

# Community Experiences with the InterNIC Whois Data Problem Reports System

31 March 2006

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## Executive Summary

This Report summarizes ICANN's experience with the operation of the Whois Data Problem Report System (WDPRS) during a 12-month reporting period that ended 28 February 2006. ICANN developed this system to receive and track complaints about inaccurate or incomplete Whois data entries. Individuals who encounter such entries may notify ICANN by completing an online form, which is then forwarded to the registrar of record for appropriate action. The WDPRS is one of the tools that ICANN uses to improve the accuracy of Whois data.

Through the WDPRS, ICANN is able to track how many reports are filed and confirmed by the reporter so they may be sent to the registrar of record. After forty-five days, ICANN asks the person filing the report to complete the process by performing a follow-up review, which involves checking the Whois data again and indicating whether (i) the data was fixed; (ii) the domain name was deleted; (iii) the data was unchanged; or (iv) there is some other disposition.

On average, there were 4,305 reports completed each month during the reporting period, totaling 51,664 total reports for which ICANN received follow-up responses. Of these, 25,219 represented unique domain names. Thus, 26,445 duplicate reports were submitted.

Reports were submitted by 3,568 different individuals; the top 20 contributing individuals accounted for over 59% of the 51,664 reports.

The analysis performed on the data indicates that approximately 63% of the names reported were corrected, suspended, or are no longer registered. This matches the percentage of names that were corrected, suspended, or no longer active during the last reporting period, but because 20,111 more complaints were filed this year, an estimated additional 12,670 Whois data complaints were successfully resolved this year.

As noted, the number of reports handled by the WDPRS during this review period was higher than in previous periods. This was likely due to increased awareness of the system. In addition, it appears that a handful of users of the WDPRS have intentionally filed redundant complaints without allowing the registrar or registrant an opportunity to take action. By way of example, in one month, a single reporter filed 36 complaints about one domain name which was ultimately suspended by the registrar and deleted.

## Introduction

This report summarizes ICANN's experience with the operation of the Whois Data Problem Report System at InterNIC.net <<http://wdprs.internic.net>> since publication of the previous WDPRS report on 31 March 2005 <<http://www.icann.org/whois/wdprs-report-final-31mar05.htm>>. These reports are published pursuant to Section II.C.10.a of Amendment 6 to the ICANN/DOC Memorandum of Understanding, which provides that:

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 generic Top Level Domains (gTLDs) includes information about the registrant, administrative contact, technical contact, and name servers associated with each domain name. This information is used for a variety of important purposes, including resolution of technical network issues, identification and verification of online merchants, investigations by consumer protection and law enforcement authorities, enforcement of intellectual property rights, identification of sources of spam e-mail, and determinations of whether a domain name is available for registration. 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 3,000 participants (representing businesses, governments, ISPs, registrars, individuals, and non-commercial organizations) conducted by the ICANN Domain Name Supporting Organization in 2001, Internet users broadly consider accurate Whois data to be important and support measures to improve its accuracy. <<http://www.dnso.org/dnso/notes/WhoisTF/20020625.TFWhois-report.htm>>

Another report required by the same section of the MOU, entitled Implementation of the Whois Data Reminder Policy, was published on 30 November 2005 <<http://www.icann.org/whois/wdrp-survey-report-30nov05.pdf>>.

## I. Applicable Provisions of the ICANN Registrar Accreditation Agreement

The Registrar Accreditation Agreement ([RAA](#)), which governs the relationship between ICANN and all accredited registrars, sets out several obligations for registrars with regard to Whois data accuracy. Specifically, registrars must:

- Require each registrant to submit (and keep updated) accurate contact details (RAA ¶ 3.7.7.1 <<http://www.icann.org/registrars/ra-agreement-17may01.htm#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 (RAA ¶ 3.3.1 <<http://www.icann.org/registrars/ra-agreement-17may01.htm#3.7.7>>);
- 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 (RAA ¶ 3.7.7.2 <<http://www.icann.org/registrars/ra-agreement-17may01.htm#3.7.7.2>>); and
- Take reasonable steps to investigate and correct the contact details in response to any reported inaccuracy (RAA ¶ 3.7.8 <<http://www.icann.org/registrars/ra-agreement-17may01.htm#3.7.8>>).

ICANN has taken several steps to improve the accuracy of Whois data. These include:

- On 10 May 2002, ICANN provided a reminder to registrars of the importance of understanding their obligations regarding the accuracy of Whois data in a "Registrar Advisory Concerning Whois Data Accuracy" <<http://www.icann.org/announcements/advisory-10may02.htm>>.
- On 3 September 2002, ICANN announced additional steps taken to attempt to improve the accuracy of Whois data, see Announcement on Steps to Improve Whois Data Accuracy <<http://www.icann.org/announcements/announcement-03sep02.htm>>. As a part of that, ICANN developed a system for receiving and tracking complaints about inaccurate or incomplete Whois data. The first annual report on the "Whois Data Problem Reports System" was published on 31 March 2004 and covered information about that process <<http://www.icann.org/whois/wdprs-report-final-31mar04.htm>>.
- On 27 March 2003, ICANN adopted the Whois Data Reminder Policy (WDRP) <<http://www.icann.org/registrars/wdrp.htm>> as a consensus policy. The WDRP requires that a registrar present current Whois information to each registrant, at least annually, and remind the registrant that the provision of false data can be grounds for cancellation of a registration. Registrants must review their Whois data and make any necessary corrections.
- On 3 April 2003, shortly after adopting the WDRP, ICANN issued a "Registrar Advisory Concerning the '15-day Period' in Whois Accuracy Requirements" <<http://www.icann.org/announcements/advisory-03apr03.htm>>. That advisory provided guidance on a registrar's right to cancel a registration because of a

- registrant's (i) "willful provision of inaccurate or unreliable information"; (ii) "willful failure promptly to update information;" or (iii) a "failure to respond for over fifteen calendar days to inquiries by Registrar concerning the accuracy of contact details." The advisory also reiterated that a registrar has the right to cancel a registration in such cases, but is not required to do so.
- In October 2004, ICANN began conducting annual WDRP compliance audits, the results of which were posted online <<http://www.icann.org/whois/WDRP-Implementation-30Nov04.pdf>> and <<http://www.icann.org/whois/wdrp-survey-report-30nov05.pdf>>.
  - As part of the registrar accreditation renewal process begun in 2005, ICANN has reviewed every renewing registrar's level of compliance with the WDRP and required non-compliant registrars to come into compliance before permitting renewal of accreditation. Over the last six months, ten registrars came into compliance with the WDRP as a direct result of the accreditation renewal process.
  - Over the course of the current reporting period, ICANN increased staffing in its Registrar Liaison and Compliance departments and has placed greater emphasis on ensuring Whois data accuracy through investigation of specific complaints and a system of selective and random auditing. ICANN has budgeted for two additional full-time positions in its Compliance Department, which it plans to fill in the near term.

## **II. Implementation of the Whois Data Problem Report System (WDPRS)**

In order to assist registrars in complying with the contractual 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, and thereby help improve the accuracy of Whois data. Since launching the WDPRS, several improvements were made to simplify the reporting process and automate the report investigation and registrar notification processes. Further technical enhancements are planned that will allow for enhanced statistical reporting of registrar report handling to ICANN compliance staff.

Reports of inaccurate Whois data under the WDPRS 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. The form requests Internet users (called "reporters" in this context) to specify the domain name they believe is inaccurate and their name and email address. After submitting this information, the reporter is shown the Whois record for that domain name, and asked to specify the inaccuracy or inaccuracies. The system then sends the reporter an email request for confirmation of the report. The reporter then has five days to acknowledge the request or the report will be deleted.

Once the report is confirmed by the reporter, it is automatically forwarded to the registrar of record for handling. Forty-five days later, a follow-up questionnaire is sent to the reporter, asking whether the inaccurate data was corrected, whether the name was deleted, whether there was no change, or whether there was some other disposition. The aggregate data collected during this final step is used by ICANN compliance staff to follow up with registrars as needed to ensure compliance with the requirements of the Registrar Accreditation Agreement.

### **III. Statistics from Operation of the WDPRS**

The following sections provide a statistical summary of operation of the Whois Data Problem Report System. These statistics cover the operation of the system from the last report's cut-off date of 28 February 2005 until this year's cut-off date of 28 February 2006. It includes information concerning: (A) the number of Whois data inaccuracies reported; (B) the number of unique domain names with reported inaccuracies; and (C) registrar handling of the submitted reports.

#### **A. Reported Data Inaccuracies**

A total of 51,664 confirmed Whois Data Problem Reports, involving 25,219 unique domain names, were completed by the submission of a follow-up report by the reporter during this reporting period. The 2005 Report indicated that 31,553 submissions had been confirmed during that reporting period, involving 16,941 unique domain names.

On a per TLD basis, .com represented 70.8% of confirmed reports, with .net and .info constituting 13% and 9.7% respectively. When scaled by the total number of registrations in each TLD, .info and .biz domain names were the subject of the most reports. Nearly 19 reports were filed for every 10,000 .info registrations, and approximately 17 reports were filed for every 10,000 .biz registrations. The statistics for these and the other gTLDs are included in the following table:

<b>TLD</b>	<b># Reports</b>	<b>% Reports</b>	<b>Reports per 10,000 registrations</b>	<b># Unique Reports</b>	<b>% Unique Reports</b>	<b>Unique Reports per 10,000 registrations</b>
<b>.com</b>	36,653	70.8%	8.22	18,367	72.8%	4.12
<b>.net</b>	6,703	13%	10.03	3,099	12.3%	4.64
<b>.info</b>	5,018	9.7%	18.71	2,250	8.9%	8.39
<b>.biz</b>	2,235	4.3%	17.13	770	3.0%	5.90
<b>.org</b>	1,143	2.2%	2.78	728	2.9%	1.77
<b>.name</b>	7	< 0.1%	0.39	5	< 0.1%	0.28
<b>total</b>	<b>51,759</b>	<b>100%</b>	<b>8.69</b>	<b>25,219</b>	<b>100%</b>	<b>4.24</b>

\* Based on registrations as of 30 November 2005.

It is unclear why .info names were the subject of twice as many unique WDPRS reports per 10,000 registrations than the other TLDs. This TLD has been offered by some registrars at promotional prices – in some cases .info names have been offered at no cost – but further research into the relationship between domain price and Whois data accuracy would be needed before any conclusions could be made.

A total of 3,568 different individuals submitted reports. On average, each reporter submitted approximately 15 reports, while some individuals submitted significantly more. Out of a total of 51,664 confirmed reports, the number of reports per individual for the top 20 reporters are as follows:

<b>Top 20 Reporters</b>	<b># Reports Submitted This Year</b>	<b># Reports Submitted Last Year</b>
<b>1</b>	6,458	4,035
<b>2</b>	3,938	2,186
<b>3</b>	3,287	1,197
<b>4</b>	2,181	1,183
<b>5</b>	1,829	1,058
<b>6</b>	1,744	891

<b>7</b>	1,704	881
<b>8</b>	1,419	770
<b>9</b>	992	715
<b>10</b>	840	592
<b>11</b>	836	572
<b>12</b>	789	555
<b>13</b>	673	532
<b>14</b>	650	513
<b>15</b>	647	505
<b>16</b>	609	482
<b>17</b>	574	482
<b>18</b>	569	415
<b>19</b>	556	414
<b>20</b>	548	339
<b>Total</b>	<b>30,843</b>	<b>18,317</b>

As this table shows, fewer than 1% of all those who filed reports (20 people) were responsible for over 59% (30,843 out of 51,664) of all Whois inaccuracy reports submitted to ICANN during the reporting period. The 2005 Report indicated that the top 20 reporters were responsible for nearly the same percentage (58% of 31, 533) of Whois inaccuracy reports, although they submitted 68% more reports this year than last.<sup>1</sup> There is evidence that individuals are also reporting single domains when they discover a problem -- there were 2,573 individuals who submitted exactly one report.

From both anecdotal information received by ICANN and text accompanying the body of these reports, we conclude that most of the high volume reporters are driven by a concern about abuses involving spam. In over half of the reports filed (approximately 55%) , the reporter indicated "spam" as a factor in the body of the report.

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<sup>1</sup> In comparing this reporting period to the last, the table above acknowledges the most active reporters in each year. The most active reporters were not necessarily the same from year to year.

## B. Unique Domain Names

A total of 25,219 unique domain names were the subject of Whois data problem reports during this review period. As reported above, there were a total of 51,664 reports confirmed and completed. Accordingly, 26,445 of the reports were duplicate submissions. The following table demonstrates the extent to which duplicate reports were received for domain names and the extent to which reporters filed redundant complaints.

<b>Top 20 Domain Names Reported</b>	<b># of Reports Received</b>	<b># of Reporters</b>	<b>Average Number of Reports per Reporter</b>
1	133	10	13
2	98	16	6
3	95	5	19
4	89	13	7
5	68	12	6
6	65	4	16
7	57	11	5
8	51	12	4
9	51	10	5
10	51	9	6
11	50	7	7
12	48	8	6
13	48	22	2
14	47	7	7
15	45	6	8
16	43	11	4
17	43	15	3



18	41	21	2
19	39	3	13
20	39	5	8

In reviewing the twenty most-reported domain names, it appears that all were appropriately deleted, suspended, or corrected. Because ICANN does not have access to a comprehensive history of the domains' Whois records, it is unclear when the invalid records were handled in relation to the submission of the reports.

In some cases, individual reporters filed redundant reports before the registrar could have even had an opportunity to act on the previous report. For example, one reporter filed 36 reports about one domain name over the course of one month, even though the reporter was asked to allow 45 days for action by the registrar.

To better understand the effect of the WDPRS on Whois data accuracy, the following discussion generally focuses on the number of individual domain names reported, not the total number of raw reports.

### C. Registrar Handling

The following table characterizes the state of the reported Whois records as indicated by the follow-up reports provided to ICANN by the reporter:

Status	Domain Names	%
Inaccuracy Corrected	1,204	4.8%
Domain Deleted	1,055	4.2%
Other	8,760	34.7%
Data Unchanged	14,200	56.3%
Total	25,219	100.0%

According to self-reporting by the person originating the report, a total of 2,259 Whois records (9%) were corrected or deleted as the result of a WDPRS report. The remaining 91% were categorized as "Other" or "Data Unchanged."

In order to better understand the nature of the reports marked "Other" or "Data Unchanged" (22,960 total) ICANN staff reviewed 10,623 (46%) of the underlying Whois

records and made the following observations: more than half (59%) had in fact been deleted or suspended. Another quarter of them (25%) had Whois data that appeared to be accurate (note, however, that it is quite possible to supply Whois information that looks completely plausible, but is in fact bad). About 16% of the records appeared incomplete or clearly inaccurate.

	<b>“Unchanged” or “Other” Domains Reviewed by ICANN Staff</b>	
<b>Actual Status</b>	<b>Domain Names</b>	<b>%</b>
Suspended	3,738	35.2%
Domain Deleted	2,567	24.2%
Incomplete or Clearly Inaccurate Data	1,653	15.6%
Whois Contained Plausible Data	2,665	25.1%
Total Domains Reviewed	10,623	100%

Combining the suspended or deleted domain names noted by ICANN staff with the user reports of corrected, suspended, or deleted domain names, we arrive at an estimate of 63% of reported domain names with bad data that were corrected, suspended, or no longer registered. An additional 14% of domains with clearly bad information were not changed. This leaves approximately 23% of reported domains' Whois data without obvious errors.

<b>Estimated Disposition of Unique Domains</b>	
Whois Corrected	4.8%
Domain Deleted	26.3%
Domain Suspended	32%
Whois Inaccurate or Incomplete	14.2%
Plausible Whois	22.8%

In reviewing the "Other" and "Data Unchanged" reports this year, staff employed stricter evaluation standards than in previous years. Specifically, in addition to subjectively determining whether a Whois record appeared valid, reviewers tested postal codes using publicly available databases and performed address lookups on unlikely or suspect addresses. In a few cases, telephone numbers were also tested.

There are a number of possible explanations for the relatively high number of "unchanged" dispositions reported. The reporter may not have correctly interpreted the Whois data. Similarly, the domain name in question may have been placed in Registrar Hold status by the registrar, which would effectively prevent the domain name from functioning in any meaningful way, but this might not have been understood by the reporter. Additionally, a reporter might have been motivated to inaccurately report an "unchanged" status, believing this would punish a registrant or registrar perceived to be causing or allowing the transmission of spam.

Although most of the WDPRS reports were directed to the larger registrars, as might be expected, there is no direct relationship observable between registrar size and the number of reports received. Given that some reporters repeatedly filed identical complaints over a short period of time, registrars who acted quickly on reports were likely to have received fewer reports in total. As an additional consideration, it is worth mentioning that at least one registrar allows users to report inaccurate Whois data on its own website through a tool similar to the WDPRS, but which is not operated or monitored by ICANN.<sup>2</sup>

#### **IV. Impact of WDPRS on Improved Accuracy of Whois Data**

There are several conclusions that can be drawn concerning the impact of the WDPRS.

ICANN's Whois Data Problem Report System continues to have a measurable impact on the accuracy of Whois data. Of the 25,219 unique domain names subject to WDPRS reports during this review period, we estimate that nearly 15,888 (63%) were deleted or suspended, or had correct Whois data supplied. An additional 5,800 (23%) domains had what appeared to be plausible Whois data, although practical constraints limited our ability to verify their accuracy with certainty.

While overall usage of the WDPRS has increased significantly over the last year, this appears largely to be the result of the repeated filing of identical reports by particularly

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<sup>2</sup> As a result of ICANN's review, it was discovered that one registrar's port 43 Whois service was out of compliance with the terms of the Registrar Accreditation Agreement, causing hundreds of Whois records to be classified by the reviewing staff members as incomplete or inaccurate, due to no fault of the registrant. Specifically, this registrar was not providing the physical address or telephone number of either the technical or administrative contacts in Whois records, as required by paragraphs 3.3.1.7 and 3.3.1.8 of the RAA. Although this occurrence may have negatively impacted the underlying data for this report, the registrar has now brought its Whois service into compliance with the RAA, which should have a positive impact on the number of Whois accuracy complaints reported in the future.

active users of the WDPRS, although there has also been a marked increase in the reporting of unique domain names.

With enhanced staffing levels, ICANN has been better able to utilize the aggregate data provided through the WDPRS to ensure that individual registrars are complying with their obligations toward ensuring Whois data accuracy. ICANN continues to strengthen its compliance program through audits and outreach efforts in order to help registrars minimize the number of Whois data accuracy reports submitted and maximize Whois data accuracy.

The use of the WDPRS by anti-spam activists continues. Because it appears some such users have, in fact, begun spamming the system and the registrars subject to its automated processes, ICANN will need to investigate whether steps are needed to limit the access of abusive reporters to the WDPRS in order to avoid diluting its effectiveness.

Although the 25,219 reported names with inaccurate Whois comprise a small fraction of the 59+ million gTLD registrations, ICANN continues its resolve to improve Whois data accuracy through community education and enforcement of its contracts with registrars.

Going forward ICANN will continue to improve the WDPRS tool and take substantial steps to improve Whois accuracy overall. Areas of improvement will include increased implementation and reliance of automation and online reporting tools and augmented staffing of the ICANN contractual compliance function so that specific instances of inaccuracy can be pursued. ICANN will also adopt the recommendations of its policy making bodies where task forces have been formed to clearly define performance goals regarding Whois accuracy.