Background-Public Concerns and Initial Steps

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September 2013 News Reports

Sept 2013- NYT: NSA Able to Foil Basic Safeguards of Privacy on Web

“Cryptographers have long suspected that the agency planted vulnerabilities in a standard adopted in 2006 by [NIST]…”

“Classified N.S.A. memos appear to confirm that the fatal weakness… was engineered by the agency.”

NIST Response on SP800-90A

- These articles referred to the Dual Elliptic Cure Random Bit Generator (Dual_EC_DRBG) in SP800-90A
- Based on these concerns, we reopened the SP800-90 series:
  - Released ITL Security Bulletin, September, 2014
  - Recommended against use of Dual_EC_DRBG
- Revised Draft SP800-90A to remove Dual_EC_DRBG
  - Released new draft SP800-90A in April, 2014
  - Currently out for 30 day comment period
These reports led to broader questions on the integrity of NIST’s standards development process.

In November 2013, NIST announced a review of its cryptographic standards and guidelines program:
- Will consider improvements to development process
- Include a review of existing body of work

Announced intent to include an independent organization.
Purpose and Scope of NIST IR 7977

• As part of the review, Draft NIST Interagency Report 7977, *NIST Cryptographic Standards and Guidelines Development Process*
  – Released February 18th
  – Available at: [http://csrc.nist.gov/groups/ST/cryptoreview/process.html](http://csrc.nist.gov/groups/ST/cryptoreview/process.html)

• Draft explains how we develop standards

• Developed to facilitate public feedback through a public comment period on the draft

• Intended to serve as basis for the review of existing body of work
Overview of Crypto Standards Process

The draft identifies:

• Our Principles
• Stakeholders and Collaborators
• Standards and Guidelines Publications
• Development Processes
  – International Competitions
  – Adoption of Existing Standards
  – Development of New Standards
• Public Review and Outreach
Public Comments

• Public comments closed April 18th
• NIST received 18 comments
  – Available at: http://csrc.nist.gov/groups/ST/crypto-review/public-comments-nistir7977.pdf

• General themes:
  – Requests for more detail on procedures
  – Collaboration with international standards organizations
  – Call for greater transparency
More Information

NIST publications available at:

csrc.nist.gov

Crypto Toolkit:

csrc.nist.gov/groups/ST/toolkit/