



## SSAC Activity Report December 2012

### What is the SSAC?

The Security and Stability Advisory Committee (SSAC) advises the ICANN community and Board of Directors 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). The 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. See the [SSAC Charter](#) for additional information.

### Introduction

This **Activity Report** is divided into the following sections: **Work Plan for 2012** and **Work Completed in 2012**.

The first section, **Work Plan for 2013**, presents 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 previous year.

The SSAC generates three types of work products: reports, advisories and comments. Reports examine a topic in substantial detail. Advisories are issued in response to a problem or incident in a timely manner. Comments are usually responses to queries from staff or to ICANN documents posted for formal response. SSAC reports, advisories and comments are generally available for distribution to the community. Those work products that were produced in 2012 are described in the **Work Completed in 2012** section. For a list of SSAC documents see:

<http://www.icann.org/en/groups/ssac/documents>. For previous Work Plans and Activities see:

<http://www.icann.org/en/groups/ssac/workplan-activities>.

The SSAC often considers security incidents or matters disclosed in confidence to committee members (e.g., a security vulnerability, an emerging threat to the Domain Name System (DNS), or information relating to a security incident). Discussions and ongoing work within the SSAC are thus typically conducted in private until complete, or until the need for confidentiality has lapsed. For information on the operation of the SSAC, see the [SSAC Operational Procedures](#). 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/groups/ssac/biographies-13dec12-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 [ssac.icann.org](http://ssac.icann.org). This report is suitable for general distribution and will also be available on the SSAC web site.

Patrik Fältström,  
Chair, Security and Stability Advisory Committee

## Work Plan for 2013

### Work Parties/Working Groups/Activities:

**Internationalized Registration Data Working Group (IRD-WG)** – SSAC members participated in a joint Generic Names Supporting Organization (GNSO)-SSAC Working Group to study the feasibility and suitability of introducing response and display specifications to accommodate registration data that cannot be represented using US-ASCII. The IRD-WG completed its work in May 2012 with a [Final Report](#) provided to the SSAC and the GNSO Council, who agreed in June 2012 to deliver the Report to the ICANN Board. In October 2012 the GNSO Council formally [approved](#) the IRD-WG's recommendations and directed staff to initiate an Issue Report on the recommendation relating to the translation and transliteration of contact information. The development of the Issue Report will continue into 2013.

**Domain Name System (DNS) Security and Stability Analysis Working Group (DSSA-WG)** – SSAC members are participating in this joint Working Group established by the GNSO, Country Code Supporting Organization (ccNSO), and the At-Large Advisory Committee (ALAC). The Working Group produced a [Phase I Report](#).

**ICANN Board DNS Risk Management Framework Working Group** – This is a Board Working Group to oversee the development of a security risk management framework and system for the DNS as it pertains to ICANN's role as defined in the ICANN Bylaws. In October 2012 the Working Group engaged an expert consultant to assist with the development of a DNS Risk Management Framework.

**Membership Committee:** The SSAC has a Membership Committee, Chaired by the Vice Chair of the SSAC, Jim Galvin, which evaluates nominations for membership and oversees the annual member review process. For further information on membership and the activities of the Membership Committee, see the [SSAC Operational Procedures](#).

**Registration Data Validation Taxonomy Work Party:** This Work Party is producing a taxonomy for the validation of domain name registration data. The taxonomy will consider the feasibility of validation, why accurate registration data is important, and reasons for registration data inaccuracy.

**Root Key Rollover Work Party:** This Work Party is studying possible security and stability issues relating to changing the cryptographic key for the Domain Name System (DNS) Security Extensions (DNSSEC) of the root. (DNSSEC is a set of protocols designed to address security issues with the DNS system.)

**Identifier Abuse Metrics Work Party:** This Work Party is conducting research on the abuse of Internet identifiers.

**New gTLD Success Metrics:** This Work Party is addressing the ICANN Board's [Resolution](#) requesting clarification concerning the SSAC's Recommendation 5 in [SAC046: The SSAC Report of the Security and Stability Advisory Committee on Root Scaling \(6 December 2010\)](#), and further issues relating to new gTLD success metrics.

**SSAC Annual Workshop:** The SSAC held its annual workshop 14-16 November 2012 in Los Angeles. The Annual Workshop is a key event that enables all SSAC members to meet in person (as well as remotely) to discuss issues that may impact the security and stability of the DNS, share information on key topics of interest and for potential work, and collaborate on the development of the SSAC Work Plan for the coming year. New topics identified for future work in 2013 include: Complexity/Challenges in the DNS, Expansion of the Name Space; Abuse of the DNS for DDoS Attacks; and DNSSEC Validation.

### Public Meetings and Collaboration:

**SSAC Public Meetings at ICANN Meetings in 2012** – The SSAC held public meetings at the ICANN meetings in [San José](#), Costa Rica in March, [Prague](#), Czech Republic in June, and [Toronto](#), Canada in October. At these meetings the SSAC provided briefings on recently published and ongoing work.

**Workshops on DNSSEC at ICANN Meetings in 2012** – The SSAC held DNSSEC Workshops in coordination with the DNSSEC Deployment Initiative at the ICANN meetings in [San José](#), Costa Rica in March, [Prague](#), Czech Republic in June, and [Toronto](#), Canada in October. These workshops provide a forum for both experienced and new people to meet, present and discuss current and future DNSSEC deployment issues. There also were separate sessions that provided an introduction to DNSSEC basics intended for people who are not yet familiar with DNSSEC in [San José](#), [Prague](#), and [Toronto](#).

**Outcomes/Collaboration on SSAC Work** -- SSAC publications directly inform the work of the community. For example, SAC056, the SSAC Advisory on Impacts of Content Blocking via the Domain Name System (09 October 2012), addressed questions raised by the Governmental Advisory Committee (GAC), and the SSAC Comment on the WHOIS Policy Review Team Final Report (SAC55) helped to inform the Board in its 08 November 2012 [Resolution](#) on WHOIS. The SSAC also held a [panel discussion](#) at the Internet Governance Forum (IGF) on Blocking and Filtering Internet DNS Content.

## Work Completed in 2012

**[SAC056]: SSAC Advisory on Impacts of Content Blocking via the Domain Name System (09 October 2012)** – This Advisory explores the technical impacts related to DNS blocking. The Advisory notes that the use of Domain Name System (DNS) blocking to limit access to resources on the Internet has become a topic of interest in numerous Internet governance venues. Several governments around the world, whether by law, treaty, court order, law enforcement action, or other actions or agreements, have either implemented DNS blocking or are actively considering doing so. However, due to the Internet's architecture, blocking by domain name can be easily bypassed by end users and is thus likely to be largely ineffective in the long term and fraught with unanticipated consequences in the near term.

**[SAC055]: SSAC Comment on the WHOIS Review Team Final Report (14 September 2012)** – This is the SSAC Comment on the [Final Report](#) of the WHOIS Policy Review Team. In this Comment the SSAC emphasizes that there is a critical need for a policy defining the purpose of collecting and maintaining registration data. The SSAC also comments on each of the recommendations in the WHOIS Review Team Final Report.

**[SAC054]: SSAC Report on the Domain Name Registration Data Model (11 June 2012)** – This report focuses on the information that is associated with a domain name from the time a registration is created – and the domain name is thus “instantiated” in the domain name system (DNS) – until the registration expires. The SSAC thinks that gaining an understanding of what data are necessary and relevant to managing domain name registrations is an important step to reduce or eliminate the considerable variability in how DNRD are labeled, represented, or formatted and notes that these types of variability can be addressed through the specification and implementation of a standards-based, structured, and extensible data model. This Report offers such a model for community consideration.

**[SAC053]: SSAC Report on Dotless Domains (23 February 2012)** – The report notes that the new generic TLD (gTLD) program could introduce a significant number of new top-level domain names to the DNS. This prospect has generated considerable interest, and sometimes confusion, in how top-level names can be used. A frequently asked question is: *If I register "dot BRAND", will I be able to use the label "BRAND" alone in a URL or an email address? What will happen if I do?* In its report the SSAC calls a domain name that consists of a single label a *dotless domain*. Applicants for new gTLDs who ask the question posed above want to know whether or not a dotless domain would be handled by Internet infrastructure and applications in the same way as other domain names. In this report, the SSAC finds that dotless domains would not always work as expected given current DNS implementation and existing application behavior. In particular, it finds that the way in which domain names are interpreted in different contexts would lead to unpredictable and unexpected dotless domain behavior.

**[SAC052]: SSAC Advisory on Single-Character Internationalized Domain Name Top-Level Domains (31 January 2012)** – This advisory is the SSAC's response to the ICANN Board's request for advice concerning the security and stability impact of delegating single-character international domain name (IDN) top-level domains (TLDs). The advisory findings include that single-character TLDs are more likely to cause user confusion than TLDs with more than one character and recommends both a very conservative approach to the delegation of all single-character IDN TLDs in all scripts and attention to the ongoing studies in the IETF and other bodies.

**SSAC Comment on the ICANN Draft Roadmap to Implement SAC 051 (05 April 2012)** – In this Comment the SSAC notes that the WHOIS (directory) service is an important concern to the SSAC, as evident by the number of SSAC advisories devoted to this issue. In particular, SAC027, SAC033 and SAC051 have been calling for the replacement of the WHOIS protocol since 2008. The SSAC appreciates that ICANN has delivered a roadmap for doing so. The SSAC agrees with the multi-pronged approach suggested by the roadmap. This Comment offers suggestions to further strengthen and bring clarity to the roadmap.

**SSAC Comment on the ICANN FY13 Budget: Impact on SSAC Productivity (08 June 2012)** – In this Comment the SSAC notes that ICANN's proposed Fiscal Year 2013 (FY13) Operating Plan and Budget decreases ICANN's overall support for the SSAC. It further notes that there is a high risk that the SSAC will lose effectiveness due to lack of support from ICANN, and the SSAC requests reconsideration in dialog with ICANN management. The SSAC also questions the rationale behind the denial of one of its funding requests for the SSAC's standing annual retreat, which SSAC uses for strategic planning and work sessions attended by its volunteers. The Comment requests the following: restoration of the retreat funding; to receive travel support for ten members per ICANN meeting as included in the current draft budget; and improvements to address the lack of SSAC Administrative Committee face-to-face meetings and logistical issues during ICANN meetings, which inhibit the effectiveness of the SSAC.