ICANN Community Experiences with the InterNIC Whois Data Problem Reports System

Introduction

The following is a report summarizing ICANN's experience with the operation of the Whois Data Problem Report system at InterNIC.net <http://reports.internic.net/cgi/rpt_whois/rpt.cgi>. This report is being published pursuant to Section II.C.10.a of Amendment 6 to the ICANN/DOC Memorandum of Understanding, providing:

ICANN shall publish a report no later than March 31, 2004, and annually thereafter, providing statistical and narrative information on community experiences with the InterNIC WHOIS Data Problem Reports system. The report shall include statistics on the number of WHOIS data inaccuracies reported to date, the number of unique domain names with reported inaccuracies, and registrar handling of the submitted reports. The narrative information shall include an evaluation of the impact of the WHOIS Data Problem Reports system on improved accuracy of WHOIS data. <http://www.icann.org/general/amend6-jpamou-17sep03.htm>

Whois data for the generic Top Level Domains (gTLDs) includes information about the registrant, administrative contact, technical contact, and nameservers associated with each domain name. This information is used for a variety of important purposes, including identifying and verifying online merchants, investigations by consumer protection and other law enforcement authorities, determining whether a domain name is available for registration, identifying the source of spam e-mail, enforcement of intellectual property rights, addressing cyber-attacks, and otherwise resolving technical network issues. Whois services have been available on the Internet since the early 1980s, and continue to be broadly used. According to an online survey of over 3000 participants (businesses, governments, ISPs, registrars, individuals, and non-commercial organizations) conducted in 2001 by the ICANN Domain Name Supporting Organization <http://www.dnso.org/dnso/notes/whoisTF/20020625.TFwhois-report.htm>, Internet users broadly consider accurate Whois data to be important and support measures to improve its accuracy.
**Applicable Provisions of the ICANN Registrar Accreditation Agreement**

ICANN's contracts with accredited registrars require registrars to obtain contact information from registrants, to provide it publicly by a Whois service, and to investigate and correct any reported inaccuracies in contact information for names they sponsor. Several provisions of the ICANN Registrar Accreditation Agreement (RAA) [http://www.icann.org/registrars/ra-agreement-17may01.htm](http://www.icann.org/registrars/ra-agreement-17may01.htm) are relevant to the accuracy of registrar Whois data. They include:

3.3.1 At its expense, Registrar shall provide an interactive web page and a port 43 Whois service 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 for each TLD in which it is accredited. The data accessible shall consist of elements that are designated from time to time according to an ICANN adopted specification or policy. Until ICANN otherwise specifies by means of an ICANN adopted specification or policy, this data shall consist of the following elements as contained in Registrar's database:

3.3.1.1 The name of the Registered Name;

3.3.1.2 The names of the primary nameserver and secondary nameserver(s) for the Registered Name;

3.3.1.3 The identity of Registrar (which may be provided through Registrar's website);

3.3.1.4 The original creation date of the registration;

3.3.1.5 The expiration date of the registration;

3.3.1.6 The name and postal address of the Registered Name Holder;

3.3.1.7 The name, postal address, e-mail address, voice telephone number, and (where available) fax number of the technical contact for the Registered Name; and

3.3.1.8 The name, postal address, e-mail address, voice telephone number, and (where available) fax number of the administrative contact for the Registered Name.
3.7.7 Registrar shall require all Registered Name Holders to enter into an electronic or paper registration agreement with Registrar including at least the following provisions:

3.7.7.1 The Registered Name Holder shall provide to Registrar accurate and reliable contact details and promptly correct and update them during the term of the Registered Name registration, including: the full name, postal address, e-mail address, voice telephone number, and fax number if available of the Registered Name Holder; name of authorized person for contact purposes in the case of an Registered Name Holder that is an organization, association, or corporation; and the data elements listed in Subsections 3.3.1.2, 3.3.1.7 and 3.3.1.8.

3.7.7.2 A Registered Name Holder's willful provision of inaccurate or unreliable information, its willful failure promptly to update information provided to Registrar, or its failure to respond for over fifteen calendar days to inquiries by Registrar concerning the accuracy of contact details associated with the Registered Name Holder's registration shall constitute a material breach of the Registered Name Holder-registrar contract and be a basis for cancellation of the Registered Name registration.

3.7.7.3 Any Registered Name Holder that intends to license use of a domain name to a third party is nonetheless the Registered Name Holder of record and is responsible for providing its own full contact information and for providing and updating accurate technical and administrative contact information adequate to facilitate timely resolution of any problems that arise in connection with the Registered Name. A Registered Name Holder licensing use of a Registered Name according to this provision shall accept liability for harm caused by wrongful use of the Registered Name, unless it promptly discloses the identity of the licensee to a party providing the Registered Name Holder reasonable evidence of actionable harm.

3.7.8 Registrar shall abide by any specifications or policies established according to Section 4 requiring reasonable and commercially practicable (a) verification, at the time of registration, of contact information associated with a Registered Name sponsored by Registrar or (b) periodic re-verification of such information. Registrar shall, upon notification by any person of an inaccuracy in the contact information associated with a Registered Name sponsored by Registrar, take reasonable steps to investigate that claimed inaccuracy. In the event Registrar learns of
inaccurate contact information associated with a Registered Name it
sponsors, it shall take reasonable steps to correct that inaccuracy.

Based on the above provisions from the RAA, a registrar must:

- Require each registrant to submit (and keep updated) accurate contact
details (3.7.7.1);

- Provide both a web-based and Port 43 Whois service providing access to
complete contact information for all TLDs covered under the RAA (3.3.1);

- Require registrants to agree that willfully submitting inaccurate contact
details (or failing to respond within 15 days to an inquiry regarding
accuracy) shall be a basis for cancellation of the registration (3.7.7.2);

and,

- Take reasonable steps to investigate and correct the contact details in
response to any reported inaccuracy (3.7.8).

Requiring Registrants to Provide Accurate Data

Subsection 3.7.7.1 of the RAA requires registrars to include in their registration
agreement with each registrant a provision under which the registrant promises
to "provide to Registrar accurate and reliable contact details and promptly correct
and update them ..." Although 3.7.8 envisions that ICANN may develop a policy
requiring registrars to verify the contact details at the time of registration, ICANN
has suggested that registrars implement techniques to verify the format of data in
the registration process (such as screening for blank fields or checking that
addresses have valid post codes), but registrars are not currently obligated to do
so.

Registrar Obligation to Investigate and Correct Reported Inaccuracies

Subsection 3.7.8 of the RAA obliges registrars to "take reasonable steps to
investigate" any inaccuracy in Whois data upon notification from "any person." The
Whois Data Problem Report system was established in part in order to
establish a clearly designated channel for registrars to receive complaints about
inaccurate Whois data. Once a registrar receives notification of an inaccuracy,
Subsection 3.7.8 requires the registrar to take "reasonable steps" to investigate
and correct the reported inaccuracy. The term "reasonable steps" is not defined
within the agreement; precisely what constitutes reasonable steps to investigate
and correct a reported inaccuracy will vary depending on the circumstances (e.g.,
accepting unverified "corrected" data from a registrant that has already
deliberately provided incorrect data may not be appropriate). ICANN has noted
that "reasonable steps" to investigate a reported inaccuracy should include, at a
minimum, promptly transmitting to the registrant the "inquiries" concerning the accuracy of the data that are suggested by RAA Subsection 3.7.7.2. The inquiries should be conducted by all commercially practicable means available to the registrar: by telephone, e-mail, and postal mail.

Cancellation of Registrations in the Event of Material Breach by the Registrant

Subsection 3.7.7.2 of the RAA requires that registrars include in the registration agreements they enter with their customers a provision that permits the registrar to cancel a domain-name registration in either of three circumstances:

1. The customer's "willful provision of inaccurate or unreliable information";
2. The customer's "willful failure promptly to update information provided to" the registrar; or
3. The customer's "failure to respond for over fifteen calendar days to inquiries by Registrar concerning the accuracy of contact details".

In their registration agreements with registrars, customers promise to provide "accurate and reliable contact details and promptly correct and update them during the term of the . . . registration." (Subsection 3.7.7.1 of the Registrar Accreditation Agreement.) Conditions (1) and (2) above authorize registrars to cancel domain-name registrations for willful breaches of these promises. Condition (3) above, is only triggered when the customer fails to respond to an inquiry; it is not triggered when the customer responds to the inquiry but does not complete any corrections to inaccurate or out-of-date Whois data within 15 days. Unlike conditions (1) and (2), which require willful transgressions on the part of the customer, condition (3) is triggered without a showing that the customer's failure to respond is willful, in recognition that the ability to prove willfulness can be frustrated by a customer's refusal to engage in dialog with the registrar.

Subsection 3.7.7.2 of the RAA does not require a registrar to cancel a registration in the event a customer fails to respond within 15 days. The accreditation agreement's approach of requiring the registrar to retain the right to cancel if the customer fails to respond in 15 days, but not requiring the registrar to exercise that right is intended to give the registrar the flexibility to use good judgment to determine what action should be taken upon a customer's failure to respond to an inquiry about a Whois inaccuracy. This approach recognizes that the appropriate course of conduct for a registrar that does not receive a response from a customer with inaccurate data varies depending on a variety of factors – including the materiality and severity of the inaccuracy, the customer's past conduct with respect to correcting inaccuracies, the extent of harm to third parties, etc.
Where an inaccuracy is minor (e.g., an incorrect postal code), appears inadvertent (e.g., transposed digits), and harms no third party (e.g., readily available means of contacting and locating the customer are provided by the data that is given), a registrar can appropriately conclude that much more than 15 days should be allowed before the registration is cancelled. In such cases the registrar, which after all seeks to promote good relations with its customer, has no motivation to act precipitously.

On the other hand, where a registrar encounters a severe Whois inaccuracy being exploited by a registrant to evade responsibility for fraudulent activity being carried out through use of the domain name, prompt action by the registrar is appropriate. Under the approach of the Registrar Accreditation Agreement, the registrar is given discretion to act as appropriate in light of the particular circumstances of each case.

In determining how long to wait for a customer response to an inquiry about a Whois inaccuracy before canceling the registration, registrars have been advised by ICANN to take guidance from RAA subsection 3.7.8, which defines the registrar’s obligation to correct inaccurate Whois data:

"Registrar shall, upon notification by any person of an inaccuracy in the contact information associated with a Registered Name sponsored by Registrar, take reasonable steps to investigate that claimed inaccuracy. In the event Registrar learns of inaccurate contact information associated with a Registered Name it sponsors, it shall take reasonable steps to correct that inaccuracy."

This requirement that registrars "take reasonable steps" is intended to reinforce the flexibility afforded to registrars that do not receive responses from their customers. As noted above, the time that a registrar should wait for a response from its customer varies according to the nature of the inaccuracy and the circumstances from which it arose. This contractual approach is based on the conclusion that a requirement of reasonable action by the registrar is better than a fixed timetable, while assuring that the registrar has the ability to cancel after 15 days of no response in very serious cases.

In summary, registrars have the right to cancel a registration if a customer fails to respond within 15 days to an inquiry concerning Whois data accuracy, but registrars also have flexibility to decide when to use that right depending on factors including whether the inaccuracy appears intentional and whether third parties are being harmed by maintaining the registration with inaccurate data. Registrars are obligated to take reasonable action to correct reported Whois inaccuracies, but are not bound to a fixed timetable.
Implementation of the Whois Data Problem Report System

In order to assist registrars in complying with the contract obligations outlined above, ICANN implemented the Whois Data Problem Report System (WDPRS) on 3 September 2002. The goal of the WDPRS is to streamline the process for receiving and tracking complaints about inaccurate and incomplete Whois data. Reports are submitted through the InterNIC website, operated by ICANN as a public resource containing information relating to domain registration services. The centerpiece of the WDPRS is a centralized online form, available at <http://WDPRS.internic.net>, for submitting reports about Whois data inaccuracies.

As of 31 March 2004, there are 192 ICANN-accredited registrars. A complete list of accredited registrars is available on the ICANN website at <http://www.icann.org/registrars/accredited-list.html>, and on the InterNIC website at <http://www.internic.net/regist.html>. (The InterNIC registrar listing can be sorted by location of registrar, and by languages supported.)

Reports concerning Whois data inaccuracy received via the WDPRS are forwarded to the responsible registrar for handling. In the initial phase of the system's operation, a tracking mechanism was implemented to provide registrars with periodic summaries of outstanding reports about inaccurate or incomplete Whois data and to allow them to record when reported problems were resolved. Registrar participation in the tracking mechanism was voluntary, and was not universal. None of the Whois data accuracy obligations outlined above requires the registrar to report back on its handling of individual inaccuracy reports to ICANN or to the person submitting the report. Nevertheless, ICANN's experience has been that accredited registrars by and large do conscientiously comply with their contractual obligations by acting promptly to correct incomplete or inaccurate data that is brought to their attention.

At its launch, the WDPRS processed reports only for the so-called "legacy" generic Top Level Domains: .com, .net, and .org. A recent enhancement, described in more detail below, has expanded the system's functionality to include all of the gTLDs under contract with ICANN (.aero, .biz, .com, .coop, .info, .museum, .name, .net, .org, and .pro).

The WDPRS, as launched initially, was a very complex system requiring interaction with the persons submitting reports, ICANN staff, and registrar personnel. To report apparent Whois inaccuracies:

1. The "reporter" enters the domain name in question, along with the reporter's name and e-mail address on the Whois Data Problem Report page at InterNIC.net
2. The system retrieves the current registry Whois data for the subject domain name. (Note: the system incorporates complex and robust safeguards to ensure it is not misused to "harvest" registry or registrar Whois data through automated, high-volume queries. In the eighteen months since the launch of the system, server logs reveal 1,678 suspected instances of automated attempts to harvest data.)

3. The system parses the registry Whois data to determine the sponsoring registrar's name and Whois server address.

4. The system retrieves the registrar's Whois data for the subject domain. If the system experiences difficulty obtaining the Whois data for the registrar, an automatic compliance tracking message is generated and sent to registrar's primary contact person and to ICANN's Registrar Liaison department.

5. A detailed report form displays the complete Whois data to the reporter, and requests identification of the erroneous data elements. The report form includes check boxes to identify particular erroneous data elements, and places for the reporter to include text to provide additional details.

6. The system generates a unique 22-character identification number for each report, including a unique 11-character "reporter cookie" used to identify the report to the reporter.

7. After the reporter completes the problem report form, an e-mail containing a confirming URL is sent to the address supplied by the reporter.

8. The reporter clicks a URL in the confirming e-mail to change the status of the report to "confirmed". The report will automatically timeout and be deactivated if it is not confirmed within a few days.

9. The report is routed to the internal queuing system. In the initial iteration of the system, ICANN staff checked each individual report that was submitted in an effort to limit abuse or misuse of the system. Reports that did not relate to inaccurate Whois data (e.g., requests to transfer domains) were closed administratively by staff, with a note sent to the reporter providing appropriate information and alternate suggestions.

<http://reports.internic.net/cgi/rpt_whois/rpt.cgi>. (A "privacy notice" on the page indicates that reporter's IP address and personal data are recorded in order to prevent frivolous reports or other misuse of the system.)
10. The report is forwarded to the sponsoring registrar’s "Whois report contact" via e-mail. The registrar receives a complete copy of the report, along with a copy of the current Whois data and the unique 22-character report ID number. The registrar is invited to report back to ICANN concerning the results of its investigation of the report. Registrars can select from: "corrected," "accuracy confirmed," "domain deleted," "inappropriate use of the form," or "other."

11. Beginning 30 days following the transmission of each the report to the registrar, the system allowed ICANN staff to review the disposition of the reports (including comparing the current Whois data to the originally Whois data) and to send reminders to registrars concerning reports where it was not clear that the registrar had resolved the issue that gave rise to the report.

12. Reporters were able to use their 11-character unique ID number to obtain the status of their report. Reporters with concerns regarding registrar handling of a report were invited to send a detailed message to <registrar-info@icann.org>. ICANN staff reviewed such reports and forwarded them to the registrar with a message indicating the importance of complying with the Whois accuracy obligations in the RAA. (No registrar has refused to comply with its obligations after being contacted with a reminder from ICANN concerning compliance.)

Enhancements to the Whois Data Problem Reports System

Eighteen months of experience have brought to light several areas where the original WDPRS could be improved. Specifically, the originally deployed system:

1. Did not cover all gTLDs under contract with ICANN (initially only .com, .net and .org were covered; .org's reassignment from VeriSign to PIR in 2003 interrupted functionality for .org);
2. Included excessive manual processes and non-value-added tasks;
3. Imposed administrative burdens on registrars who chose to comply with the system for reporting on the disposition of reports;
4. Did not capture adequate statistics; and
5. Lacked integral mechanisms for monitoring and feedback from persons who submitted reports.

To speed feedback, improve accuracy, and maximize operational efficiencies, ICANN has recently launched a new and improved version of the Whois Data Problem Reports System. As indicated above, the new version of the system has been expanded to include all gTLDs under contract to ICANN (.aero, .biz, .com, .coop, .info, .museum, .name, .net, .org, and .pro). The enhancement is designed to improve Whois data accuracy in the new gTLDs, and to reduce
support and compliance burdens on the new registry operators by allowing for a centralized referral destination for all reports concerning inaccurate Whois data.

The new version of the WDPRS is designed to use of automated processing of reports wherever possible and appropriate in order to more efficiently utilize ICANN staff resources.

The new version will also be less burdensome on registrars in that the cumbersome process of individual report tracking and closing, with the attendant registrar password verification scheme, is being transformed to a per-report monitoring system that will no longer involve registrars being asked to voluntarily report back to ICANN on the disposition of individual reports. Instead, persons submitting reports will be given the opportunity via an automated follow-up e-mail to review the registrar's handling of each submitted report.

After a specified time period, the reporter will receive a follow-up email displaying the Whois information at the time of the original report, and a copy of the then-current Whois data. The reporter will be invited to click on a URL embedded in the message to select an option to assist ICANN in monitoring registrar compliance (e.g., "Problem Fixed," "Domain Deleted," "No Change," etc.). The web page resulting from each follow-up report submitted will provide additional information to the report in order to help ensure that no report goes unaddressed.

The following is a flow chart describing the operation of the new enhanced WDPRS:
ICANN's new background monitoring interface will make it easier for staff to track individual cases and overall registrar compliance trends. Every time a reporter submits a follow-up flagging a potential issue with registrar handling of an individual report, ICANN staff will be able to quickly review all the relevant data per registrar, per domain, and per reporter.

The 2005 annual WDPRS report will provide additional statistics based on the enhanced data-gathering and analysis abilities incorporated into the new version of the system.

**Statistics from the Operation of the InterNIC WHOIS Data Problem Reports System**

The following sections will provide a statistical summary on the operation of the initial version of the Whois Data Problem Reports system. These statistics cover the operation of the system from its launch on 3 September 2002, through the cut-off date for this year's report: 29 February 2004.

**Total Whois Data Inaccuracies Reported**

A total of 24,148 confirmed Whois Data Problem Reports were received during the eighteen-month reporting period. As described in detail in the narrative section above, each submitted report must be confirmed by clicking on a link embedded in an e-mail message sent to the reporter's e-mail address. The following table describes the number of reports submitted and confirmed per month:

<table>
<thead>
<tr>
<th>Date</th>
<th>Reports Submitted</th>
<th>Reports Confirmed</th>
<th>Confirmation Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sep-02</td>
<td>998</td>
<td>847</td>
<td>84.9%</td>
</tr>
<tr>
<td>Oct-02</td>
<td>1,488</td>
<td>1,282</td>
<td>86.2%</td>
</tr>
<tr>
<td>Nov-02</td>
<td>526</td>
<td>467</td>
<td>88.8%</td>
</tr>
<tr>
<td>Dec-02</td>
<td>901</td>
<td>779</td>
<td>86.5%</td>
</tr>
<tr>
<td>Jan-03</td>
<td>1,379</td>
<td>1,255</td>
<td>91.0%</td>
</tr>
<tr>
<td>Feb-03</td>
<td>1,203</td>
<td>1,097</td>
<td>91.2%</td>
</tr>
<tr>
<td>Mar-03</td>
<td>1,831</td>
<td>1,693</td>
<td>92.5%</td>
</tr>
<tr>
<td>Apr-03</td>
<td>1,854</td>
<td>1,712</td>
<td>92.3%</td>
</tr>
<tr>
<td>May-03</td>
<td>1,805</td>
<td>1,680</td>
<td>93.1%</td>
</tr>
<tr>
<td>Jun-03</td>
<td>1,631</td>
<td>1,507</td>
<td>92.4%</td>
</tr>
<tr>
<td>Jul-03</td>
<td>1,965</td>
<td>1,766</td>
<td>89.9%</td>
</tr>
<tr>
<td>Aug-03</td>
<td>1,631</td>
<td>1,522</td>
<td>93.3%</td>
</tr>
<tr>
<td>Sep-03</td>
<td>1,610</td>
<td>1,516</td>
<td>94.2%</td>
</tr>
<tr>
<td>Oct-03</td>
<td>1,513</td>
<td>1,392</td>
<td>92.0%</td>
</tr>
<tr>
<td>Nov-03</td>
<td>1,403</td>
<td>1,330</td>
<td>94.8%</td>
</tr>
</tbody>
</table>
Dec-03 1,419 1,311 92.4%
Jan-04 1,682 1,586 94.3%
Feb-04 1,523 1,406 92.3%
Total: 26,362 24,148 91.6%

On a per TLD basis, .com represented 82% of confirmed reports, with .net and .org constituting 13% and 5% respectively (see table below). The following is a table describing the reports received per TLD:

<table>
<thead>
<tr>
<th>TLD</th>
<th>Reports %</th>
<th>Registry Size*</th>
<th>Registry Size %</th>
</tr>
</thead>
<tbody>
<tr>
<td>.com</td>
<td>82%</td>
<td>27,035,869</td>
<td>78%</td>
</tr>
<tr>
<td>.net</td>
<td>13%</td>
<td>4,515,550</td>
<td>13%</td>
</tr>
<tr>
<td>.org</td>
<td>5%</td>
<td>3,015,179</td>
<td>9%</td>
</tr>
</tbody>
</table>

*Registry size as of 31 December 2003

As indicated in the narrative section above, not all submitted and confirmed reports were forwarded to registrars. In the initial version of the system, ICANN individually reviewed each confirmed report, and administratively closed those reports that constituted obvious misuse or abuse of the system. Reports that were rejected by ICANN included requests to transfer domains, inquiries regarding availability of names for registration, and reports from registrants that had moved and wanted to update their own contact data with their registrars. These reporters were advised to contact their registrar directly for assistance. Over the eighteen-month reporting period, a total of 235 such reports were "rejected" by ICANN staff. This number represents a total of just slightly under 1% of all reports (i.e. 235 out of 24,148 reports were rejected as a result of ICANN's individual review of all reports). Since this step is labor intensive and did not provide significant value, it has been eliminated in the revised WDPRS process.

A majority (54.7%) of the reports submitted included an indication that the registrant's mailing address was inaccurate. The second and third-most reportedly inaccurate data elements were the administrative contact's telephone number and mailing address. The fourth and seventh-most included data elements were the registrant's telephone number and e-mail address, which registrars are not required to (and often do not) publish. The following table is a complete tabulation of the frequency with which each data element appeared in a Whois inaccuracy report:
Data Element | Percent*
--- | ---
RegistrantAddress | 54.7%
AdminContactPhone | 49.1%
AdminContactAddress | 48.6%
RegistrantPhone | 47.6%
AdminContactEmail | 46.1%
TechContactPhone | 41.4%
RegistrantEmail | 41.2%
TechContactAddress | 41.0%
RegistrantName | 38.8%
TechContactEmail | 38.7%
AdminContactName | 36.2%
TechContactName | 31.4%
NameserverName | 7.8%
NameserverIPAddr | 7.5%

*Note: Combined percentages total over 100% because reporters were able to note multiple inaccurate elements in each report.

Percent of reports with "N" distinct reported errors:

<table>
<thead>
<tr>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>11.0%</td>
</tr>
<tr>
<td>2</td>
<td>13.8%</td>
</tr>
<tr>
<td>3</td>
<td>16.1%</td>
</tr>
<tr>
<td>4</td>
<td>8.8%</td>
</tr>
<tr>
<td>5</td>
<td>2.9%</td>
</tr>
<tr>
<td>6</td>
<td>8.6%</td>
</tr>
<tr>
<td>7</td>
<td>2.1%</td>
</tr>
<tr>
<td>8</td>
<td>3.9%</td>
</tr>
<tr>
<td>9</td>
<td>8.0%</td>
</tr>
<tr>
<td>10</td>
<td>1.4%</td>
</tr>
<tr>
<td>11</td>
<td>1.2%</td>
</tr>
<tr>
<td>12</td>
<td>7.0%</td>
</tr>
<tr>
<td>13</td>
<td>1.8%</td>
</tr>
<tr>
<td>14</td>
<td>3.1%</td>
</tr>
</tbody>
</table>

*Note: N=12 correlates to all data elements except for the nameservers being inaccurate, and N=14 would mean that all Whois data elements were reportedly inaccurate. The peaks at N=3, 6, 9, and 12 correlate to inaccurate sets of data for one or more of the named contacts.
A total of 5,755 different individuals submitted reports. On average, each reporter submitted approximately 4.2 reports.

Some individuals submitted many reports. Out of a total of 24,148 confirmed reports, here are the numbers of reports per submitter, for the top 20 submitters:

<table>
<thead>
<tr>
<th>Top 20 Reporters</th>
<th>Reports Submitted</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1,170</td>
</tr>
<tr>
<td>2</td>
<td>1,134</td>
</tr>
<tr>
<td>3</td>
<td>966</td>
</tr>
<tr>
<td>4</td>
<td>893</td>
</tr>
<tr>
<td>5</td>
<td>549</td>
</tr>
<tr>
<td>6</td>
<td>545</td>
</tr>
<tr>
<td>7</td>
<td>543</td>
</tr>
<tr>
<td>8</td>
<td>532</td>
</tr>
<tr>
<td>9</td>
<td>453</td>
</tr>
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<td>10</td>
<td>446</td>
</tr>
<tr>
<td>11</td>
<td>336</td>
</tr>
<tr>
<td>12</td>
<td>334</td>
</tr>
<tr>
<td>13</td>
<td>297</td>
</tr>
<tr>
<td>14</td>
<td>280</td>
</tr>
<tr>
<td>15</td>
<td>264</td>
</tr>
<tr>
<td>16</td>
<td>260</td>
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<tr>
<td>17</td>
<td>256</td>
</tr>
<tr>
<td>18</td>
<td>237</td>
</tr>
<tr>
<td>19</td>
<td>229</td>
</tr>
<tr>
<td>20</td>
<td>214</td>
</tr>
<tr>
<td>Total</td>
<td>9,938</td>
</tr>
</tbody>
</table>

Based on the table above, just 0.3% of reporters (20 people) were responsible for over 40% (9,938 out of 24,148) of all Whois inaccuracy reports submitted to ICANN over the eighteen month reporting period.

**Number of Unique Names with Reported inaccuracies**
A total of 16,045 unique domain names were the subject of Whois Data Problem Reports. As reported above, there were a total of 24,148 total reports. Accordingly just over one-third of the reports were "duplicates", meaning the domain name they referred to was the subject of more than one inaccuracy report at some time during the reporting period.
The most common apparent reasons for the submission of multiple reports concerning one domain name were efforts to shut down domains that were alleged to be the source or subject of spam. A search on the text fields of the confirmed reports indicated that just over 20% has some relation to spam (i.e. the string "spam" appeared somewhere in the report text). The following sample comments extracted from the text field of selected reports gives an indication of this phenomenon:

- "The spammers are trying to hide. NUKE them!"
- "The domain is advertized by spamming."
- "Spammer trying to hide"
- "Does [redacted] register anyone other than spammers??"
- "Bogus spammer info"
- "This is a spammers fraud domain"
- "This is a spam domain being used for fraud - US FTC notified!!!
Registrar Handling of the Submitted Reports

As reported above, over 99% (23,913 out of 24,148) of all reports submitted to ICANN were forwarded to the sponsoring registrar for investigation and correction (or deletion) as appropriate. ICANN received very few indications from reporters that they were dissatisfied with the registrars' handling of the reports. (A total of 19 follow-up complaints were forwarded to registrars for review.) Anecdotal reports indicate that some registrars implemented strategies for dealing with the reports, such as automated tools that would parse the inaccuracy reports received by e-mail from ICANN and automatically transmit an inquiry to the registrant concerning the accuracy of the data. For background information concerning registrar obligations relating to Whois data accuracy, please refer to the narrative section above entitled "Registrar Obligation to Investigate and Correct Reported Inaccuracies."

Over the eighteen-month reporting period, a total of 17,415 registrar status updates concerning the disposition of 10,202 individual reports were submitted to ICANN. This represents a disposition reported on 65% of the 16,045 individual names where problems were reported – in an environment where this registrar follow-up was not required. (As noted above, registrars were under no obligation in their agreements to submit closing reports.) Registrars' voluntary participation in the tracking system at ICANN's request facilitated the monitoring of trends and tracking of registrar compliance.

One other factor that led to having fewer registrar status reports than total reports in the system was the phenomenon of multiple reports being submitted for one "spamvertized" domain. Registrars would in some cases "close" just one report, leaving other similar reports relating to the same domain appearing to be "open" even though the underlying reported inaccuracy was addressed.

The following table describes the dispositions of the Whois inaccuracy reports for which ICANN received status updates from the sponsoring registrar:

<table>
<thead>
<tr>
<th>Status</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inaccuracy Corrected</td>
<td>28%</td>
</tr>
<tr>
<td>Original Data Found to Be Accurate</td>
<td>17%</td>
</tr>
<tr>
<td>Domain Deleted</td>
<td>8%</td>
</tr>
<tr>
<td>Inappropriate Use of Whois Report System</td>
<td>8%</td>
</tr>
<tr>
<td>Other*</td>
<td>39%</td>
</tr>
</tbody>
</table>

*When reporting their actions regarding a report, registrars often chose the category "other" and included comments that indicated that their response belonged in one of the other four categories. This issue is being addressed in the new system.
As noted above, the web form used by registrars to report on status had space for comments; approximately 15% of the status reports have comments, though most are fairly terse. While it is impossible to include them all, the following sample registrar comments may be informative, especially in conjunction with the status value (the "disposition"):

Disposition: other
Comments:
   I have shut down domain.

Disposition: other
Comments:
   We have applied Registrar Hold on the domain name [redacted].com, while we await for FAXed Contact Details Proof from the Registrant Contact of this domain name.

Disposition: accuracy_confirmed
Comments:
   A message to the listed e-mail address was answered verifying the information.

Disposition: other
Comments:
   the domain is on hold status, it will be deleted after the expiration date.

Disposition: corrected
Comments:
   Proof received. Data Inaccuracy Corrected and Confirmed

Disposition: inappropriate
Comments:
   Registrant is seeking help with changing name servers, not correction with whois information. Please send support emails to support@[redacted].com for assistance.

Disposition: accuracy_confirmed
Comments:
   Customer phoned back. Confirmed receiving both the email and the phone message that we left for the customer to reply and confirm the domain whois information.

Disposition: other
Comments:
Instructed complainant on proper procedure for updating Whois information.

Disposition: inappropriate
Comments:
The complaint was due to the WhoIS information being unavailable. This was a result of the WhoIS server being inaccessible at that particular time. The complainant was informed the same day he submitted a support ticket.

Disposition: other
Comments:
only complaint -- warned customer.

Disposition: inappropriate
Comments:
Regarding a denied transfer from [redacted]?

Disposition: other
Comments:
This domain has been shut down.

Disposition: other
Comments:
Domain not with this registrar.

Disposition: other
Comments:
Domain not in service

Disposition: corrected
Comments:
In the WHOIS datas of this domain was a postal code, which was wrong. The owner did send us another address and we have updated the WHOIS datas.

Disposition: inappropriate
Comments:
Domain name was deleted for non payment.

Disposition: inappropriate
Comments:
This complaint appears to have been made by the owner of the domain, who apparently believes this is the way to update his DNS
and email information. We will contact our client directly, and explain how to update this information, if indeed, this is a real request from the domain owner.

Disposition: inappropriate
Comments:
This complaint, instead, involves someone who wishes to change the name of the registrant.

Disposition: corrected
Comments:
was a result of whois parsing problem in domain transfer

Disposition: inappropriate
Comments:
designation of a role contact is acceptable for a name

Disposition: inappropriate
Comments:
spam complaint

Disposition: other
Comments:
Hijacked Domain, [redacted] will regain control over domain briefly.

Disposition: accuracy_confirmed
Comments:
"False reports of inaccurate whois data are at least as troublesome as false whois data itself. My contact data is now and always has been accurate. Needless to say, I'm fairly troubled to get a notice from my registrar asking for a response in five days under penalty of losing my domain name. Has everyone lost their minds?"

Disposition: inappropriate
Comments:
this is a complaint from [redacted] - he has a tendancy to inform the registrar for spam related issues - I have told him time and time again that his concerns are best taken up with the hosting company and/or the IP provider - I don't see any inaccuracy with the whois

Disposition: other
Comments:
"Unable to verify contact data. Registrant has not responded. Domain has been removed from the zone."

Disposition: accuracy_confirmed
Comments:
We contacted the complainant and found that he was unfamiliar with Costa Rican addresses and made no attempt to verify this address, but just assumed it was invalid because it was unfamiliar. The phone number was a valid local number for the country, and we added the country code (+1) and North American area code (560) to make it an international number. The registrant did not immediately respond to the complainant’s e-mail because he was on vacation, but the e-mail address is valid. We were able to contact the registrant and verify the validity of the contact information, and the registrant promised to take action against their affiliate which used the domain name, against their policy, in the UCE which prompted the complaint.

Disposition: inappropriate
Comments:
this is more of a SPAM Complaint - whois appears valid

Disposition: inappropriate
Comments:
complaint actually focuses around the webmaster placing their information in the whois instead of the 'actual' registrant.

Disposition: inappropriate
Comments:
end user wanted to know how to renew domain - lord knows why they thought that this was the proper route to follow

Disposition: inappropriate
Comments:
end user wants to update admin contact

Disposition: inappropriate
Comments:
inquirer was contesting ownership, not the whois validity

During a selected subset of the reporting period for which enhanced server logs were analyzed (approximately 12 months), all registrars averaged .00048 confirmed reports per name under sponsorship. Among all registrars, the standard deviation in the number of confirmed reports per name was .000749.
Among all registrars there were seven (7) registrars with greater than one standard deviation above the mean confirmed reports per name, i.e. greater than .001229 confirmed reports per name.

Among all registrars, there were four (4) registrars with greater than two standard deviations above the mean confirmed reports per name, i.e. greater than .001978 confirmed reports per name.

Among all registrars, there were two (2) registrars with greater than three standard deviations above the mean confirmed reports per name, i.e. greater than .002726 confirmed reports per name.

These numbers are intended to describe certain characteristics of the data generated by the WDPRS. These numbers do not necessarily indicate that the "outlying" registrars (i.e., those registrars with problem reports greater than 2 or 3 standard deviations above the mean) are violating any ICANN agreements or policies, but they do indicate a direction for subsequent investigation. ICANN will use these numbers to facilitate further investigation and compliance action to promote greater Whois accuracy.

**Impact of the WHOIS Data Problem Reports System on Improved Whois Data Accuracy**

According to the statistics presented above, the WDPRS was had a role in the correction of a substantial number of Whois data inaccuracies. Based on the percentages of dispositions reported by registrars, as many as 36% of all Whois inaccuracy reports resulted in a correction of data or a deletion of a domain name due to a registrant's material breach. Additionally, many or most of the "other" category were corrected, and 25% of the reports were not really Whois accuracy problems (i.e. the data was verified to be accurate or the form was being used inappropriately). While these statistics have their deficiencies, it is clear that Whois data inaccuracies measuring in the thousands have been corrected in the Eighteen months since the system has been operational.

What these statistics do not indicate is the overall level of "accuracy" of Whois data. While comprehensive statistics are not known to exist, some experts have estimated that as many as 10% of Whois records contain inaccuracies.<http://commdocs.house.gov/committees/judiciary/hju89199.000/hju89199_0.HTM#58>.

A major effort included in the ICANN budget for Fiscal Year 2004-05 is a proactive compliance project for gTLD registrars and registries. As a part of this
compliance effort, ICANN is planning to actively sample and test registrar Whois
data to develop a statistical model for Whois data accuracy investigations.

The Whois Data Reminder Policy

One additional step taken recently by ICANN to improve Whois data accuracy is
the implementation of the "Whois Data Reminder Policy." This new policy is an
ICANN Consensus Policy as defined in the Registrar Accreditation Agreement,
and is therefore binding on all accredited registrars. The policy provides as
follows:

"At least annually, a registrar must present to the registrant the current
Whois information, and remind the registrant that provision of false Whois
information can be grounds for cancellation of their domain name
registration. Registrants must review their Whois data, and make any
corrections." <http://www.icann.org/registrars/wdrp.htm>

For most registrars, the implementation date of the new policy was 31 October
2003. Pursuant to Section II.C.10.b of Amendment 6 to the ICANN/DOC
Memorandum of Understanding, the implementation of the Whois Data Reminder
Policy will be the subject of a separate report to be published by ICANN by 30
November 2004, and annually thereafter.

Summary

This report has provided a statistical and narrative summary of experiences with
the operation of the Whois Data Problem Reports System at InterNIC.net. That
system is designed to provide a streamlined, centralized interface for the
submission of reports to registrars concerning Whois data inaccuracies. ICANN-
accredited registrars are obligated by the terms of their accreditation agreements
to investigate and correct any reported inaccuracies.

- Over the course of the eighteen-month reporting period (Sep-02 through
  Feb-04), the system received 24,148 confirmed Whois inaccuracy reports.
- 82% of the reports concerned domain registrations in .com, and .net and
  .org accounted for 13% and 5% of all reports respectively. An enhanced
  version of the system has recently been launched that will include not just
  the legacy gTLDs, but all gTLDs under contract to ICANN: .aero, .biz,
  .com, .coop, .info, .museum, .name, .net, .org, and .pro.
- More than 40% of all the reports (9,938 out of 24,148) were submitted by
  just 0.3% of reporters (20 individuals out of 5,755 reporters). Over 20% of
  the reports had text fields that included the word "spam".
• The number of complaints sent to each registrar was generally proportional to each registrar’s relative market share.

• On average, registrars were each sent approximately 0.00048 Whois inaccuracy reports per active registration per year, which equates to an average of 4.8 reports per year for every 10,000 domains under management.

Beginning on 31 October 2003, all ICANN-accredited registrars were obligated to comply with the new "Whois Data Reminder Policy." The WDRP is intended to be an additional step to improve Whois data accuracy. Experiences with the implementation of that new policy will be subject of an ICANN report to be published by 30 November 2004.

In ICANN's planning for Fiscal Year 2004-05, there is provision for additional dedicated staff resources to monitor the Whois Data Problem Report System, to obtain accurate and useful statistical data, and to monitor registrar and registry compliance with Whois service, privacy and accuracy obligations.