

# **PCH Services at TREX**

**TREX Workshop 2012**  
**Friday, September 14, 2012**

**Bill Woodcock**  
**Research Director**  
**Packet Clearing House**

# A Short History of PCH

Started in 1993-1994 to build IXPs in the United States

Built five IXPs on the west coast 1994-1995

Started assisting with IXP construction internationally in 1995

Expanded to providing TLD nameservice in 1997

Started deploying root nameservice in 2000

Began providing services over IPv6 in 2001

Started Internet infrastructure security work in 2002

Became fully IPv4/IPv6 dual-stack in 2009

Started providing FIPS 140-2 L4 DNSSEC signing in 2011

# What We Do Now

## IXP support

Helped establish or support more nearly half of the world's 350 IXPs, with training, equipment, configuration, governance, operational support services.

## DNS support

Anycast hosting more than a third of the world's TLDs, as well as several root servers, and holding and applying the DNSSEC keys for 43 zones.

## Security coordination

Operator and secretariat for INOC-DBA, NSPsec participant, coordination point for a lot of opsec communication between operators and government.

## Policy and regulatory

Educational workshops, training on Internet governance, and coordination for regulators, law enforcement, and ministers of comms, economy, military.

## Where We're Going

Upgrading from 7301 / 2811 routers to ASR 9000 / 900

More dedicated diagnostic hardware: netflow / pcap

Additional DNSSEC sites in San Jose and Montevideo

Rolling out INOC-DBA crypto and auth features

Publishing more open-source tools and libraries

Staffed offices in Europe, North America, South America, Asia, the Caribbean, and the Pacific

**INOC-DBA**  
Intelligence Protection Center

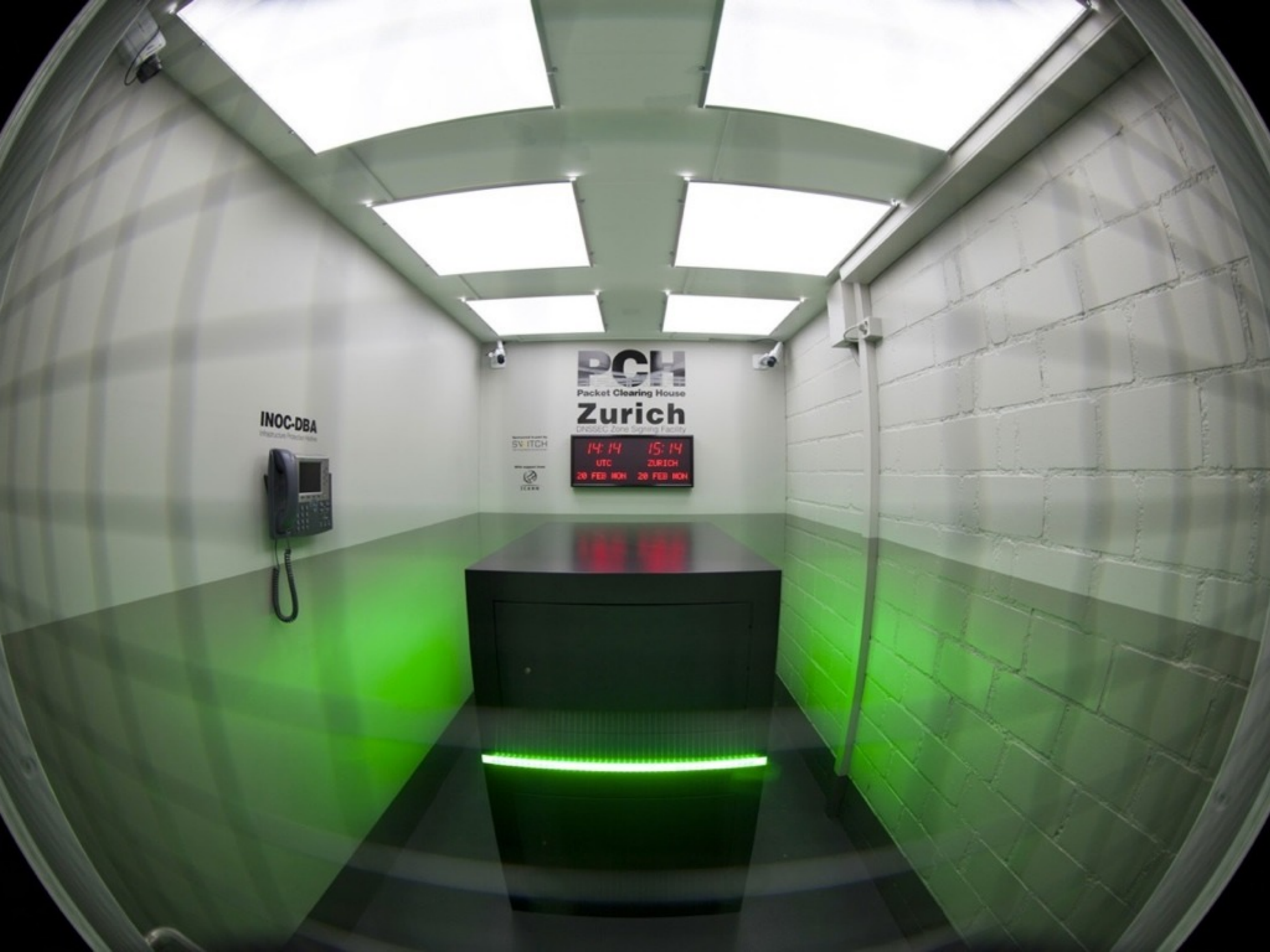


**PCH**  
Packet Clearing House  
**Zurich**  
DNSSec Zone Signing Facility

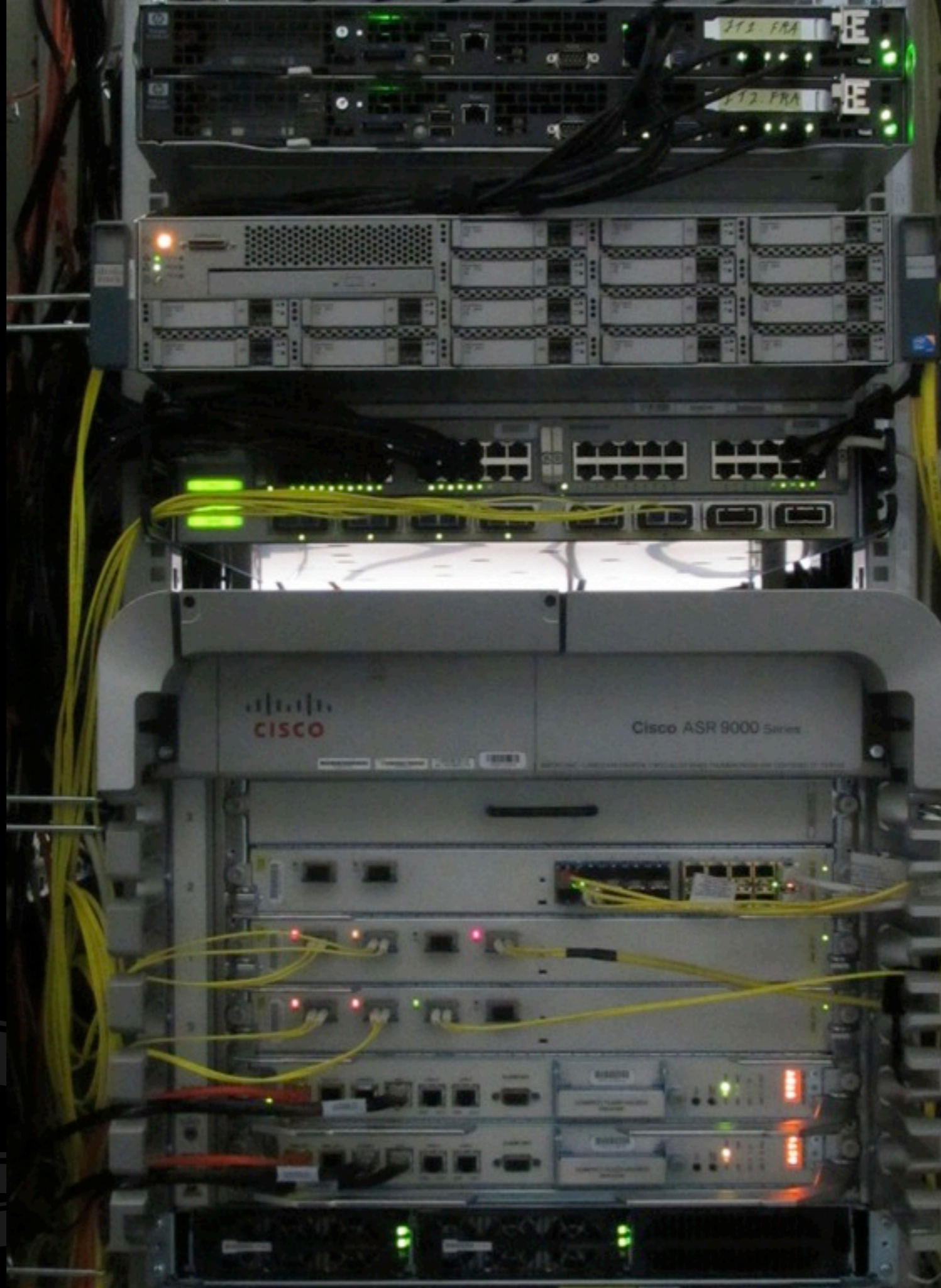
Member of the family  
SV ITCH



14:14 15:14  
UTC ZURICH  
20 FEB MON 20 FEB MON







## Please Peer With Us!

AS 42 - production traffic

AS 3856 - research traffic

Other locations listed in <https://pch.net/peering>

Nearby: Tallinn, Stockholm, Warsaw, Berlin,  
Prague, Frankfurt, Vienna, Munich, Amsterdam...

85 locations - 2,558 peer ASes - 18,115 sessions.

## Also, We're Hiring

PCH has open positions for programmers:

Java / PHP / SQL

SIP / SRTP / ZRTP / Jabber / PGP

BGP routing analysis

DNS statistics analysis

Operational security analysis

Statistical / economic / policy analysis





# Thanks, and Questions?

<https://pch.net>

Bill Woodcock  
Research Director  
Packet Clearing House  
[woody@pch.net](mailto:woody@pch.net)