



# Office of the CTO Roadmap

David Conrad | RSSAC/OCTO Meeting | 7 November 2016

# Introduction

- OCTO: Office of the CTO
  - Any resemblance to a children’s cartoon entirely unintentional
  - Two departments: Research and SSR
  - Also: Technical Engagement and Program Management
- Met in June 2016 for our Retreat
  - These slides represent the output



# The Team (as of 1 Oct 2016)

- David Conrad (CTO)
  - Cathy Petersen (Exec Assistant) - Cat Herding
- Matt Larson (VP of Research)
  - Roy Arends - DNS & DNSSEC
  - Alain Durand - Network Numbers & IETF
  - Paul Hoffman - DNS, cryptography, & testing
  - Ed Lewis - DNS, DNSSEC & Related protocols
- John Crain (CSSRO)
  - Carlos Alvarez - SSR Technical Engagement
  - Richard Lamb - DNSSEC Program Manager
  - Dave Piscitello - Security & ICT Coordinator
- Adiel Akplogan (VP, Technical Engagement)
- Steve Conte (Director of OCTO Programs)
  - Barbara Roseman – TEG Coordinator





To **constantly improve knowledge** about the identifiers ICANN helps coordinate; to **disseminate this information** to the Internet community; to **improve the technical operation** of the Internet's system of unique identifiers within ICANN's limited remit; and to **improve the technological stature** of ICANN, both the organization and the community.



**FY17 ROADMAP**

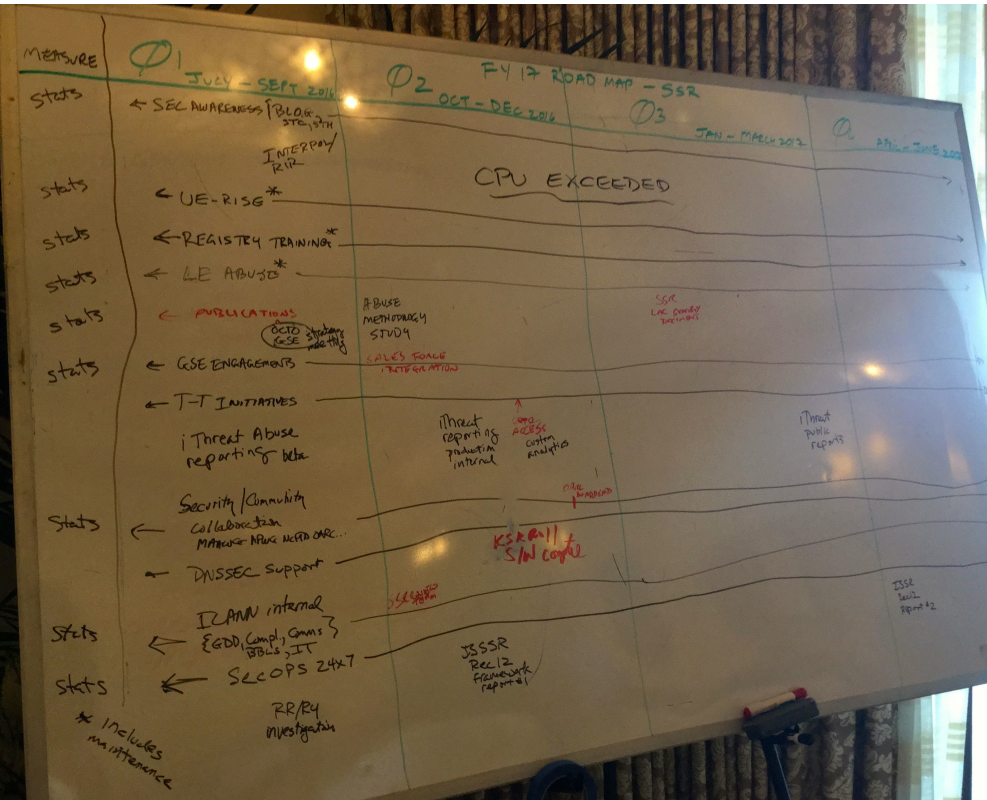
Q1 JULY - SEPT '16	Q2 OCT. - DEC. '16	JAN - MARCH '17	APRIL - JUNE '17
KSK-OPS PLAN public KSR-REQS 30 DAY REACTIVE TEST TOOL KSK TESTS IN MIDDLEBOX TRAFFIC ANALYSIS system Middlebox lab expansion (all 4 quarters) ITHI/ICR kick off ITHI/Name workshop IPv6/SDP paper/blog 6761-dl 4 quarters Administrative server analysis - RA IPv6 Compliance measurement - Publication of data - Internal IPv6 Compliance assessment - Publication of outcome - Review of IPv6 Requirement in RA	ICSK Comm Start collecting available TLD zones IPv6 support presentations at RIR meetings Eggs/Biry Publish about all server action	Refer to secondary for more TLDs... DNVSEC ops present updates ITHI/ICANN update definition ITHI/Data collection IPv6 measurement update IPv4 market update Whois accuracy Integrated ICANN Statistics Portal (data visualization)	Move middlebox lab to LA after publicly measurements Perform a miracle

- KSK Rollover
- DNS Traffic Analysis
- Middlebox Testing
- Authoritative Server Testing
- ITHI
- IPv6 Support Analysis

# FY17 Research Agenda

- DNSSEC
  - Validator behavior and identification, operational demographics
- Identifier Technologies Health Indicators
  - Domain names, numbering resources, protocol parameters
- Numbering Resources
  - IPv6 GDP per-capita, IPv6 Measurement, IPv4 Marketplace, Numbering whois vs. BGP database
- Names
  - Domain Name definition and clarification, Special use domain registry improvement
- DNS Traffic Analysis
  - Root server traffic, L-root single location
- DNS Operations and Infrastructure
  - Authoritative server behavior, middlebox DNS behavior
- Domain Registration System
  - RDAP TLD pilot server
- Data
  - Open Data Pilot

# Security, Stability, Resiliency FY17



- Security Awareness Engagement
- DNS Abuse “Scoreboard”
- DNSSEC Support
- Security Operations



## Research

- Understanding the behaviors of Internet's system of unique identifiers
- Exploring future path of Internet's system of unique identifiers

## SSR

- Investigating abuse of the Internet's system of unique identifiers
- Mitigating abuse of the Internet's system of unique identifiers (within remit)

# Questions?

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