

## Analysis of Market Penetration by New gTLDs

In 2004, Summit Strategies International (SSI) prepared a study for ICANN that analyzed the effect of the introduction of seven new gTLDs on, among other things, concentration in “the domain name market”, a market consisting of both gTLDs and ccTLDs.<sup>1</sup> It found (at 95-96) that, as of the first quarter of 2004, .com had about a 45% share, .de had about a 12% share, .uk had about an 8% share, .net had about an 8% share, .org had about a 5% share, and .info, .nl, .biz, and .it each had about a 2% share.<sup>2</sup> At that time, the combined share of new gTLDs in this market was only about 4%. When it focused on a market that consisted only of gTLDs, SSI found (at 96) that .com had a share of about 73%, .net had a share of about 12%, .org had a share of about 8%, and the combined share of the seven new gTLDs was less than 7%. Although SSI noted that the introduction of the new gTLDs had doubled their number, it also remarked (at 96) on “the relatively small impact that the new gTLDs have had on overall market share”.

In a later study that was also performed for ICANN, Katz, Rosston, and Sullivan, found that .com’s share was about 75% throughout the period from July 2001 through July 2009, about the same as SSI had found for early 2004.<sup>3</sup> In a later paper, the same authors concluded that “The finding that *undifferentiated* gTLDs introduced in the past have been unable to provide significant competition for the well-established .com is not surprising; because they are undifferentiated, these gTLDs lack unique features that offer value to users that might (a least

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<sup>1</sup> Summit Strategies International, Evaluation of the New gTLDs: Policy and Legal Issues, July 10, 2004.

<sup>2</sup> .biz was the only new gTLD among this group.

<sup>3</sup> Michael L. Katz, Gregory L. Rosston, and Theresa Sullivan, An Economic Framework for the Analysis of the Expansion of Generic Top-Level Domains, June 2010, at 47-48.

partially) offset user familiarity with and perception of .com as the primary gTLD location for commercial (and even non-commercial) websites.”<sup>4</sup>

SSI also found significant concentration among the operators of gTLDs. In particular, it found (Table 3 at 96) that gTLDs operated by VeriSign had a combined share of 85% of the gTLD market, Affilias had an 11.5% share, and NeuLevel had a 2.7% share in 2004. In another study conducted for ICANN, Rafert and Tucker, using data for November 2014, after the introduction of new gTLDs that began in late 2013, found that VeriSign’s share was 85.0%, Public Interest Registry’s share was 6.6%, Affilias’ share was 4.0%, and the share of NeuStar, Inc., which had acquired NeuLevel in 2006, was 1.6%.<sup>5</sup> Thus, although concentration among operators was somewhat lower than in 2004, a market that consisted of operators of gTLDs was still highly concentrated and VeriSign’s share was essentially unchanged.

We conducted a similar analysis of the effect of the introduction of new gTLDs in the latest round. We found that new gTLDs have acquired approximately 50 percent of the *increase* in the number of registrations in all gTLDs, 32% of the *increase* in the number of registrations in all TLDs, gTLDs and ccTLDs, and about 38% of the increase in the number of registrations in all gTLDs and all “open” ccTLDs, since the introduction of new gTLDs began in October 2013.<sup>6</sup>

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<sup>4</sup> Michael L. Katz, Gregory L. Rosston, and Theresa Sullivan, Economic Considerations in the Expansion of Generic Top-Level Domain Names, Phase II Report: Case Studies, December 2010 at 7, emphasis in original.

<sup>5</sup> Greg Rafert and Catherine Tucker, Phase I Assessment of the Competitive Effects Associated with the New gTLD Program, Table 2 at 15.

<sup>6</sup> See Table X. We excluded Brand and RLCC TLDs from the analysis. We obtained registration data for gTLDs from ICANN monthly transaction reports for October 2013 and March 2016 and employed December 2013 registration data for ccTLDs because those data were not available for October 2013. According to icannwiki: “An **open ccTLD** refers to a country code top level domain name that can be registered by anyone, regardless of which country the person resides in. These ccTLDs generally represent a particular branding aside from the name of the country or territory it represents.” [<https://icannwiki.com/CcTLD>]. In identifying open ccTLDs, we employed a list of ccTLDs that were defined as “generic” by Google.

We also found that, as of March 2016, new gTLDs accounted for about 9% of the *total* number of registrants in all gTLDs, about 5% of the *total* number of registrants in all TLDs, and about 7% of the *total* number of registrants in all gTLDs and “open” ccTLDs.

**Project 1: Marketplace Share Calculations as of March 2016<sup>1</sup>**

<b>Marketplace Definition</b>	<b>Percentage of New gTLD Registrations Relative to Marketplace Registrations</b>
Legacy TLDs and new gTLDs	9.0%
Legacy TLDs, new gTLDs, and all ccTLDs	5.0%
Legacy TLDs, new gTLDs, and open ccTLDs <sup>2</sup>	7.4%
New gTLDs, and increase in Legacy TLD registrations since the beginning of the new gTLD Program	50.0%
New gTLDs, and increase in Legacy TLDs and all ccTLDs since the beginning of the new gTLD Program <sup>3</sup>	32.1%
New gTLDs, and increase in Legacy TLDs and open ccTLDs since the beginning of the new gTLD Program	37.8%

**NOTE THAT SOME ROWS IN THE AG TABLE HAVE BEEN DELETED**

**Notes:**

[1] All calculations are based on the total number of registrations as of March 2016 with the exception of the change in Legacy TLD and ccTLD registrations since the entry of new gTLDs (October 2013). Brand and ROCC TLDs are excluded from the analysis.

[2] Open ccTLDs are defined as "generic" by Google.

[3] For the ccTLD registration data, December 2013 data are employed as a proxy for October 2013, the entry month of the first new gTLDs, as the registration data are not available until December 2013.

[4] 96 not-open ccTLDs and six open ccTLDs have December 2013 registration data available.

**Sources:**

[1] Registration data for legacy and new gTLDs are derived from monthly transaction reports as of March 2016 and October 2013.

[2] Registration data for ccTLDs are based on Zooknic map data. Where Zooknic data were not available, ccTLD registration data are based on Nominet data as of March 2016. Registration data for ccTLDs at the beginning of the new gTLD program are based on Nominet data as of December 2013.

[3] The list of Brand TLDs is available at <https://newgtlds.icann.org/en/applicants/agb/base-agreement-contracting/specification-13-applications>.

[4] The list of ROCC TLDs is available at <https://newgtlds.icann.org/en/applicants/agb/base-agreement-contracting/ccer>.

The question naturally arises as to how to interpret the observed share of registrants captured by new gTLDs. There are at least three reasons why we might expect that share initially to be quite small. First, there are costs of switching from a legacy to a new gTLD that impart inertia to the process. These costs can be fairly mundane, such as the costs of repainting trucks or issuing new business cards, but they can be significant, for example the costs of assuring that customers and others are made aware of the change. Second, there are what might be called “network” effects.<sup>7</sup> Here, someone might be reluctant to register in a new domain because the domain has a small subscriber base and thus users are generally unaware of its existence. Although a “bandwagon” might start after a gTLD reaches a given size, that is unlikely to occur during the early part of its operations. Third, a registrant might be expected to wait for the expiration of its contract with a legacy gTLD before switching to a new gTLD.

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<sup>7</sup> For a discussion of network effects, where the value of a product to a user depends not only on its intrinsic characteristics but also on the number of other users of that product, see, e.g., M.L. Katz and C. Shapiro, “Systems Competition and Network Effects,” 8 *Journal of Economic Perspectives* 93 (1994). The type of behavior described here is what H. Leibenstein, “Bandwagon, Snob, and Veblen Effects in the Theory of Consumers’ Demand,” 64 *Quarterly Journal of Economics* 183 (1950) calls (at 184) a “bandwagon effect”, which reflects “the desire of people to wear, buy, do, consume, and behave like their fellows...”

Together, these factors suggest that new gTLDs are unlikely to reach their full potential immediately. In fact, a study performed by KPMG for ICANN found that the new gTLDs that had been introduced after 2001 had, on average, reached 40% of their “most recently observed peak registration” at the end of 12 months of operation, 60% of the peak at the end 24 months of operation, and 70% of the peak at the end of 36 months of operation.<sup>8</sup> Based on these considerations, it is possible that the share of registrants currently captured by the new gTLDs understates the level that it will eventually reach.

It is important to note that the share of the number of registrants accounted for by new gTLDs depends both on their share of the *increase* in the number of registrants and on the rate at which the *total* number of all registrants increased over the period. For example, given the approximately 50% share of the increase in gTLD registrants accounted for by new gTLDs, their share of total gTLD registrants would have been approximately 25% if the number of gTLD registrants had doubled since October 2013. In fact, the rate of increase was 21.9%.<sup>9</sup>

It is also possible to use these results to project the share of total registrants that would be captured in the future by the new gTLDs *if* the rate of increase in the total remained unchanged at about 22% every 2 and one-half years and *if* the new gTLDs continued to capture about 50% of the increase. Under these assumptions, the share captured by the new gTLDs would be approximately 16% after 5 years and approximately 27% after 10 years.

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<sup>8</sup> See *Benchmarking of Registry Operations*, February 2010, p. 17.

<sup>9</sup> Over the same period, the rate of increase of registrants in all TLDs was 18.5% and the rate of increase of registrants in gTLDs and “open” ccTLDs combined was about 24.3%. This suggests that the number of registrants in gTLDs grew faster than that of all ccTLDs but slower than that of “open” ccTLDs.

We have also conducted a similar analysis in which we have taken into account the fact that a significant proportion of the number of registrations in new gTLDs are currently “parked” and that the rate of “parking” varies among gTLDs and between new and legacy gTLDs.<sup>10</sup> Because we have been unable to obtain parking data for ccTLDs, we have conducted this analysis only for gTLDs. When we take “parking” into account, we find that new gTLDs accounted for approximately X percent of the *increase* in the number of registrants in all gTLDs since their introduction and currently account for approximately Y percent of the *total* number of registrants in all gTLDs.

#### **RESULTS THAT TAKE PARKING INTO ACCOUNT TO GO HERE.**

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<sup>10</sup> Halvorson et al ascribe parking to: (1) speculation in order to sell the domain later at a profit; (2) plans to develop the domain at a later date; or (3) unsuccessful development. [T. Halvorson, M.F. Der, I. Foster, S. Savage, L.K. Saul, and G.M. Voelker, “From .academy to .zone: An Analysis of the New TLD Land Rush,” Proceedings of the 2015 ACM Conference on Internet Measurement Conference Metric, p. 387.] Measure of parking used to be provided here.