



RETHINKING ACCOUNTABILITY IN THE CYBER-AGE.

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1. Introduction

The Internet is governed by non-state organizations that seem to have a State-like monopoly on serving public interests but, unlike States, appear to lack adequate public accountability provisions. Specifically ICANN has been criticized for the supposed unilateral dominance of the US and for its lack of democratic accountability. Two solutions have been proposed to solve this claimed public accountability deficit. The first proposal was to put ICANN under the supervision of the UN and a second proposal involved direct democratic election of a part of ICANN's board of directors by the users of the Internet. The proposed solutions have either failed to make it or have been cancelled after having been implemented. An analysis of the actual proceedings of ICANN shows that the proposed solutions are based on the persistence of two factual misconceptions. The assumptions that the US possesses a dominant position and that ICANN has a monopolistic position both prove to be false. The consequence of this is that there is no need for a more balanced involvement of States in ICANN apart from their involvement as market parties (e.g. demanding a country code). Nor is there a need for a more democratic mechanism of accountability. If ICANN and States are just players in a competitive market then commonly accepted market accountability will suffice.

2. ICANN's accountability problem

ICANN manages the Internet's Domain Name System (DNS). The DNS helps users find their way around the Internet. Every computer on the Internet has a unique Internet Protocol (IP) address. Because IP addresses are strings of numbers, they are hard to remember. The DNS allows a familiar string of letters, the 'domain name', to be used instead¹. The DNS is a hierarchical system. It consists of generic Top Level Domains (gTLDs) like .com (40 mln registrations), and .org (3.5 mln registrations) and country code TLDs (ccTLDs, 30 mln registrations in total)². The next layer consists of second level domain names³ and so on. In order to contact another computer the alphanumerical name has to be translated into the respective IP number. The DNS enables this translation hierarchically by first resolving the TLD, then the second level domain name and so forth. ICANN manages the foundation of the DNS, the root zone file. This file lists the TLD names together with numeric IP addresses of the authoritative servers responsible for the particular TLDs. The DNS consists of thirteen authoritative root name servers (ten in the US, two in Europe and one in Japan)⁴ and many satellite copies in numerous countries. In addition to this there are several parallel root zone server systems in operation. Apart from purely technical decisions⁵, ICANN makes choices that affect the public interest⁶ and can have political implications⁷. Specifically, ICANN sets policies and decides on the addition of new TLDs to the root zone file. In Klein and Mueller's words⁸:

ICANN makes global public policy in a number of fields. It makes competition policy by controlling business entry into the domain name registry market and by determining the market structure of the US\$ 2 billion industry. It engages in rate regulation, setting the base price for the majority of the world's wholesalers and retailers of generic domain names. It makes Intellectual property policy by defining and enforcing global laws regarding rights in domain names. Indirectly, ICANN affects freedom of expression because its rules on trademark protection in domains set limits to public use of worlds, and its rules regarding registrant data are intended to make anonymous expression on the internet impossible. Many would say that ICANN also engages in taxation; it imposes per-domain fees on domain name registries and the fees have grown sharply over time. Finally ICANN's powers are open ended; the entities it regulates must commit to implementing any further policies that the organisation should

promulgate. ICANN's regulatory and supervisory activities constitute global public policy of a type usually exercised only by governmental (or intergovernmental) entities.

The power to set public policies is commonly held by (inter)governmental agencies. Unlike those agencies, ICANN lacks the appropriate mechanisms to constrain its decision making power and secure its accountability to the public. Several solutions to overcome this accountability problem have been proposed. The following paragraphs will examine two main proposals (direct elections and intergovernmental supervision) and show that both are based on misconceptions.

Consequently, the proposed solutions are neither suitable nor required to solve ICANN's accountability problem.

3. Proposed solutions to the accountability problem

Two solutions have been proposed to solve ICANN's accountability problem: direct elections of a part of ICANN's board of directors and intergovernmental supervision.

The proposal to directly elect a part of ICANN's board to reduce the accountability deficit needs to be seen against the background of ICANN's legitimacy problem⁹. When it was founded in 1998, ICANN's board consisted of nine technical and nine user representatives and a president, none of whom were elected by the Internet users¹⁰. The alternative, to grant ICANN legitimacy by an explicit mandate from the US government to perform its public task¹¹, was rejected under pressure of the international community. Both commercial interests and the pressure of the international community¹² led the Clinton administration to transfer the DNS management to the *not for profit corporation* ICANN. Its policy setting powers soon attracted attention¹³ and led to a call to overcome what has been described as ICANN's democratic deficit¹⁴. In 2000, answering to fierce lobbying pressures¹⁵, the board decided to have five out of nine user representatives directly elected by the Internet community. Despite its promising outlook¹⁶, the project failed miserably¹⁷. Of the estimated 375 million Internet users¹⁸ at the time, less than 0.01 percent actually voted. Failure of the experiment led ICANN to abandon the idea of direct elections in 2002¹⁹.

Other proposals to overcome ICANN's accountability problem included intergovernmental supervision. The cluster of proposals presented by the UN Working Group on Internet

Governance (WGIG)²⁰ is a recent initiative to this end. These proposals are rooted in the unease many countries feel with the alleged US power over the root zone file²¹, combined with a strong belief that internationalisation of Internet governance is a first step in overcoming the digital divide²². Despite pressure from countries like Brazil, Russia and China²³ the US insisted on retaining its privileged position²⁴. At the UN World Summit on the Information Society (WSIS) in 2005, at which the Internationalisation of ICANN was on the top of the agenda, an agreement was reached to maintain the status quo²⁵. In short, neither the proposal to implement direct board member elections, nor the proposals regarding intergovernmental supervision were successful.

4. Factual misconceptions

The failure of the proposals to install traditional State-like accountability mechanisms raises the question whether these mechanisms are really suitable and required to increase accountability to the public on the Internet. An analysis of the viability of two assumptions on which the introduction of these mechanisms is based shows that they are not. The dominant position of the US through ICANN and ICANN's monopoly in setting DNS policies prove to be factual misconceptions.

The UN proposals to put the DNS under UN supervision are based upon the assumption that the US has the ultimate control over the Internet due to its role regarding ICANN's root zone file. However, the root zone file is nothing more than a telephone directory listing names (TLDs) and IP addresses of authoritative servers. A hierarchy of servers actually resolves the domain names (i.e. translates the domain names into the matching IP addresses). Ideally, the names from the root zone file are used to resolve the TLD part of the domain name. If this were the full story, the US would have unilateral control over the resolution of the TLD part of a domain name by ruling the root zone file. This picture however, is not complete. There are alternative root zone files and there are alternative root zone servers over which the US has no control at all. From a political point of view the most interesting alternative is the European Open Root Server Network (ORSN). This European network of root servers provides a counterbalance to US power. The ORSN has two operating modes. The *ICANN based operating mode* is the normal mode involving daily synchronisation with ICANN with this exception that removed TLDs are not removed from the ORSN root. For example if ICANN for political reasons would remove a

country code TLD on instigation of the U.S. this TLD would not automatically be removed from ORSN. The *ICANN independent mode* does not synchronise automatically and is activated whenever the political situation makes this necessary, for example when a possible modification or downtime of ICANN's root exists or is expected²⁶. The ORSN servers are primarily placed in Europe. The interesting point about the existence of this alternative is that possible US power abuse by deleting certain TLDs from ICANN's root zone file will not prevent the ORSN users from reaching the deleted domains²⁷. In other words, there is no unilateral power of the US over the DNS, the ORSN provides a solid alternative.

It is however not only the US power that is overrated in the current Internet debate. Also ICANN's alleged sovereignty when it comes to the DNS is a distortion of reality. The issue at stake is the determination of the root zone file content. The advantage of having only one DNS root zone file is uniform resolvability. At the moment there are 18 gTLDs and slightly over 240 ccTLDs available²⁸. ICANN has been very slow in expanding the domain name universe with additional TLDs. As Internet pioneer Paul Vixie told the Wall Street Journal on Jan 19 2006, "The Internet is no longer the kind of thing where only six guys in the world can build it". As a result of this alternatives have been developed catering for the increased demand for new TLDs and domain names. Companies offering competing TLDs and even complete domain names have been around since 1996²⁹. There are several ways in which alternative domain names are being offered. The most important commercial TLD providers simply offer an alternative set of root zone servers that include ICANN's root zone file and offer registration for additional TLDs and complete domain names. These companies do compete successfully in the TLD market³⁰. One of these companies, New.Net³¹, for example has contracted Tiscali with over 4.8 million active European users³², Earthlink (Atlanta) also with over 4.8 million active subscribers³³ and Tutopia in South America with 2.7 million registered users³⁴. New.net is just one of many companies offering alternative domain name services on the TLD level. Other companies offering alternative root server systems are UnifiedRoot³⁵ and Public-Root³⁶.

In other words in the TLD and root zone server market competition exists. In the meanwhile China has already launched alternatives to .com domain names using Chinese characters³⁷ accessible to 110 million internet users³⁸. A uniformly resolvable DNS as was envisioned when ICANN was founded is already an idea of the past. With a growing demand for Chinese, Russian

an Arabic internet domain names, multiple splits in the Internet as we know it are already starting to occur. With the rising number of Internet connections worldwide the demand for additional TLDs will only grow and with the general availability of techniques to set up root server systems and to register domain names, competition between providers will grow likewise.

5. Another frame of reference

With several suppliers offering alternative TLDs and root name server systems, a competitive environment has emerged with ICANN as just one of the parties competing for the customer's favour. The reason why States need certain mechanisms to increase accountability to the public is because there are no alternatives to their services. Conversely, on a competitive market there are alternatives. As a consequence, in a market situation, accountability takes on a completely different form. Responsiveness to consumer needs and actual customer choices are the key constituents of the main accountability mechanism of the market. The traditional State type of accountability, characterized by formalization, control and hierarchy, is not appropriate for the market place. Market accountability is based upon informal economic mechanisms rather than highly formal hierarchical control types of accountability. On the market place the ability of a company to maintain and attract customers is the main indicator of the company's accountability to the public. So the actual competitive character of the TLD and root server market forces a shift in conceptual frame of reference upon us. The State model has to give way to a market model and its accompanying accountability mechanisms. This also has a consequence for the role of the State. In the competitive model States are just customers.

6. ICANN revisited

Approaching ICANN from a market rather than a political perspective sheds a completely new light on its structure. From a market perspective the accountability to the public is not a matter of elections or State supervision. Accountability to the public is simply constituted by the organisation's capacity to attract customers and to maintain to serve them according to their needs. This principle has inevitably led ICANN to include both user representatives in its At Large Advisory Committee and governmental representatives in its Governmental Advisory Committee. The shift in perspective allows for a more realistic description of the field of

influence in which ICANN operates and for an explanation of ICANN's organizational structure. The inclusion of both users as well as States within ICANN's structure is a natural outcome of the principles governing the market. Regarding domain names and root zone servers, the customers are both individual users as well as States. In order to maintain its market share ICANN wants to keep those groups as close by as possible resulting in its curious organizational structure³⁹. As an alternative to the hierarchical control types of accountability, ICANN's structure evolved according to a stakeholder model based on consensus, in which States and citizens act as equals. In a market with several suppliers, the market provides the necessary accountability mechanisms. Therefore ICANN does not require State-like accountability mechanisms. The market mechanism suffices and ICANN's current market share shows its success in involving all stakeholders in its decision making processes.

7. Conclusion

Both the experiment to introduce democracy and the proposal to put ICANN under intergovernmental supervision have failed. The question to what extent Internet organisations do require such thorough accountability mechanisms in order to constrain and check their decision making powers was answered negatively. The proposals turned out to be based on a mistaken conception of the actual situation. Both the alleged US power over the root zone file and ICANN's alleged monopoly on TLDs and root server systems were shown to be misconceptions. ICANN turned out to be a TLD provider and a root server service amongst others. Consequently, the State analogy should be replaced by a market frame of reference in which the control element of accountability is replaced with that of responsiveness to the public.

A shift in the frame of reference from a State perspective to a market perspective enables us to give a realistic description of the field of influence in which ICANN operates. This description enables us to explain ICANN's current organizational structure and to assess the mechanisms that hold ICANN accountable. Once one understands ICANN as an organization operating in a market environment, its current (internal and external) accountability mechanisms can be considered appropriate.

- ¹ See www.icann.org/general.
- ² Source Verisign Domain Name Report 2005 available at <http://www.verisign.com/static/036316.pdf>
- ³ A second level domain name is for example, 'visitmalta' in www.visitmalta.com
- ⁴ Authoritative name servers are the servers where the root zone is first loaded, all the others are considered to be copies.
- ⁵ ICANN's purely technical functions like the distribution of IP numbers and maintenance of the Internet's technical infrastructure leave little room for conflicts of interest of the individual users, in which case it doesn't pose problems regarding accountability to the public.
- ⁶ ICANN's articles of incorporation, Art 3 available at <http://www.icann.org/general/articles.htm>
- ⁷ An example is the discussion around the possible addition of the .xxx domain. Reserving this TLD for pornographic content enables one to 'zone' harmful content away from children. The question whether to add this TLD to the root zone file has all sorts of political implications regarding freedom of speech, protection of citizens, privacy issues and so on. For more information, see <http://www.icmregistry.com/>.
- ⁸ Klein and Mueller, *What to do about ICANN: A Proposal for Structural Reform*, April 5, 2005 at www.internetgovernance.org
- ⁹ Weinberg, 'ICANN and the Problem of Legitimacy', 2000, available at <http://www.law.wayne.edu/weinberg/legitimacy.PDF>
- ¹⁰ Its board during the first two years consisted of nine unelected interim directors selected by Internet pioneer Jon Postel, *ibid*.note 130. The nine directors were supplemented by nine ICANN representatives from the technical constituencies. See also Froomkin 'Wrong Turn in Cyberspace: using ICANN to Route Around the APA and the Constitution', 2000, available at <http://personal.law.miami.edu/~froomkin/articles/icann.pdf>
- ¹¹ In which case it would have to abide by the American Procedures Act (APA) of 1946. See http://www4.law.cornell.edu/uscode/html/uscode05/usc_sup_01_5_10_I_30_5.html
- ¹² In the green paper the US government asserted control over the internet infrastructure and proposed a private sector creation of a new not-for-profit corporation (the "new corporation"). This company was to be managed by a globally and functionally representative Board of Directors. Article III of the paper expresses the Clinton's administration's reasons for establishing the new corporation <http://www.ntia.doc.gov/ntiahome/domainname/022098fedreg.htm>. The green paper initiated much debate regarding internet governance and this resulted in the white paper in which the original idea was maintained but the US influence was significantly decreased. The green paper plans of the US Dept of Commerce to determine the new TLDs, and the company's structure were both dropped in the white paper. The white paper is available at <http://www.icann.org/general/white-paper-05jun98.htm>
- ¹³ See for early papers of Post et al www.icannwatch.org
- ¹⁴ See Hunter 'ICANN and the Concept of Democratic Deficit', *Loyola of Los Angeles Law Review*, Vol. 36, Spring 2003, available at SSRN: <http://ssrn.com/abstract=400000> , for Klein and Mueller's paper on the topic see *supra* note 3.
- ¹⁵ As described by Klein in 'The Pro-Democracy Movement in ICANN', April 2001, available at www.atlargestudy.org/kleinpaper.html
- ¹⁶ Despite an election campaign and a rather smoothly going election process, the experiment has failed, see Palfrey, 'The End of the experiment: How ICANN's Foray into Global Internet Democracy Failed' 2004 available at <http://ssrn.com/abstract=487644> .
- ¹⁷ *ibid* p44ff
- ¹⁸ <http://www.etforecasts.com/pr/pr500.htm>
- ¹⁹ For ICANN's post reform (Dec.15 2002) bylaws see: <http://www.icann.nl/general/archive-bylaws/bylaws-15dec02.htm>
- ²⁰ WGIG report June 2005 <http://www.wgig.org/docs/WGIGREPORT.pdf>. Note that these solutions are related to the legitimacy problem. By effectively giving ICANN a mandate to govern the DNS under Intergovernmental supervision, one would theoretically overcome the democratic deficit on the grounds that ideally ICANN would be accountable to the 'netizens' through the Intergovernmental organisation. This however is a far going idealisation. Nearly 40% of the world's countries aren't democracies, and even within Intergovernmental organisations there are power imbalances between States not based on the amount of citizens they represent, the UN security council veto system is an example of this www.un.org

- ²¹ The source of the alleged US power is the agreement between the US Dept. of Commerce (USDoC) and (now) Verisign which, as an editor of the root zone file must explicitly “request written direction from an authorized (USDoC) official before making or rejecting any modification additions or deletions to the root zone file”. Cooperative Agreement NI. NCR-9218742, Amendment 11 available at: <http://www.icann.org/nsi/coopagmt-amend11-07oct98.htm> (Oct. 6, 1998). See also Mueller’s Oct. 1, 2005 article in ‘Politech’ available at: <http://www.politechbot.com/2005/10/03/us-unilateral-control/>. For an extended overview of the history and function of the DNS system see the National Research Council’s report ‘Signposts in Cyberspace: The Domain Name system and Internet Navigation’ http://www7.nationalacademies.org/cstb/dns_prepub.pdf and Karrenberg at <http://www.isoc.org/briefings/019/>.
- ²² See for the WSIS commitment its Geneva plan of action of Dec. 12, 2003, available at http://www.itu.int/dms_pub/itu-s/md/03/wsis/doc/S03-WSIS-DOC-0005!!PDF-E.pdf
- ²³ Europe has shown concern about the US position since the ninety’s. At the WSIS Europe held an intermediate position pleading for an independent forum which would act as a platform for all stakeholders, see Vivian Reding’s Statement of Oct. 2005, available at http://europa.eu.int/comm/commission_barroso/reding/docs/speeches/ubiquitous_world_20051017.pdf
- ²⁴ US Statement of principles 30th June 2005 http://www.ntia.doc.gov/ntiahome/domainname/USDNSPrinciples_06302005.htm
- ²⁵ See the WSIS Statement of Sept. 30 2005, http://www.itu.int/wsis/newsroom/press_releases/wsis/2005/30sep.html
- ²⁶ <http://european.nl.orsn.net/faq.php>
- ²⁷ Apart from the ORSN, there are many satellite servers (copies of the authoritative server). It remains to be seen how many of them are likely to copy unwanted US deletions in the root zone file see ‘Signposts in Cyberspace: The Domain Name System and Internet Navigation’ National Research Council report a republication of which is available at http://www7.nationalacademies.org/cstb/pub_dns.html March 2005.
- ²⁸ For the ccTLD listing see <http://www.iana.org/cctld/cctld-whois.htm>, the gTLD listing is available at <http://www.iana.org/gtld/gtld.htm>
- ²⁹ AlterNic, eDNS and Iperdome for example were early alternative DNS providers.
- ³⁰ They are successful despite the need for special client software to resolve the additional TLDs, the need for a DNS server specifically configured to resolve these domains, or the addition of a specific extension (for example) “new.net” at the end of the additional Internet address.
- ³¹ <http://www.new.net/>
- ³² <http://www.tiscali.com/about>
- ³³ http://www.new.net/about_us_partners.tp
- ³⁴ <http://www.rightnow.com/news/article.php?id=4495>
- ³⁵ <http://www.unifiedroot.com/corporate/about>. UnifiedRoot also provides alternatives to ICANN’s DNS. The company is targeting ISP’s and consumers and works on a commercial basis in order to promote the liberalisation of the domain name market. It has also contracted Tiscali in order to provide access to their extended universe <http://www.inaic.com/index.php?p=tiscali-introduces>
- ³⁶ <http://public-root.com/> Public root offers its global root server system as well to extend domain names. It has recently launched a TLD system in Turkey see the Turkish Daily News article of June 25, 2005 available at <http://inaic.com/index.php?p=tukish-daily-news>
- ³⁷ http://english.people.com.cn/200602/28/eng20060228_246712.html
- ³⁸ <http://news.bbc.co.uk/1/hi/technology/4779660.stm>
- ³⁹ Of course, the DNS market is a market that is not simply a market of perfect competition yet, but there are alternatives, market entry is relatively easy and will become easier in the future. ICANN’s structure is based on the market situation but also partly on the awareness of States and citizens that a Unified DNS is in the Interest of all stakeholders.