



Introduction to the IETF Standards Process

**Russ Housley
IETF Chair**

23 July 2012



Internet Engineering Task Force

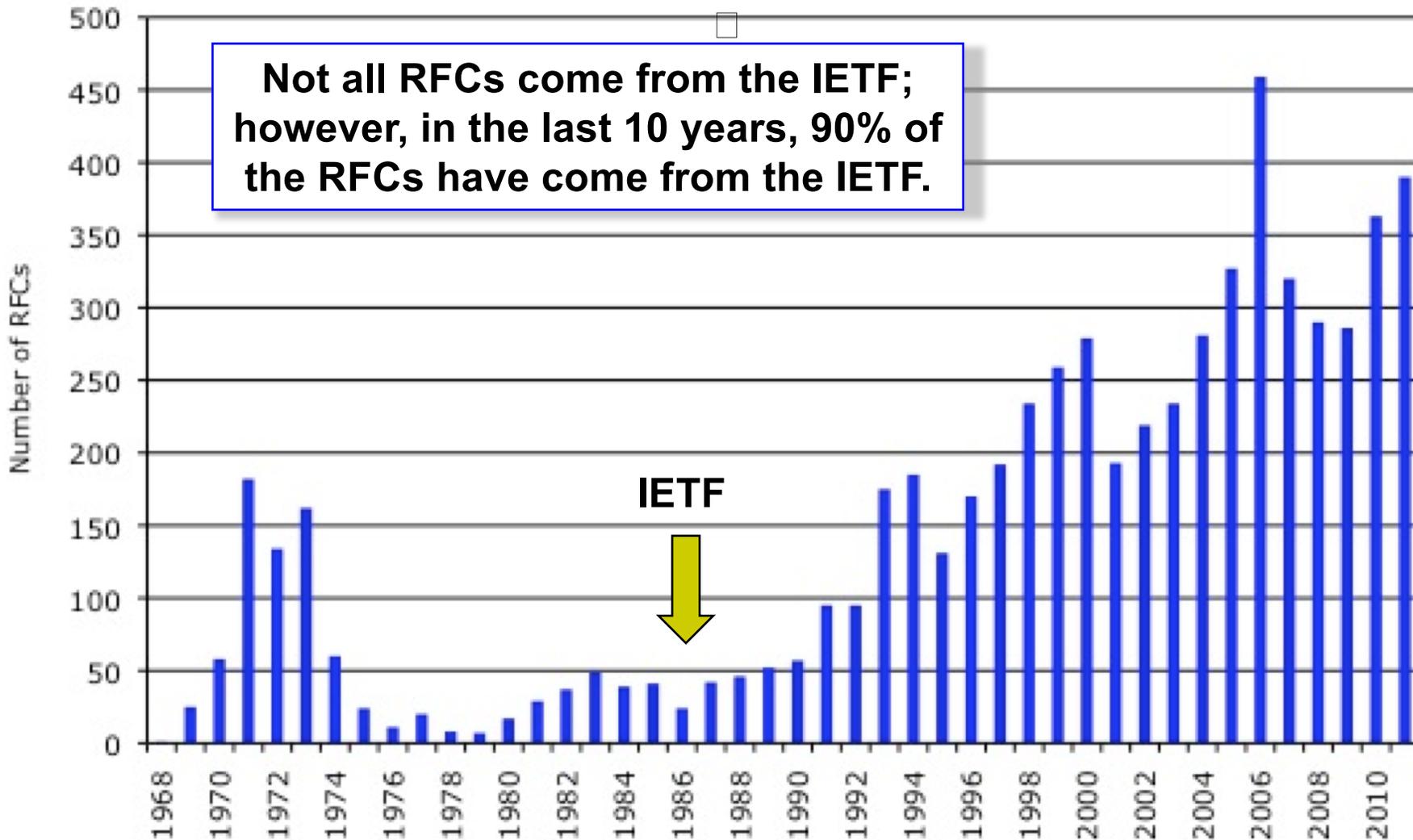
- IETF was established in 1986
- “We make the net work”
- The mission of the IETF is to produce high quality, relevant technical and engineering documents that influence the way people design, use, and manage the Internet in such a way as to make the Internet work better. These documents include protocol standards, best current practices, and informational documents of various kinds. [RFC 3935]



IETF Open Standards

While the mission of the IETF is to make the Internet work better, no one is “in charge” of the Internet. Instead, many people cooperate to make it work. Each person brings a unique perspective of the Internet, and this diversity sometimes makes it difficult to reach consensus. Yet, when consensus is achieved, the outcome is better, clearer, and more strongly supported than the initial position of any participant.

RFCs Published 1969 - 2011





Ethos of the IETF

- IETF uses an open standards process
 - All interested people are invited to participate
 - Even if unable to attend the face-to-face meetings, join mail list discussions
 - All documents are online, available to everyone
- One Internet
 - Open standards for a global Internet
 - Maximum interoperability and scalability
 - Avoid specialized protocols in different places
- Contributions are judged on merits:
rough consensus and running code



IETF takes on work when ...

- The problem needs to be solved
- The scope is well defined and understood
- Agreement on specific deliverables
- Reasonable probability of timely completion
- People willing to do the work

IETF is right place when ...



- The problem fits one of the IETF Areas
 - Applications
 - Internet
 - Operations and Management
 - Real-time Applications and Infrastructure
 - Routing
 - Security
 - Transport
- Getting better at working on topics that span Areas
- Working on topics that span Standards Development Organizations (SDOs) take *significantly* more effort to be successful



Liaison Relationships

- IAB appoints individuals to serve as liaison managers with specific SDOs
- IAB has focus on strategic concerns, transparency, and architecture
- IESG has focus on tactical concerns and particular standards
- New-work mail list intended to highlight overlap between two SDOs early in the process
- Liaison statements are posted for all to see:
<https://datatracker.ietf.org/liaison/>



IETF Structure Overview

- The IETF is not a legal entity – no members
- 1000 to 1200 people at 3/year meetings
 - Many more people on mail lists
- ~120 Working Groups (WGs)
 - Where the real work gets done
- 7 Areas, each lead by two Area Directors (ADs)
 - Except General Area is lead by IETF Chair
- IESG: Area management, standards approval
- IAB: architectural guidance, liaison, oversight
- IAOC: oversee budget, contracts, and IPR



IETF Management

- **IETF Chair**
 - IESG Chair, AD for General Area, IAB member, and IAOC member
 - Often seen as spokesman
- **Area Directors (AD)**
 - Two ADs for each Area, except General Area
- **Internet Engineering Steering Group (IESG)**
 - ADs sitting as a body
- **Internet Architecture Board (IAB)**



Area Directors

- Responsible for setting direction in the Area
- Responsible for managing process in the Area
 - Approve Birds of a Feather (BOF) sessions
 - Appoint working group chairs
 - Oversee working group charters
 - IESG and IAB involved in charter approval
- Review all working group documents prior to IESG evaluation
 - IESG approves all IETF RFCs

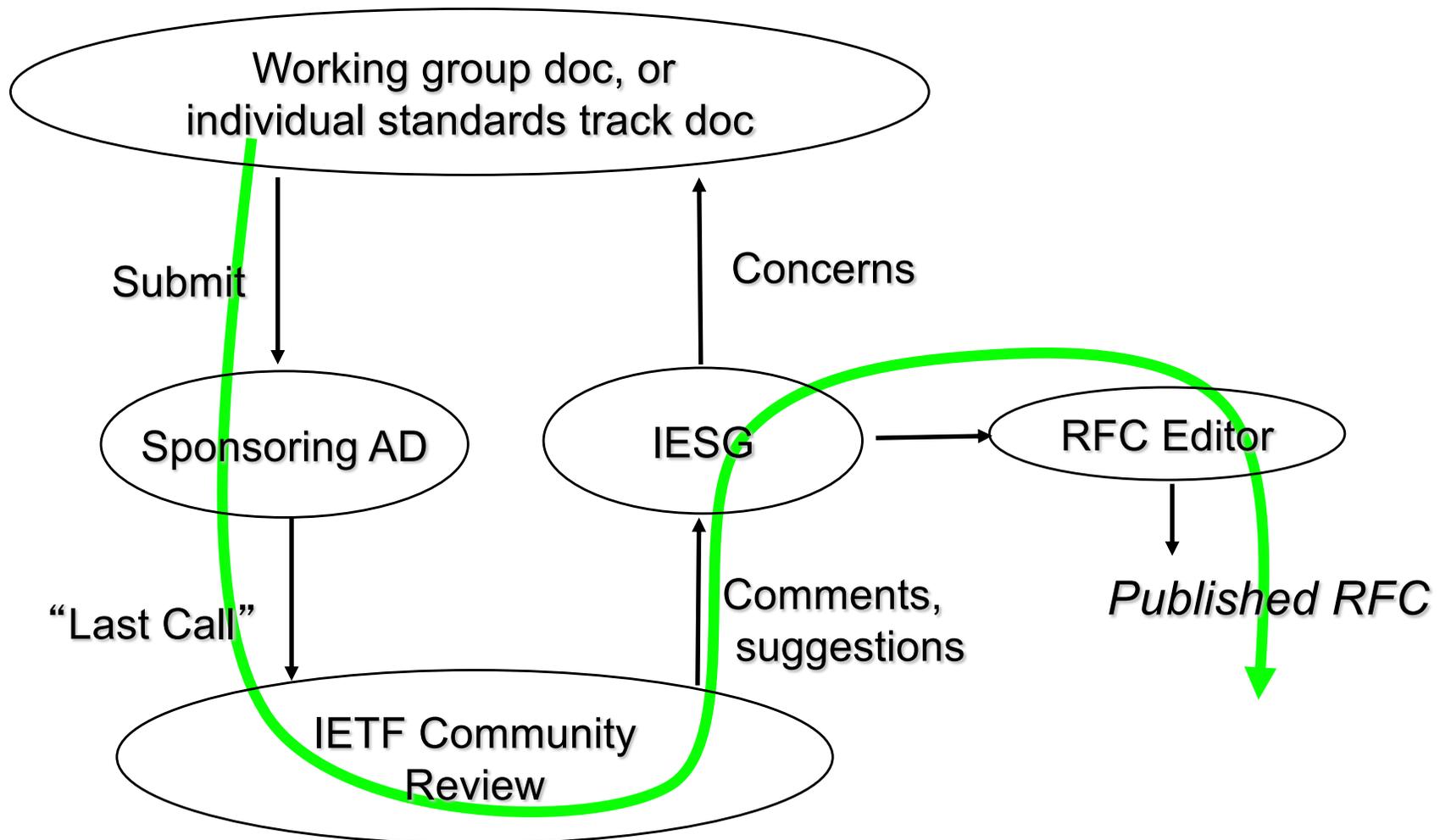
Working Groups



- WGs are primary mechanism for development of specifications and guidelines
- IESG approves WG charters with IAB input
 - Generally short-lived; address a specific problem or produce specific deliverables
- No formal membership; participation open to all
 - Every WG has a mail list
- WG Chair
 - Sets agenda for meetings
 - Appoints document editors
 - Determines when rough consensus has been reached



IETF Standards Approval





Nominations Committee

- IETF Chair, ADs, IAB and 2 IAOC members are picked by Nominations Committee
 - NomCom Chair appointed by ISOC president
- Volunteers serve as NomCom voting members
 - Must attend 3 of last 5 IETF meetings
 - Ten voting members randomly selected from the volunteer pool
- NomCom picks one person for a 2 year term
- Confirmation before names are announced
 - IETF Chair and ADs confirmed by IAB
 - IAB confirmed by ISOC Board of Trustees
 - IAOC confirmed by IESG



IETF is successful when ...

- Participants care about solving the problem
- Participants represent all stakeholders
- Successful Internet protocols have come from top-down and bottom-up approaches
 - Bottom-up is more common today
 - Most things are incremental improvements



IETF Motto

“We reject kings, presidents and voting. We believe in rough consensus and running code.”

Dave Clark, MIT

Thank You



Russ Housley

Phone: +1 703 435 1775

Email: housley@vigilsec.com