

All, here is information as requested from Steve Crocker on behalf of the SSAC on WHOIS and IRIS (and our apologies for delay).

Thanks, Liz

From: Steve Crocker
Sent: Monday, May 19, 2008 4:26 PM
To: Gasster Liz; Liz Gasster
Cc: Steve Crocker; Denise Michel
Subject: Response to Request regarding WHOIS and IRIS

Liz,

Apologies and thanks for the nudge. We drafted a response a while ago and there's been some very active discussion in the background. We didn't complete the internal discussions we had in mind, but the direction is clear so I am sending you this on my own and a pretty good sense that it represents our sense of the right approach. This is a bit lengthy because I am including some background and commentary. The short, bulletized version is

- o The WHOIS system is broken
- o A complete revision is needed
- o The revision must lay out the desired policies
- o The technical foundation should fit the desired policies, if feasible. As a reasonably informed guess, IRIS, developed by the IETF, is likely to fit the need.
- o A substantial technical examination is needed. This is beyond SSAC's capabilities. We recommend GNSO ask staff to initiate an effort similar to the way RSTEP studies are carried out.

Here's the full response.

You originally asked:

From: Liz Gasster
Sent: Thursday, April 17, 2008 12:45 PM
To: Crocker Steve
Cc: Denise Michel
Subject: Request regarding WHOIS and IRIS

Hello Steve,

The GNSO Council has a "WHOIS study group" underway, to consider what if any studies, surveys or other fact-finding research or analysis should be conducted that would be constructive in further informing the policy debate on WHOIS. We have already solicited study suggestions from the public and we are in the process of discussing different views about what studies might be useful, if any. The group would like to get some more information about what it would take to implement IRIS from both a technical and policy perspective. I'm not sure if this would be of interest, but would you have a thought about whether this is something that someone from the SSAC might like to participate in, for example, to give a short overview and answer questions? This might be too short notice, but our next call is Tuesday the 22nd at 11 EST, and we will probably meet several more times at the same interval weekly.

The participants in the group, in addition to ICANN staff, are as follows:

Jordi Iparraquirre - gTLD Registry C
Ken Stubbs - gTLD Registry C
David Maher - gTLD Registry C
Steve Metalitz - IPC
Lee Eulgen -IPC
Steve Dalrymple - GNSO

Steve DeBianco - CBUC
Tony Harris - ISP
Tim Ruiz - Registrar
Paul Stahura - Registrar
James Bladel - Registrar
Krista Papac - Registrar
Stéphane Van Gelder - Registrar
Eric Brunner-Williams -Registrar
Danny Younger
Beau Brendler
Wendy Seltzer - ALAC Liaison on the ICANN Board

Thanks so much for considering,

Liz

Our bottom line conclusion is that the current whois system is broken and needs to be replaced completely. The underlying technical structure should be replaced with an appropriate database-oriented approach, and the policies about what information is included, what level of accuracy is required and what access should be provided to whom should be approached with a clean slate. The technical foundations are probably in the best shape with the work on CRISP/IRIS in the IETF.

A different but also relevant wrinkle is the consequences of IDNs. So far as we have been able to see, despite an enormous effort to bring IDNs into the domain name system, essentially no thought has been given to internationalizing the whois database.

The magnitude of the change we're advocating requires substantial time and effort. It obviously cannot happen overnight, so there is plenty of room to argue about what to do in the interim. However, those discussions will take on very different tenor if it's clear where things are going in the medium to long term future.

As you know, we formally commented to the GNSO in

[SAC027]: SSAC Comment to GNSO regarding WHOIS studies (7 February 2008)
<http://www.icann.org/committees/security/sac027.pdf>

The full text is relevant to this discussion, so I am including it in its entirety below.

7 February 2008

SAC027: SSAC Comment to GNSO regarding WHOIS studies

The Security and Stability Advisory Committee thanks the GNSO for the opportunity to comment on future studies related to WHOIS. SSAC has conducted studies on WHOIS in the past (SAC 014, Information Gathering Using Domain Name Registration Records 28 September 2006, and SAC 023, Is the WHOIS Service a Source for email Addresses for Spammers? 23 October 2007) and believes additional studies may prove valuable.

SSAC members have and will continue to work with the GNSO to provide a viable and scalable solution to the administration and access of domain name registration information. To do so, we believe it is useful to consider the following matters:

* To date, little progress has been made towards the development of a formal directory service for the Internet. While the development of technical standards for the Internet is not an ICANN activity, the ICANN community would benefit from the use of a formal directory service.

* In the absence of a formal directory service, the Internet community has attempted to "make do" with available protocols/services. The adaptation of the WHOIS protocol by the domain name registration community is a noteworthy example.

* Considerable technical shortcomings prevent WHOIS services from satisfying the needs of the domain name community in areas of authentication, data accuracy, data confidentiality, and data integrity. SSAC observes that it is unlikely that this rudimentary protocol could be improved to overcome these shortcomings.

* The limitations of the WHOIS protocol and variability among WHOIS implementations and services contribute to the poor quality of domain name registration data currently available.

* The domain name registration community has focused its attention on compensating for (3) through policy definition and enforcement. However, policy alone will not provide the Internet community with a secure and reliable directory service capability that is able to satisfy the needs of diverse Internet constituencies. SSAC believes that this objective can only be achieved through a combination of policy development and implementation of a standard, uniform directory service that provides authentication, data confidentiality, data accuracy and data integrity services.

On these bases, SSAC recommends the following:

1. The GNSO should continue current and proposed work to resolve legal and privacy issues within the existing WHOIS framework. SSAC believes that studies that catalog legitimate uses as well as abuses of domain registration information, continued studies regarding privacy, and studies that consider finer-grained access and role-based access control models for WHOIS can help the community establish requirements for the administration of domain registration information.

2. ICANN should take aggressive measures with respect to improving registration data accuracy and integrity. Future agreements should include data accuracy and integrity (e.g., archival and restoration) guidelines and should include provisions for sanctions or other penalties for those who do not comply with these guidelines.

3. The ICANN community should adopt an Internet standard directory service as an initial step toward deprecating the use of the WHOIS protocol in favor of a more complete directory service. SSAC encourages the ICANN community to study the standards developed by the IETF's Cross Registry Information Service Protocol (CRISP) Working Group. In particular, SSAC urges the GNSO to consider the requirements for CRISP identified in RFC 3707 and the set of RFCs associated with the Internet Registry Information Service (IRIS) (RFCs 3981 - 3983) which appear to provide sufficient features and services to meet the needs of the domain

registration community.

4. ICANN should work with all TLD registry operators to develop a timeline and transition plan for migrating from the current WHOIS service to a successor Internet "domain" directory service.

SSAC looks forward to participating in these activities.

With all of the above as background, here is our suggestion for the GNSO at this point.

In response to SSAC's Comment to GNSO regarding WHOIS studies (7 February 2008, at <http://www.icann.org/committees/security/sac023.pdf>), a GNSO Council WHOIS study group has asked SSAC to provide more information about what it would take to implement IRIS from both a technical and policy perspective.

We are pleased that the GNSO intends to pursue this study topic and have the following additional comments to offer.

In SAC023, we recommended that the ICANN community adopt an Internet standard directory service. We also suggested that the community review the Internet Registry Information Service (IRIS) standards developed by the IETF's Cross Registry Information Service Protocol (CRISP) Working Group. We further suggested that the community should study at least three important features provided by many directory services, assess the utility of these features in the context of domain name administration, and include provisions for these features in policy development.

Auditing: SSAC believes that most constituencies would benefit from having a detailed auditing capability with respect to access to registration records. SSAC has consistently regarded a domain name as an asset. Thus, the registrant should be able to know who's checked his record. LEAs, IP attorneys, brand defenders, business constituents, and general public may all have a legitimate reason in some context to know who's checked a record. This implies identity verification but it doesn't have to be linked to tiered access. SSAC believes this is a desirable feature and the community should consider how to incorporate it into a policy.

Access control: Having an access control model should not be controversial and SSAC believes this should also be incorporated into policy. The finer points of how access controls are applied, to whom they are applied, and for what purpose (e.g., privacy) merit further discussion. But a consensus policy should at least reflect the community's awareness that "access controls are needed, and in principle, there are legitimate purposes for LEAs, IP attorneys, brand defenders, business constituents, and general public to access registration records". Most importantly, the access model should accommodate these purposes to the extent they are permitted by applicable laws. A benefit of a well-defined access control model is that you could, in principle, apply privacy controls to individuals according whatever the prevailing privacy laws demand.

Data integrity (accuracy): We believe it is imperative that a directory service study should consider data accuracy and abuse prevention. The substitution of a directory service for WHOIS does not assure improved accuracy, but SSAC believes that a re-examination of the ways current registration practices are exploited, including consideration of methods to corroborate contact and billing information registrants submit prior to including a domain name in a TLD zone file, are necessary irrespective of whether WHOIS persists or a successor directory service is adopted.

Careful deliberation of these features alone requires the focused attention of individuals who have extensive directory service expertise and are also very familiar with domain name registration processes, and this list is but a sample of the issues that should be factors in policy development. The level of effort required for such work exceeds the resources SSAC can bring to bear. Instead, we recommend there should be a focused technical effort similar to the

way the RSTEP process is run for examination of proposed registry service changes. We recommend GNSO ask the ICANN staff to create such an effort on behalf of the GNSO WHOIS process.