



# IETF

## Making the Internet Work Better

Андрей Робачевский

[andrei@ripe.net](mailto:andrei@ripe.net)

# Internet Engineering Task Force



- Development of open, consensus-based Internet standards
- 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]

# Internet Engineering Task Force



- Разработка открытых стандартов Интернета на основе консенсуса
- Миссией IETF является создание инженерно-технических спецификаций высокого качества, с помощью которых проектирование, использование и управление Интернетом делает его работу еще лучше. Эти спецификации включают стандарты протоколов, описание лучшей текущей практики, а также информационные документы различного рода. [RFC 3935]

# IETF standards make the Internet work



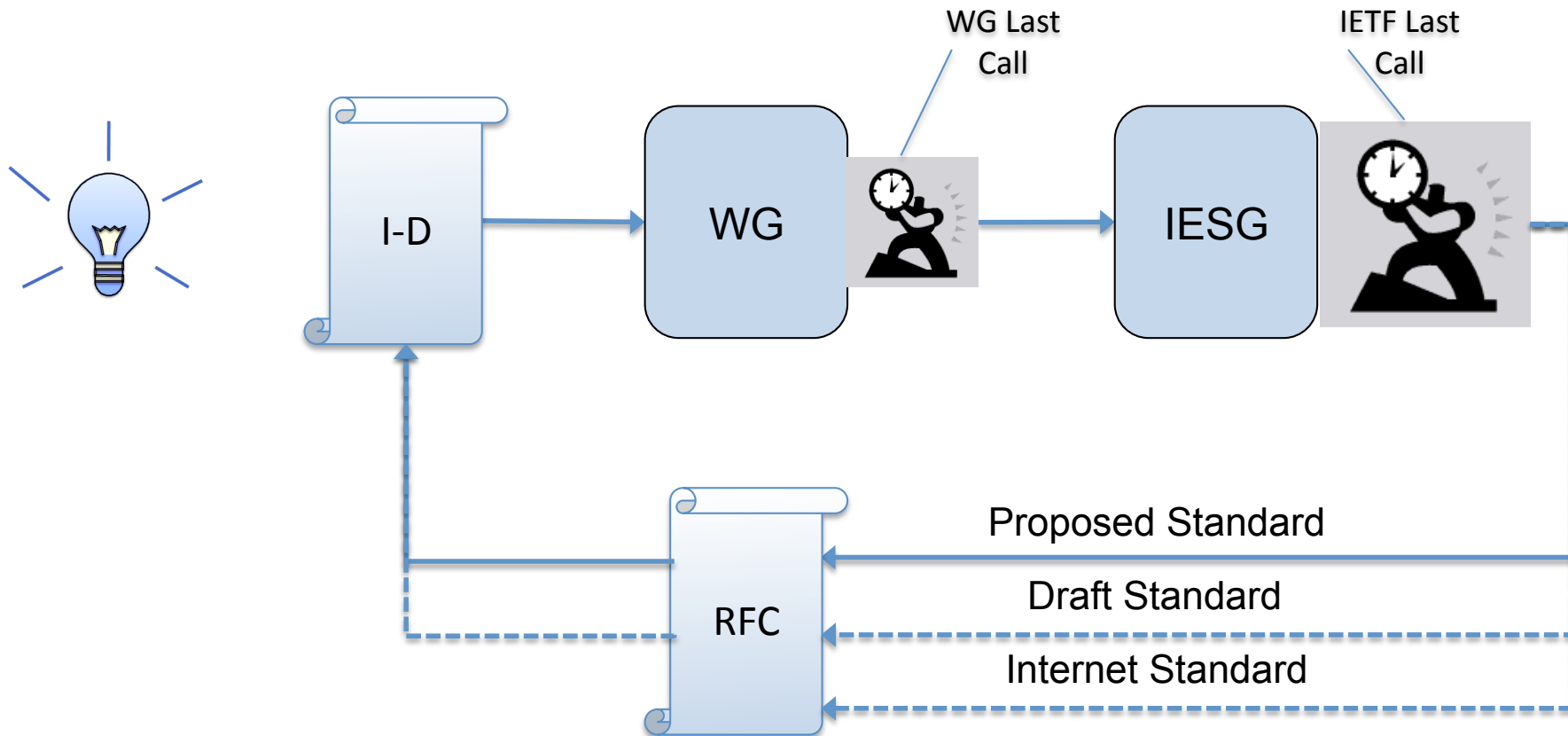
- TCP/IP
  - IPv4 ([RFC791](#)) and IPv6 ([RFC2460](#)...)
  - TCP ([RFC675](#)...) and UDP ([RFC768](#))
- E-Mail
  - SMTP ([RFC5321](#))
- Network and Routing
  - MPLS ([RFC3031](#)) and BGP ([RFC4271](#))
- ...
- DNS ([RFC1034,1035](#)...)
- Web
  - HTTP ([RFC2616](#)...)
- VoIP
  - SIP ([RFC3261](#)...) and RTP ([RFC3550](#)...)
- ...

# How the IETF works



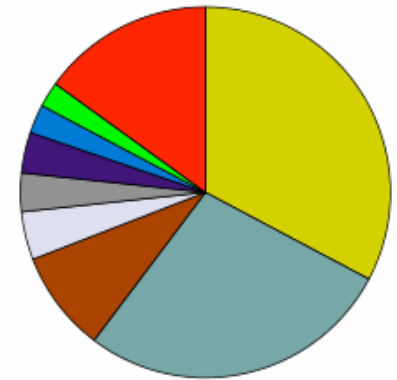
- High-quality standards
  - Experts, not organisations
  - Open and consensus based
- Areas and Working Groups
  - Mailinglists with open membership
  - Most of the work is done on-line
  - 3 face-to-face meetings with remote participation
- Working specifications and standards freely available
- Maintenance responsibility
  - Standards track

# Standards process



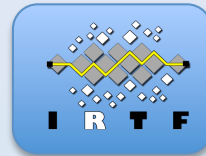
# IETF at a glance

- 1000-2000 people at 3 meetings/year
  - From 40-50 different countries
  - Many, many more on mailing lists
- ~120 Working Groups (WGs)
  - ~2 WG chairs each
- 8 Areas with 15 Area Directors (ADs)
- More than 5500 RFCs published
  - Internet Standards and informational documents
- More than 50000 Internet Draft revisions submitted



Participants at IETF-76  
Hiroshima, November 2009  
1106 total, 44 countries

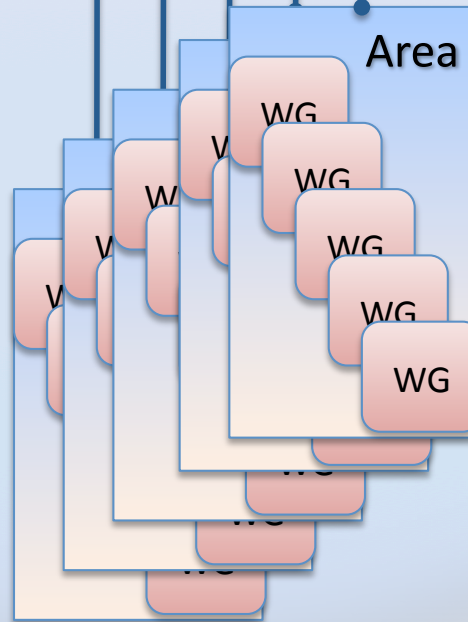
# IETF Universe



RFC Editor

IESG  
Area Directors

IETF Secretariat



IASA

IETF Trust



# Areas and WGs



Internet Architecture Board (IAB)

asrg  
cfrg  
dtnrg  
hiprg  
iccr  
moboopts  
nmrg  
p2prg  
pkng  
rrg  
samrg  
tmrg  
vnrg

Internet Research Task Force

alto  
calsify  
core  
decade  
eai  
httpbis  
httpstate  
hybi  
iri  
marf  
morg  
oauth  
sieve  
vcarddav  
vwrap  
yam

Applications Area

behave  
dccc  
fecframe  
ippm  
ledbat  
mptcp  
nfsv4  
nsis  
pcn  
ppcp  
rmt  
storm  
tcpm  
tsvrg

Transport Area

dkim  
emu  
hokey  
ipsecme  
isms  
keyprov  
kitten  
krb-wg  
ltans  
msec  
nea  
pkix  
sasl  
smime  
syslog  
tls

Security Area

bfd  
ccamp  
forces  
idr  
isis  
karp  
l2vpn  
l3vpn  
manet  
mpls  
ospf  
pce  
pim  
pwe3  
roll  
rtgwg  
sidr  
vrrp

Routing Area

adslmib  
bmwg  
dime  
dnsop  
grow  
ipfix  
mboned  
netconf  
netmod  
opsawg  
opsec  
pmol  
radext  
v6ops

O&M Area

avt  
bliss  
codec  
dispatch  
drinks  
ecrit  
enum  
geopriv  
martini  
mediactrl  
mmusic  
p2psip  
simple  
sipclf  
sipcore  
siprec  
soc  
speechsc  
speermint  
xcon  
xmpp

RAI Area

16ng  
6lowpan  
6man  
ancp  
autoconf  
csi  
dhc  
dnsect  
hip  
intarea  
ipdvb  
l2tptext  
lisp  
mext  
mif  
mip4  
mipshop  
multimob  
netext  
netlmm  
ntp  
pppext  
savi  
shim6  
softwire  
tictoc  
trill

Internet Area

GENERAL AREA

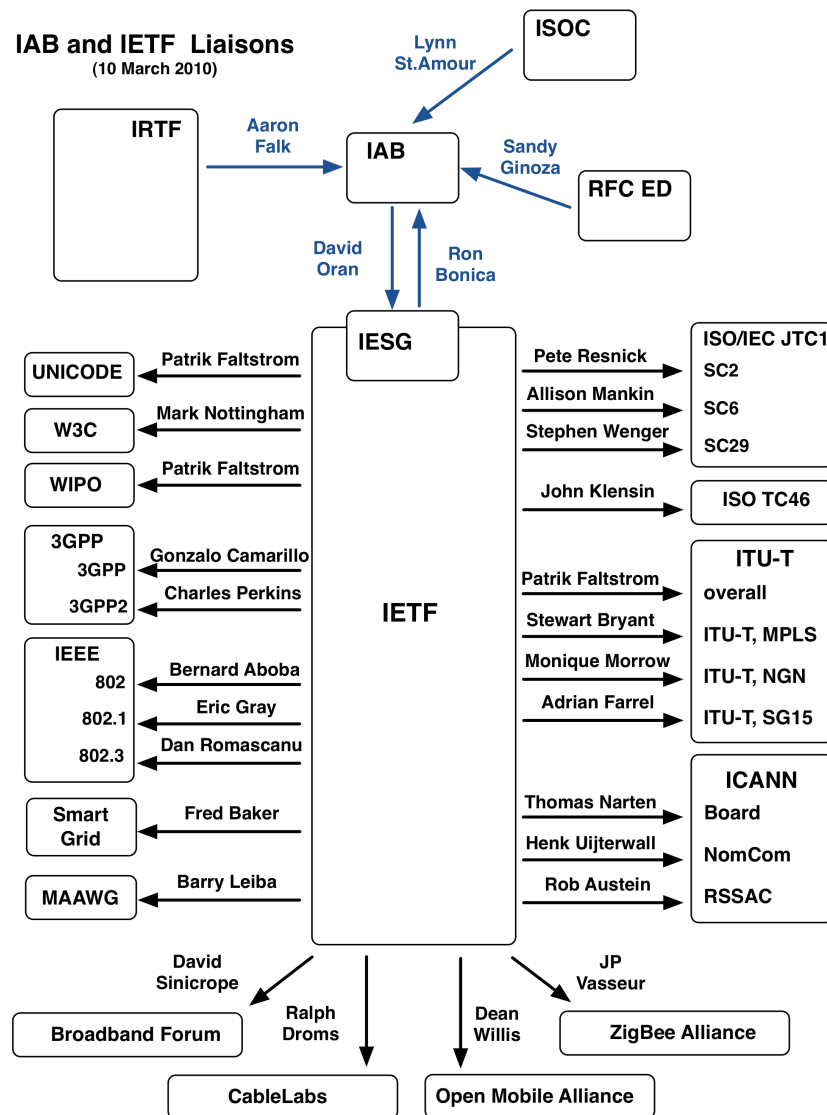
Internet Engineering Steering Group (IESG)

# IPv6 work in the IETF



- **behave**: Deals defines translation mechanisms to connect IPv4 to IPv6 networks
- **softwire**: Provides tunneling mechanisms to connect islands of address families (see RFC4925)
- **6man**: Fixes 'bugs' in the IPv6 specification
- **v6ops**: Operational guidance and more
- **savi**: improvement of validation of sources of IP traffic on a link (v4 and v6)
- **csi**: Reviewing secure neighbor discovery (SEND)

# IETF and other organisations



# Summary



- IETF makes the Internet work better
  - Fundamental role in Internet administration
- Your participation is critical to the success of the IETF
  - International scope, local relevance
- Open, inclusive, well established structure
  - evolving together with the Internet
- More information
  - [www.ietf.org](http://www.ietf.org)