



## **New Generic Top-Level Domains: Root Scaling Issues**

New York/London City

July 2009



## **ICANN DNS Root Scaling Study**

### **SSAC**

Security and Stability Advisory Committee

### **RSSAC**

Root Server System Advisory Committee

### **ICANN Staff**



## Root Zone Expansion

- New resource records for DNSSEC
- Internationalized Top-level Domain Names
- New address records and glue for IPv6
- New gTLDs



## Root Zone Expansion

- New resource records for DNSSEC
  - ♦ <http://www.dnssec-deployment.org>
  - ♦ <https://ns.iana.org/dnssec/root.zone.signed>
- Internationalized Top-level Domain Names
  - ♦ <http://www.icann.org/en/topics/idn>
- New address records and glue for IPv6
  - ♦ <http://www.iana.org/reports/2008/root-aaaa-announcement.html>
- New gTLDs
  - ♦ <http://www.icann.org/en/topics/new-gtld-program.htm>



## Root Scaling Study

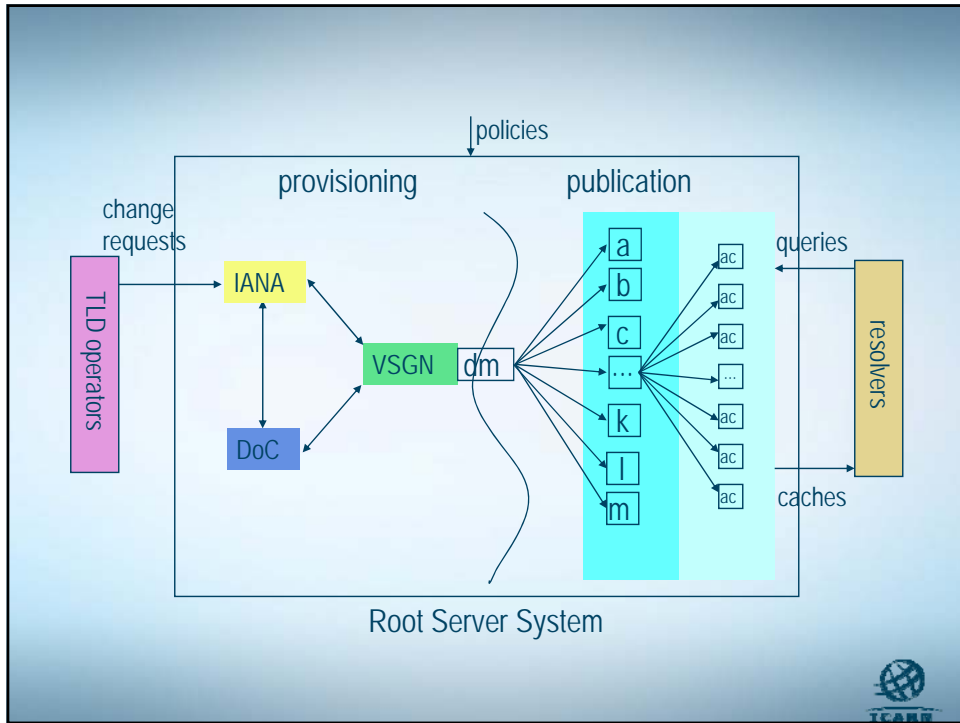
- Requested by ICANN Board
- Study team assembled early May 2009
  - ♦ Lyman Chapin (lead)
  - ♦ Jaap Akkerhuis, Glenn Kowack, Patrik Fältström, Lars-Johan Liman, Bill Manning
- Announcement and public comments
  - ♦ <http://www.icann.org/en/public-comment/#root-scaling>
- Draft report 31 August 2009
  - ♦ public review and comment prior to ICANN annual meeting in late October 2009



## How will root zone expansion affect the operation of the root server system?

- Model-based analysis of root zone scaling issues
  - ♦ Compile a description of the complete root server system
    - Provisioning side (update) and query side (lookup)
    - Technical infrastructure and operational procedures
  - ♦ Model the relationships among different parts of the system
    - How does changing something in one part affect each other part?
    - Goal is quantitative model (as timeframe of study allows)
- Factual/analytical tool for resolving concerns about root server system security and stability as the root grows





Public Comments  
[scaling@icann.org](mailto:scaling@icann.org)

THANK YOU

