

Registrar Constituency Statement:

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# The Purpose of the gTLD Whois System and Specific Contact Records - DRAFT 3 -

October 13, 2005

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## Preamble – The Purpose of the Domain Name System, ICANN and the GNSO

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ICANN's scope of engagement is defined by its agreement with the United States Department of Commerce<sup>1</sup> ("DOC") which stipulates that ICANN and the DOC will collaborate to carry out the following domain name system ("DNS") management functions;

- a. Establishment of policy for and direction of the allocation of IP number blocks;
- b. Oversight of the operation of the authoritative root server system;
- c. Oversight of the policy for determining the circumstances under which new top level domains would be added to the root system;
- d. Coordination of the assignment of other Internet technical parameters as needed to maintain universal connectivity on the Internet; and
- e. Other activities necessary to coordinate the specified DNS management functions, as agreed by the Parties.

In turn, the GNSO finds its mandate within ICANN's bylaws<sup>2</sup> which stipulate that the function of the GNSO shall be limited to "...developing and recommending to the ICANN Board substantive policies relating to generic top-level domains."

The purpose of the domain name system is to enable a decentralized system of administering the Internet's authoritative database of host information. This host information includes IP address and mail routing information, references to other domains and other technical information required to facilitate client-server interactions via the Internet.

The purpose of the gTLD domain registration system is to provide host operators with the means to register and receive a delegation of authority for a specific zone which they administer via the domain name system.

These arrangements carry several implications. It puts direct management of root-level and top-level domain delegations within ICANN's scope. The GNSO's responsibility for developing policy in the area of generic top level domains is derived from this. Responsibility for policy development related to IP addressing, country-code domains and protocol identifiers fall to other organizations within ICANN's structure.

The GNSO has influence over policy that manages the *types* of gTLD delegations that may be requested and granted. String-length restrictions, character set guidelines and trademark-centric string-content restrictions are all examples of the types of limitations ICANN's GNSO has imposed on delegation requests. However, this does not mean that the GNSO has any direct policy influence over *how* delegations that do meet these criteria are managed after they have been granted. The GNSO's influence over the

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<sup>1</sup> ICANN web site, "Memorandum of Understanding Between the U.S. Department of Commerce and the Internet Corporation for Assigned Names and Numbers, Amendment 6", <http://www.icann.org/general/amend6-jpamou-17sep03.htm> .

<sup>2</sup> ICANN web site, "Bylaws for Internet Corporation for Assigned Names and Numbers", [Section X, 1], <http://www.icann.org/general/archive-bylaws/bylaws-08apr05.htm#X-1> .

operational management of a zone is limited to a very narrow and appropriate set of specifications that outline the processes registrants may use to transfer delegations to one another, choose a new registrar to interface with and so on.

Since neither of ICANN and the GNSO are technical standards creation bodies, neither have any control over how delegations technically function within the domain name system beyond specifying the standardized protocols that will be used. For instance, past GNSO policy recommendations have included advice advocating the development of new technical standards within the IETF and stipulations that currently deployed standards continue to be used. Neither of these recommendations are inappropriate nor out of scope for the GNSO.

Finally, the functional mapping of hostnames to IP addresses, and of IP addresses to host based applications and content such as web sites or email services via the DNS record is a function that is managed locally by the DNS administrator. Central to the function of the DNS is the notion of zone delegation which puts 100% of the technical, operational and policy management of a zone in the hands of the local host administrator. These local functions are naturally outside of ICANN and the GNSO's sphere of control.

The GNSO's policy making powers can be summed up very simply –

*The GNSO only has the capability to manage what gets registered and how registrations are administered, but not what registrations are used for.*

Any discussion of the purpose of Whois must be consistent with this context and naturally limited to two key areas;

- 1) Processes, standards and policies related to domain registration and administration activity.
- 2) specific areas of the domain name system, including;
  - a. ensuring technical standards compliance for registrants, registrars and registries, and;
  - b. the ongoing management of the authoritative record of name server delegations.

## The Purpose of “Whois”

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Shedding light on the purpose of ICANN, the GNSO and the domain name system also sheds light on the purpose of the gTLD Whois System. There is a tendency within ICANN circles to view specific parts of the DNS as being isolated from one another, when in fact each of these constituency pieces is an integral part of a much larger system. Each of these specific parts is required to function efficiently or the stability and efficiency of the entire system will start to fail.

But, there is little understanding of what the domain name system actually entails, and as a result, there are many opinions as to what the gTLD Whois System actually is. A popular view is that the purpose of the Whois System is to act as a directory of contact information. However, an examination of the data and protocols that ICANN requires registrars and registries to publish and use to implement the Whois System paints a picture that implies a much broader purpose for the gTLD Whois System than the very narrow purpose of acting as a directory of contact information.

Publicly accessible directories of contact information, such as the directory of Senators of the 109<sup>th</sup> Congress of the United States of America<sup>3</sup> typically includes information like the name, mail and email address and phone number of the individuals and companies included in the directory.

i.e.

*Sample record from the directory of Senators of the 109<sup>th</sup> Congress*

[Akaka, Daniel](#) - (D - HI)  
141 HART SENATE OFFICE BUILDING WASHINGTON DC  
20510 (202) 224-6361  
E-mail: [senator@akaka.senate.gov](mailto:senator@akaka.senate.gov)

This sample record is consistent with records found in other contact directories, online and offline, such as the white page directories published by telephone companies<sup>4</sup>, the professional networking web directory operated by LinkedIn<sup>5</sup> or the directory of contact information for the members of the MPAA<sup>6</sup>.

Each of these directories has one thing in common – the data included in each of the records is consistent with its purpose – to provide the public with ready access to contact information.

On the other hand, the gTLD Whois System provides a much broader dataset in response to third party queries;

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<sup>3</sup> U.S. Senate web site, “Senators of the 109<sup>th</sup> Congress”,  
[http://www.senate.gov/general/contact\\_information/senators\\_cfm.cfm](http://www.senate.gov/general/contact_information/senators_cfm.cfm) .

<sup>4</sup> Canada411, <http://www.canada411.com>

<sup>5</sup> LinkedIn, <http://www.linkedin.com>

<sup>6</sup> Missouri Professional Auctioneers Association web site,  
<http://www.moauctioneers.org/VMemberList.asp>

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*Sample record from the gTLD Whois System*

Whois info for, tu cows.com:

Registrant:

Tucows ( Delaware ) Inc.  
96 Mowat Avenue  
Toronto, Ontario M6K3M1  
CA

Domain name: TUCOWS.COM

Administrative Contact:

Administrator, DNS dnsadmin@tu cows.com  
96 Mowat Avenue  
Toronto, Ontario M6K3M1  
CA  
+1.4165350123x0000

Technical Contact:

Administrator, DNS dnsadmin@tu cows.com  
96 Mowat Avenue  
Toronto, Ontario M6K3M1  
CA  
+1.4165350123x0000

Registrar of Record: TUCOWS, INC.  
Record last updated on 22-Nov-2004.  
Record expires on 06-Sep-2006.  
Record created on 07-Sep-1995.

Domain servers in listed order:

DNS1.TUCOWS.COM	216.40.37.11
DNS2.TUCOWS.COM	216.40.37.12
DNS3.TUCOWS.COM	204.50.180.59

Domain status: REGISTRAR-LOCK

If the gTLD Whois System was simply a directory of contact information, then there would be no reason to include additional information about *the domain delegation* in the record displayed in response to a query which would be intended to discover *contact information*.

This additional information includes:

- the zone that was delegated ("*tu cows*") and the zone that the delegation belongs to ("*com*")
- the date that the delegation was granted ("*07-Sep-1995*") and when the delegation next expires ("*06-Sep-2006*")
- which domain name servers are authoritative for this particular zone ("*dns1, dns2 and dns3.tu cows.com*")
- the status of the delegation ("*REGISTRAR-LOCK*")

This is a lot of additional information to include in a simple database of contact information for domain name registrants. This additional information was not included by accident – it was included because it was central to the intended purpose of the gTLD Whois System in support of the domain name system. Queries destined for this system are not provided with contact records, they are provided *delegation* records.

The gTLD Whois System is a record lookup service that uses the Whois protocol to allow third parties to determine which entity currently holds the delegation for a particular second level domain. The purpose of this lookup service is *to facilitate the technical co-ordination and inter-operation of specific delegations within the registration and domain name systems*.

Examples of technical co-ordination and inter-operation include;

- Resolving issues related to lame delegation (i.e. delegation records that specify nameservers that are not authoritative for the delegation in question).
- Determining which name servers are intended to be authoritative for a specific delegation (i.e. comparing the delegation records with data from other sources while troubleshooting configuration issues).
- Determining the status of a delegation (INACTIVE, CLIENT LOCK, PENDING RENEW, and other EPP/RRP status codes<sup>7</sup>).
- Determining which delegant is responsible for the activity of a specific network host.
- Determining when a specific delegation was granted.

Facilitating technical co-ordination and inter-operation does not include;

- Providing contact information for host operators to help third parties resolve civil and criminal matters.
- Facilitating commercial transactions related to the transfer of delegations between registrants.
- Facilitating interactions between network providers.
- Providing the general public with ready access to the identity and contact information for domain name registrants and the associated contacts.
- Facilitating the resolution of host based security and network attacks.

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<sup>7</sup> Web Design by Cookie, "Guide to Domain Name Status Codes",  
<http://www.wdbc.com/domain/status-codes.cfm>

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## The Purpose of Specific Contact Records in the gTLD Whois System

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The purpose of specific contact types in the gTLD Whois System cannot be divorced from the purpose of the overall gTLD Whois System, or that of the GNSO and ICANN.

There are at least four contact types listed in the current gTLD Whois System – the “Registrant”, the “Administrative Contact”, the “Technical Contact” and the “Sponsoring Registrar”. Some gTLD Whois records also include contact information for the ISP or reseller acting as the liaison between the Registrar and Registrant. As previously discussed, there are many other technical details included in these records in addition to the contact information.

The following table describes the purpose of only three of these contact types;

Contact Type	Purpose
Registrant	To provide a clear record of the entity responsible for a specific delegation.
Administrative Contact	To provide contact information for an individual or role that can provide assistance to third parties who have questions regarding the administration of the delegation.
Technical Contact	To provide contact information for an individual or role that can provide assistance to third parties who have questions regarding the technical management of the zone.

This view of the purpose of these contact types also carries implications that warrant further examination.

- 1.) The contact information currently associated with the Registrant type is extraneous. A record that intends to provide delegation information need not also provide contact information. This contact information could be removed from the gTLD Whois System with little operational impact.
- 2.) The purpose of the Administrative Contact and the Technical Contact are very closely related. In fact, there is little to distinguish each of these record types on a practical basis. The continued relevance and value of maintaining separate contact types should be examined.