An Analysis of Parking-Adjusted Registrations

According to data compiled by nTLDstats, about 60% of registrations in new gTLDs are currently parked.[1]   Although exact definitions of parking vary, the general idea is that parked domains are not currently being used as identifiers for Internet resources. Halvorsen 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. [2] Examples of behaviors that could be considered parking include:

- The domain name does not resolve.

- The domain name resolves but attempts to connect via HTTP return an error message.

- HTTP connections are successful but the result is a page that displays advertisements, offers the domain for sale, or both. In a small number of cases, these pages may also be used as a vector to distribute malware.

- The page that is returned is empty or otherwise indicates that the registrant is not providing any content.

- The page that is returned is a template provided by the registry with no customization offered by the registrant.

- The domain was registered by an affiliate of the registry operator and uses a standard template with no unique content.

- The domain redirects to another domain in a different TLD.

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[1] https://ntldstats.com/parking/tld (viewed on March 21, 2017).

[2] 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.

Because the percentage of registrations in new gTLDs is so large, the Review Team sought to analyze whether, and to what extent, its conclusions regarding (i) the share of registrations in all gTLDs that have been captured by new gTLDs and (ii) its measures of concentration among all gTLD operators are affected when parking rates are taken into account. Taking parking rates into account would affect our estimates of the share of registrations captured by new gTLDs if the parking rates of new gTLDs differ from those of legacy gTLDs and could affect our concentration measures if there are differences in parking rates among individual gTLDs. One possible reason for taking parking rates into account is that registration renewal rates may be negatively correlated with parking rates so that the current market shares of TLDs with relatively high parking rates may overstate their long run competitive significance.

In order to carry out this analysis, the Review Team used parking data for new gTLDs that nTLDstats routinely calculates together with parking data for legacy gTLDs that ICANN contracted with nTLDstats to develop especially for this project.[3] We used registration data for December 2016, the same month for which other statistics in this report are based, and the most comprehensive parking measure provided by nTLDstats, the aggregate of the 7 separate sources of parking that it identifies, to calculate (i) the "parking-adjusted" share of all gTLD registrations that are accounted for by new gTLDs and (ii) the "parking-adjusted" 4-firm and 8-firm concentration ratios and HHI for all gTLDs.[4] We then compared these results with those obtained using data for December 2016 that were not adjusted for parking.

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[3] nTLDstats applied its parking analysis to each legacy gTLD based on the number of names in its zone file. For TLDs with 10,000 names or fewer, nTLDstats analyzed all registered names, for TLDs with 10,001-100,000 names, nTLDstats analyzed 10% of registered names, and for TLDs with more than 100,000 names, nTLDstats analyzed 1% of registered names. nTLDstats also conducted a manual review of 10% of the total sample to check for false positives.

[4] Specifically, we adjusted the number of registrations for each gTLD to reflect the number of registrations that were *not* parked, i.e., we calculated (1 minus the parking rate) times the number

The Parking-Adjusted Share of New gTLD Registrations

As indicated above, the share of all gTLD registrations that was accounted for by new gTLDs in December 2016 was approximately 13 percent when registrations are *not* adjusted to take parking into account. nTLDstats has estimated that the weighted average parking rate for legacy gTLDs in that month was approximately 56 percent and that the weighted average parking rate for new gTLDs in the same month was approximately 68 percent, about 20 percent higher. Using these estimates to measure the *parking-adjusted* share of all gTLD registrations that was accounted for by new gTLDs, we find that the new gTLD share was about 10 percent, approximately 23 percent lower than the share based on unadjusted registrations. ELEEZA: THESE CALCULATIONS ARE BASED ON CENTR DATA AND WILL BE REVISED WHEN WE RECEIVE THE RESULTS BASED ON ICANN DATA FROM AG.

Parking-Adjusted Concentration Measures

Above, we reported the results of calculating the 4-firm and 8-firm concentration ratios and the HHI in December 2016 for all gTLD registry operators. Here, we report the results of calculating the same concentration measures taking registration parking into account and compare them to the results based on unadjusted registrations. Because the parking-adjusted concentration measures depend on the percentage of parked registrations of each separate gTLD, we (1) calculated the parking- adjusted number of registrations separately for each gTLD,[5] (2) added together the parking-adjusted registrations of all gTLDs controlled by the same operator, (3) used the results of (2) to calculate the parking-adjusted share of registrations of each operator,

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of registrations for each gTLD, and then calculated market shares based on the adjusted data. We used the most comprehensive parking measure calculated by nTLDstats.

[5] The parking-adjusted registrations of a gTLD equal (one minus its estimated parking rate) multiplied by its unadjusted registrations.

and (4) used these shares to calculate the respective concentration measures.[6] The following

table compares the registry operator concentration measures for December 2016 based on

unadjusted registrations with the same measures based on parking-adjusted registrations for the

same month:

Registry Data for December 2016

Unadjusted Registrations   Parking-Adjusted Registrations

4-firm concentration ratio

8-firm concentration ratio

HHI

Recommendations

These results suggest that measures of the impact of the entry of new gTLDs are sensitive

to whether or not they take registration parking into account. As a result, we recommend that

ICANN consider undertaking research into whether registration renewal rates are correlated with

parking rates and to use the results of that research to improve its analysis of developments in the

DNS marketplace. In addition, we recommend that ICANN consider using data on upcoming

registration deletes, which nTLDstats routinely collects for new gTLDs, for the same purpose

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[6] These calculations were performed by the Analysis Group at the request of the CCT RT.