municipalities under the province	No	N/A	No	No	

	limitations on the content, apart from a list of reserved names	name.				
LT	The applicant is served with a domain name which is easily associated with the organization of the applicant. This can be done by registering a well-known or common abbreviation for the organization, trademarks or the complete organization name. The domain name can be a common name of organization activity. Geographical words is given only for cities local administration, and foreign countries names only for embassies. No words realted directly with porno, sex, or famous personal names.	Obscene or pornographic words, Geographical words (place names, rivers, etc..), Famous names or well known marques, Names of famous individuals. Geographical cities names are given only for local administration, and foreign only for embassies. Rivers or other geographical names is not prohibited. Famouns names can be given for organizations which can to proof by documents.	Yes	No reply	No	No reply	
NL	No reply	Geographical words (place names, rivers, etc..)However just provinces and community names (according to the law), Generic words (e.g. medicine, football) If there is a representative organisation. If such an organisationapllies for the name it will	Yes	a numeric identifier will be used as second level label	Yes, Indemnification and warranty of the holder not to infringe property rights of a third person	No reply	

		be registered, Other restrictions Reserved names (.nl.nl, domein-registratie.nl etc.)					
NO	No reply	Obscene or pornographic words, Geographical words (place names, rivers, etc..), Generic words (e.g. medicine, football), Names which equate to other TLDs such as .com.se	Yes	No	No	There must be an associative binding between the org. name and the domain name.	
NSI	The NSI Registry accepts domain names that comply with label syntax as specified in RFCs 1035, 1101, 1123, and 1281. Labels for second level domains are limited to US-ASCII characters ranging from "A"-"Z", "a"-"z", "0"-"9", and "-". A label must begin and end with an alphanumeric character. A hyphen may appear in a name, but only if it is not the first or last character. However, we retain the option through our agreements for restricting registrations related to applicable statute controlled names (should the need arise)	The Registry will register any domain name that complies with the requirements stated in D7.l above. Due to the Registry's international constituency of customers, we allow each registrar to restrict registrations based on its own laws, regulations, and customs.	No	N/A	No	No	

PT	A well configured nameserver is required.	Geographical words (place names rivers etc), Famous names or well known marques Generic words (e.g. medicine, football), Names of famous individuals, Names which equate to other Top Level Domains such as .com.se	Yes	No	No	No reply	
RO	No reply	Obscene or pornographic words	Yes	NO. Individuals select themselves the names. N/A	Yes	Domain names are not registered to be resold. The domain name cannot be used in manner likely to cause confusion to Internet users. The domain name should not be administered in a way likely to endanger operation of the DNS	
SE	Obscene or pornographic words	See company rules	Yes	No	Yes, The rules for registration itself prohibits cybersquatting	See company rules	

SI	The value of a subdomain is a string of characters subject to the following constraints: - individual characters can be letters of the English alphabet (A-Z) with no distinction between upper- and lower-case letters, numbers (0-9) and the "-" character (hyphen); - the first and last character must not be a hyphen; - the length of the string must be between 3 and 24 characters. Subdomains under the domain .si are awarded exclusively to legal entities registered in Slovenia. None of them may register more than one subdomain under .si. The name of the subdomain can be the full or abbreviated registered name of the organisation (company name).	Names which equate to other TLDs such as .com.se. Only registered name of the company is accepted for a domain name, so other restrictions are not necessory.	No	N/A	Yes, No personal data on tech. or admin. contact is available on WHOIS	No reply	
UK	2 name servers, maximum 63 characters	no two letter names, no one character domain name	No	N/A	No	No	