

Non-State Actors and Global Informal Governance -- The Case of ICANN

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In 1998, the Internet world began an experiment in governance: the Internet Corporation for Assigned Names and Numbers, or ICANN. ICANN is an unusual beast. A private entity (formally, a California nonprofit corporation), it plays the sort of role more commonly played in our society by governmental entities. It sets rules for an international communications medium of surpassing importance; its decisions turn not on technical considerations, but on competing values and competing claims of right. Some of its activity looks uncannily like command-and-control regulation. When ICANN came into existence, some were unconvinced that ICANN was an appropriate wielder of the power it claimed, that they had any obligation to cooperate in its governance functions, or that they should comply with its pronouncements. Onlookers raised obvious questions about ICANN and its Board of Directors: Who were these guys? Why should the nineteen members of ICANN's board of directors be the persons making important decisions about the shape of the Internet name space? And on what did this private body base its authority? What justified this seeming exercise of public power, and creation of public policy, by an entity without democratic credentials or direct political accountability?

In seeking to bolster its legitimacy, ICANN invoked the rhetoric of technical coordination, urging that it was a mere technical body articulating consensus in the model of the Internet Engineering Task Force. It experimented as well with representative government, at one point holding elections open to anyone with an email address. Neither approach quelled

legitimacy concerns. I will argue in this chapter that ICANN's key move in establishing its legitimacy was its expansion and bureaucratization. ICANN today has adopted the appearance, processes and culture of a modern large bureaucracy. In seeking to be accepted by business enterprises and governments, it has structured itself so that it looks like a business enterprise or government. It negotiated successfully with influential players as to the goals it should pursue, and reframed its structure and culture so as to conform to their images of what a successful and legitimate organization ought to look like.

After some initial technical background and a brief history of ICANN's creation, I will explain why I categorize ICANN's governance model as 'informal', and move on to discuss ICANN's responses to legitimacy challenges. As an initial matter, I should make clear what I mean by 'legitimacy' in this context. I use the term in a sociological sense (see Meyer & Scott 1983, Powell & Dimaggio 1991, Stryker 2000), not a normative one. That is, I use it to refer to the attitudes people have about an organization, not to its intrinsic characteristics. People draw on overlapping sources and normative beliefs to support their understanding that an organization or action is 'legitimate'. Often, in our shared political culture, a key basis for the view that a government decision is legitimate is the belief that it was arrived at through meaningfully representative democratic procedures. Alternatively, an action may be seen as legitimate (or not) based on whether the actor was operating within his sphere of delegated legal authority (Solum 2007). Notions of legitimacy also may be influenced by a decision-making process's outputs, whether via the normative view that a process should not be deemed legitimate if it cannot reliably produce just outcomes (Solum 2007, Barnett 2003), or via the observation that people

are more likely to deem a process legitimate if it delivers results that they endorse (Christiansen et al. 2003). Most importantly for my purposes, an organization's legitimacy will depend on the extent to which it fits within established cultural accounts explaining its exercise of authority (Meyer & Scott 1983).

For any governance institution, legitimacy is important:

The capacity of bodies of governance largely depends on whether the subjects recognize them as legitimate Individuals and organizations are often influenced by considerations of whether a command or arrangement is legitimate or fair, and whether such judgments are widely shared. Such perceived legitimacy is especially important to sustain mutual expectations of future willing compliance (Christiansen et al. 2003).

For ICANN, as I shall describe, the stakes of legitimacy were especially high.

The system of Internet identifiers¹

The domain name system, or DNS, matches Internet Protocol (IP) addresses, which identify individual host computers on the Internet, with domain names. In any system of networked computing, there has to be some mechanism enabling one computer to locate another. If I want to send email to a friend in Toulouse, the system has to have some way to find his mail server so that it can direct the information there. Internet engineering solves that problem by giving each computer connected to the Internet a unique IP address -- a 32-bit number, usually printed in dotted decimal form, such as 141.217.1.22. Because no two computers have the same IP address, it is possible to locate any computer on the Internet simply by knowing its IP address.²

Ordinary Internet users don't type IP addresses into their email clients or web browsers, though; they rely on domain names -- sets of text labels set off by dots, such as threecats.net or law.wayne.edu. The 'domain name system' matches domain names to IP addresses so that users can locate Internet resources knowing only their domain names; this offers greater convenience to both users and network operators.

The domain name system takes the form of a pyramid. The overall name space is divided into top level domains, such as .nl; each top level domain is divided into second level domains, such as sidn.nl; and so on. The pyramidal structure of the name space replicates itself at each level. Thus, the .edu top level domain is divided into about 4000 second level domains such as wayne.edu. The wayne.edu second level domain, in turn, is divided into third level domains including law.wayne.edu, gradschool.wayne.edu and socialwork.wayne.edu (Mockapetris 1983, Postel 1994, Byfield 1999).

How does an individual Internet user's computer determine what IP address corresponds to a given domain name? At the apex of the DNS pyramid is a set of thirteen root servers, each of which lists the IP addresses of the computers containing the zone files for the various top-level domains. At the next level are the computers holding those top-level domain zone files, each of which lists the IP addresses of the name servers for each second-level domain it controls, and so on. When a user looking for a particular Internet resource types in a domain name, her computer queries DNS servers until it finds the corresponding IP address.

Control over the root zone -- at the very top of the pyramid -- carries with it considerable power. If a user types in a domain name incorporating a top-level domain that is unknown to the root servers, then the DNS will be unable to find the corresponding computer. The power to

control the root servers, thus, is the power to decide (1) which top-level domains are visible in the name space; and (2) which name servers are authoritative for those top-level domains – that is, which entity gets to allocate names within each of those top-level domains.

The domain name system took its present form in the mid-1980s; it included 'generic' top level domains such as .com and .org, and 'country code' top level domains such as .uk and .jp. The key role in coordinating its oversight was played by a long-haired, sandal-wearing engineer named Jon Postel, at the University of Southern California. Postel performed these functions under contract with the U.S. Defense Department, as part of that entity's funding of almost all of the Internet's early development. Eventually, the Defense Department relinquished to the U.S. National Science Foundation most of its task of funding the civilian part of the Internet infrastructure. NSF then entered into an agreement with a company named Network Solutions, Inc., or NSI (its successor-in-interest is now known as Verisign). NSI got the day-to-day job of registering second level domains in .com, .net, .org and .edu, and of maintaining those TLDs' master databases.

Of the thirteen root servers, the most important was known as the 'A' root; the operators of the other root servers ('B' through 'M') incorporated any changes made to 'A'. While NSI had physical possession of the 'A' root, it was generally understood that Postel had policy authority over its contents: It was Postel, thus, who was responsible for deciding whether a new top-level domain should be added to the root zone, and which entity should be responsible for administering that domain (Postel 1994, Weinberg 2000).³ The other root server operators, it's important to note, had no formal connection with Postel, and most had no connection to the U.S. government. In theory, they were free to install on their machines copies of the root zone file

inconsistent with the one Postel maintained on the 'A' root -- recognizing different top level domains, or recognizing different entities as having authority to say who should control the second level domains in a given top level domain. Community norms and informal relationships, though, caused them to follow Postel's lead (Simon 1998, Weinberg 2000).

In much the same way, there has never been a technical or legal requirement that any particular end user send his DNS queries to a nameserver referencing the root zone I just described. Users have the ability to point their computers at entirely different DNS servers that in turn point to different root servers, referencing a different set of top level domains. Such alternate top level domains and alternate root servers did and still do exist, so that if one points one's computer at the right DNS server, one can send electronic mail to addresses that most of the Internet does not recognize, such as <richard@vrz.zoo> or <richard@tangled.web>. Very few Internet users, though, look to alternate root servers; the vast majority rely on the single set of authoritative root servers that have achieved canonical status.⁴

ICANN's origins

By the mid-1990s, many in the Internet community were unhappy with NSI's role in domain name registration; proposals to expand the DNS generated controversy, and sparked political and organizational maneuvering (Simon 1998, Weinberg 2000). However the controversy was to be resolved, it was clear that status quo could not long continue. Although Postel had the loyalty and respect of a wide consensus of the community, his informal leadership was no longer enough.

Members of a U.S. government interagency working group, convened to address the situation, were eager to devise a satisfactory solution. At the same time, they faced considerable uncertainty about the government's legal authority to impose its own policy choices. Although Postel's functions were performed under contract to the Department of Defense, and NSI registered names pursuant to an agreement with the National Science Foundation, it was unclear how much authority the U.S. government had. The agreements did not unambiguously obligate Postel and NSI to follow the government's orders regarding the root zone, and it was even more murky what would happen once the five-year NSF-NSI agreement expired (Weinberg 2000).

In the end, U.S. government policy makers decided that Postel should form a wholly new, private, not-for-profit corporation to manage the naming and numbering system. In October 1998, Postel published the proposed bylaws of the new entity, now called ICANN, and identified its initial directors (Postel 1998). He was to serve as Chief Technical Officer, and would advise the initial directors (who had been chosen for their neutrality and overall balance but were largely innocent of specialized knowledge of the Internet or of domain name issues). Two weeks later, the scheme was upended: Postel died, unexpectedly, of complications following heart surgery. The new ICANN organization went on, as planned, without him (Froomkin 2000, Weinberg 2000).

Two key challenges faced decision-makers at ICANN's inception. First, how would the new organization operate? Second, why should anybody listen to it?

ICANN's founders characterized it as a technical body in the model of the Internet Engineering Task Force (IETF), part of a long and successful tradition of Internet technical coordination. The IETF historically had set Internet technical standards in a voluntary,

decentralized, consensus-based manner. Groups of engineers, programmers and computer scientists came together to address Internet technical problems; if they could reach rough consensus on a particular solution, and that solution passed review by other groups of engineers, they published it more broadly. That system incorporated few formal mechanisms; as Internet pioneer Dave Clark put it, 'We reject kings, presidents and voting. We believe in rough consensus and running code.' A standard was adopted if it was supported by adequate consensus and worked in practice; the ultimate test of its success was adoption in the market (Froomkin 2003, Liu 1999, Reagle 2000). ICANN set out to develop policy in IETF-style working groups.

ICANN's bylaws prescribed a structure, though, that was rather different from IETF's. Departing from the IETF model, ICANN constructed an alphabet soup of 'supporting organizations' designed to funnel to the Board the views of identified groups of 'stakeholders' representing various industry segments. Within the Domain Name Supporting Organization, initially charged with formulating domain name policy, various 'constituency' groups -- each representing an industry segment -- had responsibility for electing representatives to a policymaking council (ICANN 1999, Art. VI-B).

That returns us, though, to the second question I raised above: Why should anybody listen to what ICANN said? Jon Postel was dead. Board members had been chosen in a closed process, the details of which were unclear, and lacked standing with the Internet community. And ICANN had little formal control over anything. The U.S. government had done what it could by leaning hard on NSI, which had possession of the 'A' root. NSI held its lucrative position as registry for .com, .net and .org by virtue of an agreement with the U.S. National Science Foundation. The U.S. government had used that leverage successfully to pressure NSI to

enter into a formal agreement binding it to follow ICANN's directives -- subject to a U.S. government veto -- regarding the contents of the 'A' root (Amendment 11; NTIA 1998b).

ICANN's control (shared with the government) over the 'A' root, though, didn't end the matter. The remaining root server operators, for example, had never entered into enforceable contracts with Postel. A few of the root servers were operated directly by the U.S. government; the rest, though, had no legal obligation to follow either ICANN's or the government's lead. Nor could ICANN easily dictate policy to other Internet actors. If, for example, ICANN directed a country code top level domain operator to do something, and the operator declined, what was ICANN to do, exactly? While ICANN, as proprietor of the 'A' root, could threaten to delete any top level domains that declined to follow its policy guidance, the threat would be an empty one. The U.S. government would hardly approve wholesale deletions from the root.

More important was an even more fundamental weakness in ICANN's authority. Even after NSI's agreement, ICANN's only formal power was over the 'A' root. As I noted earlier, not only were other root server operators free to ignore the 'A' root, but so were individual users: there was nothing to stop some other entity from establishing a consortium of entirely different root servers. If ICANN became sufficiently unpopular, and were perceived to be manipulating the root zone arbitrarily, then Internet service providers, major institutional users, or governments outside the U.S. might create such a set of alternate root servers. If users embraced the alternate system, and decided they should no longer direct their DNS queries in the direction of ICANN's legacy root, then the contents of the ICANN-controlled root zone file would be irrelevant; ICANN would be presiding over a party with no guests. Alternatively, if some users switched to the new root system and others remained with ICANN's, then domain names would

no longer have unique meaning; which IP address a given domain name identified could depend on which root server a user happened to choose.

ICANN, in short, faced a series of challenges: it was in a position to control other DNS actors only to the extent those actors agreed to be bound. It could not succeed unless it could consolidate its position by entering into agreements with other Internet actors, and it could not enter into those agreements unless it were seen by the Internet community as an appropriate and legitimate entity to supervise the DNS. To the extent that its legitimacy was less secure, ICANN would be able to enter into agreements only by conceding greater autonomy to other actors.

ICANN and informal governance

At this point, it makes sense to stop and ask where, exactly, this story fits in with the basic themes of this book. To what extent were ICANN's activities 'informal governance'? It was plain from the outset, I think, that ICANN was making important non-technical public policy choices. ICANN decided whether to add new top level domains; selected new firms to introduce those domains; and, through contractual negotiations with the winning applicants, imposed a wide range of requirements on them. It worked to maximize competition among registries (who maintain the zone files for the top level domains) and registrars (who accept domain name registrations from customers, and transmit the necessary information to the registries), evaluating the relative benefits to competition of limiting vertical and horizontal integration of those businesses. It created structures to give trademark holders rights against the registrants of domain names that were similar to their trademarks. It required new registries to

incorporate trademark-protection arbitrations into their own rules, and bound them to enact additional detailed procedures designed to give trademark owners preferential rights at the outset of registration in the domain. It regulated the fees that each registry charges for its services, and set the fees that the registry must pay to it in turn. It addressed how the new top-level domain registries should balance the interest in transparent availability of the identity and contact information of domain name registrants with the registrants' interests in safeguarding that information (Weinberg 2001).

ICANN implemented those choices, moreover, in ways essentially indistinguishable from command-and-control regulation. Under the trademark protection process, known as the Uniform Dispute Resolution Procedure (UDRP), each domain registrant in the generic top level domains is subject to an arbitration procedure, in which the arbitrator can order the domain name transferred to a complaining trademark owner. ICANN had earlier been able to impose an accreditation requirement on registrars; in that connection it required registrars to agree that they would include terms imposing the UDRP in the contracts they made available to would-be domain name registrants. The bottom line was that all persons registering Internet domain names outside of the country code top level domains were required to submit themselves to the arbitration procedure (Weinberg 2000).

This was surely governance; was it 'informal'? Scholars have used the term 'informal governance' to refer to the informal relationships between government actors and elements of civil society; they have used it as well in the context of the relationships among government actors (Christiansen et al. 2003). In the domain name space, government actors were only

peripherally involved. Rather, ICANN provided a forum in which private actors could *themselves* formulate and implement the terms of what looked very much like public regulation.

In two key respects, ICANN arguably diverged from the informal governance model. First, ICANN had formal structure; it had adopted bylaws setting out its internal procedures. Some of those procedures were formal ones: certain decisions, for example, could be made only by a majority vote of the board of directors, and others could be made only by a two-thirds supermajority vote of constituent bodies.

Second, ICANN's governance model incorporated an element not routinely associated with governance informality: its constituency model, formally assigning voting rights to each officially recognized industry segment ('Business', 'Internet Service Providers', 'Registries', 'Noncommercial Organizations' and so on), could be characterized as corporatist. The groups clustering around policy decisions were more structured, and less fluid, than in some informal governance regimes.

At the same time, I think, it's appropriate to view ICANN as in essential respect an informal governance system. ICANN could not have established a defined structure for channeling and re delegating formally delegated authority, because it wielded no such authority. Lacking formal authority, its tools for gaining cooperation were appeals to mutual self-interest, enticements, politicking and threats. As such, it had no choice but to follow the model of informal governance, where 'cooperation cannot be commanded by a hierarchically superordinated [and authoritative] institution . . . but must be somehow enticed' (Christiansen et al. 2003).

ICANN's self-image and founding mythology came from the IETF, which famously rejected mechanisms of formal authority. In an IETF working group, the standard for adoption of a proposal commonly was the 'hum': rather than conducting a vote, a working group chair would instruct those who agree with a proposal to hum aloud, and then would decide whether in his view a 'very large majority of those who cared' supported the proposal. If so, he would declare the necessary 'rough consensus' (Hoffman 2008).

ICANN, at its inception, followed the IETF model, placing substantial reliance in policy-making on the conclusions of working groups that were open to the public at large, and leaving them to craft their own definitions of online rough consensus. The working groups had no dispositive authority -- although they served a key role in policy formation, their recommendations could not become policy without the approval of higher-ranking bodies up the line. The rhetoric and mythology of informal consensus, though, pervaded ICANN's early work.

ICANN's governance slighted formal legality. One example should set the tone: In 2000, the organization selected seven new registries (from forty-five applicants each paying a \$50,000 fee for consideration) to establish new global top level domains. In some respects, it followed a procedurally formal model: it took some steps to insulate Board members from off-the-record contacts with the applicants, and in the name of transparency it limited the Board's deliberations to a single public afternoon-long meeting. Yet two aspects of the process were telling. First, the process ICANN set up was one in which Board members would compare applications in an ad hoc manner, unconstrained by any substantive rules; the organization made clear that it viewed the selection process as inherently subjective and legally unconstrained (Weinberg 2002).

Second, the selection of the new registries was merely the prelude to a new process in which ICANN would engage in comprehensive and detailed specification of the registries' day-to-day operation; the documents setting out those rules were about two inches thick in hard copy (Weinberg 2004). Those rules were arrived at through private negotiation between ICANN staff and each of the new registries. On this point there was no transparency, no formal process, no constraining rules – merely informal off-the-record negotiation (Weinberg 2001).

It should be noted, finally, that the corporatist aspects of ICANN's system were limited. ICANN had no mechanisms to make its stakeholder groups all-encompassing, internally democratic, or even coherent. Access to ICANN decision-makers was not remotely tightly limited to stakeholder representatives. While ICANN formally recognized its stakeholder groups, the catch-as-catch-can formation of those groups, relying on both the personal relationships among members and the need of the larger regime for legitimation, rather than on some more authoritative means specified by public authorities (see Streek & Schmitter 1985), should be familiar to students of informal governance.⁵

ICANN's legitimacy challenge

As other scholars have noted, informal governance regimes can raise legitimacy concerns (Christiansen et al. 2003). When ICANN was formed, its legitimacy was open to serious challenge. Not only was it a private entity seeking to play the sort of role more commonly played in our society by public entities, but it was a private body of dubious pedigree. There were some who asserted that ICANN had no right to the role it sought.⁶

From one perspective, ICANN brings to mind U.S. administrative-law literature relating to 'collaborative governance'. The notion of collaborative governance is that representatives of all stakeholders -- government agencies, regulated parties and regulatory beneficiaries -- share a place in the regulatory process on a par with one another. Regulation is not imposed by the agency, but negotiated by the stakeholders. Substantive legal mandates are flexible, yielding to the imperatives of negotiation (Freeman 2000, Ayres & Braithwaite 1992, Seidenfeld 2005). ICANN had emphasized negotiation among stakeholders – representatives of government and industry groups deemed sufficiently important players to get a seat at the bargaining table. It initially identified agreement among these groups as the 'consensus' it was created to identify and implement.

In important respects, though, collaborative theory fit ICANN awkwardly from the start. Collaborative governance, like the informal governance canvassed in this book, requires ultimate accountability to a government sovereign. Thus, for example, proponents of negotiated rule-making have emphasized that government must play an active role in structuring the negotiation process, to ensure that all potentially affected interests are suitably and fairly represented. Government cannot simply 'withdraw[] from active duty' (Freeman 1997); rather, informal governance must 'still take place "in the shadow of hierarchy"' (Christiansen et al. 2003).

But ICANN's only mechanism of government accountability was its continuing contractual relationship with the U.S. Department of Commerce. That mechanism was quite weak: while U.S. government officials, in particular White House adviser Ira Magaziner, were closely involved at ICANN's formation, the nature of that involvement changed after the negotiation of a series of agreements with NSI a year later (Magaziner had already left the

government at that point). After that, while ICANN had significant incentive to stay on the U.S. government's good side, and submitted more than a dozen status reports to it between 1999 and 2006, the government's attention to ICANN was no more than sporadic. And indeed, significant elements of ICANN's constituency outside of the United States saw the remaining U.S. government oversight as diminishing rather than enhancing the organization's legitimacy.⁷ So how was ICANN to bridge its legitimacy gap?

Technical development and coordination

One of ICANN's key initial moves was to characterize its own work as no more than mere 'technical management' or 'technical coordination.' As I've already noted, the rhetoric of technical coordination was valuable to ICANN because it evoked a long and successful Internet engineering tradition. ICANN urged that its role, like IETF's, was simply to facilitate the development of global consensus on DNS-related issues, and then to implement that consensus. Because ICANN could take no action unless it had won the consensus of the Internet community, its supporters argued, it could exercise no real discretion; it was merely a vehicle for the community will (see, e.g., Dyson 1999).

This claim of legitimacy was bound to fail. First, it misdescribed ICANN's actual decisional mechanisms: ICANN did not have procedures that would enable it to recognize consensus (or the lack of consensus) surrounding a given issue. Second, the issues facing ICANN were not susceptible of resolution in an IETF-type consensus-based process. The issues addressed in the Internet engineering standards context had been technical ones, capable of

resolution via a (relatively) neutral performance metric. The community of Internet engineers and system administrators, in turn, had been relatively small and homogeneous, bound together by shared values and professional norms (Froomkin 2003).

ICANN did not have the same advantages. The policy questions ICANN was deciding were policy, not technical, and could not be resolved from a pure engineering standpoint. Further, the universe of stakeholders was large, fractious and diverse, with participants driven by their opposing economic stakes. There was never any reason to believe that consensus could be formed around the issues ICANN was addressing (Liu 1999, Weinberg 2000).

Democracy, and its failures

The U.S. government had been heavily involved in the conception, drafting and final approval of ICANN's bylaws. Those bylaws included two key elements relevant to ICANN's legitimacy. One was the constituency system, instantiating the 'participation of key stakeholders' that the government had insisted on from the start (NTIA 1998a, NTIA 1998b). The other was the principle that some of ICANN's Board members would be elected directly. ICANN's lawyers had made that concession only reluctantly, at the U.S. government's insistence; the parties agreed that implementation would await completion of an elections study by a Membership Advisory Committee (Weinberg 2001).

The constituency structure from the start was less than satisfactory; at an early stage, one well-respected observer (now a member of ICANN's board) labeled it 'a fundamental reason for the DNSO's problems', a 'failure' that 'should be abandoned' (quoted in Weinberg 2000). There

was no coherent way to reflect the views of the domain name community by identifying a set of activities necessary to, or enabled by, the domain name system or the Internet in general, collecting industry actors performing each of the activities on the list, and then giving a set number of votes to each group. Nor was there a coherent way to ensure that the Business Constituency, say, meaningfully 'represented' the interests of the global set of businesses that were affected in some way by Internet identifiers. Indeed, there was no coherent basis for adopting -- or rejecting -- the view that there should be an Intellectual Property Constituency oriented to trademark protection alongside the Business Constituency, given that nearly all trademarks are held by businesses. Rather, the list of constituencies simply reflected the political strength of various lobbies at a particular point in time.

Were direct elections the answer? At the Cairo meeting in 1999, ICANN's board, under pressure from civil-society activists, promised that, the following year, individual Internet users would directly elect five board members -- one each in the five geographic regions that, for ICANN geographic diversity purposes, make up the world. The ICANN board appointed a nominating committee to put forth the various candidates. Its rules allowed other candidates to be nominated by petition, though, and the petition process ended up adding nine candidates to the eighteen put forward by the nominating committee. In the North American and European regions, all five of the member-nominated candidates presented perspectives sharply different from those of the current board members, emphasizing concerns including democracy, free speech and privacy. The ultimate winner in the North American region was Karl Auerbach, who campaigned on a platform of 'deep, substantial and fundamental reform'. In Europe, it was Andy Mueller-Maguhn, who headed an organization of 'netizens and hackers'.

ICANN's electoral experiment, though, was short-lived. Many ICANN insiders had opposed elections from the start, seeing little useful that elections would contribute to the Internet governance process (Weinberg 2000, p. 245-46). Indeed, it was never clear what it meant to 'represent' any community as ill-defined as Internet users. As the failings of the DNSO constituency model demonstrate, it was problematic to try to devise a way to assign votes to functionally defined sectors of the industry and public, and to create new institutions to wield those votes. But one-person-one-vote was no more helpful. One could hardly say that the Internet community as a whole participated in the 2000 elections. The contest for the African seat had 130 voters. The contest for the Asian seat, where many participants seem to have been mobilized by appeals to national pride and the desire to elect a candidate from their own country, had 17,745. Neither figure generates confidence in the meaningfulness of the election (Froomkin 2002).

The two insurgent candidates elected in 2000 quickly found themselves out of step with the rest of the Board; neither was an effective force. Auerbach in particular repeatedly clashed with ICANN staff, and with various other members of the board; he ended up suing the board (successfully) over the conditions imposed on his access to corporate records (Auerbach v. ICANN 2002). Shortly before Auerbach filed that lawsuit, ICANN's CEO announced a plan to eliminate the elected board seats, and replace them with seats filled by directors named by a Board-selected committee. ICANN adopted that plan in 2002 (Kleinwachter 2003).

Currently, a majority of the seats on ICANN's board of directors are self-perpetuating; their occupants are chosen by a committee in turn chosen by the Board. A minority of the directors are chosen by the various 'constituency' groups or by representatives of IP address

registries. Non-voting liaisons from a variety of advisory groups sit alongside them (ICANN 2009b).

The decline of bottom-up coordination

ICANN's initial model for policy development was that policy should be developed in consensus-seeking procedures in the subsidiary 'supporting organizations', and then passed up to the Board. This 'bottom-up coordination', though, ran into obstacles from the start. The Domain Name Supporting Organization, notwithstanding its initial charge to develop domain-name policy, had great difficulty generating policy on any but the highest degree of generality. Repeatedly, in its early years, it either was unable to generate coherent recommendations; generated recommendations only at a high level of abstraction, leaving all remaining issues to be decided by ICANN's professional staff; or was cut out of the decision-making process altogether (Weinberg 2000, Weinberg 2001).

As time went on, the DNSO (and its successor, the 'Generic Names Supporting Organization') developed new approaches to policy development, including invitation-only task forces balanced among the various constituencies; these tools were intended in part to reclaim policymaking authority from the ever-expanding role of ICANN staff. But full-time staff have an advantage in the policy formation process, deriving both from their proximity to the seat of power and to the resources they could devote. ICANN grew over time, as I'll discuss further a little later on; currently, it has expanded to employ more than a hundred people, with a budget in

excess of US\$50,000,000. The GNSO could not and cannot effectively compete with a policy bureaucracy of this size.

In addition, there was a key shift in ICANN's rhetoric. In the same 2002 reorganization in which it eliminated elected directors, ICANN amended its bylaws so as to abandon the requirement that new ICANN policies have supermajority 'consensus' backing in the supporting organizations. Stuart Lynn, ICANN's then-CEO, strongly urged this change. He explained that '[i]n hindsight, the notion of truly "bottom-up" consensus decision-making simply has not proven workable', and that 'the characteristic gridlock in the DNSO is a function of the inevitable difficulty of consensus development among parties with self-interested but conflicting goals.' He continued: 'The driving notion at the time of ICANN's creation was consensus; it is clear to me that the driving notion today, with the renewed focus precipitated by the events of 9/11, must be effectiveness.' To be effective, he concluded, 'the ICANN Board of Trustees has to be clearly empowered to make decisions even if there is no clear consensus, to the extent they see it necessary to carry out the ICANN mission' (Lynn 2002; Johnson et al. 2003).

These changes, one can argue, advanced ICANN's efficiency. But they did not directly speak to the organization's legitimacy. And that legitimacy, again, was subject to challenge. The most important challenge came shortly afterwards, in the deliberations of the World Summit on the Information Society (WSIS). WSIS, a United Nations process bringing together representatives of government, business and civil society, became a touchpoint for frustrations in various quarters about ICANN's authority; its status as an informal, private organization rather than an intergovernmental body; and in particular its U.S.-centrism.⁸ WSIS's Draft Declaration of Principles in March 2003 tartly chided that management of Internet names and address 'must

be multilateral, democratic and transparent, taking into account the needs of the public and private sectors as well as those of the civil society, and respecting multilingualism'. Going further, the Declaration stated that ICANN's responsibilities 'should rest with a suitable international, inter-governmental organization' (WSIS 2003). ICANN was dubiously 'international' and certainly was not an 'inter-governmental' organization like the ITU.

The WSIS challenge, though, failed. WSIS ended with no more than an agreement to create a new forum in which participants would continue to discuss Internet governance; that process (the Internet Governance Forum) has no apparent interest in challenging ICANN's authority over the domain name system (Mueller 2009). Many actors and considerations played a role in that history. One key factor, though, was ICANN's overall success at positioning itself as a legitimate actor. How did ICANN bolster its own legitimacy? I will present one suggestion below.

Institutional isomorphism, or, how to look like a bureaucracy

It seems to me that ICANN's key move in establishing its legitimacy -- and, indeed, its inevitability -- was its expansion and bureaucratization. In 1998, one could count IANA's workers on the fingers of one hand. In 2002, ICANN had twenty employees. Currently, it has more than a hundred.

This expansion was made possible by ICANN's contracts with registries and registrars, specifying the fees that those businesses agree to pay ICANN in connection with every domain name registered. As the domain name market has grown, so has ICANN's revenue -- from about

five million dollars in FY 2000 to over sixty million dollars projected for FY 2010. Verisign, the registry maintaining the .com and .net zone files, is projected to pay ICANN over twenty-eight million dollars in FY 2010 (ICANN 2009c).

ICANN has not merely grown, though; it has bureaucratized. It is hard to overstress the change in its corporate culture over the last ten years. At the outset, ICANN participants were creating structures from scratch, with open working groups recommending procedures. The enterprise was new; the atmosphere was fluid and informal. Nobody had become acclimated to institutional structures that were still in the flush of creation -- and which might be modified soon enough.

ICANN today, by contrast, is the very model of a modern large bureaucracy. It boasts an elaborate Strategic Planning Process; an operating plan identifying what it describes as ICANN's specific 'deliverables or service elements' and a metric of success for each; a Code of Conduct setting out anodyne 'expected standards of behavior' for persons participating in its processes; and various statements of management operating principles. As part of its 'program of continuous improvement,' it has contracted with independent management consultants to undertake a program of organizational reviews of its constituent components; it recently released a document reviewing the review program. That document, according to ICANN's summary, 'analyses --for each of the phases making up the Organizational Review processes- the opportunities in revising the phases, their objectives, the lessons learnt, and concrete measures for their systematization. It includes an Executive Summary allowing a high-level appreciation of the objectives of the proposed systematization of OR processes' (ICANN 2010).

In short, the new ICANN looks like nothing so much as a modern, business-jargon-

obsessed, consultant-ridden, process-driven, large corporate or government bureaucracy. What were the advantages to ICANN of this shift? As an initial matter, it's worth noting the advantages of bureaucratization and professionalization in giving the impression of rationality, without regard to whether the bureaucratic procedures work well. Bringing in managers and business consultants can give an organization an air of competence and legitimacy (Dornbusch et al. 2000). Both of these were valuable to ICANN.

More fundamentally, ICANN's key move, in seeking to be accepted by business enterprises and governments, was structuring itself so that it looks like a business enterprise or a government. This is what organizational sociologists Walter Powell and Paul DiMaggio called institutional isomorphism. Powell and DiMaggio explained that the perception of an organization as legitimate rests with outsiders; it depends on the extent to which the organization's practices match outsiders' understandings of what constitutes legitimate, rational organizational behavior (Powell & DiMaggio 1991). An organization's need for legitimacy will drive it to adapt the practices and structures of other entities on which it depends for its inputs or functioning. The organization will seek to meet cultural expectations held within those other entities, and to copy the structures of more successful models (Pfeffer & Salancik 1978; Maurer 1971; Stryker 2000).

ICANN began its existence seeking to adopt the mores and structures of an Internet standards organization; it sought to look, in other words, like a crowd of computer engineers. Ultimately, though, it became plain that the community of Internet geeks were not the folks from whom ICANN most needed acceptance: while they were quick to complain when ICANN didn't measure up to their standards, but they didn't hold the levers of power. ICANN needed acceptance from world governments; from large Internet service providers, owned by entities

such as France Telecom; from the large corporations that have the ability effectively to lobby both. To be sure, ICANN needed the support of the root server operators. Because the defection of any root server operator from ICANN allegiance would be tremendously destabilizing, though, the root servers would not be the first to mount the barricades against ICANN; rather, they would withdraw their support only after a critical mass of other key players -- governments and businesses -- had already done so. In the end, looking like a business or governmental actor was ICANN's key move in establishing its legitimacy with those actors.

Bureaucratization served the needs of key ICANN players in other ways. Influential outsiders -- industry and government representatives -- were ill-served by the initial less bureaucratized structure. More open processes were less predictable and harder to manage; they opened the door to substantively disfavored proposals. Corporate players had little investment in IETF mores, and zero interest in democratic representation or structural openness to the general public; they wanted a decision-making process that would protect their own interests, in a trustworthy manner, and emphasize stability. Governments wanted the same with respect to their own interests. All of this was best served by a structure that was elite-oriented, bureaucratized, and corporate-modeled, with privileged roles reserved for governments and representatives of specific industry segments. The only voices with an interest in opposing such a shift were public-interest and civil-society players, but, without a financial stake, they had no compelling voice.

ICANN staff, for their part, sought to maximize their own autonomy and to increase their own empires. In that connection, a role as neutral facilitator of the consensus emerging from an IETF-modeled process was less appealing to them than was a role steering a self-sufficient, self-

perpetuating, staff-dominated, ever-growing organization. ICANN's formal structure as a U.S. nonprofit corporation facilitated that shift.

ICANN's structure was amenable to these changes precisely because the organization was remarkably in control of its destiny in two ways. First, its structure was plastic. There were no meaningful internal limits on the organization's ability to restructure itself, nor did the U.S. government provide significant constraint. ICANN, thus, has amended its own bylaws -- the constitutional rules structuring its decision-making processes -- twenty-three times in the organization's less-than-twelve-year existence (ICANN 2009a). ICANN's structure determined the process through which its diverse participants got to make (sometimes unexamined) choices about what the organization was there to achieve. The continual shifts in this structure facilitated the organization's self-remaking.

Second, ICANN was in control of its own financial inputs. ICANN's initial agreements with NSI, executed under the watchful eye of the U.S. government, included a provision for NSI's payment of registry-level fees to support ICANN's operations (ICANN-NSI Registry Agreement 1999). Every subsequent agreement ICANN has entered into with Verisign or any other top level domain registry has included a similar position. Similarly, ICANN's registrar accreditation agreements have from the start included a provision for registrar payments to ICANN. ICANN's ability to impose these fees, and to set their levels, has largely been a function of its bargaining power vis-a-vis the other parties; ICANN's position as gatekeeper, with the ability to accredit registrars to sell domain names and to admit registries to the root, gave it initial large advantages. (ICANN had little bargaining power over the country-code domain registries and thus was able to collect little money from them, but its other revenue sources more

than made up for that.) The upshot has been an ever-increasing budget and an organization able to effect this institutional shift.

Organizational legitimacy refers to 'the degree of cultural support for an organization -- the extent to which the array of established cultural accounts provide explanations for its existence' (Meyer & Scott 1983). At the outset, established cultural accounts provided no explanation for ICANN's existence. As ICANN grew, solidified its relationships with other actors, and became a difficult-to-replace part of the status quo, those cultural accounts shifted. ICANN could not achieve legitimacy by conforming to any existing normative structure with widespread support; there was none. Rather, it negotiated successfully with influential players as to the goals it should pursue, and reframed its structure and culture so as to conform to their images of what a successful and legitimate organization ought to look like.

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Endnotes

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¹ General background for the discussion of Internet architecture in this section can be found in Froomkin 2000, Mueller 2002, and Weinberg 2000; I will avoid repeated citations to those sources.

² My reference to an IP address as 'unique' is oversimplified. Techniques such as network address translation can allow a computer to function using an IP address that is unique only within that computer's local network. Most residential Internet users get their IP addresses pursuant to a dynamic allocation system under which the user may get a different address each time she logs on to her Internet service provider (Weinberg 2000).

³ Postel added only country-code top level domains to the DNS after 1988. That said, the decade beginning in 1985 saw the addition of more than a hundred country-code domains; at one point, Postel was adding a new top level domain roughly every sixteen days (Weinberg 2002).

⁴ BIND, the software running most Internet name servers, includes a root.cache file listing the canonical root servers as authoritative. Name server operators can change that file, but few do.

⁵ Kleinwachter 2009 suggests a contrary view. Professor Kleinwachter suggests that ICANN is 'one of the most transparent' international corporations and has developed a 'diversified accountability mechanism'. Taken together, these suggest a regime that is not significantly informal in practice. Most of the elements Prof. Kleinwachter lists, however (such as the fact that ICANN is nominally subject to California law, maintains fora to receive public comments, maintains an ombudsman, provides a structure within which its various subsidiary bodies can interact, and so on) have not proved significantly constraining, and have not provided significant transparency or accountability.

One notable exception relates to the process, required by ICANN's current bylaws, for 'independent third-party review of Board actions alleged by an affected party to be inconsistent with the Articles of Incorporation or Bylaws'. After dragging its feet for years on establishing such a process, ICANN agreed in 2008 to submit such a dispute to a distinguished international arbitration panel. That panel ruled on 19 February 2010, finding that the disputed action 'was

not consistent with the application of neutral, objective and fair documented policy' (ICM Registry v. ICANN 2010). The panel's findings, however, are nonbinding, and ICANN has not yet made clear how it will respond.

⁶ See, e.g., U.S. Small Business Administration 1999 ('Industry representatives, consumer advocates, and members of the U.S. Congress have questioned ICANN's scope of authority. . . . These questions of authority and legitimacy are especially troublesome, because they are beginning to undermine the validity of ICANN's proceedings . . .'); Greenwell 1999 ('the decisions that ICANN are making will amount to privately imposed law, existing in every nation on earth, without the benefit of the review or enactment by a representative legislative body in *any* of these nations').

⁷ See, e.g., Kane 2005: '(I)t is clear that ICANN's approach of attempting to insert itself as a quasi-regulator of ccTLD Registries is fuelling the concerns of many sovereign nations who feel they cannot accept a situation where they would effectively be subject to oversight by a United States private-sector company.'

⁸ For a comic commentary on the way conflicts over the U.S. role in ICANN played out in WSIS, see Feld 2005.