The Structure of the TLD Industry

Registrar Services

One factor that has facilitated the entry of new gTLDs is the availability of important "inputs", specifically registrar and back-end services, that can be acquired though market transactions rather than be "produced" internally.[1] According to ICANN, "A **registrar** has direct relationships with domain name registries and is authorized to sell domain names. In order to become a registrar, one has to be accredited through ICANN, which requires that they meet certain business and technical requirements."[2]

334 registrars currently register domain names in new gTLDs[3] and a significant number of new gTLDs are represented by a relatively large number of registrars. The following table reports the distribution of new gTLDs as measured by the number of registrars that register names in their domains:

AN UPDATED VERSION OF THE PROJECT 6 TABLE WILL APPEAR HERE.[4]

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[1] Of course, this does not mean that registries should be prevented from vertically integrating into either backend or registrar functions, especially as doing so is unlikely to result in foreclosing other registries from obtaining needed services from third parties.

[2] https://icannwiki.com/Registrar.

[3] These registrars report active registrations in new gTLDs or were included in the March 2016 ICANN Monthly Transaction Reports of new gTLDs despite having zero active registrations in those domains. The list of registrars was obtained from http://www.iana.org/assignments/registrar-ids/registrar-ids.xhtml. We have excluded Brand and ROCC TLDs from our analysis.

[4] Of the 5 ccTLDs in the Latin American and Caribbean region that do not employ a direct registration model in which "domain are acquired directly from the registry's platform and/or website," the number of registrars employed were 17, 19, 80, 92, and 200, respectively. [*Latin American and Caribbean DNS Marketplace Study*, p. 50.] Thus, it appears that at least some ccTLDs have been able to attract the interest of a significant number of registrars. The report notes, however, that "one of the challenges that many ccTLDs in the region face once they have decided to implement the registry-registrar model is more [sic] how to attract the larger international registrars to their business…." [Ibid. p. 51]

Back-End Registry Operators

ICANN defines a back-end registry operator as "an organization contracted by a registry to run one or more of the Critical Functions of a gTLD registry."[5] The Critical Functions are:

1. DNS resolution
2. DNSSEC properly signed zone (if DNSSEC is offered by the registry)
3. Shared Registration System (SRS), usually by means of the Extensible Provisioning Protocol (EPP)
4. Registration Data Directory Services (RDDS), e.g., WHOIS provided over both port 43 and through a web based service.
5. Registry Data Escrow

Although there are many fewer back-end providers than there are registrars, 6 different back-end providers each provide service to new gTLD registries that collectively have more than 1 million registrants. Moreover, although the supply of back-end services to *all* gTLDs is highly concentrated, with a 4-firm concentration ratio of 95.7% and an HHI of 6,434, the supply of back-end services to *new* gTLDs is considerably less concentrated, with a 4-firm concentration ratio of 79.7% and an HHI of only 1,284. Presumably this disparity reflects the fact that the largest legacy gTLD, .com, obtains its back-end services from a single supplier.

Of the 944 new gTLDs registries of May 6, 2016, 495 are using back-end providers that are located in their respective jurisdictions and 627 are using back-end providers located in their respective ICANN regions.[6] Thus, although well over half of all new gTLD registries employ

[5] ICANN, Registry Transition Processes, https://www.icann.org/resources/pages/transition-processes-2013-04-22-en.

[6] See (https://meetings.icann.org/en/regions). In Africa, 3 gTLDs (out of a total of 10) are using back-end providers in their respective jurisdictions and these 3 are using back-end providers in their regions, in Latin America and the Caribbean, 5 gTLDs (out of a total of 17) are using back-end providers in their respective jurisdictions and 6 are using back-end providers in their regions,

back-end providers that are located in relatively close proximity, a significant number do not. This suggests that back-end providers at more distant locations can nonetheless provide service to a registry.

The Review Team also compiled data, for each of the 6 largest back-end providers as measured by the number of registrants in the gTLDs that they serve, on the **size distribution** of the gTLDs that they serve. The following table reports the results of this analysis:

RSPs servicing the most new gTLD registrations	**1 - 2,500**	**2,501 - 5,000**	**5,001 - 10,000**	**10,001 - 50,000**	**50,001 - 100,000**	**100,001 - 250,000**	**250,001 - 500,000**	**500,000 - 1 million**	**> 1 million**
Central Nic	21	1	3	6	1	3	2	0	1
ZDNS	9	1	1	2	0	0	2	0	1
Neustar Inc.	184	5	3	5	6	4	2	1	1
Rightside Registry	38	60	70	56	8	0	0	0	0
Uniregistry Inc.	8	1	2	11	3	0	2	0	0
Afilias Limited	152	7	4	13		1	2	0	0

in Asia Pacific, 81 gTLDs (out of a total of 163) are using back-end providers in their respective jurisdictions and 102 are using back-end providers in their regions, in North America, 357 gTLDs (out of a total of 441) are using back-end providers in their respective jurisdictions and 409 are using back-end providers in their regions, and in Europe: 49 gTLDs (out of a total of 352) are using back-end providers in their respective jurisdictions and 107 are using back-end providers in in their regions.

There are several observations that can be made about these results. First, about 94% of the new gTLDs that obtain back-end services from one of these providers have fewer than 50,000 registrants. Second, three of these back-end providers, Rightside, Neustar, and Afilias, collectively serve about 90% of the new gTLDs with fewer than 50,000 registrants. Third, whereas neither Rightside nor Afilias serves any new gTLDs with more than 500,000 registrants and, indeed, none of the new gTLDs that are served by Rightside has more than 100,000 registrants, three of these back-end providers, Neustar, CentralNic, and ZDNS, together serve all of the 4 new gTLDs with more than 500,000 registrants.

It is also important to note that the incremental cost incurred by a back-end operator to serve a registry operator varies with the number of domains served by the registry[7] and that back-end providers employ a number of pricing models that take these cost differences into account. For example, some charge registries a fixed fee per registered domain, others charge a per-domain fee that varies with the number of domains in the registry, and still others provide service in return for a share of registry revenues, among other models. As a result, small TLDs tend to pay lower total prices than do large ones.

Size Distribution of Registries

Another aspect of the structure of the TLD industry is the wide variation in the sizes of different registries. The following table reports the size distribution of new gTLDs, where size is measured by number of registrants. Since our primary focus is on gTLDs that are, or will be, generally available for registration by members of the public, we have excluded from our

[7] The incremental cost also varies with the registry's policies. For example, the incremental cost incurred by a back-end operator to serve a gTLD that does non- standard manual vetting is higher than the incremental cost of serving one that does not.

analysis gTLDs that are subject to Spec. 13 and/or are ROCC-exempt from the data.[8] Moreover, in reviewing the data in the table, it is important to recognize that some new gTLDs have only recently become available for registrations by the public and others may still not be available. Nonetheless, it is significant that almost three-quarters of the gTLDs that we have analyzed currently have fewer than 10,000 registrants and more than 90 percent have fewer than 50,000 registrants. That raises the question of whether these gTLDs will be viable in the long run or whether we should expect some to exit and others to consolidate. At the same time, it should be recognized that some registries appear to have based their business models on targeting narrow audiences, for example small geographic areas or specialized products and services, and may be viable even if they do not serve large numbers of registrants. Moreover, it is likely that the ability of gTLDs to obtain inputs such as registrar and back-end services through market transactions instead of having to provide them internally has reduced the minimum viable scale of gTLDs, the number of registrations that they need to operate profitably.

Number of registrations	Number of TLDs	% of TLDs
0 – 1000	230	0.358814353
1,001 - 10,000	247	0.385335413
10,001 - 50,000	119	0.185647426
50,001 - 100,000	23	0.035881435
100,001 - 250,000	11	0.017160686
250,001 - 500,000	7	0.010920437
500,001 - 1,000,000	2	0.003120125
> 1,000,000	2	0.003120125
Total	641	1

[8] For details on Spec 13 see https://newgtlds.icann.org/en/applicants/agb/base-agreement-contracting/specification-13-applications and for details on ROCC exemptions see https://newgtlds.icann.org/en/applicants/agb/base-agreement-contracting/ccer.