Initial Report on the Thick Whois Policy Development Process

STATUS OF THIS DOCUMENT

This is the Initial Report on thick Whois, prepared by ICANN Staff for submission to the GNSO Council on [Date]. ICANN Staff will prepare a Final Report following review of the public comments received on this Initial Report.

SUMMARY

This report is submitted to the GNSO Council and posted for public comment as a required step in this GNSO Policy Development Process on thick Whois.

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1. Executive Summary

1.1 Background

ICANN specifies Whois service requirements for generic top-level domain (gTLD) registries through the Registry Agreement (RA) and the Registrar Accreditation Agreement (RAA). Registries and registrars satisfy their Whois obligations using different service models. The two common models are often characterized as "thin" and "thick" Whois registries. This distinction is based on how two distinct sets of data are managed. One set of data is associated with the domain name, and a second set of data is associated with the registrant of the domain name.

- A thin registry only stores and manages the information associated with the domain name. This set includes data sufficient to identify the sponsoring registrar, status of the registration, creation and expiration dates for each registration, name server data, the last time the record was updated in its Whois data store, and the URL for the registrar's Whois service.
- With thin registries, registrars manage the second set of data associated with the registrant of the domain and provide it via their own Whois services, as required by Section 3.3 of the RAA for those domains they sponsor. COM and NET are examples of thin registries.
- Thick registries maintain and provide both sets of data (domain name and registrant) via Whois. INFO and BIZ are examples of thick registries.

The IRTP B Working Group recommended requesting an Issue Report on the requirement of thick Whois for all incumbent gTLDs in its 30 May 2011 Final Report. The primary goal of that recommendation was to provide a secure mechanism for a gaining registrar to obtain contact information for use in inter-registrar transfers of domain names. The IRTP C Working Group subsequently recommended separating the processes of "transfers between registrars" and "transfers between registrants." This recommendation heightens the need for a mechanism to obtain contact information about the current registrant.

Following the IRTP-B recommendation, the GNSO Council requested an Issue Report on thick Whois at its meeting on 22 September 2011. The Issue Report was expected to '*not only consider a*

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possible requirement of thick Whois for all incumbent gTLDs in the context of IRTP, but should also consider any other positive and/or negative effects that are likely to occur outside of IRTP that would need to be taken into account when deciding whether a requirement of thick Whois for all incumbent gTLDs would be desirable or not'.

Following the delivery of the Final Issue Report, the GNSO Council initiated a Policy Development Process at its meeting of 14 March 2012.

1.2 Deliberations of the Working Group

- The thick Whois Working Group started its deliberations on 13 November 2012 where it was decided to continue the work primarily through weekly conference calls, in addition to e-mail exchanges.
- Section 5 provides an overview of the deliberations of the Working Group conducted both by conference call as well as e-mail threads.
- The WG created a number of sub-teams to review the comments received and address the different issues outlined in its charter which include:
  - Response consistency
  - Stability
  - Access to Whois data
  - Impact on privacy and data protection
  - Cost implications
  - Synchronization / migration
  - Authoritativeness
  - Competition in registry services
  - Existing Whois applications
  - Data escrow
  - Registrar Port 43 Whois requirements
- The findings and conclusions for each of these topics can be found in section 5 of the report.

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1.3 WG Preliminary Recommendations

- The WG was tasked to provide the GNSO Council with 'with a policy recommendation regarding the use of thick Whois by all gTLD registries, both existing and future'. Following its analysis of the different elements, as outlined in the WG Charter, which has been detailed in section 5 of this report, on balance the Working Group concludes that there are more benefits than disadvantages to requiring thick Whois for all gTLD registries. As a result, the Working Group recommends that:

The provision of thick Whois services should become a requirement for all gTLD registries, both existing and future.

- The Working Group has arrived at preliminary consensus on this recommendation. A final consensus call will take place once the recommendation is finalized following review of the public comments received on this Initial Report.
- The WG expects numerous benefits as a result of requiring thick Whois for all gTLD registries. Nevertheless, the WG recognizes that a transition of the current thin gTLD registries would affect over 120 million domain name registrations and as such it should be carefully prepared and implemented. In section 7.2, the WG outlines a number of implementation considerations. In section 7.3 the WG also provides other observations that emerged from this discussion which while not directly related to the question of thin or thick did and should receive due consideration by other bodies

1.4 Community Input

- The WG reached out to all ICANN Supporting Organizations and Advisory Committees as well as GNSO Stakeholder Groups and Constituencies with a request for input (see Annex B and C) at the start of its deliberations. The WG developed a matrix (located in Annex E) that it used to assess the input received in relation to the Charter Topics. This matrix, in addition to the summary of the comments, formed the basis for sub-team as well as Working Group discussions in relation to the different topics, the results of which have been outlined in section 5 of this report.

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1.5 Conclusions and Next Steps

- The Working Group aims to complete this section of the report in the second phase of the PDP, following a second public comment period.

2. Objective and Next Steps

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This Initial Report on thick Whois is prepared as required by the GNSO Policy Development Process as stated in the ICANN Bylaws, Annex A (see http://www.icann.org/general/bylaws.htm#AnnexA). The Initial Report will be posted for public comment for at least 30 days, plus a 21-day reply period. The comments received will be analyzed and used for redrafting of the Initial Report into a Final Report to be considered by the GNSO Council for further action.

3. Background

3.1 Process background

- The IRTP B Working Group recommended requesting an Issue Report on the requirement of thick Whois for all incumbent gTLDs in its 30 May 2011 Final Report. That recommendation went on to state:

The benefit would be that in a thick registry one could develop a secure method for a gaining registrar to gain access to the registrant contact information. Currently there is no standard means for the secure exchange of registrant details in a thin registry. In this scenario, disputes between the registrant and admin contact could be reduced, as the registrant would become the ultimate approver of a transfer.

- Following that recommendation, the GNSO Council requested an Issue Report on thick Whois at its meeting on 22 September 2011. The Issue Report was expected to '*not only consider a possible requirement of thick Whois for all incumbent gTLDs in the context of IRTP, but should also consider any other positive and/or negative effects that are likely to occur outside of IRTP that would need to be taken into account when deciding whether a requirement of thick Whois for all incumbent gTLDs would be desirable or not'*.
- In accordance with the proposed revised GNSO Policy Development Process, a Preliminary Issue Report was published for public comment on 21 November 2011. Following review of the public comments received, the Staff Manager updated the Issue Report accordingly and included a summary of the comments received, which was submitted as the Final Issue Report to the GNSO Council on 2 February 2012.
- The GNSO Council initiated a Policy Development Process at its meeting of 14 March 2012 (see http://gnso.icann.org/resolutions/#20120314-1), but decided subsequently to delay next steps due to workload concerns. In the end, a drafting team to develop a charter for the PDP WG was formed in August 2012 and presented the proposed charter to the GNSO

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Council for consideration in October 2012. The GNSO Council adopted the charter on 17 October 2012 (see http://gnso.icann.org/en/council/resolutions#20121017-3) following which a call for volunteers was launched and the PDP Working Group formed.

3.2 Issue background

- Difference between thick vs. thin Whois[1]:

For the generic top-level domain (gTLD) registries, ICANN specifies Whois service requirements through the Registry Agreement (RA) and the Registrar Accreditation Agreement (RAA). Registries satisfy their Whois obligations using different services. The two common models are often characterized as "thin" and "thick" Whois registries. This distinction is based on how two distinct sets of data are managed. One set of data is associated with the domain name, and a second set of data is associated with the registrant of the domain name. A thin registry only stores and manages the information associated with the domain name. This set includes data sufficient to identify the sponsoring registrar, status of the registration, creation and expiration dates for each registration, name server data, the last time the record was updated in its Whois data store, and the URL for the registrar's Whois service. With thin registries, registrars manage the second set of data associated with the registrant of the domain and provide it via their own Whois services, as required by Section 3.3 of the RAA for those domains they sponsor. COM and NET are examples of thin registries.

Thick registries maintain and provide both sets of data (domain name and registrant) via Whois. INFO and BIZ are examples of thick registries.

To illustrate thick and thin Whois, consider the Whois response for two domains, cnn.com and cnn.org. Both domains are registered by Turner Broadcasting System and have the same technical and administrative contact information, but one of the registrations is managed in a thin registry (COM) manner and the other is in managed as a thick registry (ORG).

[1] From the Whois Service Requirements Report (July 2010)

If we query COM's Whois server for cnn.com, we get the following results:

```
Domain Name: CNN.COM
Registrar: CSC CORPORATE DOMAINS, INC.
WHOIS Server: whois.corporatedomains.com
Referral URL: http://www.cscglobal.com
Name Server: NS1.TIMEWARNER.NET
Name Server: NS3.TIMEWARNER.NET
Name Server: NS5.TIMEWARNER.NET
Status: clientTransferProhibited
Updated Date: 04-feb-2010
Creation Date: 22-sep-1993
Expiration Date: 21-sep-2018[2]
```

However, if we query the .org's Whois server, we get both the domain and registrant Whois information:

```
Domain ID:D5353343-LROR
Domain Name:CNN.ORG
Created On:16-Apr-1999 04:00:00 UTC
Last Updated On:04-Feb-2010 22:48:15 UTC
Expiration Date:16-Apr-2011 04:00:00 UTC
Sponsoring Registrar:CSC Corporate Domains, Inc. (R24-LROR)
Status:CLIENT TRANSFER PROHIBITED
Registrant ID:1451705371f82308
Registrant Name:Domain Name Manager
Registrant Organization:Turner Broadcasting System, Inc.
Registrant Street1:One CNN Center
Registrant Street2:13N
Registrant Street3:
```

[2] To get the registrant's information, the user or client application must make a referral query to the registrar's Whois service, which in this case is whois.corporatedomains.com

```
Registrant City:Atlanta
Registrant State/Province:GA
Registrant Postal Code:30303
Registrant Country:US
Registrant Phone:+1.4048273470
Registrant Phone Ext.:
Registrant FAX:+1.4048271995
Registrant FAX Ext.:
Registrant Email:tmgroup@turner.com
```
…[3]

The content of registration data provided via Whois may differ across gTLD registries. Some gTLD registry agreements, such as .tel, have provisions in place that in certain circumstances exclude personal information from the public Whois. For example, .tel Whois output for individuals may only mention registrant's name with no other contact information.

It is noted that there has been considerable debate on the merits of thin Whois versus thick Whois[4]. From a technical perspective, a thick Whois model provides a central repository for a given registry whereas a thin Whois model is a decentralized repository[5]. Historically, the centralized databases of thick Whois registries are operated under a single administrator that sets conventions and standards for submission and display, archival/restoration and security have proven easier to manage. By contrast, registrars set their own conventions and standards for submission and display, archival/restoration and security registrant information under a thin Whois model. Today, for example, Whois data submission and display conventions vary among registrars. The thin model is thus criticized for introducing

[3] In addition, contact information of administrative and technical contact are also provided, but have been truncated here.
[4] See for example discussions outlined in this thread: http://gnso.icann.org/mailing-lists/archives/registrars/thrd35.html
[5] To be more precise, the data model for a thin registry has two "chunks". The registry still centrally manages all the domain name **related** data (it's in one place, under one administrator, etc.). Each registrar, in turn, manages its set of sponsored names – but these are **separate** databases, each is a unique database and not part of a decentralized one. The more accurate term might therefore be a hierarchical vs flat (monolithic) database model.

variability among Whois services, which can be problematic for legitimate forms of automation. It is this problem that prompted the IRTP B Working Group to recommend requiring thick Whois across incumbent registries – in order to improve security, stability and reliability of the domain transfer process.

A thick Whois model also offers attractive archival and restoration properties. If a registrar were to go out of business or experience long-term technical failures rendering them unable to provide service, registries maintaining thick Whois have all the registrant information at hand and could transfer the registrations to a different (or temporary) registrar so that registrants could continue to manage their domain names. A thick Whois model also reduces the degree of variability in display formats. Furthermore, a thick registry is better positioned to take measures to analyze and improve data quality since it has all the data at hand.

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- **Situation of incumbent gTLDs**: The following table was developed by the IRTP Part A Working Group and has been updated with the recent addition of .xxx as a gTLD:

gTLD	Thin	Thick
.AERO		✓
.ASIA		✓
.BIZ		✓
.CAT		✓[6]
.COM	✓	
.COOP		✓
.INFO		✓
.JOBS	✓	
.MOBI		✓
.MUSEUM		✓

[6] .CAT has requested changes to its agreement to allow for tiered access to Whois data in a similar way that .TEL currently provides (see http://www.icann.org/en/registries/rsep/index.html#2011007).

.NAME		✓[7]
.NET	✓	
.ORG		✓
.PRO		✓
.TEL		✓[8]
.TRAVEL		✓
.XXX		✓

- **Thick Whois in new gTLDs**: Within the context of the new gTLD programme, new gTLD registries will be required to operate a thick Whois model[9]. As outlined in the new gTLD Program Explanatory Memorandum thick vs. thin Whois for new gTLDs:

While current registry agreements have differing provisions with regards to the Whois output specification, ICANN's intent with the next round of new gTLDs has been to have the agreements as standard as possible, with minimal or no individual negotiation and variation of provisions such as a registry's Whois output specification. In an attempt to standardize on a one-size fits-all approach for new gTLDs, the first draft of the proposed new registry agreement suggested a least-common denominator approach under which all registries would have been required to be at least thin, but registries could opt on their own to collect and display more information at their discretion. This was consistent with the approach used by ICANN for at least the past five years in which registry operators have been free to suggest their own preferred Whois data output and whatever specification each registry proposed was incorporated into the that registry operator's agreement.

Registrars would continue to display detailed contact information associated with

[7] Thick Whois information is available at the registry, but public access to the data is organized in four tiers. Full set of data is available to requesters if the requester enters into an agreement with the registry under the Extensive Whois Data tier. See http://www.icann.org/en/tlds/agreements/name/appendix-05-15aug07.htm for further details.
[8] Thick Whois information is available, but tiered access is provided consistent with a registry request approved by ICANN in order for the registry to harmonize with UK data protection requirements.
[9] To clarify, as was pointed out in the public comments, the requirement for 'thick' Whois for new gTLDs was not the result of a policy development process.

registrations, so there is no question about the total set of data elements that will be published concerning each registration, the only question is whether all of the data will be maintained/published by both the registry and the registrar, or whether the full data will be displayed by the registrar only *and the registry could, if it so elected, maintain just a subset of data as in the example above.*

Many commenters on the proposed registry agreement have requested a change to the agreement to mandate thick Whois for all new registries. The commenters have suggested that such a requirement would be in line with the status quo since most gTLD agreements require thick Whois output (all except com, net and jobs, as noted above). Comments have suggested substantial benefits from mandating thick instead of thin Whois, including enhanced accessibility and enhanced stability.

Critics of the proposed thick Whois mandate have raised potential privacy concerns as a reason to require thin Whois only, but proponents of thick Whois point to ICANN's community-developed "Procedure For Handling Whois Conflicts with Privacy Law" http://www.icann.org/en/processes/icann-procedure-17jan08.htm as a means for resolving any potential situations where a registry operator's Whois obligations are alleged to be inconsistent with local legal requirements concerning data privacy. Also it could be argued that, as indicated above, all of the data that might be published by a thick registry is already public data since it would already be published by the registrar. ICANN's Registrar Accreditation Agreement obligates registrars to ensure that each registrant is notified and consents to the purposes and recipients of any personal data collected from the registrant in association with every domain registration http://www.icann.org/en/registrars/ra-agreement-17may01.htm#3.7.7.4.

Proponents of requiring thick Whois argue that being able to access the thick data at both the registry and the registrar level will ensure greater accessibility of the data. The draft report of the Implementation Recommendations Team put together by ICANN's Intellectual Property Constituency stated "the IRT believes that the provision of Whois information at the registry level under the Thick Whois model is essential to the cost-effective protection of

consumers and intellectual property owners." http://icann.org/en/topics/new-gtlds/irt-draft-report-trademark-protection-24apr09-en.pdf. There are at least two scenarios in which the additional option of retrieving the data at the registry would be valuable:

1. *Where the registrar Whois service might be experiencing a short- or long-term outage (in violation of the registrar's accreditation agreement), and*
2. *Where the registrar has implemented strong (or sometimes overly-defensive) measures to prevent large-scale automated harvesting of registrar data.*

Also, in the event of a registrar business or technical failure, it could be beneficial to ICANN and registrants to have the full set of domain registration contact data stored by four organizations (the registry, the registry's escrow agent, the registrar, and the registrar's escrow agent) instead of just two organizations (the registrar and the registrar's escrow agent).

4. Approach taken by the Working Group

The thick Whois PDP WG started its deliberations on 13 November 2012 where it was decided to continue the work primarily through weekly conference calls, in addition to e-mail exchanges. Furthermore, the WG decided to create a number of sub-teams to conduct some of the preparatory work on the different topics identified in its charter (see https://community.icann.org/x/v4BZAg).

The Working Group also prepared a work plan, which was reviewed on a regular basis. In order to facilitate the work of the constituencies and stakeholder groups, a template was developed that could be used to provide input in response for the request for constituency and stakeholder group statements (see Annex B). This template was also used to solicit input from other ICANN Supporting Organizations and Advisory Committees early on in the process.

4.1 Members of the Working Group

The members of the Working group are:

Name	Affiliation*	Meetings Attended (Total # of Meetings:)
Wilson Abigaba	NCUC	
Marc Anderson	RySG	
Titi Akinsanmi	At Large	
Roy Balleste	NCUC	
Iliya Bazlyankov	RrSG	
Don Blumenthal	RySG	
Bob Bruen	At Large	
Avri Doria	NCSG	
Amr Elsadr	NCSG	
Ray Fassett	RySG	
Christopher George	IPC	
Alan Greenberg	ALAC	
Volker Greimann (Council Liaison)	RrSG	
Frederic Guillemaut	RrSG	
Carolyn Hoover	RySG	

Susan Kawaguchi	CBUC	
Evan Leibovitch	ALAC	
Marie-Laure Lemineur	NPOC	
Steve Metalitz	IPC	
Jeff Neuman	RySG	
Ope Odusan	At Large	
Mikey O'Connor (Chair)	ISPCP	
Susan Prosser	RrSG	
Norm Ritchie	RySG	
Tim Ruiz	RrSG	
Carlton Samuels	ALAC	
Michael Shohat	RrSG	
Salanieta T. Tamanikaiwaimaro	At Large	
Christa Taylor	Individual	
Jill Titzer	RrSG	
Joe Waldron	RySG	
Rick Wesson	Individual	
Jennifer Wolfe	NomCom	
Jonathan Zuck	IPC	

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394 The statements of interest of the Working Group members can be found at

395 https://community.icann.org/x/v4g3Ag.

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397 The attendance records can be found at https://community.icann.org/x/_oVwAg. The email archives

398 can be found at http://forum.icann.org/lists/gnso-thickwhoispdp-wg/.

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400 RrSG – Registrar Stakeholder Group

401 RySG – Registry Stakeholder Group

402 CBUC – Commercial and Business Users Constituency

403 NCUC – Non Commercial Users Constituency

404 IPC – Intellectual Property Constituency

405 ISPCP – Internet Service and Connection Providers Constituency

406 NPOC – Not-for-Profit Organizations Constituency

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5. Deliberations of the Working Group

This chapter provides an overview of the deliberations of the Working Group conducted both by conference call as well as e-mail threads. The points below are just considerations to be seen as background information and do not necessarily constitute any suggestions or recommendations by the Working Group. It should be noted that the Working Group will not make a final decision on which solution(s), if any, to recommend to the GNSO Council before a thorough review of the comments received during the public comment period on the Initial Report.

5.1 Initial Fact-Finding and Research

Per its Charter, the WG was tasked to review the following topics as part of its deliberations to consider the use of thick Whois by all gTLD registries:

- Response consistency
- Stability
- Access to Whois data
- Impact on privacy and data protection
- Cost implications
- Synchronization / migration
- Authoritativeness
- Competition in registry services
- Existing Whois applications
- Data escrow
- Registrar Port 43 Whois requirements

In order to obtain as much information as possible at the outset of the process and identify whether WG members had specific expertise and/or interest to support the deliberations on these topics, a survey was conducted amongst the WG membership (see results in Annex D). In addition, the WG requested input from GNSO Stakeholder Groups and Constituencies, as well as other ICANN Supporting Organizations and Advisory Groups (see Annex C and section 6 for further details).

Furthermore, the WG formed an ad-hoc expert group[10] consisting of a number of individuals that had been involved in the transition of .org from thin to thick that took place in 2004 and reviewed the PIR Post Transition Report.

Substantial preparatory work was carried out through the work of a number of sub-teams (see https://community.icann.org/x/v4BZAg) that have contributed to the following sections of this report.

5.2 Response Consistency

Issue Description

A thick registry can dictate the labelling and display of Whois information to be sure the information is easy to parse, and all registrars / clients would have to display it accordingly. This could be considered a benefit (response consistency) but also a potential cost (registrars / clients would be required to display it as dictated by the registry). This might also be a benefit in the context of internationalized registration data as even with the use of different scripts, uniform data collection and display standards could be applied.

Response Consistency in the current environment

Currently there are no labelling or display requirements for thin or thick gTLD registries. As a result, registrars, even for the same gTLD, may currently display data in inconsistent ways, which affects efficiency in accessing and using the information. These problems may be exacerbated with internationalized data items that do not employ Latin characters.

However the proposed 2013 RAA contains language that would require registrars to provide uniform Whois output (see http://www.icann.org/en/resources/registrars/raa/proposed-whois-22apr13-en.pdf for further details).

[10] For the list of experts and mailing list archives, please see http://forum.icann.org/lists/gnso-thickwhoispdp-experts/msg00000.html.

Response Consistency in a thick Whois environment

A thick gTLD registry could dictate labelling and display requirements for Whois information for all of its gTLDs and that would result in consistency across its gTLDs, but that would not create consistency across other gTLDs offered by different registry operators. In order to achieve consistency across gTLDs, registry operators would need to be required to use the same labelling and display requirements. In advance of possible changes to the Registry Agreement, the WG is considering recommending that all thick gTLD registries follow the same labelling and display requirements, as per the model outlined in Specification 4 of the proposed RA (See Annex E), but would welcome community input on this proposal before taking a final decision. The WG recognizes that a recommendation of this nature will require special consideration of the timing, cost and implementation implications for existing Thick Whois Registries.

Improvements to response consistency under a thick Whois model

Establishing requirements such as collecting uniform sets of data, and display standards, would improve consistency across all gTLDs at all levels and result in better access to Whois data for all users of Whois databases.

Collecting and displaying registration data presents difficult challenges when that data is being provided by registrants whose primary language uses a script that does not employ Latin characters. Those challenges are currently under study within ICANN; but however they are resolved, the implementation of those recommendations will almost certainly be less complex if Whois data is centralized at the registry level, rather than being held by hundreds or thousands of registrars, who may apply data collection or display standards inconsistently.

Possible downsides to response consistency under a thick Whois model

The WG received comments suggesting that the opportunity for innovation and ingenuity may be lost in the pursuit of response consistency. For example registrar innovation in the handling and processing of different scripts might overcome barriers and challenges that centralized systems organizations may not see or know. The working group concluded that on balance the opportunities for improved response consistency dramatically outweighed these opportunities missed.

Conclusion

The working group finds that requiring thick Whois would improve response consistency.

5.3 Stability

Issue Description

The Working Group used the following definition in its deliberations about the issue of stability: "Availability of Whois data in the case of a business or technical failure".

Stability in a thin Whois environment

In a thin Whois model, there are two sources of copies of Whois information in case of a business or technical failure; the registrar and the escrow service used by the registrar. In case of the failure of one of these two sources, there is one fallback copy of Whois data available for recovery efforts.

Stability in a thick Whois environment

Under the current policies, under a thick Whois model, the two sources identified in the 'Stability in a thin Whois environment' section are available as well as two additional sources, namely the registry and the escrow service used by the registry. This results in a total of up to four separate locations where the data is stored, depending on whether the same escrow provider is used by the registry and registrar. In the cases of a failure there are at least two remaining sources of data available for recovery.

Possible advantages for stability in a thick Whois environment

The WG noted that a thick Whois model provides at least two fallback sources in the case of a failure, compared to one in the thin model. Since most catastrophic failures are often the result of multiple failures, having multiple geographically dispersed backups is preferred.

Possible downsides for stability in a thick Whois environment

Some WG participants noted that having personal data at multiple sites makes that data more susceptible to attack or misuse. This issue is addressed in the section on privacy and data protection.

Some WG participants asked if there might be an increased risk of inconsistencies by having up to four copies of the same data. The working group concluded that there are well-established mechanisms to mitigate this risk through the use of various techniques[11].

Conclusion

The working group finds that requiring thick Whois would improve stability.

5.4 Access to Whois Data

Issue Description

Per its charter the WG addressed the issue of whether the ability to access Whois information at the registry level under the thick Whois model is more efficient and cost-effective than a thin model in protecting consumers and users of Whois data and intellectual property owners.

Access to Whois data in the current Whois environment

In thin gTLD registries, data associated with the registrant of the domain is only available via the registrar's Whois services, while the data associated with the domain name is published both by the registrar as well as the registry. In thick registries both sets of data (that associated with the domain name as well as with the registrant) are published by the registrar and the registry. It was noted that the NORC Draft Report for the Study of the Accuracy of Whois Registrant Contact Information[12] (commissioned by ICANN in 2010) found that the Whois data for the domain names selected was accessible 100% of the time for the thick Whois registries sampled (.org, .biz and .info), while Whois data availability was only 97.5% for .com and 98.5% for .net. The WG received comments pointing out difficulties that have been experienced in accessing registrar-based Whois services. Commenters also noted restrictions on access to data due to Registrar-imposed limits to queries

[11] The working group discussed one example of such a mitigation approach -- the use of multi-master replication across the data. However the WG identified several issues that indicate that this probably isn't the best approach. Registrars currently escrow their data on a particular schedule that is inconsistent with the schedule at which registries escrow data. Similarly, registrars are not required to post new data to registries instantaneously so a registry and registrar could reasonably be out of sync frequently. Finally, at least four sets of contracts would have to be amended in order to change the current model by which data is backed up through escrow. See http://en.wikipedia.org/wiki/Multi-master_replication

[12] See http://www.icann.org/en/compliance/reports/whois-accuracy-study-17jan10-en.pdf

554 under thin registries as certain information is only available at the registrar. Others pointed out that
555 the Whois Audit Access Report[13] (2012) produced by ICANN Contractual Compliance found that only
556 94% of registrars provided consistent access to Whois data compliant with Section 3.3 of the RAA.
557 The report did point out that 'Registrar compliance rate with the RAA to provide Whois access
558 service has declined from last year's results from 99% to 94%. This decline is likely due to proactive
559 monitoring, tool enhancements and enforcement of this RAA obligation'.
560
561 **Access to Whois data in a thick Whois environment**
562 If all registries were to operate under a thick Whois model, all Whois information associated with
563 the domain name as well as the registrant would be accessible via both the registrar and registry
564 Whois services[14].
565
566 **Possible advantages for access to Whois data under a thick Whois model**
567 Proponents of requiring thick Whois argue that being able to access the thick data at both the
568 registry and the registrar level will improve accessibility of the data. The draft report[15] of the
569 Implementation Recommendations Team put together by ICANN's Intellectual Property
570 Constituency stated, "*the IRT believes that the provision of Whois information at the registry level*
571 *under the Thick Whois model is essential to the cost-effective protection of consumers and*
572 *intellectual property owners.*" There are at least two scenarios in which the additional option of
573 retrieving the data at the registry would be valuable:
574
575 • The registrar Whois service is experiencing a short- or long-term outage (in violation of the
576 registrar's accreditation agreement), and
577 • The registrar has implemented strong (or sometimes overly-defensive) measures to prevent
578 large-scale automated harvesting of registrar data.
579
580 It would also be beneficial to ICANN and registrants to have the full set of domain registration

[13] See https://www.icann.org/en/resources/compliance/update/update-whois-access-audit-report-port43-30apr12-en.pdf
[14] Note: under the proposed 2013 RAA the requirement for registrars to provide Whois in thick registries at port 43 would be eliminated, but leaving the web-based Whois service in place.
[15] See http://icann.org/en/topics/new-gtlds/irt-draft-report-trademark-protection-24apr09-en.pdf.

contact data stored by four organizations (the registry, the registry's escrow agent, the registrar, and the registrar's escrow agent) instead of just two organizations (the registrar and the registrar's escrow agent) in the event of a registrar business or technical failure.

The IRTP-B Working Group and comments received by this working group have also pointed out that the use of a common format and location to find information for a given gTLD is an advantage for Whois users.

Possible downsides for access to Whois data under a thick Whois model

The WG received comments suggesting that it may be difficult to suppress data that has already been published should there be any changes in the future to the Whois model, e.g. if certain information is no longer required to be published. The WG concluded that this would be a broader issue as all the Whois registrant information is currently already publicly available both in the thin model (published by the registrar) as well as the thick model (published by both the registrar and registry).

As discussed in the section on data escrow, there is some question as to whether four sets of the same data are really necessary and whether maintaining them result in additional costs for contracted parties as well as registrants. The WG concluded that this is at most an incremental cost increase and further concluded that this is a topic better pursued in broader discussions of data escrow for all thick registries (such as the RAA negotiation).

The WG received comments pointing out that centralizing the accessibility of Whois information at the registry is a natural efficiency for users of Whois data when considering one gTLD at a time in the current environment. However, with the introduction of new gTLDs the number of registries may exceed the number of registrars; therefore, a Whois user may need to access dozens or hundreds of registries to obtain responses for a common second level string that is registered across multiple registries. Thus there may be an advantage to the thin Whois model in that information from multiple gTLDs could be obtained through a single registrar, although identifying the appropriate registrar is not certain from the domain name itself. The WG concluded that this advantage is incremental at best, especially considering that ICANN is implementing the Whois

Review Team recommendation #11 *("Overhaul of the Internic to provide enhanced usability for consumers, including the display of full registrant data for all gTLD domain names; operational improvements to include enhanced user awareness")*. The WG also notes that 3rd party services are available that provide aggregation of Whois from multiple sources, which can be used when efficient and cost-effective accessibility across multiple gTLDs is needed.

Conclusion

The working group finds that requiring thick Whois would improve access to Whois data.

5.5 Impact on privacy and data protection

Issue Description

Whois records contain domain registrants' names, addresses, email addresses, and phone numbers. These details would be considered personal information in colloquial use and are provided legal protection in regimes that provide data protection to personal information. The fundamental question before the thick Whois PDP WG is whether thin and thick registry models present different risks with respect to data protection and privacy. These risks might arise with respect to data at rest, information held in registry databases, and data in motion, records being transferred from registrars to registries in a thick model.

"Risks" include unauthorized disclosure in a security sense and issues related to information disclosure in violation of local law and regulations. They also include the possibility that information could be deleted or altered inadvertently or deliberately, possibly a more significant consideration for those individuals who believe that Whois information is public and therefore cannot be "disclosed" in an unauthorized manner.

The WG notes that its discussions of information security were simplified for purposes of clarity. Detailed risk analyses were beyond the capacity and scope of the WG given the complexity of issues and variety of possible system configurations. As an example, the WG will focus on the necessity for data to be transferred in a thick Whois model. The WG will not discuss whether data may in fact move when a registrar in a thin environment has redundant systems.

As an explanation in advance, “data at rest” is stored information. For our simplified purposes, it includes data in use, a common term that is not useful for our construct. “Data in motion” is information that is being transferred between computer systems.

Data Protection and Privacy in a thin Whois environment

Data at rest: Information will be protected to the extent that registrars’ security safeguards are in place. Such safeguards, both here and in the discussions that follow, include measures to protect against unauthorized duplication, deletion, or alternation of information.

Data in motion: Information is not transferred to registries in a thin model.

Data protection laws: Whois records must be made public under ICANN rules. At first glance, any applicable data protection laws will be the rules of the location of a registrar. However, it is possible that a registrant’s location might be determinative where a registrant and registrar are not in the same jurisdiction.

Data Protection and Privacy in a thick Whois environment

Data at rest: Information will be protected to the extent that security safeguards are in place in registrar or registry systems.

Data in motion: Information transfer between registrar and registry introduces the need for additional information security safeguards beyond measures required for data that remains with a registrar. These additional safeguards have purposes similar to those measures that must be in place for data at rest, but have the added complexity of protections interception and possibly reinsertion of information while it is in transit.

Data protection laws: Whois records must be made public under ICANN rules. Thick Whois models present additional challenges with respect to possible data protection conflicts. Do rules governing

registrars apply because registrant contracts are signed in their countries, or does a registry's regime govern because the registry publishes the data? How relevant is the location of the registrant?

Possible advantages for Data Protection and Privacy in a thick Whois environment

Data at rest: Whois databases would be held by the registry and not necessarily multiple registrars. This single point of failure instead of multiple ones would increase data protection. In addition, it may be that a registry, being in most cases larger than registrars, will be able to institute better security safeguards.

Data in motion: Thick registries provide no advantage in this category.

Data protection laws: To the extent that controlling data protection laws and regulations are deemed to be those of the registry, a thick Whois environment will provide additional assurances where local rules limit information disclosure more than in the locale of an applicable registrar. The WG must stress however, that any discussion of laws that might apply is speculation. It is beyond the capacity and scope of the work group to do an exhaustive review of applicable rules and contract provisions.

Possible downsides for Data Protection and Privacy in a thick Whois environment

Data at rest: More copies of Whois records will exist. The level of risk will depend on decisions concerning, for example, who must maintain escrow systems, but registrars certainly still will have the Whois information even if it is not contained in defined Whois databases.

Data in motion: Thick Whois models introduce the necessity for data transfer, which requires additional security measures beyond what are needed for information that remains in a single system.

Data protection laws: As a counterpoint to possible increased legal protection when laws in a registry's jurisdiction allow less information disclosure than an applicable registrant's, rules governing a registry's may in fact be less restrictive. In addition, questions concerning whether registry or registrar location controls may add a level of complexity for the overall system and of

704 confusion for a registrant. We do note however that we are unaware of any such instances that
705 have arisen in current thick Whois environments.
706
707 **Discussion**
708 Data at rest: The WG cannot identify an advantage between a thin and thick environment. The same
709 information is contained in Whois databases in the two models. While ostensibly all Whois data as
710 such will be in a single system in a thick environment, the data elements still will be kept by
711 registrars. While more official copies of Whois information may exist in a thick environment, the fact
712 is that bulk record access[16] is available to the public and the likely magnitude of those copies in the
713 hands of individual analysts or of aggregators makes the value of a discussion questionable.
714
715 Data in motion: The WG cannot identify an advantage between a thin and thick environment. On
716 the surface, the need for Whois transfers from registrars to registries presents an additional point of
717 data vulnerability and need for additional security measures. However, Whois information regularly
718 moves through downloads and replication, as well as through transfer of data from registrars to
719 registries in the existing thick registries. The WG finds it hard to conclude that risks of data leakage
720 will increase at an identifiable level when thin registries move to a thick model.
721
722 Data Protection Laws: This subject is especially complex when it comes to drawing conclusions. It
723 raises a level of complexities, uncertainties, and emotions that are beyond the capacity of the WG to
724 address conclusively given available resources and time constraints, and that also may spill beyond
725 the bounds of the scope of this WG in the case of certain issues.
726
727 Thick registries have existed for many years, and the .org registry transitioned from a thin to a thick
728 environment. The WG has not been able to identify a formal analysis of data protection laws in the
729 context of Whois information with respect to thin or thick models or the transition from one to
730 another. The WG would hope that analyses have been done, and the fact that it can find no public
731 objections from the registry or registrar community indicates that no problems have been identified.
732

[16] The WG does note that changes to bulk access are proposed under the 2013 RAA.

In addition, the WG is not aware of any formal government actions against registries or registrars for maintaining Whois systems in accordance with ICANN requirements. In particular, no registrar has sought to adjust contract requirements pursuant to ICANN Procedure for Handling Whois Conflicts with Privacy Laws (http://www.icann.org/en/resources/registrars/whois-privacy-conflicts-procedure-17jan08-en.htm), which permits exceptions if a government begins an inquiry under data protection laws and regulations. Further, the comment on thick vs. thin Whois that was submitted by the Registrar Stakeholder Group did not raise privacy or data protection concerns.

However, the fact that the WG has not seen analyses or objections from the contracted party community does not prove a lack of problems. In addition, data protection and privacy laws and regulations change over time so any analyses from the past might need to be revisited periodically. RSEPs (Registry Services Evaluation Panel) initiated by .cat and .tel suggest that they have identified data protection and privacy legal issues that they considered valid even if no formal government action was initiated. While registrars are required under the Registrar Accreditation Agreement to obtain registrants' consent to uses made of data collected from them, whether registrants are aware of the full ramifications of data publication, legal or real, might be questioned, and local rules concerning coercive contract provisions conceivably could come into play.

The WG has made every effort to examine thin vs. thick registry models in a broad sense. However, any requirement that all registries use the thick model will require that existing thin registries move to thick environments. This situation will raise concerns that, while limited in the long run, are significant given the numbers of domains and registrants involved. The WG expects that data transfers will be in volumes unprecedented in Whois operations and urges that increased information systems and protections are put in place, which are appropriate to handle the volumes.

Some registrations may have occurred based on a registrant's consideration of local rules governing a registrar or registry. In that event, registrants' data protection expectations will be affected when publication of Whois data moves to a registry that is in a different jurisdiction from the relevant registrar. Thorough examination must be given to the extent to which data protection guarantees governing a registrar can be binding on a registry. Should data protections in the jurisdiction of a

763 registrant, registrar, or registry control? Should registry or registrar accreditation agreements
764 contain language that specifies whose protection environment applies?
765
766 Again, these questions must be explored in more depth by ICANN Staff, starting with the General
767 Counsel's Office, and by the community, with registries and registrars taking the lead. As an added
768 benefit, analyses concerning change of applicable laws with respect to transition from a thin to a
769 thick environment also may prove valuable in the event of changes in a registry's management,
770 presumably an increasing likelihood given the volume of new gTLDs on the horizon.
771
772 **Conclusion**
773
774 Data Protection: The WG finds that requiring thick Whois for all gTLD registries does not raise data
775 protection issues that are specific to thin vs. thick Whois, as those that have been identified already
776 exist in the current environment and should be considered as part of the broader Whois debate.
777
778 Privacy: There are currently issues with respect to privacy related to Whois, and these will only
779 grow in the future. Those issues apply to other gTLDs as well, and thus will need to be addressed by
780 ICANN. Existing registry policy and practice allows flexibility when needed, and the new draft RAA
781 provides similar options for registrars. None of these issues seem to be related to whether a thick or
782 thin Whois model is being used. The support of the Registrar Stakeholder Group related to a thin-to-
783 thick transition implies that they perceive no immediate issue. There are still WG participants who
784 feel uneasy with the vast amounts of data that will need to be transferred across jurisdictional
785 boundaries, but those have not translated into concrete concerns. So although privacy issues may
786 become a substantive issue in the future, and should certainly be part of the investigation of a
787 replacement for Whois, it is not a reason to not proceed with this PDP WG recommending thick
788 Whois for all.
789

5.6 Cost implications

Issue Description

What are the cost implications of a transition to thick Whois for registries, registrars, registrants and other parties for all gTLDs? Conversely, what are the cost implications to registries, registrars, registrants and other parties if no transition is mandated?

Discussion

The WG has chosen to identify broad components of on-going and transition costs, and in some cases base its analysis on projects that are of comparable scope and complexity. The WG did not have the capacity to develop detailed cost comparisons and does not consider them to be required in order to reach valid conclusions regarding the cost impact of requiring thick Whois for all gTLD registries.

Cost Implications of requiring thick Whois – On going costs

Escrow costs

Registrars: **No change**

Registries: **Incrementally higher** -- increased data-storage and data transfer costs. Estimating guideline: data volume will increase from domain-information-only to domain-and-contact information. The WG offers a SWAG estimate of roughly doubled volume of escrow data-storage and transfer. The cost is paid by the registry.

Data consumers**: No change**

Port 43 Whois server costs

Registrars: **No change or lower** – depending on whether Port 43 Whois requirements for thick Whois registries are eliminated in the new RAA

Registries: **Incrementally higher –** due to increase in the size of the data payload for each Whois query (roughly double). Estimating guideline: Whois server costs are a small fraction of the cost of

operating the front-facing server for a registry, and the incremental impact of increased processing and bandwidth by these relatively simple systems is negligible.

Data consumers: **Lower** – due to reduced cost of automation resulting from more consistent access methods and format of the data

Web-based Whois server costs

Registrars: **No change or incrementally lower** – depending on the extent to which Whois-query demand shifts from registrars to registries

Registries: **No change or incrementally higher** – depending on the extent to which Whois-query demand shifts from registrars to registries. Estimating guideline: Whois server costs are a small fraction of the cost of operating the front-facing server for a registry, the incremental impact of increased processing and bandwidth is negligible.

Data consumers: **Lower** – due to reduced errors resulting from more consistent access methods and format of the data

Cost Implications of requiring thick Whois – Transition costs

Registrars: **Less than adding a new gTLD** – the WG anticipates that registrars will only be required to reconfigure systems and processes that they already support rather than having to develop new ones. Those changes will require reconfiguring Whois systems from the exception (process in a thin-Whois manner) to the norm (process in a thick-Whois manner). The WG views the initial transfer of contact data to the registry as similarly straightforward – and could be as simple as using the escrow data as the data-source for the transfer. Estimating guideline: a comparable effort might be a project to start up escrow.

Registries: **Less than adding a new gTLD** – the WG similarly anticipates that registries will also be reconfiguring systems and processes that they already support, as all of them support thick Whois for other gTLDs already. Again the WG generally anticipates a highly automated process will be used to transfer and populate contact data. Estimating guideline: a comparable effort might be a project to start up escrow.

Marika Konings 12/6/13 14:48
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Marika Konings 12/6/13 12:20
Deleted: , which is likely to require minimal training or manual intervention

Data consumers: **Less than adding a new gTLD –** data consumers will likewise be required to reconfigure systems and processes to switch from the exception (thin Whois) to the norm (thick Whois), but again they will merely be reconfiguring systems and not developing new ones.

Cost Implications of not requiring thick Whois

The WG received comments that noted that the costs associated with not having easy access to Whois data is significant, not only to rights owners, but also victimized Internet users. The WG acknowledges that this may be true, but has concluded that analysing the nature and scale of costs of this type are outside its charter

Conclusion

The working group finds that requiring thick Whois would not have overly burdensome cost impacts on providers of Whois data and could reduce acquisition and processing costs for consumers of that data.

5.7 Synchronization / migration

Issue Description

Synchronization refers to updating the Whois information in an immediate and accurate manner so that both data sets, registrar and registry, are exact duplicates. Synchronization of data must occur when either the registrar provides new information to the registry or the registry updates a Whois record directly. The WG was asked to address the impact on synchronization between the registry and registrar Whois and EPP systems for those Registries currently operating a thin registry, both in the migration[17] phase to thick Whois as well as ongoing operations.

Synchronization in a thin Whois environment

The registrar collects the Whois data from the registrant but only transmits a limited subset of that data to the registry. This limited subset must be updated in an immediate and accurate manner to insure that both subsets of data are exactly the same.

[17] Please note that issues related to a possible transition of existing thin gTLD registries to a 'thick' model are covered in a different section of this report.

Synchronization in a thick Whois environment

The only difference in a thick Whois environment is that all of the Whois data collected by the registrar is transmitted to the registry. As in the thin Whois environment the information must be updated in an immediate and accurate manner[18].

Possible disadvantages for synchronization in a thick Whois environment

The WG received no concrete examples of synchronization issues in converting from a thin Whois environment to a thick Whois environment in the comments received. Most of the comments addressing this topic emphasized the need for being mindful of the following:

1. Cost
2. Stability when transitioning the data
3. Number of records involved

Synchronization Inconsistencies

The WG notes that there are risks of inconsistencies between the data output of the registrar and the registry under both the thin and thick models. By having additional data shared between a registry and registrar in a thick Whois model, this risk for inconsistencies may increase.

For example, inconsistencies may arise when the registry updates Whois records directly, as may be required by a (closed) court order. In circumstances where a domain name is being transferred by the registry without the losing registrar's knowledge, this may lead to the losing registrar publishing outdated Whois data for a domain name no longer under it's control. Effectively, one domain name could have two or more registrars publishing completely different data for the same domain name. While the registry will reference the correct registrar, a third party may obtain differing results depending on where they perform their lookup. In thick registries, inconsistencies between the registrar Whois and the registry Whois contact information may also arise, as again such modifications are not necessarily transmitted to the losing registrar. Effectively, registries and losing

[18] The RAA gives registrars a matter of days to update registry data (5 business days under the 2009 RAA and 7 calendar days under the proposed 2013 RAA) and up to 24 hours to update their own Whois records.

registrars could conceivably output completely different Whois data. It was suggested that this could be fixed by removing the port 43 Whois requirement[19] for registrars in thick registries, although some explained that currently some registrars already pass on registrar port 43 queries to the registry in the case of thick Whois, which also eliminates the risk of inconsistencies. The WG notes that the proposed 2013 Registrar Accreditation Agreement (RAA) provides for the removal of the port 43 requirement for thick gTLD registries (see section 3.3.1 - https://www.icann.org/en/resources/registrars/raa/proposed-agreement-22apr13-en.pdf).

Marika Konings 31/5/13 17:29
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Conclusion

The WG finds that a transition to thick Whois for all gTLD registries will have no detrimental effects on data synchronization.

5.8 Authoritativeness[20]

Issue Description

Here is the working definition used by the WG while analysing this issue: "Authoritative, with respect to provision of Whois services, shall be interpreted as to signify the single database within a hierarchical database structure holding the data that is assumed to be the final authority regarding the question of which record shall be considered accurate and reliable in case of conflicting records; administered by a single administrative [agent] and consisting of data provided by the registrants of record through their registrars." A proposed shorter version is "the data set to be relied upon in case of doubt".

Authoritativeness in a thin Whois environment

Since the registrar alone holds most Whois data, its data is necessarily authoritative as to those data elements (e.g., name of registrant). For that data held by both registrar and registry (e.g., name of registrar), it appears that registry data is generally treated as authoritative, but the WG is not aware

[19] Only the port 43 Whois requirement is an issue as it cannot be mirrored to the registry web-based Whois output and can therefore cause synchronization issues, for web-based Whois registrars would actually be permitted to mirror the registry web-based Whois output or use the registry port 43 Whois.

[20] Not to be confused with accuracy: accurate data is not necessarily authoritative nor is authoritative data necessarily accurate.

of any official ICANN policy statement on this. The WG observes that in the case of the Uniform Dispute Resolution Policy (UDRP), UDRP Providers treat the registrar Whois information as authoritative, which may be the result of the UDRP having been adopted prior to the emergence of thick gTLD registries.

Authoritativeness in a thick Whois environment

Most comments that addressed this question stated that registry data is considered authoritative in the thick environment. Only one stated that the registrar data was authoritative. Again, the WG is not aware of any official ICANN policy statement on this question. The WG notes that the registrar remains responsible for the accuracy of the data under either the thick or thin model, as the relationship with the registrant remains with the registrar.

Possible advantages for authoritativeness in a thick Whois environment

Several comments cited efficiency and trust as advantages of treating the registry Whois data as authoritative. The WG supports the view that the registry will hold the entire data set, and is able to change the data without informing the registrar (due to closed court orders or similar events). Therefore, the only authoritative data source can be the registry as it holds the ultimate sway over the data. A registrar updates the data at customer request and is responsible for its accuracy, but such changes would only become authoritative once the registry Whois reflects the change.

Possible downsides for authoritativeness in a thick Whois environment

Several comments noted that registrars remain responsible for collecting the data and (to an extent governed by contract with ICANN) for its accuracy. One contribution felt this was inconsistent with a conclusion that registry Whois would be authoritative in the thick environment. The WG did not agree that this inconsistency was problematic (primarily on the grounds stated above that the WG assumes that any data collected by the registrar becomes authoritative only after it is incorporated in the registry database).

Conclusion

The WG finds that a transition from thin to thick Whois will have no detrimental effect on authoritativeness. The WG reviewed the question as to whether it is necessary for this WG to

recommend a policy on this issue. Based on that review, the WG has concluded that this is not necessary, given that thick registries have functioned for many years without requiring a formal position on authoritativeness, and the lack of evidence that this created any problem during previous thin-to-thick transitions such as .org.

5.9 Competition in registry services

Issue Description

The WG was tasked to consider what the impact would be on competition in registry services should all registries be required to provide Whois service using the thick Whois model – would there be more, less or no difference with regard to competition in registry services.

Competition in registry Services in the current Whois environment

Today, the two largest gTLD registries (.com and .net) are exempt from the requirement to operate under the thick Whois model, as well as .jobs. All other registries, including new gTLDs, are required to operate under a thick Whois model.

Competition in registry Services in a thick Whois environment

The WG observes that all registries would be operating on a level playing field as they would all operate under the same model in a thick Whois environment.

Possible advantages for competition in registry services under a thick Whois model

The WG concludes that requiring thick Whois would create a level playing field among registries. The WG also observes that diversity in Whois data models is inappropriate as a matter of competitive advantage among registries.

Possible downsides for competition in registry services under a thick Whois model

The position was put forward that creating a level playing field and requiring the provision of the same Whois services would reduce competition as there would be no difference in the Whois model offered and registrants could only choose the same standardized Whois services. As noted above, the WG did not find this to be a compelling argument and is of the view that standardized Whois

services are much more attractive than any innovations that were restricted to a single registry provider.

Conclusion

The working group finds that requiring thick Whois would provide a more level playing field between registry providers. Furthermore, the WG was not able to identify any substantive examples as to why a differentiated approach in provision of Whois services would be better for competition.

5.10 Existing Whois applications

Issue Description

What, if anything, are the potential impacts on the providers of third-party Whois-related applications if thick Whois would be required for all gTLDs? Do these applications need to be updated / changed and how would that impact users of those applications?

Possible advantages to existing Whois Applications under a thick Whois model

The WG observes that the transition to thick gTLD registries may have a small transitional impact on third-party providers. But in the long term that transition would allow them to use a simpler data-gathering model and they could eliminate the issues associated with registrar-specific Whois data access. Whois data providers will also benefit from having to implement and parse only one authoritative data source instead of one per registrar.

Possible downsides to existing Whois Applications under a thick Whois model

There is the possibility that the transition to thick Whois may disrupt third-party Whois applications due to the change in location and format of the data. Furthermore, the ability and incentive for third-party providers to innovate in providing new services to address the yet unsolved problems of internationalized domain name data may be diminished.

Conclusion

The WG finds that a transition from thin to thick Whois will have no substantive detrimental effect on existing 3rd-party Whois service providers and will reduce the variability and cost of data acquisition for those providers.

5.11 Data escrow

Issue Description

Data Escrow is the act of storing Whois data with a neutral third party in case of registry or registrar failure, accreditation termination, or accreditation expiration without renewal. ICANN requires all registrars and gTLD registries to contract with a data escrow provider in order to safeguard registrants.

Marika Konings 6/6/13 17:08
Comment [1]: This is not correct. Registrars don't deposit on the same schedule as each other registrars and registries do not deposit on the same schedule as registrars.

Marika Konings 12/6/13 12:25
Deleted: Both registry and registry escrows follow the same system: a weekly full deposit on Sundays, and a partial deposit on all other days containing all new data since the last full deposit[21]. .

Data Escrow in a thick Whois environment

Registrars and the registries store Whois data in different, unrelated escrow accounts. Thus the Whois data is stored in four logical locations (registry, registrar, escrow accounts). In the case of a failure, the data could be available from up to three other locations. The WG notes that this number may decline if the registry and the registrar use the same data escrow provider and care is not taken to store the data in separate physical locations. ICANN Staff noted that in the case of registrar failure, the registrar escrow data has often been found to be incomplete or formatted incorrectly, and in some cases not available at all. In those instances, thick registry data has proven invaluable in standing up failed registrars.

Data Escrow in a thin Whois environment

Under the thin Whois model, the registrar stores its Whois data (the contact data) in its escrow location and the registry stores its domain data in its escrow account. Thus, for any single data element there is one location available for backup data in the event of a failure.

Conclusion

The working group finds that requiring thick Whois would result in more copies of escrowed data in the event of a failure.

5.12 Registrar Port 43 Whois requirements

Issue Description

Under the current Registrar Accreditation Agreement (RAA), registrars are required to provide access to Whois data to the public via two ways:

1. An interactive web page provided on the registrar's website, and
2. Port 43 lookup accessed in several ways (such as through command line utility, Whois lookup software, and third party websites)

Registrars suggest that with thick registries online, the need for Port 43 access on the registrar level is becoming irrelevant. In their view it does not make sense to provide this data if it is not referred to by the registry and the duplication of the services from multiple data sources may lead to inconsistencies in the results displayed (see also the section on synchronization / migration). If the registry displays the Whois data, and therefore the registry no longer points to the Whois server of the registrar, that server becomes redundant.

Recent developments

The proposed 2013 RAA includes a provision that the current requirement for registrars to provide Port 43 Whois service is no longer required for thick gTLD registries. The proposed language reads: 'At its expense, Registrar shall provide an interactive web page and, with respect to any gTLD operating a "thin" registry, a port 43 Whois service (each accessible via both IPv4 and IPv6) providing free public query---based access to up---to---date (i.e., updated at least daily) data concerning all active Registered Names sponsored by Registrar in any gTLD'. As a result, the WG did not consider this issue in further detail.

Conclusion

The WG finds that the RAA negotiation is on track to resolve this question and defers to the conclusions arrived at through that process.

6. Community Input

6.1 Request for Input

As outlined in its Charter, 'the PDP WG is also expected to consider any information and advice provided by other ICANN Supporting Organizations and Advisory Committees on this topic. The WG is strongly encouraged to reach out to these groups for collaboration at an early stage of its deliberations, to ensure that their concerns and positions are considered in a timely manner'. As a result, the WG reached out to all ICANN Supporting Organizations and Advisory Committees as well as GNSO Stakeholder Groups and Constituencies with a request for input (see Annex B and C) at the start of its deliberations. In response, statements were received from:

- The GNSO Business Constituency (BC)
- The GNSO Intellectual Property Constituency (IPC)
- The GNSO Non-Commercial Users Constituency (NCUC)
- Verisign
- The GNSO Registry Stakeholder Group (RySG)
- The GNSO Registrar Stakeholder Group (RrSG)
- The At-Large Advisory Committee (ALAC)

The full statements can be found here: https://community.icann.org/x/WIRZAg.

6.2 Review of Input Received

The WG developed a matrix (located in Annex F) that it used to assess the input received in relation to the Charter Topics. This matrix, in addition to the summary of the comments, formed the basis for sub-team as well as Working Group discussions in relation to the different topics, the results of which have been outlined in section 5 of this report.

7. Working Group Preliminary Recommendations and Observations

7.1 Preliminary Recommendation

The WG was tasked to provide the GNSO Council with 'with a policy recommendation regarding the use of thick Whois by all gTLD registries, both existing and future'. Following its analysis of the different elements, as outlined in the WG Charter, which has been detailed in section 5 of this report, on balance the Working Group concludes that there are more benefits than disadvantages to requiring thick Whois for all gTLD registries. As a result, the Working Group recommends that:

The provision of thick Whois services should become a requirement for all gTLD registries, both existing and future.

Preliminary level of consensus for this recommendation: The Working Group has arrived at preliminary consensus on this recommendation. A final consensus call will be conducted once the recommendation is finalized following review of the public comments received on this Initial Report.

Expected impact of the proposed recommendation:
As outlined in section 5, the WG expects numerous benefits as a result of requiring thick Whois for all gTLD registries. Nevertheless, the WG recognizes that a transition of the current thin gTLD registries would affect over 120 million domain name registrations and as such it should be carefully prepared and implemented. In section 7.3 the WG also provides other observations that emerged from this discussion which while not directly related to the question of thin or thick did and should receive due consideration by other bodies.

7.2 Implementation Considerations

Per its Charter and given the recommendation that thick Whois services become a requirement for all gTLD registries, the WG is also charged with considered the following questions:

- **Cost implications for gTLD registries, registrars and registrants of a transition to thick Whois**
  The WG notes that some of these considerations have already been covered in section 5.6 - cost implications. Overall, the WG expects that there will be a one-off cost involved in the actual transition from thin to thick, but the WG also notes that considering synergies in the implementation process may minimize such costs. For example, instead of requiring all registrar data to be transferred to the registry at a certain point in time, this could coincide with the submission by the registrar of the data to the escrow agent so that it may only involve minor adjustments to submit that data to the gTLD operator. Also, as virtually all registrars already deal with thick TLDs and the only registry currently operating thin gTLDs also operates thick gTLDs, it is the expectation that there is hardly no learning curve or software development needed. The WG would welcome further input on this question as part of the public comment forum.

- **Guidelines as to how to conduct such a transition (timeline, requirements, potential changes to Registration Agreements, etc.)**
  The WG notes that valuable information may be learned from the PIR Post Transition Report that describes the transition of .org from thin to thick and is considering whether specification 4 of the proposed new gTLD Registry Agreement (see Annex F) could serve as a model for implementation, but would welcome further community input before making any possible implementation recommendations. The WG does recommend that as part of the implementation a team is formed consisting of experts from the parties that will be most affected by this transition, together with ICANN Staff, to work out such details. It is the expectation that any implementation plan would be shared with the ICANN Community for input. Any further input on this question would be welcomed.

Marika Konings 12/6/13 12:32
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- **Are special provisions and/or exemptions needed for gTLD registries which operate a thick Whois but provide tiered access, for example?**
  The WG notes that ICANN already has a Procedure for Handling Whois Conflicts with Privacy Law in place. Furthermore, the WG notes that the proposed 2013 RAA also includes a proposed mechanism for a registrar to request a waiver if the collection and/or retention of any data element violate applicable local law. The WG does not intend or expect that any of these

exemptions or special provisions granted under these procedures are affected by a requirement for thick Whois for all gTLD registries.

The WG would like to encourage commenters on this Initial Report to raise any other issues or questions that the WG should consider as part of possible implementation guidance on this issue as part of the public comment forum.

7.3 Additional Observations

The WG would like to share the following observations that emerged as part of its deliberations on the different elements as outlined in section 5. These are not within scope of its Charter, but the WG would nevertheless like to document them so that the GNSO Council / ICANN Staff can take further action if deemed appropriate and timely.

Data Escrow: The WG suggests that ICANN consider exploring the implications of two escrows, which could conceivably be stored at the same site removing the benefit of the duplication, and the implications of registrar/registry integration which could result in those "two" sites being co-located.

Authoritativeness: The WG observes that UDRP providers consider registrar data to be authoritative (whether it is thick or thin), while in all other circumstances the registry data is considered authoritative under the thick Whois model. The WG suggests that the GNSO Council further consider this issue.

Privacy & Data Protection: The WG notes the increasing number of data protection and privacy laws and regulations around the world, as well as specific Whois-related concerns raised by the public. While recognizing that this exceeds the scope of our remit, we suggest that, as part of the development of the registration data directory system model currently in process, ICANN ensure that the ramifications of data protection and privacy laws and regulations with respect to Whois requirements be examined thoroughly. We make these points as part of that suggestion:

1) Examinations must include data collection, data disclosure, and data retention laws, as well as data quality requirements under data protection principles. These examinations must be

ongoing, as new data protection laws take effect and old ones are amended on a continual basis. The European Union Data Privacy Framework is well known and proposed amendments have received much attention. Additionally, the Singapore Personal Data Protection Commission will just begin its work in May, 2013.

2) Government inquiries can be expensive for a registrar or registry even if they do not lead to formal action. We suggest specifically that the procedures cited above for handling conflicts with privacy laws be reviewed to ensure that they can be invoked on the basis of documented and objectively well-founded concrete concerns about conflicts with local rules. Accommodations for conflicts between Whois requirements and data protection laws have been made without a requirement of law enforcement inquiry through RSEPs initiated by .cat and .tel;

3) Reviews of the relevant questions already are occurring or have occurred, as evidenced by, for example, the Data Retention Specification in the Draft RAA currently open for public comment and Section 7.13, Severability; Conflicts with Laws of the draft RA also in the ICANN comment phase. However,

4) Given the dynamic nature of laws and contracts that may address what data protections should be in place, as well as increasing complexities, the examinations must be limited to: provisions that have the force of law at any given time, authoritative statements from relevant governments about those provisions, or contract provisions that are final. If a decision is made to examine broader frameworks, those analyses must focus on what exists, not changes that may happen. It is not possible to anticipate what will happen or address all possibilities.

5) Some level of real world review of the efficacy of data protection provisions must occur as part of any reviews. As examples, a) what is the real effect of data retention provisions or b) do safe harbor laws really provide data protection assurances.

8. Conclusions and Next Steps

The Working Group aims to complete this section of the report in the second phase of the PDP, following a public comment period on this Initial Report.

Annex A – PDP WG Charter

WG Name:	Thick Whois PDP Working Group	
Section I: Working Group Identification		
Chartering Organization(s):	GNSO Council	
Charter Approval Date:	17 October 2012	
Name of WG Chair:	Mikey O'Connor	
Name(s) of Appointed Liaison(s):	Volker Greimann	
WG Workspace URL:	https://community.icann.org/display/PDP/Home	
WG Mailing List:	http://forum.icann.org/lists/gnso-thickwhois-wg/	
GNSO Council Resolution:	**Title:**	Motion to approve the Charter for the thick Whois PDP Working Group
	Ref # & Link:	http://gnso.icann.org/en/resolutions#20121017-3
Important Document Links:	• Thick Whois Final Issue Report (http://gnso.icann.org/issues/whois/final-report-thick-whois-02feb12-en.pdf) • GNSO Working Group Guidelines (http://gnso.icann.org/council/annex-1-gnso-wg-guidelines-08apr11-en.pdf) • GNSO PDP Manual (http://gnso.icann.org/council/annex-2-pdp-manual-16dec11-en.pdf) • Annex A – GNSO Policy Development Process of the ICANN Bylaws (http://www.icann.org/en/about/governance/bylaws#AnnexA)	
Section II: Mission, Purpose, and Deliverables		
Mission & Scope:		
Background ICANN specifies Whois service requirements through Registry Agreements (RAs) and the Registrar Accreditation Agreement (RAA) for the generic top-level domain (gTLD) registries.		

Registries have historically satisfied their Whois obligations under two different models. The two models are often characterized as “thin” and “thick” Whois registries. This distinction is based on how two distinct sets of data are maintained.

Whois contains two kinds of data about a domain name; one set of data is associated with the domain name (this information includes data sufficient to identify the sponsoring registrar, status of the registration, creation and expiration dates for each registration, name server data, the last time the record was updated in the registry database, and the URL for the registrar’s Whois service), and a second set of data that is associated with the registrant of the domain name.

In a thin registration model the registry only collects the information associated with the domain name from the Registrar. The registry in turn publishes that information along with maintaining certain status information at the registry level. Registrars maintain data associated with the registrant of the domain and provide it via their own Whois services, as required by Section 3.3 of the RAA for those domains they sponsor [1] .

In a thick registration model the registry collects both sets of data (domain name and registrant) from the Registrar and in turn publishes that data via Whois.

Mission and Scope

The PDP Working Group is tasked to provide the GNSO Council with a policy recommendation regarding the use of thick Whois by all gTLD registries, both existing and future. As part of its deliberations on this issue, the PDP WG should, at a minimum, consider the following elements as detailed in the Final Issue Report:

- Response consistency: a thick registry can dictate the labeling and display of Whois information to be sure the information is easy to parse, and all registrars/clients would have to display it accordingly. This could be considered a benefit but also a potential cost. This might also be a benefit in the context of internationalized registration data as even with the use of different scripts, uniform data collection and display standards could be applied.
- Stability: in the event of a Registrar business or technical failure, it could be beneficial to ICANN and

registrants to have the full set of domain registration contact data stored by four organizations (the registry, the registry's escrow agent, the Registrar, and the Registrar's escrow agent), which would be the case in a thick registry.

- Accessibility: is the provision of Whois information at the registry level under the thick Whois model more effective and cost-effective than a thin model in protecting consumers and users of Whois data and intellectual property owners?
- Impact on privacy and data protection: how would thick Whois affect privacy and data protection, also taking into account the involvement of different jurisdictions with different laws and legislation with regard to data privacy as well as possible cross border transfers of registrant data?
- Cost implications: what are the cost implications of a transition to thick Whois for registries, registrars, registrants and other parties for all gTLDs? Conversely, what are the cost implications to registries, registrars, registrants and other parties if no transition is mandated?
- Synchronization/migration: what would be the impact on the registry and registrar Whois and EPP systems for those registries currently operating a thin registry, both in the migration phase to thick Whois as well as ongoing operations?
- Authoritativeness: what are the implications of a thin registry possibly becoming authoritative for registrant Whois data following the transition from a thin-registry model to a thick-registry model. The Working Group should consider the term “authoritative” in both the technical (the repository of the authoritative data) and policy (who has authority over the data) meanings of the word when considering this issue.
- Competition in registry services: what would be the impact on competition in registry services should all registries be required to provide Whois service using the thick Whois model – would there be more, less or no difference with regard to competition in registry services?
- Existing Whois Applications: What, if anything, are the potential impacts on the providers of third-party Whois-related applications if thick Whois is required for all gtLDs?
- Data escrow: thick Whois might obviate the need for the registrar escrow program and attendant expenses to ICANN and registrars.
- Registrar Port 43 Whois requirements: thick Whois could make the requirement for registrars to maintain Port 43 Whois access redundant.

Should the PDP WG reach consensus on a recommendation that thick Whois should be required for all gTLDs,

the PDP WG is also expected to consider:

- Cost implications for gTLD registries, registrars and registrants of a transition to thick Whois
- Guidelines as to how to conduct such a transition (timeline, requirements, potential changes to Registration Agreements, etc.)
- Are special provisions and/or exemptions needed for gTLD registries which operate a thick Whois but provide tiered access [2] , for example?

In addition, the PDP WG should take into account other ICANN initiatives that may help inform the deliberations limited to this specific topic such as;

- Registry/registrar separation and related developments with regards to access to customer data;
- Output from any/all of the four Whois Studies chartered by the GNSO Council, if completed in time for consideration by the WG;
- The 2004 transition of .ORG from thin to thick;
- The work being done concurrently on the internationalization of Whois and the successor to the Whois protocol and data model;
- Results of the RAA negotiations, and
- Recommendations of the Whois Review Team.

The PDP WG is also expected to consider any information and advice provided by other ICANN Supporting Organizations and Advisory Committees on this topic. The WG is strongly encouraged to reach out to these groups for collaboration at an early stage of its deliberations, to ensure that their concerns and positions are considered in a timely manner.

Objectives & Goals:

To develop, at a minimum, an Initial Report and a Final Report regarding the use of thick Whois by all gTLD registries, both existing and future to be delivered to the GNSO Council, following the processes described in Annex A of the ICANN Bylaws and the GNSO PDP Manual.

Deliverables & Timeframes:

The WG shall respect the timelines and deliverables as outlined in Annex A of the ICANN Bylaws and the PDP Manual. As per the GNSO Working Group Guidelines, the WG shall develop a work plan that outlines the necessary steps and expected timing in order to achieve the milestones of the PDP as set out in Annex A of the

ICANN Bylaws and the PDP Manual and submit this to the GNSO Council.
Section III: Formation, Staffing, and Organization
Membership Criteria:
The Working Group will be open to all interested in participating. New members who join after certain parts of work has been completed are expected to review previous documents and meeting transcripts.
Group Formation, Dependencies, & Dissolution:
This WG shall be a standard GNSO PDP Working Group. The GNSO Secretariat should circulate a 'Call For Volunteers' as widely as possible in order to ensure broad representation and participation in the Working Group, including: - Publication of announcement on relevant ICANN web sites including but not limited to the GNSO and other Supporting Organizations and Advisory Committee web pages; and - Distribution of the announcement to GNSO Stakeholder Groups, Constituencies and other ICANN Supporting Organizations and Advisory Committees
Working Group Roles, Functions, & Duties:
The ICANN Staff assigned to the WG will fully support the work of the Working Group as requested by the Chair including meeting support, document drafting, editing and distribution and other substantive contributions when deemed appropriate. Staff assignments to the Working Group: • GNSO Secretariat • 1 ICANN policy staff member (Marika Konings) The standard WG roles, functions & duties shall be applicable as specified in Section 2.2 of the Working Group Guidelines.
Statements of Interest (SOI) Guidelines:
Each member of the Working Group is required to submit an SOI in accordance with Section 5 of the GNSO Operating Procedures.
Section IV: Rules of Engagement
Decision-Making Methodologies:
{Note: The following material was extracted from the Working Group Guidelines, Section 3.6. If a Chartering

Organization wishes to deviate from the standard methodology for making decisions or empower the WG to decide its own decision-making methodology, this section should be amended as appropriate}.

The Chair will be responsible for designating each position as having one of the following designations:

- **Full consensus** - when no one in the group speaks against the recommendation in its last readings. This is also sometimes referred to as **Unanimous Consensus.**
- **Consensus** - a position where only a small minority disagrees, but most agree. *[Note: For those that are unfamiliar with ICANN usage, you may associate the definition of 'Consensus' with other definitions and terms of art such as rough consensus or near consensus. It should be noted, however, that in the case of a GNSO PDP originated Working Group, all reports, especially Final Reports, must restrict themselves to the term 'Consensus' as this may have legal implications.]*
- **Strong support but significant opposition** - a position where, while most of the group supports a recommendation, there are a significant number of those who do not support it.
- **Divergence** (also referred to as **No Consensus**) - a position where there isn't strong support for any particular position, but many different points of view. Sometimes this is due to irreconcilable differences of opinion and sometimes it is due to the fact that no one has a particularly strong or convincing viewpoint, but the members of the group agree that it is worth listing the issue in the report nonetheless.
- **Minority View** - refers to a proposal where a small number of people support the recommendation. This can happen in response to a **Consensus** , **Strong support but significant opposition** , and **No Consensus;** or, it can happen in cases where there is neither support nor opposition to a suggestion made by a small number of individuals.

In cases of **Consensus**, **Strong support but significant opposition**, and **No Consensus**, an effort should be made to document that variance in viewpoint and to present any **Minority View** recommendations that may have been made. Documentation of **Minority View** recommendations normally depends on text offered by the proponent(s). In all cases of **Divergence,** the WG Chair should encourage the submission of minority viewpoint(s).

The recommended method for discovering the consensus level designation on recommendations should work

as follows:

i. After the group has discussed an issue long enough for all issues to have been raised, understood and discussed, the Chair, or Co-Chairs, make an evaluation of the designation and publish it for the group to review.

ii. After the group has discussed the Chair's estimation of designation, the Chair, or Co-Chairs, should reevaluate and publish an updated evaluation.

iii. Steps (i) and (ii) should continue until the Chair/Co-Chairs make an evaluation that is accepted by the group.

iv. In rare case, a Chair may decide that the use of polls is reasonable. Some of the reasons for this might be:

- A decision needs to be made within a time frame that does not allow for the natural process of iteration and settling on a designation to occur.
- It becomes obvious after several iterations that it is impossible to arrive at a designation. This will happen most often when trying to discriminate between **Consensus** and **Strong support but Significant Opposition** or between **Strong support but Significant Opposition** and **Divergence.**

Care should be taken in using polls that they do not become votes. A liability with the use of polls is that, in situations where there is **Divergence** or **Strong Opposition**, there are often disagreements about the meanings of the poll questions or of the poll results.

Based upon the WG's needs, the Chair may direct that WG participants do not have to have their name explicitly associated with any Full Consensus or Consensus view/position. However, in all other cases and in those cases where a group member represents the minority viewpoint, their name must be explicitly linked, especially in those cases where polls where taken.

Consensus calls should always involve the entire Working Group and, for this reason, should take place on the designated mailing list to ensure that all Working Group members have the opportunity to fully participate in the consensus process. It is the role of the Chair to designate which level of consensus is reached and announce this designation to the Working Group. Member(s) of the Working Group should be able to challenge the designation of the Chair as part of the Working Group discussion. However, if disagreement persists,

members of the WG may use the process set forth below to challenge the designation.

If several participants (see Note 1 below) in a WG disagree with the designation given to a position by the Chair or any other consensus call, they may follow these steps sequentially:

1. Send email to the Chair, copying the WG explaining why the decision is believed to be in error.
2. If the Chair still disagrees with the complainants, the Chair will forward the appeal to the CO liaison(s). The Chair must explain his or her reasoning in the response to the complainants and in the submission to the liaison. If the liaison(s) supports the Chair's position, the liaison(s) will provide their response to the complainants. The liaison(s) must explain their reasoning in the response. If the CO liaison disagrees with the Chair, the liaison will forward the appeal to the CO. Should the complainants disagree with the liaison support of the Chair's determination, the complainants may appeal to the Chair of the CO or their designated representative. If the CO agrees with the complainants' position, the CO should recommend remedial action to the Chair.
3. In the event of any appeal, the CO will attach a statement of the appeal to the WG and/or Board report. This statement should include all of the documentation from all steps in the appeals process and should include a statement from the CO (see Note 2 below).

Note 1: Any Working Group member may raise an issue for reconsideration; however, a formal appeal will require that that a single member demonstrates a sufficient amount of support before a formal appeal process can be invoked. In those cases where a single Working Group member is seeking reconsideration, the member will advise the Chair and/or Liaison of their issue and the Chair and/or Liaison will work with the dissenting member to investigate the issue and to determine if there is sufficient support for the reconsideration to initial a formal appeal process.

Note 2: It should be noted that ICANN also has other conflict resolution mechanisms available that could be considered in case any of the parties are dissatisfied with the outcome of this process.

Status Reporting:

As requested by the GNSO Council, taking into account the recommendation of the Council liaison to this group.

Problem/Issue Escalation & Resolution Processes:

{Note: the following material was extracted from Sections 3.4, 3.5, and 3.7 of the Working Group Guidelines and may be modified by the Chartering Organization at its discretion}

The WG will adhere to ICANN's Expected Standards of Behavior as documented in Section F of the ICANN Accountability and Transparency Frameworks and Principles, January 2008.

If a WG member feels that these standards are being abused, the affected party should appeal first to the Chair and Liaison and, if unsatisfactorily resolved, to the Chair of the Chartering Organization or their designated representative. It is important to emphasize that expressed disagreement is not, by itself, grounds for abusive behavior. It should also be taken into account that as a result of cultural differences and language barriers, statements may appear disrespectful or inappropriate to some but are not necessarily intended as such. However, it is expected that WG members make every effort to respect the principles outlined in ICANN's Expected Standards of Behavior as referenced above.

The Chair, in consultation with the Chartering Organization liaison(s), is empowered to restrict the participation of someone who seriously disrupts the Working Group. Any such restriction will be reviewed by the Chartering Organization. Generally, the participant should first be warned privately, and then warned publicly before such a restriction is put into place. In extreme circumstances, this requirement may be bypassed.

Any WG member that believes that his/her contributions are being systematically ignored or discounted or wants to appeal a decision of the WG or CO should first discuss the circumstances with the WG Chair. In the event that the matter cannot be resolved satisfactorily, the WG member should request an opportunity to discuss the situation with the Chair of the Chartering Organization or their designated representative.

In addition, if any member of the WG is of the opinion that someone is not performing their role according to the criteria outlined in this Charter, the same appeals process may be invoked.

Closure & Working Group Self-Assessment:

The WG will close upon the delivery of the Final Report, unless assigned additional tasks or follow-up by the GNSO Council.

Section V: Charter Document History			
Version	**Date**	**Description**	
1.0	8 October 2012	Final version submitted by the DT to the GNSO Council for consideration	
Staff Contact:	Marika Konings	**Email:**	Policy-staff@icann.org

[1] 'A Registered Name is "sponsored" by the registrar that placed the record associated with that registration into the registry. Sponsorship of a registration may be changed at the express direction of the Registered Name Holder or, in the event a registrar loses accreditation, in accordance with then-current ICANN specifications and policies' (see http://www.icann.org/en/resources/registrars/raa/ra-agreement-21may09-en.htm)

[2] For some registries, Thick Whois information is available at the registry, but public access to the data is organized in tiers. For example, for .name, the full set of data is available to requesters if the requester enters into an agreement with the registry under the Extensive Whois Data tier. See http://www.icann.org/en/tlds/agreements/name/appendix-05-15aug07.htm for further details.

Annex B – Template for Constituency & Stakeholder Group Statement

Stakeholder Group / Constituency / Input Template

thick Whois PDP Working Group

PLEASE SUBMIT YOUR RESPONSE AT THE LATEST **BY 9 January 2013** TO THE GNSO SECRETARIAT (gnso.secretariat@gnso.icann.org), which will forward your statement to the Working Group. If additional time is needed by your SG / C to provide your feedback, please inform the secretariat accordingly, including the expected delivery date so that this can be factored in by the WG.

The GNSO Council has formed a Working Group of interested stakeholders and Stakeholder Group / Constituency representatives, to collaborate broadly with knowledgeable individuals and organizations, in order to consider recommendations in relation to thick Whois.

Part of the working group's effort will be to incorporate ideas and suggestions gathered from Stakeholder Groups, Constituencies through this template Statement. Please note that the WG is currently in an information-gathering phase. Inserting your response in this form will make it much easier for the Working Group to summarize the responses. This information is helpful to the community in understanding the points of view of various stakeholders. However, you should feel free to add any information you deem important to inform the working group's deliberations, even if this does not fit into any of the questions listed below.

For further information, please visit the WG Workspace (https://community.icann.org/display/PDP/Home).

Process

- Please identify the member(s) of your stakeholder group / constituency who is (are) participating in this working group
- Please identify the members of your stakeholder group / constituency who participated in

developing the perspective(s) set forth below
- Please describe the process by which your stakeholder group / constituency arrived at the perspective(s) set forth below
- If not indicated otherwise, the WG will consider your submission a SG / C position / contribution. Please note that this should not prevent the submission of individual and/or minority views as part of your submission, as long as these are clearly identified.

Topics:

The WG is tasked to provide the GNSO Council with a policy recommendation regarding the use of thick Whois by all gTLD registries, both existing and future. As part of its deliberations, the WG is expected to consider the topics listed below in the context of thick Whois. Please provide your stakeholder group's / constituency's views, including quantitative and/or empirical information supporting your views, on these topics in relation to whether or not to require thick Whois for all gTLDs and/or provide any information that you think will help the WG in its deliberations (for further information on each of these topics, please see the WG Charter https://community.icann.org/x/vIg3Ag):

- Response consistency - a thick registry can dictate the labeling and display of Whois information to be sure the information is easy to parse, and all registrars/clients would have to display it accordingly. This could be considered a benefit but also a potential cost. This might also be a benefit in the context of internationalized registration data as even with the use of different scripts, uniform data collection and display standards could be applied.

Your view:

- Stability - in the event of a Registrar business or technical failure, it could be beneficial to ICANN and registrants to have the full set of domain registration contact data stored by four organizations (the registry, the registry's escrow agent, the Registrar, and the Registrar's escrow agent), which would be the case in a thick registry.

Your view:

- Accessibility - is the provision of Whois information at the registry level under the thick Whois model more effective and cost-effective than a thin model in protecting consumers and users of Whois data and intellectual property owners?

Your view:

- Impact on privacy and data protection - how would thick Whois affect privacy and data protection, also taking into account the involvement of different jurisdictions with different laws and legislation with regard to data privacy as well as possible cross border transfers of registrant data?

Your view:

- Cost implications - what are the cost implications of a transition to thick Whois for registries, registrars, registrants and other parties for all gTLDs? Conversely, what are the cost implications to registries, registrars, registrants and other parties if no transition is mandated?

Your view:

- Synchronization/migration - what would be the impact on the registry and registrar Whois and EPP systems for those registries currently operating a thin registry, both in the migration phase to thick Whois as well as ongoing operations?

Your view:

- Authoritativeness - what are the implications of a thin registry possibly becoming authoritative for registrant Whois data following the transition from a thin-registry model to a thick-registry model. The Working Group should consider the term “authoritative” in both the technical (the repository of the authoritative data) and policy (who has authority over the data) meanings of the word when considering this issue.

Your view:

- Competition in registry services - what would be the impact on competition in registry services should all registries be required to provide Whois service using the thick Whois model – would there be more, less or no difference with regard to competition in registry services?

Your view:

- Existing Whois Applications - What, if anything, are the potential impacts on the providers of third-party Whois-related applications if thick Whois is required for all gtLDs?

Your view:

- Data escrow - thick Whois might obviate the need for the registrar escrow program and attendant expenses to ICANN and registrars.

Your view:

- Registrar Port 43 Whois requirements - thick Whois could make the requirement for registrars to maintain Port 43 Whois access redundant.

Your view:

Based on your assessment of these topics, you are also encouraged to indicate whether you think there should or there shouldn't be a requirement for thick Whois by all gTLD registries.

Your view:

If there is any other information you think should be considered by the WG as part of its deliberations, please feel free to include that here.

Other information:

Annex C – Request for input from ICANN SO / ACs

Dear SO/AC Chair,

As you may be aware, the GNSO Council recently initiated a Policy Development Process (PDP) on thick Whois. As part of its efforts to obtain input from the broader ICANN Community at an early stage of its deliberations, the Working Group that has been tasked with addressing this issue is looking for any input or information that may help inform its deliberations. You are strongly encouraged to provide any input or information you or members of your respective communities may have to the GNSO Secretariat (gnso.secretariat@gnso.icann.org).

For further background information on the WG's activities to date, please see https://community.icann.org/display/PDP/Home. Below you'll find an overview of the issues that the WG's has been tasked to address per its charter.

If possible, the WG would greatly appreciate if it could receive your input by 9 January 2012 at the latest. If you cannot submit your input by that date, but your group would like to contribute, please let us know when we can expect to receive your contribution so we can plan accordingly. Your input will be very much appreciated.

With best regards,

Mikey O'Connor, Chair of the thick Whois PDP Working Group

From the Charter (see https://community.icann.org/x/vIg3Ag):

The PDP Working Group is tasked to provide the GNSO Council with a policy recommendation regarding the use of thick Whois by all gTLD registries, both existing and future. As part of its deliberations on this issue, the PDP WG should, at a minimum, consider the following elements as detailed in the Final Issue Report:

- Response consistency: a thick registry can dictate the labeling and display of Whois information to be sure the information is easy to parse, and all registrars/clients would have to display it accordingly. This could be considered a benefit but also a potential cost. This might also be a benefit in the context of internationalized registration data as even with the use of different scripts, uniform data collection and display standards could be applied.
- Stability: in the event of a Registrar business or technical failure, it could be beneficial to ICANN and registrants to have the full set of domain registration contact data stored by four organizations (the registry, the registry's escrow agent, the Registrar, and the Registrar's escrow agent), which would be the case in a thick registry.
- Accessibility: is the provision of Whois information at the registry level under the thick Whois model more effective and cost-effective than a thin model in protecting consumers and users of Whois data and intellectual property owners?
- Impact on privacy and data protection: how would thick Whois affect privacy and data

protection, also taking into account the involvement of different jurisdictions with different laws and legislation with regard to data privacy as well as possible cross border transfers of registrant data?
- Cost implications: what are the cost implications of a transition to thick Whois for registries, registrars, registrants and other parties for all gTLDs? Conversely, what are the cost implications to registries, registrars, registrants and other parties if no transition is mandated?
- Synchronization/migration: what would be the impact on the registry and registrar Whois and EPP systems for those registries currently operating a thin registry, both in the migration phase to thick Whois as well as ongoing operations?
- Authoritativeness: what are the implications of a thin registry possibly becoming authoritative for registrant Whois data following the transition from a thin-registry model to a thick-registry model. The Working Group should consider the term "authoritative" in both the technical (the repository of the authoritative data) and policy (who has authority over the data) meanings of the word when considering this issue.
- Competition in registry services: what would be the impact on competition in registry services should all registries be required to provide Whois service using the thick Whois model – would there be more, less or no difference with regard to competition in registry services?
- Existing Whois Applications: What, if anything, are the potential impacts on the providers of third-party Whois-related applications if thick Whois is required for all gtLDs?
- Data escrow: thick Whois might obviate the need for the registrar escrow program and attendant expenses to ICANN and registrars.
- Registrar Port 43 Whois requirements: thick Whois could make the requirement for registrars to maintain Port 43 Whois access redundant.

Should the PDP WG reach consensus on a recommendation that thick Whois should be required for all gTLDs, the PDP WG is also expected to consider:
- Cost implications for gTLD registries, registrars and registrants of a transition to thick Whois
- Guidelines as to how to conduct such a transition (timeline, requirements, potential changes to Registration Agreements, etc.)
- Are special provisions and/or exemptions needed for gTLD registries which operate a thick Whois but provide tiered access, for example?

In addition, the PDP WG should take into account other ICANN initiatives that may help inform the deliberations limited to this specific topic such as;
- Registry/registrar separation and related developments with regards to access to customer data;
- Output from any/all of the four Whois Studies chartered by the GNSO Council, if completed in time for consideration by the WG;
- The 2004 transition of .ORG from thin to thick;
- The work being done concurrently on the internationalization of Whois and the successor to the Whois protocol and data model;
- Results of the RAA negotiations, and
- Recommendations of the Whois Review Team.

Annex D – Topics Poll Results

thick Whois PDP WG - Topics Poll

Introduction

This is a quick survey to collect two kinds of information – your interest in participating in sub-groups focused on each of our topics, and your suggestions as to sources of information or experts about those topics.

You are welcome to offer information-source and expert suggestions for all topics, not just the ones that you are volunteering to focus on.

Questions

1. **Authoritativeness**: what are the implications of a thin registry possibly becoming authoritative for registrant Whois data following the transition from a thin-registry model to a thick-registry model. The Working Group should consider the term "authoritative" in both the technical (the repository of the authoritative data) and policy (who has authority over the data) meanings of the word when considering this issue.

I would like to participate in the sub-team for this topic:

- Jill Titzer (RrSG)
- Titi Akinsanmi (ALAC)
- Amr Elsadr (NCSG)
- Tim Ruiz (RrSG)
- Jeff Neuman (RySG)
- Steve Metalitz (IPC)

Here are my suggested information-sources (or experts who would be good advisors) about this topic:

2. **Stability:** in the event of a Registrar business or technical failure, it could be beneficial to ICANN and registrants to have the full set of domain registration contact data stored by four organizations (the registry, the registry's escrow agent, the Registrar, and the Registrar's escrow agent), which would be the case in a thick registry.

I would like to participate in the sub-team for this topic:

- Alan Greenberg (ALAC)
- Carolyn Hoover (RySG)
- Tim Ruiz (RrSG)
- Jeff Neuman (RySG)
- Christopher E George (IPC)

Here are my suggested information-sources (or experts who would be good advisors) about this topic:

3. **Data escrow:** thick Whois might obviate the need for the registrar escrow program and attendant expenses to ICANN and registrars.

I would like to participate in the sub-team for this topic

- Alan Greenberg (ALAC)
- Carolyn Hoover (RySG)
- Frederic Guillemaut (RrSG)
- Tim Ruiz (RrSG)

Here are my suggested information-sources (or experts who would be good advisors) about this topic:

4. **Synchronization/migration:** what would be the impact on the registry and registrar Whois and EPP systems for those registries currently operating a thin registry, both in the migration phase to thick Whois as well as ongoing operations?

I would like to participate in the sub-team for this topic:

- Jill Titzer (RrSG)
- Susan Kawaguchi (BC)

Here are my suggested information-sources (or experts who would be good advisors) about this topic:

5. **Response consistency:** a thick registry can dictate the labeling and display of Whois information to be sure the information is easy to parse, and all registrars/clients would have to display it accordingly. This could be considered a benefit but also a potential cost. This might also be a benefit in the context of internationalized registration data as even with the use of different scripts, uniform data collection and display standards could be applied.

I would like to participate in the sub-team for this topic:

- Jill Titzer (RrSG)
- Carlton Samuels (ALAC)
- Carolyn Hoover (RySG)
- Michael Shohat (RrSG)
- Susan Prosser (RrSG)
- Tim Ruiz (RrSG)
- Marie-laure Lemineur (NPOC)
- Susan Kawaguchi (BC)
- Christopher E George (IPC)

Here are my suggested information-sources (or experts who would be good advisors) about this topic:

6. **Accessibility:** is the provision of Whois information at the registry level under the thick Whois model more effective and cost-effective than a thin model in protecting consumers and users of Whois data and intellectual property owners?

I would like to participate in the sub-team for this topic:

- Jill Titzer (RrSG)
- Carlton Samuels (ALAC)
- Titi Akinsanmi (ALAC)
- Amr Elsadr (NCSG)
- Jennifer Wolfe (NomCom)
- Michael Shohat (RrSG)

- Evan Leibovitch (ALAC)
- Susan Prosser (RrSG)
- Tim Ruiz (RrSG)
- Jeff Neuman (RySG)
- Susan Kawaguchi (BC)
- Christopher E George (IPC)

Here are my suggested information-sources (or experts who would be good advisors) about this topic:

- NORC study commissioned by ICANN. See http://www.icann.org/en/compliance/reports/whois-accuracy-study-17jan10-en.pdf); Whois Policy Review Team Final Report, http://www.icann.org/en/about/aoc-review/whois/final-report-11may12-en.pdf , at 15. (suggested by Steve Metalitz)

7. **Impact on privacy and data protection:** how would thick Whois affect privacy and data protection, also taking into account the involvement of different jurisdictions with different laws and legislation with regard to data privacy as well as possible cross border transfers of registrant data?

I would like to participate in the sub-team for this topic:

- Alan Greenberg (ALAC)
- Carlton Samuels (ALAC)
- Titi Akinsanmi (ALAC)
- Amr Elsadr (NCSG)
- Roy Balleste (NCUC)
- Jennifer Wolfe (NomCom)
- Michael Shohat (RrSG)
- Susan Prosser (RrSG)
- Marie-laure Lemineur (NPOC)

Here are my suggested information-sources (or experts who would be good advisors) about this topic:

- Dr. Joanna Kulesza, Faculty of Law and Administration, University of Lodz (Suggested by Roy Balleste, NCUC)

8. **Competition in registry services:** what would be the impact on competition in registry services should all registries be required to provide Whois service using the thick Whois

model – would there be more, less or no difference with regard to competition in registry services?

I would like to participate in the sub-team for this topic:

- Alan Greenberg (ALAC)
- Jill Titzer (RrSG)
- Amr Elsadr (NCSG)
- Jeff Neuman (RySG)
- Jonathan Zuck (IPC)
- Steve Metalitz (IPC)

Here are my suggested information-sources (or experts who would be good advisors) about this topic:

- Need to look at survey and sales data for both kinds of registries (suggested by Jonathan Zuck)

9. **Existing Whois Applications:** What, if anything, are the potential impacts on the providers of third-party Whois-related applications if thick Whois is required for all gtLDs?

I would like to participate in the sub-team for this topic:

- Titi Akinsanmi (ALAC)
- Susan Prosser (RrSG)
- Susan Kawaguchi (BC)

Here are my suggested information-sources (or experts who would be good advisors) about this topic:

10. **Registrar Port 43 Whois requirements:** thick Whois could make the requirement for registrars to maintain Port 43 Whois access redundant.

I would like to participate in the sub-team for this topic:

- Alan Greenberg (ALAC)
- Carlton Samuels (ALAC)
- Frederic Guillemaut (RrSG)

- Tim Ruiz (RrSG)
- Steve Metalitz (IPC)

Here are my suggested information-sources (or experts who would be good advisors) about this topic:

- Registrar Constituency (Suggested by Frederic Guillemaut, RrSG)

11. **Cost implications:** what are the cost implications of a transition to thick Whois for registries, registrars, registrants and other parties for all gTLDs? Conversely, what are the cost implications to registries, registrars, registrants and other parties if no transition is mandated?

I would like to participate in the sub-team for this topic

- Alan Greenberg (ALAC)
- Jill Titzer (RrSG)
- Michael Shohat (RrSG)
- Jeff Neuman (RySG)
- Christopher E George (IPC)

Here are my suggested information-sources (or experts who would be good advisors) about this topic:

Annex E – Agreement Excerpts on WHOIS Response Format

Excerpt from Proposed RA (Spec 4)[22]:

1.1. The format of responses shall follow a semi-free text format outline below, followed by a blank line and a legal disclaimer specifying the rights of Registry Operator, and of the user querying the database.

1.2. Each data object shall be represented as a set of key/value pairs, with lines beginning with keys, followed by a colon and a space as delimiters, followed by the value.

1.3. For fields where more than one value exists, multiple key/value pairs with the same key shall be allowed (for example to list multiple name servers). The first key/value pair after a blank line should be considered the start of a new record, and should be considered as identifying that record, and is used to group data, such as hostnames and IP addresses, or a domain name and registrant information, together.

1.4. The fields specified below set forth the minimum output requirements. Registry Operator may output data fields in addition to those specified below, subject to approval by ICANN.

Excerpt From Proposed RAA (REGISTRATION DATA DIRECTORY SERVICE (WHOIS) SPECIFICATION)[23]:

1.1. The format of responses shall follow a semi---free text format outline below, followed by a blank line and a legal disclaimer specifying the rights of Registrar, and of the user querying the database.

1.2. Each data object shall be represented as a set of key/value pairs, with lines beginning with keys, followed by a colon and a space as delimiters, followed by the value.

1.3. For fields where more than one value exists, multiple numbered key/value pairs with the same key shall be allowed (for example to list multiple name servers). The first key/value pair after a blank line should be considered the start of a new record, and should be considered as identifying

[22] RA: http://newgtlds.icann.org/en/applicants/agb/base-agreement-specs-29apr13-en.pdf
[23] http://www.icann.org/en/resources/registrars/raa/proposed-whois-22apr13-en.pdf

that record, and is used to group data, such as hostnames and IP addresses, or a domain name and registrant information, together.

1.4. Domain Name Data:

1.4.1. Query

format: whois –h whois.example---registrar.tld EXAMPLE.TLD

1.4.2. Response format:

The format of responses shall contain all the elements and follow a semi---free text format outline below.

Additional data elements can be added at the end of the text

Annex F – Specification 4 of the proposed new gTLD Registration Agreement

Please note that at the time of publication of this report, the new gTLD Registration Agreement had not been finalized so it is possible that changes to this specification will occur. If so, these will be considered by the Working Group in due time.

SPECIFICATION 4

REGISTRATION DATA PUBLICATION SERVICES

1. **Registration Data Directory Services**. Until ICANN requires a different protocol, Registry Operator will operate a WHOIS service available via port 43 in accordance with RFC 3912, and a web-based Directory Service at <whois.nic.TLD> providing free public query-based access to at least the following elements in the following format. ICANN reserves the right to specify alternative formats and protocols, and upon such specification, the Registry Operator will implement such alternative specification as soon as reasonably practicable.

   Registry Operator shall implement a new standard supporting access to domain name registration data (SAC 051) no later than 135 days after it is requested by ICANN if: 1) the IETF produces a standard (i.e., it is published, at least, as a Proposed Standard RFC as specified in RFC 2026); and 2) its implementation is commercially reasonable in the context of the overall operation of the registry.

   1.1. The format of responses shall follow a semi-free text format outline below, followed by a blank line and a legal disclaimer specifying the rights of Registry Operator, and of the user querying the database.

   1.2. Each data object shall be represented as a set of key/value pairs, with lines beginning with keys, followed by a colon and a space as delimiters, followed by the value.

   1.3. For fields where more than one value exists, multiple key/value pairs with the same key shall be allowed (for example to list multiple name servers). The first key/value pair after a blank line should be considered the start of a new record, and should be considered as identifying that record, and is used to group data, such as hostnames and IP addresses, or a domain name and registrant information, together.

   1.4. The fields specified below set forth the minimum output requirements.

Registry Operator may output data fields in addition to those specified below, subject to approval by ICANN.

1.5. **Domain Name Data:**

1.5.1 **Query format:** whois EXAMPLE.TLD

1.5.2 **Response format:**

Domain Name: EXAMPLE.TLD
Domain ID: D1234567-TLD
WHOIS Server: whois.example.tld
Referral URL: http://www.example.tld
Updated Date: 2009-05-29T20:13:00Z
Creation Date: 2000-10-08T00:45:00Z Registry
Expiry Date: 2010-10-08T00:44:59Z
Sponsoring Registrar: EXAMPLE REGISTRAR LLC
Sponsoring Registrar IANA ID: 5555555
Domain Status: clientDeleteProhibited
Domain Status: clientRenewProhibited
Domain Status: clientTransferProhibited
Domain Status: serverUpdateProhibited
Registrant ID: 5372808-ERL
Registrant Name: EXAMPLE REGISTRANT
Registrant Organization: EXAMPLE ORGANIZATION
Registrant Street: 123 EXAMPLE STREET Registrant
City: ANYTOWN
Registrant State/Province: AP
Registrant Postal Code: A1A1A1
Registrant Country: EX
Registrant Phone: +1.5555551212
Registrant Phone Ext: 1234
Registrant Fax: +1.5555551213
Registrant Fax Ext: 4321
Registrant Email: EMAIL@EXAMPLE.TLD Admin
ID: 5372809-ERL
Admin Name: EXAMPLE REGISTRANT ADMINISTRATIVE
Admin Organization: EXAMPLE REGISTRANT ORGANIZATION Admin
Street: 123 EXAMPLE STREET
Admin City: ANYTOWN
Admin State/Province:
AP
Admin Postal Code: A1A1A1
Admin Country: EX
Admin Phone: +1.5555551212
Admin Phone Ext: 1234

Admin Fax: +1.5555551213
Admin Fax Ext:
Admin Email: EMAIL@EXAMPLE.TLD Tech
ID: 5372811-ERL
Tech Name: EXAMPLE REGISTRAR TECHNICAL
Tech Organization: EXAMPLE REGISTRAR LLC Tech
Street: 123 EXAMPLE STREET
Tech City: ANYTOWN
Tech State/Province:
AP
Tech Postal Code:
A1A1A1 Tech Country:
EX
Tech Phone: +1.1235551234
Tech Phone Ext: 1234
Tech Fax: +1.5555551213
Tech Fax Ext: 93
Tech Email: EMAIL@EXAMPLE.TLD
Name Server: NS01.EXAMPLEREGISTRAR.TLD Name
Server: NS02.EXAMPLEREGISTRAR.TLD
DNSSEC: signedDelegation
DNSSEC: unsigned
>>> Last update of WHOIS database: 2009-05-29T20:15:00Z <<<

1.6. **Registrar Data:**

1.6.1 **Query format**: whois "registrar Example Registrar, Inc."

1.6.2 Response format:

Registrar Name: Example Registrar, Inc. Street:
1234 Admiralty Way
City: Marina del Rey
State/Province: CA Postal
Code: 90292
Country: US
Phone Number: +1.3105551212
Fax Number: +1.3105551213
Email: registrar@example.tld
WHOIS Server: whois.example-registrar.tld
Referral URL: http://www.example-registrar.tld Admin
Contact: Joe Registrar
Phone Number: +1.3105551213
Fax Number: +1.3105551213
Email: joeregistrar@example-registrar.tld
Admin Contact: Jane Registrar

Phone Number: +1.3105551214
Fax Number: +1.3105551213
Email: janeregistrar@example-registrar.tld Technical
Contact: John Geek
Phone Number: +1.3105551215
Fax Number: +1.3105551216
Email: johngeek@example-registrar.tld
>>> Last update of WHOIS database: 2009-05-29T20:15:00Z <<<

1.7. **Nameserver Data:**

1.7.1 **Query format**: whois "NS1.EXAMPLE.TLD", whois "nameserver (nameserver name)", or whois "nameserver (IP Address)"

1.7.2 Response format:

Server Name: NS1.EXAMPLE.TLD IP
Address: 192.0.2.123 IP Address:
2001:0DB8::1 Registrar: Example
Registrar, Inc.
WHOIS Server: whois.example-registrar.tld Referral
URL: http://www.example-registrar.tld
>>> Last update of WHOIS database: 2009-05-29T20:15:00Z <<<

1.8. The format of the following data fields: domain status, individual and organizational names, address, street, city, state/province, postal code, country, telephone and fax numbers, email addresses, date and times should conform to the mappings specified in EPP RFCs 5730-5734 so that the display of this information (or values return in WHOIS responses) can be uniformly processed and understood.

1.9. WHOIS output shall be compatible with ICANN's common interface for WHOIS (InterNIC).

1.10. **Searchability**. Offering searchability capabilities on the Directory Services is optional but if offered by the Registry Operator it shall comply with the specification described in this section.

1.10.1 Registry Operator will offer searchability on the web-based Directory Service.

1.10.2 Registry Operator will offer partial match capabilities, at least, on the following fields: domain name, contacts and registrant's name, and contact and registrant's postal address, including all the sub-fields described in EPP (e.g., street, city, state or province, etc.).

1.10.3 Registry Operator will offer exact-match capabilities, at least, on the following fields: registrar id, name server name, and name server's IP address (only

applies to IP addresses stored by the registry, i.e., glue records).

1.10.4 Registry Operator will offer Boolean search capabilities supporting, at least, the following logical operators to join a set of search criteria: AND, OR, NOT.

1.10.5 Search results will include domain names matching the search criteria.

1.10.6 Registry Operator will: 1) implement appropriate measures to avoid abuse of this feature (e.g., permitting access only to legitimate authorized users); and 2) ensure the feature is in compliance with any applicable privacy laws or policies.

1.11. Registry Operator shall provide a link on the primary website for the TLD (i.e. the website provided to ICANN for publishing on the ICANN website) to a web page designated by ICANN containing WHOIS policy and education materials.

2. Zone File Access

2.1. Third-Party Access

2.1.1 **Zone File Access Agreement**. Registry Operator will enter into an agreement with any Internet user that will allow such user to access an Internet host server or servers designated by Registry Operator and download zone file data. The agreement will be standardized, facilitated and administered by a Centralized Zone Data Access Provider, which may be ICANN or an ICANN designee (the "CZDA Provider"). Registry Operator (optionally through the CZDA Provider) will provide access to zone file data per Section 2.1.3 of this Specification and do so using the file format described in Section 2.1.4 of this Specification. Notwithstanding the foregoing, (a) the CZDA Provider may reject the request for access of any user that does not satisfy the credentialing requirements in Section 2.1.2 below; (b) Registry Operator may reject the request for access of any user that does not provide correct or legitimate credentials under Section 2.1.2 below or where Registry Operator reasonably believes will violate the terms of Section 2.1.5. below; and, (c) Registry Operator may revoke access of any user if Registry Operator has evidence to support that the user has violated the terms of Section 2.1.5 below.

2.1.2 **Credentialing Requirements**. Registry Operator, through the facilitation of the CZDA Provider, will request each user to provide it with information sufficient to correctly identify and locate the user. Such user information will include, without limitation, company name, contact name, address, telephone number, facsimile number, email address, and the Internet

host machine name and IP address.

2.1.3 **Grant of Access**. Each Registry Operator (optionally through the CZDA Provider) will provide the Zone File FTP (or other Registry supported) service for an ICANN-specified and managed URL (specifically, <TLD>.zda.icann.org where <TLD> is the TLD for which the registry is responsible) for the user to access the Registry's zone data archives. Registry Operator will grant the user a non-exclusive, nontransferable, limited right to access Registry Operator's (optionally CZDA Provider's) Zone File hosting server, and to transfer a copy of the top-level domain zone files, and any associated cryptographic checksum files no more than once per 24 hour period using FTP, or other data transport and access protocols that may be prescribed by ICANN. For every zone file access server, the zone files are in the top-level directory called <zone>.zone.gz, with <zone>.zone.gz.md5 and <zone>.zone.gz.sig to verify downloads. If the Registry Operator (or the CZDA Provider) also provides historical data, it will use the naming pattern <zone>-yyyymmdd.zone.gz, etc.

2.1.4 **File Format Standard**. Registry Operator (optionally through the CZDA Provider) will provide zone files using a subformat of the standard Master File format as originally defined in RFC 1035, Section 5, including all the records present in the actual zone used in the public DNS. Sub-format is as follows:

1. Each record must include all fields in one line as: <domain-name> <TTL> <class> <type> <RDATA>.
2. Class and Type must use the standard mnemonics and must be in lower case.
3. TTL must be present as a decimal integer.
4. Use of /X and /DDD inside domain names is allowed.
5. All domain names must be in lower case.
6. Must use exactly one tab as separator of fields inside a record.
7. All domain names must be fully qualified.
8. No $ORIGIN directives.
9. No use of "@" to denote current origin.
10. No use of "blank domain names" at the beginning of a record to continue the use of

the domain name in the previous record.

11. No $INCLUDE directives.

12. No $TTL directives.

13. No use of parentheses, e.g., to continue the list of fields in a record across a line boundary.

14. No use of comments.

15. No blank lines.

16. The SOA record should be present at the top and (duplicated at) the end of the zone file.

17. With the exception of the SOA record, all the records in a file must be in alphabetical order.

18. One zone per file. If a TLD divides its DNS data into multiple zones, each goes into a separate file named as above, with all the files combined using tar into a file called <tld>.zone.tar.

2.1.5 **Use of Data by User**. Registry Operator will permit user to use the zone file for lawful purposes; provided that, (a) user takes all reasonable steps to protect against unauthorized access to and use and disclosure of the data, and (b) under no circumstances will Registry Operator be required or permitted to allow user to use the data to, (i) allow, enable, or otherwise support the transmission by email, telephone, or facsimile of mass unsolicited, commercial advertising or solicitations to entities other than user's own existing customers, or (ii) enable high volume, automated, electronic processes that send queries or data to the systems of Registry Operator or any ICANN-accredited registrar.

2.1.6 **Term of Use**. Registry Operator, through CZDA Provider, will provide each user with access to the zone file for a period of not less than three (3) months. Registry Operator will allow users to renew their Grant of Access.

2.1.7 **No Fee for Access**. Registry Operator will provide, and CZDA Provider will facilitate, access to the zone file to user at no cost.

2.2. Co-operation

2.2.1 **Assistance**. Registry Operator will co-operate and provide reasonable assistance to ICANN and the CZDA Provider to facilitate and maintain the efficient access of zone file data by permitted users as contemplated under this Schedule.

2.3. **ICANN Access**. Registry Operator shall provide bulk access to the zone files for the TLD to ICANN or its designee on a continuous basis in the manner ICANN may reasonably specify from time to time. Access will be provided at least daily. Zone files will include SRS data committed as close as possible to 00:00:00 UTC.

2.4. **Emergency Operator Access**. Registry Operator shall provide bulk access to the zone files for the TLD to the Emergency Operators designated by ICANN on a continuous basis in the manner ICANN may reasonably specify from time to time.

3. Bulk Registration Data Access to ICANN

3.1. **Periodic Access to Thin Registration Data**. In order to verify and ensure the operational stability of Registry Services as well as to facilitate compliance checks on accredited registrars, Registry Operator will provide ICANN on a weekly basis (the day to be designated by ICANN) with up-to- date Registration Data as specified below. Data will include data committed as of 00:00:00 UTC on the day previous to the one designated for retrieval by ICANN.

3.1.1 **Contents**. Registry Operator will provide, at least, the following data for all registered domain names: domain name, domain name repository object id (roid), registrar id (IANA ID), statuses, last updated date, creation date, expiration date, and name server names. For sponsoring registrars, at least, it will provide: registrar name, registrar repository object id (roid), hostname of registrar Whois server, and URL of registrar.

3.1.2 **Format**. The data will be provided in the format specified in Specification 2 for Data Escrow (including encryption, signing, etc.) but including only the fields mentioned in the previous section, i.e., the file will only contain Domain and Registrar objects with the fields mentioned above. Registry Operator has the option to provide a full deposit file instead as specified in Specification 2.

3.1.3 **Access**. Registry Operator will have the file(s) ready for download as of 00:00:00 UTC on the day designated for retrieval by ICANN. The file(s) will be made available for download by SFTP, though ICANN may request other means in the future.

3.2. **Exceptional Access to Thick Registration Data**. In case of a registrar failure, deaccreditation, court order, etc. that prompts the temporary or definitive transfer of its domain names to another registrar, at the request of ICANN, Registry Operator will

provide ICANN with up-to-date data for the domain names of the losing registrar. The data will be provided in the format specified in Specification 2 for Data Escrow. The file will only contain data related to the domain names of the losing registrar. Registry Operator will provide the data within three calendar days. Unless otherwise agreed by Registry Operator and ICANN, the file will be made available for download by ICANN in the same manner as the data specified in Section 3.1 of this Specification.

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Annex G – Table Comparison Matrix

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Expected Impacted of Requiring thick Whois	IPC	BC	ALAC	NPOC	Verisign	RySG	RrSG	NCUC	Preliminary Conclusion	
Response Consistency	✔	✔	✔	✔	✔	✔	✔	✗	Almost all agree that from the perspective of response consistency, requiring thick Whois could be considered a benefit	✔ = Positive impact ✗ = Negative impact
Stability	✔	✔	✔	✗	✗	✔	✔	✗	Most agree that from the perspective of stability, requiring thick Whois could be considered a benefit	✔ = Positive impact ✗ = Negative impact
Accessibility	✔	✔	✔	✗	✗	✔	✔	✗	Most agree that from the perspective of accessibility, requiring thick Whois could be considered a benefit	✔ = Positive impact ✗ = Negative impact
Cost Implications	✗	✗	✗	?	?	✗	✗	?	More information needed, but in principle most agree that there is no negative impact expected with regard to cost implications from requiring thick Whois	✗ = no negative impact expected with regard to costs ? = More information needed

Synchronization / Migration	?	✔	✔	?	?	?	?	?	More information needed	✔= No significant impact expected ? = More information needed
Competition in registry services	✔	✔	✔	✗	0	/	/	✗	Most agree that there will be more, or no difference in competition if thick Whois would be required.	✔= More competition / = no difference ✗= less competition 0 = no comment
Existing Whois applications	/	✔	✔	0	0	/	✔	✗	Almost all agree that there will a positive, or no impact on existing Whois applications if thick Whois would be required.	✔ = Positive impact / = no difference ✗ = Negative impact 0 = no comment
Registrar Port 43 Whois Requirements	✗	✗	✗	0	0	✗	✔	0	Almost all agree that Port 43 Whois Requirements should be maintained if thick Whois would be required	✔ = Makes Port 43 redundant ✗ = Does not make Port 43 redundant 0 = no comment
Privacy & Data Protection	✔	✔	✔	✗	✗	✔	✔	✗	Most agree that from the perspective of Privacy & Data Protection there are no significant issues if thick Whois would be required	✔ = Not an issue / not specific to thick Whois ✗ = Is a problem

Authoritativeness	?	✔	?	?	?	✔	✔	✗	More information needed	✔ = registry would become authoritative ✗ = Registrar should remain authoritative ? = More information needed
Data Escrow	0	✔	✔	0	✔	0	✗	✔	Almost all agree that there should be no change to the current data escrow requirements if thick Whois is mandated	✔ = Current escrow requirements should be maintained ✗ = No need to maintain current escrow requirements 0 = no comment

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