



## SSAC Public Report Work Plan for 2010 February 26, 2010

### What is the SSAC?

The Security and Stability Advisory Committee advises the ICANN community and Board on matters relating to the security and integrity of the Internet's naming and address allocation systems. This includes operational matters (e.g., matters pertaining to the correct and reliable operation of the root name system), administrative matters (e.g., matters pertaining to address allocation and Internet number assignment), and registration matters (e.g., matters pertaining to registry and registrar services such as WHOIS). SSAC engages in ongoing threat assessment and risk analysis of the Internet naming and address allocation services to assess where the principal threats to stability and security lie, and advises the ICANN community accordingly.

### Introduction

With this report we are beginning a series of reports on SSAC activities. These are divided into two types of reports. The first type is a report on the SSAC Work Plan of activities and progress. These will appear in the first and third quarters of each year. The second type is a report previewing SSAC activities that will take place at an upcoming ICANN meeting. These will appear prior to each of the three ICANN meetings.

This report, **SSAC Public Report on the Work Plan for 2010**, is divided into the following sections: **Work Plan for 2010** and **Work Completed in 2009**.

The first section, **Work Plan for 2010**, describes the SSAC Work Plan for 2010. These are the ideas and preliminary work to develop specific project plans. This is perhaps the most important section of this report because it provides notice of issues on the horizon. The Work Plan may include activities that have been carried over from the following year.

SSAC generates three types of work products. These include Reports, Advisories and Comments. Reports cover substantial projects. Advisories are shorter and faster. Comments are usually responses to queries from staff or to documents posted for formal response. Those work products that were produced in 2009 are described in the **Work Completed in 2009** section. For a list of SSAC documents see: <http://www.icann.org/en/committees/security/ssac-documents.htm> and SSAC presentations see: <http://www.icann.org/en/committees/security/ssac-presentations.htm>.

SSAC reports, advisories and comments are generally available for distribution to the community. Occasionally, specific matters require confidentiality. Such projects are treated accordingly. SSAC often considers security incidents or matters disclosed in confidence to committee members (e.g., a security vulnerability, an emerging threat to the DNS, or information relating to a security incident).

Discussions and ongoing work within SSAC are thus typically conducted in private until complete, or until the need for confidentiality has lapsed. SSAC members participate in an individual capacity and do not represent the organizations that employ them. SSAC member biographies and statements of interest are posted here: <http://www.icann.org/en/committees/security/biographies-14aug09-en.htm>.

Feedback on this content, process and format are welcome. Full information on the Committee and its completed reports is on the ICANN web site at <http://www.icann.org/committees/security>. This report is suitable for general distribution and will also be available on the SSAC web site.

Steve Crocker,

Chair, Security and Stability Advisory Committee

## Work Plan for 2010

**Collaboration with the ICANN Community** -- SSAC members are carrying forward work from various deliverables (SAC026, SAC033, SAC038, SAC040) into the Generic Names Supporting Organization (GNSO) through participation in the Registration Abuse Policies Working Group, as well as the Registrar Accreditation Agreement (RAA) Drafting Team (DT) where numerous SAC040 measures are being considered. See: [https://st.icann.org/reg-abuse-wg/index.cgi?registration\\_abuse\\_policies\\_working\\_group](https://st.icann.org/reg-abuse-wg/index.cgi?registration_abuse_policies_working_group) and [https://st.icann.org/raa-related/index.cgi?joint\\_alac\\_gnso\\_wg\\_and\\_at\\_large\\_workspace\\_on\\_raa\\_related](https://st.icann.org/raa-related/index.cgi?joint_alac_gnso_wg_and_at_large_workspace_on_raa_related). SSAC work products also are being considered by staff at GNSO request, including an inventory of Whois service requirements. SAC037 is the catalyst and basis for 2010 work on internationalizing registration data. See: [https://st.icann.org/int-reg-data-wg/index.cgi?internationalized\\_registration\\_data\\_working\\_group](https://st.icann.org/int-reg-data-wg/index.cgi?internationalized_registration_data_working_group). SSAC support staff are participating in advisory groups tasked with assessing and developing further programs described in two ICANN explanatory memoranda, including the High Security TLD and Zone File Access Advisory Groups. See <http://www.icann.org/en/topics/new-gtlds/hstld-program-en.htm> and <http://www.icann.org/en/topics/new-gtlds/zone-file-access-en.htm>. SSAC is also collaborating with ICANN towards the potential creation of a DNS-CERT activity.

**SSAC Recommendations on the Stability of the Root Level of the DNS** -- In February 2009, the ICANN Board requested SSAC and RSSAC to co-ordinate a technical and operational study to consider the potential impact on the stability of the root level of the Domain Name System (DNS) when IPv6 address records, IDN (Internationalized Domain Name) top level domains (TLD), other new TLDs, and new resource records to support DNS security (DNSSEC) are added to the root zone. In September 2009, SSAC began consideration of the Root Scaling Study Team's (RSST) report, *Scaling the Root: Report on the Impact on the DNS Root System of Increasing the Size and Volatility of the Root Zone*. See <http://www.icann.org/en/committees/dns-root/root-scaling-study-report-31aug09-en.pdf>. An accompanying report, *Root Scaling Study: Description of the DNS Root Scaling Model* released on 1 October 2009 (the "TNO report") provided a quantitative modeling of the root zone to simulate scenarios relevant to the root scaling study. See <http://www.icann.org/en/committees/dns-root/root-scaling-model-description-29sep09-en.pdf>. The SSAC has reviewed both reports and is considering recommendations to provide to the ICANN Board of Directors in 2010 prior to substantive decisions on the introduction of new TLDs.

**SSAC Retreat** -- The SSAC will produce a report providing recommendations for possible SSAC projects related to the topics discussed at the retreat, as well as for topics to be considered at the next retreat.

**SSAC Operational Procedures** -- Article XI of the ICANN Bylaws establishes the Charter of the SSAC, but the SSAC develops its operational procedures. In response to the review of the SSAC conducted by the Board Governance Committee of the ICANN Board of Directors, the SSAC has committed to initiate various improvements to its procedures that will be incorporated into the SSAC Operational Procedures, to be finalized and published in 2010.

**Orphaned DNS Records** -- Orphaned DNS records are name server records that exist in delegation, but whose parent domain names no longer exist. The issue of concern is that orphaned DNS records can be maliciously abused. The SSAC has formed a Work Party to study this issue and develop possible recommendations.

**IPv6 Support in Commercial Firewalls** -- In October 2007 the SSAC published SAC020, *A Survey of IPv6 Support in Commercial Firewalls*. See <http://www.icann.org/en/committees/security/sac021.pdf>. The report surveyed the commercial firewall market for Internet Protocol Version 6 (IPv6) service availability. In 2010 the SSAC plans to conduct another IPv6 firewall survey and report on the results.

**Further Measures to Protect Domain Registration Services Against Exploitation or Abuse** -- In August 2009 the SSAC published SAC040, *Measures to Protect Domain Registration Services Against Exploitation or Abuse*. See <http://www.icann.org/en/committees/security/sac040.pdf>. In 2010 the SSAC will consider producing a companion report that is more prescriptive for registrants. For example, the report might suggest specific steps registrants could take to protect a valuable domain name against malicious abuse.

## Work Completed in 2009

**[SAC042]: SSAC Comment on the Root Scaling Study Team Report and the TNO Report (17 December 2009)** -- See <http://www.icann.org/en/committees/security/sac042.pdf>. This is an SSAC Comment on the following two reports: The Root Scaling Study Team (RSST) report issued on 31 August 2009 entitled, *Scaling the Root: Report on the Impact on the DNS Root System of Increasing the Size and Volatility of the Root Zone*. See <http://www.icann.org/en/committees/dns-root/root-scaling-study-report-31aug09-en.pdf>. The *Root Scaling Study: Description of the DNS Root Scaling Model* released on 1 October 2009 (the "TNO report"). See <http://www.icann.org/en/committees/dns-root/root-scaling-model-description-29sep09-en.pdf>.

## Work Completed in 2009, Continued

**[SAC041]: Recommendation to Prohibit Use of Redirection and Synthesized Responses by New TLDs (10 June 2009)** – See <http://www.icann.org/en/committees/security/sac041.pdf>. In this recommendation the SSAC advises ICANN that new TLDs, including both new gTLDs and new ccTLDs, should not use DNS redirection and synthesized DNS responses.

**[SAC040]: Measures to Protect Domain Registration Services Against Exploitation or Misuse (19 August 2009)** – See <http://www.icann.org/en/committees/security/sac040.pdf>. This report called attention to certain high profile incidents involving domain name registration accounts to determine if there are common causes among the events that might reveal measures to reduce or mitigate certain threats and vulnerabilities.

**[SAC039]: SSAC Review of SSAC (15 October 2009)** – See <http://www.icann.org/en/committees/security/sac039.pdf>. The SSAC bylaws require a periodic review of each supporting organization (SO) and Advisory Committee (AC). The ICANN Board initiated the review of SSAC in June 2008, which included an external review by JAS Communications. In addition to participating actively in the external review, the SSAC also conducted an internal review, the results of which are provided in this Report.

**[SAC038]: Registrar Abuse Contacts (26 February 2009)** – See <http://www.icann.org/en/committees/security/sac038.pdf>. In this document, the SSAC examined some of the difficulties law enforcement, CERTs, online reputation protection services, and others may experience when they attempt to contact ICANN accredited registrars to make inquiries regarding the possible involvement of a domain name in a malicious, illegal or criminal activity. The Report provides several recommendations.

**[SAC037]: Display and Usage of Internationalized Registration Data: Support for Characters From Local Languages or Scripts (21 April 2009)** – See <http://www.icann.org/en/committees/security/sac037.pdf>. This document examines how the use of characters from local scripts affects the Internet user experience with respect to domain name registration data submission, usage, and display.

**[SAC036]: SAC036a: Letter of Transmittal to ICANN Board, SSAC Comments on the Draft ICANN Strategic Plan for 2009-2012 (11 February 2009)** – See <http://www.icann.org/en/committees/security/sac036a.pdf> and <http://www.icann.org/en/committees/security/sac036b.pdf>. These documents make public the SSAC's comments regarding the Draft ICANN Strategic Plan for 2009-2012.

**SSAC Retreat** -- In 2009 the SSAC proposed holding a retreat for its members. This was to be a landmark event because since it was chartered in 2001 the full Committee had never met face to face. The SSAC Retreat was held on 30 September 30 and 01 October in Rosslyn, Virginia. At the retreat the following topics were discussed:

- Registrant Protection and Abusive Behavior;
- Routing: An Accident Waiting to Happen?;
- DNS as an Attack Vector;
- How Robust is the Root Server System and What is Its Future?;
- Root Scaling Study: Briefing, Outcomes, Next Steps;
- New gTLDs /IDNs; JPA: SSAC Role in the Process;
- Engagement with Other ICANN Bodies;
- SSAC Review Outcomes; and
- SSAC Workflow and SSAC Charter, Roles, and Members.

In 2010, the SSAC will produce a report providing recommendations for possible SSAC projects related to the topics discussed at the retreat, as well as for topics to be considered at the next retreat.

**SSAC Operational Procedures** -- Article XI of the ICANN Bylaws establishes the Charter of the SSAC, but the SSAC develops its operational procedures. When it was established in 2002 the SSAC operated under informal operational procedures. In 2009, the SSAC decided to begin to document its operation to improve its procedures and enhance communication between the SSAC and other ICANN structures. In addition, in response to the review of the SSAC conducted by the Board Governance Committee of the ICANN Board of Directors, the SSAC has committed to initiate various improvements to its procedures that will be incorporated into the SSAC Operational Procedures, to be finalized and published in 2010.

**Orphaned DNS Records** – Orphaned DNS records are name server records that exist in delegation, but whose parent domain names no longer exist. SSAC has given two presentations on this topic in ICANN Sydney and Seoul meetings. The issue of concern is that orphaned DNS records can be maliciously abused. See these and other SSAC presentations at: <http://www.icann.org/en/committees/security/ssac-presentations.htm>.