

Internet Standards and the Internet Architecture Board

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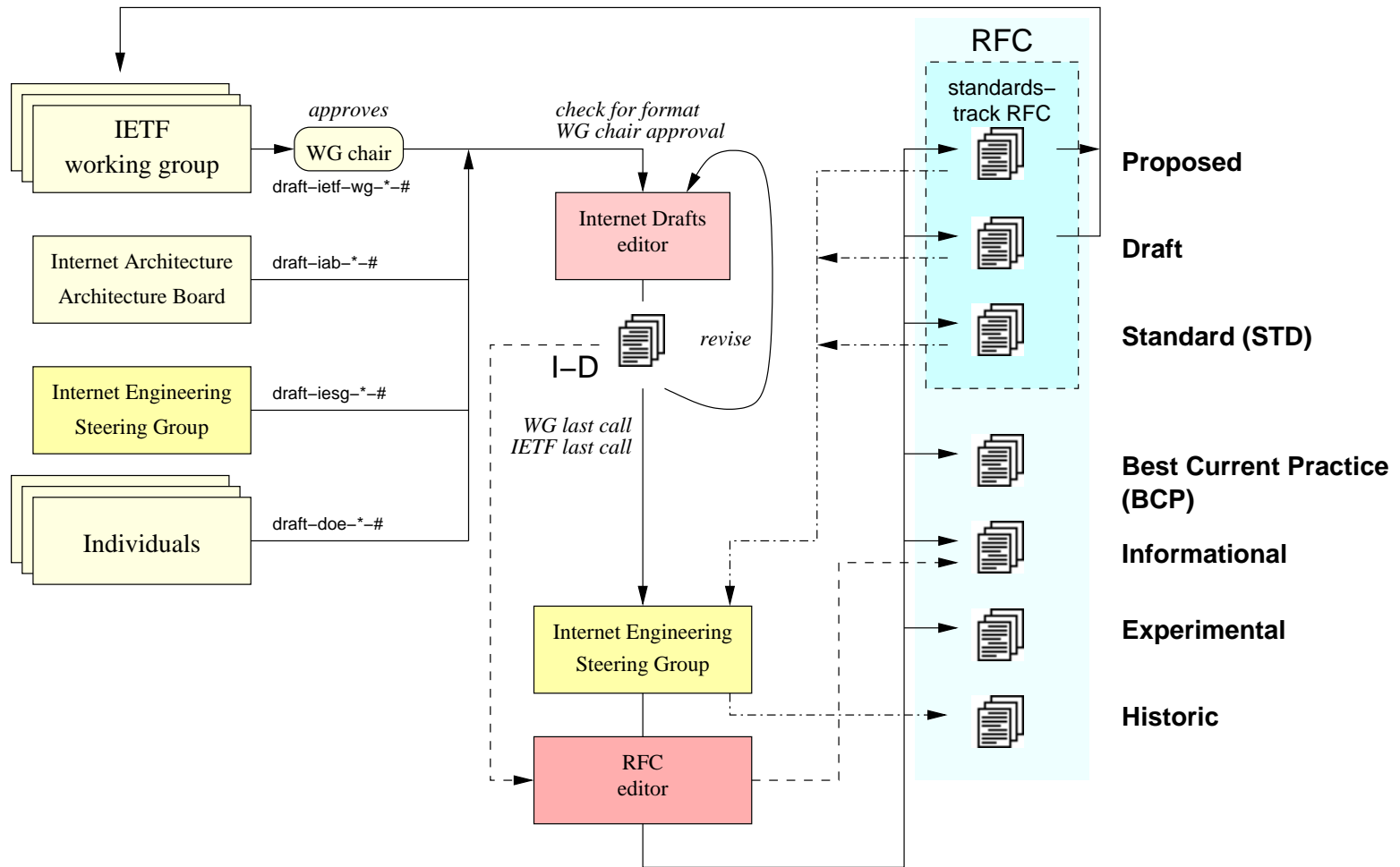
Overview

- review of IETF process
- growth of IETF
- is the IETF getting slower?
- who is contributing and participating?
- Internet Architecture Board
- recommendations

Realm of IETF

- layer 3 and above, plus IP-over-foo and layer "2.5" (PPP)
- network, transport (+ shims), application layers
- management for link layer
- not document/file/media formats like XML, HTML, JPEG, MPEG
- not APIs (exceptions: GSSAPI, LDAP, IPv6 socket extensions)
- no "interfaces", but protocols
- not architectures, but modular components

Document process



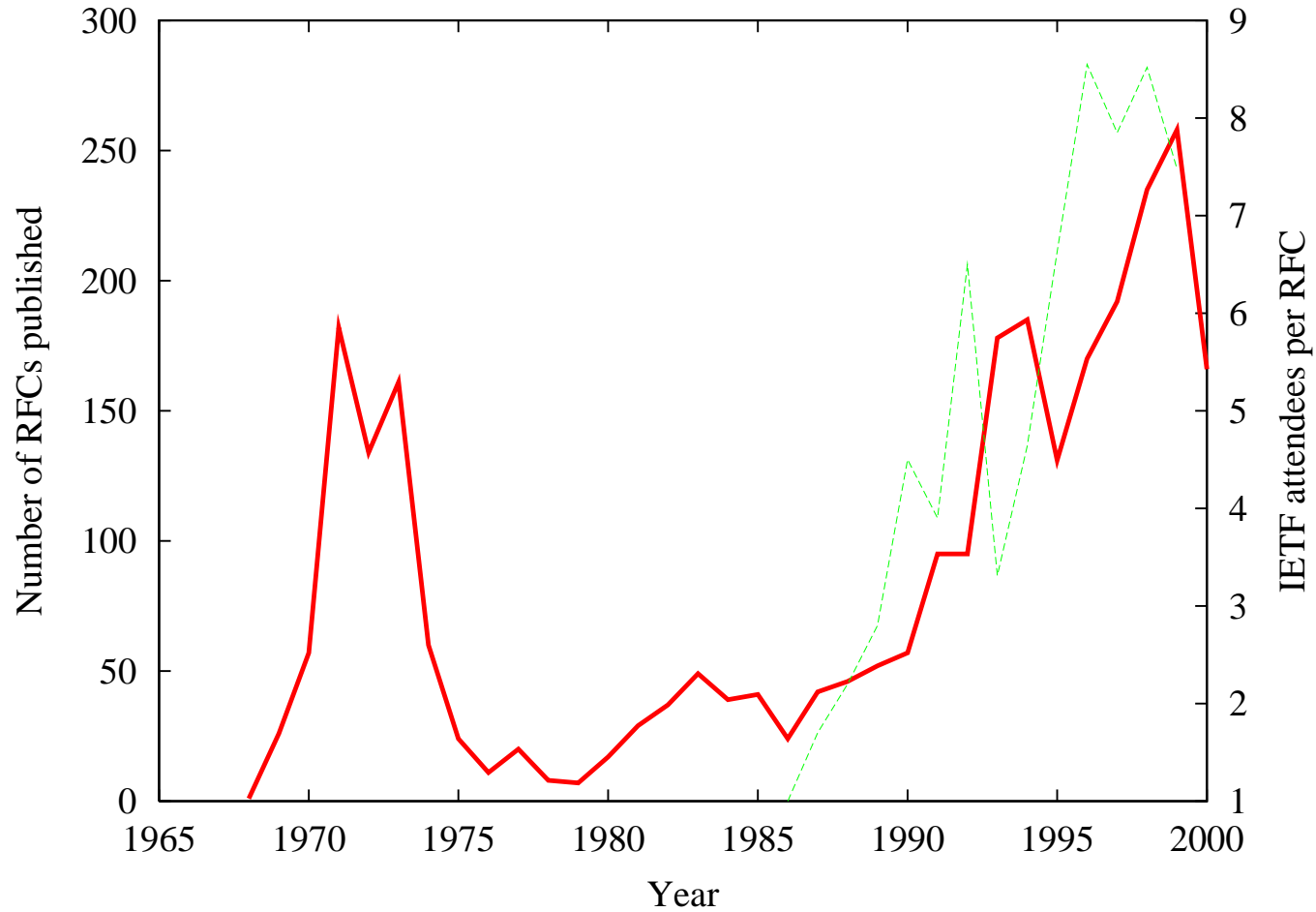
Standardization status

Unknown		918
Informational	I	793
Proposed Standard	PS	690
Experimental	E	183
Historic		109
Draft Standard	D	92
Standard	S	90
Best Current Practice	BCP	45
<hr/>		
Total		2984

IETF – who's in charge

- usually, active participants *not* from standards departments, but from R&D
- participants are expected to speak for themselves, not company
- liaisons not that important
- working group chairs guide WG activities, prime candidates for IESG/AD
- IESG/ADs can initiate and delay, but rarely shape
- IAB can initiate, but doesn't influence details

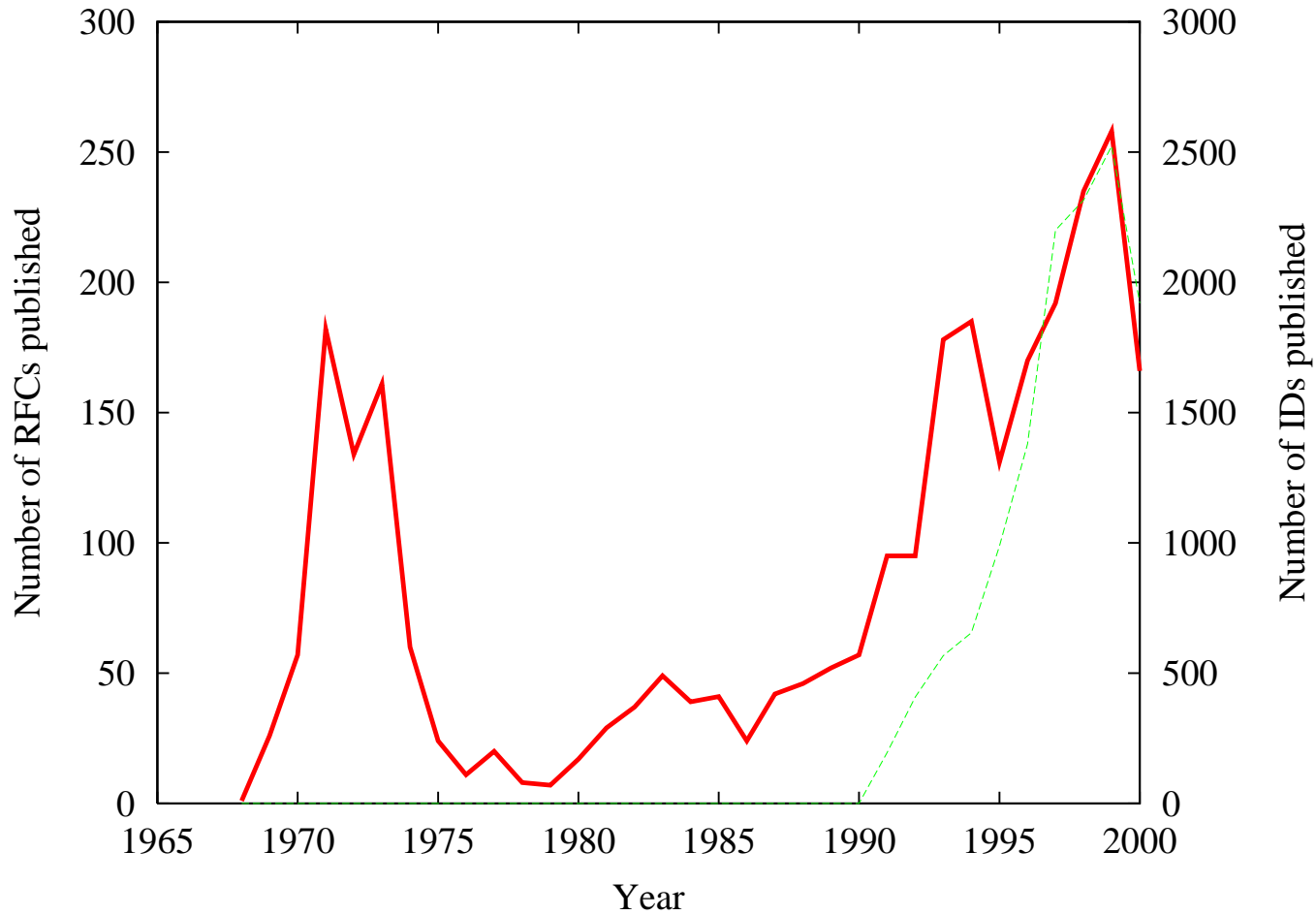
IETF growth: RFC output



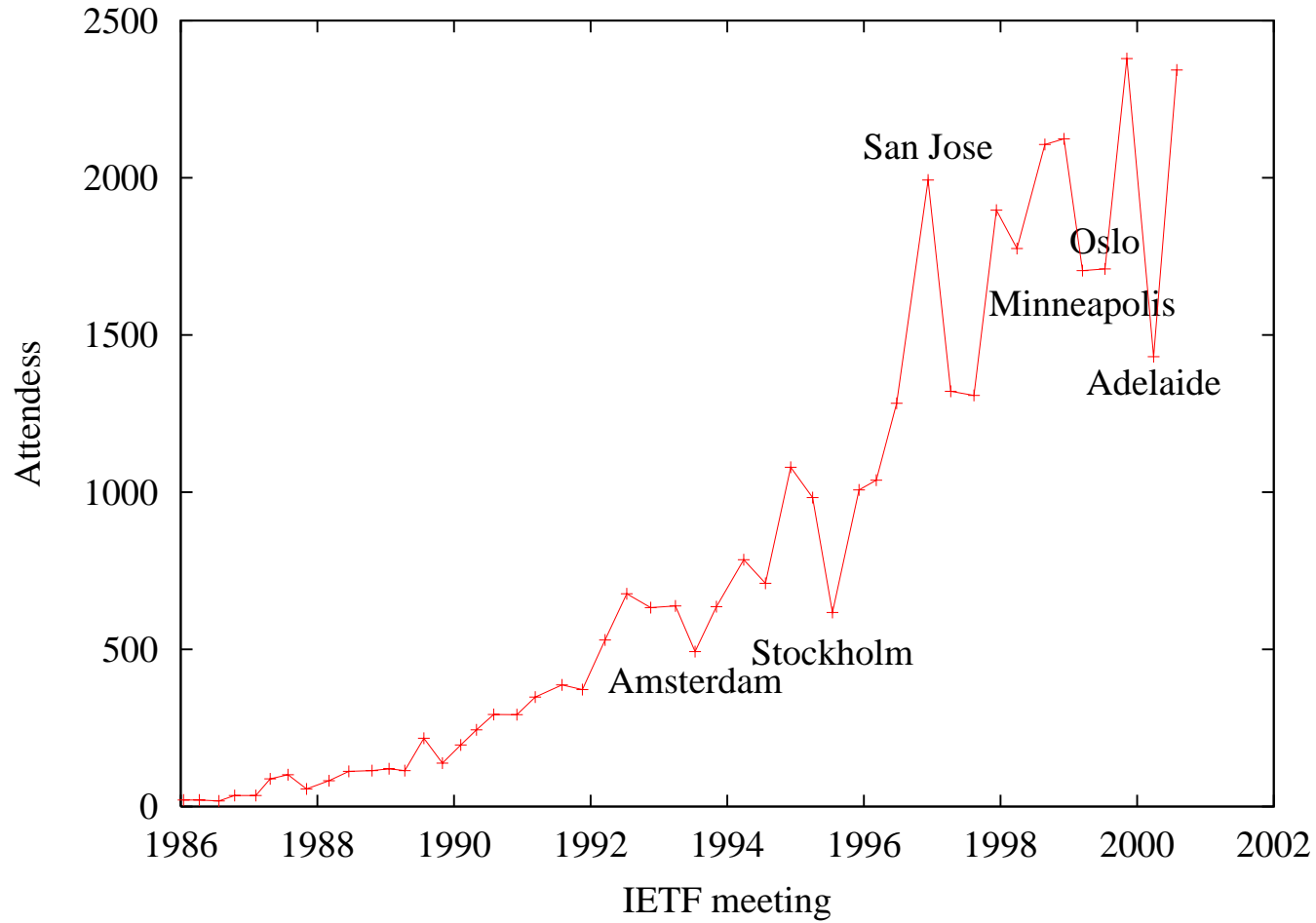
I-Ds vs. RFCs

- anybody can submit an I-D on just about any topic
- roughly, less than one in six I-Ds becomes an RFC
- usually, very little change in last revisions \Rightarrow can start implementations

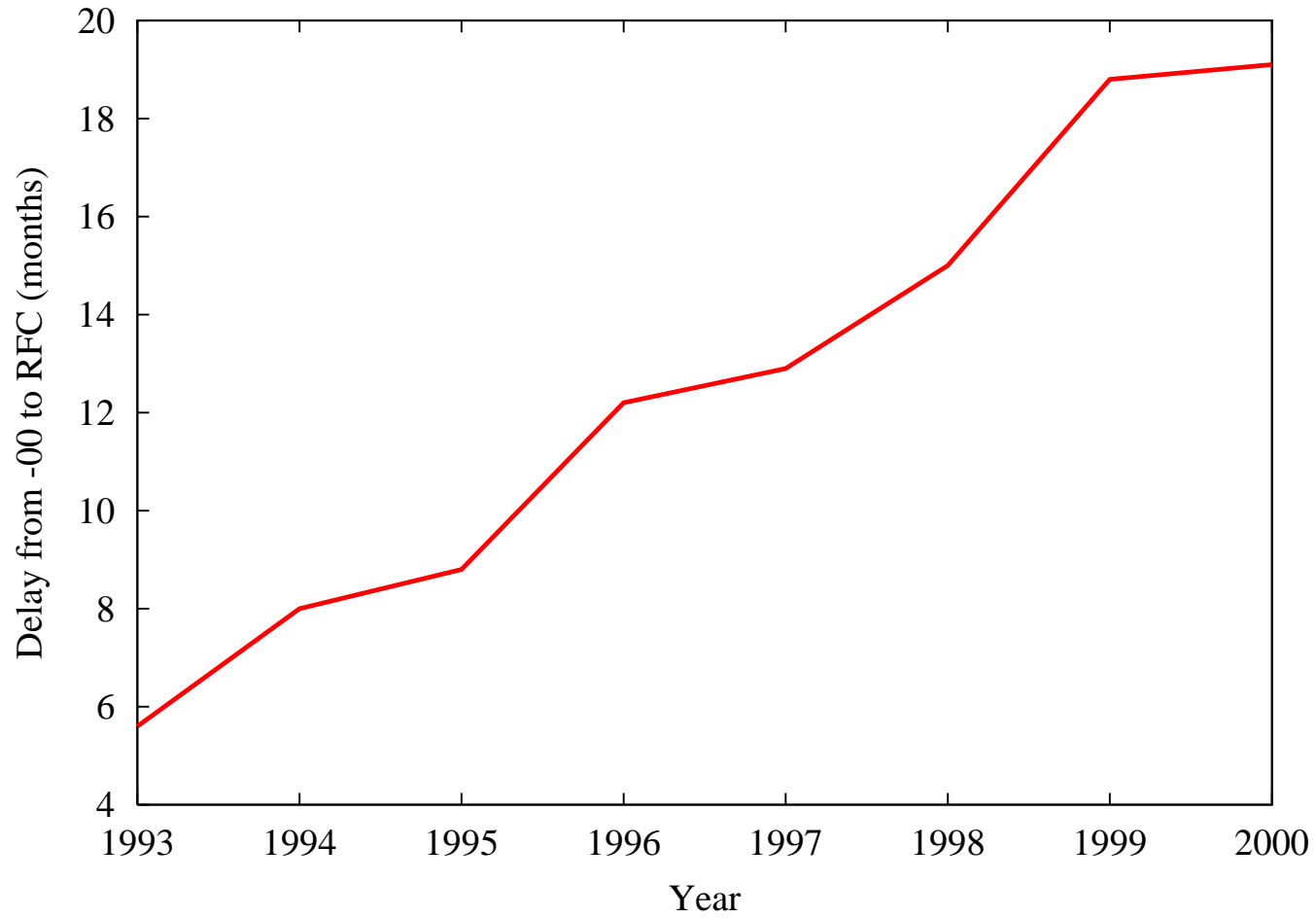
IETF growth: I-D output



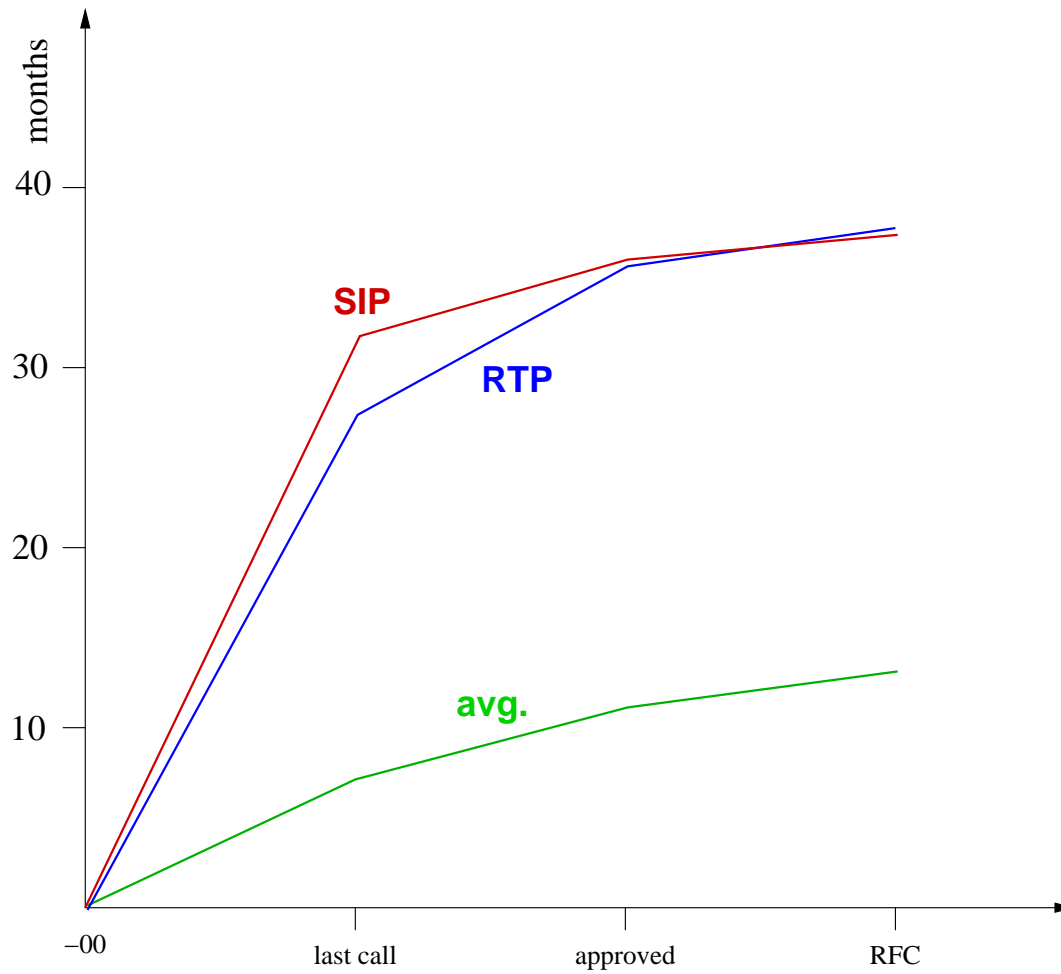
IETF growth: meeting attendance



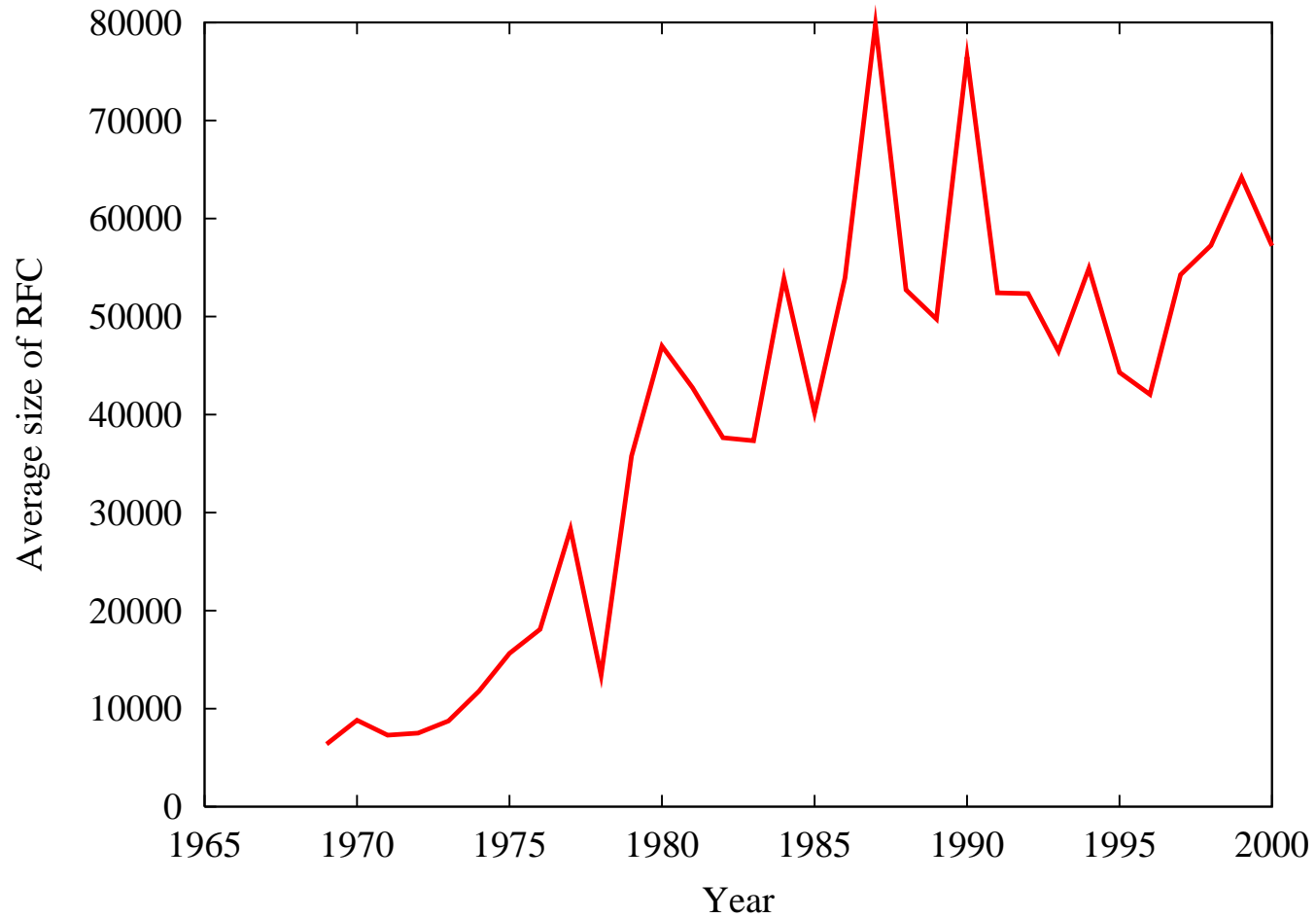
IETF is getting slower



Delays in the process



RFC size is not the culprit



IETF activity

	I-Ds	RFCs	WG chairs	IESG	nomcom
Cisco	287	218	19	3	0
Lucent	117	52	5	1	0
Microsoft	108	98	2	0	0
Nortel	171	19	8	1	2
Sun	113	75	8	1	2

Internet Architecture Board (IAB)

IAB is a technical advisory group of ISOC/IETF, selected by NomCom

IESG Selection: IAB appoints new IETF chair and other IESG candidates, from list by IETF NomCom.

Architectural Oversight: oversight of architecture for protocols and procedures.

Standards Process Oversight and Appeal: oversight of Internet Standards process; appeal board for complaints.

RFC Series and IANA: editorial management and publication of RFCs; administration of Internet assigned numbers.

External Liaison: representative of the interests of the Internet Society in liaison relationships.

Advice to ISOC: advice and guidance to Internet Society for technical, architectural, procedural, and policy matters.

Aside: Nominations Committee (NomCom)

- nominates candidates for IAB and IESG
- 10 voting members + chair + liaisons to IAB/IESG + last year's chair
- voting members selected randomly from volunteers
- volunteers must have been at 2 out of 3 past IETF meetings

IAB members

Harald Alvestrand	Maxware	
Ran Atkinson	Extreme Networks	
Rob Austein		
Fred Baker	Cisco	IETF chair
Brian Carpenter	ICAIR/IBM	
Steve Bellovin	AT&T	Liaison to the IESG
Jon Crowcroft	UCL	
Leslie Daigle	ThinkingCat	
Steve Deering	Cisco	
Tony Hain	Microsoft	
Geoff Huston	Telstra	
John Klensin	AT&T	IAB Chair
Henning Schulzrinne	Columbia U.	
Randy Bush	PSG	Liaison from the IESG
Joyce K. Reynolds		RFC editor
Abel Weinrib	Intel	IAB Executive Director
Erik Huizer	SURFnet	

IAB functions

- meets monthly by phone conference and at IETF meetings
- most of the detailed technical review done by IESG:
 - issue last calls
 - draft reviews and standards actions
 - new working groups

Recent IAB discussions

- ICANN issues (IAB is member of PSO)
- I18N for DNS – allow non-ASCII characters
- QoS architecture
- unique root
- firewalls and NATs
- VoIP architecture document
- IETF process reform discussions
- workshops on wireless, routing
- workshops on “middle boxes” and I18N planned

Process problems to be addressed

- “whole network envy” of link layers (ATM, Bluetooth)
- rubber-stamping of closed organizations
- filibusters and other delays
- IESG overload
- most recent deployed protocols are “proposed standards” NNTP, PPP, RTP, SIP, RTSP, SNMPv2, FDDI MIB, SOCKS, IMAP, RSVP, ... or draft standards: PPP (RFC 1548), HTTP/1.1, BGP4, ...

Cultural problems

IETF does components, not architectures

- does not mandate set of protocols to be used
- different: SoftSwitch consortium, 3GPP
- not too good at re-use (but then, ASN.1 wasn't exactly a success...)

Recommendations

- avoid time-wasting internal “coordinated positions” on protocols
- internal victors may still back the wrong horse
- funnel consortia work into IETF *early* – don’t expect rubber stamp
- avoid splitting of effort (ITU, 3GPP, Tiphon) – authors have more influence in IETF
- speed up work by providing comments, holding chairs to schedule