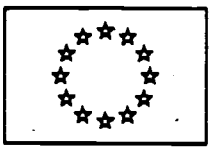

COMMISSION OF THE EUROPEAN COMMUNITIES

Brussels, 11.4.2000
COM(2000) 202 final

COMMUNICATION FROM THE COMMISSION

TO THE COUNCIL AND THE EUROPEAN PARLIAMENT

The Organisation and Management of the Internet

International and European Policy Issues 1998 - 2000

EXECUTIVE SUMMARY

Introduction

The organisation and management of the Internet infrastructure involves several limited but essential technical coordination functions. This Communication addresses:

- recent developments in this area, during the 1998-2000 period.
- transfering the US Government's responsibilities to ICANN*
- the principal policy issues for the European Union and internationally, and
- operational conclusions for the European Union.

The Communication also draws attention to the current expansion of the Internet in Europe and its increasing importance as a key economic and social infrastructure. This is likely to put the capacity of the existing system under some strain. The Commission has already taken some measures aimed at improving the economy and efficiency of the communications infrastructure for Internet use and will continue to monitor the development of the situation.

International Aspects

The European private sector participants have played a critical role in establishing the European Union's position at all levels in the global coordination of the Internet infrastructure functions: the ICANN Board and Supporting Organisations, the DNS Root Server system, Internet Registries and Registrars and in the IETF and the World Wide Web Consortium. Without that commitment, the public policy role of the EU and the Member States would be much less effective, if not impossible. Maintaining and deepening European private sector membership and participation in the ICANN organisation is a critical pre-condition for successful participation by the EU both from the point of view of the Internet user community in Europe and from the point of view of public policy.

Regarding the EU's international role, the Commission requests the Council and the European Parliament to confirm the Union's existing role as a participant, co-ordinator and, where necessary, negotiator in this area. This involves the International Organisations, notably WIPO and the ITU, bilateral relationships with several governments, including the United States and the role of the European Union and the Member States in the ICANN Governmental Advisory Committee (GAC). These international responsibilities go beyond a simple presence and oversight of the ICANN process. They also involve specific aspects of EU public policy:

- the neutral global role of ICANN
- the scope of the US Government's remaining powers over the Internet infrastructure
- international aspects of intellectual property, competition and data protection policy
- the scope of ICANN's authority regarding Registries and Registrars.

Creating and maintaining an environment for neutral international jurisdiction is proving to be even more difficult than had been originally envisaged when this process began in 1998.

The European Union has argued consistently for a balanced global participation in Internet management structures and international representation in the competent ICANN bodies, respecting the principle of geographical diversity. However, to date, many developing

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* Internet Corporation for Assigned Names and Numbers (ICANN)

countries are under-represented in this process. Thus, considering the European Union's role and responsibility for development, the Commission will try and find ways of improving their participation in the organisation and management of the Internet.

The Communication addresses each of these matters in greater detail and indicates the conclusions and recommendations that the Commission has reached in each case.

Domestic EU considerations

The Communication also addresses a number of European policy issues that require further attention during the months to come, that will also require the continued support and cooperation of the Council and the Member States if the Commission's objectives are to be achieved. These include:

- **Internet Domain Name System**: appropriate follow-up to the Commission's recently launched public consultation on the creation of a new Internet Top Level Domain: Dot-EU. An additional Communication is envisaged on this question before July 2000;

- **Intellectual Property Rights**: preparation of a code of conduct or other appropriate instrument to address abusive registration of domain names("cybersquatting");

- **National Country Code Top Level Domains** (ccTLDs):
  - implementation of the guidelines recommended by the ICANN-GAC
  - preparation and implementation of guidelines for data protection and privacy
  - development, by the national Registries of best practice for registration policies.

- **Alternative dispute resolution (ADR)**: Development of and implementation ADR policies in the light of the WIPO recommendations appropriate for TLD Registries operating in the EU.

- **Competition policy**: The Commission will ascertain whether agreements and business registration practices in the area of Internet Organisation and Management fall under the EU competition rules (Articles 81 and 82) and, where necessary, will take the appropriate action on the basis of its direct powers under the EC Treaty".

These policy developments will continue to be co-ordinated as appropriate with the Member States through the existing Internet informal working group, convened by the Commission.

The Internet Infrastructure

The topography and capacity of the Internet backbone infrastructure in Europe is a source of some concern. The current structure of prices and available bandwidth have had the effect of diverting a significant proportion of European Internet traffic across the Atlantic and back. The resulting costs and inefficiencies are already burdensome and will become intolerable as increasing proportions of communications and commerce migrate to the Internet in the foreseeable future. The security and competitiveness of Internet communications in Europe consequently depends on the security and costs of the US-based Internet exchange points. The Commission intends as a matter of urgency to complete its information in this respect and to pursue its policy aiming at encouraging the rapid roll-out of very high bandwidth Internet backbone throughout the European area.

Conclusion

In the light of the Presidency Conclusions of the **Lisbon European Council**, the significance of these issues can only be re-emphasised. Indeed, the whole scope of the Information Society and electronic commerce in the European Union, and world wide, is influenced by the stability, and reliability of the Internet in the context of its extremely rapid growth.

The European Parliament and the Council are invited to endorse the policies and actions envisaged by the Commission in this Communication and to support their implementation in cooperation with the Member States. These are summarised in Chapter 10 of this Communication.

THE ORGANISATION AND MANAGEMENT OF THE INTERNET INTERNATIONAL AND EUROPEAN POLICY ISSUES

1 INTRODUCTION

The Internet is a global communications network and is ultimately available for all. The original leitmotif of the Internet Assigned Numbers Authority (IANA) organisation was: *"Dedicated to preserving the central coordinating functions of the global Internet for the public good."* The United States Government has furthermore recognised that the increasingly global Internet user community should have a voice in decisions affecting the Internet's technical management.* Thus the principal international interest in the organisation and management of the Internet today is to ensure that the global public interest in the Internet is effectively translated in practice. **Indeed, *all* the initiatives envisaged in the Commission's recent *e*Europe initiative depend in the last resort on the efficiency and economy of the Internet infrastructure** in Europe and world-wide.

In its Communication of July 1998 to the European Parliament and the Council[1#] the Commission reported on the progress made in the United States and internationally, in transferring a number of functions relating to the organisation and management of the Internet to the private sector. This process has involved **transferring functions** previously undertaken by the Internet Assigned Numbers Authority (IANA) under contract with the US Government to a new private organisation, the Internet Corporation for Assigned Names and Numbers (ICANN) and the merging of the IANA functions within ICANN. Since that time, the Commission's services have maintained close contact with the US authorities and European and other international interests during the elaboration of structures and operating conditions for the new organisation. This has been done in coordination with the Member States.

In addition to addressing the narrowly defined coordination functions carried out by ICANN, this Communication also informs the Council and the European Parliament about recent developments in a number of other key issues and proposes further actions to ensure and encourage full European participation in these developments. In particular:

- the management structure and membership of the new system must represent an equitable balance of interests globally;
- the new registry system must be implemented in a correct and timely way, including acceptable rules for data protection, competition and the identification and traceability of commercial operations[2] and the appropriate protection of existing intellectual property rights;

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* The US government White Paper of July 1998 states, *inter alia*, that:

"... the Internet is a global medium and that its technical management should fully reflect the global diversity of Internet users. ..., a key U.S. Government objective has been to ensure that the increasingly global Internet user community has a voice in decisions affecting the Internet's technical management. ... Our dialogue has been open to all Internet users - foreign and domestic, government and private - during this process, and we will continue to consult with the international community as we begin to implement the transition plan outlined in this paper."

The Footnotes to this Communication are grouped at the end of the document.

- It is also necessary to prepare adequate systems in Europe for both numerical addresses and domain names to cope with a massive increase in Internet use and applications.

Accordingly, European interests are being encouraged to participate in the existing and new fora to ensure necessary progress in these and related areas.

2 THE NEW STRUCTURE

2.1 The Internet Corporation for Assigned Numbers and Names (ICANN)

On the basis of the US White Paper issued in June 1998, the Internet Corporation for Assigned Names and Numbers (ICANN) was created in October 1998 and incorporated as a non profit public benefit corporation in the County of Los Angeles, California. Its Articles of incorporation specify that

> ***"ICANN shall operate for the benefit of the Internet community as a whole, carrying out its activities in conformity with relevant principles of international law and applicable international conventions and local law and, ... through open and transparent processes that enable competition and open entry in Internet-related markets".***

The Memorandum of Understanding signed on 25 November 1998 provided that the US Department of Commerce and ICANN will:

> ***"... jointly design, develop, and test the mechanisms, methods, and procedures that should be in place and the steps necessary to transition management responsibility for Domain Name System functions now performed by, or on behalf of, the U.S. Government, to a private-sector not-for-profit entity".***

By October 2000, ICANN should have taken responsibility for co-ordinating the management of the Domain Name System, the allocation of Internet Protocol address spaces, the coordination of new Internet protocol parameters and the management of the Internet's root name server system. Although the October 2000 threshold appeared to be distant when the US White Paper was published, in the light of intervening delays, it is now a challenging deadline for all concerned. Significant progress had already been made by the end of 1999, although in the context of its agreements with ICANN and NSI, the US Department of Commerce has retained a significant degree of direct authority over ICANN. Exactly how and when the US Government will divest itself of these authorities remains to be seen. In that event, the question will remain as to what extend and how the necessary public policy oversight of ICANN's important functions will be exercised. The Commission has drawn the attention of the US Department of Commerce to the importance of resolving these issues in a timely manner.

An Initial ICANN Board consisting of ten members was appointed in autumn 1998 and the new organisation began its work.[3] Nine additional Board members were elected in late 1999[4]. ICANN's staff is currently all American and US Based[5]. It would now be appropriate for ICANN to begin to diversify the composition of its senior policy making staff. This should be a priority task for the permanent CEO, to be appointed in the near future.

2.1.1 ICANN's Financing

After its meeting in Santiago in August 1999, ICANN convened a Task Force composed of ten representatives of Internet IP address registries and domain name registries and registrars to consider permanent funding arrangements for ICANN. In Los Angeles, the ICANN Board adopted the recommendations of the Task Force and their implementation for the year

beginning 1 July 1999. Their recommendations address the cost recovery principle appropriate for a not-for-profit organisation, improvements in ICANN's budget process and the allocation of the budget among classes of contributors. These comprise:

(i) domain name Registries
(ii) domain name Registrars, and
(iii) IP address Registries.

The proportions for the current transitional budget year are: 55% to gTLD registry and registrars and, 35% to ccTLD registries, and 10% to IP address registries. Within each funding category, fair and proportional formulas should be developed. Regarding the ccTLD Registries, the ICANN-GAC has recommended that these funding arrangements should be included in agreements between ICANN and the registry organisations concerned.

The balance of financing from domain name Registries and IP Registries could however be improved. The most equitable and painless way of raising the necessary funds in the longer term would be through a modest charge for the use of all (present and future) allocated blocks of IP addresses. That might also introduce a modest incentive for more efficient use of allocated IP address blocks in the future. ICANN's funding should not become beholden to a few large domain name Registries. Furthermore, a number of small domain name Registries, notably in developing countries, have very few resources. Indeed ICANN may have some difficulty in collecting these contributions from all ccTLD Registries, world-wide. The EU GAC members have been assured by their national Registries that this would not be a problem within the Union

ICANN's Board considers that their supporting organisations and "At Large" Membership should be financially self-supporting. Certain activities, such as the processing of registrar accreditation applications, should be identified for special purpose funding so that inadvertent subsidies do not creep into the ICANN financial structure.

2.1.2 ICANN's Membership

The current intention is that the nine "At Large" Directors will be elected by ICANN's "At Large membership" in two stages during 2000-2002. It has recently become possible for individuals to become Members of ICANN. The method for the election of Board Members through on-line voting is currently being developed. That will have to take account of the objective of a broadly representative membership with due regard for the cultural and economic differences within the global user community and the need to protect the organisation against capture by minority interests.

Other options under consideration include the selection of the "At Large" Board Members, indirectly, by an elected Membership Council, and reserving five of the Board Seats for election by the Members from the geographic regions in the ICANN structure.

There is currently a still unfulfilled objective for the Commission and the Member States to stimulate European participation in these "constituencies" for the DNSO. Public service Internet users such as universities, museums, libraries, and local and regional authorities are to date under-represented in the Non-commercial constituency. Business users in general and SME's in particular are under-represented in the Business users' constituency.

2.1.3 Conclusion on ICANN Membership

The Commission urges the Member States and the European Parliament to help in encouraging the flow of information about the ICANN process, including membership, to all categories of Internet users, particularly individuals and public service organisations, to ensure an adequate level of participation and representation of the interests concerned.

2.2 Governmental Advisory Committee(GAC)

Partly in response to the interest of the public authorities world wide, including the EU, the ICANN Bylaws provide for a Governmental Advisory Committee (GAC) that should

> ***"consider and provide advice on the activities of the Corporation as they relate to concerns of governments, particularly matters where there may be an interaction between the Corporation's policies and various laws, and international agreements".***

The Commission and the Member States participate in the work of the Governmental Advisory Committee. The GAC has adopted Operating Principles that are consistent with the objectives initially envisaged for this body by the EU[6]. The GAC has already provided the ICANN Board with advice on questions such as dispute resolution, geographical diversity and policies for ccTLD Registries. EU participation in these negotiations has been co-ordinated in advance through the informal Internet working group convened periodically by the Commission and through the Council Telecommunications Group. The scope and functioning of the ICANN-GAC call for several comments:

(1) The ICANN GAC is open to all governments[7]; currently there are about 35 members. It is the Commission's intention to continue to encourage global participation in the ICANN GAC through the Union's bilateral relationships, world-wide. The GAC currently includes as members a restricted number of international organisations with a direct interest in ICANN policy, including the ITU, WIPO and the OECD.

(2) The GAC has an advisory function only. In general governments do not seem to wish to exercise a more direct decision making role in the organisation and management of

he advice of the GAC. There has been no difference of opinion, to date, that might have tested the willingness of the governments to accept a - formally - secondary role in this context.

However, should ICANN extend its influence tacitly or *de facto* to other policy areas where governments found that the interests of their general public were being affected, or in the event of a significant disagreement between the Board and the GAC, then the current relationship would probably have to be re-visited.

(3) The GAC Operating Principles include the following description of its **policy objectives.**

> ***Secure, reliable and affordable functioning of the Internet, including uninterrupted service and universal connectivity;***
>
> ***the robust development of the Internet, in the interest of the public good, for government, private, educational, and commercial purposes, world wide;***

> ***transparency and non-discriminatory practices in ICANN's role in the allocation of Internet names and address;***
>
> ***Effective competition at all appropriate levels of activity and conditions for fair competition, which will bring benefits to all categories of users including, greater choice, lower prices, and better services; fair information practices, including respect for personal privacy and issues of consumer concern; and freedom of expression."***

These ambitious principles will not be fulfilled automatically or spontaneously in Europe, even less world-wide. The agreed public policy objectives will require the **concerted efforts** of all the participants in the Internet. In Europe this is will be particularly critical during the next two or three years because of the wave of new demands and opportunities which are currently materialising on the net. It is important to recognise that the effective co-ordination of the Internet infrastructure functions by ICANN is a **crucial underpinning of many other objectives** and aspirations in the broader context of Internet-related policies, especially for the information society, electronic commerce and communications.

In conclusion, even within their narrowly defined remit, it is already the case that ICANN and the GAC are taking decisions of a kind that governments would, in other contexts, expect to take themselves in the framework of international organisations.

For the time being, there would appear to be consensus that the nature of the Internet and the speed of events preclude this approach and that the current self-regulatory structure buttressed by active public policy oversight is the best available solution.

3 INTERNET ADDRESSING

While for the facility of users, Internet names are commonly represented by textual domain names such as *europa.cec.eu.int*, the underlying addresses which are used to route data from one host computer to another are numeric.[8] This numeric system is currently based on numbers that are 32 bits long (IPv4). **All Internet applications, both current and future, rely on these addresses.** The IPv4 address space has been coming under increasing pressure because of the growth in the use of the Internet by increasing numbers of people, organisations and applications, including a wide range of mobile electronic devices, and a shift to permanent instead of temporary connections. Consequently almost every device or communications function related to all aspects of life and society will involve Internet addresses. Currently there is evidence that the requirements for IP addresses for mobile communications are about to accelerate significantly. This would argue, both for more efficient use of existing IPv4 address blocks, and for early introduction of the next generation of IPv6 addresses based on 128 bit numbers.

No property rights inhere to blocks of IP addresses: they are considered to be a public resource. The financial and other terms and conditions for the allocation of IP address blocks, both directly and indirectly, remain to be determined, bearing in mind that this may affect the ability of the Regional IP Registries to contribute appropriately to the financing of ICANN in the future.

The allocation of IP addresses must respect principles of aggregation that facilitates efficient routing of IP traffic. It is critically important that IP addresses are autonomously and neutrally managed, in the interests of an open and competitive market for all present and future Internet based services. A wide range of new and potential users of the IP addressing system have recently expressed a particular interest in the policies of the ASO and the operations of the Regional Registries. The ICANN Board has created an Ad Hoc Working Group comprising

all the declared interested parties that will review IP addressing policy in the context of the ASO and report to the Board by mid-2000.

3.1 Conclusions on IP Addressing

The IP addressing system, managed through ICANN and the Regional Registries underlies the addressing requirements of all Internet based services. Consequently the Commission intends to undertake the following steps:

- ***monitor the developments in ICANN and its constituent bodies, and the policies developed, since the allocation of these addresses will have a direct effect on the feasibility and the economics of routing, and therefore on the efficiency of the Internet environment,***

- ***encourage the new constituencies, including the public sector, to define and develop their requirements,***

- ***encourage the timely transition to IPv6, particularly within the European institutions and the public administrations in the Member States;***

- ***facilitate the global expansion of the Internet, particularly in developing countries, through the transition from IPv4 to IPv6 addressing systems;***

- ***in the context of appropriate EU research projects, promote the development and use of IPv6 and next generation Internet technologies more generally.***

- ***to encourage the development and implementation of improved future naming and addressing systems, including Internet search and directory services and routing technologies.***

The Member States are encouraged to support the implementation of next generation Internet Addressing in their public administrations.

Additional information regarding of IP addressing and the ASO is in the Annex to this Communication.

4 INTERNET PROTOCOLS

Internet protocols allow the different entities on the Internet to work together to transport data between machines and present it in the applications that the users actually see.[9] The development of new protocols, and their appropriate software implementation is fundamental to the development of new services on the Internet and is becoming more important as the range of applications connected to the Internet increases. Internet protocols are developed mainly through the Internet Engineering Task Force (IETF), although other bodies, such as the World Wide Web Consortium are increasingly contributing to this work.[10]

The ICANN Protocol Supporting organisation (PSO) is concerned with the above technical standards and has the primary responsibility for developing and recommending substantive policies in the area of protocol parameter assignment and is the custodian of the invaluable legacy of the Internet's open specifications and standards, independent of the operating systems and platforms that are employed by the final Internet user. It is critically important that at all levels of service and infrastructure this inheritance from the IETF and IANA be

maintained and developed. The PSO and ultimately the ICANN Board hold a major international responsibility in this regard.

The increasingly commercial use of the Internet and competition between operators and service providers should in no way become a pretext for proprietary or closed interfaces. That would risk prejudicing the current universal inter-operability of the global Internet.

4.1 Conclusions on Internet protocols

The European Union has a long-standing interest in the standardisation aspects of the information technologies from the point of view of interoperability and fair competition. As these technologies evolve globally, notably in the context of the Internet, the Commission intends to:

- ***Continue to encourage European industrial and technical support and participation in the PSO and its constituent bodies;***
- ***Support international cooperation between the standardisation bodies comprising the PSO;***
- ***encourage within Europe increased awareness and use of the protocols being developed;***
- ***encourage enhanced involvement in the protocol development process by the organisations participating in related EU research projects;***
- ***ensure that the existing neutrality of Internet specifications between alternative operating systems and other platforms is maintained and enhanced, particularly in view of the growing interest on the part of users in Open Software.***

Additional information about Internet protocols and the PSO is in the Annex to this Communication.

5 DOMAIN NAMES

Domain names are names by which Internet hosts may be easily identified, e.g. *europa.eu.int,* as opposed to the numerical IP addressing system that is used for network communication. A limited number of generic Top Level Domains (gTLDs) are in current use globally: these are .COM, .NET and ORG[11]. About 240 other registries at national or territorial level maintain similar systems of names under a country code, (ccTLD registries) such as .ES or .DE, and .US

Historically the Internet Assigned Numbers Authority, IANA, and now ICANN, has borne the overall responsibility for the administration of these names. These functions include the delegation for the attribution of gTLDs and ccTLDs on the basis of the principles developed in Request for Comments (RFC) 920 (1984) and RFC 1591 (1994). Those RFCs provide information on the structures of the names in the Domain Name System (DNS) and on the administration of domains.

ICANN is supported in its work in this area by the Domain Name Supporting Organisation (DNSO), which consists of a Names Council and a General Assembly and should include

seven constituencies, including Registrars, gTLD Registries, ccTLD Registries, Business users, non-commercial users, Service Providers and Intellectual Property interests.

5.1 Competition in Top Level Domain Registration market

One of the primary functions of the new Corporation, described in the 1998 US White Paper, now ICANN, was to introduce competition into the registration market for gTLD domain names, with respect to both the gTLD Registrars and Registries.

With regard to competition between Registrars, ICANN has made progress as described below. With regard to creating any alternatives to the existing gTLDs, ICANN has made very little progress to date, and substantial difficulties remain to be resolved before a consensus is likely to be reached on the creation of new gTLDs. This matter is under consideration in the DNSO and by the ICANN Board. In this context, it has also been suggested that ICANN could create an exclusively non-commercial TLD, in which registrations by individuals could benefit from a degree of anonymity that would not be appropriate for commercial Domain Names.

Meanwhile it has to be noted that the NSI Registry has recently confirmed that it no longer makes any distinction in the registration policy and eligibility criteria for the .COM, .NET and .ORG Registries, respectively. In the Commission's view, this is a lost opportunity to manage the available domain name space in a responsible and efficient manner.

5.2 New generic Top Level Domains (gTLDs)

Although the creation of additional gTLD Registries has been on the agenda of the Internet community since at least 1996 and several alternative approaches have been under discussion since then, no consensus has been reached. In early 1997 the International Ad-Hoc Committee (IAHC) proposed to create seven new gTLDs. These were to be operated through the proposed CORE Registry. That proposal engendered significant support but also encountered sufficient opposition in the United States to trigger the original US Department of Commerce inquiry in June 1997 and the subsequent Green and White papers. A counter proposal in the February 1998 US Green Paper to the effect that the US Government would delegate a number of new gTLDs itself was criticised by the EU as tending to confirm US authority and jurisdiction in such matters. The US White Paper proposed that the Initial Board of ICANN would both address the possibility of a need for new TLDs, and establish a system of qualifications for DNS Registries and Registrars in existing and new TLDs. Meanwhile, the wide range of names already registered under .COM etc. is apparently already restricting the possibility of registering meaningful - and short - addresses, at least in the English language[12].

The question whether, how and when, to introduce new gTLDs has been addressed in the context of the DNSO working groups, and an interim report has been published which surveys the available options without making any recommendation.[13]. In March 2000, the ICANN Board has requested its staff to prepare a report before mid-July on which it could act at the next Board meetings in Yokohama, taking account of advice from the Names Council.

The ICANN-GAC has supported this approach, stating that:

> ***Considering the possibility of expanding the domain name space, the addition of new gTLDs should be done thoughtfully and through a consensus-based process.New gTLDs for specific uses[14], as well as for more generic or 'open' registration, should be fully considered.***
>
> ***Recognising ICANN's responsibilities to achieve consensus in the creation of any new gTLDs, ICANN should avoid, in the creation of new gTLDs the alpha-3 codes of ISO 3166-1; 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.

5.3 ICANN Accreditation of competing Registrars

ICANN has adopted guidelines for accrediting the first registrars and a policy to be reviewed in the first half of 2000. Until the initial introduction of competitive registration services in June, registration services in the .COM, .NET, and .ORG domains were provided solely by Network Solutions, Inc., under a 1992 Co-operative Agreement with the U.S. Government. By February 2000, 110 companies had been accredited by ICANN as registrars, of which 22 are European-based. [15] The registrars allocate domain names on a first-come-first-served basis, relying on a common database to ensure that the requested name is free.

Under an agreement between NSI and the US Department of Commerce, the term of NSI's Registry Agreement is for four years. If the NSI Registry is fully separated from the Registrar operation within 18 months, and the Registry functions are performed by an entity that is not affiliated with a Registrar and undertakes never to affiliate with a registrar, the term would be extended for four additional years. Department of Commerce approval is required for the transfer of NSI's registry operations and for the designation of a successor registry by ICANN.

Those agreements notwithstanding, NSI recently reached an agreement with the VeriSign Corporation to merge their activities. The deal results in a paper valuation of NSI at US$21 billion. The US Department of Commerce was apparently not given any opportunity to approve or disapprove of the transfer of NSI's Registry operations in this way. The new owners of the Registry have not yet confirmed that it is their intention to proceed with the full separation of the Registry and Registrar operations, as currently envisaged.

The principal line of business of VeriSign is digital certification, in which it has a dominant market position. Consequently, the question arises as to whether it is appropriate for domain name services and digital certification services to be bundled in this way. Although the EU recognises the importance of digital certification as part of the infrastructure for electronic signatures and commerce, the EU, whether public or private sector, has not accepted that the VeriSign service should have a privileged position in this new market.

However, the massive valuation of the NSI/VeriSign deal appears to imply that substantial value added can be achieved by the merged company through the exploitation of the very large NSI registration data base for the provision of other Internet related services, presumably including digital certification. The question as to how VeriSign would ensure that European data protection laws and policies are respected in this sector is also germane and unanswered.

Prior to the merger/acquisition envisaged between NSI and VeriSign, the Commission had assessed the effects of the November 1999 agreements from the point of view of Community competition policy and determined that they broadly responded to the major competition concerns that the Commission had identified. Accordingly the Commission closed its investigations in this area. However, ***the Commission will continue to monitor developments because of the global extent of the markets affected by these agreements, and has informed the United States Department of Commerce accordingly.***[16] ***These new developments, only serve to reinforce the importance of permanent monitoring of these matters by the competition authorities in both the EU and the US.***

5.4 Exercise of ICANN's Authority

Under the agreements with US DoC and NSI, ICANN is also obliged, to the Registry and to all accredited registrars, to comply with specified procedural requirements governing the exercise of its authority, particularly regarding consensus-building.

The US DoC has also reasserted its rights of supervision over ICANN policies, including any amendments to ICANN's agreements with NSI. Furthermore, ICANN shall not enter into any agreement with any successor registry to NSI for the .COM, .NET. and .ORG TLDs without prior approval by US DoC. Should US DoC withdraw its recognition of ICANN or any successor entity by terminating their Memorandum of Understanding, ICANN agrees that it will assign to DoC any rights that ICANN has in all existing contracts with registries and registrars.

The broad scope of the powers and authorities reasserted by the US Administration (as recently as November 1999) notwithstanding, the US Department of Commerce has repeatedly reassured the Commission that it is still their intention to withdraw from the control of these Internet infrastructure functions and complete the transfer to ICANN by October 2000.

The Commission has confirmed to the US authorities that these remaining powers retained by the United States DoC regarding ICANN should be effectively divested, as foreseen in the US White Paper. The necessary governmental oversight of ICANN should be exercised on a multilateral basis, in the first instance through the Governmental Advisory Committee.

The Commission will take the necessary steps to ensure that the principles of openness, transparency and respect for international agreements, are fully observed in the remainder of the transition phase and thereafter. That was foreseen, in the US White Paper and the ICANN Articles of Incorporation

5.5 InterNIC

The InterNIC is an integrated network information centre and Whois service for the existing gTLDs, .COM, .NET and .ORG. The InterNIC domain names and web-site will be transferred from NSI to the Department of Commerce. It is anticipated that the web-site will in due course be transferred to ICANN, but that is not yet the case. Indeed in this and other areas, ICANN staff has indicated that they are not yet able to take over all the functions that would normally be transferred to ICANN under the agreements with the US DoC because of lack of staff and other resources.

Until the transfer is completed, NSI will maintain the Internic.net website as a public information site with a directory of accredited registrars for .COM, .NET and .ORG., with links to those registrars and cease to use the term InterNIC for its own activities.

Similar InterNIC and Whois services are provided by the country code Registries and the regional IP Registries, e.g. RIPE.

5.6 Management of the Root Server System

The root name servers that provide the critical top-level Internet addresses for routing communications are under-represented outside the United States. (The Internet's Root Name Servers are still operated by volunteers under the auspices of IANA although ICANN is conducting a study to determine the future requirements). Thirteen root name servers perform

this function globally, ten of which are located in the United States, including the principal "A-Root" server, currently still in the premises of NSI. The other three are in Tokyo, London and Stockholm.

Nothing in the agreements between US DoC, ICANN and NSI affects the current arrangements regarding management of the authoritative root server. NSI will continue to manage the authoritative root server in accordance with the direction of the Department of Commerce. The Department of Commerce expects to receive a technical proposal from ICANN for management of the authoritative root and this management responsibility may be transferred to ICANN at some point in the future. The Department of Commerce has no plans to transfer to any entity its policy authority to direct the authoritative root server.

5.7 Country Code Top Level Domains (ccTLDs)

ICANN has general competence for the recognition of country-code TLDs on the basis of the ISO 3166 alpha-2 codes and the subdivisions of some codes on the basis of RFC 920 and 1591[17]. ICANN, and IANA before it, consider that they are not competent to decide "what is or is not a country". Accordingly they have adhered to ISO 3166 standard lists of two letter country codes. As is the case for other ISO standards, it is kept up to date by a Maintenance Agency whose secretariat is provided in this case by the Deutsche Institut für Normung (DIN).

The GAC has already given ICANN some advice in this area. The GAC Operating Principles state that:

> ***"Country code top level domains are operated in trust by the Registry for the public interest, including the interest of the Internet community, on behalf of the relevant public authorities including governments, who ultimately have public policy over their ccTLDs, consistent with universal connectivity of the Internet."***

IANA delegated 243 ccTLDs to a wide range of Registry organisations world-wide[18]. The legacy of these decisions, implementing RFC 1591, has given rise to several disagreements and uncertainties between Registries and either the local Internet community or the relevant government or public authority. These are now being addressed by ICANN and by the GAC. The Board has published a revised policy statement for consultation[19] and, the GAC has recently endorsed a detailed document that constitutes guidelines for the best-practice relationships between the ccTLD Registries, ICANN and their relevant public authorities or governments[20].

It is anticipated that ICANN with the support of the GAC will be able to facilitate solutions to the few outstanding problems in this area without being too heavy-handed with respect to the operational autonomy which is rightly enjoyed by most ccTLD Registries. Furthermore, ICANN's direct authority over the ccTLD Registries should be limited to a few critical technical parameters. National ccTLDs' registration policies are a matter between the Registry and it's local Internet community and the relevant government or public authority. These concern ICANN only when the interests of third parties may be affected in other parts of the world. For example, the question has arisen as to whether a ccTLD that accepts commercial registrations from entities outside its territory should apply the equivalent of a WIPO-based dispute resolution policy in the interests of protecting third party interests in other parts of the world.

Within the EU, the Commission understands that all national ccTLD Registries enjoy the confidence of the local Internet community and the authorities in the Member States. As a matter of best practice and with due regard to EU internal market and competition rules, it

would nevertheless be desirable to encourage a higher degree of harmonisation and consistency among the registration policies of the ccTLD Registries within the EU. The Commission has taken this matter up with the CENTR[21] organisation of which all ccTLD Registries in the EU are members. It is anticipated that CENTR and its members will complete their examination of best practice in ccTLD registration policies in Europe by mid-2000 and make recommendations to their membership accordingly.

Following adoption by the GAC as a whole, its advice in this area has been published and addressed to the ICANN Board and to the ccTLD Registries[22].

In view of the consensus that has been reached among the Member States and internationally, the Commission encourages the Member States to implement the GAC recommendations in an appropriate manner insofar as they relate to governments' relationships with ICANN and with their national ccTLD Registries.

It would also be appropriate for the national ccTLD Registries in the European Union to adapt their policies and practices to achieve a high level of transparency in their operations. In so far as the national Registries accept registrations from entities and individuals from outside their territory, their dispute resolution policies should take full account of the interests of third parties in other Member States, and elsewhere.

The Member States should also participate actively with their Registry organisations in the review of the registration policies and practices of the national ccTLDs and encourage the Registries to develop and implement registration policies consistent with the principles of the Internal Market and Competition policy. Meanwhile the Commission will continue to review whether the registration policies of the national ccTLD Registries are entirely consistent with EU internal market and competition law.

5.8 The proposed new Top Level Domain: .EU

As noted above, the expansion of the Internet Domain Name Space that was envisaged in 1996 has not taken place for several reasons, and the question is still on the agenda of the new ICANN organisation. In view of the current wave of expansion in the Internet in Europe, the Commission envisages that a .EU TLD Registry should be created as soon as possible in order to give the Internet DNS in Europe an additional dimension for identification and growth.[23]

The Commission's suggestions have been the subject of a public on-line consultation. They will be up-dated in the light of the observations received and the Commission will decide on appropriate steps to be taken. In addition the .EU domain would have to be endorsed by the ICANN Board.

In view of the creation of the .EU TLD, the Commission is considering providing a clear and specific legal framework to address cybersquatting problems and the protection of Industrial property rights within the new TLD.

6 Intellectual Property Rights

6.1 Trademarks

The main IPR questions arising from domain names are currently trademark-related. Most of the work done in WIPO (and most of the jurisprudence) concerns the resolution of potential or actual disputes over trademarks and domain names. However, this is not the complete

picture. Copyright holders have already indicated their interest in using the domain name registration data as a vehicle to locate the origin of copyright infringement and piracy. The question of the ownership of IPR in domain names[24] and in the registration databases themselves[25] has also arisen.

It is the Commission's policy to discourage the appropriation of property rights in names, particularly generic words, and to restrict the scope for ownership of certain databases related to the operation of the DNS in the interests of competition and data protection[26]. The legal basis for this position, as regards the protection of IPR, has not yet been established, though the available jurisprudence is quite unanimous. The creation of a legal framework for the future top level domain ".EU", might facilitate the establishment of some clear European-wide guiding principles that would entail a "*de facto*" harmonisation of some national practices.

6.2 Abusive registration of domain names

Domain names have been an easy target for abuses of intellectual property rights, and specifically trade marks. In principle it is possible to limit the risks of trademark infringement in the DNS by subjecting registrations to certain rules. This is usually the case for national ccTLDs.

However, the principal open generic TLDs, .COM, .ORG, and .NET names are allocated on a 'first come, first (only) served' basis. During the last five years several costly court cases were required to restore rights which had been infringed, such as speculative registrations in bad faith of famous and well known trademarks. On the other hand a balance has to be sought in respect of small companies who in good faith and with justification register a name which then proves to be of interest to a larger and more powerful organisation.

6.3 World Intellectual Property Organisation

On April 30, 1999 WIPO issued its Final Report on the Internet Domain Name Process[27], to which the EU and its Member States contributed actively. The ICANN Governmental Advisory Committee also supported the implementation of the WIPO recommendations. ICANN has adopted the principle of a uniform dispute resolution procedure within the gTLDs and initiated a process to implement other aspects of the WIPO recommendations. That depends on their being applied by all gTLD Registrars, including NSI. More recently (July 1999), a quorum of these Registrars, including NSI adopted a standard agreement for all gTLD DNS registrations that would effectively achieve a uniform dispute resolution procedure as advocated by the EU and recommended by WIPO. This development is to be welcomed. The procedure is currently limited to abusive registration of trademarks and service marks. The policy could also be extended to those ccTLD Registries that accept commercial registrations from outside their own territory. The ICANN Board has referred other WIPO recommendations to the Domain Name Supporting Organisation – DNSO, notably the protection of famous marks and the creation of new gTLDs. The resulting delay in implementing the WIPO recommendations has been criticised by industry representatives.[28]

Thus, the Internet IPR policy promoted by the EU in March 1998 and sustained by the Commission and the Member States throughout the intervening period has largely borne fruit. WIPO's role has effectively been re-instated and a wide range of users and trademark owners have accepted that respect of trademark rights and uniform dispute resolution procedures are a necessary element of the expansion of the use of the Internet into commercial communications world-wide.

6.4 Other rights to names in the DNS

Although trademark rights are increasingly secure in the context of the DNS, rights to other categories of names, including place names, names of celebrities and geographical indications may also justify a degree of protection that currently cannot be ensured. In this light, following the adoption by the US Congress of a Cybersquatting Bill in November 1999 several members of the ICANN-GAC have requested WIPO to produce guidelines for anti-cybersquatting policies. The Commission, which participated in those discussions, encourages and supports this initiative. The ICANN Board has also requested WIPO to prepare an agreed list of Famous Names with a view to the development of possible exclusion lists for DNS Registries and Registrars. It is understood that WIPO is willing to undertake this additional work. It is anticipated that these developments will be an important step towards facilitating the creation of new gTLDs.

However, it must be recalled that jurisdiction of the United States' Courts predominates over dispute resolution procedures as already highlighted in the earlier European Community reply to the US Government on Internet Governance. Indeed, any dispute under the Registrars Accreditation Agreement other than those relating to domain names and trademarks is referred, through the Agreement, to the International Arbitration rules of the American Arbitration Association and should be conducted in California.

6.5 Conclusions

The Commission will continue to maintain a dialogue notably with WIPO and the US authorities on dispute resolution and the implementation of truly international alternative dispute resolution mechanisms.

National legislation and jurisdiction based on the location of Domain Name Registries may have extra-territorial effects. The Commission will examine the consequences of this development for the interests of European registrants in the existing gTLD Registries and propose those measures that may be necessary.

In view of the specific issues arising from domain name disputes, the Commission intends to make a proposal for a code of conduct or other appropriate instrument that would restrict the scope of current abuses in this area. This would include the identification of the categories of names to be protected and the treatment of trademarks and other recognised marks.

The Commission will seek the cooperation of the Member States in the implementation of such a code of conduct, to be applied in the first instance to all TLD Registries operating in the European Union. The Commission will also take the necessary steps to ensure that similar disciplines are applied with equivalent effect by TLD Registries elsewhere, including the existing gTLDs.

7 DATA PROTECTION ASPECTS

7.1 Registration and Whois Data

The ICANN "Statement of Registrar Accreditation Policy" including in particular the Registrars Accreditation Agreement, contains provisions requiring the domain name applicant to give personal data (and other data) to the Registrar which forwards the data to the Registry and their Whois databases (see annex to this Communication). Registrars also have to maintain and provide public access to a database containing the name and postal address of the holder (and further contact details for the administrative and technical contacts) of all Second Level Domains (e.g. example.com) that have been registered.

The above data have to be transferred notably to a Registry, currently the exclusive registry being Network Solutions Inc. (NSI) and to some extent to ICANN or other third parties, such as an escrow agent. Since these operations include processing of personal data falling under the scope of Directive 95/46/EC, its requirements have to be met.

7.2 Domain Name Registration data flows

The data flows related to the NSI domain name registration system have been analysed by ICANN and the Commission services and steps are being taken to re-enforce conformity with EU data protection rules. The Commission has requested that all registrants have the opportunity to be informed about the specific purposes for which their personal data are collected. The purposes for which ICANN may use data that it receives in this context should be strictly circumscribed and limited to the functioning of the Internet Domain Name System. The Commission has also recommended that all escrow sites for domain name registration databases in Europe should be located in the same jurisdiction as the Registrar concerned.

The main shortcomings in the current Registrars Accreditation Agreement relate to the definition of the purpose for which data is collected, stored, transmitted or otherwise processed. Those involved in personal data processing should ensure that informed consent is obtained from the domain name holder and respect the absence of rights in personal data.

The Commission has sent detailed comments on these matters to ICANN and discussion is continuing with ICANN and the US Department of Commerce with the view to reaching agreement on the adequate level of data protection required. It is the Commission's view that Registrars, Registries or ICANN and its related bodies can claim no rights in personal data of data subjects, and that all rights in individuals' data accrue to the individuals concerned. The application of this principle to ICANN itself and to domain name Registries should be considered.

7.3 Transparency and access to data

Access to data held by Registrars and the Registry, such as via Whois services, are a significant information service to the global Internet community and to anyone who has technical responsibility for a host connected to the Internet. In addition to this fundamental role it also helps to reduce disputes in trademarks because parties who think that their rights may have been infringed can use such data to identify those companies and other organisations that may be responsible for trademark infringement, whether deliberate or inadvertent. Accordingly, access to such data figures as one of the key recommendations in the WIPO Final Report. The principal features of domain name registration and Whois data are discussed in greater detail in the Annex to this Communication.

Yet, from a privacy perspective, and in so far as personal data are concerned, only selected contact details need to be accessed for a specific purpose. Practical arrangements, such as ensuring that no more data than necessary is collected and processed at the appropriate level and for the relevant purpose, can reduce the concerns relating to privacy requirements in the domain name process.

Access to such data for other purposes, notably the prevention of fraud, may be envisaged provided appropriate safeguards are in place, which would ensure compliance with the requirements of Directive 95/46/EC. Another issue that needs to be considered is the obligation to ensure security and confidentiality of data, communications and networks.[29]

7.4 Conclusions

The Commission will continue discussions with ICANN and the US Government regarding data protection and privacy issues and the way these are reflected in the contractual framework between ICANN and the domain name Registries and Registrars. The Commission will also consider the ways in which data protection rules should be applied by the national ccTLD Registries in the Member States.

The Commission may also recommend that ICANN and GAC adopt policies limiting the collection, processing and use of personal registration data, should that prove to be necessary.

8 COMPETITION POLICY

8.1 From the point of view of competition policy, the Commission will follow closely developments regarding the organisation and management of the Internet, given the global

nature of the Internet and the global scope of the markets affected by the agreements that have been reached in this area, and their possible effects on trade between EU Member States. In particular, ***the Commission will ascertain whether agreements and business registration practices fall under EU competition rules (Articles 81 and 82) and, where necessary, will take the appropriate action on the basis of its direct powers under the EC Treaty***. The EU and US competition authorities have already agreed to a framework for bilateral cooperation, and this has already proved to be useful in this area.

8.2 National Country Code Registries (ccTLDs) in the Member States

The general principles of EU competition policy are evidently also relevant to the operation of the ccTLD Registries as well and in particular to the possible .EU Registry.

The Commission has received a number of complaints, lodged for alleged violations of Article 82 of the EC Treaty, against the ccTLDs registry bodies in some Member States. In general, the complaints have been made by companies or by DNS registration agents acting on their behalf.

The Commission has started an investigation to ascertain to which extent the practices criticised constitute a restriction of competition within the meaning of EU Competition Law. Formal information requests have been addressed to some of the ccTLDs registry bodies concerned. Further information requests could be addressed to those bodies in the short term. The Commission's proceedings on those complaints are still pending.

8.3 Generic Top Level Domain (gTLD) Registries

The adoption by ICANN of its Guidelines for Accreditation of Internet Domain Name Registrars and for the Selection of Registrars for the Shared Registry System Test-bed for the .COM, .ORG and .NET domains was the starting point of the process to open the gTLDs to competition.

Registrars willing to register names on behalf of their customers in the .COM, .NET and .ORG domains have to submit their registration requests to NSI, the current exclusive Registrar/Registry for these domains. This is proving to be an opportunity for that private company to impose on competing Registrars contractual conditions which have recently been brought to the attention of the competition authorities both in the United States and in Europe.

A complex and unfair contractual environment could seriously undermine the Registrars Accreditation Policy and the Agreement proposed by ICANN for Registrars Accreditation for Registrars that could put at risk the efforts to upgrade the US-based monopolistic infrastructure towards a more balanced international environment.

Other competition policy considerations are discussed in the context of ICANN's Registrar accreditation policy and ICANN's agreements with the US DoC and NSI (Sections 5.3-5.5 above.)

9 INTERNET INFRASTRUCTURE AND THE ROUTING OF EUROPEAN INTERNET TRAFFIC

The ability of the Internet in Europe to fulfil the enormous expectations that are currently being placed upon it presupposes that the current disparities in access, use, content and cost can be rapidly reduced through:

- less expensive access,
- affordable and adequate bandwidth to the home
- more extensive availability of relevant content on European web-sites
- much more extensive use of all European languages and
- backbone infrastructure able to accommodate traffic flows efficiently.
- higher levels of security for commercial use are also necessary.

The European Union and the Member States are currently encouraging the movement towards convergence in communications media towards the Internet and the use of the Internet as the primary if not exclusive platform for electronic commerce. These objectives are an integral part of the *e*Europe initiative, information society policies, including Research and Development. However, the international topography of the Internet still depends disproportionately on communications to and from the United States. Internet traffic currently originates disproportionately from the United States, where the large majority of web-sites are currently based. There are several reasons for this asymmetry in Internet traffic[30] that are discussed in greater detail in the Annex to this Communication.

The Commission has already drawn attention to the fact that the capacity and price-structure of cross-border leased lines within the Union is a matter of grave concern and is seriously compromising the competitiveness of all classes of Internet users throughout Europe.

The price of access to Internet users is also an issue and needs to be further reduced, both in terms of telecommunications tariffs for adequate bandwidth and Internet access charges. Cheaper broad band access to small and medium sized enterprises and to the home would greatly facilitate electronic commerce.

The Commission has adopted a Recommendation regarding best practice for the pricing of international and cross-border leased lines and is about to make a Recommendation regarding the un-bundling of the local loop.

The Commission intends to collect information from the providers of Internet backbone infrastructure and Internet service providers in Europe with a view to identifying those possible further measures that would correct the current situation regarding the capacity and routing of Internet infrastructure in Europe.

In conclusion, the Commission confirms that the development of the Internet infrastructure is of critical importance for the economy of the European Union. The Commission wishes to reinforce the conclusions of the Lisbon European Council and to confirm that it is essential for the Member States to act as expeditiously as possible to implement the Commission's recommendations on leased line pricing and un-bundling of the local loop. That should accelerate affordable Internet access and use throughout European society and economy.

10 CONCLUSIONS

In this Communication the Commission has drawn a number of conclusions and made several recommendations as to its own policies and priorities and for the Member States. These points are summarised here:

Internet management

The Commission will continue to participate in relevant fora and to encourage European interests to participate also with the aim of ensuring that Internet management structures represent an equitable balance of interests. The new registry system should be implemented in a correct and timely way. This should include acceptable rules for data protection and competition, appropriate protection of intellectual property rights and permit when necessary to identify and trace commercial operations.

The Commission will examine ways to prepare adequate systems in Europe for both numerical addresses and domain names to cope with a massive increase in Internet use and applications.

ICANN participation and membership

The Commission urges the Member States and the European Parliament to help in encouraging the flow of information about the ICANN process, including membership, to all categories of Internet users, particularly individuals and public service organisations, to ensure an adequate level of participation and representation of the interests concerned.

The Global Perspective

The effective co-ordination of the Internet is **crucial for many other objectives** and aspirations in the broader context of Internet-related policies, especially for the information society, electronic commerce and communications.

Even within their narrowly defined remit, it is already the case that ICANN and the GAC are taking decisions of a kind that governments would, in other contexts, expect to take themselves in the framework of international organisations.

For the time being, there would appear to be consensus that the nature of the Internet and the speed of events preclude this approach and that the current self-regulatory structure buttressed by active public policy oversight is the best available solution.

The Council and European Parliament are invited to confirm their agreement to the current approach to these matters.

The Commission will take the necessary steps to ensure that the principles of openness, transparency and respect for international agreements, are fully observed in the remainder of the transition of authority from the United States government and thereafter, the necessary governmental oversight being exercised in the first instance by the Governmental Advisory Committee.

Internet Addressing

The Commission intends to take several steps to facilitate where appropriate the transition of the information economy to the IP addressing system, including the timely introduction of next generation Internet addressing (IPv6).

Internet Protocols

The Commission also intends to take full account of the development of Internet protocols in its approach to information technology standardisation, including in EU research projects.

Principles for ccTLD Registries

The Member States are invited to implement the GAC recommendations in an appropriate manner insofar as they relate to governments' relationships with ICANN and with their national ccTLD Registries. National ccTLD Registries in the European Union should adapt their policies and practices to achieve a high level of transparency and reliability in their operations. Their dispute resolution policies should take full account of the interests of third parties in other Member States, and elsewhere.

The Member States are invited to participate actively in the review of the registration policies and practices of the national ccTLDs with their Registry organisations and to encourage the Registries to develop and implement registration policies consistent with the principles of the Internal Market and EU Competition policy.

The Commission will continue to review whether the registration policies of the national ccTLD Registries are entirely consistent with EU internal market and competition law

The proposed Dot EU Top Level Domain

The Commission's suggestions for a .EU Top Level Domain have been the subject of a public on-line consultation. They will be up-dated in the light of the observations received and the Commission will decide on appropriate steps to be taken.

Alternative Dispute Resolution

The Commission will continue to maintain a dialogue notably with WIPO and the US authorities on dispute resolution and the implementation of truly international alternative dispute resolution mechanisms.

National legislation and jurisdiction based on the location of Domain Name Registries may have extra-territorial effects. The Commission will examine the consequences of this development for the interests of European registrants in the existing gTLD Registries and propose those measures that may be necessary.

In view of the specific issues arising from domain name disputes, the Commission intends to make a proposal for a code of conduct or other appropriate instrument to be implemented through cooperation with the Member States that would restrict the scope of current abuses in this area. This would include the identification of the categories of names to be protected and the treatment of trademarks and other recognised marks.

Data protection and privacy

The Commission will continue discussions with ICANN and the US Government regarding data protection and privacy issues and the way, these are reflected in the contractual framework between ICANN and the domain name Registries and Registrars. The Commission will also consider the ways in which data protection rules should be applied by the national ccTLD Registries in the Member States.

The Commission may also recommend that ICANN and GAC adopt policies limiting the collection, processing and use of personal registration data, should that prove to be necessary.

The Commission will also monitor the implementation of the ICANN accreditation agreements and of the Registry policies and agreement and determine whether the appropriate

requirements of Directives 95/46/EC, 97/66/EC and the forthcoming Electronic commerce directive are fulfilled.

Competition Policy

The Commission will monitor developments in the Internet Naming and Addressing system from the point of view of competition policy.

Internet Infrastructure

The Commission intends to collect the necessary information with a view to identifying those possible further measures that would correct the current imbalances regarding the capacity and routing of Internet infrastructure in Europe.

The Member States are invited to act as expeditiously as possible to implement the Commission's recommendations on leased line pricing and un-bundling of the local loop in order to accelerate affordable Internet access and use throughout European society and economy.

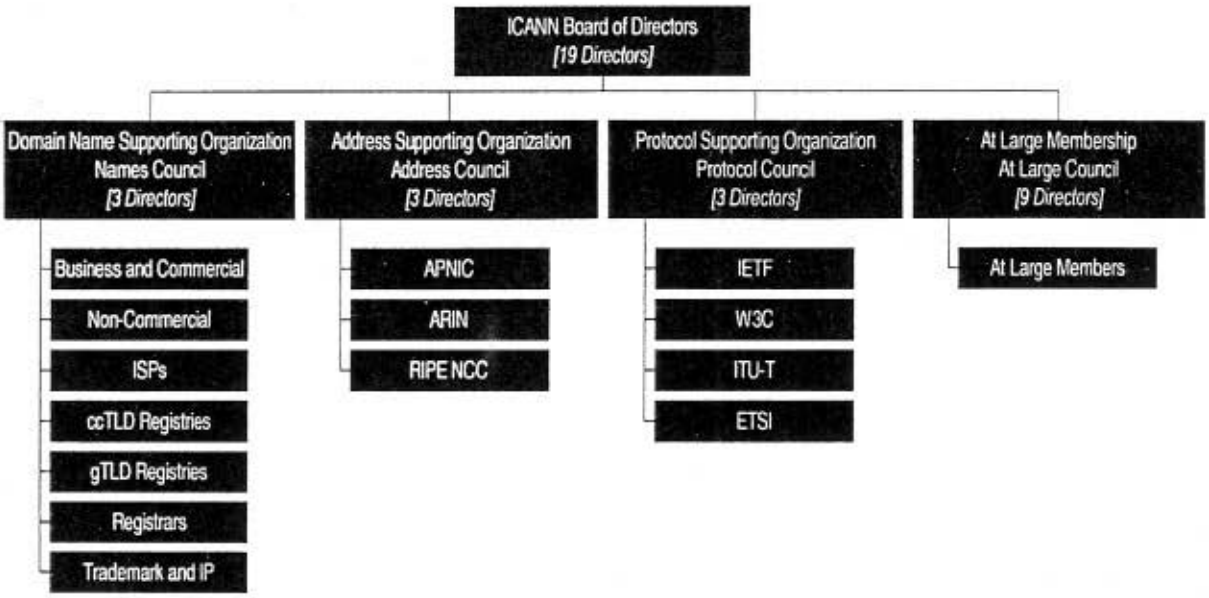
Annex

THE ORGANISATION AND MANAGEMENT OF THE INTERN INTERNATIONAL AND EUROPEAN POLICY ISSUES

Explanatory and supporting information

CONTENTS

The ICANN Organisation



Advisory Committees

Advisory Committee on Membership
Advisory Committee on Independent Review
Governmental Advisory Committee
DNS Root Server Advisory Committee

Committees of the Board of Directors

Audit Committee
Committee on Conflicts of Interest
Committee on Reconsideration
Executive Committee
Executive Search Committee

Mission of ICANN

According to the Articles of Incorporation, ICANN is a non-profit public benefit corporation and is not organised for the private gain of any person, under the California Non-profit Public Benefit Corporation Law for charitable and public purposes. The Corporation is organised, and will be operated, exclusively for charitable, educational, and scientific purposes.

The Articles specify that "In recognition of the fact that the Internet is an international network of networks, owned by no single nation, individual or organiszation, ICANN shall pursue the charitable and public purposes of lessening the burdens of government and promoting the global public interest in the operational stability of the Internet by:

(i) coordinating the assignment of Internet technical parameters as needed to maintain universal connectivity on the Internet

(ii) performing and overseeing functions related to the coordination of the Internet Protocol ("IP") address space

(iii) performing and overseeing functions related to the coordination of the Internet domain name system ("DNS"), including the development of policies for determining the circumstances under which new top-level domains are added to the DNS root system

(iv) overseeing operation of the authoritative Internet DNS root server system"

Powers of the Board

The powers of ICANN are exercised by or under the direction of the Board.

For certain matters specified in the Bylaws, with respect to any policies that substantially affect the operation of the Internet or third parties, including the imposition of any fees or charges, the Board may act only by a majority vote of all members of the Board. In all other matters the Board may act by majority vote of those present at any official meeting.

ICANN shall not act as a Domain Name System Registry or Registrar or Internet Protocol Address Registry in competition with entities affected by the policies of the Corporation. But ICANN is entitled to take whatever steps are necessary to protect the operational stability of the Internet in the event of financial failure of a Registry or Registrar or other emergency.

The Corporation shall not apply its standards, policies, procedures or practices inequitably or single out any particular party for disparate treatment unless justified by substantial and reasonable cause, such as the promotion of effective competition.

Structure of the Board

The authorized number of Directors of the Board shall be no less than nine (9) and no more than nineteen. The Board annually elects a Chairman and a Vice-Chairman from among the Directors, not including the President. The regular term of office of a Director is three years.

The Board of ICANN is composed of nineteen Directors: nine At-Large Directors, nine selected by ICANN's three supporting organizations, and the President/CEO (ex officio).

The nine At-Large Directors of the Initial Board are serving initial terms and will be succeeded by nine At-Large Directors selected by ICANN's At Large Membership. Each Board after the Initial Board shall be comprised as follows:

(i) Three (3) Directors selected by the Address Supporting Organization

(ii) Three (3) Directors selected by the Domain Name Supporting Organization

(iii) Three (3) Directors selected by the Protocol Supporting Organization

(iv) Nine (9) At Large Directors, consisting of the At Large members of the Initial Board or their successors

(v) The person who shall be, from time to time, the President of the Corporation (i.e. the Chief Executive Officer - CEO).

International Representation

In order to ensure broad international representation on the Board: (1) at least one citizen of a country located in each of the geographic regions shall serve as an At Large Director on the Board (other than the Initial Board) at all times; and (2) no more than one-half (1/2) of the total number of At Large Directors serving at any given time shall be citizens of countries located in any one Geographic Region.

The selection of Directors by each Supporting Organization and the At Large Council shall comply with all applicable geographic diversity provisions.

There are 5 ICANN "Geographic Region" : Europe; Asia/Australia/Pacific; Latin America/Caribbean islands; Africa; North America. The specific countries included in each Geographic Region shall be determined by the Board, and this shall be reviewed by the Board from time to time (but at least every three years) to determine whether any change is appropriate, taking account of the evolution of the Internet.

The current geographical composition of the ICANN Board is as follows:

North America:	8
Europe:	7
Asia Pacific:	3
Latin America:	1
Africa:	--

IP Addressing and the Addressing Supporting Organisation (ASO)

An expanded and **up-graded version of the IP addressing system** is currently being rolled out based on numbers that are 128 bits long (IPv6). This constitutes a massive expansion in the available address space: ($3x10^{36}$). The transition from IPv4 to IPv6 and the anticipated vast increase in addresses, require serious consideration to be given to aspects such as organisation, aggregation and routability of the IP addressing system in Europe and world-wide. IANA and RIPE have recently published a provisional policy for the allocation of IPv6 address space.[31] It is anticipated that this will be done in an hierarchical manner through Top Level and Next Level operators which will be custodians of blocks of IP addresses and which will in effect be responsible for the allocation of smaller blocks of addresses to their customers or users.

The ASO is intended to assist, review and develop recommendations on Internet policy and structure relating to the system of IP addresses. It currently comprises the three Regional Internet Address Registries AP-NIC (Asia-Pacific), ARIN (Americas) and RIPE-NCC[32] (Europe). It is anticipated that new Regional Registries will be created for Africa and Latin America in due course and will also become members of the ASO. Russia and other CIS countries are likely to continue as members of RIPE for the foreseeable future. In November 1999 the ASO elected three ICANN Board members.

Internet Protocols and the Protocol Supporting Organisation (PSO)

Internet protocols are developed through the "Requests for Comments" (RFC) process and are consequently voluntary and consensus based. However, the overriding requirement of global inter-operability accords certain RFC's the status of binding technical standards.

The Protocol Supporting Organisation (PSO)

The Protocol Supporting Organisation (PSO) is concerned with the above technical standards. It is a consensus-based advisory body within the ICANN framework. A Memorandum of Understanding (MoU) has been drawn up between ICANN and a group of open international Internet-related standards development organisations: IETF, World Wide Web Consortium, ITU and ETSI. Each of those organisations has designated two members to the Protocol Council. The PSO has elected three members of the ICANN Board.

The PSO has the primary responsibility for developing and recommending substantive policies in the area of protocol parameter assignment. The operation of the PSO will be open, and will permit participation by all interested individuals.

The Protocol Supporting Organisation (PSO), while playing a low profile role at this stage could become a significant platform for global industry co-operation in Internet standards. Although much of the technical work may be carried out by the standards development organisations themselves, notably by the IETF, it is necessary to ensure that adequate means exist to resolve any technical or political disagreements that may arise.

Domain Name Registration data and Data protection (Whois)

The registration of a domain name implies supplying identification data for the owner of the domain name. The part of the information that is generally accessible is referred to as the Whois data after the protocol used. This information is basically required for technical purposes notably in case of difficulties in the resolution of domain names but also as a mechanism for validation of the online information provided by the registrant.

It has also been suggested that for the purpose of reliability of identification of commercial operators, registration details of the company or incorporated body should be provided as well as a tax identification number or similar information, which should also be available through query-based access as part of registration data.[33]

Currently these particular Whois databases encounter three kinds of problems:

- **transparency**: eliminating inaccurate or out-of-date information;

- **consistency**: following the introduction of the NSI shared registry system, the original gTLD Whois data has become dispersed between a number of Registrars. Technical measures are now being taken to correct that anomaly. Furthermore gTLD Whois and ccTLD Whois data are not yet available on a consistent basis;

- **purpose of use:** Whois data can be accessed by the public but should not be used for unauthorised purposes. What those purposes should be remains to be clarified, notably in relation to data protection laws. Work in this area is on-going.

All the ICANN accredited registrars for the.COM, .NET and .ORG now have to provide query-based access to registration data. Beside the registered name and registrar information, available data includes the name, postal addresses and contacts data (email, telephone and fax number) of the registrant and the technical contact and administrative contact for the second level domain. Accredited registrars also have to inform their customers about the purposes of the collection of such data and limitations to the processing and use of personal data. ICANN will inform registrars about the purposes and conditions of use of personal data received by the registrars.[34] Registrars also have to prevent the shared registry system being used for unsolicited commercial email (spam), by preventing high volume, automated, repetitive queries for the purpose of extracting data to be used to compile or infer customer identity or similar information (profiling).

The Commission will monitor the implementation of the ICANN accreditation agreements and of the Registry policies and agreement and determine whether the appropriate requirements of Directives 95/46/EC, 97/66/EC and the forthcoming Electronic commerce directive are fulfilled.

Internet Infrastructure: topography and routing of Internet traffic

There are several reasons for the asymmetry in Internet traffic in Europe arising from the original structure of the Internet, disparities in the source of content and economic factors, including the currently still inadequate availability of competitively priced bandwidth for Internet communications in Europe.

Structure:

The early development of the Internet in most parts of the world was based on establishing connections between national networks and the Internet in the United States. The practical result is that the installed capacity of the Internet backbone infrastructure between each Member State and the United States has several times the bandwidth (capacity) of the connections between the Member States. The analogous situation in other parts of the world is apparently even more unbalanced.

Consequently, a large proportion of Trans-European Internet traffic is routed via the United States. Quite apart from the economic effects of this situation, it means that many European communications, including information of commercial significance depend on a day-to-day basis on the security and reliability of these Trans-Atlantic connections.

Content:

Today, most web pages are in English and most of them are hosted in the United States. Of the 100 most-visited web-sites, 94 are located physically in the United States. Currently an even larger share of those secure sites used for electronic commerce is in the United States. These imbalances should be attended to quickly. Otherwise, the Internet will remain dominated by US-based content from the point of view of language and culture and a significant proportion of the economic growth that may arise from electronic commerce in Europe will in practice simply result in importing goods and services from the United States. Furthermore, the displacement of existing services and the development of new economic products brought about by the Internet have consequences for the EU's VAT system, which will shortly be addressed by an appropriate proposal from the Commission.

Economic factors:

In addition to these substantive reasons for the asymmetry in today's Internet, economic factors in Europe further aggravate the situation to the detriment of the economic interests of European operators and users. The fact that a large proportion of European domestic Internet traffic transits via the United States means that the commercial relationships between European and American Internet Service Providers are out of balance. For example, few, if any US ISPs accept traffic from Europe on a "peering" basis and in practice European originating traffic is charged for the privilege of transiting US-based exchange points, whereas large US-based ISPs exchange each other's traffic without charge as "peers".

Furthermore only a few US-based Internet backbone suppliers do business with European ISPs while these have to exchange with US ISPs because of the predominance to date, of US based content on the Internet. Certain large US-owned and based ISPs are also active in the European market. At present it is not known whether their internet transit charges are treated on the same basis as other European-owned ISPs or whether their European business benefits

from the more favourable interconnection and peering arrangements that they enjoy in the United States. This question will be investigated by the Commission services concerned. In addition, cross-border Internet traffic in the EU has to carry the cost of the notoriously excessive international leased line tariffs that are still in effect to differing degrees throughout the EU, liberalisation and competition in the provision of telecommunications infrastructure notwithstanding.

Capacity

The liberalisation of telecommunications infrastructure is starting to yield encouraging results in terms of availability of bandwidth and lower access prices. The forthcoming recommendation on unbundling of the local loop is expected to have a significant impact. However, this will take some time and the Commission will be constantly monitoring the situation in view of possible further measures.

The bandwidth available to the market for cross border communications also remains inadequate in many parts of the Union, thus aggravating the already strong economic pressures for European Internet traffic to be routed via US-based exchange points. Consequently European Internet traffic and the EU based ISPs in particular have been confronted with the invidious choice of either paying high prices for inadequate cross-border bandwidth within the Union or of paying for Transatlantic connections (twice) and paying US-based ISPs for their traffic exchange in the United States. This situation represents a significant distortion in the global market for Internet-related services. It also prejudices the international competitiveness of European-based ISPs and other operators, and their many customers that use the Internet for commercial purposes, including international electronic commerce. Needless to say that analogous concerns may be relevant regarding both the enlargement countries and the Mediterranean area. The Commission is currently examining the reasons for high prices for cross-border leased lines, and will be considering other measures if the situation does not improve.

Glossary of Internet terminology and acronyms

CORE	Council of Registrars, a not-for-profit shared Registry set up by the IAHC report. Current (9/99) membership 55 companies.
ccTLDs	Country code Top Level Domains. (Referring to the ISO 3166 standard two letter codes for countries and territorial entities).
Cybersquatting	Speculative (or abusive) registration of trademarks owned by third parties.
Delegation	Delegation by ICANN/IANA of a TLD in the Internet Root.
Designation	Designation by the relevant government or public authority of the Deleguee, recognised as competent to create the Registry organisation and database.
DNS	Domain Name System
GAC	ICANN Governmental Advisory Committee
gTLDs	Generic Top Level Domains (such as .COM, .ORG, .INT etc.)
IAHC	International Ad Hoc Committee
IANA	Internet Assigned Numbers Authority (predecessor to ICANN)
ICANN	Internet Corporation for Assigned Names and Numbers (successor organisation to IANA)
IETF	Internet Engineering Task Force
InterNIC	The InterNIC is a concept for an integrated network information center that was developed by several companies, including Network Solutions, in cooperation with the U.S. Government. Under a recent agreement with the U.S. Government, Network Solutions is transitioning from the use of the word "InterNIC" in connection with its products and services. InterNIC is a registered service mark of the U.S. Department of Commerce.
ISO	International Standards Organisation, Geneva
ISOC	Internet Society
NSI	Network Solutions Incorporated, previously a subsidiary of Science Applications Investment Corporation(SAIC) recently acquired by VeriSign, Inc.
RFC	Request for Comments: originally a label for a draft Internet (IETF) standard. In practice, once a standard has been stabilised by consensus, the title RFC(No.) is not changed.
Warehousing:	Speculative registration of significant numbers of words or names, not necessarily for current use but in the expectation of transferring them at a profit subsequently.
Whois:	Refers to a protocol used for presenting queries to certain types of database. InterNic and RIPE and many others provide a Whois interface to the information they make available. Increasingly though access to these databases is provided through web access and so the term is increasngly

related to the style of access and data requested rather than the technical protocol used across the network.

Footnotes

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[1]. COM(1998) 476 final

[2]. It must be borne in mind that while ICANN is responsible for ensuring a high degree of transparency in the global DNS, it is not a policing body. Furthermore, ICANN has not accepted any role that might result in certain IPRs such as trademarks and copyrights acquiring protection at a higher level (for example territorial) than the existing rights.

[3]. See: http://www.icann.org and http://www.iana.org

[4]. ICANN's current organisation can be seen in the Annex to this Communication.

[5]. Comprising the ex-staff of IANA in Los Angeles California and part of the staff of the Berkman Center at the Harvard Law School, Cambridge, Massachusetts.

[6]. See: http://www.noie.gov.au/docs/GAC_Operating_Principles.htm

[7]. Membership of the Governmental Advisory Committee shall be open to all national governments. Membership shall also be open to Distinct Economies as recognized in international fora, and multinational governmental organizations and treaty organizations, on the invitation of the Governmental Advisory Committee through its Chair, or on invitation of the ICANN Board. (ICANN Bylaws, Section 3a.)

[8]. These addresses are normally written in dotted decimal notation. Each byte is written as a decimal number from 0 to 255 and each value is separated by a dot (e.g. 130.50.15.6).

[9]. Examples of Internet protocols are *TCP* (Transmission Control Protocol), *http* (Hypertext Transfer Protocol), and *ftp* (file transfer protocol).

[10]. The Internet Architecture Board (IAB) has vested the copyright in IANA and IETF RFC's in the Internet Society. These specifications are available for use, royalty free.

[11]. Other TLDs include .GOV, .MIL (exclusive to the US government), .INT, .EDU (exclusive to American universities).

[12]. The Wired News Survey published on 14 April 1999 found that of 25,500 standard English dictionary words, only 1,760 were free in the .COM domain. At that time only about 7.5 million domain names had been registered. More than 3 million have been registered in the ensuing five months. Interim *Report of Working Group C of the ICANN/DNSO, page 10.*
See: http://www.dnso.org/dnso/notes/19991023.NCwgc-report.html

[13]. http://www.dnso.org/dnso/notes/19991023.NCwgc-report.html

[14]. The reference to new TLDs for specific uses, refers to the concept of "chartered" TLDs that would be operated on the basis of a clearly defined and potentially restrictive registration policy, and be less open than the existing gTLDs.

[15]. For the complete list of accredited Registrars see:
http://www.icann.org/registrars/accredited-list.html

[16]. Letter of 15.12 99 addressed to Secretary of Commerce, Mr William Daley, from Mr Monti and Mr Liikanen, and Mr Daley's reply of 3 March 2000.

[17]. Request for Comments (RFC). Term of the art for a proposed and final policy or standardisation document published by IANA.

[18]. Of these, 46 are in fact territories (usually islands) under the administration of sovereign states: 4 for France, 16 for the UK, 5 for the US. 1 ccTLD has no sovereignty (.aq for Antarctica)

[19]. See: http://www.icann.org/tld-deleg-prac.html

[20]. See: http://www.noie.gov.au/docs/gac1.htm
and http://www.icann.org/gac/gac-cctldprinciples-23feb00.htm

[21]. Council of European National TLD Registries (CENTR).

[22]. See: http://www.icann.org/gac/gac-cctldprinciples-23feb00.htm

[23]. The Creation of the .EU Internet Top Level Domain, COM/2000/153, 2 February 2000.

[24]. See the UMBRO case: (Umbro International, Inc., Judgment Creditor v. 3263851 Canada, Inc. Judgment Debtor, and Network Solutions, Inc., Garnishee, At Law n° 174388) Nineteenth Judicial Circuit of Virginia - February 3, 1999.

[25]. See discussion of the rights to the WHOIS database in:
http://www.ntia.doc.gov/ntiahome/domainname/blileyrsp.htm

[26]. Note that the bills in the US Congress regarding the protection of databases, specifically exclude the DNS Root Server and Whois databases from protection.

[27]. WIPO Publication n° 92-805-0779-6 also available at
http://www.wipo2.wipo.int/process/eng/processhome.html

[28]. See ICC letter to the Chair of the ICANN Interim Board.

[29]. c.f. Article 17 of Directive 95/46/EC and Articles 4 and 5 of Directive 97/66/EC.

[30]. Although these issues are of particular relevance today in Europe because of the very rapid growth in Internet use, they are arguably even more critical in other parts of the world where asymmetric dependence on the Internet in the United States is even more striking.

[31]. See: http://www.ripe.net

[32] RIPE NCC is an association of over 1300 members, mostly ISPs, from 86 countries. RIPE NCC has been operation since 1992. RIPE, on the other hand, is an open forum for co-ordination and policy development, which has been operation since 1989.

[33] Such query based access should however be limited to Domain Names and keywords, not the names of individuals

[34]. The WIPO Report also suggested that the registration contract should include a provision whereby the communication of incorrect or insufficient information would be considered as a breach of contract and lead to suspension of the domain name in question. This recommendation has been included in the Registrar Accreditation Agreement.

ISSN 0254-1475

COM(2000) 202 final

DOCUMENTS

EN **15 16 08 10**

Catalogue number : KT-CO-00-214-EN-C

Office for Official Publications of the European Communities
L-2985 Luxembourg