To the outsider—and in this I am very much the outsider—the Internet Corporation for Assigned Names and numbers is an improbable body. ICANN routinely claims to be either a technical standards body or a technical coordination body, but this claim is wearing quite thin. It has issued no standards. Charged with the task of 'coordinating' the administration of key aspects of the Internet's infrastructure, it acts instead like a regulator. Existing at the heart of the Internet, its key decision making processes rely on face-to-face meetings and make only minimal use of Internet technology. Entrusted with a global mission of interest to all the peoples in the world, it mightily resists efforts to introduce democratic accountability into its power structure, preferring to rely on structures that privilege key "stakeholders" who have managed to engineer and keep, a majority on the ICANN Board.

From to top down, ICANN has perhaps achieved its goals of keeping the DNS off the Administration's agenda and pleasing the trademark lobby. From the bottom up, the results have not been so pretty: ICANN's go-very-slow policy on new gTLDs lacks a documented technical basis. The new entrants are hobbled by names and policies largely imposed by ICANN rather than the market. Indeed, ICANN's policies are a product of an internal deliberative process that under-weighs the interests of the public at large and in so doing tends towards anti-competitive, or competitively weak, outcomes skewed by special interests.

**ICANN's Deep Structure**

In form, ICANN is a only a private, non-profit, California-based, US corporation charged with a narrow technical role involving the regulation of IP numbers and the Domain Name System (DNS). In reality, ICANN is a corporatist regulator. This creates enormous confusion.

ICANN exists because the US government did not want to take responsibility for making tough choices about key parts of the Internet infrastructure. This was not simple shirking, a mere bureaucratic willingness to pass on a hot potato, or subservience to Trademark interests. Rather, the Clinton Administration's decision to hand off authority seems have had some more noble motivations, including:

- ideological belief in privatization
- pressure from European and perhaps Japanese allies to internationalize, or at least de-Americanize, control over the DNS
- response to a strong anti-government culture among Internet pioneers and new technology "stakeholders"
• the existence of a consensus choice to head the new organization: Jon Postel

Tragically, Jon Postel died between the US government's decision that there should be a private-sector regulator for the DNS and the actual incorporation of ICANN. The result was not only a human tragedy, but a political one. The original mission and of the new private regulator had been one that was primarily but not uniquely technical. The institution was crafted to lend political and institutional support to the actions its Chief Technical Officer (CTO), Postel. In order to provide this support, the initial board was to be the digital equivalent of the 'great and the good' – and limited to people who had not already joined the lists in what was coming to be known as the DNS Wars.

Thus, the initial ICANN board was selected for its worthiness – and its relative ignorance of the issues. When it assembled without Postel, and decided to avoid the daunting task of finding a Chief Technical Officer who might fill his shoes, bureaucratic logic required that the vacuum of authority be filled in some manner. As the Board members were busy people with other lives, and service on ICANN was essentially uncompensated, the vacuum was filled primarily by two sorts of people: those with a financial interest in ICANN's decisions, and members of the nascent staff, notably ICANN's outside counsel and then inside lawyers. The result was an internal deliberative process that under-weighs the interests of the public at large and in so doing tends towards anti-competitive, or competitively weak, outcomes skewed by special interests.

Today, the distribution of decision-making authority on the ICANN Board, and in ICANN's subsidiary institutions, has been manipulated to neuter the public voice, and the role of individuals, non-profits, and civil society groups. Originally, half of ICANN's governing Board would have been elected by at-large members of ICANN. Instead, ICANN has worked at every turn to prevent this.

In July, 1999, ICANN Chair Esther Dyson told the House Commerce Committee's Subcommittee on Oversight and Investigation that ICANN's "highest priority" was to elect nine at-large Board members, (6) exactly as ICANN had committed to do as an original condition of being approved by the Department of Commerce. Instead, ICANN reneged on its commitment to the United States government, and to the public, that half its Board would be elected by an at-large membership. Thus, today:

• Instead of half (nine) of the Board members being elected at large, as promised to NTIA and to Congress, ICANN amended its by-laws to allow only five members to be elected at large;
• Instead of all the self-appointed nine original directors leaving office as they promised Congress and the public they would do, four remain in office;
• Instead of allowing the five elected at large members to participate in the selection of the new gTLDs, ICANN amended its by-laws to seat them at the close of a meeting, instead of at the start (the process used for all previous new directors). Then ICANN rushed its processes so that it could make the final decisions minutes before the new directors took office.
• In a move that risks further neutering the five elected at-large members, ICANN announced that their jobs would all be abolished at the end of their two-year terms, unless a majority of the full Board voted (after a "clean sheet study") to re-establish elected at-large Board seats.
• That study processes seems destined to recommend that the at-large component be reduced to 6 or so members, small enough that the ICANN bylaws can be changed without their votes.

ICANN's Infrastructure

ICANN is a highly complex organization (see charts prepared by Tony Rutkowski). It is simply impossible for anyone to keep track of what is happening in all the different pieces, except an organization capable of deploying a fleet of lawyers. Similarly, because ICANN sees its mission as global, it meets four times a year on four different continents. Next month's meeting, for example, is in Australia. The result of this laudable attempt at internationalization is that only interests wealthy enough to attend all these meetings - with several representatives - can achieve the continuity of participation required to influence ICANN's decisions in any sort of a consistent manner. The result tends to be a 'consensus' of those with the necessary expense accounts.

The interest groups that acquired a voting majority in those institutions have shown relatively little interest in the rights and needs of small businesses, non-commercial entities, or individuals. They have shown considerably more interest in securing special protections for trademarks, above and beyond what is provided by statute, than they have in maximizing the liberty-enhancing and competitive potential of the Internet.

The internal institutions that ICANN created to take the lead in domain name policy - the seven constituencies in the "Domain Name Supporting Organization" (DNSO) - were designed from the start to exclude individuals from membership. The very engineers who built the Internet are not represented in their personal capacities - only if their employers choose to send them. All non-commercial groups, including all universities, all consumer groups, all political groups throughout the world are shoehorned a single DNSO constituency. They are, in the main, ineligible for full voting membership of any of the other six constituencies. Meanwhile, many businesses such as Internet first-movers and others who have an interest in reducing on-line competition for established firms are eligible to be in two, or more of the seven constituencies, thus allowing them multiple votes-and a certain majority.

Effect on Outcomes

Both ICANN's deep structure and its infrastructure help determine outcomes. An enormous amount of energy has been devoted to organizational matters - setting up a staff, creating a quite baroque series of advisory and constituency groups, each of which is now seeking to hire its own staff, and working out the problems of elections and non-member membership. Meanwhile, as the structures become more baroque, decisions are made in ways that perforce ignore the structure. And interest groups that have power which is not recognized on the Board – notably the ccTLDs – agitate for increased representation commensurate with what they take to be their power.

In its first two years of life, ICANN has made rules requiring millions of domain name registrants to submit to an arbitration clause that requires them to appear before tribunals whose
objectivity has been questioned, and which apply idiosyncratic rules. In this, it claimed to be acting as a standards body. Most recently, ICANN announced that it would recommend the creation of seven new, somewhat constrained, top-level-domains. In this, presumably, it was acting as some sort of allocation or addressing body. Unfortunately, the procedures used to produce these initial decisions left almost everything to be desired.

ICANN now defines its mission of 'technical coordination' to include making rules for, inter alia:
- Competition policy between domain name registrars (and soon, perhaps, registries).
- The substantive trademark and unfair competition law that should determine when a registered domain name should be transferred to a claimant (an attempt to cure the 'cybersquatting' problem).
- Rules of procedure for arbitrations to administer these substantive rules.
- Accreditation rules to decide which arbitral institutions should hear the cases.

And, ICANN has in a fairly ad-hoc manner set out to both allocate new top-level domain names, specifying to a very high level of detail both the business plans and policies of the bodies that will manage them.
- Picking winners for new gTLDs on the basis of business plans and the semantic content of name strings rather than technical merit.

In ICANN's recent gTLD process, ICANN acted not as a standards or coordination body, but as if it were allocating scarce broadcast spectrum is some kind of comparative hearing process. ICANN created no standard. It 'coordinated' no projects with running code being deployed by outside parties. Rather, ICANN acted like a foundation grant committee, trying to pick 'winners.' In practice, ICANN's exercise of its gatekeeper committee role contributes to the artificial shortage of gTLDs. Worse, the selection processes ICANN employed were amateurish and arbitrary.

Although all applicants were charged the same non-refundable $50,000 fee, a sum that immediately skewed the process towards commercial uses and away from non-profit or experimental uses, it appears not all applicants received equal treatment. During the Los Angeles ICANN Board Meeting, it transpired that the staff had not subjected all the proposals to the same level of analysis. Thus, when Board members sought more detailed information about proposals that interested them, but which the staff had relegated to the second tier, that information sometimes did not exist, although it existed for the staff's preferred picks.

ICANN then attempted to hold a one-day comparative hearing between more than 40 applicants, each of whom had complex applications that referenced multiple possible gTLDs. During this process, each applicant was given three minutes to speak.

Both before and during the one-day Board meeting, both the staff and the Board seemed excessively concerned with avoiding risk. Although true competition in a fully competitive market requires that participants be allowed to fail if they deserve to do so, there are reasonable arguments as to why it makes sense to have a body like ICANN require potential registry operators to meet some
minimum standard of technical competence. One can even make a case for requiring a showing of some financial resources, and for requiring the advance preparation of basic registry policy documents spelling out who will be allowed to register names and under what terms. Perhaps there are other neutral criteria that should also be required and assessed. This is a far cry from ICANN's apparent tendency to tend to prefer established institutions and big corporations, and to downplay the value of experience in running code. If in 1985 the Internet itself had been a proposal placed before a committee that behaved as ICANN did in 2000, the Internet would have been rejected as too risky. Risk aversion of this type is antithetical to entrepreneurship and competition.

Worst of all, ICANN applied its criteria arbitrarily, even making them up as it went along. The striking arbitrariness of the ICANN decision-making process is illustrated by the rejection of the ".union" proposal based on unfounded last-minute speculation by an ICANN board member that the international labor organizations proposing the gTLD were somehow undemocratic. (That this same Board member was at the time recused from the process only adds to the strangeness.) The procedures ICANN designed gave the applicants no opportunity to reply to unfounded accusations. ICANN then rejected ".iii" because someone on the Board was concerned that the name was difficult to pronounce, even though the ability to pronounce a proposed gTLD had never before been mentioned as a decision criterion. I am not in a position to vouch for the accuracy of each of the claims of error made by the firms that filed reconsideration requests after the Los Angeles meeting (available at http://www.icann.org/committees/reconsideration/index.html) but as a group these make for very sobering reading.

Fixing ICANN

ICANN's processes little resemble either standard-making or technical coordination. To date, ICANN's "standard making" has produced no standards. ICANN's "technical coordination" has been neither technical nor has it coordinated anything. Rather, in its initial foray into the creation of new gTLDs, ICANN has acted like a very badly organized administrative agency. Instead of engaging in standards work, ICANN is instead engaged in recapitulating the procedural early errors of federal administrative agencies such as the Federal Communications Commission (FCC).

What real standard-making would look like

A standard-based (or, at least, standardized) approach to gTLD creation would require ICANN to craft a pre-announced, open, neutral, and objective standard of competence rather than to pick and choose among the applicants on the basis of the ICANN Board's vague and inconsistent ideas of aesthetic merit, market appeal, capitalization, or experience. All applicants meeting that standard would be accepted, unless there were so many that the number threatened to destabilize the Internet (as noted below, if there is such a number, it is very large). ICANN might also put in reasonable limits on the number of TLDs per applicant, and on sequencing, in order to keep all of them going online the same day, week, or month.

Under a standards-based approach ICANN would have tried to answer these questions in the
abstract, before trying to hold comparative hearings in which it attempted to decide to which of specific applicants it should allocate a new gTLD registry:

- What is the minimum standard of competence (technical, financial, whatever) to be found qualified to run a registry for a given type of TLD?
- What open, neutral, and objective means should be used to decide among competing applicants when two or more would-be registries seek the same TLD string?
- What are the technical limits on the number of new TLDs that can reasonably be created in an orderly fashion per year?
- What open, neutral, and objective means should be used to decide among competing applicants, or to sequence applicants, if the number of applicants meeting the qualification threshold exceeds the number of gTLDs being created in a given year?

Today, reasonable people could no doubt disagree on the fine details of some of these questions, and perhaps on almost every aspect of others. Resolving these issues in the abstract would not necessarily be easy. It would, however, be valuable and appropriate work for an Internet standards body, and would greatly enhance competition in all the affected markets.

Once armed with a set of standards and definitions, ICANN or any other allocation body, would be on strong ground to reject technically incompetent or otherwise abusive applications for new gTLDs, such as those seeking an unreasonably large number of TLDs. A thoughtful answer would inevitably resolve a number of difficult questions, not least the terms on which a marriage might be made between the Department of Commerce's "legacy" root and the so-called "alternate" roots.

**What technical coordination would look like**

An alternate approach to gTLD creation, one that would most certainly enhance competition, would take its inspiration from the fundamental design of the Internet itself and from major league sports. The Internet was designed to continue to function even if large parts of the network sustained damage. Internet network design avoids, whenever possible, the creation of single points of failure. When it comes to policy, however, ICANN is currently a single point of failure for the network. A solution to this problem would be to share out part of ICANN's current functions to a variety of institutions.

In this scenario, ICANN would become a true technical coordination body, coordinating the activities of a large number of gTLD policy partners. ICANN's functions would be:

1. to keep a master list of TLDs;
2. to ensure that there were no 'name collisions' - two registries attempting to manage the same TLD string;
3. to fix an annual quota of new gTLDs;
4. to run an annual gTLD draft;
5. to coordinate the gTLD creation process so that new gTLDs came on stream in an orderly fashion instead of all at once.

Each of ICANN's policy partners would be assigned one or more draft choices, and then
ICANN would randomly (or, perhaps, otherwise) assign each one their draft picks. As each policy partner's turn came up, it would be entitled to select a registry - imposing whatever conditions it wished - to manage any gTLD that had not yet been claimed on ICANN's master list. In keeping with the transnational and public/private nature of the Internet, ICANN's policy partners could be a highly diverse mix of international, national, and private "civil society" bodies.

While I think this alternate solution would best achieve the ends of internationalization, competition, and diversity, it might well require legislation since it is unclear if the Department of Commerce has the will (or the authority) to implement such a plan, and we have seen no sign that ICANN is about to divest itself of any policy authority unless forced to do so.

ICANN faces a choice: On one path it becomes a true standards body, or a true technical coordination body, and leaves the social policy choices to those - like Congress - who have the legitimacy to make them. On the other path, the one it currently seems to be following, it is a state actor. In that case, its actions to date have been far too arbitrary to survive judicial review.

Why End-User Representation is Unnecessary in an Improved ICANN

The White Paper did impose on ICANN an obligation to be widely representative but yet there was (and is) no broad agreement as to who is entitled to be represented, and how representation is to be accomplished. While the issue of end-user representation looms large in the current ICANN, largely because ICANN seems to have significant (and growing) powers not subject to sufficient other checks, the best outcome would be one in which such representation was unnecessary. Both practical and philosophical considerations support this perhaps counter-intuitive contention.

As an abstract matter, if ICANN were really the purely technical body it claims already to be, why have representation? Scientists do not vote on how to prove theorems. I personally would prefer not to drive on a suspension bridge whose tensile strength was decided by plebiscite.

If anything, the practical considerations loom even larger than the theoretical ones. It remains completely unclear how ICANN can define an electorate that is both broadly inclusive of those with a legitimate claim to be included and also produce an electoral roll that is practical to administer. The White Paper's reference to being "representative of Internet users around the world" offered one global and inclusive vision—a vision that threatened to scale out to billions if the exponential growth of the Internet continued unabated. Other visions, still global but less inclusive, saw the potential pool of persons entitled to representation as perhaps being limited to the increasing millions of domain name registrants, or persons somehow qualified to opine on the issues, or persons who demonstrated interest in some way.

Each of these visions, however, had to grapple with genuinely novel and difficult practical problems. Among the most difficult were

- what the relationship should be between the number of internet users (or machines) and voting power? (one person one vote? one domain name one vote? one computer one vote?)
- whether voting should be regional or global? Single or multi-member districts (i.e. whether one was more concerned about protecting geographic or ideological minorities).

- mechanics of voting - how to vote over the Internet – and how to ensure that voters were real people and only voted the number of times they were supposed to?

- how to ensure that the election was not captured by a determined minority that would then use ICANN for an extraneous ideological purpose.

Given the difficulty – indeed, likely intractability – of these questions one almost can sympathize with ICANN's panicked attempt to escape from the democratic and representative commitments in the White Paper. It produced, for the first election of 5 at-large directors, only a very cramped and limited electoral system, and devoted relatively few resources to publicizing the election or running the computers on which would-be voters had to register. Voters who managed to log into the overburdened server later got a letter with a code. If they used it to register, they could then (much later) vote. The result was to discourage voters, and the drop-off was substantial. Ultimately the contest for the African seat had 130 voters, and Asia, the region with the highest voter turnout, had a much larger, but still-small 17,745. As a further turn-off, ICANN also emphasized that although the individual "members" of the at-large electorate would be voting for directors, they should have none of the legal rights of members of a California non-profit corporation – legally, they were not actually members at all.

The core problem is that ICANN's nature currently tends to function creep which emphasizes the need for democratic legitimacy. Yet, the mechanics for providing this legitimacy via the sort of election ICANN could run do not exist, indeed may be impossible, and the very cramped and limited proposals that ICANN is prepared to approve are substantially unequal to the task. Furthermore, representation structures that increase legitimacy for ICANN's new functions introduce obstacles – democracy– to the adoption of new policies, obstacles that the ICANN staff is determined to prevent (indeed, it already routes around some of the ones that exist). Streamlining operations reduces legitimacy but increases efficiency – enabling further function creep and increasing the legitimation deficit. And once they are entrenched, as they now are, the very non-representative structures that enable function creep can be used to block representation.

The improbable solution I have proposed would break this vicious circle of function creep and growing legitimacy deficit. It is 'improbable' because the forces that have captured ICANN have no real incentive to voluntarily surrender their power and take up a merely coordinating role rather than making policy directly. And there appears to be no one with both the power and the will to make them.