

VIII. Consumer Trust

Background

The Review Team sought to determine the extent to which the increase in the number of gTLDs has promoted consumer trust.¹ As with our findings about competition and consumer choice issues, we are still in the early stages of the New gTLD Program and hence our data reflects an early look, rather than a long-term assessment of the program. To examine the impact of the New gTLD Program on consumer trust, among other issues, ICANN commissioned the Nielsen company to survey global online consumers and global domain name registrants. To avoid confusion between the CCTRT's broad definition of "consumer" and the narrower segment of internet users surveyed in ICANN's Global Consumer Surveys, we refer to the latter group as "consumer end users." Two surveys of each group were taken approximately one year apart between 2015 and 2016. These surveys aimed at assessing the current TLD landscape, as well as measuring factors such as consumer awareness, experience, choice, and trust in new TLDs and the Domain Name System in general. Reports on the results of the consumer end-user survey were published in April 2015 and June 2016, and reports on the results of the registrant surveys were published in September 2015 and August 2016.² Nielsen directed its "consumer" survey at global internet users who spent more than five hours per week on the internet and its "registrant" survey at the primary decision makers that registered a domain name.³ Based on this data, we identified two primary factors relevant to the public's trust of gTLDs: familiarity and security. The concept of "familiarity" includes the awareness and reputation of the gTLD. The concept of "security" includes concerns about DNS abuse and expectations about restrictions concerning who can register a domain name within a particular gTLD.

Typically, awareness is the most basic knowledge of a domain name extension. Familiarity can be considered a higher level of awareness; more experience and understanding about a particular domain name extension. In addition to providing data on aspects of awareness of gTLDs, the global consumer end-user and registrant surveys also asked consumers about the level of their trust in new gTLDs as compared to that of legacy gTLDs and their comfort levels with providing certain types of sensitive information to new gTLDs as compared to legacy gTLDs. The following discussion sets forth the most pertinent findings from those studies.

Awareness and Visitation

¹ For the purposes of our review, we recognized that "consumers" (typically, a natural person, acting primarily for personal, family or household purposes) generally fall into two categories: (i) Internet Users and other market participants who make use of domains through DNS resolution, such as by navigating to a URL or sending an e-mail; and (ii) Registrants (and potential registrants), which may, depending on the context, include individuals, businesses, and government agencies.

² Nielsen, *Consumer Research* (2015); Nielsen, *Consumer Research Wave 2* (2016); Nielsen, *Registrant Survey* (2015); Nielsen, *Registrant Survey Wave 2* (2016). Statistical significance test results in the Nielsen surveys are reported at a 95% confidence interval. Although differences in the results of the surveys between 2015 and 2016 reported below are small in many cases and not all are statistically significant, the Review Team nonetheless views the survey data as useful information for its analysis of consumer trust in new gTLDs (results of the significance tests can be found in the respective Nielsen reports). The Review Team recognizes that further study of consumer trust will be required to compare these early measures with the results of future surveys.

³ Nielsen, *Consumer Research Wave 2* (2016), p.3; Nielsen, *Registrant Survey Wave 2* (2016), p. 4.

In terms of awareness, the logical predecessor to familiarity, the ICANN Global Consumer Survey found that consumer end-user “total awareness” of new gTLDs increased from 46% to 52% between 2015 and 2016.⁴ Total awareness of new gTLDs by registrants was higher than awareness for consumer end users and remained stable, showing no statistically significant change between 2015 (66%) and 2016 (64%).⁵ Interestingly, consumer end-user and registrant awareness of any new gTLDs specified in the survey was higher in the Asian, African, and South American regions than it was in North America and Europe.⁶ As one might expect, total awareness of new gTLDs is lower than that of legacy gTLDs, which have total consumer end-user and registrant awareness levels of 98% or more in both 2015 and 2016.⁷

Nielsen also found that consumer end users do not visit new gTLDs as often as they do legacy gTLDs. Comparing visitation rates between highly known legacy gTLDs (.com, .net, .org) and specified new gTLDs (.email, .photography, .link, .guru, .realtor, .club, .xyz), the data showed that in 2015, 71% of consumer end users visited a legacy gTLDs in the “high” category vs. 15% of consumer end users that visited specified new gTLDs (.email, .photography, .link, .guru, .realtor, .club).⁸ In 2016, an even higher percentage of consumer end users reported visiting these same legacy gTLDs (81%), while the number of consumer end users visiting the specified new gTLDs was down slightly (12%).⁹ When additional new gTLDs were added to the survey questions in 2016 (.news, online, .website, .site, .space, .pics, .top), the reported visitation rate was 15%.¹⁰ Generally speaking, the average visitation rates for new gTLDs were closest to the rates reported for legacy gTLDs in the moderately known categories (.info, .biz), 22% in 2015 and 27% in 2016.¹¹

[Expectations about Relationship of gTLD Name to Websites Using That gTLD](#)

The surveys indicated that the public expected a connection between the name of a gTLD and the websites associated with that gTLD. Fifty-five percent of consumer end users surveyed expected “a very clear relationship” between domain names and websites registered under those domain names.¹² In addition, 79% of consumer end users also expect that the actual use of the domain name to be

⁴ Nielsen, *Consumer Research Wave 2* (2016), p. 42 (for “consistent” gTLDs listed in both 2015 and 2016 surveys).

⁵ Nielsen, *Registrant Survey Wave 2* (2016), p. 12.

⁶ Nielsen, *Consumer Research Wave 2* (2016), p.42; Nielsen, *Registrant Survey Wave 2* (2016), p. 42.

⁷ Nielsen, *Consumer Research Wave 2* (2016), p. 8; Nielsen, *Registrant Survey Wave 2* (2016), p. 12.

⁸ Nielsen, *Consumer Research Wave 2* (2016), p.7.

⁹ *Ibid.*, p.7. Note these are averages of regional responses. Statistical significance of regional results in 2015 and 2016 can be found on p. 15 for legacy gTLD visitation and pp. 46-47 for new gTLD visitation.

¹⁰ *Ibid.*, p.7.

¹¹ *Ibid.*, p.7.

¹² Nielsen, *Consumer Research Wave 2* (2016), pp. 9, 50. The survey asked the following question: “Think about accessing a website with one of the newer domain extensions (the part after the “dot”). If the domain name extension in question is descriptive of a service or item, would you expect that all websites using that domain extension have a direct relationship to it? For example, if you go to .bank, would you expect to see registrations by banks across the globe? If you go to .paris do you expect to see domain names connected to the city of Paris? If you go to .film do you expect to see content related to films?” *Id.* at appended survey question Q890, p. 20.

consistent with the meaning of the gTLD.¹³ This issue relates to another question posed in the surveys: Why websites have different extensions? A majority of registrants believed that websites have different extensions to “properly identify the purpose or owner or to give an indication of content or function.”¹⁴ Nevertheless, when asked about how much attention consumer end users pay to a domain extension, the survey reported that 29% reported “they don’t pay much attention,” 34% only visit sites with “familiar” domains, and 37% base their visitation upon search engine results.¹⁵ This finding is consistent with another reported result, that the public’s preferred way of finding a website is with search engines.¹⁶ The consumer end-user survey indicated that in 2016, 67% of consumer end users preferred to use a search engine to find a website as compared to 20% that indicated that they preferred to type the domain name directly into a browser.¹⁷ Registrants also reported a preference for using search engines to find websites and also identified search engines as the leading method that they use to find out more information about gTLDs.¹⁸

When asked what makes domain extensions trustworthy, consumer end users reported that reputation and familiarity played key roles.¹⁹ In the related topic of why consumer end users visit gTLDs, Nielsen found that consumer end users choose to visit sites based upon relevance of the gTLD to the information they seek. Consumer end users also tend to visit sites with which they are already familiar.²⁰ Interestingly, registrants may presume familiarity *and trust* of certain domains based on the name (such as a reference to a prominent city) regardless of whether the gTLD has actually been delegated.²¹ Conversely, the public may experience discomfort visiting sites with unfamiliar gTLDs.²² When deciding whether to visit a website with an unfamiliar gTLD, consumer end users look to usage (their own prior usage or the popularity of the website), site appeal or interest, and reputation (good reviews, recommendation, etc.).²³

¹³ Ibid, p.27. In relation to legacy gTLDs, the survey asked respondents to answer “yes” or “no” as to whether they felt that certain restrictions on registration of a gTLD should be enforced. The reported result relates to the following restriction: “[r]equirements for use of the name to be consistent with the meaning of the gTLD (e.g., use of a .net name must be for network operations purposes).” See appended survey question Q767, p. 16.

¹⁴ Nielsen, *Registrant Survey Wave 2* (2016), pp. 25-26.

¹⁵ Nielsen, *Consumer Research Wave 2* (2016), p.54.

¹⁶ Ibid, p.77.

¹⁷ Ibid, p.77.

¹⁸ Nielsen, *Registrant Survey Wave 2* (2016), pp.102, 32.

¹⁹ Nielsen, *Consumer Research Wave 2* (2016), pp.19-20. See also pp. 56-57. Survey respondents indicated that relevance and appeal of information are significant factors in determining whether an unfamiliar domain extension feels trustworthy. The respondents inserted these results in a text box. See also: NCC Group (2016), *Trust in the Internet Survey*, accessed 7 February 2017, <https://www.nccgroup.trust/globalassets/resources/uk/surveys-and-reports/2016/trust-in-the-internet-survey-2016-discussion-paper/>, p. 5. More than 50% of those surveyed identify the following as a factor that would increase their confidence in new domains: “Brand/company clearly communicates the steps to take to secure your personal information within the website.” We note that it appears this study was commissioned by an entity that has a business interest in marketing both cyber- security products and the .trust domain.

²⁰ Nielsen, *Consumer Research* (2015), pp. 8, 18, 36.

²¹ Nielsen, *Registrant Survey Wave 2* (2016), p. 39.

²² NCC Group, *Trust in the Internet Survey* (2016), p. 3. In 2016, 52% of those surveyed reported feeling “not very or not at all comfortable” visiting websites with new domains.

²³ Nielsen, *Consumer Research Wave 2* (2016), pp. 38.

Public Trusts Legacy gTLDs More Than New gTLDs

The survey data shows that both consumer end users and registrants trust new gTLDs less than they do legacy gTLDs. In both 2015 and 2016, consumer end users reported trusting specified new gTLDs approximately only half as much as specified legacy gTLDs.²⁴ For example, in 2015, consumer end users found 90% of specified legacy gTLDs to be very/or somewhat trustworthy but only 49% of specified new gTLDs were found to be very/somewhat trustworthy.²⁵ Results were similar in 2016, with consumer end users reporting that 91% found specified legacy gTLDs to be very/somewhat trustworthy, whereas 45% found new gTLDs to be very/somewhat trustworthy. In Wave 2 of the consumer end user survey, Nielsen added certain specified new gTLDs to its survey question, the percentage of new gTLDs that consumer end users found to be very/somewhat trustworthy rose to 52% for the added new gTLDs.²⁶ When surveyed about specific new gTLDs, consumer end-user responses varied depending upon the particular gTLD and the consumer's region.²⁷ For example, approximately half the consumer end-users surveyed reported high levels of trust for .news, .photography, .email, and .realtor with .news seen as the most trustworthy across all regions.²⁸ When asked similar questions about specified legacy gTLDs, over 70% of consumer end-users across all regions rated .com, .org, and .net as very/somewhat trustworthy.²⁹

Compared to consumer end users, registrants consistently report higher levels of trust for specified gTLDs but still report lower levels of trust for new gTLDs when compared to legacy gTLDs.³⁰ Registrants associate the term "trustworthy" with legacy gTLDs more than they do with new gTLDs. For example, in 2015, 83% of registrants associated the term "trustworthy" with legacy gTLDs compared to a rate of 58% for new gTLDs.³¹ In 2016, 79% of registrants viewed legacy gTLDs as "trustworthy" compared to 60% for new gTLDs.³²

This increase in the rates of trust for new gTLDs by registrants is also reflected in data regarding individual new gTLDs. For example, for the most trusted new gTLD surveyed over both waves – .email – 68% of registrants viewed this domain as "somewhat/very trustworthy" as compared to approximately 62% of consumer end-users.³³

Consumer Behavior That Indicates Trust

In addition to surveying the public about their subjective views on trust, Nielsen also gathered data about behavior that could indicate trust, such as willingness to provide sensitive information to

²⁴ Nielsen, *Consumer Research* (2015), pp. 9, 40; Nielsen, *Consumer Research Wave 2* (2016), p. 9. Note the referenced figures are based on averages of regional responses. Statistical significance for changes in trustworthiness from 2015 to 2016 for selected gTLDs can be found on p. 55 of the Wave 2 Study.

²⁵ Nielsen, *Consumer Research* (2015), pp. 9, 40. Specified legacy gTLDs: .com, .net, .org; specified new gTLDs: .email, .photography, .link, .guru, .realtor, .club; .xyz.

²⁶ Nielsen, *Consumer Research Wave 2* (2016), p. 9. Added new gTLDs (.news, online, .website, .site, .space, .pics, .top).

²⁷ Ibid, p. 55.

²⁸ Ibid, p. 55.

²⁹ Ibid, p. 18.

³⁰ Nielsen, *Registrant Survey Wave 2* (2016), p. 64. Compare trustworthiness percentages for legacy gTLDs reported on p. 27 to legacy gTLDs p. 66.

³¹ Ibid, pp.27 and 66 show trustworthiness percentages.

³² Ibid, pp.27 and 66 show trustworthiness percentages.

³³ Nielsen, *Registrant Survey Wave 2* (2016), p.64.

websites associated with new gTLDs. To a certain extent, these results were similar to differences between consumer end users' trust of new gTLDs and legacy gTLDs. For example, when asked whether they felt "very/somewhat comfortable" providing financial information to websites in the .com legacy gTLDs, 62% of consumer end users responded affirmatively compared to with only 36% when asked this same question regarding new gTLDs.³⁴

Results for other types of personal information, showed lower comfort levels when consumer end users were asked about providing sensitive information to new, versus legacy, gTLDs.³⁵ In fact, consumer end users tended to respond that they were "not very comfortable" with providing sensitive information to new gTLDs.³⁶ Related to these findings, another survey on trust in the internet reflected the public's increasing concerns regarding stolen credit card/financial information; online security; protection and security of credit card and personal information.³⁷

Registration Restrictions Contribute to Trust

The ICANN Global surveys indicated that the public expects certain restrictions about who can purchase domain names and trusts that these restrictions will be enforced.³⁸ The survey results also indicated that the presence of such restrictions contributed to consumer trust.³⁹ These results applied to all gTLDs and the percentage of the consumer end users who reported that restrictions contributed to consumer trust increased from 56% in 2015 to 70% in 2016.⁴⁰ For example, the consumer end-user surveys indicated that over 70% of those surveyed not only trusted entities that offer domain names to take precautions about who gets a domain name, they also trusted entities that offer domain names to screen individuals or companies who register for certain special domain names.⁴¹ Moreover, over 80% of consumer end users expected the enforcement of restrictions such as requiring validation that the person/company registering site meets intended parameters and requiring validated credentials related to the gTLD.⁴²

Focusing on new gTLDs, an increasing percentage of consumer end users (73%) expected at least some level of restriction on registrations in specified new gTLDs.⁴³ Registrants also favored restrictions but were generally more opposed to restrictions than consumer end users.⁴⁴ However, when put in context of validating certain characteristics that are in keeping with the intended or implied use of the gTLD (such as a contractor's license for .builder), three out of four registrants approved of such restrictions.⁴⁵

³⁴ Nielsen, *Consumer Research Wave 2* (2016), p. 90. The survey did not specify which new gTLD and asked "Please think about two websites. One has a .com domain extension and one has one of the new gTLDs like .club or .bank. How comfortable would you be doing each of these activities on each website?" See appended survey question Q1145, p. 31.

³⁵ Ibid, p. 90.

³⁶ Ibid, p. 90.

³⁷ NCC Group, *Trust in the Internet Survey* (2016), p. 2.

³⁸ Nielsen, *Consumer Research Wave 2* (2016), pp. 9, 13, 26-27, 65; Nielsen, *Registrant Survey Wave 2* (2016), pp. 14, 18, 30, 68.

³⁹ Nielsen, *Consumer Research* (2015), pp. 9, 26; Nielsen, *Consumer Research Wave 2* (2016), pp. 9, 13, 26.

⁴⁰ Nielsen, *Consumer Research Wave 2* (2016), p. 9.

⁴¹ Nielsen, *Consumer Research* (2015), p. 49.

⁴² Nielsen, *Consumer Research Wave 2* (2016), p. 27.

⁴³ Nielsen, *Consumer Research Wave 2* (2016), p. 9. This figure is up from 67% in 2015.

⁴⁴ Nielsen, *Registrant Survey Wave 2* (2016), p. 67.

⁴⁵ Ibid, p. 14.

For context, both consumer end users and registrants also expected restrictions on registrations in legacy gTLDs.⁴⁶

Consumer Trust in the Domain Name System Overall Since the Introduction of New gTLDs

Wave 1 of the Global Survey found that about half of consumer end users trusted the Domain Name industry just as much as they did other tech industries (Internet Service Providers, software companies, computer/hardware companies, e-commerce, and web-based marketing companies) and the rest are more inclined to trust it more as opposed to less⁴⁷ Consumer end users in Africa, Asia, and South America had higher levels of trust than consumer end users in other regions.⁴⁸ Reputation was the factor cited most as the reason some consumer end users trusted the DNS more than they did other tech industries; it was also cited as the reason some consumer end users trusted the DNS less than other industries.⁴⁹ Wave 2 of the survey found that trust levels had at least remained the same since 2015.⁵⁰ The global total seemed to improve against all of the five reference industries, wave over wave, by an average of just over four percentage points.⁵¹ At this point, with only a year between the two reports on a nascent market, it is not possible to conclude with certainty that these levels had in fact improved; [we therefore recommend periodically conducting further registrant surveys as discussed in Recommendation 13 in order to better understand both why some TLDs are trusted more than others and how trust in new gTLDs and the DNS in general evolves over time](#). The survey of registrants found positive results similar to those found in the consumer segment when it comes to trust in the domain name industry relative to other industries.⁵² General reputation and self-interest drive trust.⁵³ Registrants expected the industry to adhere to practices that protect their own interests and commonly note security protocols, as well as just a general positive reputation, as factors that promote trust.⁵⁴ Those who trust less cite poor security and regulations, as well as general reputational issues like a lack of transparency regarding business practices.⁵⁵

Conclusions

The global consumer end-user and registrant surveys indicate that the release of hundreds of new gTLDs does not appear to have had a negative impact on overall trust in the DNS. Looking at trust of new gTLDs specifically, the survey found that while consumer end users do not trust new gTLDs nearly as much as they do legacy gTLDs, the trust levels appear to be stable over both waves of the Global Surveys with registrants reporting slightly higher trust levels than consumer end users. Finally, a majority of both registrants and consumer end users expected gTLD registration restrictions, trust that such restrictions will be enforced, and associate such restrictions with an increase in trustworthiness.

⁴⁶ Nielsen, *Consumer Research Wave 2* (2016), p. 9; Nielsen, *Registrant Survey Wave 2* (2016), p. 29.

⁴⁷ Nielsen, *Consumer Research* (2015), p. 50.

⁴⁸ Ibid, p. 50.

⁴⁹ Nielsen, *Consumer Research Wave 2* (2016), p. 66.

⁵⁰ Ibid, pp. 63-64.

⁵¹ Ibid, pp. 63-64.

⁵² Nielsen, *Registrant Survey* (2015), p. 67. In Asia registrants say they hold comparatively higher trust in the domain name industry compared to other regions.

⁵³ Nielsen, *Registrant Survey Wave 2* (2016), pp. 77,79.

⁵⁴ Ibid, pp. 77,79.

⁵⁵ Ibid, pp. 77, 81-82.

Recommendations

Recommendation 13: Conduct periodic end-user consumer surveys

Rationale/related findings: We are still in the early days of the new gTLD program. In order to further analyze both the topic of consumer choice and consumer trust, we must continue to survey end-user registrants in order to understand their behavior and motivations.

To better understand issues of consumer trust it is also important to understand why they choose to visit some TLDs but not others; whether the TLD's registration policies influence the choice of whether or not to visit; and whether consumers behavior on certain websites indicate varying levels of trust across TLDs.

For consumer choice, the survey should allow a relative weighting of the potential contributions to consumer choice with respect to geographic name gTLDs, specific sector gTLDs and Internationalized Domain Name (IDN) gTLDs should help determine whether there is a clear preference by consumers for different types of gTLDs and whether there are regional differences or similarities in their preferences.

To: ICANN organization and future CCT Review Teams

Prerequisite or Priority Level: Prerequisite

Consensus within Team: Yes

Details: The survey should repeat applicable parts of the global surveys for consumer end-users to allow an analysis of (1) which new gTLDs have been visited most; (2) the reasons users give to explain why they visited certain new gTLDs more than others; (3) what factors matter most to users in determining which gTLDs to visit; (4) how users' behaviors indicate to what extent they trust new gTLDs; (5) comparing the trustworthiness of new gTLDs with restrictions on registration, to new gTLDs with few or no restrictions; and (6) whether consumers view the expanded name space as beneficial or confusing.

Recommendation 14: Create incentives to encourage gTLD registries to meet user expectations regarding: (1) the relationship of the types of registrations within a gTLD to its name; (2) restrictions as to who can register a domain name in certain gTLDs based upon implied messages of trust conveyed by the name of its gTLDs (particularly in sensitive or regulated industries) and (3) the safety and security of users' personal and sensitive information (including health and financial information).

Rationale/related findings: The Nielsen surveys indicate that the public expects restrictions on who can purchase domain names, expects that such restrictions will be enforced and is concerned about the security of their personal and sensitive information. However, the vast majority of new gTLDs fall into one of two models: either .brands, where no registrations by the public are allowed at all, or completely unrestricted open TLDs where anyone can purchase a domain in the TLD and use it for any purpose. Given that restricted models simultaneously increase prices for both registries and registrars while reducing the potential pool of registrants, it is perhaps unsurprising that restricted registration models have been rarely adopted.

To: New gTLD Subsequent Procedures PDP Working Group

Prerequisite or Priority Level: Prerequisite (incentives could be implemented as part of application process)

Consensus within Team: Yes

Details: The exact mechanics of the proposed incentives are best decided by the community as part of the policy development or implementation process, but the intent of the recommendation is to encourage a greater diversity of registration models. In particular, incentives (either financial or

Deleted: *Conduct a study to identify (1) which new gTLDs have been visited most; (2) the reasons users identify to explain why visited certain new gTLDs more than others; (3) what factors matter most to users in determining which gTLDs to visit and (4) how users' behaviors indicate to what extent they trust new gTLDs*

Deleted: *The Nielsen studies indicate the relationship between trust of a gTLD and several other factors, including familiarity, reputation and security. However, further information is needed on why and to what extent the public trusts new gTLDs. In particular, in addition to repeating surveys that gather the respondents' subjective views about trustworthiness, ICANN, relevant stakeholders and future Review Teams should assess what objective information can be gathered and measured that relates to trustworthiness. A further study could provide useful information for future gTLD applicants.*

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otherwise) may encourage registry operators to choose the types of restricted models that end-users are expecting but the 2012 expansion largely failed to deliver.

Further Review

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Recommendation 16: ICANN should commission a study to collect data on the impact of restrictions on who can buy domains within certain new gTLDs (registration restrictions) to (1) compare consumer trust levels between new gTLDs with varying degrees of registration restrictions; (2) determine whether there are correlations between DNS abuse and the presence or absence of registration restrictions; (3) assess the costs and benefits of registration restrictions and (4) determine whether and how such registration restrictions are enforced.

Rationale/related Findings: Future PDPs and review teams can use this data to inform future policy decisions regarding new gTLDs, especially as it relates to the issue of whether restrictions should be encouraged or included within the standard provisions included in ICANN new gTLD contracts.

To: ICANN organization

Prerequisite or Priority Level: Low

Consensus within team: Yes

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