

**IN THE MATTER OF AN INDEPENDENT REVIEW PROCESS
BEFORE THE INTERNATIONAL CENTRE FOR DISPUTE RESOLUTION**

AFILIAS DOMAINS NO. 3 LIMITED,

Claimants

v.

INTERNET CORPORATION FOR ASSIGNED NAMES AND NUMBERS,

Respondent

ICDR Case No. _____

**EXPERT REPORT BY JONATHAN ZITTRAIN
ICANN INDEPENDENT REVIEW PROCESS**

September 26, 2018

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1. OBJECTIVE AND SUMMARY OF OPINIONS

1. I have been asked by Dechert LLP, counsel to the Claimants, to describe the history of the Internet Corporation for Assigned Names and Numbers (“**ICANN**”), its mandate to introduce and promote competition in the provision and supply of generic domain names (ICANN’s “**Competition Mandate**”),¹ and the unique importance that the .WEB registry plays in achieving ICANN’s Competition Mandate in the context of ICANN’s New gTLD Program. Although this expert opinion has been requested by Claimants’ counsel, I understand that my duty is to the IRP Panel.

2. As set forth in greater detail below, ICANN was conceived with objectives to, and has operated to, expand the Internet namespace and to introduce and promote competition in the provision and supply of generic domain names, which are fundamental to the architecture of the Internet. Competition in fundamental Internet naming provisioning, while maintaining interoperability, has been a touchstone for the Internet technical community, digital entrepreneurs, telecommunications regulators, and end-users—those who formed and remain stakeholders of ICANN—since the commercialization of the Internet in the early 1990s. ICANN’s Competition Mandate represents an obligation by ICANN to do more than just comply with applicable antitrust and competition laws. Rather, it is an affirmative undertaking by ICANN to

¹ “The launch of the new gTLD program was part of ICANN’s founding mandate when it was formed by the U.S. Government over 12 years ago. That **mandate is to introduce competition** and choice into the domain name system in a stable and secure manner”. Statement of Kurt Pritz (ICANN Senior Vice President for Shareholder Relations) (“**Pritz Statement**”), S. Hrg. 112-394, ICANN’s Expansion of Top Level Domains, Hearing before the Committee on Commerce, Science, and Transportation, U.S. Senate, 112th Congress, First Session, December 8, 2011, *available at* <https://www.gpo.gov/fdsys/pkg/CHRG-112shrg74251/html/CHRG-112shrg74251.htm> (“**December 2011 Senate Hearing**”), [Ex. JZ-2], at 8 (emphasis added). Herein, I refer to the “mandate” identified by Mr. Pritz as ICANN’s “**Competition Mandate**”.

ensure that its decisions and actions are consistent with its mission to create a competitive environment within the DNS in which market forces can operate without restraint.

3. In the late 1990s, when ICANN was formed, the mandate to introduce and promote competition for the provision and supply of domain names meant creating competition for Network Solutions, Inc. (“**NSI**”), which controlled the .COM registry among others, and which was acquired in 2000 by VeriSign, Inc. (“**VeriSign**”).

4. To realize its Competition Mandate, ICANN launched a program that would allow for the formation of new registries (the “**New gTLD Program**”) to compete with NSI/VeriSign. Since the first round of the New gTLD Program in 2000, the industry has recognized that the most important new registry could be .WEB, which, of all existing and potential new gTLDs, is the closest and best potential competitor to VeriSign.

5. VeriSign’s presumptive acquisition of .WEB runs counter to ICANN’s Competition Mandate, is inapposite to the intent and purpose of the New gTLD Program, and is contrary to ICANN’s fundamental objective of adopting and acting pursuant to processes that are transparent, fair, and non-discriminatory. A recent analyst report from JP Morgan described the current situation thusly:

Verisign is paying \$135M for the ownership rights to be the registry operator of .web. This could offer a new growth opportunity for the company into the future, but just as important, we think it is a very good defensive strategic move keeping .web out of the hands of the potential competitor as we believe .web could be the closest thing to .com in the minds of customers looking for domain names.²

² J.P.Morgan, *VeriSign (VRSN US): DoJ Clears Way for VRSN to Close .web Purchase*, January 10, 2018, [Ex. JZ-3], at 1.

2. QUALIFICATIONS AND EXPERIENCE

6. I am the George Bemis Professor of International Law and Professor of Computer Science at Harvard University, holding faculty appointments at Harvard Law School, the Harvard John F. Kennedy School of Government, and the Harvard John A. Paulson School of Engineering and Applied Sciences. I co-founded and served as executive director of the Berkman Center for Internet and Society at Harvard Law School from 1996 to 2000. I was an assistant professor of law at Harvard Law School from 2000 to 2005, the Professor of Internet Governance and Regulation at the University of Oxford from 2005 to 2008, when I rejoined the Harvard Law School faculty as professor of law.

7. I write and teach about the impact of the Internet on society and on law. Some of my relevant works include *The Future of the Internet and How to Stop It*³ and numerous articles, such as “The Generative Internet,”⁴ published in the *Harvard Law Review*; “A History of Online Gatekeeping,”⁵ published in the *Harvard Journal of Law & Technology*; “Better Data for a Better Internet,”⁶ published in *Science*; and “ICANN: Between the Public and the Private,”⁷ published in *The Best in E-Commerce Law*.

8. In addition to my academic appointments, I was the Distinguished Scholar in Residence at the Federal Communications Commission (“FCC”) in 2011 and chaired the FCC’s Open Internet Advisory Committee from 2012 to 2014. In July 1999, I testified before the United

³ Jonathan Zittrain, *The Future of the Internet: and How to Stop It* (2009).

⁴ Jonathan Zittrain, “The Generative Internet,” *Harvard Law Review* 1974 (2006).

⁵ Jonathan Zittrain, “A History of Online Gatekeeping,” *Harvard Journal of Law and Technology* 253 (2005).

⁶ Jonathan Zittrain, “Better Data for a Better Internet,” *Science* 1210 (2011).

⁷ Jonathan Zittrain, “ICANN: Between the Public and the Private,” in *The Best in E-Commerce Law* (2001).

States House of Representatives Subcommittee on Investigations and Oversight about ICANN's role in domain name system privatization. I testified before the United States House of Representatives Subcommittee on Courts and Intellectual Property in June 2000 about issues and obstacles relating to the Internet and federal courts. In April 2000, I testified before the United States Senate Committee on Commerce, Science, and Technology about the Internet Tax Freedom Act, and in October 2006 I testified before the British House of Lords Select Committee on Science and Technology on cybersecurity. I served on the board of trustees of The Internet Society, which facilitates the development of Internet standards, from 2009 through 2012, and I am currently a board member of the Electronic Frontier Foundation, which advances digital rights in the public interest.

9. I was a member of ICANN's Membership Advisory Committee, which advised the ICANN board on the creation of its membership framework in the organization's early years. I participated in the discussions that gave rise to ICANN, and the Berkman Klein Center (then the Berkman Center) hosted ICANN's first public meeting in 1998.

10. A copy of my *curriculum vitae* is attached as **Exhibit JZ-1**.

11. Although I am participating in this case on a paid basis, the views expressed in this report are my own, and do not represent any organization or institution. I reserve the right to supplement or amend this report if additional evidence comes to my attention.

3. INTRODUCTION

12. Competition is a recurring concern in the communications space. When the goal of a system is to ensure the ability of any person to communicate with any other person, the easiest way to do that often entails assigning the coordination of that system to a single entity.

With a single party at the reins, the argument goes, we could be sure that everybody will be properly interconnected. For decades this was the argument made by AT&T in its insistent defense of its monopoly for U.S. telephonic communication. And it's true that calls from California to Connecticut did go through reliably. But those calls, made on universally-rented, company-issued telephones, were expensive. Innovation was limited, and, when companies like Hush-A-Phone tried to make things better, AT&T would use its dominant position to ensure that nothing happened on its system without its consent.⁸

13. Looking back from a world with dozens of smartphone makers and four major wireless networks in the U.S. alone, it is clear that there are alternatives to centralized proprietary coordination. And it seemed that way as well in the mid- to late 1990s, when the community that created the modern Internet was rapidly building a governance infrastructure for the most significant digital communications platform in history. At nearly every step of the process of developing our current Internet governance infrastructure, ensuring competition has not just been a factor but a primary objective when making decisions, including the design of technical architectures. Stakeholders remain vigilant regarding anticompetitive behavior in the context of major Internet infrastructure issues like the assignment of new generic Top Level Domains (“gTLDs”).

4. ORIGIN AND DEVELOPMENT OF THE DOMAIN NAME SYSTEM

14. The Internet started out as an academic experiment aimed at connecting geographically separated computer networks. In these early days, it was easy to connect to other

⁸ Matthew Lasar, “Any lawful device: Revisiting Carterfone on the eve of the Net Neutrality vote”, *Ars Technica*, December 13, 2017, available at <https://arstechnica.com/tech-policy/2017/12/carterfone-40-years/>, [Ex. JZ-4].

Internet users because there were so few people on the network. However, as the Internet began to expand, users developed ways to make navigation on the Internet more straightforward. As a result, the domain name system (“DNS”) was created by a handful of researchers, including Paul Mockapetris.⁹ In short, the DNS is a hierarchical distributed database that serves as a “directory” for points of presence on the Internet.¹⁰ Every website has a numeric “IP address” that corresponds to its location on the Internet. IP addresses are usually represented in dot-decimal notation, consisting of four decimal numbers, each ranging from 0 to 255, separated by dots, *e.g.*, 172.16.254.1. Because IP addresses are difficult to remember, the DNS uses human-friendly “domain names” such as *www.google.com*. The DNS translates these domain names into IP addresses and directs us to the website we have requested.¹¹

15. DNS records are stored on servers all over the world that are organized in a hierarchical structure. At the very top of the DNS hierarchy are thirteen “root” servers that store DNS information about all top-level domains (“TLDs”).¹² Top-level domains are found at the far right end of any given domain name. For example, the TLD of *www.google.com* is .COM. Next in the DNS chain of command are top-level domain nameservers which keep DNS records for all subdomains within that TLD. For example, the .COM domain nameserver contains all DNS records for *www.google.com*, while the .EDU domain name server contains DNS records for

⁹ See Cricket Liu and Paul Albitz, *DNS and BIND* (5th ed. 2006), [Ex. JZ-5], Ch. 1, Secs. 1-2, 4 (“A (Very) Brief History of the Internet”, “On the Internet and Internets”, and “The History of BIND”).

¹⁰ The DNS performs a variety of functions, but for the purposes of this document, we focus on its role as a directory. For example, in addition to translating domain names into IP addresses, DNS servers can also be used to direct and balance Internet traffic so that no individual server is burdened by too many requests. These types of functions are called load balancing and traffic steering. See *id.*, Ch. 10, Sec. 7 (“Round-Robin Load Distribution”).

¹¹ Keith Shaw, “What is DNS and how does it work?”, *Network World*, April 11, 2018, available at <https://www.networkworld.com/article/3268449/internet/what-is-dns-and-how-does-it-work.html>, [Ex. JZ-6].

¹² Cricket Liu and Paul Albitz, *DNS and BIND*, [Ex. JZ-5], Ch. 2, Sec. 6 (“Resolution”).

www.harvard.edu and www.berkeley.edu. These second level domains store the DNS records for websites within that second level domain and so on and so forth.¹³

16. At the dawn of TLD creation and assignment in 1984, the Internet community thought of TLDs in terms of general purpose categories: commercial, education, government, etc. The seven original TLDs (.COM, .NET, .ORG, .EDU, .MIL, .INT, .GOV) reflect this approach. .COM was designated for commercial businesses, .EDU was reserved for education institutions like universities, .GOV was set aside for U.S. government organizations, .MIL was created for U.S. military groups, .NET was designated for “organizations providing network infrastructure,” .ORG was created for non-profits, and the seventh TLD, .INT, was set aside for international organizations.¹⁴ These seven were the original members of a set of TLDs which would later become known as gTLDs. .COM, .NET, and .ORG were open gTLDs, meaning that anyone could register a second-level domain in one or more of these gTLDs, while .INT, .MIL, .EDU, and .GOV were closed gTLDs, meaning that only registrants meeting certain criteria could own a second-level domain in that gTLD.

17. .COM emerged as the dominant gTLD even for non-commercial use. From the outset, gTLDs were confusing to most users. They were too technical for the general public to fully understand. The difference between .COM and .NET, for instance, was lost on many. Many early users did not understand how to use domain names and URLs to navigate the Web. Instead,

¹³ Keith Shaw, “What is DNS and how does it work?”, [Ex. JZ-6]; Cricket Liu and Paul Albitz, *DNS and BIND*, [Ex. JZ-5], Ch. 1, Sec. 3 (“The Domain Name System, in a Nutshell”).

¹⁴ Cricket Liu and Paul Albitz, *DNS and BIND*, [Ex. JZ-5], Ch. 2, Sec. 2 (“The Internet Domain Namespace”). See also Jon Postel and J. Reynolds, Network Working Group, Request for Comments: 920, Domain Requirements, October 1984, available at <https://tools.ietf.org/pdf/rfc920.pdf>, [Ex. JZ-7], at 2. Note that .net was eventually opened to commercial traffic as well.

they treated their browsers' URL bars as search engines and simply typed in the name of the entity they were looking for. In an attempt to make their browsers more user-friendly, developers designed browsers to append ".COM" to any non-URL the user typed into the browser window. This increased the commercial value of .COM domains and further cemented .COM's status in the hierarchy of gTLDs in this formative era of the Web in the 1990s.¹⁵

18. .COM continues to be the dominant gTLD today, but in many ways it is an imperfect flag-bearer for the general-purpose Internet. Colloquially, when we think of .COM, we think of businesses, start-ups, and the "dot com bubble". Though .COM is semantically associated as a commercial gTLD, many .COM domains are not commercial, and no test for commercial use is applied for acquisition or renewal of a domain.

5. THE BIRTH OF NSI/VERISIGN

19. In the beginning of the Internet age, gTLDs were managed and domain names were assigned by one man, Jon Postel, acting in a non-commercial capacity. The fact that there was just one man responsible for managing gTLDs and acting as the root may seem bewildering today, and it was remarkable even back then. In an effort to become more formal, Postel's work was formalized under an entity known as **IANA**—the Internet Assigned Number Authority—(informally, he was sometimes referred to as the "Internet Main Man"¹⁶ or even the "God" of the Internet¹⁷). Postel did not wish to be the "owner" of the franchise, but rather saw himself as

¹⁵ Milton L. Mueller, *Ruling the Root: Internet Governance and the Taming of Cyberspace* (2006), [Ex. JZ-8], Sec. 6.1.2.

¹⁶ "Fallout over Unsanctioned DNS Test", *Wired News Report*, May 2, 1999, available at <https://www.wired.com/1998/02/fallout-over-unsanctioned-dns-test/>, [Ex. JZ-9].

¹⁷ "The Internet: A peace of sorts", *The Economist*, November 17, 2005, available at <https://www.economist.com/node/5178973>, [Ex. JZ-10].

performing a task that was necessary for the greater community. IANA was not merely a formalization but also a recognition that this essential function existed independently of Postel as an individual.

20. Despite having a more formal-sounding moniker, Postel could not scale his work at the rate of the Internet, and eventually the task of managing gTLDs and assigning domain names became too burdensome for one person to manage. Postel's insufficient scale became acutely evident in 1991, when the United States government officially opened the Internet to commercial traffic. The commercialization of the Internet resulted in a massive spike in demand for domains.¹⁸ To help manage the increased demand, the National Science Foundation ("NSF") in 1993 entered into a five year, \$5.2 million agreement with NSI to manage its gTLD registries.¹⁹

21. In 1995, NSI was acquired by defense contractor Science Applications International Corporation ("SAIC") for \$4.7 million.²⁰ Shortly thereafter, NSF agreed to arrange for the company to charge a domain registration fee rather than have the government pay for domain name management services.²¹ As a result of being the sole source of generic domain names, NSI started earning a significant amount of money from registration fees (NSI charged \$100 for the initial registration and a \$50 annual renewal fee after the first two years). Over a period of a few years, NSI's income from registration fees would escalate from tens to hundreds

¹⁸ Heather N. Mewes, "Memorandum of Understanding on the Generic Top-Level Domain Name Space of the Internet Domain Name System", 13(1) *Berkeley Technology Law Journal* 235 (1998), [Ex. JZ-11], at 236.

¹⁹ ICANN, Cooperative Agreement between NSI and U.S. Government, Agreement No. NCR-9218742, January 1, 1993, available at <https://archive.icann.org/en/nsi/coopagmt-01jan93.htm>, [Ex. JZ-12].

²⁰ Craig Simon, The Technical Construction of Globalism: Internet Governance and the DNS Crisis, A case study for *Bandwidth Rules*, October 1998, available at <https://web.archive.org/web/20000815211830/http://www.flywheel.com/ircw/dnsdraft.html>, [Ex. JZ-13], at 8.

²¹ ICANN's Early Days, *ICANN History Project*, available at <https://www.icann.org/en/history/early-days>, [Ex. JZ-14].

of millions of dollars.²² Five short years after its acquisition by SAIC, VeriSign would acquire NSI for \$21 billion.²³

22. The shift from free to paid domain registration marks the point at which Internet stakeholders started to think critically about the importance of competition in the domain assignment space. Given that NSI was the sole source of generic domain names, Internet stakeholders became concerned that the company could and would adopt aggressive and predatory behavior. Jon Postel himself said:

I think this introduction of charging . . . for domain registrations is sufficient cause to take steps to set up a small number of alternate top level domains managed by other registration centers. I'd like to see some competition between registration services to encourage good service at low prices.²⁴

As NSI's five-year contract with the NSF was running out, calls were made to break the NSI monopoly and introduce meaningful competition into the domain name space.²⁵

23. NSI, however, resisted efforts to force it to relinquish its control of domain registration at the end of its contract. The company argued that it owned its registry of domains and should be allowed to continue its registration business unencumbered.²⁶ Ultimately,

²² David S. Hilzenrath, "Network Solutions Dropped as Registrar of Internet Domains", *The Washington Post*, April 24, 1997, available at https://www.washingtonpost.com/archive/business/1997/04/24/network-solutions-dropped-as-registrar-of-internet-domains/dafcf9ef-e875-4d68-83b1-232823d8aadf/?utm_term=.a645a444e70a, [Ex. JZ-15], at 1.

²³ "VeriSign buys Network Solutions in \$21 billion deal", *CNet*, January 2, 2002, available at <https://www.cnet.com/news/verisign-buys-network-solutions-in-21-billion-deal/>, [Ex. JZ-16].

²⁴ Postel Note, September 15, 1995, available at <https://web.archive.org/web/20020624231348/https://wia.org/pub/postel-iana-draft13.htm>, [Ex. JZ-17].

²⁵ Milton L. Mueller, *Ruling the Root*, [Ex. JZ-8], Sec. 6.3.2; David S. Hilzenrath, "Network Solutions Dropped as Registrar of Internet Domains", [Ex. JZ-15].

²⁶ David S. Hilzenrath, "Network Solutions Dropped as Registrar of Internet Domains", [Ex. JZ-15].

however, NSI did endorse the basic concept of introducing competition by adding new gTLDs to the root.

24. The urgent need for competition in the gTLD space was a position also endorsed by Jon Postel, who saw competition as a necessary step to prevent an abuse of monopolistic market power by NSI. Writing in 1996, he said:

What are the priorities here? My list is:

1. Introduce competition in the domain name registry business.
2. Everything else.

So lets [sic] focus on how to accomplish the top priority.

General observation: Changing things is hard, introducing separate new things is easier.²⁷

Postel's comment reflected his frustration with the development of how the DNS was being managed: NSI had leveraged its position as the sole source of generic domain names for private gain whereas Postel had managed the DNS as an academic in the public interest. Postel's concerns were reflected throughout the Internet community and NSI encountered a significant amount of criticism.²⁸ Notably, the president of the Internet Society ("ISOC"), Donald Heath, accused NSI of "tak[ing] the low road" and valuing its market position above what was in "the

²⁷ Postel Priorities, July 3, 1996, available at <https://web.archive.org/web/19970227141952/Http://www.iiia.org/lists/newdom/current/0233.html>, [Ex. JZ-18], at 1-2.

²⁸ According to *Ruling the Root*, "[a] rift was growing between Network Solutions and the Internet technical community. The community had reacted uncomfortably to the acquisition of the InterNIC registry by a multibillion-dollar defense contractor in March 1996. Many of its participants did not approve of the commercialization of domain names generally". Milton L. Mueller, *Ruling the Root*, [Ex. JZ-8], Sec. 6.3.2 (citation omitted).

best interest of the Internet”.²⁹ By 1997, the Internet community and the U.S. government were starting to consider proposals to break NSI’s monopoly.³⁰

6. THE ORIGIN OF THE NEW GTLD PROGRAM: DRAFT-POSTEL, THE GTLD-MOU, THE GREEN PAPER, AND THE WHITE PAPER

25. As noted above, Jon Postel was one of the first to suggest expanding the number of gTLDs as a mechanism to promote competition among registries. In 1996, Postel submitted a draft Request for Comment titled, “New Registries and the Delegation of International Top-Level Domains,” that became popularly known as the “**draft-postel**”.³¹ The draft proposed to create fifty new registries to compete with NSI and allow each to control three new gTLDs.³² Every year, ten new registries would be designated to manage new gTLDs in order to keep up with the demand for domain names.³³ Although the draft-postel was never adopted, it was the first of many proposals that suggested adding new gTLDs to the root as a means of introducing competition in the provision and supply of generic domain names.³⁴

26. Soon after the draft-postel was issued, eleven representatives from several Internet governance groups, led by ISOC and including Postel, formed the International Ad Hoc Committee (“**IAHC**”) to create a “global governance structure for the domain name system” as

²⁹ David S. Hilzenrath, “Network Solutions Dropped as Registrar of Internet Domains”, [Ex. JZ-15], at 2, “They’ve taken the low road and tried to protect their monopoly instead of taking a leadership role in the best interest of the Internet,” quoting Donald Heath.

³⁰ Milton L. Mueller, *Ruling the Root*, [Ex. JZ-8], Sec. 7.3.1.

³¹ Jon Postel, New Registries and the Delegation of International Top Level Domains, June 1996, *available at* <https://tools.ietf.org/html/draft-postel-iana-itld-admin-01>, [Ex. JZ-19], at 6.

³² *Id.*, at 13.

³³ Milton L. Mueller, *Ruling the Root*, [Ex. JZ-8], Sec. 6.3.2.

³⁴ *Id.*, Sec. 6.4.3.

an alternative to NSI.³⁵ The Committee’s ultimate proposal (the “gTLD-MOU”) differed from the draft-postel in that it planned to initially add only seven new gTLDs rather than hundreds and to create a “global monopoly registry” that would operate as a non-profit.³⁶ This registry would be owned by a group of registrars (the Council of Registrars (“CORE”))³⁷ that would share control over all of the gTLDs instead of dividing exclusive control of different gTLDs among various registries.³⁸

27. The gTLD-MOU was an important step for the Internet community. Before the gTLD-MOU, Internet governance groups had focused on developing technical standards, not policymaking. But it had become increasingly clear to members of the IAHC that the commercialization of Internet infrastructure, and NSI, in particular, posed a challenge to a free and open Internet. With the gTLD-MOU, the leaders of the Internet community recognized that policy neutrality was no longer a viable model and that they had to take a position that directly opposed NSI’s *existing* business model.³⁹ This should not be understood to reflect an opposition

³⁵ Other members of the IAHC were from the International Trademark Association, the World Intellectual Property Association, Intellectual property attorney, Keio University, Japan, WIDE Project, Telstra, Australia education and research Internet, IBM Israel, International Telecommunication Union, Internet Engineering Task Force, and the National Science Foundation. *See id.*, Sec. 7.1 (citation omitted).

³⁶ The gTLD-MoU defined a new role in the domain name registration process called a registrar in an attempt to separate the “wholesale” function of operating the registry database from the “retail” function of selling second-level domains to consumers. *Id.* A TLD’s registry is responsible for maintaining databases of all of the domain names allocated under that TLD. Registrars facilitate the process of selling domains within a TLD’s namespace to companies and individuals. A registry can serve as the registrar for the TLDs under its control, or it may delegate that function to other registrars (GoDaddy, etc.). In effect, registries function as domain name wholesalers whereas registrars function as consumer-facing retailers. *See* GoDaddy, *Domain Help: What is the difference between a registry, registrar and registrant?*, available at <https://www.godaddy.com/help/what-is-the-difference-between-a-registry-registrar-and-registrant-8039>, [Ex. JZ-20].

³⁷ Domain Names, *gTLD-MoU*, available at <https://cs.stanford.edu/people/eroberts/cs201/projects/1997-98/domain-names/proposals/gtldmou.html>, [Ex. JZ-21].

³⁸ Milton L. Mueller, *Ruling the Root*, [Ex. JZ-8], Sec. 7.1.

³⁹ *Id.*, Sec. 7.2.

to NSI in general. In fact, the IAHC publicly encouraged NSI to join the Council of Registrars so that it could fully participate in a new, more evenly distributed world of gTLD administration.⁴⁰

28. NSI, however, refused to participate in this effort to democratize the Internet's infrastructure.⁴¹ NSI thus walked away from the position of its former partner, the U.S. government. Up until the gTLD-MoU, the U.S. government had remained silent on struggles over domain name registration. However, the controversy over the gTLD-MoU, as well as the looming expiration of the NSF-NSI agreement, pushed a change of course.⁴² In 1997, the NSF announced that it did not intend to renew its agreement with NSI.

29. In a congressional subcommittee hearing, the deputy director of NSF, Joseph Bordogna, told the committee, "Today, the vast majority of domain name registrants are commercial interests whose activities go far beyond the research and education community that NSF is chartered to serve".⁴³ Bordogna later went on to emphasize that "the Internet community and others will eventually develop mechanisms to handle Internet registration without NSF's involvement".⁴⁴ In the same statement, Bordogna spoke highly of IAHC as one entity in the community that could address the domain name controversy, which IAHC Chair Donald Heath interpreted as support for IAHC's gTLD-MoU. "This is NSF's way of saying that domain names

⁴⁰ *Id.*, Sec. 7.1.

⁴¹ *Id.*, Sec. 7.2.1.

⁴² *Id.*, Sec. 7.4.

⁴³ Peyman Pejman, "NSF is tired of the name game", *GCN*, October 20, 1997, available at <https://gcn.com/articles/1997/10/20/nsf-is-tired-of-the-name-game.aspx>, [Ex. JZ-22], at 1, quoting Joseph Bordogna.

⁴⁴ "NSF bows out of domain names", *CNet*, April 23, 1997, available at <https://www.cnet.com/news/nsf-bows-out-of-domain-names/>, [Ex. JZ-23], at 1, quoting Joseph Bordogna.

should be handled by the IAHC,” said Heath.⁴⁵ Even without officially endorsing the gTLD-MoU, Bordogna made clear that NSF would no longer play a role in domain name assignment.

30. Once NSF decided against renewing the NSF-NSI agreement, Ira Magaziner, President Clinton’s chief Internet Policy Advisor, assumed responsibility to set policy regarding domain name assignment moving forward. Magaziner formed the Interagency Working Group (“**IWG**”) on domain names in March 1997. When NSF officially bowed out of its role overseeing management of the DNS, the working group, with the help of the U.S. Department of Commerce, designated the National Telecommunications and Information Administration (“**NTIA**”) to take NSF’s place and assist in determining what role the government should play in domain registration.⁴⁶

31. For Magaziner, NSI’s market dominance was a serious problem. He said in 1998 that for whatever solution was ultimately reached,

The goal should be to get NSI to a competitive playing field. I would welcome suggestions on how to create this competitive playing field, whereby other registries can compete and commence.⁴⁷

Magaziner further commented:

Right now, there already seems to be some consensus i.e. 1) people want the US government to move aside, 2) most agree that it should be a private not-for-profit organization and 3) most agree that NSI is a monopoly that should be ended and competition be introduced.⁴⁸

⁴⁵ *Id.*, quoting Donald Heath.

⁴⁶ ICANN, *ICANN History Project: Interview with Ira Magaziner*, October 19, 2017, video available at <https://www.icann.org/news/multimedia/3219>; Milton L. Mueller, *Ruling the Root*, [Ex. JZ-8], Sec. 7.4.2.

⁴⁷ Senki, *ICANN History – Transcript of an open meeting, APRICOT 98, Manila, Philippines (Part One)*, February 17, 1998, available at <http://www.senki.org/icann-history-apricot-98-part-1/>, [Ex. JZ-24], at 5.

⁴⁸ *Id.*, at 8.

Magaziner’s IWG on domain names and the NTIA did not have any alternative solutions. The NTIA issued a “Request for Comment on the Registration and Administration of Internet Domain Names” that asked “for comment on the appropriate principles to use to guide the transition and on the proper organizational framework, and for suggestions on specific issues such as new TLD creation, shared vs. exclusive top-level domains, and trademark protection”.⁴⁹ The NITA received over 430 comments between July and August of 1997,⁵⁰ which were incorporated into a Notice of Proposed Rulemaking, technically called “A Proposal to Improve the Technical Management of Internet Names and Addresses” but more commonly known as the “**Green Paper**”.⁵¹

32. The Green Paper, released in 1998, officially rejected the draft-postel and the gTLD-MoU, proposing instead that a new, private, non-profit organization be established and take on domain registration responsibility, gTLD creation, and management of the root. To the disappointment of the IAHC, the Green Paper firmly established U.S. government control over the DNS and the transfer of responsibility to the to-be-determined new entity. However, like the IAHC and Jon Postel, the Green Paper emphasized the need for competition in the new system.

33. The Green Paper expressly stated, “we believe that consumers will benefit from competition among market oriented registries. . .”;⁵² however, some of the comments received in response to the Green Paper indicated some disagreement about what form competition

⁴⁹ Milton L. Mueller, *Ruling the Root*, [Ex. JZ-8], Sec. 7.4.2.

⁵⁰ NTIA, Registration and Administration of Internet Domain Names -- Summary of Comments [Docket No. 97061337-7137-01], August 18, 1997, available at <https://www.ntia.doc.gov/other-publication/1997/registration-and-administration-internet-domain-names-summary-comments-docket>, [Ex. JZ-25], at 1-2.

⁵¹ Milton L. Mueller, *Ruling the Root*, [Ex. JZ-8], Sec. 7.5.

⁵² NTIA, Improvement of Technical Management of Internet Names and Addresses; Proposed Rule [Docket No. 980212036-8036-01], February 20, 1998, available at <https://www.ntia.doc.gov/federal-register-notice/1998/improvement-technical-management-internet-names-and-addresses-proposed->, [Ex. JZ-26], at 7.

among registries should take.⁵³ Specifically, there was a debate as to whether competitive registries should be made non-profit, in order to avoid the type of price-gouging and domain price bait-and-switch that made people concerned about NSI's business model in the first place.⁵⁴ In an effort to recognize that there was a lack of consensus and to gather more information, the Green Paper proposal planned to create five new gTLDs and assign each to a new registry. By adding only a small number of gTLDs and authorizing a limited number of new registries, the Green Paper authors hoped to conduct a low-risk experiment in registry competition.⁵⁵

34. The process of transitioning from the "God of the Internet" model to one with robust competition was inevitably going to be messy. Businesses, governments, and the public at large had all witnessed the Internet's growth and wanted to have a say.⁵⁶ As a result, the volume and variety of stakeholders was extraordinary, and there was no way that the Green Paper would be able to satisfy all or even most of them, as many stakeholder positions seemed to be directly at odds with one another. Some groups lamented the slight drift from the

⁵³ *Id.*: "Some have made a strong case for establishing a market-driven registry system. Competition among registries would allow registrants to choose among TLDs rather than face a single option. Competing TLDs would seek to heighten their efficiency, lower their prices, and provide additional value-added services. Investments in registries could be recouped through branding and marketing. The efficiency, convenience, and service levels associated with the assignment of names could ultimately differ from one TLD registry to another. Without these types of market pressures, they argue, registries will have very little incentive to innovate. Others feel strongly, however, that if multiple registries are to exist, they should be undertaken on a not-for-profit basis. They argue that lack of portability among registries (that is, the fact that users cannot change registries without adjusting at least part of their domain name string) could create lock-in problems and harm consumers. For example, a registry could induce users to register in a top-level domain by charging very low prices initially and then raise prices dramatically, knowing that name holders will be reluctant to risk established business by moving to a different top-level domain".

⁵⁴ *Id.*

⁵⁵ *Id.*: "On balance, we believe that consumers will benefit from competition among market oriented registries, and we thus support limited experimentation with competing registries during the transition to private sector administration of the domain name system".

⁵⁶ Milton L. Mueller, *Ruling the Root*, [Ex. JZ-8], Table 8.1.

theoretically more egalitarian, simple gTLD-MOU approach. Others simply resented the U.S. government's continued outsized role in the proposed processes.⁵⁷

35. The response to the Green Paper demonstrated to the U.S. government that it would better serve the cause by remaining in the background rather than leading the charge for change. In June 1998, after a series of negotiations with members of the Internet community and telecommunications companies, the Clinton Administration released a non-binding statement of policy titled, "The Management of Internet Names and Addresses," also known as the "**White Paper**".⁵⁸ Unlike the Green Paper, the White Paper did not dictate exactly how the new entity would function. Rather it left all major decisions, such as gTLD creation and the authorization of new registries, up to the yet-to-be-created organization.⁵⁹ Although the White Paper set general guidelines regarding the structure of the new organization, the authors refrained from establishing any set policy. Instead, the paper directed the private sector to produce a consensus-based proposal by the time that the NSI-NSF contract expired on September 30, 1998.⁶⁰ This approach largely removed the U.S. government from the process of creating what would become ICANN and pushed various stakeholders in the Internet community to come to some resolution on their own.

36. The release of the White Paper started conversations in the Internet community about the nature and policies of the new domain name registration entity. There were several

⁵⁷ *Id.*, Sec. 8.1.

⁵⁸ *Id.*

⁵⁹ NTIA, Statement of Policy on the Management of Internet Names and Addresses [Docket No. 980212036-8146.02], June 5, 1998, available at <https://www.ntia.doc.gov/federal-register-notice/1998/statement-policy-management-internet-names-and-addresses>, [Ex. JZ-27], at 23.

⁶⁰ Milton L. Mueller, *Ruling the Root*, [Ex. JZ-8], Sec. 8.1.3.

groups working on different proposals in parallel: The International Forum on the White Paper, IANA and ISOC, the Boston Working Group (an offshoot of the International Forum on the White Paper), Network Solutions (which later teamed up with IANA),⁶¹ and the Open Root Server Confederation. The lack of collaboration among these groups generated considerable tension and meant that the government's expectation that it would receive exactly one consensus-based proposal failed.⁶² Instead, the government received multiple proposals, each produced by a different group within the community.

37. One of these groups, IANA-NSI led by Jon Postel, had moved forward with its proposed bylaws and articles of incorporation and had formed an initial board of directors for an organization called a "new IANA," which was later renamed the Internet Corporation for Assigned Names and Numbers ("ICANN").⁶³ Because there was no consensus on any proposal, the government solicited comments from the community on all the proposals it received in an attempt to make the process as inclusive as possible.

38. In the end, the government chose Postel's plan with NSI for the "new IANA" called ICANN.⁶⁴ On November 25, 1998, ICANN signed a MoU with the Department of Commerce in

⁶¹ "New Internet Government Forged", *Wired*, September 17, 1998, available at <https://www.wired.com/1998/09/new-internet-government-forged/>, [Ex. JZ-28].

⁶² Milton L. Mueller, *Ruling the Root*, [Ex. JZ-8], Sec. 8.2.2.

⁶³ *Id.*, Sec. 8.2.

⁶⁴ *See id.*

which it agreed to take over DNS maintenance and name/number assignment functions.⁶⁵ And on December 24, 1998, ICANN officially assumed responsibility for the IANA function.⁶⁶

7. ICANN EMERGES, AND PROPOSES TO INTRODUCE NEW gTLDs AS A MEANS FOR CREATING COMPETITION

39. Once ICANN assumed responsibility, subject to its agreement with the NTIA, for performing the IANA functions, it quickly turned its attention to developing policies and programs that would introduce and promote competition for the provision and supply of generic domain names. Concerns about NSI specifically dominated the conversation. Mere months after ICANN's formation, Esther Dyson, the first Chairman of ICANN, accused NSI of attempting to thwart ICANN's initial efforts to introduce competition:

Of course, 'I want to protect my monopoly' is hardly an attractive slogan, and so NSI uses the language of democracy instead. In addition, [NSI] encourages and supports others who have a variety of reasons[,] economic, philosophical or political to be unhappy with the way the community consensus has formed.⁶⁷

40. Following the lead of its Chairman, ICANN took steps to reduce the influence of NSI on issues related to competition. These efforts took a variety of forms, but the first was to designate NSI as an accredited ICANN registry. Due to a renegotiation between the Department

⁶⁵ ICANN, Memorandum of Understanding between the U.S. Department of Commerce and Internet Corporation for Assigned Names and Numbers, November 25, 1998, *available at* <https://www.icann.org/resources/unthemed-pages/icann-mou-1998-11-25-en>, [Ex. JZ-29].

⁶⁶ ICANN, Transition Agreement between University of Southern California and Internet Corporation for Assigned Names and Numbers, February 25, 2012, *available at* <https://www.icann.org/resources/unthemed-pages/usc-icann-transition-2012-02-25-en>, [Ex. JZ-30].

⁶⁷ ICANN, Esther Dyson's Response to Ralph Nader's Questions, June 15, 1999, *available at* <https://www.icann.org/resources/unthemed-pages/dyson-response-to-nader-1999-06-15-en>, [Ex. JZ-31], at 2.

of Commerce and NSI, NSI remained the official gTLD registry. But as part of the new agreement, NSI was now required to allow nascent competing registrars to sell domain registrations.⁶⁸

41. Despite the entry of dozens of registrars, consumer choice at the retail registrar level did not create a competitive environment consistent with ICANN's Competition Mandate. Indeed, although ICANN's policies had greatly increased consumer choice at the registrar (retail) level, ICANN leadership continued to express concerns about the lack of competition at the registry (that is, wholesale) level. NSI was still the only gTLD registry and, in the growing consensus that was forming in the broader Internet community, the best way to introduce competition to NSI at the registry level was to create new gTLDs.⁶⁹

42. There was disagreement, however, about the number of new domains that should be created. Some argued that adding as many as 500 gTLDs would do more to increase competition whereas others worried that adding more than just a few domains would trigger trademark disputes and cause regulatory problems.⁷⁰ In response to the debate, the Domain

⁶⁸ As part of the new contract, NSI agreed to become an ICANN accredited registry and adhere to ICANN's policies and fees in exchange for continued operation as the registry for the .COM, .NET, and .ORG TLDs for four years. If NSI also separated its registry and registrar functions within the first 18 months of the arrangement, which would further break up its monopoly, NSI could extend its control of .COM, .NET, and .ORG for an additional four years or until ICANN designated a Successor Registry to assume NSI's responsibilities. Both parties also agreed not to "unreasonably restrain competition" and to re-evaluate the agreement if ICANN failed to recruit competing accredited registries or if NSI was "adversely affected from a competitive perspective". See ICANN, Registry Agreement between Internet Corporation for Assigned Names and Numbers and Network Solutions, Inc., November 10, 1999, *available at* <https://archive.icann.org/en/nsi/nsi-registry-agreement-04nov99.htm>, [Ex. JZ-32], at 4, 9; Prepared Testimony of Esther Dyson (Interim Chairman of the Board of Directors, ICANN), U.S. House of Representatives, Committee on Commerce, Subcommittee on Oversight and Investigations, July 22, 1999, *available at* <https://www.icann.org/resources/unthemed-pages/dyson-testimony-1999-07-22-en>, [Ex. JZ-33]; Milton L. Mueller, *Ruling the Root*, [Ex. JZ-8], Sec. 9.3.

⁶⁹ ICANN, ICANN Yokohama Meeting Topic: Introduction of New Top-Level Domains, June 13, 2000, *available at* <https://archive.icann.org/en/meetings/yokohama/new-tld-topic.htm>, [Ex. JZ-34], II(C) (at 5-8).

⁷⁰ ICANN, Report (Part One) of Working Group C (New gTLDs) Presented to Names Council, March 21, 2000, *available at* <https://archive.icann.org/en/dnso/wgc-report-21mar00.htm>, [Ex. JZ-35], at 3.

Name Supporting Organization (“DNSO”), a supporting organization of ICANN,⁷¹ created a working group to devise a compromise. The working group suggested “that a limited number of new top-level domains be introduced initially and that the future introduction of additional top-level domains be done only after careful evaluation of the initial introduction”.⁷² The group also proposed creating several different types of new domains including “fully open top-level domains, restricted and chartered top-level domains with limited scope, non-commercial domains and personal domains”.⁷³ The DNSO proposal proved persuasive to the larger ICANN Board, which ultimately “invite[d] expressions of interest from parties seeking to operate and/or sponsor any new TLD registry”.⁷⁴

43. In August 2000, ICANN began accepting applications from registries to operate new gTLDs. Throughout the application process, ICANN leadership emphasized that the introduction of new gTLDs was “a proof of concept” intended to explore the technical, business, and legal impact of adding new gTLDs to the root. The criteria for evaluating applications clearly indicated that ICANN was not only intent on introducing competition for NSI: evaluators were instructed to consider how likely it was that the proposed gTLD and registry would be competitive with existing gTLDs given their “proposed pricing and service levels”.⁷⁵ They were also

⁷¹ ICANN has three supporting organizations that were formed to advise the ICANN board of directors on issues directly related to their area of expertise. The three supporting organizations include: the Generic Names Supporting Organization (the successor to the DNSO), the Country Code Names Supporting Organization, and the Address Supporting Organization. See ICANN, *Groups*, February 6, 2012, available at <https://www.icann.org/resources/pages/groups-2012-02-06-en>, [Ex. JZ-36].

⁷² DNSO Names Council Statement on new gTLDs, April 19, 2000, available at <http://www.dnso.org/dnso/notes/20000419.NCgtlds-statement.html>, [Ex. JZ-37].

⁷³ *Id.*

⁷⁴ ICANN, ICANN Yokohama Meeting Topic: Introduction of New Top-Level Domains, [Ex. JZ-34], at 13.

⁷⁵ ICANN, Criteria for Assessing TLD Proposals, August 15, 2000, available at <https://archive.icann.org/en/tlds/tld-criteria-15aug00.htm>, [Ex. JZ-38], at 3.

encouraged to think about whether the proposed gTLD would meet a consumer need not currently addressed by existing gTLDs, how it might impact competition among registrars, and whether the new gTLD could have a broader negative impact on competition by, for example, “lead[ing] to lock-in of domain-name holders[] so that inter-TLD competition is constrained”.⁷⁶

44. ICANN received 47 applications for over 200 different gTLD strings by the deadline in October 2000.⁷⁷ The application review team prepared a report explaining their evaluation of each application given the aforementioned criteria. It is apparent from the report that the evaluators were most concerned with a given applicant’s ability to compete with .COM. For that reason, the evaluators favored more established entities such as Afilias, LLC and NeuStar, Inc. that could show that they had the resources to operate a larger, more competitive gTLD and were willing to charge a registration price that was comparable to fees⁷⁸ charged by VeriSign, which, as mentioned earlier, had recently agreed to acquire NSI.⁷⁹ Smaller entities were therefore less likely to be granted a gTLD because their limited resources made it less likely that they would be able to compete with VeriSign.

45. After careful consideration of all of the proposals, on November 16, 2000, ICANN announced seven new gTLDs and their registries:⁸⁰

⁷⁶ *Id.*

⁷⁷ ICANN, TLD Applications Lodged, October 2, 2000 (corrected through October 10, 2000), available at <https://archive.icann.org/en/tlds/tld-applications-lodged-02oct00.htm>, [Ex. JZ-39].

⁷⁸ VeriSign charged \$6 per year to register a .COM domain. See ICANN, Report on TLD Applications: Application of the August 15 Criteria to Each Category or Group, November 9, 2000, available at <https://archive.icann.org/en/tlds/report/report-iiib1a-09nov00.htm>, [Ex. JZ-40], at 12.

⁷⁹ *Id.*; “VeriSign buys Network Solutions in \$21 billion deal”, [Ex. JZ-16].

⁸⁰ ICANN, *Announcements: ICANN Announces Selections for New Top-Level Domains*, November 16, 2000, available at <https://www.icann.org/news/icann-pr-2000-11-16-en>, [Ex. JZ-41].

TLD	Operator(s)
.AERO	Societe Int'l de Telecommunications Aeronautiques SC, (SITA)
.BIZ	JVTeam, LLC
.COOP	National Cooperative Bus. Assn, (NCBA)
.INFO	Afilias, LLC
.MUSEUM	Museum Domain Management Association, (MDMA)
.NAME	Global Name Registry, Ltd.
.PRO	RegistryPro, Ltd.

8. .WEB IS THE BEST AND CLOSEST POTENTIAL COMPETITOR FOR VERISIGN

46. In addition to its high brand awareness, there are other reasons why .WEB is the strongest potential competitor of all new gTLDs: .WEB has a unique association with the Internet. The explosion in the mid 1990s of the World Wide Web⁸¹ lent massive semantic weight to the word “web”. As the public increasingly adopted web-based technology, “web” came to be something of a catch-all term for the services and technologies constituting the Internet as a whole.⁸² In the minds of many in the 1990s, everything from AOL to Compuserve was “on the web,” even if it had nothing to do with the web. It is worth noting, therefore, that the terminological power of “web” had and continues to have the potential to meaningfully compete with .COM as a standard-bearer for web-based entities.

⁸¹ While it is difficult to pinpoint the exact moment at which the World Wide Web was invented, it is the product of research and development originally conducted by Tim Berners Lee at CERN in the early 1990s. CERN, *Topic: The birth of the web*, available at <https://home.cern/topics/birth-web>, [Ex. JZ-42].

⁸² Milton L. Mueller, *Ruling the Root*, [Ex. JZ-8], Sec. 6.1.2.

47. At the time of the 2000 trial round, there was a lot of discussion about the purpose of .WEB. Many believed that .WEB would serve as an alternative to .COM because .COM still had a commercial connotation and .WEB could be used more broadly. On the message board where public commenters debated the merits of .WEB, one commenter listed eight reasons why the .WEB gTLD should be chosen:

Why .WEB ?

1. All inclusive (unlike .Mall, .Biz, .news, et)
2. Non controversial (Unlike .Sex, .XXX, .Aids, et)
3. Most recognized and well known prefix (unlike .nom, .wap, .ypi, .svc, etc)
4. Poses as a serious contender to the already depleted .com, .net, .org suffixes
5. .WEB registry has been in continuous operation since July 31, 1996
6. .WEB already holds a strong following and tremendous support all over the world, from Internet and non-Internet users
7. Image Online Design's .WEB application meets all of ICANN's criteria
8. Over 20,000 registrants have approved of .WEB a their TLD selection⁸³

Not only was .WEB thought to be one of the most generic of all potential gTLDs, its name was intrinsically related to the Internet, which, following the invention of the World Wide Web, was now commonly referred to as “**the Web**,” built around a series of “websites,” each with its own unique “web address”. As many argued at the time, and continue to do so today, .WEB, because

⁸³ ICANN, *Forum: Why IOD? Over 20,025 Reasons Why*, October 30, 2000, available at <https://forum.icann.org/tldapps/39FDEC910000D1C.html>, [Ex. JZ-43], at 1. .WEB was created in 1996 by Christopher Ambler of Image Online Design (“IOD”) specifically to compete with .COM. Ambler had launched a .WEB registry on an alternative root, and despite the limited appeal of that platform, had registered over 20,000 .WEB domains by 2000. Although IOD had applied for .WEB in 2000, ICANN had rejected IOD's application on the grounds that IOD was not equipped to operate a major registry that would be “a vigorous competitor with .com.” See ICANN, *Report on TLD Applications: Application of the August 15 Criteria to Each Category or Group*, November 9, 2000, available at <https://archive.icann.org/en/tlds/report/report-iiib1a-09nov00.htm>, [Ex. JZ-40].

of its strong association with the Web, would be a natural choice for users seeking to register a web address for their website, competing on equal footing with .COM.

48. Although Afilias had applied for and had been initially awarded .WEB in 2000, ICANN ultimately chose not award .WEB to Afilias, in part due to concerns about VeriSign's non-controlling ownership stake in Afilias. Indeed, certain Board members, including Chairman Dyson, had expressed some "queasiness" about awarding .WEB to an entity that was associated with VeriSign, the very entity that the .WEB registry was supposed to compete with.⁸⁴ Afilias was instead awarded .INFO, its second choice. Since that time, however, VeriSign has sold all of its equity in Afilias and there is no longer any ownership link between the two companies.

49. WEB would not be available for acquisition for another 12 years. In 2012, .WEB again attracted the most applications and the greatest interest from the community. Indeed, the strong association between .WEB and the Web was cited by multiple applicants for .WEB in 2012 as a reason why the proposed gTLD would be a strong competitor for VeriSign. For example, Web.com wrote:

In looking to expand the gTLD landscape beyond the existing robustness of gTLD offerings, an easy-to-remember and intuitively logical gTLD such as .web is a relevant addition. Consumers will instantly understand that a .web domain is an Internet website thereby ensuring quick adoption by users. Due to its ubiquitous nature, .web will compete directly with all gTLDs, both existing

⁸⁴ Patrick Thibodeau, ".com gets company; controversy flares," *Computer World*, November 20, 2000, available at <https://www.computerworld.com/article/2589104/enterprise-applications/-com-gets-company---controversy-flares.html>, [Ex. JZ-49], at 3 ("Particularly controversial was a proposal by Afilias LLC, an organization that includes 19 registrars, including Herndon, Va.-based Network Solutions Inc., the domain registration unit of VeriSign Inc., to run the registry for a .web domain. Dyson said the formation of the Afilias consortium could potentially impede competition among domain names. "The whole thing gives me a queasy feeling, is the short way to say it," she said.").

ones and others to be approved by ICANN. It has universal appeal to anyone looking to operate on the World Wide Web.⁸⁵

9. VERISIGN'S PRESUMPTIVE ACQUISITION OF .WEB RUNS COUNTER TO ICANN'S COMPETITION MANDATE AND IS INCONSISTENT WITH THE INTENT OF THE NEW GTLD PROGRAM

9.1 *The Meaning of ICANN's Competition Mandate*

50. As a U.S. government official testified in 2011, “[s]ince its inception in 1998, ICANN has been charged with promoting competition in the registration of domain names while ensuring the security and stability of the DNS”.⁸⁶ As former ICANN Chairwoman Esther Dyson would later recall during her Senate testimony at the same hearing: “***our primary mission was to break the monopoly of Network Solutions*** (which managed .com among other registries), first by separating the functions of registry (which manages the list of names in a particular top-level domain) and registrar (which resells second-level domain names to the public)”.⁸⁷ Yet, as Dyson conceded, even following ICANN’s separation of registry and registrar functions and two trial rounds of the New gTLD Program, “it’s fair to say that .com retained its first-mover advantage as by far the leading TLD”.⁸⁸ This view was shared by ICANN institutionally. In approving the New gTLD Program, the ICANN Board conceded that, “[t]o date, ICANN has not created meaningful competition at the registry level”.⁸⁹

⁸⁵ ICANN, New gTLD Application Submitted to ICANN by Web.com Group, Inc., Application ID: 1-1009-97005, June 13, 2012, [Ex. JZ-44], at 7.

⁸⁶ Statement of Fiona M. Alexander (Associate Administrator Office of International Affairs, National Telecommunications and Information Administration, U.S. Department of Commerce) at December 2011 Senate Hearing, [Ex. JZ-2], at 4. See also fn. 1, *supra*.

⁸⁷ Statement of Esther Dyson (Founding Chairman of ICANN, 1998-2000) (“**Dyson Statement**”) at December 2011 Senate Hearing, [Ex. JZ-2], at 46 (emphasis added).

⁸⁸ *Id.*

⁸⁹ ICANN Board Rationales for the Approval of the Launch of the New gTLD Program, June 21, 2011, [Ex. JZ-45], at 27.

51. For this reason, ICANN’s Competition Mandate required, and indeed envisioned, that ICANN must do more. Kurt Pritz, ICANN Senior Vice-President, testified at the U.S. Senate’s hearing on the New gTLD Program that the New gTLD Program was intrinsically intertwined with ICANN’s Competition Mandate: “The launch of the new gTLD program was part of ICANN’s founding mandate when it was formed by the U.S. Government over 12 years ago. That mandate is to introduce competition and choice into the domain name system in a stable and secure manner”.⁹⁰ Pritz would go on to specifically testify that the “founding mandate for ICANN, included within the United States Government’s ‘White Paper’ . . . is to create competition in the domain name market and specifically[] to ‘oversee policy for determining the circumstances under which new TLDs are added to the root system.’”⁹¹ ICANN’s Board agreed. In explaining its rationale to approve the launch of the New gTLD Program, the Board wrote:

The launch of the new gTLD program is in fulfillment of a core part of ICANN’s Bylaws: the introduction of competition and consumer choice in the DNS. . . . This decision represents ICANN’s continued adherence to its mandate to introduce competition in the DNS, and also represents the culmination of an ICANN community policy recommendation of how this can be achieved.⁹²

52. ICANN’s Board was crystal clear that the purpose of the New gTLD Program was to create competition for VeriSign. As the ICANN Board wrote in approving the launch of the full round of the New gTLD Program in 2011:

- “When ICANN was formed in 1998 . . . [its] purpose was to promote competition in the DNS marketplace, including by developing a process for the introduction of new generic top-level domains. . . . The introduction of new top-level domains into the DNS has thus been a fundamental part of ICANN’s mission from its

⁹⁰ Pritz Statement at December 2011 Senate Hearing, [Ex. JZ-2], at 8.

⁹¹ *Id.*, at 11.

⁹² ICANN Board Rationales for the Approval of the Launch of the New gTLD Program, [Ex. JZ-45], at 7.

inception, and was specified in ICANN's [MOU] with the U.S. Department of Commerce".⁹³

- "ICANN's Bylaws and other foundational documents articulate that the promotion of competition in the registration of domain names is one of ICANN's core missions. See ICANN Bylaws, Article 1, Section 2.6. One part of this mission is fostering competition by allowing additional Top Level Domains ("TLDs") to be created".⁹⁴
- "ICANN's mission statement and one of its founding principles is to promote competition. The expansion of gTLDs will allow for more innovation and choice in the Internet's addressing system".⁹⁵
- ICANN's "economic studies indicated that . . . the introduction of new gTLDs will bring benefits in the form of increased competition, choice and new services to Internet users".⁹⁶
- "A broad consensus was achieved [within the GNSO] that new gTLDs should be added to the root in order to stimulate competition further . . .".⁹⁷
- "[A]n important objective of the new [g]TLD process is to diversify the namespace, with different registry . . . models . . .".⁹⁸
- "[T]he addition of new gTLDs to the root in order to stimulate competition at the registry level[]".⁹⁹
- "The launch of the new gTLD program is anticipated to result in improvements to consumer choice and competition in the DNS".¹⁰⁰
- "New gTLDs would promote consumer welfare".¹⁰¹

⁹³ *Id.*, at 4.

⁹⁴ *Id.*, at 79.

⁹⁵ *Id.*, at 114.

⁹⁶ *Id.*, at 4.

⁹⁷ *Id.*, at 9.

⁹⁸ *Id.*, at 12.

⁹⁹ *Id.*, at 14.

¹⁰⁰ *Id.*, at 17.

¹⁰¹ *Id.*, at 119.

53. In its planning process for the New gTLD Program, ICANN retained Dennis Carlton, the former Deputy Attorney General for Economic Analysis for the Antitrust Division of the U.S. Department of Justice, to study ICANN's proposal to introduce new gTLDs as a means to "promote competition".¹⁰² Dr. Carlton opined that: "ICANN's plan to introduce new gTLDs is likely to benefit consumers by facilitating entry which would be expected to both bring new services to consumers and *mitigate market power associated with .com* and the other major TLDs and to increase competition".¹⁰³ Dr. Carlton's views are consistent with Ms. Dyson's interpretation of ICANN's Competition Mandate, namely that ICANN's "primary mission was to break the monopoly of Network Solutions".¹⁰⁴

54. ICANN's Competition Mandate, which is intrinsic to ICANN's mission, must therefore be considered and reflected in all significant decisions and actions taken by ICANN: given the choice, ICANN must pursue the option that "promotes" competition as opposed to an option that lessens competition or even simply preserves the status quo. As the ICANN Board observed:

ICANN's "default" position should be for creating more competition as opposed to having rules that restrict the ability of Internet stakeholders to innovate. New gTLDs offer new and innovative opportunities to Internet stakeholders.¹⁰⁵

¹⁰² ICANN, *Rationale for Board Decision on Economic Studies Associated with the New gTLD Program*, March 21, 2011, available at <https://www.icann.org/en/system/files/bm/rationale-economic-studies-21mar11-en.pdf>, [Ex. JZ-46], at 8.

¹⁰³ Dennis Carlton (Compass Lexecon), Report regarding ICANN's Proposed Mechanism for Introducing New gTLDs, June 5, 2009, available at <https://archive.icann.org/en/topics/new-gtlds/carlton-re-proposed-mechanism-05jun09-en.pdf>, [Ex. JZ-47], at ¶ 23 (emphasis added).

¹⁰⁴ Dyson Statement at December 2011 Senate Hearing, [Ex. JZ-2], at 46 (emphasis added).

¹⁰⁵ ICANN Board Rationales for the Approval of the Launch of the New gTLD Program, [Ex. JZ-45], at 62.

9.2 VeriSign's Presumptive Acquisition of .WEB Violates ICANN's Competition Mandate

55. As Esther Dyson succinctly summarized in her Senate testimony, ICANN's mission to promote competition has been specifically tied to breaking the NSI/VeriSign monopoly—with so far mixed results. Further to and as an intrinsic element of its Competition Mandate, ICANN created a process to add new gTLDs to the root: the New gTLD Program. The primary purpose of the New gTLD Program was create “meaningful competition at the registry level”.¹⁰⁶ By VeriSign's own survey, from the end of 2017, .COM had 131.9 million registrations. The next most popular gTLD is VeriSign's .NET at 14.5 million registrations or 11% of the size of the .COM registry.¹⁰⁷ The third most popular gTLD is .ORG, still predominately used by non-profits in accordance with its original purpose, with only 10.3 million registrations.¹⁰⁸

56. ICANN's procedures, decisions and actions taken in connection with its New gTLD Program therefore must be evaluated in the broader context of ICANN's Competition Mandate. In that regard, ICANN's decision to award the exclusive license to operate the .WEB registry to NDC/VeriSign is inconsistent with ICANN's obligations under its Competition Mandate. .WEB is the best and closest potential competitor to VeriSign. Allowing this unique asset to fall under VeriSign's control does nothing to promote competition. If anything, ICANN's proposed course of conduct will only strengthen VeriSign's market position, contrary to the objectives of the New gTLD Program.

¹⁰⁶ *Id.*, at 27.

¹⁰⁷ Verisign, Fourth Quarter 2017 Domain Report, *The Domain Name Industry Brief*, Vol. 15, Issue 1, February 2018, [Ex. JZ-48], at 2.

¹⁰⁸ *Id.*

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GLOSSARY

CORE – Council of Registries. An association of domain name registries originating from the gTLD-MoU.

DNS – Domain Name System. A distributed hierarchical database that functions as a directory for the Internet, mapping human-readable domain names to computer-readable numerical IP addresses. For example, an IP address for the Google search website at www.google.com is 216.58.193.196.

Domain name – A string of characters which defines a section of the Internet namespace. A domain name comprises a top level domain (TLD) (e.g., .com) and a unique second level domain (SLD) (e.g., google). Thus, “google.com” is the domain name for the Google search website.

DNSO – Domain Name Supporting Organization. An ICANN supporting organization which, among other activities, generated early proposals for gTLD expansion.

GNSO – Generic Names Supporting Organization. Successor to the DNSO. ICANN supporting organization responsible for monitoring and developing proposals for ICANN’s management of gTLDs.

gTLD – Generic Top-Level Domain (e.g., .COM, .NET, .WEB). Only gTLDs may be used by all users, regardless of geography and purpose. Some gTLDs may be less “generic” than others, such as location-specific gTLDs (e.g., .NYC); sponsored gTLDs made on behalf of a specific community (e.g., .EDU) or otherwise have limited relevance beyond a particular industry or subject (e.g., .WINE).

gTLD-MOU – Generic Top-Level Domain Memorandum of Understanding. A document prepared by the IAHC that proposed the introduction of new gTLDs as a mechanism for introducing competition for the provision and supply of generic domain names. Many of the principles and policies outlined in gTLD-MOU were formally embraced by the U.S. government in the Green Paper and the White Paper, as well as by ICANN in its New gTLD Program.

IAHC – International Ad Hoc Committee. A group formed from a wide range of Internet stakeholders including ISOC, IANA, and WIPO to create proposals for the introduction of new TLDs. While it was initially largely dismissed by the U.S. government, the group’s ultimate proposal (the gTLD-MoU) contained many of the principles that would later find a place in the Green Paper and White Paper, and, ultimately, the New gTLD Program.

IANA – Internet Assigned Numbers Authority. An ICANN affiliate responsible for the allocation of several key numerical identification and addressing systems, including IP addresses. Originally administered by Jon Postel, IANA traces its history to the early days of the pre-ICANN Internet.

ICANN – Internet Corporation for Assigned Names and Numbers. A non-profit founded in 1998 which, among other responsibilities, coordinates numerous aspects of the DNS. ICANN is also responsible for authorizing and managing the introduction of new gTLDs.

IETF – Internet Engineering Task Force. A group under the umbrella of the ISOC that develops Internet standards.

IOD – Image Online Design. A private company which has repeatedly claimed the rights to .WEB, running its own .WEB registry on an alternate root not approved by ICANN. It has repeatedly and unsuccessfully applied for ownership of the .WEB gTLD.

IP address – Internet Protocol address. A number assigned to a networked device which serves as its address on the Internet, allowing it to be identified and to send and receive web traffic.

ISOC – Internet Society. A group formed in 1992 to contribute to the development and governance of the Internet. Umbrella for the unincorporated Internet Engineering Task Force (IETF), which develops Internet standards.

IWG - Interagency working group. The government working group created by the U.S. Clinton Administration to set policy for domain name assignment.

Nameserver – A server within the DNS hierarchy which either provides the IP address corresponding to a domain name or otherwise points to another nameserver at a lower level of the hierarchy.

NSF – National Science Foundation. A U.S. government agency tasked with supporting scientific research and development efforts. Supported the development of the early Internet through grants and logistical coordination but abdicated its central role in Internet governance prior to the rise of ICANN.

NSI – Network Solutions, Inc. A technology company which held an NSF-sanctioned monopoly over domain name registration services from 1993 to 1998. Became the target of significant criticism from the Internet community and was acquired by VeriSign in 2000 for \$21 billion.

NTIA – National Telecommunications and Information Administration. A U.S. government agency tasked by the Clinton Administration with developing a plan for scalable and competition-friendly Internet governance. Its work led to the publication of the Green Paper and White Paper, which laid the groundwork for the introduction of ICANN.

Registry – The registry operator (such as VeriSign or Afilias) for a gTLD is responsible for maintaining a database of all domains allocated under that gTLD.

Registrar – A registrar contracts with one or more registries to sell domains within gTLD namespaces to individuals and organizations. A registry may act as its own registrar, or it may empower other registrars to sell domains within its namespace in exchange for compensation.

Registrant – A registrant is an individual or organization which contracts with a registrar to purchase control of a domain name for its use.

RFC – Request for Comment. A type of document published by the Internet Engineering Task Force to foster public discussion and deliberation on proposed changes or additions to the structures and protocols governing the Internet.

Root – The authoritative “root” of the Internet is a collection of mirrored servers administered by a range of governmental and civilian organizations. Root servers provide authoritative nameserver listings for gTLDs, pointing to the uppermost rung of the DNS hierarchy and allowing users to access domains within the namespaces of those gTLDs. In other words, an authoritative root nameserver would provide a user looking to access the Google search home page with instructions for accessing the “.com” nameservers, which would in turn provide instructions for accessing “google.com”. ICANN is responsible for managing the list of gTLDs in the root zone.

SLD – Second-Level Domain. The second highest rung in the DNS hierarchy, located to the left of the TLD string (e.g., the “example” in <https://www.example.com>).

TLD – Top-Level Domain. The uppermost rung in the DNS hierarchy, TLDs can be found at the rightmost end of a URL (e.g., the “com” in <https://www.example.com>). So that the DNS can function, the manager of a TLD’s registry is responsible for maintaining a database of the domains (such as “example,” in this case) registered under that TLD.

URL – Uniform Resource Locator. A structured identifier for referencing the location of a resource on the Internet (e.g., <https://www.example.com/page.html>). URLs can be used to retrieve web pages, files, and other types of content.

WIPO – World Intellectual Property Organization. A specialized agency of the United Nations tasked with supporting intellectual property rights on a global level. Participated as a stakeholder in debates surrounding Internet governance.

LIST OF EXHIBITS

Exhibit No.	Description
JZ-1	Jonathan Zittrain <i>Curriculum Vitae</i>
JZ-2	S. Hrg. 112-394, ICANN’s Expansion of Top Level Domains, Hearing before the Committee on Commerce, Science, and Transportation, U.S. Senate, 112 th Congress, First Session, December 8, 2011, <i>available at</i> https://www.gpo.gov/fdsys/pkg/CHRG-112shrg74251/html/CHRG-112shrg74251.htm
JZ-3	J.P.Morgan, <i>VeriSign (VRSN US): DoJ Clears Way for VRSN to Close .web Purchase</i> , January 10, 2018
JZ-4	Matthew Lasar, “Any lawful device: Revisiting Carterfone on the eve of the Net Neutrality vote”, <i>Ars Technica</i> , December 13, 2017, <i>available at</i> https://arstechnica.com/tech-policy/2017/12/carterfone-40-years/
JZ-5	Cricket Liu and Paul Albitz, <i>DNS and BIND</i> (5th ed. 2006)
JZ-6	Keith Shaw, “What is DNS and how does it work?”, <i>Network World</i> , April 11, 2018, <i>available at</i> https://www.networkworld.com/article/3268449/internet/what-is-dns-and-how-does-it-work.html
JZ-7	Jon Postel and J. Reynolds, Network Working Group, Request for Comments: 920, Domain Requirements, October 1984, <i>available at</i> https://tools.ietf.org/pdf/rfc920.pdf
JZ-8	Milton L. Mueller, <i>Ruling the Root: Internet Governance and the Taming of Cyberspace</i> (2006)
JZ-9	“Fallout over Unsanctioned DNS Test”, <i>Wired News Report</i> , May 2, 1999, <i>available at</i> https://www.wired.com/1998/02/fallout-over-unsanctioned-dns-test/
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JZ-11	Heather N. Mewes, “Memorandum of Understanding on the Generic Top-Level Domain Name Space of the Internet Domain Name System”, 13(1) <i>Berkeley Technology Law Journal</i> 235 (1998)
JZ-12	ICANN, Cooperative Agreement between NSI and U.S. Government, Agreement No. NCR-9218742, January 1, 1993, <i>available at</i> https://archive.icann.org/en/nsi/coopagmt-01jan93.htm

Exhibit No.	Description
JZ-13	Craig Simon, The Technical Construction of Globalism: Internet Governance and the DNS Crisis, A case study for <i>Bandwidth Rules</i> , October 1998, available at https://web.archive.org/web/20000815211830/http://www.flywheel.com/ircw/dnsdraft.html
JZ-14	ICANN's Early Days, <i>ICANN History Project</i> , available at https://www.icann.org/en/history/early-days
JZ-15	David S. Hilzenrath, "Network Solutions Dropped as Registrar of Internet Domains", <i>The Washington Post</i> , April 24, 1997, available at https://www.washingtonpost.com/archive/business/1997/04/24/network-solutions-dropped-as-registrar-of-internet-domains/dafcf9ef-e875-4d68-83b1-232823d8aadf/?utm_term=.a645a444e70a
JZ-16	"VeriSign buys Network Solutions in \$21 billion deal", <i>CNet</i> , January 2, 2002, available at https://www.cnet.com/news/verisign-buys-network-solutions-in-21-billion-deal/
JZ-17	Postel Note, September 15, 1995, available at https://web.archive.org/web/20020624231348/https://wia.org/pub/postel-iana-draft13.htm
JZ-18	Postel Priorities, July 3, 1996, available at https://web.archive.org/web/19970227141952/Http://www.iiia.org/lists/newdom/current/0233.html
JZ-19	Jon Postel, New Registries and the Delegation of International Top Level Domains, June 1996, available at https://tools.ietf.org/html/draft-postel-iana-itld-admin-01
JZ-20	GoDaddy, <i>Domain Help: What is the difference between a registry, registrar and registrant?</i> , available at https://www.godaddy.com/help/what-is-the-difference-between-a-registry-registrar-and-registrant-8039
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JZ-22	Peyman Pejman, "NSF is tired of the name game", <i>GCN</i> , October 20, 1997, available at https://gcn.com/articles/1997/10/20/nsf-is-tired-of-the-name-game.aspx
JZ-23	"NSF bows out of domain names", <i>CNet</i> , April 23, 1997, available at https://www.cnet.com/news/nsf-bows-out-of-domain-names/
JZ-24	Senki, ICANN History – Transcript of an open meeting, APRICOT 98, Manila, Philippines (Part One), February 17, 1998, available at http://www.senki.org/icann-history-apricot-98-part-1/

Exhibit No.	Description
JZ-25	NTIA, Registration and Administration of Internet Domain Names -- Summary of Comments [Docket No. 97061337-7137-01], August 18, 1997, <i>available at</i> https://www.ntia.doc.gov/other-publication/1997/registration-and-administration-internet-domain-names-summary-comments-docket
JZ-26	NTIA, Improvement of Technical Management of Internet Names and Addresses; Proposed Rule [Docket No. 980212036-8036-01], February 20, 1998, <i>available at</i> https://www.ntia.doc.gov/federal-register-notice/1998/improvement-technical-management-internet-names-and-addresses-proposed-
JZ-27	NTIA, Statement of Policy on the Management of Internet Names and Addresses [Docket No. 980212036-8146.02], June 5, 1998, <i>available at</i> https://www.ntia.doc.gov/federal-register-notice/1998/statement-policy-management-internet-names-and-addresses
JZ-28	"New Internet Government Forged", <i>Wired</i> , September 17, 1998, <i>available at</i> https://www.wired.com/1998/09/new-internet-government-forged/
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JZ-30	ICANN, Transition Agreement between University of Southern California and Internet Corporation for Assigned Names and Numbers, February 25, 2012, <i>available at</i> https://www.icann.org/resources/unthemed-pages/usc-icann-transition-2012-02-25-en
JZ-31	ICANN, Esther Dyson's Response to Ralph Nader's Questions, June 15, 1999, <i>available at</i> https://www.icann.org/resources/unthemed-pages/dyson-response-to-nader-1999-06-15-en
JZ-32	ICANN, Registry Agreement between Internet Corporation for Assigned Names and Numbers and Network Solutions, Inc., November 10, 1999, <i>available at</i> https://archive.icann.org/en/nsi/nsi-registry-agreement-04nov99.htm
JZ-33	Prepared Testimony of Esther Dyson (Interim Chairman of the Board of Directors, ICANN), U.S. House of Representatives, Committee on Commerce, Subcommittee on Oversight and Investigations, July 22, 1999, <i>available at</i> https://www.icann.org/resources/unthemed-pages/dyson-testimony-1999-07-22-en
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Exhibit No.	Description
JZ-35	ICANN, Report (Part One) of Working Group C (New gTLDs) Presented to Names Council, March 21, 2000, <i>available at</i> https://archive.icann.org/en/dnso/wgc-report-21mar00.htm
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JZ-39	ICANN, TLD Applications Lodged, October 2, 2000 (corrected through October 10, 2000), <i>available at</i> https://archive.icann.org/en/tlds/tld-applications-lodged-02oct00.htm
JZ-40	ICANN, Report on TLD Applications: Application of the August 15 Criteria to Each Category or Group, November 9, 2000, <i>available at</i> https://archive.icann.org/en/tlds/report/report-iiib1a-09nov00.htm
JZ-41	ICANN, <i>Announcements: ICANN Announces Selections for New Top-Level Domains</i> , November 16, 2000, <i>available at</i> https://www.icann.org/news/icann-pr-2000-11-16-en
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JZ-44	ICANN, New gTLD Application Submitted to ICANN by Web.com Group, Inc., Application ID: 1-1009-97005, June 13, 2012
JZ-45	ICANN Board Rationales for the Approval of the Launch of the New gTLD Program, June 21, 2011
JZ-46	ICANN, <i>Rationale for Board Decision on Economic Studies Associated with the New gTLD Program</i> , March 21, 2011, <i>available at</i> https://www.icann.org/en/system/files/bm/rationale-economic-studies-21mar11-en.pdf
JZ-47	Dennis Carlton (Compass Lexecon), Report regarding ICANN's Proposed Mechanism for Introducing New gTLDs, June 5, 2009, <i>available at</i> https://archive.icann.org/en/topics/new-gtlds/carlton-re-proposed-mechanism-05jun09-en.pdf
JZ-48	Verisign, Fourth Quarter 2017 Domain Report, <i>The Domain Name Industry Brief</i> , Vol. 15, Issue 1, February 2018

Exhibit No.	Description
JZ-49	Patrick Thibodeau, “.com gets company; controversy flares”, <i>Computer World</i> , November 20, 2000, <i>available at</i> https://www.computerworld.com/article/2589104/enterprise-applications/-com-gets-company---controversy-flares.html