

**Independent Review of Trademark Clearinghouse (TMCH) Services
Revised Report**

Jiarui Liu, Center for Internet and Society, Stanford Law School; University of San Francisco
School of Law

Greg Rafert, Analysis Group

Katja Seim, The Wharton School, University of Pennsylvania

I. Executive Summary

The Trademark Clearinghouse (“TMCH”) was established in March 2013 and serves as a central repository for information to be authenticated, stored, and disseminated, pertaining to the rights of trademark holders in ICANN’s New Generic Top-Level Domain (“new gTLD”) program. Analysis Group was commissioned by ICANN to undertake an independent review of TMCH services based on the Governmental Advisory Committee (“GAC”) recommendation in May 2011 that a comprehensive, post-launch review be performed.¹

Objectives and Limitations

The purpose of this review is not to make policy recommendations, but to inform reviews of Rights Protection Mechanisms in the domain name space by assessing the strengths and weaknesses of the TMCH services in conjunction with the specified areas for review proposed by the GAC.² Specifically, our review is focused on the TMCH matching criteria, as well as the Claims Service and Sunrise Services (described in more detail below).³ This revised report incorporates public comments and suggestions to the original report and analyses published on 25 July 2016.⁴ The revisions include additional analyses and discussion of the data and results presented in the original report, and do not represent analyses of new or updated data.

This review is informed by an analysis of TMCH and third-party data sources, as well as interviews and surveys of TMCH stakeholders. Although we have made our best efforts to collect data that will allow for a comprehensive evaluation of the Claims Service, matching criteria, and Sunrise Services, our data have some limitations that are important to consider. While the data allow us to make meaningful observations about the use of the TMCH services that we are studying, we are only able to draw conclusions regarding whether the results of the evaluation are consistent with what one would expect to see if the TMCH services were effective (or not) at helping to deter domain name abuse. Our data also do not provide quantifiable information on the costs and benefits associated with the present state of the TMCH services, nor the potential costs and benefits of expanding or altering the way the services function, making concrete cost-benefit analyses outside the scope of this report.

Summary of Findings

We find that although it is possible that the Claims Service and matching criteria may help deter rights-infringing registrations that are exact matches to trademark strings recorded in the TMCH, it is also possible that some good-faith registrations are being deterred by the current Claims Service system, which may be detrimental to the registration activity of non-trademark-holder domain registrants.

¹ The full text of the GAC recommendation is available in Appendix A and can also be found on the ICANN website at <https://archive.icann.org/en/topics/new-gtlds/gac-comments-new-gtlds-26may11-en.pdf>.

² The GAC suggested an examination of whether the matching criteria could be expanded to include non-exact matches and the effect of extending the Claims Service period.

³ The TMCH also provides dispute resolution services, but those services are not a focus of this review.

⁴ The draft report is available at <https://www.icann.org/news/announcement-2016-07-25-en>. As suggested in the public comments, we have augmented our analyses of Ongoing Notifications and the Sunrise period: we have added an analysis of the geographic locations represented by trademark holders that are enrolled in Ongoing Notifications and performed an analysis of the Sunrise period that attempts to account for how popularity/awareness of Sunrise periods may affect Sunrise period use. We have also removed registrations in Brand TLDs from our analyses, which did not meaningfully impact our results. The report text has also been edited to reflect additional discussion and explanation of some of our results, as suggested in the public comments. We have also noted, in the relevant sections, where we attempted to obtain additional data and/or perform additional analyses but were unable to do so due to data constraints.

Limitations of our data do not allow us to definitively conclude whether Claims Service notifications have a deterrent effect on either type of registration activity.

In addition, extending the Claims Service period or expanding the matching criteria used for triggering Claims Service notifications may be of limited benefit to trademark holders and may be associated with costs incurred by other stakeholder groups, such as registries, registrars, and non-trademark-holder domain registrants. Although our data do not permit us to perform a cost-benefit analysis of extending the Claims Service or expanding the matching criteria, the tradeoffs felt by different stakeholder groups should be considered when weighing those policy decisions.

When evaluating whether the Claims Service period should be extended, one should consider how many potential registrations would be affected by the extension. That is, the effectiveness of Claims Service notifications depends on how many registration attempts are being made: if there are few registration attempts being made, then there are fewer potentially-infringing registrations being made. We find that registration activity declines after the 90-day Claims Service period ends, so any additional months added to the Claims Service period will likely have diminishing value. We also find that trademark holders infrequently dispute registrations that are variations of trademark strings. Given the low dispute rates, an expansion of the matching criteria may bring little benefit to trademark holders and only harm non-trademark-holder domain registrants, who may be deterred from registering trademark string variations that would otherwise not be considered a trademark infringement by trademark holders or authorities who make such determinations. Lastly, we find that although trademark holders expressed valuing the Sunrise period through questionnaire feedback and many trademark holders apply for Sunrise eligibility by submitting proof of use when recording their marks in the TMCH, many trademark holders do not utilize the period. This could be due to the expense of Sunrise registrations or because other protections of the TMCH services, such as the Claims Service, reduce the need for trademark holders to utilize Sunrise registrations.

II. Introduction

A. Introduction to the Trademark Clearinghouse

The new gTLD program delegated the first new gTLD in October 2013 and was developed to allow for the introduction of new top-level domains, expanding the number of domain names available to domain registrants. In light of the planned launch of the new gTLD program, the ICANN community sought ways to allow trademark holders to protect themselves from domain name abuse in the new gTLDs (i.e., registrations of domain names in the new gTLDs that would purposefully infringe on trademark holders' rights), while also considering the perspective of consumers, registrants, registrars, and registries of new gTLDs.⁵

The TMCH serves as a database of verified trademark rights information for a global community of rights holders. It collects information on registered trademarks, marks protected by statute or treaty, court-validated marks in all languages and scripts, and, upon request of a registry, other marks that constitute intellectual property rights.⁶ The Trademark Clearinghouse Database ("TMDB") that connects with registries is provided by IBM, and the Trademark Clearinghouse Validation Function is provided by

⁵ "Final report of the ICANN Implementation Recommendation Team," May 9, 2009 ("IRT Report"), available at <https://archive.icann.org/en/topics/new-gtlds/irt-final-report-trademark-protection-29may09-en.pdf>.

⁶ Specific eligibility requirements are available at http://www.trademark-clearinghouse.com/downloads?title=guidelines&field_category_tid=All.

Deloitte.⁷ Trademarks are submitted to the TMCH by trademark holders (or trademark agents on behalf of trademark holders) and undergo a verification process.⁸ Verified marks are afforded several services, including access to the Sunrise registration period for all new gTLDs and Trademark Claims services for all new gTLDs.^{9,10}

B. Overview of Trademark Clearinghouse Services

All new gTLDs are required to hold a priority-registration Sunrise period of at least 30 days, which precedes the gTLD's general availability period. During the Sunrise period, only verified trademark holders in the TMCH may register domains that match their TMCH-recorded trademarks. The Sunrise period allows trademark holders to, for example, make registrations in gTLDs that are important to their marketing efforts as well as to make defensive registrations of their trademark strings.^{11, 12}

The Claims Service period follows the Sunrise period and typically runs for the first 90 days of every gTLD's general availability.¹³ The Claims Service is intended to help reduce infringing activity when an attempt is made to register a domain that matches a TMCH-recorded trademark through a two-pronged process: 1) potential registrants receive a notice (and must acknowledge receipt) when they attempt to register a domain that matches a TMCH-recorded trademark, and 2) trademark holders are sent a notice if a registration that matches the holder's mark has been completed. Trademark holders may also enroll in a free Ongoing Notifications Service with the TMCH to continue receiving notifications after the Claims Service period ends, although ongoing notifications are not sent to potential registrants, only trademark holders.

The Claims Service identifies potentially infringing domain registrations by comparing TMCH-recorded trademark strings to domain names submitted during the registration process. A domain name is considered an "exact match" to a TMCH-recorded string if it is either an exact string match to a recorded trademark or an exact string match to a trademark after the following adjustments have been made to invalid characters: punctuation, spaces, and other invalid characters have been replaced with hyphens or omitted for the string, and special characters @ and & have been spelled out (e.g., "at" and "and") or omitted.¹⁴

⁷ Deloitte verifies all marks submitted to the TMCH and provides the Clearinghouse User Interface. The central database is provided by IBM. ("What are the Roles of Deloitte and IBM with Regard to the Clearinghouse," Trademark Clearinghouse website, available at <http://www.trademark-clearinghouse.com/help/faq/what-are-roles-deloitte-and-ibm-regards-clearinghouse>.)

⁸ Basic submissions to the TMCH are charged a registration fee of \$150 USD per mark per year. An advanced fee structure is available to trademark holders with many marks or for trademark agents who represent many trademark holders. More information is available at <http://www.trademark-clearinghouse.com/content/trademark-clearinghouse-fees>.

⁹ Access to Sunrise registration periods also require proof of use.

¹⁰ The requirements and interfaces between the TMCH, registries, and registrars during the Sunrise and Trademark Claims period is described in the ICANN TMCH Functional Specifications, available at https://datatracker.ietf.org/doc/draft-ietf-regext-tmch-func-spec/?include_text=1.

¹¹ Some registries provide registration blocking services to TMCH-registered trademark holders. These services are not the focus of this report.

¹² The formats used by trademark holders to register domains during the Sunrise registration period are outlined in the Mark and Signed Mark Objects Mapping, available at <https://tools.ietf.org/html/rfc7848>.

¹³ It is mandatory that the Claims Service period last for 90 days, however it may run for a period longer than 90 days.

¹⁴ ICANN, "Explanatory Memorandum: Implementing the Matching Rules," September 24, 2012, available at <https://newgtlds.icann.org/en/about/trademark-clearinghouse/matching-rules-24sep12-en.pdf>.

C. Objectives of Analysis Group’s Independent Review of TMCH Services

Analysis Group was commissioned by ICANN to undertake an independent review of TMCH services based on the GAC recommendation in May 2011 that a comprehensive, post-launch review be performed.¹⁵ The analyses presented in this report assess the strengths and weaknesses of the TMCH in conjunction with the specified areas for review proposed by the GAC. Specifically, our review is focused on the TMCH matching criteria, as well as the Claims Service and Sunrise Services described above. Although interest has also been expressed by the ICANN community and TMCH stakeholders in assessing the possibility of allowing other TMCH providers to compete with Deloitte and IBM, our review is focused on the services of the TMCH and not its service providers.¹⁶ The findings presented in this report are those of Jiarui Liu, Greg Rafert, and Katja Seim, who were supported by a team at Analysis Group.

III. Trademark Infringement Background in the Context of the TMCH

The Implementation Recommendations Team (“IRT”), who suggested the creation of TMCH services, acknowledged motivating concerns of domain abuse, including cybersquatting (i.e., bad-faith registrations of trademarked names).¹⁷ Cybersquatting occurs when a registrant in bad faith registers a domain name that is identical or confusingly similar to a registered trademark. Cybersquatting domains receive web traffic when Internet users who intend to visit a trademark holder’s website mistakenly enter the cybersquatting domain name.¹⁸ Cybersquatters may generate income from web traffic through a variety of means: the cybersquatting website may exclusively display advertisements, may forward the Internet user to a website that pays the referencing website (i.e., the cybersquatting website) for sending traffic to its website, may display a scam that deceives the Internet user into downloading malware/spyware, or may collect personal information from the Internet user through false “surveys,” then misusing or selling that personal information.¹⁹ Additionally, cybersquatters sometimes attempt to sell domains to trademark holders for prices that may be seen as exorbitant by the trademark holder.

Cybersquatting can have a serious economic impact on legitimate businesses by pre-empting domain name registration by trademark holders, disrupting market competition, and causing substantial confusions among consumers. Prior to the implementation of the TMCH, one group estimated that

¹⁵ See Appendix A or <https://archive.icann.org/en/topics/new-gtlds/gac-comments-new-gtlds-26may11-en.pdf> for the full text of the GAC recommendation.

¹⁶ Additional analysis of the market for the provision of TMCH services would be necessary to determine how the presence of additional TMCH providers would affect the price and effectiveness of TMCH services. However, when contemplating the infrastructural investments required of TMCH providers and the regulation of entry and exit that would be necessary from ICANN, it is unlikely that the provision of TMCH services could function as a perfectly competitive marketplace (i.e., a marketplace in which prices are affected by the unrestricted entry and exit of suppliers).

¹⁷ IRT Report, pp. 1-2.

¹⁸ For example, “peta.org” was registered by an individual in 1995 to host the website “People Eating Tasty Animals,” but could easily have been mistaken by Internet users for a website owned by the non-profit organization People for the Ethical Treatment of Animals (PETA).

¹⁹ P. Agten, W. Joosen, F. Piessens, and N. Nikiforakis, “Seven Months’ Worth of Mistakes: A Longitudinal Study of Typosquatting Abuse,” Internet Society Briefing Paper, February 2015, available at http://www.internetsociety.org/sites/default/files/01_3_1.pdf.

cybersquatting cost brand owners \$1 billion every year due to a combination of diverted web traffic, loss of goodwill, and enforcement expenses.²⁰

However, the over-regulation of domain name registration activity can also harm non-trademark holders who have legitimate intentions behind domain name registrations that are identical or similar to trademarked strings. In addition, services that are put into place to protect trademark holders, like those provided by the TMCH, impose costs on various stakeholder groups, such as registries, who must pay a fee to the TMCH for each gTLD operated, and registrars, who must develop software systems to query the TMCH.

IV. Data

Our study relies on a variety of data sources that allow us to understand the strengths and potential weakness of TMCH services. These include the trademark holder database, Claims Service notification records, domain dispute records, Whois domain registration data (provided by DomainTools), and interview and survey feedback from TMCH stakeholders. We describe these sources in more detail below. We also briefly discuss the aspects of the data that limit our ability to draw broad conclusions about the TMCH services. We note that our data and analyses are descriptive in nature, and we are only able to draw conclusions regarding whether the results of the evaluation are consistent with what one would expect to see if the TMCH services were effective (or not) at helping to deter domain name abuse. Our data also do not quantify the costs and benefits associated with the present state of the TMCH services, nor the potential costs and benefits of expanding or altering the way the services function, making concrete cost-benefit analyses outside the scope of this report.

A. Trademark Holder Database

The trademark holder database is administered by Deloitte and contains all recorded trademarks in the TMCH.²¹ We received data on all trademarks submitted to the TMCH, whether the trademark was verified and, if so, how long it will be subscribed to TMCH services before its next renewal. We also received information on the trademark holders and TMCH agents who filed each trademark, including the name of the registrant's organization, their geographic location (i.e., country), and their industry (represented by a two-digit Nice classification code).²² As of November 1, 2016, there were 41,601 records in the TMCH of which 33,523 were current and have been verified to have accurate and correct information that meets TMCH guidelines.²³

Several characteristics of the data from the trademark holder database provide initial insight into how the TMCH has been adopted since its inception in March 2013:

- The first record in the TMCH was filed on March 26, 2013. Submission and verification of trademarks were relatively swift among trademark holders, with half of all verified trademark

²⁰ Coalition Against Domain Name Abuse to Combat Cybersquatting, "Current News Updates," Compliance and Privacy, available at <http://complianceandprivacy.com/News-CADNA-campaign.html>.

²¹ Deloitte verifies all marks submitted to the TMCH and provides the Clearinghouse User Interface. The central database is provided by IBM. ("What are the Roles of Deloitte and IBM with Regard to the Clearinghouse," Trademark Clearinghouse website, available at <http://www.trademark-clearinghouse.com/help/faq/what-are-roles-deloitte-and-ibm-regards-clearinghouse>.)

²² Information about Nice classification codes can be found at <http://www.wipo.int/classifications/nice/en/>.

²³ Trademarks that are current and verified have a status of "Verified" or "Corrected." Other statuses are "Deactivated," "Expired," "Incorrect," "Invalid," and "New." We received trademark holder database information from Deloitte on April 1, 2016. At that time, there were 40,465 records in the TMCH, of which 32,528 were current and verified.

records in the data enrolling in the TMCH by the end of 2013. Most verified trademark records (90%) were recorded by June 2015.

- Valid submissions in the TMCH are represented by roughly 1,700 users (TMCH agents and trademark holders who do not use the services of TMCH agents).²⁴ These users are predominantly located in the United States (57%); other well-represented countries include China (8% of all users), Great Britain (8% of all users), and Germany (6% of all users).
- TMCH users who are TMCH agents are predominantly located in the United States (37%); other well-represented countries include Germany (14% of all TMCH agent users), France (7% of all TMCH agent users), and Great Britain (7% of all TMCH agent users).
- TMCH users who are trademark holders are predominantly located in the United States (59%); other well-represented countries include China (9% of all trademark-holder users), Great Britain (9% of all trademark-holder users), and Germany (5% of all trademark-holder users).
- The vast majority of trademarks recorded in the TMCH are recorded in Latin script (97%), which is reflective of the geographic representation of TMCH users.²⁵
- The median number of verified trademarks recorded in the TMCH by each TMCH user is one. The vast majority of TMCH users have recorded 10 or fewer verified trademarks, but there are several TMCH users with a large number of verified trademarks, with the largest having recorded more than 5,000.

B. Claims Service Notifications

During the Claims Service period, each time a potential domain registrant attempts to register a domain name through a registrar,²⁶ the registrar must check whether the requested domain name matches a record in the TMCH. If the requested domain name is found in the TMCH, the registrar then downloads the associated trademark file(s) and sends a Claims Service notification to the potential registrant to inform them of the match (i.e., that the domain name may infringe on a trademark holder's rights).

The Claims Service data identify all such downloads made from the TMDB during the Claims Service period for each new gTLD. The data identify which trademarks were downloaded, when the download occurred, which registrar downloaded the data, when registrations were completed, and the registered domain name for those registrations that were completed. These data provide a way to measure which trademark strings are included in registration attempts during the Claims Service period and how often claims notifications result in registration or abandonment. *However, due to limitations of the data (discussed in more detail below), our analyses of the data require an assumption that each download is associated with a registration attempt (and was not downloaded by a registrar for a purpose unrelated to domain name registrations). If this assumption is incorrect, then our results will exaggerate the size of any observable registration-deterrent Claims Service effect.*

We received the Claims Service data from IBM on February 25, 2016. It contained 125.8 million records of Claims Service downloads made between October 4, 2013 and February 24, 2016.²⁷ By removing

²⁴ There are 1,679 unique users in the TMCH, but some are registered in multiple countries. Users are identified in the trademark holder database by User ID.

²⁵ "STUTTGART MEDIA" is an example of a registered, Latin script trademark in the TMCH. "玛 茜" is an example of a non-Latin-script trademark.

²⁶ Registrars are organizations that provide domain registration services.

²⁷ The time window of these data align with the availability of the first new gTLDs and the date that the data was excerpted by IBM.

duplicate records, we identified 113.2 million unique download requests.²⁸ In conversations with IBM, we learned that downloads in the Claims Service data are an imperfect measure of Claims Service notifications. In particular, the measure would be perfect if every download from the TMDB was associated with a domain name registration attempt. However, registrars may download records from the TMDB, even when no registration attempt has been made and can download multiple records at one time.²⁹ We investigated the data for the presence of bulk downloads by searching for simultaneous downloads of more than one TMDB record by a given registrar. The vast majority of registrars making downloads of multiple TMCH trademark strings had average download sizes of fewer than five strings, with the exception of downloads by two registrars, whose average download size was larger than 20 TMCH records per download. However, we cannot be certain whether the large download sizes by these two registrars were associated with actual domain registration attempts or not. For analyses that rely on a count of registration attempts, we conduct the analysis both including and excluding these registrars. As is demonstrated in Section V, both approaches yield relatively similar results.

An initial analysis of the data shows us how often trademark strings are downloaded from the TMDB during the Claims Service period and which trademark holders have trademarks that are downloaded most frequently:

- Roughly 26,405 unique, verified trademarks in the TMCH (81% of all verified trademarks in the TMCH) have been downloaded during the Claims Service period at least once.
- The most frequently downloaded trademarks tend to be common words. **Table 1** shows the ten most commonly downloaded trademark strings.

Table 1
Ten Most Frequently Downloaded Trademark Strings in Claims Service Data

²⁸ Unique downloads are defined as the unique combination of trademark string, downloading registrar ID, and download time stamp (i.e., we count each time a registrar downloads a unique trademark string or set of strings).

²⁹ Concern in the ICANN community regarding bulk downloads has surrounded the possibility that registries or registrars may attempt to download the entire TMCH database to determine what trademarks are in the database.

String	Download Count	Trademark Holder(s)
smart	15,198	Smart Communications, Daimler AG
forex	14,823	Forex Bank AB
hotel	14,690	Hotel Top Level Domain GMBH
one	14,205	American Academy of Ophthalmology
love	13,912	Cartier International AG, The Conde Nast Publications
cloud	13,821	Individual
nyc	13,622	City of New York, NYC & Company
london	13,343	London & Partners
abc	13,331	LV Insurance Management Limited
luxury	13,125	ILUX Holdings

Notes:

[1] Downloads by the ICANN registrar ID 9997 (ICANN’s monitoring system) are excluded from the data to limit the analysis to downloads by actual registrars.

[2] This analysis is limited to verified strings in the TMCH.

[3] The count of downloads for each string is calculated as the number of downloads with a unique time stamp by each registrar for that string.

Sources:

IBM Claims Service Notifications Data; Deloitte Trademark Holder Database.

- Trademark holders with a U.S. address in the trademark holder database account for the largest share of the trademarks that have been downloaded from the TMCH (48%). Other trademark holders with a large share of trademark downloads are located in Germany, France, and Great Britain (nearly 10% of downloads each). These numbers are generally proportionate to the number of trademarks that are recorded in the TMCH by trademark holders from these countries.

C. Domain Dispute Records

The Uniform Domain Name Dispute Resolution Policy (“UDRP”) and Uniform Rapid Suspension System (“URS”) allow trademark holders to arbitrate claims against domain registrants when they consider a domain name to infringe on their rights. The UDRP allows any individual or organization to file a complaint regarding a registered domain name that is arguably identical or confusingly similar to a trademark owned by the complainant and appears to have been registered and is being used in bad faith. The complaint is filed with an ICANN-approved UDRP provider. The domain is frozen so that no changes can be made to it, the registrant of the domain name in question then has the opportunity to respond to the complaint, a dispute panel is appointed by the chosen UDRP provider to review the complaint and any response provided, and a decision is declared.³⁰ A UDRP dispute may be resolved in favor of the complainant by cancelling the domain name registration in question or transferring the domain to the complainant.³¹ URS disputes follow a similar process, but for the time period applicable to our dispute record data, are limited to domains registered in new gTLDs and are designed to be concluded

³⁰ “Rules for Uniform Domain Name Dispute Resolution Policy (the ‘Rules’),” Approved September 28, 2013, ICANN, available at <https://www.icann.org/resources/pages/udrp-rules-2015-03-11-en>.

³¹ “Uniform Domain Name Dispute Resolution Policy,” Adopted August 26, 1999, ICANN, available at <https://www.icann.org/resources/pages/policy-2012-02-25-en>.

on a faster timeline and at lower cost than the UDRP.³² The URS can only result in the suspension of the domain name in question for the remainder of its registration period (i.e., domains disputed by URS are not eligible for transferal to the complainant and are released for registration at the end of the suspension period).³³

The dispute data identify URS and UDRP disputes that were filed in January 2014 through December 2015 through the Asian Domain Name Dispute Resolution Centre, National Arbitration Forum, World Intellectual Property Organization, the Czech Arbitration Court Arbitration Center for Internet Disputes, and the Arab Center for Domain Name Dispute Resolution providers.³⁴ There are roughly 17,500 disputes in the data, and a summary of these disputes across years and URS versus UDRP is shown in **Table 2**. The .com legacy TLD is the most common TLD among disputed domains, accounting for nearly 65% of all disputes in the data. The .net and .org TLDs are the next most common, accounting for 10% and 6% of all disputes in the data, respectively. The most common new gTLDs represented in the dispute data are .email, and .xyz, each accounting for less than 1% of all disputes. These percentages are roughly proportional to the prevalence of registrations in these TLDs: .com, .net, and .org represent 71%, 9%, and 6% of all domain registrations as of February 2016. The new gTLD .email represents less than 1% of all registrations, and .xyz represents 1.4% of all registrations.³⁵ The majority of disputes (80%) are found in favor of the complainant.

³² Some legacy TLDs also are eligible for the URS.

³³ “Uniform Rapid Suspension System (‘URS’),” March 1, 2013, ICANN, available at <https://newgtlds.icann.org/en/applicants/urs/procedure-01mar13-en.pdf>. The prevailing complainant may extend the suspension period by one year.

³⁴ Only the National Arbitration Forum, Alternative Dispute Resolution Forum, and Asian Domain Name Dispute Resolution Centre are URS providers.

³⁵ “ICANN Contractual Compliance Performance Reports: Domain Count & Trending by TLD,” ICANN, available <https://features.icann.org/compliance/domain-count-by-tld>, visited June 22, 2016. Total domain registrations exclude ccTLDs. ccTLDs are not obligated to report registration activity to ICANN.

Table 2
Number of URS and UDRP Disputes (2014 – 2015)

	Number of Disputes	
	2014	2015
UDRP	8,751	8,182
URS	281	287
Total	9,032	8,469

Notes:

[1] Disputes are categorized according to complaint date. Disputes without a complaint year are excluded (only sixteen records are excluded).

Sources:

Dispute records received from Asian Domain Name Dispute Resolution Centre, National Arbitration Forum, World Intellectual Property Organization, The Czech Arbitration Court Arbitration Center for Internet Disputes, and the Arab Center for Domain Name Dispute Resolution.

D. Whois Domain Registration Data

Whois data are generated at the time that a domain name is registered, and consist of the registered domain name, information about the registration (i.e., registration date), and information about the registrant (i.e., registrant name and contact information).³⁶ We received Whois domain registration data from DomainTools, a Whois research service.³⁷ We selected a random sample of 25% of the valid trademark strings in the TMCH data and requested registration information for any registered domains that were exact matches to those strings or that matched a defined set of string variations of those trademark strings (described in more detail below).³⁸ A 25% random sample reduces the amount of Whois data requested while still allowing our results to be representative of the TMCH database and TMCH users.³⁹

³⁶ “WHOIS Primer,” ICANN, available at <https://Whois.icann.org/en/primer>.

³⁷ According to the DomainTools website, it has the most complete historical database of Whois registration data in the industry.

³⁸ We limited our sample to Latin-character trademarks, which comprise 97% of the TMCH database.

³⁹ Each trademark string included in our sample results in an average of 75 string variations. Because each string variation may result in a Whois record for any gTLD, adding one additional trademark to our sample increases the potential size of the Whois registration data set by more than 75,000 registrations (assuming that each string variation could be registered in each gTLD).

We submitted a data request for Whois data consisting of 613,732 unique strings, 42,870 of which were strings corresponding to TMCH records and 582,524 of which were variations on those trademark strings, and requested a search for Whois data for all domain names that matched any of the requested strings within all legacy TLDs and new gTLDs through May 2016.⁴⁰ Our data request yielded a total of 1,570,947 Whois records. Of these records, 1,348,852 had parsed Whois information, and 14%, or 222,095, were “thin” records for domains marked for deletion or having no associated Whois record, which could not be parsed by DomainTools.⁴¹ In our analyses, we rely on all records received from DomainTools where we can extract the necessary information from both the parsed and unparsed records. In analyses where the necessary registration data are not available in the unparsed Whois data set, we rely exclusively on the parsed data.

For a number of the analyses that we perform, we distinguish registrations made by trademark holders from registrations made by third-party registrants. A non-trivial portion of registrations (13%) are made by registrants using a privacy or proxy service, which screens the registrant’s information from the Whois data.⁴² Due to the use of privacy or proxy services on these registrations, we are unable to be certain whether the registrations were made by trademark holders or third-party registrants. Because there is no process requiring data from privacy or proxy services to be shared, which would make it possible for us to identify the identities of registrants using privacy or proxy services, we are unable to identify whether such registrants are trademark holders or not.⁴³ However, it is unlikely that any results are meaningfully affected by this limitation of the data.⁴⁴

The data reveals the most commonly used TLDs for registrations containing the requested trademark strings and string variations. **Table 3** shows that the legacy TLDs .com, .net, and .org are the most prevalent TLDs in the registration data, while .xyz, .wang, and .club are the most common new gTLDs in the registration data. Although Brand TLDs are excluded from this analysis, the results are the same when they are included.

⁴⁰ The requested variations of trademark strings have been used to study typo-squatting domains. See Section V.C.1 for a more detailed discussion.

⁴¹ The parsed records contained separate fields for each part of the Whois record (e.g., domain name, registrant name). Records that could not be parsed did not have distinct data fields and did not always contain the standard Whois registration data.

⁴² Registrations made by registrants using a privacy screen are identified by searching for the words “private,” “privacy,” “proxy,” and “Whois” in the registrant organization name in the Whois data.

⁴³ ICANN is currently working with the Privacy and Proxy Services Accreditation Program Implementation Review Team to implement the Privacy and Proxy Services Accreditation Program, which would require privacy and proxy services to be accredited by ICANN and could provide an avenue to attaining data about the use of privacy and proxy services for future research. Additional information about the program are available at <https://www.icann.org/resources/pages/ppsai-2016-08-18-en> and <https://community.icann.org/display/IRT/IRT+Purpose%2C+Scope+and+Procedures>.

⁴⁴ The analyses that would be affected by treating privacy and proxy service users as third-party registrants are Figure 1, which analyzes the number of registrations made after the Claims Service period, and Table 10, which analyzes the dispute rate of third-party registrations of domains that are variants of trademark strings. It is unlikely that the frequency of privacy or proxy registrations would differ in a significant and systematic way that would affect the results of Figure 1, and given the low dispute rates found in Table 10 and other analyses of the dispute rates in this report, we believe it is unlikely that inclusion of privacy or proxy registrations would meaningfully affect those results either.

Table 3
Ten Most Prevalent TLDs in Whois Registration Data Set

TLD	Share of Registrations
.com	16.03%
.net	6.81%
.org	6.03%
.info	4.40%
.biz	3.29%
.xyz	2.34%
.mobi	1.81%
.wang	1.34%
.club	1.33%
.top	1.17%

Notes:

[1] All registrations in the parsed and unparsed Whois records are included in this analysis.

[2] Registrations in Whois records represent the most recent record of domain name registrations that match the set of trademark strings and trademark variations that were requested from DomainTools.

[3] Percentages shown are calculated as the number of registrations in a given TLD observed in the Whois registration records data received from DomainTools divided by the total number of registrations observed.

[4] Registrations in Brand TLDs have been excluded from this analysis.

Sources:

Whois Registration Data Received from DomainTools.

E. Stakeholder Interviews and Questionnaires

We issued a publicly-available web form, sent questionnaires, and interviewed TMCH stakeholder groups to collect their opinions of the TMCH services and features that are the focus of this study. Interviews took place during the ICANN 55 meeting in Marrakech, questionnaires were distributed in March, April, and May 2016, and the web form was made available from March 30, 2016 until April 27, 2016. The questionnaires were sent to trademark holders, non-trademark holders, TMCH agents, registries, and registrars.⁴⁵ The web form was publicized by ICANN to the ICANN community. The questionnaire and web form text, as well as a summary of the responses received, are available in the appendix.

Members of all of ICANN's Supporting Organizations and Advisory Committees were invited to participate in interviews at the ICANN 55 meeting, and six groups replied. Questionnaires were addressed to two registries and two registrars from each of the five ICANN geographic regions based on their registration activity. Based on the results of the interviews conducted at ICANN 55, we also sent questionnaires to five corporate registrars, for a total of 10 registries and 15 registrars. Non-trademark holders were contacted with the assistance of ICANN's Non-Commercial User Group. Trademark holders and TMCH agents were selected from the TMCH data to participate in the questionnaire to reflect geographic diversity and TMCH users with a large number of registered trademarks.

We conducted five interviews with stakeholders and the TMCH service providers at the ICANN 55 meeting in Marrakech and received 38 completed questionnaires and web forms. The questionnaires and web forms were received from four self-identifying registrars, six self-identifying registries, eleven trademark holders, eight TMCH agents, eight law firms, and one group of non-trademark-owner registrants.⁴⁶ The feedback collected from these stakeholders is used to inform and add context to our analyses. Due to the informative nature of the first-round questionnaire responses and their consistency with the results of our analyses, we did not perform a second round of interviews or questionnaire release.⁴⁷

V. Findings of the Analysis Group Independent Review

A. Claims Service

1. Analyses

The Claims Service period is an initial, mandatory, 90-day period during a new gTLD's general availability.⁴⁸ During this period, Claims Service notifications are sent to potential domain name registrants and trademark holders when domain name registrations that match a trademark string in the TMCH are attempted (notifications are sent to potential registrants) or completed (notifications are sent to trademark holders). In its 2011 recommendation on the independent review of the TMCH, the GAC advised that the review consider the benefits of extending the notifications period.⁴⁹ Initial questionnaire feedback that we received from trademark holders, TMCH agents, and law firms indicated an interest in

⁴⁵ Archived materials from the ICANN 55 discussion of this review are available at <https://meetings.icann.org/en/marrakech55/schedule/thu-tmch-review>. Non-trademark holders were contacted for the questionnaire with the assistance of ICANN's Non-Commercial User Group.

⁴⁶ Some respondents identified in multiple stakeholder groups.

⁴⁷ Appendix I provides a summary of the questionnaire responses that we received.

⁴⁸ New gTLDs may offer Claims Service periods that are longer than 90 days.

⁴⁹ See GAC 2011 Recommendation attached as Appendix A.

the extension of the Claims Service period, but some registrars find implementing the Claims Service to be costly and oppose extending the Claims Service period. In addition, some non-trademark holder registrants oppose the extension of the Claims Service period due to concerns that Claims Service notifications reduce good-faith registrations of domain names that happen to match trademark strings.⁵⁰ Below, we discuss the costs and benefits associated with the Claims Service and the potential benefits associated with extending the Service.

To answer these questions, we examined the extent to which Claims Service notifications appear to deter registration activity (i.e., how often registration attempts that trigger Claims Service notifications are not completed) and assist trademark holders in monitoring domain name registrations. These analyses involve determining how often registration attempts that trigger Claims Service notifications are abandoned and, of registrations that are completed, how often they are disputed relative to registrations that are completed without having triggered a Claims Service notification. There is unfortunately no way for us to determine the intent (i.e., bad faith or not) behind a registration attempt; we interpret dispute as a signal that a registration may have been considered to be trademark-infringing by the trademark holder. We also examine how trademark holders value Claims Service notifications by measuring adoption of the Ongoing Notifications Service. Finally, we evaluate whether potentially-infringing registrations are made immediately after the Claims Service period ends.

2. Data Collection

Our analysis relies on information from four data sources: Claims Service data, the trademark holder database, UDRP/URS dispute data, and Whois domain registration data.

As discussed above, when a potential registrant attempts to register a domain name that matches a trademark string in the TMCH during the Claims Service period of a new gTLD, the trademark string information is downloaded by the registrar from the TMDB and a Claims Service notification is shown to the potential registrant. There is no way to determine, from the data available, whether and to what extent registrars conducted downloads from the TMDB in the absence of an attempted registration. The Claims Service data record the trademark strings that were downloaded during the Claims Service period of every new gTLD, the date and time of each download, the downloading registrar, and, if a registration was completed, the name of the registered domain. Trademark strings and the domain names of completed registrations are the key variables that we use to merge the Claims Service data with other data sets.

In order to identify the dispute rate of domains that trigger Claims Service notifications, we match the Claims Service notifications data to the dispute data. In particular, we identify completed registrations in the Claims Service data that also appear in the dispute data.⁵¹ Using Whois registration data, we also examine whether third-party registrants register domain names matching trademark strings in the TMCH during and/or after the Claims Service period. To determine whether a third-party registrant has registered such a name, we compare the registrant name in the Whois registration data to the trademark holder names associated with trademark strings in the TMCH. We use an automated text comparison of the registrant and trademark holder information in the two data sets to determine whether the names are sufficiently similar to constitute a match.⁵² Registrations made by registrants who cannot be matched to a corresponding trademark holder in the TMCH are deemed to be third-party registrants.⁵³

⁵⁰ As noted above, we received 38 questionnaire responses.

⁵¹ We are able to identify 12.9% of the dispute data as registrations made in the Claims Service notifications data.

⁵² Domain registrants are deemed to be trademark holders if the registrant information in the Whois data is the same or very similar to the trademark holder information in the trademark holder database. Similarity is measured based on the generalized edit distance between the two registrant and trademark holder names in the two data sources after

Another aspect of our analyses necessitates that we identify whether a registered domain name is an exact match to a trademark string in the TMCH. To do so, we compare the domain names in the Whois data to the trademark strings in the TMCH. Trademark strings in the TMCH dataset may contain non-alphanumeric characters that are not permitted in domain name registrations. In accordance with the exact match criteria used in sending Claims Service notifications, we standardize these strings by omitting or replacing ampersands with “and,” replacing @ with “at,” and either removing all spaces and other non-allowed characters, or replacing them with hyphens. As such, a TMCH string can have several different variations: for example the hypothetical mark “Widget Inc” in the TMCH could manifest in a domain name as both “WidgetInc” and “Widget-Inc.” We look for all exact-match variations of TMCH strings in the Whois data to determine whether an exact-match registration has been made.

We also collected qualitative data about stakeholders’ interactions with and opinions of the Claims Service through our questionnaires and interviews.

3. Results

Our findings are consistent with what one might expect to see if the Claims Service was helping to deter bad faith registrations that would otherwise be disputed. However, the results may also indicate that many legitimate domain registrations may be deterred by Claims Service notifications. These results should not be relied upon to make policy recommendations. We find that the vast majority of registration attempts are not completed after receiving a Claims Service notification (94% abandonment rate). This abandonment rate seems quite high, however there are several caveats to this result, which include our inability to determine the abandonment rate that would occur if no Claims Service notifications were sent and limitations of our data set, which require us to assume that every registrar download from the TMDB represents a registration attempt.⁵⁴ We therefore cannot determine whether Claims Service notifications are the direct cause for the abandonment rate that we observe. We also find a very low dispute rate (0.3%) among registrations that receive Claims Service notifications (i.e., new gTLD registrations of domain names that are exact matches of trademark strings recorded in the TMCH). Although we are unable to say exactly why this dispute rate is so low, it is possible that Claims Service notifications are effective at deterring bad faith registrations that would otherwise be disputed, or that trademark holders are not very concerned about registrations made in new gTLDs (i.e., they are more concerned about registrations made in the .com legacy TLD) or have not yet submitted a dispute on these infringing registrations. Trademark

removing common organizational identifiers such as “inc.,” “llc,” or “corporation,” etc. Generalized edit distance is calculated using the COMPGED function in SAS, which generates a string distance score that quantifies the number of deletions, insertions, or replacements of single characters that are required to transform one text string (i.e., registrant name) into the other (i.e., trademark holder name). This is a standard methodology for comparing text strings that are identical across data sources. We tested multiple generalized edit distances, and determined that a distance of 500 or less maximized matches while minimizing incorrect matches. We estimate that this methodology yields correct treatment of 97% of the data. I.e., we estimate that our methodology correctly identifies 97% of the registrations in the Whois data that are made by trademark holders. As there is no other source of registrant information, we are unable to verify the correctness of the Whois data. However, fraudulent registrations made by registrants posing as trademark holders would need to be sizeable and considerably different in nature and timing from other registration activity to have a meaningful impact on our results.

⁵³ Registrants using privacy screens cannot be identified as trademark holders or third-party registrants and are therefore evaluated as their own category of registrant.

⁵⁴ To the extent that the Claims Service data includes downloads that are not associated with registration attempts, our calculation of the abandonment rate will be inflated. Additionally, to the extent that registrations are abandoned even when Claims Service notifications are not sent, Claims Service notifications may not be entirely responsible for the high abandonment rate observed in this analysis.

holders appear to appreciate receiving claims notifications, since the vast majority of trademark strings are enrolled in Ongoing Notification Services.

In consideration of expanding the Claims Service period, we find no evidence that bad faith registrations are timed strategically to avoid triggering Claims Service notifications. Further, registrations in new gTLDs decline after the Claims Service period ends and remain below the registration levels during the Claims Service period. This indicates that an extension of the Claims Service period would result in a declining marginal benefit to trademark holders while potentially increasing the monitoring and administrative costs of registrars. It is also possible that by extending the Claims Service period, any deterrent effect of Claims Service notifications on non-trademark-holder registrants would continue, thus decreasing registrations overall or slowing the registration adoption of new gTLDs.

a. Registration Abandonment

Claims Service notifications are intended to deter bad-faith registrations of trademark strings but, as discussed in Section III, may also deter good-faith registrations of domain names that coincidentally match trademarked strings. We examine the extent to which Claims Service notifications appear to deter registration activity by calculating the prevalence of registration abandonment among registration attempts that triggered Claims Service notifications. We interpret each download observed in the Claims Service data as an indication that a domain registration was attempted and triggered a notification; to the extent that bulk downloads (i.e., simultaneous downloads of more than one TMDB record by a given registrar) are present in the data, we may observe more “abandoned” registrations than actually occurred (i.e., bulk downloads will appear to be an abandoned registration because bulk downloads will never be associated with completed registrations). Because we cannot be certain that the large downloads made by two registrars in the data do not also include bulk downloads made by those registrars, we exclude those two registrars from this analysis. However, our results are qualitatively similar if these registrars are included.⁵⁵

As shown in **Table 4**, we find that 93.7% of the 1.8 million registration attempts that received a Claims Service notification were abandoned. (We count the number of unique domain names registered as reported in the IBM data to determine how many registrations were completed. All downloads that are not associated with a unique registered domain name are considered abandoned.⁵⁶) Unfortunately, due to data constraints, we are not able to observe the registration abandonment rate for registrations that are attempted outside of the Claims Service period (when no Claims Service notifications are sent); such a measure would be useful to use as a base abandonment rate to which we would compare the Claims Service period abandonment rate to measure the size of the Claims Service notifications’ deterrent effect. Measuring a baseline level of abandonment outside of the Claims Service would require data on registration attempts and completions, which may be observed and recorded by registrars.⁵⁷

⁵⁵ As discussed in Section IV, there are two registrars that averaged downloads of more than 20 trademark strings per download, which is large compared to the average of fewer than five trademark strings in the downloads of other registrars. We also exclude downloads made by ICANN’s monitoring system. The exclusion of the two registrars does not significantly impact our results. Inclusion of the two registrars shows that 99% of registrations are abandoned and 0.5% of completed registrations are disputed.

⁵⁶ As noted above, if there are bulk downloads present in the data, then we will observe more “abandoned” registrations than occurred due to bulk downloads being unrelated to registration attempts.

⁵⁷ Some commenters on the draft version of this report suggested we request registrar data for registration attempts and abandonment both during and after the Claims Service period. Although we requested this data from a representative sample of 54 registrars, we received data from only one registrar. The received data was not sufficient to perform a generalizable analysis that would compare abandonment rates during and after the Claims Service period.

Table 4
Claims Service Registration Abandonment, Completion, and Dispute Rates
October 2013 – February 2016

	<u>All Attempted Registrations</u>		Share of Completed Registrations
	Count of Claims Service Downloads	Share of Claims Service Downloads	
"Abandoned" Registrations	1,696,862	93.7%	N/A
"Completed" Registrations			
Non-disputed registrations	113,338	6.3%	99.7%
Disputed registrations	346	0.0%	0.3%
"Completed" Registrations Subtotal	113,684	6.3%	100.0%
Attempted Registration Total	1,810,546	100.0%	-

Notes:

[1] Downloads by the ICANN registrar ID 9997 (ICANN’s monitoring system) are excluded in order to limit the analysis to downloads by registrars. This exclusion results in an exclusion of 35.7% of the observations in the original Claims Service data received from IBM.

[2] A bulk download is defined as a download from the TMCH of multiple strings by the same registrar with exactly the same time stamp. Downloads by two registrars are excluded from this analysis because of a potentially high prevalence of bulk downloads (98.7% and 81.9% of downloads, respectively) by each of these two registrars. The average size of the “bulk downloads” by these two registrars (approximately 23 and 35 strings, respectively) is much larger than the average “bulk download” size of other registrars (other registrars in the Claims Service data download 5 strings or less on average). This exclusion results in an exclusion of 62.2% of the observations in the original Claims Service data received from IBM after excluding downloads by ICANN's monitoring system.

[3] Each Claims Service download is interpreted to represent a domain registration attempt. Downloads are defined as unique combinations of string, registrar, and timestamp in the original IBM claims service data.

Sources:

IBM Claims Service Notifications Data; UDRP Dispute Data.

b. Registration Completion and Disputes

As shown in **Table 4**, 6.3% of registration attempts that trigger a Claims Service notification complete the registration process. Of the nearly 114,000 completed registrations, only 0.3% resulted in domain disputes as of December 2015. The registrations in the Claims Service data account for approximately 5% of 2.2 million registrations made in new gTLDs during Claims Service periods that occurred between October

2013 and February 2016 (i.e., the time period covered by the Claims Service data).⁵⁸

There are several possible reasons why the dispute rate on Claims Service notifications appears to be so low. First, bad-faith registrations may be largely abandoned when a Claims Service notification is received, so very few domains are registered that trademark holders would wish to dispute. Second, there may be a lag between the time a domain is registered and discovered by a trademark holder and when a dispute is filed, causing us to see some registrations as non-disputed when they may become disputed in the future (i.e., we do not observe a dispute in the dispute data because it is limited to disputes that occurred before the end of 2015). Third, trademark holders may be generally less concerned by the domain registrations in the Claims Service data, either because the domain names are low-priority for disputes or because exact-match registrations made in new gTLDs are less threatening to trademark holders than registrations in legacy TLDs like .com. Another potential explanation is that trademark holders may resolve issues with domain registrants outside of the formal dispute process.

To evaluate whether the first explanation explains our results, we would need information on the domain names that were attempted in abandoned registrations. However, the Claims Service data only contain domain names for completed registrations. Therefore, we are unable to evaluate the characteristics of abandoned registration attempts. We attempt to evaluate the second potential explanation by limiting our analysis to the earliest quarter of Claims Service data, thus focusing our analysis on the registrations in our data that have been available to the dispute process for the longest period of time and would therefore be less affected by the limited time window of the dispute data. The dispute rate of the domain registrations made in the earliest quarter of the Claims Service data is also 0.3%, which suggests that the limited time window associated with the dispute data may not be responsible for the low dispute rate that we observe. The third explanation is consistent with feedback that we received from questionnaire respondents, which indicated that trademark holders consider the importance of the domain name (including the TLD) when determining whether to file a complaint. Our data do not allow us to test the hypothesis that infringing domains are resolved outside of the dispute process, since we do not have records associated with attempts at such resolutions and how often they are successful.⁵⁹

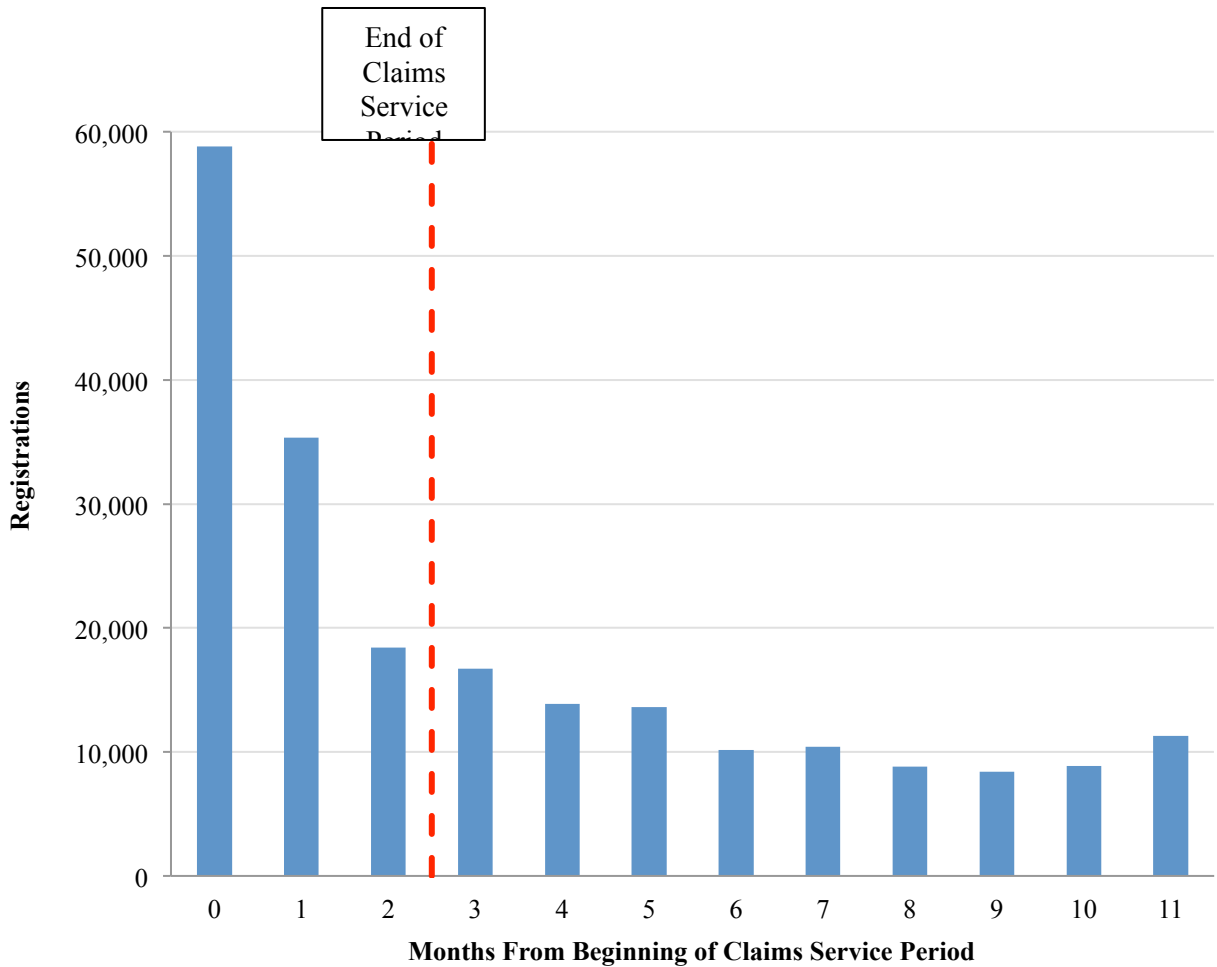
c. Timing of Potentially-Infringing Registrations Around the Claims Service Period

It is possible that the Claims Service period deters bad faith registrations during the Claims Service period, so bad-faith registrants wait until the Claims Service period is complete to make their registrations. If that is the case, we might expect to see a spike in registrations that are an exact match of a trademarked string (i.e., would trigger a Claims Service notification during the Claims Service period) immediately after the Claims Service period ends. **Figure 1** shows that there is a gradual decline in the number of exact-match registrations made by third-party registrants following the Claims Service period. This chart indicates that it is unlikely that potentially-infringing registrants strategically time registrations to avoid Claims Service notifications.

⁵⁸ The total number of registrations made during Claims Service periods is calculated based on ICANN's monthly transaction reports. Because Claims Service periods may begin and end in the middle of a calendar month, but the monthly transaction reports report all registrations made in a TLD for an entire calendar month, the monthly transaction reports only provide an approximation of registrations made during the Claims Service period of a given TLD. We total all approximated Claims Service period registrations for new gTLDs that had Claims Service periods that overlapped with the Claims Service data (i.e., occurred between October 2013 and February 2016).

⁵⁹ We are aware of work by the Rights Protection Mechanisms Policy Development Process Working Group to collect data on this question. A survey launched by the International Trademark Association (INTA) on 9 January 2017 will collect data related to the dispute process and other rights protection mechanisms http://www.inta.org/INTABulletin/Pages/Internet_Update_7201.aspx.

Figure 1
Exact-Match Registrations During and After Claims Service Period by Non-Trademark-Holders



Notes:

[1] This analysis is limited to new gTLDs with at least twelve months of observable registration data from DomainTools. This limitation results in the analysis including 345 out of a total 1,354 new gTLDs.

[2] This analysis is limited to registrations made by non-trademark holders of exact-match strings. Non-trademark holders are identified as registrants that do not match the trademark holder based on approximate string matching between registrant and trademark holder.

[3] Exact-match strings are strings that match a TMCH string in accordance with ICANN's matching criteria and would trigger a Claims Service notification if registered during the Claims Service period.

[4] Registrations in Brand TLDs have been excluded from this analysis.

Sources:

Whois Registration Data Received from DomainTools; Deloitte Trademark Holder Database; Claims Service Periods downloaded from <https://newgtlds.icann.org/en/program-status/sunrise-claims-periods>.

Another way to measure the prevalence of potentially-infringing registrations is to examine disputed domains. Disputed domains are more likely to be indicative of bad-faith registrations, since they trigger dispute actions by trademark holders.⁶⁰ We therefore analyze whether exact-match registrations made by non-trademark holders are more likely to be disputed when they are registered during or after the Claims Service period. A higher rate of disputes on registrations made after the Claims Service period would indicate that registrations completed after the Claims Service period are perceived by trademark holders as more infringing than registrations made during the Claims Service period. We limit our analysis to registrations made during or within 90 days after the Claims Service period to focus on registration activity that may have been timed intentionally to avoid Claims Service notifications (i.e., registrations following immediately after the Claims Service period) and to examine dispute rates based on a uniform period of time (i.e., a dispute rate based on registrations made during a 90-day period during or after the Claims Service period).

Table 5 shows that there is no discernible increase in the dispute rate of exact-match domain registrations when those registrations are made after the Claims Service period ends. This indicates that it is unlikely that bad faith registrants strategically time their registrations relative to the Claims Service period. Therefore, it is unclear whether extending the Claims Service period would help to deter or delay bad faith registrations from being made. Anecdotal evidence also suggests that extending the Claims Service period could be costly for non-trademark-holder stakeholders: a number of questionnaire respondents identified administrative costs associated with expanding the Claims Service period.⁶¹

⁶⁰ It is possible, however, that disputed domains are not made in bad faith. Disputes are only indicative of a trademark holder's perception that a domain infringes on trademark rights. Domain disputes also do not encompass all bad-faith registrations, as some bad-faith registration may go undetected by trademark holders.

⁶¹ The dispute rate for registrations during the Claims Service period reported in **Table 5** is not the same as the dispute rate reported in **Table 4** due to discrepancies between the Claims Service data and Whois registration data set regarding the number of registrations made during the Claims Service period. However, the two dispute rates reported in **Table 5** are comparable to each other for this analysis because they rely on the same data source.

Table 5
Dispute Rate for Exact-Match Strings Registered During and After the Claims Service Period

	Number of Exact Match Disputes	Number of Exact Match Registrations	Dispute Rate
Registered During Claims Service Period	323	136,732	0.24%
Registered within 90 Days After Claims Service Period	62	47,606	0.13%
Total	385	184,338	0.21%

Notes:

- [1] This analysis is limited to registrations made by non-trademark holders of exact-match strings.
- [2] Non-trademark holders are identified as exact-match-string registrants whose names do not match the name of the trademark holder based on approximate text comparison between registrant and trademark holder names.
- [3] Exact-match strings are strings that match a TMCH string in accordance with ICANN's matching criteria.
- [4] Disputed domains are identified by comparing registered domains with UDRP dispute data.
- [5] Registrations in Brand TLDs have been excluded from this analysis.

Sources:

Whois Registration Data Received from DomainTools; UDRP Dispute Data; Claims Service Period Dates downloaded from <https://newgtlds.icann.org/en/program-status/sunrise-claims-periods>.

d. Ongoing Notifications

As described above, TMCH users can enroll in the free Ongoing Notifications Service to continue receiving notifications after the end of the Claims Service period.⁶² The relative cost and benefit that TMCH users receive from Claims Service notifications can be measured by evaluating the rate at which TMCH users enroll in Ongoing Notifications. In economics, when a consumer purchases a good or service, he/she must value the good or service at least as much as the price that he/she pays for that good or service. Because the Ongoing Notifications is a free service, it is difficult to determine the “value” of the service to TMCH agents and trademark holders. However, among the feedback that we received from stakeholders regarding Claims Service notifications, some respondents felt that the notifications were costly to review (based on the time and effort involved). The high enrollment rate in the Ongoing Notifications program indicates that the perceived benefit of receiving ongoing notifications outweighs the costs of filtering any notifications that would be received through the program. Because the Ongoing Notifications program is a free program that extends the Claims Service notices received by trademark holders, but there is no corresponding program by which the Claims Service notices shown to potential domain registrants are similarly extended, we are unable to assess the relative value that trademark holders place on each type of Claims Service notice. We are also unable to determine how trademark holders value the Ongoing Notifications Service relative to the Claims Service.⁶³

⁶² Ongoing notifications for exact-match registrations are free. Trademark holders may add some variations to the Ongoing Notifications Service for a price of \$1 per variation and label per year.

⁶³ Some trademark holders may purchase domain name watching services outside of the TMCH. The existence of a market for commercial watching services may reflect that trademark holders value (i.e., are willing to pay for) such a service. These services monitor new domain name registrations for domain names that meet certain criteria to qualify as meaningfully similar to the protected trademark string, and will notify the trademark holder when such domain registrations are found.

Table 6A shows that the vast majority of TMCH users who are TMCH agents (82%) enroll in the Ongoing Notifications program, while nearly half of TMCH users who are trademark holders (45%) enroll in the program. Nearly half of all TMCH users use Ongoing Notifications (49%). **Table 6B** shows that TMCH agents are more likely to enroll in Ongoing Notifications than trademark holders, regardless of geographic location.

Table 6A
Summary of TMCH Users Enrolled in Ongoing Notifications Service

User Type	Enrolled in Ongoing Notifications	Not Enrolled in Ongoing Notifications	Percent Enrolled in Ongoing Notifications
Agent	142	31	82.1%
Trademark Holder	673	833	44.7%
Total	815	864	48.5%

Notes:

[1] Users enrolled in ongoing notifications were identified using ongoing notification flags for each TMCH user received from Deloitte.

[2] User types were identified by an indicator included in the Deloitte Trademark Holder Database.

Sources:

Deloitte Trademark Holder Database; Deloitte Trademark Holder Ongoing Notification Indicators.

Table 6B
Summary of TMCH Users Enrolled in Ongoing Notifications Service
By Country

Country	Enrolled in Ongoing Notifications		Not Enrolled in Ongoing Notifications		Percent Enrolled in Ongoing Notifications	
	Agents	TM Holders	Agents	TM Holders	Agents	TM Holders
US	54	388	10	499	84.4%	43.7%
CH	2	62	1	75	66.7%	45.3%
GB	9	59	3	59	75.0%	50.0%
DE	21	27	3	47	87.5%	36.5%
AU	3	25	1	31	75.0%	44.6%
FR	11	13	1	17	91.7%	43.3%
CA	3	12	1	24	75.0%	33.3%
ES	3	5	-	10	100.0%	33.3%
AT	1	6	-	9	100.0%	40.0%
NL	4	4	-	8	100.0%	33.3%
Total - Top 10 Countries	111	601	20	779	84.7%	43.6%

Note:

[1] Users enrolled in ongoing notifications were identified using ongoing notification flags for each TMCH user received from Deloitte.

[2] User types were identified by an indicator included in the Deloitte Trademark Holder Database.

[3] User countries are identified from the Deloitte Trademark Holder Database.

Sources:

Deloitte Trademark Holder Database; Deloitte Trademark Holder Ongoing Notification Indicators.

We evaluate whether certain types of TMCH users value Claims Service notifications more than others by studying whether some users are more likely to use Ongoing Notifications than others. We find that TMCH users who have recorded many trademark strings in the TMCH tend to enroll in Ongoing Notifications Services more than TMCH users with fewer trademark strings. **Table 7** shows that for both TMCH agents and trademark holders, the average user enrolled in the Ongoing Notifications service has more recorded strings than those that are not enrolled in Ongoing Notifications services: the average TMCH agent that uses Ongoing Notifications has 192 trademark strings in the TMCH, whereas the average TMCH agent that does not use Ongoing Notifications has only 18 recorded trademarks, and; the average trademark holder that uses Ongoing Notifications has just over 2 recorded trademark strings, while the average trademark holder that does not use Ongoing Notifications has just less than 2 recorded trademark strings. Because TMCH agents who use Ongoing Notifications account for such a large portion of the strings in the TMCH, overall, 92.9% of all strings in the TMCH are covered by Ongoing Notifications. Given the widespread interest in extending the Claims Service period voiced by TMCH agent and trademark holder questionnaire respondents, it is unsurprising that many TMCH users enroll in Ongoing Notifications Services.

Table 7
Summary of Ongoing Notifications Activation
By User Type

User Type	Average Number of Strings Registered		Total Number of Strings Registered		Fraction of Strings with Ongoing Notifications Activated
	Enrolled	Not Enrolled	Enrolled	Not Enrolled	
Agent	191.6	18.3	27,208	566	97.96%
Holder	2.3	1.9	1,573	1,621	49.25%
Total	220.8	24.2	28,781	2,187	92.94%

Notes:

[1] Users enrolled in ongoing notifications were identified using ongoing notification flags for each TMCH user received from Deloitte.

[2] User types were identified by an indicator included in the Deloitte Trademark Holder Database.

[3] The number of strings registered is the number of trademarks registered by a given TMCH user according to the Deloitte Trademark Holder Database.

Sources:

Deloitte Trademark Holder Database; Deloitte Trademark Holder Ongoing Notification Indicators.

B. Matching Criteria

1. Analyses

The Claims Service identifies potentially-infringing domain registrations by identifying domain names submitted during the registration process that are “exact matches” to TMCH-recorded strings, where an exact match is defined as either an exact string match to a recorded trademark, or an exact string match to a trademark after the following adjustments have been made to invalid characters: punctuation, spaces, and other invalid characters have been replaced with hyphens or omitted for the string and the special characters @ and & have been spelled out (i.e., “at” and “and”).⁶⁴

In its 2011 recommendation on the independent review of the TMCH, the GAC advised that the review examine whether an expansion of the matching criteria could be implemented.⁶⁵ Initial responses to our questionnaires from trademark holders and TMCH agents often expressed interest in expanding the matching criteria.⁶⁶ However, registries and registrars expressed some concern regarding the cost associated with implementing additional matching criteria. The intention of our analyses is to understand some of the costs and benefits associated with expanding the matching criteria and what expansions may be most beneficial.

⁶⁴ ICANN, “Explanatory Memorandum: Implementing the Matching Rules,” 24 September 2012, available at <https://newgtlds.icann.org/en/about/trademark-clearinghouse/matching-rules-24sep12-en.pdf>.

⁶⁵ See GAC 2011 Recommendation attached as Appendix A.

⁶⁶ Many of the expansions suggested by questionnaire respondents are captured by our analysis, for example plurals and common misspellings.

To analyze which non-exact match criteria might be most beneficial to incorporate into the TMCH services, we analyzed the prevalence of several common non-exact text variations that have been used to study typo-squatting domains.⁶⁷ In particular, we examined how often the following text variations have been registered:⁶⁸

- Missing-dot typos: These variations simulate an Internet user omitting a period in a domain address (e.g., `www.domain.com` becomes `wwwdomain.com`). In the first variation, “www” is appended to the beginning of the trademark string. In the second variation, “com” is appended to the end.
- Fat-finger Typos: These variations take advantage of “fat-finger” characters (the characters immediately surrounding a character on the QWERTY keyboard). These variations simulate an Internet user accidentally hitting a nearby key when typing a domain name by replacing one character in a trademark string with each possible fat-finger character.
- Character Duplication: For every character in the original string, a character is duplicated (i.e., “domain” becomes “ddomain,” “doomain,” etc.).⁶⁹
- Character Swaps: For every adjacent pair of characters in the original string, their positions are switched (e.g., “domain” and “odmain”).
- Character Removal: One at a time, remove each character from the original string (i.e., “domain” becomes “omain,” “dmain,” etc.).
- Plurals: An “s” is added to the end of each original string.
- Digit Addition: A “1” is added to the end of every original string.
- “Cheap” and “Buy”: “Cheap” is added to the beginning of each string and to the end of each string, respectively. The same is also done with “buy.”

We would have liked to also incorporate the goods or services sold by trademark holders into another set of permutations (e.g., “apple-computer” for the trademark string “apple” registered by Apple, Inc.). However, due to the lack of detail in the Nice classification codes available in the TMCH data, we were unable to include these types of variations in our analysis. The two-digit Nice codes provide very high-level industry characteristics that are not always product names that are likely to be included in domain names. For example, Nice Class 1 is described as “Chemicals used in industry, science and photography, as well as in agriculture, horticulture and forestry; unprocessed artificial resins, unprocessed plastics; manures; fire extinguishing compositions; tempering and soldering preparations; chemical substances for preserving foodstuffs; tanning substances; adhesives used in industry.”⁷⁰ In addition to the difficulty of determining what industry key words to associate with a trademark string’s Nice classification, many TMCH-recorded trademarks are associated with multiple Nice codes, making a goods and services string variation so broad that it loses its relevance.

⁶⁷ See A. Linari, F. Mitchell, D. Duce, and S. Morris, “Typo-squatting: The ‘curse’ of popularity,” in *WebSci’09: Society On-Line*, 2009; T. Moore and B. Edelman, “Measuring the Perpetrators and Funders of Typosquatting” in *Financial Cryptography and Data Security*, Vol. 6052 of the series *Lecture Notes in Computer Science*, pp. 175-191; P. Agten, W. Joosen, F. Piessens, and N. Nikiforakis, “Seven Months’ Worth of Mistakes: A Longitudinal Study of Typosquatting Abuse,” Internet Society Briefing Paper, February 2015, available at http://www.internetsociety.org/sites/default/files/01_3_1.pdf; and Y. Wang, D. Beck, J. Wang, C. Verbowski, and B. Daniels, “Strider Typo-Patrol: Discovery and Analysis of Systematic Typo-Squatting,” *Usenix 2nd Workshop on Steps to Reducing Unwanted Traffic on the Internet (SRUTI)*, July 2006.

⁶⁸ An example of all text variations applied to “domain” is available in Appendix B.

⁶⁹ In the case where two or more of the same character are adjacent to each other in the original trademark string, no duplication is made (e.g., *allegro*).

⁷⁰ “Nice Classification, Official Publication,” WIPO, available at http://web2.wipo.int/classifications/nice/nicepub/en/fr/edition-20160101/taxonomy/class-1/?pagination=no&lang=en&mode=flat&explanatory_notes=show&basic_numbers=show.

Regardless of the source of industry classification (i.e., Nice classes or SIC codes), the ability to associate pertinent keywords to the trademarks in the TMCH will be limited because TMCH-recorded trademarks may be associated with multiple industries and a wide variety of products. For example, "apple" has Nice Class 9, which includes "apparatus and instruments for scientific research in laboratories; apparatus and instruments for controlling ships, such as apparatus and instruments for measuring and for transmitting orders; protractors; punched card office machines; all computer programs and software regardless of recording media or means of dissemination, that is, software recorded on magnetic media or downloaded from a remote computer network."⁷¹ There are many products one could assign to Nice Class 9, some of which would apply to products generated by Apple, Inc., and some of which would not. Additionally, there may be many words that some people may consider to be key words associated with a trademark or a trademark holder (e.g., Apple, Inc.), that would not be apparent based on the definition of the broad industry that applies to the trademark or the trademark holder. This problem would be exacerbated for trademarks associated with multiple Nice classes or SIC industry codes.⁷² We are therefore unable to generate an objective list of key words associated with each industry that would be provide meaningful color to this analysis. Future analyses of keyword criteria may require additional research and interviews of industry representatives to identify the proper set of words for each industry.

2. Data Collection

As described above, the TMCH database includes records for all trademarks recorded in the TMCH. Because only verified trademarks are protected by the Claims Services, we limit our analyses to verified trademarks. We selected a 25% random sample of the verified, Latin script trademarks in the TMCH, which resulted in a sample of 7,661 trademarks.⁷³ We then created a list of non-exact string permutations of each trademark in our sample, as described above. This process was conducted using base Python string manipulation and iteration functions. This process resulted in 613,732 permutations of the trademark strings in our sample.

DomainTools provided Whois registration data for all new gTLD and legacy TLD domain registrations made since July 2013 that had a domain name matching any of the non-exact trademark permutations described above and any valid TMCH exact-match strings (as described above in Section V.B.2). To determine how many domain registrations were made for each type of non-exact string permutation, we compared each string in the Whois registration data to the strings in our initial data request.⁷⁴ We determine dispute rates and whether a domain was registered by a trademark holder or third-party registrant as discussed above in Section V.B.2.

⁷¹ "Class 9," WIPO, available at http://web2.wipo.int/classifications/nice/nicepub/en/fr/edition-20170101/taxonomy/class-9/?pagination=no&lang=en&mode=flat&explanatory_notes=show&basic_numbers=show.

⁷² We have also investigated the possibility of using dispute records to identify keywords. Disputes may occur on domains that are registered in a product-related TLD (e.g., audi.auto, audi.cars) or may be very product-specific (e.g., skullcandy-headphones.com), and do not contain enough product- or industry-related terms to define keywords for all relevant industries or individual trademark holders registered in the TMCH.

⁷³ A number of the non-exact string permutations are based on a QWERTY keyboard and require Latin script. 97% of the trademark strings in the TMCH are Latin script.

⁷⁴ One registered domain name can correspond to multiple original trademark strings in the TMCH data. For example, a registration of "books.xyz" may relate to a trademark string of "boks" through a character duplication permutation (i.e., duplicating the "o" to result in "books") or a plural typo permutation of the string "book" (i.e., adding an "s" to result in "books"). In such an instance, we match the registration record of "books.xyz" to both original strings "boks" and "book."

3. Results

We find no clear evidence that expanding the matching criteria will outweigh the potential costs of doing so. Registration activity by trademark holders and third-party registrants is disproportionately centered around exact matches of trademark strings rather than variations of trademark strings. Additionally, our results indicate that trademark holders file very few disputes using the URS or UDRP. If trademark holders value domains that are variations of their trademarks but are unable to monitor the registration of these domains, then expanding the matching criteria may be useful. However, if many trademark holders already utilize registration monitoring services other than the TMCH, it is unlikely that expanding the matching criteria will yield much benefit.

We are aware that there are numerous companies that provide domain monitoring services to trademark holders for registrations of exact and non-exact match domains. Unfortunately, due to the limited responses to our questionnaire regarding use of these services, we are unable to quantify or hypothesize how often TMCH users rely on monitoring services outside of the TMCH.

Expanding the matching criteria may also be associated with increased costs for other stakeholder groups to develop and support systems to handle expanded matching criteria. Responses to our questionnaires indicate that registries and registrars will face costs associated with implementing additional matching criteria. These additional named costs include additional staffing resources and computing infrastructure necessary to develop and support the expanded rights protection mechanisms: additional criteria will require additional programming, computing facilities, and staff to support and maintain the more complex system. Questionnaires also indicate that, to the extent that expanded criteria generate more Claims Service notifications, law firms and trademark holders will need to dedicate more resources to reviewing notifications, which is costly.

a. Exact and Non-Exact Match Domain Name Registrations

To determine what types of string variations could potentially be included in an update to the matching criteria, we examined how often non-exact match variations of trademark strings are registered. If a string variation is disproportionately common among registrations, then it may be useful to consider including that string variation in the matching criteria.

In **Table 8**, we compare the frequency of registrations of each non-exact string variation to the frequency with which one would expect those registrations to occur at random. Columns [C] and [D] of the table show the count of each type of string variation that we generated for the trademark strings in our sample and the portion of the total number of string variations that is attributable to each type of variation. The character removal, character swap, fat finger, and duplication typo variations comprise the largest shares of all of the variations because the complete set of variations generated for each trademark string involves a typo for each character in that string (i.e., for a string that is 10 characters in length, there will be 10 character removal typo variations, 10 character swap typo variations, etc., yet only one plural typo). The set of string variations that we generate is a complete set of all variations of each trademark string in our sample that meet any of the string variation criteria that we are evaluating. Therefore, if a registrant were to choose to register a variant of a trademark string at random, we would expect that on average an exact match would be registered 1.5% of the time, a plural typo would be registered 1.3% of the time, etc. If exact match registrations occur more than 1.5% of the time, one might conclude that registrants are not selecting domain names at random, but instead are most interested in registering trademark string exact matches. We conduct this comparison by comparing the actual registration frequency of each variation type in Column [B] against the frequency with which we'd expect registrations to occur if they were random (Column [D]).

We find that exact-match registrations account for a disproportionately large share of registrations in our Whois data compared to their relative share in our Whois data request. We can compare the share of registrations that are exact matches to trademark strings (Column [B] in **Table 8**) to the share of the generated set of string variations in the Whois data request (Column [D] in **Table 8**) that is represented by exact match strings. For exact-match registrations the share of registrations (17.9%) is larger than the share of all string variations in the Whois data request that were exact match strings (1.5%) by a factor of 11.8. This indicates that domain registrants target registrations that match trademark strings.⁷⁵ Plural typos and character removal typos are the only other string variations with registrations disproportionately large relative to their share of strings in the Whois data request (2.9% vs. 1.3% and 23.2% vs. 11.1%, respectively).⁷⁶ This seems to indicate that these string variations are the most popular among registrants, although we are unable to tell what portion of plural and character removal registrations have been made in bad faith.⁷⁷

⁷⁵ Exact-match registrations may be the result of cybersquatting or it may be the result of coincidentally matching a trademark string that is a common word, phrase, or name.

⁷⁶ Plural typos have disproportionately more registrations than expected based on their prevalence in the data request to Domain Tools, however these string variations comprise only 2.9% of the registrations in the Whois registration data set.

⁷⁷ One could also note that character swap and fat finger typos are registered fairly often. However, the frequency with which they are registered is smaller than the frequency at which one would expect them to be registered at random.

Table 8
Prevalence of Each String Variation Observed in Whois Registration Data Set

String Variation	All Registrations		Generated Set of String Variations		Observed Registration Factor
	Count	%	Count	%	
	[A]	[B]	[C]	[D]	[B] / [D]
TMCH Exact Match	154,130	17.9%	8,854	1.5%	11.81
Plural Typo	25,087	2.9%	7,661	1.3%	2.22
Character Removal Typo	199,847	23.2%	64,744	11.1%	2.09
Character Swap Typo	86,035	10.0%	66,794	11.4%	0.87
Fat Finger Typo	367,524	42.6%	310,521	53.1%	0.80
Duplication Typo	24,147	2.8%	72,773	12.4%	0.23
Digit Addition Typo	1,828	0.2%	7,661	1.3%	0.16
COM Missing Dot Typo	1,059	0.1%	7,661	1.3%	0.09
Buy Typo	1,416	0.2%	15,322	2.6%	0.06
WWW Missing Dot Typo	325	0.0%	7,661	1.3%	0.03
Cheap Typo	506	0.1%	15,322	2.6%	0.02
Total	861,904	100.0%	584,974	100.0%	N/A

Notes:

- [1] Counts reflected in the table above include only domains from parsed Whois records. Registrations in legacy TLDs which represent 29% of registrations are excluded.
- [2] Registrations corresponding to each string variation are identified by comparing Whois registration records with string variations generated on the 25% sample of verified TMCH strings. For TMCH exact-match strings, registrations associated with each string are identified by comparing Whois registration records with string variations of the 25% sample of verified TMCH strings that meet the TMCH exact-match criteria.
- [3] String variations used in this analysis are described in Section V.C.1 above.
- [4] Observed registration factor is calculated as each string variation type's share of all registrations divided by that variations share of all generated string variations. Observed registration factors above 1 indicate that string variation type accounted for a disproportionately large share of registrations compared to its share of generated string variations.
- [5] Brand TLDs have been excluded from this analysis.

Sources:

Whois Registration Data Received from DomainTools; TMCH string variations generated on 25% Sample of Deloitte Trademark Holder Database; Deloitte Trademark Holder Database.

To try to determine the possibility of bad-faith registrations for each type of string variation, we focus on the registration activity of third-party registrants. We separate the registration behaviors of trademark holders, registrants who use a privacy screen when registering their domain name, and third-party registrants in **Table 9**. Just over half of trademark holder registrations (56.8%) are exact matches of trademark strings. Approximately 15% and 19% of registrations by third-party registrants and privacy screen users, respectively, also are exact matches of trademark strings. This shows that the prevalence of exact-match registrations is being driven by trademark holders, however exact-match registrations are still more prevalent among third-party and private registrants than would be expected based on their prevalence in the set of string variations in the Whois data request (15.4% and 19.1% vs. the 1.5% shown in Column [D] of **Table 8** for exact matches). This indicates that third-party registrants are also targeting registration activity at domain names that are exact matches to trademark strings.

Table 9
Domain Name Registrations by String Variation and Registrant Type

String Variation	Registrations							
	Trademark Holder		Privacy Service		Other Registrant		All Registrations	
	Count	%	Count	%	Count	%	Count	%
TMCH Exact Match	24,328	56.8%	20,958	19.1%	108,844	15.4%	154,130	17.9%
Plural Typo	819	1.9%	3,595	3.3%	20,673	2.9%	25,087	2.9%
Character Removal Typo	4,120	9.6%	26,717	24.3%	169,010	23.8%	199,847	23.2%
Character Swap Typo	7,769	18.1%	10,407	9.5%	67,859	9.6%	86,035	10.0%
Fat Finger Typo	5,291	12.3%	44,933	40.9%	317,300	44.7%	367,524	42.6%
Duplication Typo	395	0.9%	2,612	2.4%	21,140	3.0%	24,147	2.8%
Digit Addition Typo	34	0.1%	267	0.2%	1,527	0.2%	1,828	0.2%
COM Missing Dot Typo	37	0.1%	134	0.1%	888	0.1%	1,059	0.1%
Buy Typo	17	0.0%	245	0.2%	1,154	0.2%	1,416	0.2%
WWW Missing Dot Typo	3	0.0%	17	0.0%	305	0.0%	325	0.0%
Cheap Typo	33	0.1%	108	0.1%	365	0.1%	506	0.1%
Total	42,846	100.0%	109,993	100.0%	709,065	100.0%	861,904	100.0%

Notes:

- [1] This analysis is limited to parsed Whois registration records because non-parsed records do not include registrant information. Registrations in legacy TLDs which represent 29% of registrations are excluded.
- [2] Registrations corresponding to each string variation are identified by comparing Whois registration records with string variations generated on the 25% sample of verified TMCH strings. For TMCH exact-match strings, registrations associated with each string are identified by comparing Whois registration records with string variations of the 25% sample of verified TMCH strings that meet the TMCH exact-match criteria.
- [3] String variations used in this analysis are described in Section V. C. 1 above.
- [4] Registrations by trademark holders are identified using a string matching technique to classify a registration as having been made by a trademark holder when the original trademark holder sufficiently matches the registrant for a particular domain. This matching technique combines a generalized string distance algorithm with the removal of common strings such as 'inc', 'the', or 'company' from trademark holder and registrant organization names to determine whether a registration was made by a trademark holder. This technique is about 97% accurate in successfully identifying trademark holders.
- [5] Privacy service registrations are identified as any registrant whose name contains any of the following words: 'Privacy', 'Private', 'Proxy', or 'Whois'.
- [6] String variation types are sorted in descending order of observed registration factor as calculated in Table 8. Observed registration factor is calculated as each string variation type's share of all registrations divided by that variations share of all generated string variations. Observed registration factors above 1 indicate that string variation type accounted for a disproportionately large share of registrations compared to its share of generated string variations.
- [7] Registrations in Brand TLDs have been excluded from this analysis.

Sources:

Whois Registration Data Received from DomainTools; TMCH string variations generated on 25% Sample of Deloitte Trademark Holder Database; Deloitte Trademark Holder Database.

b. Dispute Rates of Exact- and Non-Exact-Match Third-Party Registrations

The analyses above help to illustrate what types of domains are registered by trademark holders and third-party registrants, but more information is required to determine how many registrations are made in bad faith or are perceived by trademark holders as trademark infringement. To measure this, we examine how

often each type of string variation is disputed.⁷⁸ **Table 10** shows that dispute rates among registrations are very low, which is consistent with the result that 0.3% of completed registrations that receive a Claims Service notification are disputed. Although it is difficult to make a statistical comparison of the dispute rates in **Table 10** to the 0.3% dispute rate found in our Claims Service analysis, this result indicates that expanding the matching criteria may not help to deter many bad faith registrations that would be disputed by trademark holders.

Our results show that there are many registrations of non-exact trademark permutations, but not many are disputed. To the extent that the Claims Service deters good-faith registrations, it is possible that extending the Claims Service to include non-exact matches could cause many registrations to be abandoned. However, the size of the effect on good-faith registrations cannot be determined in a decisive manner. Although we observed in Section V.B.3 a high rate of abandonment among registration attempts that received Claims Service notifications, we are unable to observe how many of those registrations attempts were potentially infringing. We are therefore unable to distinguish the deterrent effect of Claims Service notifications on potentially infringing registrations from a deterrent effect on legitimate registrations. To the extent that a deterrent effect on registrations does exist, extending the Claims Service period would likely reduce good-faith registration activity.

Although expanding the matching criteria may assist trademark holders in monitoring registration activity that could be related to their trademarks, an increase in Claims Service notifications may act as a deterrent to a large number of legitimate registration attempts. It could also be costly to registries and registrars to implement the additional matching criteria.

⁷⁸ We limit this analysis to registrations made by third-party registrants, since registrations made by trademark holders are irrelevant to this analysis. It should be noted that domain disputes are not definitively bad faith registrations: they represent domains that trademark holders perceive as a trademark infringement. Domain disputes also do not encompass all bad faith registrations, as some bad faith registration may go undetected by trademark holders.

Table 10
Dispute Rates for Each Permutation Type Based on Whois Registration Data Set

String Variation	Disputed Domains	All Registrations	
		Observed Registrations	Dispute Rate
Character Removal Typo	25	195,727	0.01%
Character Swap Typo	10	91,856	0.01%
Duplication Typo	6	27,792	0.02%
Fat Finger Typo	45	470,372	0.01%
Total	86	785,747	0.0%

Notes:

- [1] Registrations in legacy TLDs are excluded.
- [2] Registrations by trademark holders are excluded. Registrations by trademark holders are identified using a string matching technique to classify a registration as having been made by a trademark holder when the original trademark holder sufficiently matches the registrant for a particular domain. This matching technique combines a generalized string distance algorithm with the removal of common strings such as 'inc', 'the', or 'company' from trademark holder and registrant organization names to determine whether a registration was made by a trademark holder. This technique is about 97% accurate in successfully identifying trademark holders.
- [3] There were no disputed buy typos, .com missing dot typos, cheap typos, digit addition typos, plural typos, or www missing dot typos.
- [4] This analysis is limited to parsed Whois registration records. Registrations of strings from IBM claims service notification data and TMCH exact-match strings are excluded.
- [5] Disputed domains are identified by comparing Whois registration records with UDRP dispute data. Each disputed domain is classified as one string variation type by comparing the registered string with the list of strings for which Whois registration records were requested from DomainTools.
- [6] Some registrations may be categorized as more than one type of string variation if the domain string matches a string in multiple string variation categories.

Sources:

Whois Registration Data Received from DomainTools; UDRP Dispute Data; TMCH string variations generated on 25% Sample of Deloitte Trademark Holder Database.

C. Sunrise Period

1. Analyses

The Sunrise period allows trademark holders to make exact match registrations in new gTLDs that are important to their marketing efforts as well as to make defensive registrations of their trademark strings to block potential abusive registrations. The purpose of these analyses is to determine how trademark holders value the Sunrise period. Although we are unable to assign a monetary value to the Sunrise period, we are able to observe how often trademark holders make use of the Sunrise period. Use of the

Sunrise period can be interpreted as a sign that trademark holders value the benefits of being able to register domain names matching their trademarks in a new gTLD before the general availability period at least as much as the cost differential between Sunrise registration prices and general availability prices. We also examine how usage of the Sunrise period differs across different types of trademark holders. For example, there may be trademark holder characteristics that cause a trademark holder to place more value on Sunrise registrations and therefore utilize the Sunrise period more often when making registrations in new gTLDs.

2. Data Collection

As discussed in earlier sections, Whois registration data include the date that each domain in the data was registered. From each domain registration, we determine the Sunrise period for the TLD in which it was registered based on data from ICANN.⁷⁹ We then compare the registration date for each domain with the Sunrise period dates of the new gTLD in which the domain is registered to determine whether the domain was registered during the Sunrise period. We determine that a trademark holder was eligible to register during a Sunrise period if its trademark string was recorded in the TMCH before or during the Sunrise period in question.⁸⁰

3. Results

Although most TMCH users submit proof of use to gain access to the Sunrise period, few trademark holders utilize the Sunrise period.⁸¹ **Table 11** shows that 19.9% of the trademark holders with trademark strings recorded in the TMCH who were eligible to make Sunrise period registrations ever did so. On average, only 7.2% of trademark holder registrations for domain names that match their trademark strings are made during Sunrise periods.⁸² This indicates that trademark holders most frequently wait until the general availability period of new gTLDs to register domains of their trademark strings. I.e., of trademark holders that were eligible for Sunrise period registrations and eventually did register their trademark as a domain in the new gTLD where they were Sunrise-eligible, 80.1% never made a registration of their trademark string during the Sunrise period at all, and trademark holders that do register during the Sunrise period are selective about which Sunrise periods they utilize (ultimately making Sunrise registrations during only 7.2% of Sunrise periods for which they are eligible). This is consistent with feedback that we received in questionnaires, which indicated that the Sunrise period is a valuable opportunity to prevent cybersquatting but is also an expensive option. These results may also reflect a relationship between the usage of Sunrise registrations and the effectiveness of the Claims Service period or other services that

⁷⁹ Sunrise periods for the new gTLDs are available at <https://newgtlds.icann.org/en/program-status/sunrise-claims-periods>.

⁸⁰ Our data from the TMCH did not include the trademark verification date or the date at which proof of use was received. However, because most records are verified within ten days of the basic verification fee payment date associated with a trademark string, we used that payment date as the date at which a trademark string became eligible for registration during the Sunrise period. This analysis does not account for additional registration requirements, such as geographic presence for certain community TLDs.

⁸¹ As of May 2015, 90% of rights holders with verified trademarks in the TMCH also provided proof of use (ICANN, “Rights Protection Mechanisms Review,” Revised Report, September 11, 2015, available at <https://newgtlds.icann.org/en/reviews/rpm/rpm-review-11sep15-en.pdf>, p. 40.)

⁸² The share of each trademark holder’s registrations that occurred during the Sunrise period is calculated as the number of Sunrise period registrations made by the trademark holder divided by the number of registrations that match the trademark holder’s registered trademark and were eligible for Sunrise registration (i.e., where the trademark holder’s trademark was verified in the TMCH prior to the end of the Sunrise period). Because the TMCH data do not contain the verification date of each trademark and we do not have data on the date that trademark holders were granted access to Sunrise periods, we use the TMCH payment date as a proxy.

trademark holders may use to protect their brands, such as global blocking programs. If the Claims Service is effective in deterring infringing registrations, then trademark holders may feel less necessity to utilize the Sunrise period. Similarly, if many trademark holders are enrolled in global blocking programs, they may find it unnecessary to participate in the Sunrise period; global blocking programs require verification in the TMCH and can provide protection across multiple TLDs.⁸³ Trademark holders also expressed a concern that trademark strings may be on reserved or premium lists, making it difficult to register during the Sunrise period. We unfortunately did not have access to a sufficient number of reserved or premium lists to test this hypothesis, but this may be a useful avenue for future research. We also attempted to collect Sunrise period price data to compare Sunrise period prices to general availability pricing to investigate the extent to which Sunrise period fees may be prohibitive to domain registrants who would like to register during the Sunrise period. However, we did not receive responses from enough registries to perform the analysis.

In general, larger trademark holders (i.e., those with more trademarks recorded in the TMCH) tend to make more Sunrise period registrations. This may occur because trademark holders who submit many trademarks to the TMCH are potentially more concerned about their trademarks and brand and, therefore, are more likely to participate in other measures of trademark protection, such as Sunrise period registrations. It could also reflect that trademark holders who submit many trademarks to the TMCH have the necessary resources to make more registrations during the Sunrise period.

⁸³ Global blocking programs are a service provided by some registries. Generally, these programs allow trademark holders to block registrations in certain TLDs that are exact matches to their TMCH-verified trademarks. In some cases, variations of trademark strings and premium names can also be protected. These programs may apply to all TLDs offered by a given registry, with trademark holders registering in the service for a fee that covers a certain time period. We unfortunately do not have data on the use of global blocking programs. To understand how many trademark holders are enrolled in various global blocking programs and in which TLDs those trademarks are protected, registries offering these services would need to disclose their subscribers. The INTA survey mentioned above is seeking to collect information on how many trademark holders are utilizing these services and may therefore be an informative resource in the near future.

Table 11
Share of Registrations During the Sunrise Period

	Count of Eligible Trademark Holders	Average Number of Trademarks	Holders that Ever Used Sunrise Period	Total Share of Registrations made During Sunrise Period
Trademark Holders of 1 trademark	4,363	1	17.7%	5.8%
Trademark Holders of 2 - 4 trademarks	2,047	3	19.2%	5.9%
Trademark Holders of 5 - 9 trademarks	571	6	25.6%	6.7%
Trademark Holders of 10 or more trademarks	416	21	38.0%	9.3%
Trademark Holders Overall	7,397	3	19.9%	7.2%

Notes:

[1] Registrations are limited to registrations in TLDs where the trademark holder verified their trademark prior to the end of the Sunrise Period. This analysis is limited to strings where the eligible trademark holder did eventually end up registering their trademarked string in the first three months of general availability of the new gTLD for which they were eligible for the sunrise period. The earliest available TMCH payment date for each trademark string is used as a proxy for trademark verification date. Records with invalid trademark registration or TMCH payment dates have been excluded. Registrations made by trademark holders are identified using an approximate text matching technique that is about 97% accurate in identifying registrations made by trademark holders.

[2] Average number of trademarks is the average number of trademarks registered in the TMCH by trademark holders in each size group.

[3] Trademark holders that ever used the Sunrise Period is the share of trademark holders in each size group that ever made a registration during the Sunrise Period.

[4] Total share of registrations made during the Sunrise Period is calculated as the number of registrations made during the Sunrise Period divided by all registrations described in note [1].

Sources:

Whois Registration Records Received from DomainTools; Deloitte Trademark Holder Database; Sunrise Periods Downloaded from <https://newgtlds.icann.org/en/program-status/sunrise-claims-periods>.

It is also possible that we see low usage of the Sunrise period in **Table 11** because those results reflect Sunrise period use across all trademark holders: those who may have been eager to register in a given TLD and those that may not have been aware of the TLD until months after the Sunrise period ended (i.e., did not register in the TLD until after the Sunrise period due to lack of awareness). In **Table 12**, we analyze the Sunrise period use of trademark holders who were likely to be aware of the Sunrise period. This analysis assumes that trademark holders who register an exact match of their trademark within the first three months of the general availability period were aware of the Sunrise period but chose not to use it. We see that 31.6% of the trademark holders with trademark strings recorded in the TMCH who were eligible to make Sunrise period registrations and registered an exact-match domain registration during the Sunrise period or the first three months of general availability ever did so. On average, only 15.4% of trademark holder registrations for domain names that match their trademark strings and are made during the Sunrise period or the first three months of general availability are made during Sunrise periods.⁸⁴ This indicates that the results in **Table 11** may be biased downward slightly by the presence of trademark

⁸⁴ The share of each trademark holder's registrations that occurred during the Sunrise period is calculated as the number of Sunrise period registrations made by the trademark holder divided by the number of registrations that match the trademark holder's registered trademark and were eligible for Sunrise registration (i.e., where the trademark holder's trademark was verified in the TMCH prior to the end of the Sunrise period). We limit this analysis to trademark holders that make registrations during the Sunrise period or the first three months of the general availability period. Because the TMCH data do not contain the verification date of each trademark and we do not have data on the date that trademark holders were granted access to Sunrise periods, we use the TMCH payment date as a proxy.

holders who are not aware of Sunrise registration periods, however the majority of trademark holders do not make use of the Sunrise period.

Table 12
Share of Registrations During the Sunrise Period
by Trademark Holders Aware of the Sunrise

	Count of Eligible Trademark Holders	Average Number of Trademarks	Holders that Ever Used Sunrise Period	Total Share of Registrations made During Sunrise Period
Trademark Holders of 1 trademark	3,532	1	28.9%	13.5%
Trademark Holders of 2 - 4 trademarks	1,678	3	30.7%	14.4%
Trademark Holders of 5 - 9 trademarks	487	6	40.0%	15.9%
Trademark Holders of 10 or more trademarks	373	21	50.7%	17.5%
Trademark Holders Overall	6,070	3	31.6%	15.4%

Notes:

[1] Registrations are limited to registrations in TLDs where the trademark holder verified their trademark prior to the end of the Sunrise Period. This analysis is limited to strings where the eligible trademark holder did eventually end up registering their trademarked string in the first three months of general availability of the new gTLD for which they were eligible for the sunrise period. Registrations are further limited to TLDs that had recorded at least three months of general availability as of March 2016. The earliest available TMCH payment date for each trademark string is used as a proxy for trademark verification date. Records with invalid trademark registration or TMCH payment dates have been excluded. Registrations made by trademark holders are identified using an approximate text matching technique that is about 97% accurate in identifying registrations made by trademark holders. Eligible trademark holders are those trademark holders whose trademarks were registered prior to the end of the Sunrise Period for a given new gTLD.

[2] Average number of trademarks is the average number of trademarks registered in the TMCH by trademark holders in each size group.

[3] Trademark holders that ever used the Sunrise Period is the share of trademark holders in each size group that ever made a registration during the Sunrise Period.

[4] Total share of registrations made during the Sunrise Period is calculated as the number of registrations made during the Sunrise

Sources:

Whois Registration Records Received from DomainTools; Deloitte Trademark Holder Database; Sunrise Periods Downloaded from <https://newgtlds.icann.org/en/program-status/sunrise-claims-periods>.

VI. Conclusions

Our analyses have shown that it is possible that the Claims Service and matching criteria help deter rights-infringing registrations that are exact matches to trademark strings recorded in the TMCH. It is also possible that some good faith registrations are being deterred by the current Claims Service system, which may be detrimental to the registration activity of non-trademark-holder domain registrants. However, limitations of our data do not allow us to definitely conclude whether Claims Service notifications have a deterrent effect.

In addition, extending the Claims Service or expanding the matching criteria used for triggering Claims Service notifications may be of limited benefit to trademark holders and will be associated with costs incurred by other stakeholder groups, such as registries, registrars, and non-trademark-holder domain registrants. The effectiveness of Claims Service notifications depends on how many registration attempts are being made. We find that registration activity declines after the Claims Service period, so any additional months added to the Claims Service period will likely have a diminishing value. We also find that trademark holders infrequently dispute registrations that are variations of trademark strings. To the extent that dispute rates are low because trademark holders do not consider string variations to be

trademark-infringing, an expansion of the matching criteria may bring little benefit to trademark holders and only harm non-trademark-holder domain registrants, who may be deterred from registering trademark string variations that would otherwise not be considered a trademark infringement by trademark holders. Lastly, we find that although trademark holders value access to the Sunrise period and many submit proof of use to become eligible for Sunrise registrations, few trademark holders make Sunrise registrations. This could be due in part to the expense of Sunrise registrations or because other protections of the TMCH services reduce the need for trademark holders to utilize Sunrise registrations.

VII. Appendices

Appendix A GAC Recommendation

In May 2011, the Governmental Advisory Committee (GAC) provided advice to the Board that:

The GAC now proposes that a comprehensive post-launch independent review of the Clearinghouse be conducted one year after the launch of the 75th new gTLD in the round. The GAC advises that this review should examine whether the aims, functionality and operation of the Clearinghouse would benefit from incorporating the current GAC proposals as well as any unforeseen questions and issues that may arise following the launch of the round. The GAC advises that the following specific questions should be included in the review's terms of reference:

With regard to the issue of non-exact matches (i), the GAC notes that the Board's principal argument against acceptance of the GAC's advice is that the automation of the TM Claims and sunrise services would not allow the inclusion of non-exact matches. The GAC therefore recommends that the request for proposal (RFP) that ICANN will issue to potential Clearinghouse providers includes a requirement that the candidate assess whether domain names that include a mark at the beginning or the end of an applied for second level domain could be included in the services. Secondly, the GAC advises the Board to direct the post-launch review to establish whether the automated system should be enhanced to include key terms associated with the goods or services identified by the mark, and typographical variations identified by the rights holder.

In light of the experience gained from the initial period of the operation of the Clearinghouse, in relation to the GAC's advice on extending the operation of the Clearinghouse beyond 60 days after each gTLD launch (ii), the GAC advises that the review should include: a) a consultation with registry providers, registrants and rights holders on the benefits or otherwise of extending the period of the Clearinghouse notifications beyond 60 days; b) an analysis of the impact of the operation of the Clearinghouse notifications on the commercial watch services market; c) an assessment of the likely resource requirements for extending the operation of the Clearinghouse notifications to potential registrants for the life of each new registry.

Appendix B
Text Variations Applied to “Domain”

Missing-dot Typos

WWWDOMAIN

DOMAINCOM

Fat-finger Typos

FOMAIN

COMAIN

XOMAIN

SOMAIN

EOMAIN

ROMAIN

DPMAIN

DLMAIN

DKMAIN

DIMAIN

DONAIN

DOJAIN

DOKAIN

DOMSIN

DOMZIN

DOMQIN

DOMWIN

DOMAON

DOMAKN

DOMAJN

DOMAUN

DOMAIM

DOMAIB

DOMAIH

DOMAIJ

Character Duplication Typos

DDOMAIN

DOOMAIN

DOMMAIN

DOMAAIN

DOMAIIN

DOMAINN

Character Swap Typos

ODMAIN
DMOAIN
DOAMIN
DOMIAN
DOMANI

Character Removal Typos

OMAIN
DMAIN
DOAIN
DOMIN
DOMAN

Plural Typo

DOMAINS

Digit Addition Typo

DOMAIN1

Buy Typo

BUYDOMAIN
DOMAINBUY

Cheap Typo

CHEAPDOMAIN
DOMAINCHEAP

Appendix C
Trademark Clearinghouse Questionnaire
Web Form

Analysis Group, one of the largest private economic consulting firms in the United States, has been retained by ICANN to assess the effectiveness of Trademark Clearinghouse (TMCH) services. As part of this work, we are interested in the views of various groups that interact with, or are affected by, either all or some of the TMCH services. To assess these views, we have developed a questionnaire, which is provided below. Your feedback will not be attributed to you if shared publicly, unless you provide permission (see Question 1d below).

1. Please provide the following information about yourself and/or your organization.
 - a. Your name
 - b. Your organization's name
 - c. Your email address
 - d. May we publicly attribute your responses to your organization?
 Yes
 No
 - e. May we contact you if we have follow-up questions based on your survey responses?
 Yes
 No
 - f. Which of the following best describes your organization:
 Registry
 Registrar
 Trademark holder registrant
 Non-trademark holder registrant
 TMCH agent
 Other, please specify
2. If you are a trademark holder, do you use TMCH services?
 Yes
 No
 N/A (Not a trademark holder)
 - a. If not, why not?
3. Please provide us with your thoughts regarding the strengths and weaknesses of the following TMCH services.

- a. TMCH claims service
 - b. Sunrise services
 - c. Ongoing notification service
 - d. TMCH verification process
4. More generally, please comment on any areas in which you feel the TMCH is currently performing well, or where and how the TMCH could be improved.
 5. In the context of the TMCH, the original goal was to protect the existing rights of trademark holders without expanding or creating new rights. In your view, does the current TMCH system sufficiently protect the existing rights of trademark holders?
 - Yes
 - No
 - Don't know/Not sure
 - a. If not, what additional protections do you think are needed?
 6. Please tell us whether, in your opinion, expanding the matching criteria would be beneficial or costly for your organization (or others) and why.
 7. Please comment on whether there are any specific extensions to the matching criteria that you would like to see made.
 8. In your view, would it be useful to expand the Claims Service period beyond 90 days?
 9. Finally, please provide any other comments below.

Appendix D
Trademark Clearinghouse Questionnaire
Registries

Analysis Group, one of the largest private economic consulting firms in the United States, has been retained by ICANN to assess the effectiveness of Trademark Clearinghouse (TMCH) services. As part of this work, we are interested in the views of various groups that interact with either all or some of the TMCH services. To assess these views, we have developed a questionnaire, which is provided below.

We recognize the value of your time and appreciate your participation. The questionnaire should take less than 30 minutes to complete. Please answer as many questions as you are able. If you prefer to discuss the topics covered in this questionnaire rather than respond in writing, please contact us, and we can schedule a time to talk. Your feedback will not be attributed to you if shared publicly, unless you provide permission (see Question 4 below).

You may email your completed questionnaire to Stacey.Chan@analysisgroup.com. We appreciate receiving your response by May 6th. Thank you for your participation.

Respondent Information

Please provide the following information about yourself and/or your organization.

1. Your name
2. Your organization's name
3. Your email address
4. May we publicly attribute your responses to your organization?
 Yes
 No
5. May we contact you if we have follow-up questions based on your survey responses?
 Yes
 No
6. Which of the following best describes your organization:
 Registry
 Registrar
 Trademark holder registrant
 Non-trademark holder registrant
 TMCH agent
 Other, please specify

TMCH Claims Service and Sunrise Registration Period

The purpose of the TMCH is to protect the trademark rights of rights holders. To this end, the claims service provides notifications to registered trademark holders if a domain is registered that may infringe upon their rights. Trademark holders also are given priority to request domain names associated with their registered trademark(s) during the sunrise registration period. The questions in this section ask about the effectiveness of these two TMCH services.

1. In your view, what are the positive aspects associated with these TMCH services?
2. What improvements or changes would you like to see made to the TMCH claims service and/or the sunrise registration period?
3. What types of costs does your organization incur in meeting your obligations under the TMCH?
4. In your view, is the one-time fee of \$5,000 per TLD to access the TMCH too high, too low, or appropriate?
 - a. If the fee is too high or too low, what do you think a reasonable fee structure would be?
5. In your view, does the TMCH currently do an effective job at reducing your costs of validating registrations?
 - Yes
 - No
 - Don't know/Not sure
 - a. If not, why not?
6. Please share any other thoughts you have regarding the TMCH claims service and/or sunrise registration period.

TMCH Protection of Trademark Holder Rights

The original goal of the TMCH was to protect the existing rights of trademark holders without expanding or creating new rights. The questions in this section ask whether that goal is being achieved.

1. In your view, does the current TMCH system sufficiently protect the existing rights of trademark holders?
 - Yes
 - No
 - Don't know/Not sure
 - a. If not, what additional protections do you think are needed?

2. In your view, does the current TMCH system provide increased protection to trademark holders, beyond their existing rights?

- Yes
- No
- Don't know/Not sure

- a. If so, what protections do you think extend beyond trademark holders' rights?

TMCH Trademark Matching Criteria

Currently, the TMCH sends notices of potential trademark infringement when applicants attempt to register domains that are exact matches of trademarked strings. The questions in this section ask your opinion regarding expanding the matching criteria.

1. Are there specific expansions (permutations) to the matching criteria that you feel are needed?

- Yes
- No
- Don't know/Not sure

- a. If so, please describe these permutations.

2. If the matching criteria were expanded, do you have a view as to whether that would lead to more or fewer registrations by trademark holders?

- More registrations
- Fewer registrations
- Don't know/Not sure

3. If the matching criteria were expanded, do you have a view as to whether that would lead to more or fewer registrations by non-trademark holders?

- More registrations
- Fewer registrations
- Don't know/Not sure

4. If the matching criteria were expanded, do you have a view as to whether expanding the matching criterion would increase or reduce the number of "Premium" domain names available?

- Increase available "premium" domain names
- Reduce available "premium" domain names
- Don't know/Not sure

5. If the matching criteria were expanded, do you have a view as to whether such an endeavor would be technically feasible to implement?
 - Technically feasible to implement
 - Not technically feasible to implement
 - a. If so, would there be any additional costs to your organization or other organizations you partner with?
 - Yes
 - No
 - Don't know/Not sure

6. If the matching criteria were expanded, do you have a view as to whether opportunities for abuse would change?
 - Increase opportunities for abuse
 - Same opportunities for abuse
 - Reduce opportunities for abuse
 - Don't know/Not sure

7. If the matching criteria were expanded, do you have a view as to whether it would have an impact on IDNs or the individuals who utilize IDNs?
 - Yes
 - No
 - Don't know/Not sure

8. Are there any suggestions you have, other than expanding the matching criteria, which could reduce typo-squatting if implemented by the TMCH?

9. Please share any additional thoughts that you have regarding expanding the matching criteria.

Claims Service Period

Currently, registries are required to provide claims service for 90 days. The questions in this section ask your opinion regarding extending the claims service period.

1. In your view, would it be useful to expand the claims service period beyond 90 days?
 - Yes
 - No
 - Don't know/Not sure
 - a. If yes, what is the length of time you would have the claims service period cover? If not, why not?

2. In your view, how would such an extension impact your organization or your customers?

Appendix E
Trademark Clearinghouse Questionnaire
Registrars

Analysis Group, one of the largest private economic consulting firms in the United States, has been retained by ICANN to assess the effectiveness of Trademark Clearinghouse (TMCH) services. As part of this work, we are interested in the views of various groups that interact with either all or some of the TMCH services. To assess these views, we have developed a questionnaire, which is provided below.

We recognize the value of your time and appreciate your participation. The questionnaire should take less than 30 minutes to complete. Please answer as many questions as you are able. If you prefer to discuss the topics covered in this questionnaire rather than respond in writing, please contact us, and we can schedule a time to talk. Your feedback will not be attributed to you if shared publicly, unless you provide permission (see Question 4 below).

You may email your completed questionnaire to Stacey.Chan@analysisgroup.com. We appreciate receiving your response by May 6th. Thank you for your participation.

Respondent Information

Please provide the following information about yourself and/or your organization.

1. Your name
2. Your organization's name
3. Your email address
4. May we publicly attribute your responses to your organization?
 Yes
 No
5. May we contact you if we have follow-up questions based on your survey responses?
 Yes
 No
6. Which of the following best describes your organization:
 Registry
 Registrar
 Trademark holder registrant
 Non-trademark holder registrant
 TMCH agent
 Other, please specify
7. What are your annual firm revenues? (We are interested in whether the costs and benefits of the TMCH vary for organizations or different sizes.)

TMCH Claims Service and Sunrise Registration Period

The purpose of the TMCH is to protect the trademark rights of rights holders. To this end, the claims service provides notifications to registered trademark holders if a domain is registered that may infringe upon their rights. Trademark holders also are given priority to request domain names associated with their registered trademark(s) during the sunrise registration period. The questions in this section ask about the effectiveness of these two TMCH services.

1. What are the positive aspects associated with the TMCH claims service and/or the sunrise registration period?
2. What improvements or changes would you like to see made to the TMCH claims service and/or the sunrise registration period?
3. What types of costs does your organization incur in meeting your obligations under the TMCH?
4. Are there improvements to the TMCH you would like to see made that would help to reduce your incurred costs?
5. Does the TMCH currently do an effective job at reducing your costs of validating registrations?
 - Yes
 - No
 - Don't know/Not sure
 - a. If not, why not?
6. Please share any other thoughts you have regarding the TMCH claims service and/or sunrise registration period.

Trademark Claims Service Notifications

The claims service provides notices to potential domain name registrants when a domain name that the registrant is attempting to register matches an existing trademark on record in the TMCH. The questions in this section ask, in your experience, how often these notices are sent.

1. Can you provide an estimate of the number of claims service notifications sent to potential registrants as a percent of all registrations made through your organization? (If you are not sure of the exact percentage, a qualitative assessment of the frequency would be useful: e.g., a small, medium, or large percentage.)
2. Of the cases where your organization sends a claims service notification to a potential registrant, can you provide an estimate of the percentage of cases where the registrant:
 - a. proceeds with the original registration? ____%
 - b. abandons the original registration but registers a different domain name? ____%
 - c. abandons the registration altogether? _____%

(If you are not sure of the exact percentage, a qualitative assessment of the frequency would be useful: e.g., a small, medium, or large percentage.)

3. In your experience, how often do potential registrants ask clarifying questions or need other forms of help after receiving claims service notifications?

_____ % of the time

(If you are not sure of the exact percentage, a qualitative assessment of the frequency would be useful: e.g., a small, medium, or large percentage.)

TMCH Protection of Trademark Holder Rights

The original goal of the TMCH was to protect the existing rights of trademark holders without expanding or creating new rights. The questions in this section ask whether that goal is being achieved.

1. In your view, does the current TMCH system sufficiently protect the existing rights of trademark holders?

- Yes
- No
- Don't know/Not sure

- a. If not, what additional protections do you think are needed?

2. In your view, does the current TMCH system provide increased protection to trademark holders, beyond their existing rights?

- Yes
- No
- Don't know/Not sure

- b. If so, what protections do you think extend beyond trademark holders' rights?

3. When a registrant attempts to register a domain name that matches a trademark string in the TMCH, would you like to see that registration be blocked or placed on a hold for some period of time?

- Yes
- No
- Don't know/Not sure

TMCH Trademark Matching Criteria

Currently, the TMCH sends notices of potential trademark infringement when applicants attempt to register domains that are exact matches of trademarked strings. The questions in this section ask your opinion regarding expanding the matching criteria.

1. Are there specific expansions (permutations) to the matching criteria that you feel are needed?

- Yes
- No
- Don't know/Not sure

- a. If so, please describe these permutations.
2. If the matching criteria were expanded, do you have a view as to whether that would lead to more or fewer registrations by trademark holders?
- More registrations
 - Fewer registrations
 - Don't know/Not sure
3. If the matching criteria were expanded, do you have a view as to whether that would lead to more or fewer registrations by non-trademark holders?
- More registrations
 - Fewer registrations
 - Don't know/Not sure
4. If the matching criteria were expanded, do you have a view as to whether that would increase or reduce the number of "Premium" domain names available?
- Increase available "premium" domain names
 - Reduce available "premium" domain names
 - Don't know/Not sure
5. If the matching criteria were expanded, would it affect your organization's ability to show potential registrants "suggested domain names"?
- Yes
 - No
 - Don't know/Not sure
6. If the matching criteria were expanded, do you have a view as to whether such an endeavor would be technically feasible to implement?
- Yes
 - No
 - Don't know/Not sure
- a. If so, would there be any additional costs to your organization or other organizations you partner with?
- Yes
 - No
 - Don't know/Not sure

7. If the matching criteria were expanded, do you have a view as to whether opportunities for abuse would change?
- Increase opportunities for abuse
 - Same opportunities for abuse
 - Reduce opportunities for abuse
 - Don't know/Not sure
8. Are there any suggestions you have, other than expanding the matching criteria, which could reduce typo-squatting if implemented by the TMCH?
9. Please share any additional thoughts that you have regarding expanding the matching criteria.

Claims Service Period

Currently, registries are required to provide claims service for 90 days. The questions in this section ask your opinion regarding extending the claims service period.

1. In your view, would it be useful to expand the claims service period beyond 90 days?
- Yes
 - No
 - Don't know/Not sure
- a. If yes, what is the length of time you would have the claims service period cover? If not, why not?
2. In your view, how would such an extension impact your organization or your customers?

Appendix F
Trademark Clearinghouse Questionnaire
TMCH Agents and Law Firms

Analysis Group, one of the largest private economic consulting firms in the United States, has been retained by ICANN to assess the effectiveness of Trademark Clearinghouse (TMCH) services. As part of this work, we are interested in the views of various groups that interact with either all or some of the TMCH services. To assess these views, we have developed a questionnaire, which is provided below.

We recognize the value of your time and appreciate your participation. The questionnaire should take less than 30 minutes to complete. Please answer as many questions as you are able. If you prefer to discuss the topics covered in this questionnaire rather than respond in writing, please contact us, and we can schedule a time to talk. Your feedback will not be attributed to you if shared publicly, unless you provide permission (see Question 4 below).

You may email your completed questionnaire to Stacey.Chan@analysisgroup.com. We appreciate receiving your response by May 30th. Thank you for your participation.

Respondent Information

Please provide the following information about yourself and/or your organization.

1. Your name
2. Your organization's name
3. Your email address
4. May we publicly attribute your responses to your organization?
 Yes
 No
5. May we contact you if we have follow-up questions based on your survey responses?
 Yes
 No
6. Which of the following best describes your organization:
 Registry
 Registrar
 Trademark holder registrant
 Non-trademark holder registrant
 TMCH agent
 Other, please specify

TMCH Claims Service and Sunrise Registration Period

The purpose of the TMCH is to protect the trademark rights of rights holders. To this end, the claims service provides notifications to registered trademark holders if a domain is registered that may infringe upon their rights. Trademark holders also are given priority to request domain names associated with their registered trademark(s) during the sunrise registration period. The questions in this section ask about the effectiveness of these two TMCH services.

1. What are the positive aspects associated with the TMCH claims service and/or the sunrise registration period?
2. In your view, what costs does your organization incur that are associated with the TMCH?
3. In your view, is the cost to register a mark (\$150 per mark) in the TMCH too high, too low, or appropriate?
 - a. If the fee is too high or too low, what do you think a reasonable fee structure would be?
4. What improvements or changes would you like to see made to the TMCH claims service and/or the sunrise registration period?
5. In your experience, have you or your clients encountered any issues regarding the TMCH verification process?
 - Yes
 - No
 - Don't know/Not sure
 - a. In your view, are there any changes that could be implemented to the TMCH verification process and would be beneficial to either the TMCH, trademark holders, or TMCH agents?
6. Please share any other thoughts you have regarding the TMCH claims service and/or sunrise registration period.

Trademark Claims Service Notifications

The claims service provides notices to potential domain name registrants when a domain name that the registrant is attempting to register matches an existing trademark on record in the TMCH. The questions in this section ask how your clients respond to receiving these notifications.

1. When your client receives a notification from the TMCH, what factors inform your decision to take further action or not?
2. When your client receives a notification from the TMCH, can you provide an estimate of how frequently they choose to pursue further action?

_____ % of the time

(If you are not sure of the exact percentage, a qualitative assessment of the frequency would be useful: e.g., a small, medium, or large percentage.)

3. In your view, what are the primary reasons a trademark holder would choose to utilize your services?

TMCH Protection of Trademark Holder Rights

The original goal of the TMCH was to protect the existing rights of trademark holders without expanding or creating new rights. The questions in this section ask whether that goal is being achieved.

1. In your view, does the current TMCH system sufficiently protect the existing rights of trademark holders?

- Yes
- No
- Don't know/Not sure

- a. If not, what additional protections do you think are needed?

2. In your view, does the current TMCH system provide increased protection to trademark holders, beyond their existing rights?

- Yes
- No
- Don't know/Not sure

- c. If so, what protections do you think extend beyond trademark holders' rights?

3. When a registrant attempts to register a domain name that matches a trademark string in the TMCH, would you like to see that registration be blocked or placed on a hold for some period of time?

- Yes
- No
- Don't know/Not sure

TMCH Trademark Matching Criteria

Currently, the TMCH sends notices of potential trademark infringement when applicants attempt to register domains that are exact matches of trademarked strings. The questions in this section ask your opinion regarding expanding the matching criteria.

1. Are there specific expansions (permutations) to the matching criteria that you feel are needed?

- Yes
- No
- Don't know/Not sure

- a. If so, please describe these permutations.
2. If the matching criteria were expanded, do you have a view as to whether that would lead to more or fewer trademark holders choosing to utilize your services?
 - More trademark holders
 - Same number of trademark holders
 - Fewer trademark holders
 - Don't know/Not sure
3. Are there any suggestions you have, other than expanding the matching criteria, which could reduce typo-squatting if implemented by the TMCH?
4. Please share any additional thoughts that you have regarding expanding the matching criteria.

Claims Service Period

Currently, registries are required to provide claims service for 90 days. The questions in this section ask your opinion regarding extending the claims service period.

1. In your view, would it be useful to expand the claims service period beyond 90 days?
 - Yes
 - No
 - Don't know/Not sure
 - a. If yes, what is the length of time you would have the claims service period cover? If not, why not?
2. In your view, how would such an extension impact your organization?

Appendix G
Trademark Clearinghouse Questionnaire
Trademark Holders

Analysis Group, one of the largest private economic consulting firms in the United States, has been retained by ICANN to assess the effectiveness of Trademark Clearinghouse (TMCH) services. As part of this work, we are interested in the views of various groups that interact with either all or some of the TMCH services. To assess these views, we have developed a questionnaire, which is provided below.

We recognize the value of your time and appreciate your participation. The questionnaire should take less than 30 minutes to complete. Please answer as many questions as you are able. If you prefer to discuss the topics covered in this questionnaire rather than respond in writing, please contact us, and we can schedule a time to talk. Your feedback will not be attributed to you if shared publicly, unless you provide permission (see Question 4 below).

You may email your completed questionnaire to Stacey.Chan@analysisgroup.com. We appreciate receiving your response by May 30th. Thank you for your participation.

Respondent Information

Please provide the following information about yourself and/or your organization.

1. Your name
2. Your organization's name
3. Your email address
4. May we publicly attribute your responses to your organization?
 Yes
 No
5. May we contact you if we have follow-up questions based on your survey responses?
 Yes
 No
6. Which of the following best describes your organization:
 Registry
 Registrar
 Trademark holder registrant
 Non-trademark holder registrant
 TMCH agent
 Other, please specify

7. Does your organization use TMCH services?

- Yes
- No

a. If not, why not?

TMCH Claims Service and Sunrise Registration Period

The purpose of the TMCH is to protect the trademark rights of rights holders. To this end, the claims service provides notifications to registered trademark holders if a domain is registered that may infringe upon their rights. Trademark holders also are given priority to request domain names associated with their registered trademark(s) during the sunrise registration period. The questions in this section ask about the effectiveness of these two TMCH services.

1. What are the positive aspects associated with the TMCH claims service and/or the sunrise registration period?
2. What improvements or changes would you like to see made to these TMCH services?
3. In your view, what costs does your organization incur that are associated with the TMCH?
4. In your view, is the cost to register a mark (\$150 per mark) in the TMCH too high, too low, or appropriate?

a. If the fee is too high or too low, what do you think a reasonable fee structure would be?

5. In your experience, have you encountered any issues regarding the TMCH verification process?

- Yes
- No
- Don't know/Not sure

a. In your view, are there any changes which could be implemented to the TMCH verification process that would be beneficial to either the TMCH or trademark holders?

6. Please share any other thoughts you have regarding the TMCH claims service and/or sunrise registration period.

7. Does your organization utilize any other trademark protection services other than the TMCH services?

- Yes
- No
- Don't know/Not sure

a. If yes, which ones do you use? In your view, what are the added benefits of these services?

Trademark Claims Service Notifications

The claims service provides notices to potential domain name registrants when a domain name that the registrant is attempting to register matches an existing trademark on record in the TMCH. The questions in this section ask how your organization responds to these notifications.

1. Have you ever received a trademark claims service notification from the TMCH?

- Yes
- No
- Don't know/Not sure

(If not, please skip to the next section.)

2. When you receive a notification from the TMCH, what factors inform your decision to take further action or not?
3. When you receive a notification from the TMCH, can you provide an estimate of how frequently you choose to pursue further action?

_____ % of the time

(If you are not sure of the exact percentage, a qualitative assessment of the frequency would be useful: e.g., a small, medium, or large percentage.)

TMCH Protection of Trademark Holder Rights

The original goal of the TMCH was to protect the existing rights of trademark holders without expanding or creating new rights. The questions in this section ask whether that goal is being achieved.

1. In your view, does the current TMCH system sufficiently protect the existing rights of trademark holders?

- Yes
- No
- Don't know/Not sure

- a. If not, what additional protections do you think are needed?

2. In your view, does the current TMCH system provide increased protection to trademark holders, beyond their existing rights?

- Yes
- No
- Don't know/Not sure

- d. If so, what protections do you think extend beyond trademark holders' rights?

3. When a registrant attempts to register a domain name that matches a trademark string in the TMCH, would you like to see that registration be blocked or placed on a hold for some period of time?

- Yes
- No
- Don't know/Not sure

TMCH Trademark Matching Criteria

Currently, the TMCH sends notices of potential trademark infringement when applicants attempt to register domains that are exact matches of trademarked strings. The questions in this section ask your opinion regarding expanding the matching criteria.

1. Are there specific expansions (permutations) to the matching criteria that you feel are needed?

- Yes
- No
- Don't know/Not sure

- a. If so, please describe these permutations.

2. If the matching criteria were expanded, do you have a view as to whether that would lead you to make to more or fewer registrations?

- More registrations
- Fewer registrations
- Don't know/Not sure

3. Are there any suggestions you have, other than expanding the matching criteria, which could reduce typo-squatting if implemented by the TMCH?

4. Please share any additional thoughts that you have regarding expanding the matching criteria.

Claims Service Period

Currently, registries are required to provide claims service for 90 days. The questions in this section ask your opinion regarding extending the claims service period.

1. In your view, would it be useful to expand the claims service period beyond 90 days?

- Yes
- No
- Don't know/Not sure

- a. If yes, what is the length of time you would have the claims service period cover? If not, why not?

2. In your view, how would such an extension impact your organization?

Appendix H
Trademark Clearinghouse Questionnaire
Non-Trademark Holder Registrants

Analysis Group, one of the largest private economic consulting firms in the United States, has been retained by ICANN to assess the effectiveness of Trademark Clearinghouse (TMCH) services. As part of this work, we are interested in the views of various groups that interact with either all or some of the TMCH services. To assess these views, we have developed a questionnaire, which is provided below.

We recognize the value of your time and appreciate your participation. The questionnaire should take less than 30 minutes to complete. Please answer as many questions as you are able. If you prefer to discuss the topics covered in this questionnaire rather than respond in writing, please contact us, and we can schedule a time to talk. Your feedback will not be attributed to you if shared publicly, unless you provide permission (see Question 4 below).

You may email your completed questionnaire to Stacey.Chan@analysisgroup.com. We appreciate receiving your response by Friday, May 6th. Thank you for your participation.

Respondent Information

Please provide the following information about yourself and/or your organization.

1. Your name
2. Your organization's name
3. Your email address
4. May we publicly attribute your responses to your organization?
 Yes
 No
5. May we contact you if we have follow-up questions based on your survey responses?
 Yes
 No
6. Which of the following best describes your organization:
 Registry
 Registrar
 Trademark holder registrant
 Non-trademark holder registrant
 TMCH agent
 Other, please specify

TMCH Claims Service and Sunrise Registration Period

The purpose of the TMCH is to protect the trademark rights of rights holders. To this end, the claims service provides notifications to registered trademark holders if a domain is registered that may infringe upon their rights. Trademark holders also are given priority to request domain names associated with their registered trademark(s) during the sunrise registration period. The questions in this section ask about the effectiveness of these two TMCH services.

1. What are the positive aspects associated with the TMCH claims service and/or the sunrise registration period?
2. What improvements or changes would you like to see made to the TMCH claims service and/or the sunrise registration period?
3. Please share any other thoughts you have regarding the TMCH claims service and/or sunrise registration period.

Trademark Claims Service Notifications

The claims service provides notices to potential domain name registrants when a domain name that the registrant is attempting to register matches an existing trademark on record in the TMCH. The questions in this section ask how you respond to receiving notifications.

1. Have you ever received a trademark claims service notification from a registrar?

- Yes
- No
- Don't know/Not sure

(If not, please skip to the next section.)

2. When you receive a notification from the registrar, what factors inform your decision to continue or abandon the registration?
 - a. Did you have any difficulty receiving or understanding the notification?
 - Yes
 - No
 - Don't know/Not sure
 - b. If so, did you ask registrar representatives or other individuals for help understanding the notification?
3. What type of information would have been useful to help you to better understand the notification that you received?
4. In situations where you receive a notification from the registrar and decide to abandon the original registration, did you try to find a different domain name to use instead?

TMCH Protection of Trademark Holder Rights

The original goal of the TMCH was to protect the existing rights of trademark holders without expanding or creating new rights. The questions in this section ask whether that goal is being achieved.

1. In your view, does the current TMCH system sufficiently protect the existing rights of trademark holders?
 - Yes
 - No
 - Don't know/Not sure
 - a. If not, what additional protections do you think are needed?
2. In your view, does the current TMCH system provide increased protection to trademark holders, beyond their existing rights?
 - Yes
 - No
 - Don't know/Not sure
 - a. If so, what protections do you think extend beyond trademark holders' rights?

TMCH Trademark Matching Criteria

Currently, the TMCH sends notices of potential trademark infringement when applicants attempt to register domains that are exact matches of trademarked strings. The questions in this section ask your opinion regarding expanding the matching criteria.

1. What are your thoughts regarding the costs and benefits of expanding the matching criteria?

Claims Service Period

Currently, registries are required to provide claims service for 90 days. The questions in this section ask your opinion regarding extending the claims service period.

1. In your view, would it be useful to expand the claims service period beyond 90 days?
 - Yes
 - No
 - Don't know/Not sure
 - a. If yes, what is the length of time you would have the claims service period cover? If not, why not?
2. In your view, how would such an extension impact your organization?

Appendix I Summary of Questionnaire Responses

Claims Service Feedback

1. *Positive Feedback*

- Benefit of automating the registration verification process:
 - o Registries generally feel that the Claims Service reduces their costs of verifying registrations. However, they feel that these cost savings are offset by the fees associated with registering their TLDs and the development costs associated with the TMCH.
- Brand protection for trademark owners: Several of the responding trademark owners noted the benefit of brand protection provided by the Claims Service.

2. *Mixed Feedback*

- Length of the Claims Service period: Different stakeholder groups have different opinions on whether this should be extended.
 - o Registries are mostly opposed to extending the Claims Service period and think it should be reduced in length. Registries are concerned that it would be costly to implement a longer Claims Service period and some registries suggested that doing so may disenfranchise non-American geo-TLDs. It was suggested that restricted-access or closed Brand TLD registries not be mandated to participate in the Claims Service.
 - o Trademark owners and organizations that work on their behalf (TMCH agents and law firms) generally would prefer that it be extended (some would like it to run indefinitely).
 - o Extending the Claims Service would involve additional engineering and operational staff hours for registrars to manage and provide technical support of TMCH-related issues. Non-trademark holders also expressed concern that extending the Claims Service period would extend whatever deterrent effect the Claims Service has on good-faith registrations.
- Limit Claims Notices to registration attempts in TLDs related to trademarked goods and services: Non-trademark holders suggested that Claims Service notifications be limited to registration attempts being made in TLDs that are directly related to the goods and services of the registered trademark.

3. *Areas for Improvement*

- Notifications: Registrars and TMCH agents felt that Claims Service notifications should provide more information. One suggestion was including the registration date for the potentially infringing domain.
- Claims Service notification effectiveness: A common complaint across registries, registrars, trademark owners, TMCH agents, and law firms is that trademark owners cannot take action or prevent potentially infringing registrations when they receive a notification.
 - o One trademark owner noted that they monitor potentially infringing registrations in addition to receiving claims notifications, so they appreciate the service but find it unnecessary.
- Fees and costs: Most registries and trademark owners felt that fees and the costs associated with working with the TMCH are too high.

- Registries would like the per-TLD fee to be lower, especially for registries with many TLDs. Registry development costs are also high.
- Most trademark owners and law firms feel that the fee to register trademarks is too high, to the extent that trademark owners with many marks may choose not to register all of their marks. They also find it time consuming to sort through the notifications that they receive.
- To address fees, it was suggested by several respondents that other services be allowed to compete with the TMCH or Deloitte.
- Trademark owners and law firms noted that they sometimes receive duplicative or extraneous notifications, such as notices for domains that have had attempted registrations multiple times. Some respondents mentioned that due to using different TMCH agents or registries, they have received notifications for their own registrations. Reviewing these notifications is costly.
- Ongoing notifications service: Respondents noted that potentially infringing registrants should continue to receive notifications as part of the ongoing notifications service. They also noted that the ongoing notifications service suffers from the same weakness of the Claims Service period by not allowing trademark owners to block registrations or take action until after a registration has been completed.

Sunrise Period Feedback

1. *Mixed Feedback*

- Early ability to register/protect domains:
 - Trademark owners, TMCH agents, and law firms appreciated the ability to register domains early. They mentioned that this is a valuable (but expensive) way to protect against potential cybersquatting.
 - Trademark owners, TMCH agents, and law firms felt limited by Sunrise registrations being forced to be exact string matches of registered trademarks. It was suggested that previously abused labels be allowed to participate in the Sunrise period.
 - Registries were less convinced that the Sunrise period has helped to protect trademark owners.
 - Non-trademark holders suggested that Sunrise registrations be limited to new gTLDs related to the goods and services of the trademark.

2. *Areas for Improvement*

- Inflated Sunrise prices: Registrars, trademark owners, TMCH agents, and law firms mentioned that Sunrise prices are noticeably expensive.
- Trademark strings placed on reserved or premium lists: Trademark owners and related parties expressed frustration that trademarked strings are often placed on reserved or premium lists, making it difficult to register them during the Sunrise period. They suggested that a limit be placed on how many trademarked strings could be placed on reserved and premium lists.

- Lack of interest: Respondents among registrars, registries, and TMCH agents expressed a sentiment that trademark owners are not as interested in utilizing the Sunrise period for new TLDs as historic launches.
- geoTLD and ccTLD launch programs: A registry noted that slow approval for special launch programs to give public authorities priority access to geoTLD and ccTLD registrations sometimes cause these TLDs to give priority to trademark owners instead of geoTLD and ccTLD community members.
- Sunrise dispute resolution procedures: A TMCH agent suggested that utilization of the Sunrise period is limited for trademark owners who registered trademarks after the launch of the new gTLD program because many registries continue to employ sunrise dispute resolution procedures that allow challenges to trademarks that were registered after a TLD was launched. It was suggested that the ability to challenge trademarks registered after a TLD's launch be reduced or eliminated, since this ability is seldom (if ever) utilized.
- False trademark registrations: A law firm suggested that some "trademark owners" purposefully register generic trademarks in order to register premier domains during the Sunrise period.

Protection of Trademark Owner Rights Feedback

1. Mixed Feedback

- Protection of trademark owner rights: There are mixed opinions on how well the TMCH protects trademark owner rights.
 - o Registrars and registries had mixed opinions of how well the TMCH protects existing rights.
 - Some registrars felt that the TMCH protects trademark owners beyond their current rights.
 - o Trademark owners, TMCH agents, and law firms mostly felt that the TMCH does not adequately protect trademark owner rights.
 - Suggestions for improvement that were submitted include:
 - Allowing trademark owners who are not registered in the TMCH to utilize URS procedures.
 - Blocking third parties who attempt to register marks registered in the TMCH.

Matching Criteria Feedback

1. Areas for Improvement

- Limitation of exact matches: Registrars, registries, trademark owners, TMCH agents, and law firms all felt that the criteria should be expanded.
 - o Some concern was expressed by registries, registrars, and trademark owners about the cost associated with implementing additional match criteria.
- Suggestions for expanded criteria:
 - o Plurals
 - o Prefixes and suffixes
 - o "mark + string" where the string is a keyword associated with the mark

- IDN matches for ä, ö, ü
- Common misspellings
- Allow trademark owners to select or request additional watch strings (for a fee)
- Create an algorithm to measure how similar a string is to a registered mark (e.g., how many letters in the trademark appear in the same order within a registered domain).
Allow trademark owners to select what level of similarity should be required to trigger a notification.

Verification Process Feedback

1. Areas for Improvement

- Additional explanation requested for rejections or additional requested materials: A common comment across trademark owners, TMCH agents, and law firms was that it was difficult to understand the reason for rejection or why additional materials were requested for an application. Respondents felt that additional information would be helpful.
- Expansion of eligible marks: Registrars, registries, trademark owners, TMCH agents, and law firms wanted more trademarks to be eligible for the TMCH, such as:
 - Labels or trademarks that contain design or figurative elements
 - Trademarks that are already in other databases, such as USPTO, OAMI, ROMARIN
- Difficulty submitting marks in multiple languages: Respondents noted difficulty submitting trademarks in multiple languages, multiple scripts, or non-Latin script.
- Difficulty verifying marks that are registered in some national databases: Respondents noted that it is difficult to register marks that are in national trademark registries that do not have online database records (e.g., S. Korean Trademark Registry).