

WHOIS Review Team

Final Report *(Draft)* Executive Summary

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Table of Contents

Chapter 1: Executive Summary	3
PART I – Scope of Work and Definitions.....	14
Chapter 2: The WHOIS Review Team, Scope of Work & Key Definitions	14
PART II – ICANN WHOIS Policy and its Implementation.....	21
Chapter 3: The Complex History of WHOIS Policy.....	21
Chapter 4: Implementation of WHOIS policy – ICANN’s Compliance Efforts	36
Chapter 5: Implementation of WHOIS Policy in Relation to Internationalized Domain Names.....	41
PART III – The Extent to which ICANN’s Existing Policy and its Implementation Are Effective in Meeting Stakeholder Needs	45
Chapter 6: Understanding the Needs of Stakeholders.....	45
Chapter 7: Gap Analysis	80
Chapter 8: Recommendations	88

Chapter 1: Executive Summary

The Internet Corporation for Assigned Names and Numbers (ICANN) is one of a small but important set of organizations responsible for administering certain functions critical to the operation of the Internet. ICANN's primary responsibility is to facilitate the policy maintenance and enhancement of the Domain Name System (DNS), an integral part of the Internet.

ICANN is a California, public benefit corporation that undertakes periodic reviews to assess its efficacy in serving its various constituencies and the global public at large. In 2009, ICANN and the US Department of Commerce approved, signed, and published an Affirmation of Commitments (AoC) in which ICANN commits to undertake a number of high level reviews, including on Accountability and Transparency (completed December 2010), and WHOIS.

This report is the formal output of the Review Team responsible for assessing WHOIS and represents the culmination of a yearlong effort by a diverse group, representative of ICANN's makeup.

A. History

ICANN was formed in 1998 to fulfill the requirement that operation of the DNS move from the government to private sector control.

WHOIS (not an acronym) was first defined as a *protocol* of the Internet Engineering Task Force (IETF) in 1982. WHOIS is one of the simplest in the suite of protocols that the IETF maintains. Any machine connected to the Internet can operate a WHOIS *service* by implementing the protocol and responding to requests as described in the *specification*.

Initially, the WHOIS *specification* described a set of information that was requested of anyone capable of transmitting information across the network. This information consisted of name and contact information that was to be stored on specific servers and would be returned upon receipt of an appropriate WHOIS request.

As the Internet grew and it became impractical to maintain a single WHOIS server, updated versions of the *specification* were developed and approved. These specifications dropped the references to specific servers and required information, thereby enabling broader use of the specifications. It was then incumbent on any community desiring to use WHOIS to define required information and where that information could be found. ICANN is responsible for those definitions for the Domain Name System.

B. Discussion

Domain names are the familiar sequence of characters we see in our web browsers after the "http://www." and before the next "/"; e.g. "google.com", "redcross.org", and

["europa.eu"](http://europa.eu). They are an integral part of the Internet, serving us as mnemonics for places we have been to or wish to be, and as keys for machines to perform the necessary translation from the abstract to the real.

Domain names sit on the human side of the man-machine interface and through the DNS are translated to machine-compatible Internet Protocol (IP) addresses. Internet-connected machines use IP addresses to send and receive messages transmitted over the Internet. They are fundamental to the Internet itself, as is uniform translation from name to number, and back again.

While the DNS presents a single, complete view of the Internet, no single machine holds all of the Internet's addressing and mapping information. Rather, that information is distributed across a series of name servers that cooperate to seamlessly provide that one comprehensive view.

Domain names and the DNS are used in virtually every aspect of the Internet, not just those parts most visible to most consumers, web browsers. Every email message, song or movie download, instant message, tweet, Facebook "like", or online transaction involves the DNS in some way. Without the DNS, the Internet would not exist, as we know it.

As important as machine-to-machine communication is, there are times when human-to-human interaction related to the Internet is required. The reasons for this interaction are varied and include notice, abuse, and security amongst others. For these reasons, contact information (as specified by ICANN) related to a domain name must be provided in order to register a domain name, much like when registering a vehicle.

This information is stored and is available to the public through a system known colloquially as WHOIS. WHOIS predates the "commercial" Internet and remains largely unchanged since its earliest days, ca 1982. It is likely that it was selected for use in this context because it existed and was well understood. In all probability, it was selected by default.

C. Debate

WHOIS is the source of long-running discussion and debate at ICANN, other Internet Governance institutions, and elsewhere. This team and its successors hopefully will inform future debate and consensus-based decision making.

Issues in the WHOIS debate are varied. Any discussion of WHOIS will likely contain all of the words accuracy, privacy, anonymity, cost, policing, and SPAM. Each of the issues is important. This is sometimes lost in the heat of the debate and it is important to remind ourselves of this on a regular basis.

In order to inform the debate, and perhaps make the decision-making process easier, ICANN has adopted the age-old tradition of "the study" in lieu of or a precursor to

action. Significant sums have been spent studying WHOIS, more is being spent, and yet more is planned with the span of time now stretching into decades.

Each study addresses some different aspect of WHOIS; accuracy, proxy/privacy reveal/request, availability, ... They take time to be approved, conducted, reported, and of course debated. This time is measured in years and could be called ICANN time as compared to Internet time. The one constant throughout has been WHOIS itself; protocol, service, data.

D. Conclusion

This summary discussion is not a condemnation of the debate, the studies, or the people that invested their time, emotion, and personal capital over the years. Rather, it is an attempt to concisely present in a balanced and fair manner the very real truth that the current system is broken and needs to be repaired.

This Review Team reflects the diversity of ICANN's multi-stakeholder model. We have been given time to conduct our review, receiving invaluable feedback from the community. We agree to disagree yet we have found consensus, for each and every one of the recommendations we make. We look forward to participating in the debates that follow, and monitoring their implementation if adopted by the Board.

E. Work of this RT

The WHOIS Review Team's scope, guided by the Affirmation of Commitments, was to review the extent to which ICANN's WHOIS policy and its implementation are effective, meet the legitimate needs of law enforcement, and promote consumer trust.

Formed in October 2010, the WHOIS Review Team comprised representatives from across the ICANN constituencies, a representative of law enforcement and two independent experts. The Review Team held two dedicated face-to-face meetings during its term, as well as working and outreach sessions at each of the ICANN meetings in 2011. Fortnightly calls were held. Apart from rare occasions where Chatham House rules were invoked, all the Review Team's calls, meetings and e-mail list were open to observers, and the public wiki

<https://community.icann.org/display/whoisreview/WHOIS+Policy+Review+Team>

provides an archive of our activities.

F. Findings

One of our earliest "findings" was our inability to find a clear, concise, well-communicated WHOIS Policy. The Team was assured that one existed and that it had been in force for some time. Several versions of Registrar and Registry contracts were reviewed as were compliance activities related to the policy. Throughout, we were unable to locate a document labeled WHOIS Policy as referenced by the ICANN-approved Affirmation of Commitments.

Unfortunately, we find that in this case policy is divined from its implementation. As a consequence, it is not clear, concise, or well communicated – hallmarks of good policies. What once might have been simple has been allowed to become complex, difficult to understand or to identify the parties responsible for changing it.

While there is no specific policy, there has been no lack of WHOIS related effort. Rather, we find that considerable effort has been expended over the years, discussing, debating, arguing, proposing, developing, and implementing WHOIS "policy". Meaningful attempts at change have been made but it is unclear that these changes have in fact resulted in improvements.

A gross understatement is that tensions exist between the various ICANN constituencies regarding WHOIS. Issues abound including right to privacy, anonymity, intellectual property protection, security and abuse, among others. Each is important. None more so than the other.

We find little consensus within the ICANN community on the issues. More concerning, there appears to be no coordinated effort to achieve consensus on these important, and admittedly difficult issues. Neither ICANN the corporation nor ICANN the community have seen the need to charge an individual or group as responsible for WHOIS. We find this a significant oversight and surmise that without such a coordinating effort, the small steps required for consensus may never be taken. It is hoped that the establishment of regular WHOIS Reviews will assist in this regard.

Perhaps it should be no surprise that in this environment, policy and implementation have not kept pace with the real world. International Domain Names (IDNs) were introduced to great fanfare by ICANN in 2000, and in 2010 at the root level, without a corresponding change to its policies related to WHOIS.

What this means, is that while domain names can now be written in Arabic for example, the contact information for these domains must still be transliterated into a format ill-suited to the purpose. The issues are well understood and mechanisms exist to address them. Admittedly, change in this space will take time, and ICANN (and others) are taking steps to improve the situation but we find it is a case of too little too late.

Privacy and proxy services have arisen to fill an ICANN policy vacuum. These services are clearly meeting a market demand and it is equally clear that these services are complicating the WHOIS landscape.

In the time since the formation of ICANN, Internet usage for ill gain or harm has increased dramatically. Combatting it has become, and remains ever more complex both for Law Enforcement Agencies (LEAs) and those responsible for any Internet-connected service.

Governments have recognized the changing landscape and have individually enacted cyber security laws and cooperatively entered into international cyber security treaties.

Certainly more needs to be done here, but steps have been taken and more are on the way.

Cyber security and cybercrime experts make extensive use of WHOIS to thwart and respond to a varied set of threats. Information contained within WHOIS is invaluable in these efforts and practitioners have conveyed to us their frustration at the continuing high levels of inaccuracy of WHOIS data. We find that ICANN has neglected to respond to the needs of this community both in the accuracy of WHOIS data and in response times for access and action.

Where does this leave the issue of “promotes consumer trust”? Having struggled with what “consumer” means in the context of WHOIS, and aware of the Affirmation of Commitments’ observation that there are key stakeholders who do not engage in the ICANN environment, the WHOIS Review Team commissioned consumer research. This found that drivers of consumer trust include knowing the entity with whom they are dealing, and being able to find reliable contact information. The vast majority of consumers were unaware of the existence of the WHOIS service, and many struggled to understand the format of WHOIS outputs. This led us to conclude that the current implementation of WHOIS services does not help to build consumer trust, and more could be done to raise awareness of the service, and to improve its user-friendliness.

For something so simple as WHOIS the protocol, it is unfortunate that WHOIS the policy has become so complex and unmanageable.

G. Recommendations

Single WHOIS Policy

1. ICANN's WHOIS policy is poorly defined and decentralized The ICANN Board should oversee the creation of a single WHOIS policy document, and reference it in subsequent versions of agreements with Contracted Parties. In doing so, ICANN should clearly document the current gTLD WHOIS policy as set out in the gTLD Registry and Registrar contracts and GNSO Consensus Policies and Procedure.

Policy review – WHOIS Data Reminder Policy

2. The ICANN Board should ensure that the Compliance Team develop, in consultation with relevant contracted parties, metrics to track the impact of the annual WHOIS Data Reminder Policy (WDRP) notices to registrants. Such metrics should be used to develop and publish performance targets, to improve data accuracy over time. If this is unfeasible with the current system, the Board should ensure that an alternative, effective policy is developed and implemented

in consultation with registrars that achieves the objective of improving data quality, in a measurable way.

Strategic Priority

3. ICANN should make WHOIS a strategic priority. This should involve allocating sufficient resources, through the budget process, to ensure that ICANN compliance staff is fully resourced to take a proactive regulatory role and encourage a culture of compliance. The Board should ensure that a senior member of the executive team is responsible for overseeing WHOIS compliance.

Outreach

4. ICANN should ensure that WHOIS policy issues are accompanied by cross-community outreach, including outreach to the communities outside of ICANN with a specific interest in the issues and an ongoing program for consumer awareness.

Data Accuracy

5. ICANN should take appropriate measures to reduce the number of unreachable WHOIS registrations (as defined by the NORC Data Accuracy Study, 2009/10) by 50% within 12 months and by 50% again over the following 12 months.
6. ICANN shall produce and publish an accuracy report focused on measured reduction in “unreachable WHOIS registrations”, on an annual basis.
7. ICANN should provide at least annual status reports on its progress towards achieving the goals set out by this WHOIS Review Team, published by the time the next WHOIS Review Team starts. This report should include tangible, reliable figures needed.
8. ICANN should ensure that there is a clear, unambiguous and enforceable chain of contractual agreements with registries, registrars, and registrants to require the provision and maintenance of accurate WHOIS data. As part of these agreements, ICANN should ensure that clear, enforceable and graduated sanctions apply to registries, registrars and registrants that do not comply with its WHOIS policies. These sanctions should include de-registration and/or de-accreditation as appropriate in cases of serious or serial non-compliance.
9. ICANN should ensure that the requirements for accurate WHOIS data are widely and pro-actively communicated to current and prospective Registrants. As part of this effort, ICANN should ensure that its Registrant Rights and Responsibilities

document is pro-actively and prominently circulated to all new and renewing registrants.

Data Access – Privacy Services

10. ICANN should develop and manage a system of clear, consistent and enforceable requirements for all privacy services consistent with national laws. This should strike an appropriate balance between stakeholders with competing but legitimate interests. At a minimum this would include privacy, law enforcement and the industry around law enforcement.

- WHOIS entry must clearly label that this is a private registration
- Privacy services must provide full contact details as required by the WHOIS which are available and responsive as required by the framework mentioned above.
- Standardized relay and reveal processes and timeframes.
- Rules for the appropriate level of publicly available information on the registrant
- Maintenance of a dedicated abuse point of contact for the privacy service provider
- Privacy service provider shall conduct periodic due diligence checks on registrant contact information

11. ICANN should develop a graduated and enforceable series of penalties for privacy service providers who violate the requirements with a clear path to de-accreditation for repeat, serial or otherwise serious breaches.

Data Access- Proxy Service

12. ICANN should facilitate the review of existing practices by reaching out to proxy providers to create a discussion that sets out current processes followed by proxy service providers.

13. Registrars should be required to disclose their relationship with any Affiliated Retail proxy service provider to ICANN.

14. ICANN should develop and manage a set of voluntary best practice guidelines for appropriate proxy services¹ consistent with national laws. These voluntary

¹ As guidance to the Community and as useful background for the Proxy Service Recommendations, the Review Team provides its working definitions of proxy service and different types of proxy service providers:

- **Proxy Service** – a relationship in which the registrant is acting on behalf of another. The WHOIS data is that of the agent and the agent alone obtains all rights and assumes all responsibility for the domain name and its manner of use.

- **Affiliated Registrar** – another ICANN accredited registrar that operates under a common controlling interest (2009 Registrar Accreditation Agreement, Section 1.20)

- **Affiliate retail proxy service provider** – entity operating under a common controlling interest of a registrar.

guidelines should strike an appropriate balance between stakeholders with competing but legitimate interests. At a minimum this would include privacy, law enforcement and the industry around law enforcement.

Such voluntary guidelines may include:

- Proxy services provide full contact details as required by the Whois
- Publication by the proxy service of its process for revealing and relaying information
- Standardization of reveal and relay processes and timeframes, consistent with national laws
- Maintenance of a dedicated abuse point of contact for the proxy service provider
- Due diligence checks on licensee contact information.

15. ICANN should encourage and incentivize registrars to interact with the retail service providers that adopt the best practices.

16. For the avoidance of doubt, the WHOIS Policy, referred to in Recommendation 1 above, should include an affirmative statement that clarifies that a proxy means a relationship in which the Registrant is acting on behalf of another. The WHOIS data is that of the agent, and the agent alone obtains all rights and assumes all responsibility for the domain name and its manner of use.

Data Access – Common Interface

17. To improve access to the Whois data of .COM and .NET gTLDs, the only remaining Thin Registries, ICANN should set up a dedicated, multilingual interface website to provide thick WHOIS data for them.

ALTERNATIVE for public comment:

To make WHOIS data more accessible for consumers, ICANN should set up a dedicated, multilingual interface website to allow "unrestricted and public access to accurate and complete WHOIS information". Such interface should provide thick WHOIS data for all gTLD domain names.

Internationalized Domain Names

18. ICANN Community should task a working group within 6 months of publication to finalize (i) encoding, (ii) modifications to data model, and (iii) internationalized services, to give global access to gather, store and make available

- **Retail proxy service provider** - proxy service with little or no knowledge of the entity or individual requesting the service beyond their ability to pay and their agreement to the general terms and conditions.

- **Limited proxy service provider** - proxy service for an entity or individual in which there is an ongoing business relationship bound by a contract that is specific to the relationship.

internationalized registration data. Such working group should report no later than one year from formation, using existing IDN encoding. The working group should aim for consistency of approach across the gTLD and – on a voluntary basis – the ccTLD space.

- 19.** The final data model and services should be incorporated and reflected in Registrar and Registry agreements within 6 months of adoption of the working group's recommendations by the ICANN board. If these recommendations are not finalized in time for the next revision of such agreements, explicit placeholders for this purpose should be put in place in the agreements for the new gTLD program at this time, and in the existing agreements when they come up for renewal (as is the case for adoption of consensus policies).
- 20.** Requirements for registration data accuracy and availability in local languages should be finalized (following initial work by IRD-WG and other similar efforts, especially if translation or transliteration of data is stipulated) along with the efforts on internationalization of registration data. Metrics should be defined to measure accuracy and availability of data in local languages and (if needed) corresponding data in ASCII, and compliance methods and targets should be explicitly defined accordingly.