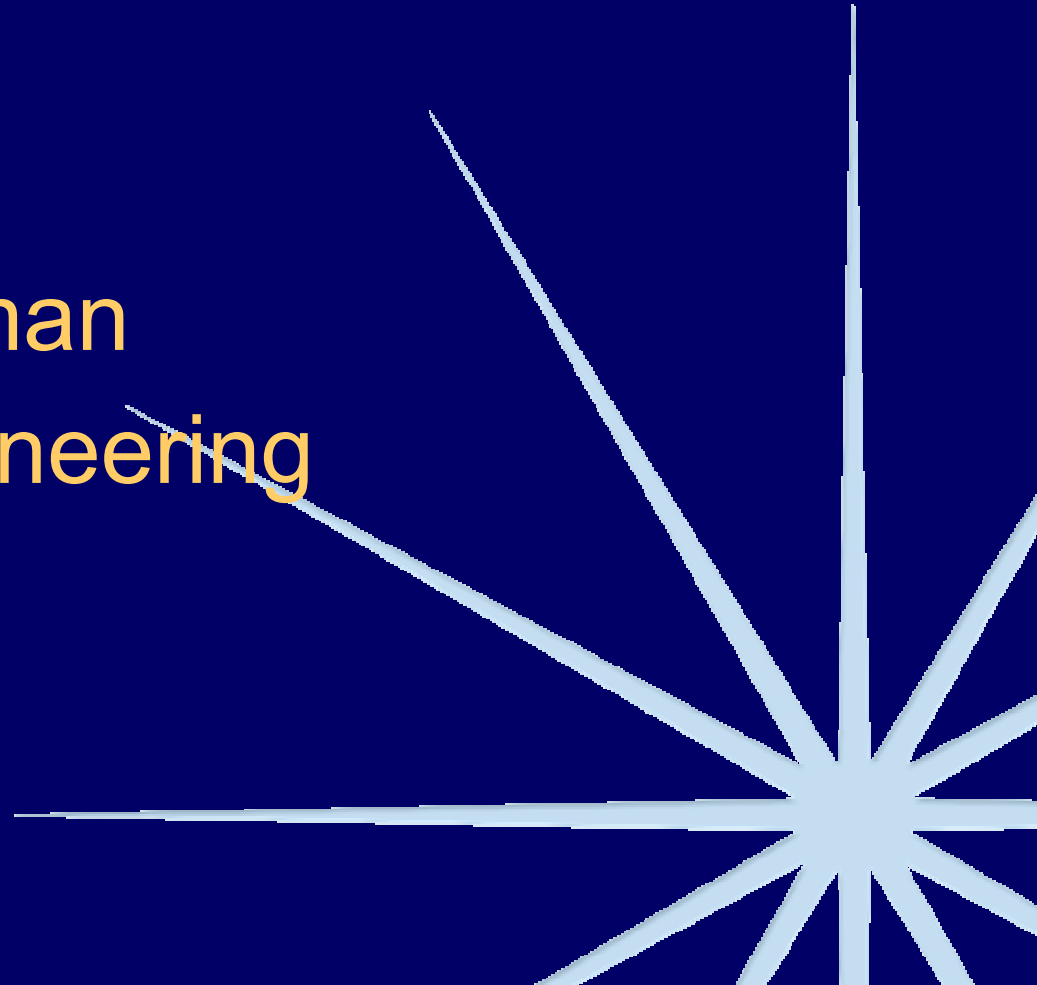


# Engineering Department

Ginny Listman  
Director of Engineering



# Engineering Staff

Director:  
Ginny Listman

System Administrators:  
Matt Ryanczak  
Darren Kara  
Matt Rowley  
Ray Stark  
Wogri Hennerbichler

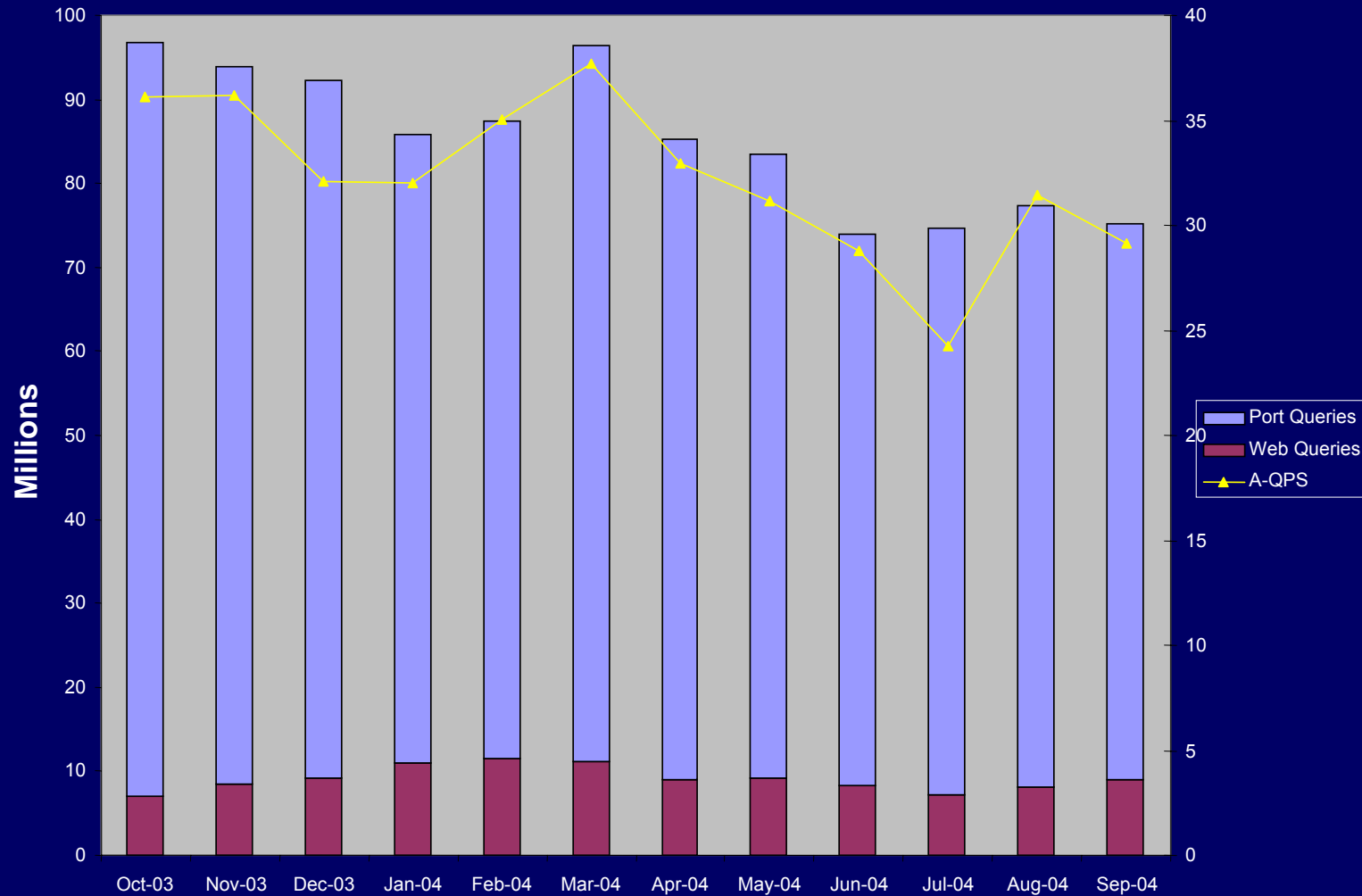
Software Engineers:  
Cathy Murphy  
Adam Guyot  
Matt O'Donnell  
Abram Thiekle  
Ming Yan



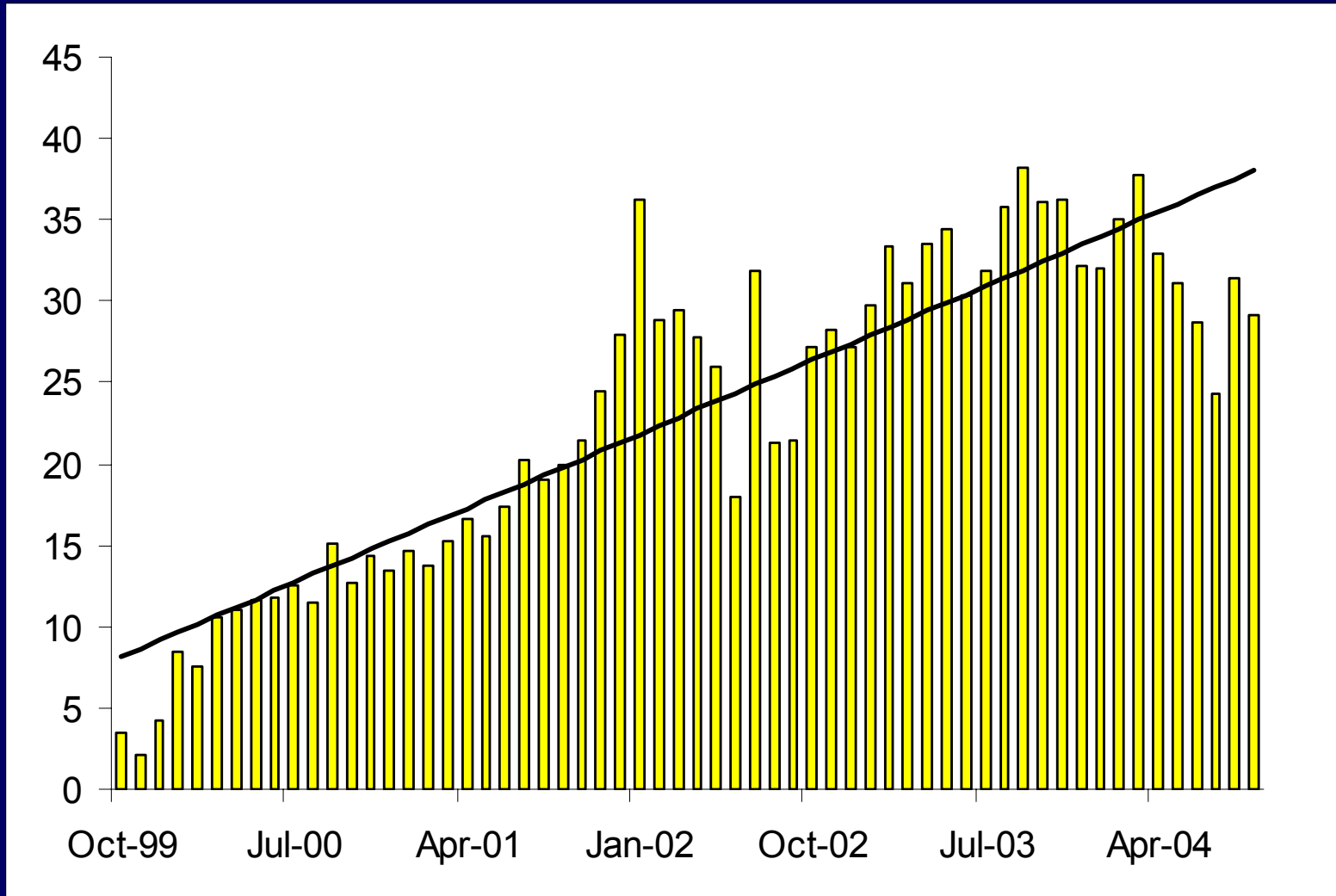
Database Administrator:  
Tim Christensen

Systems Engineer:  
Michael O'Neill

# WHOIS Statistics



# WHOIS Queries Per Second



# RWhois Statistics

Orgs with networks using RWhois	233
RWhois Servers Up	144 (61.8%)
RWhois Servers Down	89 (38.2%)

Addresses using RWhois by nodes	5.67%
Addresses using RWhois by nets	2.49%

# Operational Activities - Completed

## \* WHOIS Redundancy Project

- ▶ Provide services from second location
- ▶ Replace hardware
- ▶ Rewrite rate limiting software

## \* Improvements to internal network

- ▶ Firewall redundancy
- ▶ DNS cleanup

## \* Disaster Recovery Project

- ▶ Added to the co-location: WHOIS, RWhois, Routing Registry and HTTP
- ▶ Migration of many internal applications off legacy servers

# Operational Activities – On-going

## \* IPv6 services at co-location

- ▶ DNS, FTP, Web, WHOIS via Port 80

## \* E-Mail improvements

- ▶ Public list redundancy at co-location
- ▶ Spam identification and deletion

# Registration and Membership Support - Completed

- ★ RWhois referral generation change
  - ▶ No longer use RWhois Template
  - ▶ Provide rwhois URL on Org Template
- ★ Modifications to registration software to support policy and template changes
- ★ Migration of Billing Software
- ★ Upgrade meeting registration software
- ★ Upgrade election software



# Registration and Membership Support – On-going

- \* Web-based RSA
- \* IPv6 template integration
- \* Membership database integration

# Policy Implementation Completed

- ★ 2003-5: Distributed Information Server Use Requirements
  - ▶ Implemented tool to monitor RWhois servers availability
- ★ 2003-3: Residential Customer Privacy
  - ▶ Modified registration application to enforce
  - ▶ Converted existing records to meet criteria

# Engineering Impact of Policies at Last Call/BoT

## \*2002-2: Experimental Internet Resource Allocations

- ▶ Modify database schema to identify experimental allocations
- ▶ Develop notification report to track expired allocations

## \*2003-4 IPv6 Policy Changes

- ▶ Minor modifications to registration software

Thank You!