

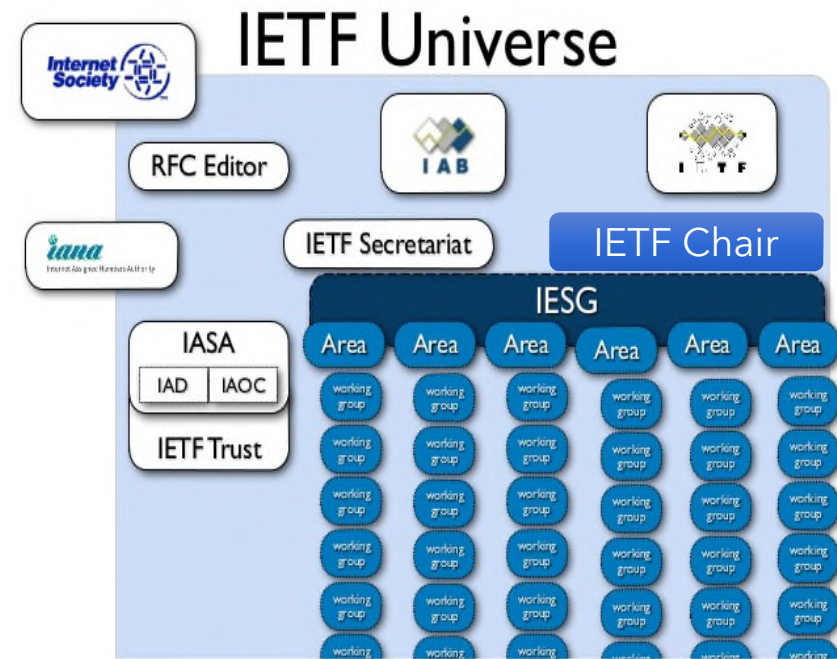
Do's and Don't's of evaluating your AD

**Dr. Susan Hares,
Hickory Hill Consulting
PhD from Regent University, Business School**



Based on dissertation: Antecedents of effective Consensus Decision-Making in IESG

Did Leaders in the IETF make it successful?



IETF
Chair 7



IETF
Chair 8



IETF
Chair 9

Agenda

Consensus Decision-Making in Internet Standards (Dr. Susan Hares)



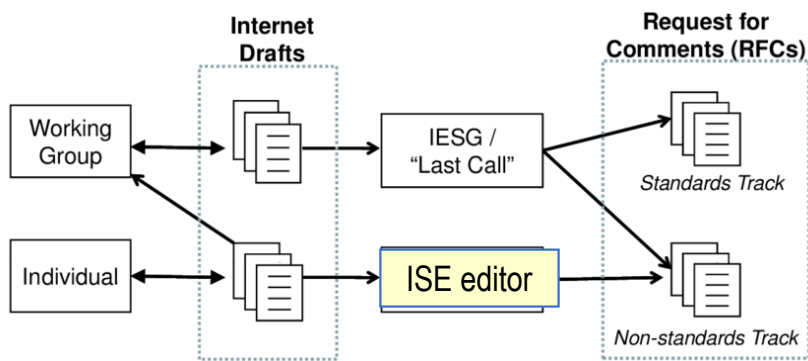
Measures of an AD

- Don't use RFC publications as a measure
- Do judge as WG senior manager/leader
- Do look at where your AD spends time weekly.

Purpose – Aid chairs-AD relationship

IETF Mission – guided by IESG (TMT)

IETF Drafts (RFC2026)



Simcoe, Waguespack, Smith, & Rotman (2009)

RFC 3935: Mission of IETF

*"Its mission 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."*

All Decisions made by "rough consensus"

Rough consensus and running code We make standards based on the combined engineering judgment of our participants and our real-world experience in implementing and deploying our specifications.

Reality versus RFC2026

RFC 2026 - WG track

- Internet-Draft (I-D) developed in WG
- WG requests the IESG publish I-D
- IESG reviews
 - IETF LC
 - IESG review
 - IESG Approves
- RFC editor publishes

**RFC editor
statistics**

Reality prior to RFC handoff

- Individual I-D (draft) published
- WG Adoption call on mail list
- WG discussion + implementations
- Early IETF Directorate review
- WG LC (May happen 1-2 times) on mail list
- WG Shepherds help authors refine draft
- Pre-IESG Directorate review
- WG shepherd/Chairs request IESG that publish I-D
- AD review - prior to IETF LC
- Directorate Reviews
- IETF LC
- AD write-up of IETF LC
- IESG review (ballot and IESG formal telechat)
- Resolution of comments at IESG review
- Formal hand-off to RFC Editor

Mail list research

Reviewer choices

**Datatracker +
Reviewer choices**

**IESG Review +
Reviewers**

Mail list research

IESG Consensus

Review AD on RFC responsibilities

AD director Responsibility

- AD review - prior to IETF LC
- Scheduling Directorate Reviews
- IETF LC
 - Schedule and monitor responses
 - Works with WG Chairs + Authors
 - AD write-up of IETF LC
- IESG review
 - Ballot + IESG formal telechat discussion
- Resolution of comments at IESG review
- Formal hand-off to RFC Editor

Do Review AD on:

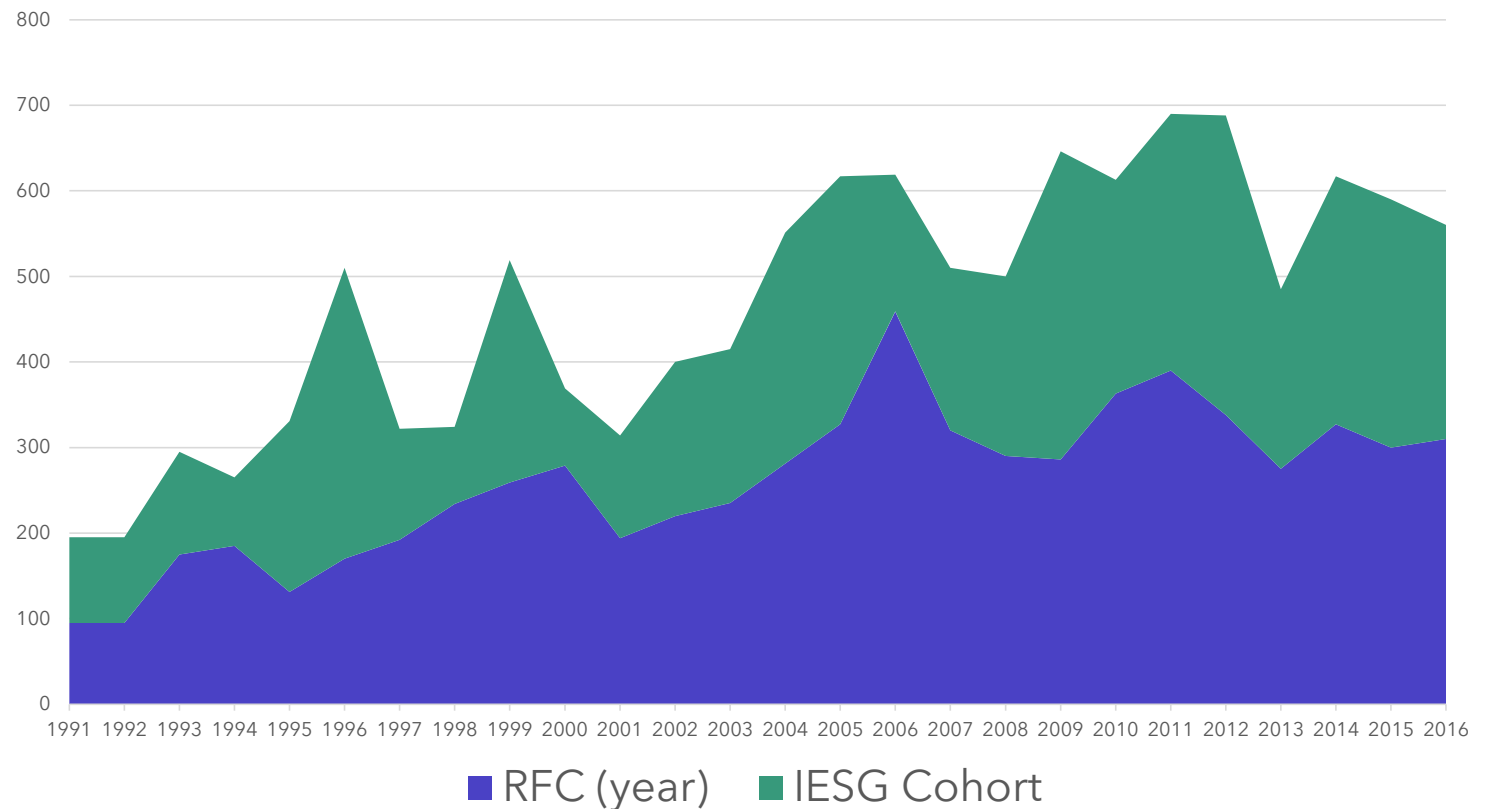
- Timely AD review + communication of time frames
- Prompt Scheduling Directorate Reviews
- IETF LC – Prompt scheduling + reporting
 - Interaction during the IETF LC with Authors + WG chairs
- IESG review
 - Prompt Ballot Creation
 - Interactive responses to Ballot Comments of other ADs
 - Handling in IESG Session
- Effective Resolution of comments at IESG review
- Prompt Formal hand-off to RFC Editor

IESG is from March to March
RFC is from January to January

RFC yearly vs. IESG Cohort

Consensus Decision-Making in Internet
Standards (Dr. Susan Hares)

**RFC Published/year versus IESG Cohort Publication
Decisions (10% Estimate)**



Do not review AD on RFC stats

IESG is from March to March
RFC is from January to January

2015-2016 data (100%)

- 2015: total decisions
 - 474 docs, **313** approved (66%), RFC: **300**
 - 111 WG actions, 102 approved (92%)
 - 235 Mgt actions, 111 approved (47%)
 - 820 decisions, 58% docs, 14% WG, 35% Mgt
- 2016: 66% approved
 - 449 docs, **295** approved (66%): RFC: **310**
 - 84 WG actions, 72 Approved (86%)
 - 252 Mgt Actions, 111 approved (44%)
 - 785 decisions, 57% docs, 11% WG, 32% Mgt

IESG RFC Actions

- Review Documents for RFC
- Review WG actions
 - BOFs, WG Charter, WG re-charter
 - Closure (AD controls)
- IETF Management
 - IANA
 - IESG Statements
 - IPR, Appeals, etc.

Your AD as a manager and a leader



- Is your AD a good manager/leader?
- Is your AD growing your Area?

Do review as a WG manager/leader

A good manager

- Listens to WG chairs + participants
- Knows WG drafts before review,
- Helps with Challenges and obstacles in WG,
- **Provides clear and timely communication,**
- Lobbies to get WG what it needs,

Inspiring leaders

- Listens to WG chairs + participants,
- Knows and encourages WG chairs,
- Tries to know + encourage all participants,
- **Clear and inspiring communication.**
- Plans a future that allows for growth in Area, WG chairs and participants,
- Decides when it is time to change direction.

Ask if AD is Growing the Area

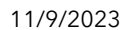
High-Quality requires:

- Selecting Quality BOFs
- Building a Cadre of Reviewers in
 - WG
 - Area
 - Cross-Area
- Being the final check on quality rather than the first check on quality

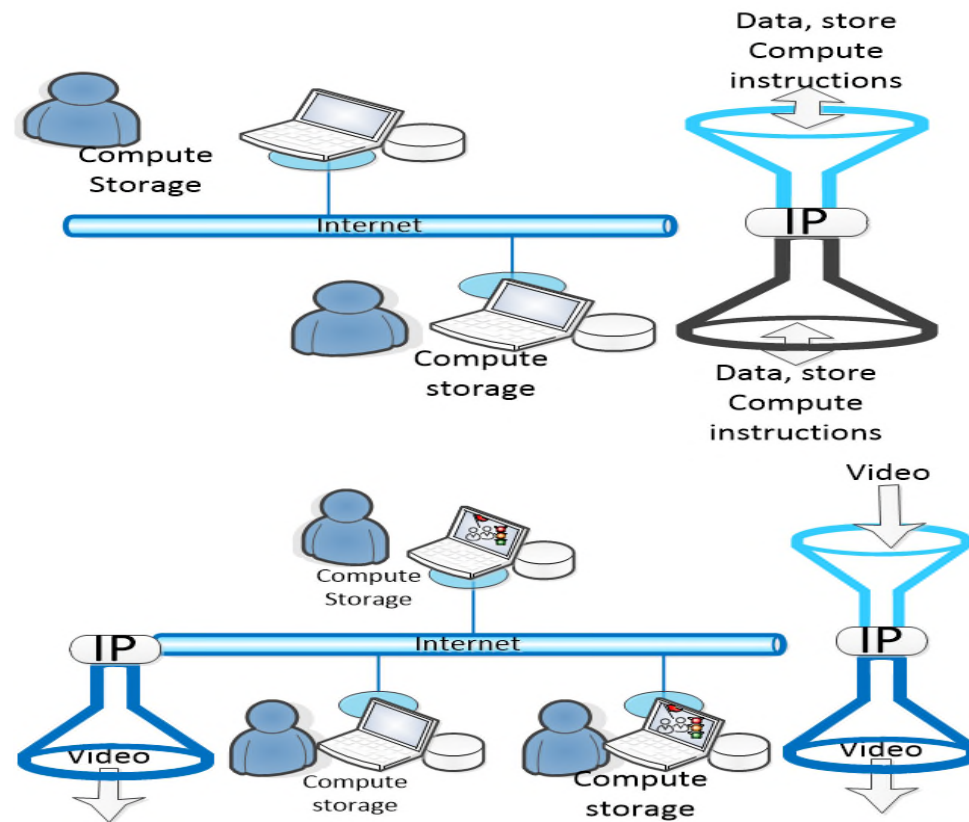
Relevant Technical Documents

- Nurtures BOFs from emerging technology that fit the area,
- Balances time between BOFs, WG management, and IESG duties
- Manages the BOF process with the IESG

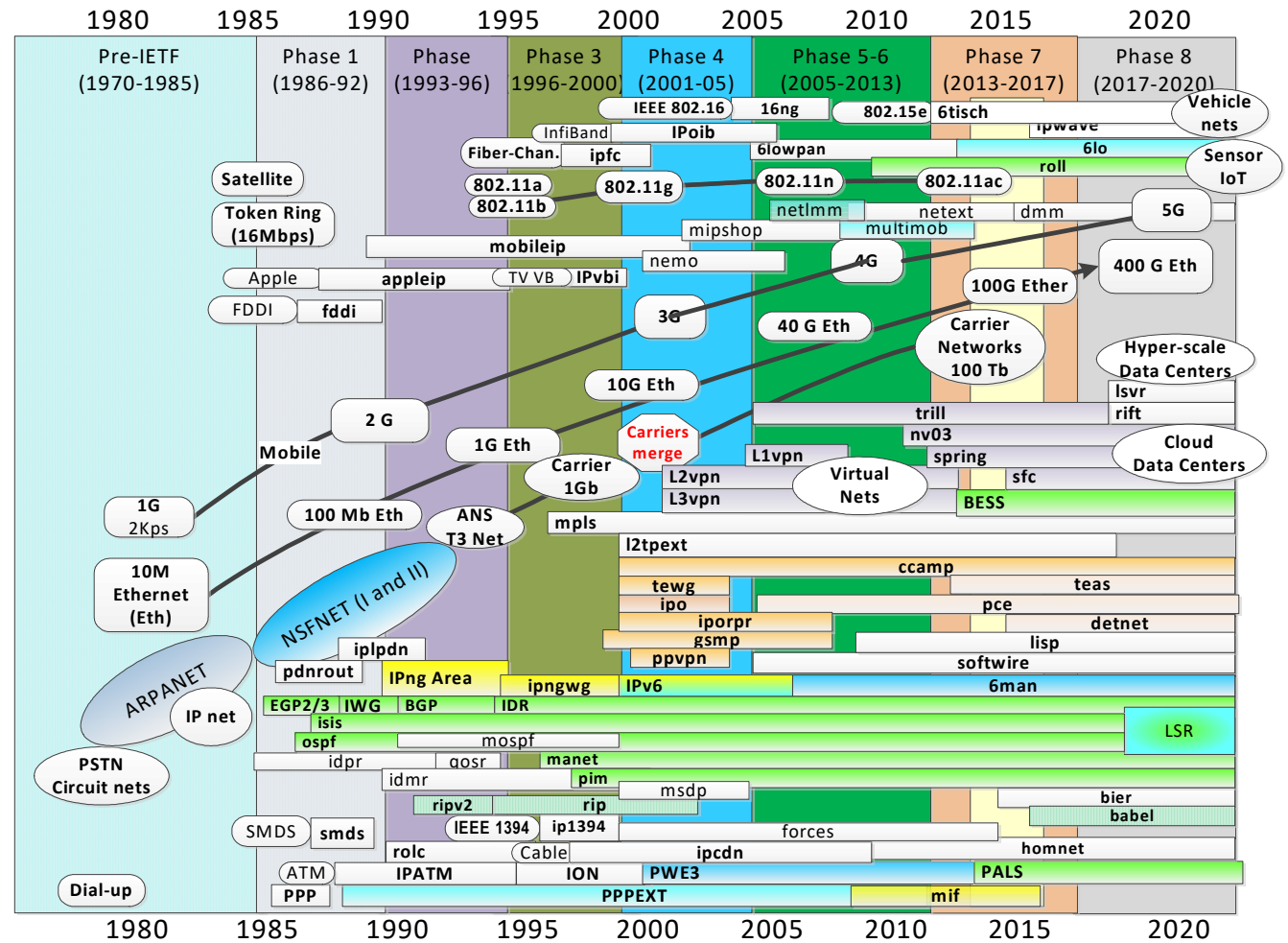
Consensus Decision-Making in Internet Standards (Dr. Susan Hares)



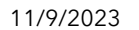
Compute Store Video Net- model (Day)



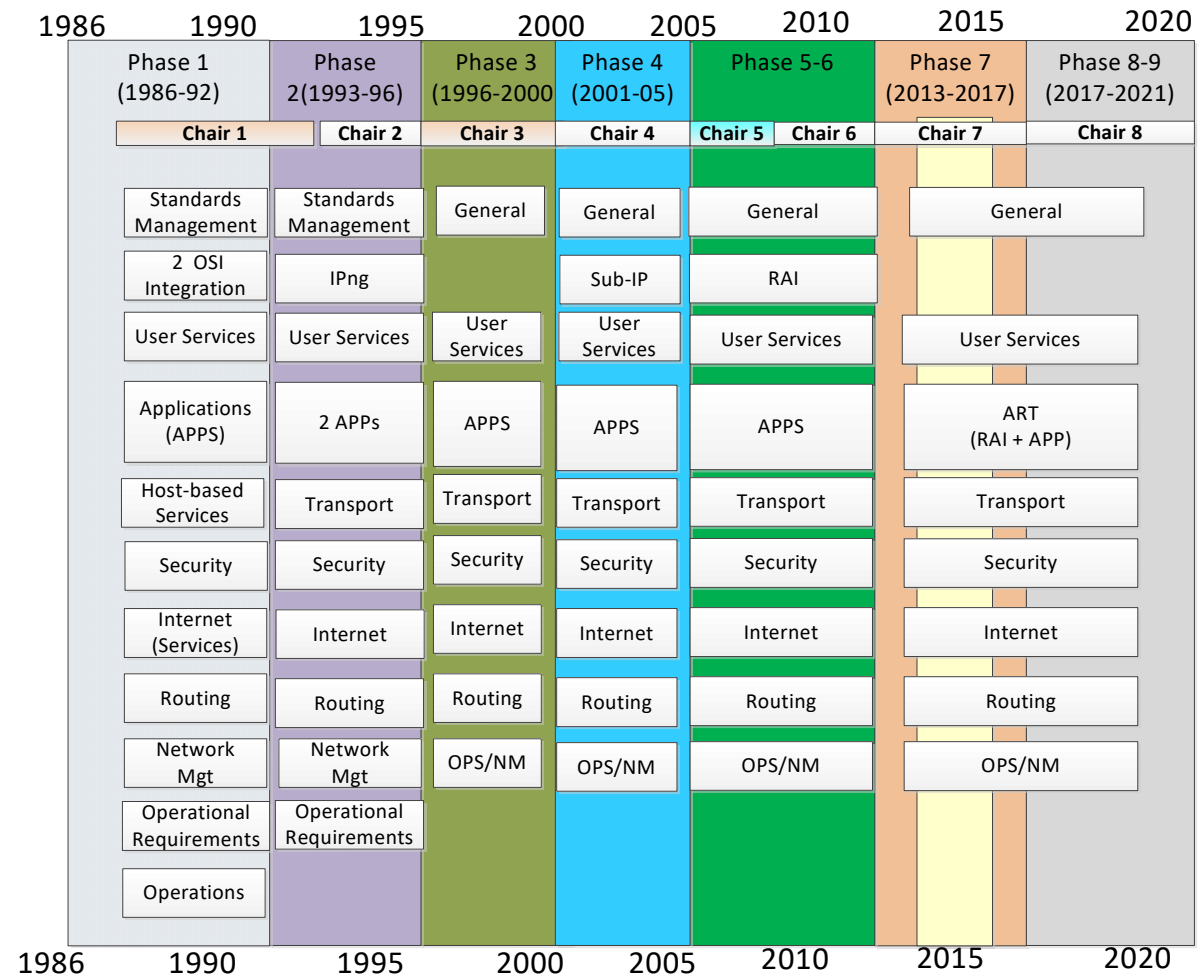
Did IP/RTG match Physical nets growth 1980-2016?



Consensus Decision-Making in Internet Standards (Dr. Susan Hares)



Ask if Changing Areas WGs - focuses WG efforts



Your AD as a IESG Team Player

Consensus Decision-Making in Internet Standards (Dr.
Susan Hares)

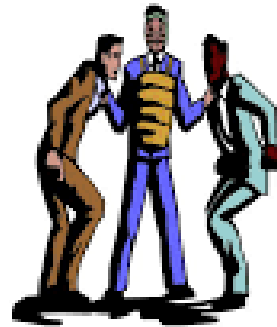
Go the
Extra Mile
It's Never
Crowded

Solidarity

- Bi-Weekly Responsibilities
- Optional Responsibilities
 - IESG statements
 - IPR, Appeals, Organizational Experiments
 - Helpful RFCs

Bad Teamplayers

- Blockers
- Attackers
- Recognition Seekers
- Jokers
- Withdrawers

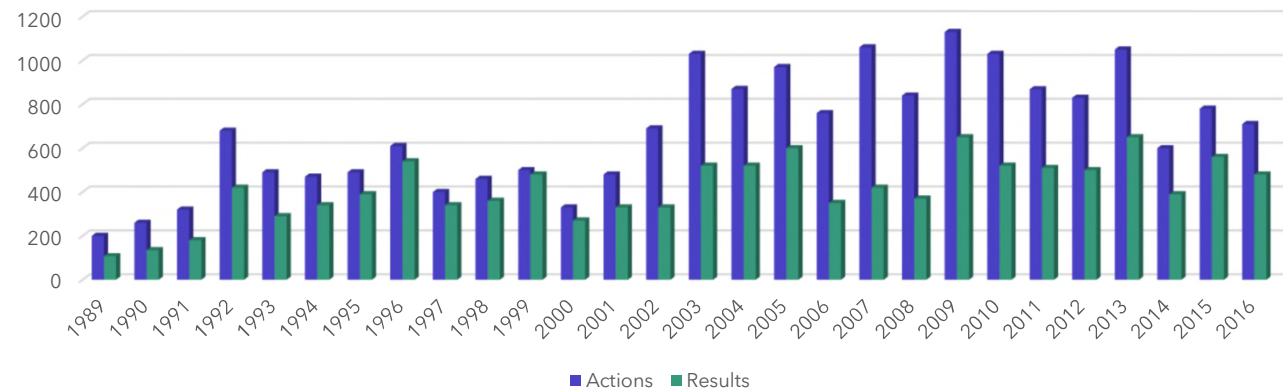


Solidarity

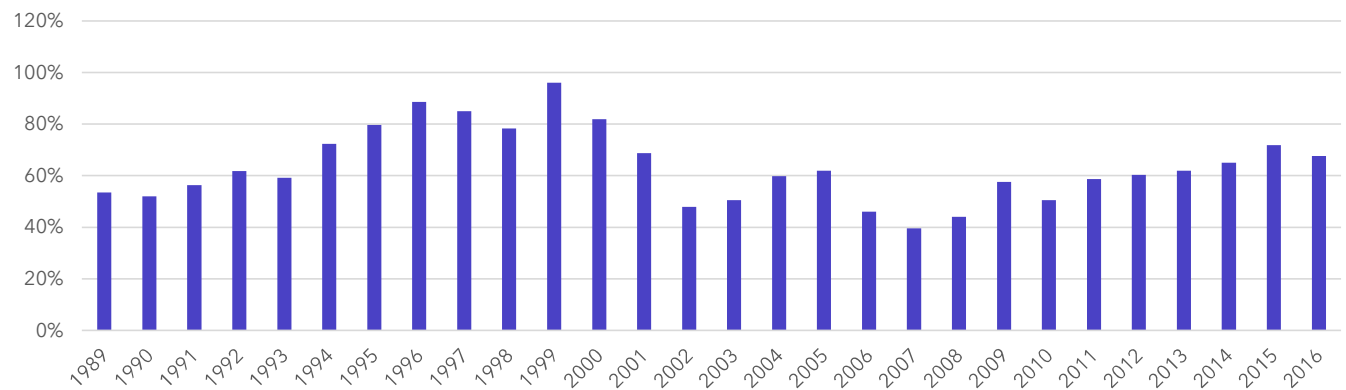
IESG Decisions Discussed vs Results

Consensus Decision-Making in Internet Standards (Dr. Susan Hares)

IESG - Decisions versus Results
Raw Count (based on 10% analysis)



% IESG Decision causing Results



11/9/2023

18

Statistics on Bi-Weekly Load

Bi-weekly Meetings

- Read and Ballot on Documents
- Read and Ballot on WG proposals
- Review Management proposals
- Time management - Some people elect to “coast” on some decisions

2015 Statistics

IESG created ART Area

820 decisions in 28 mtgs

- 474 docs (~17/mtg)
- 111 WG decisions (~4/mtg)
- 235 mgt (~8.3/mtg)
- Who decides
 - 2/3 all IESG
 - 1/3 sub-group

2016 Statistics

IETF chair transition

785 decisions in 27 mtg

- 449 docs (~16.5/mtg)
- 84 WG (~3/mtg)
- 252 mtg (~9.3/mtg)
- Who Decides
 - 2/3 IESG
 - 1/3 sub-group

IETF Chair as a Manager/ Leader

Consensus Decision-Making in Internet Standards (Dr.
Susan Hares)

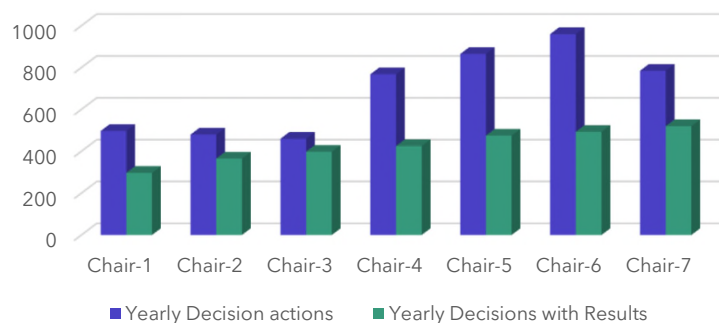


- Is the IETF Chair a good manager/leader of the IESG?
 - Measure 1: Results during tenure
 - Measure 2: Does IESG become more effective during the term of IETF Chair?
- Is your IETF Chair growing IETF?

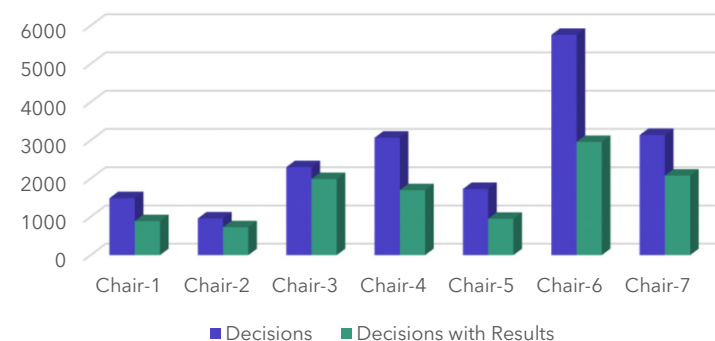
Per IETF Chair – % of decisions by IESG causing results

Consensus Decision-Making in Internet
Standards (Dr. Susan Hares)

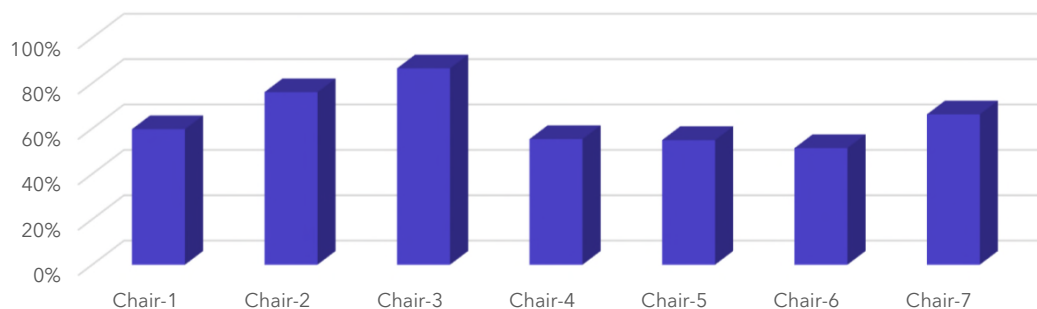
Average Yearly
Decision versus Decisions with Results



Results versus Decisions
for all IESG led by IETF Chair



IETF Chair tenure
% Decision causing Results



Dissertation conclusions

1. Quantity of quality data matters
2. Triangulation is critical
3. Solidarity appears to be better than OCB for IESG

Still in the mountains of data
Going from 10% to 100%



My goal
Help make the IESG more effective

So the IETF can
Make the Internet work better

Dr. Susan Hares

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Dissertation:
Solidarity as an Antecedent
of Consensus Decision-
Making: A Mixed Mode Study
(**PhD Organizational
Leadership**)

LinkedIn: Sue Hares

Thank you

Dr. Corné Bekker – dissertation chair
and committee (Dr. Cabanda and
Dr. Gomez) for their guidance

And you ... for your feedback!



IETF's Goal:
Make the Internet work better

Backup slides

Susan Hares

Antecedents of Effective Consensus Decision making - PhD thesis

group behaviors that predict decisions with results

3 phase Research Study

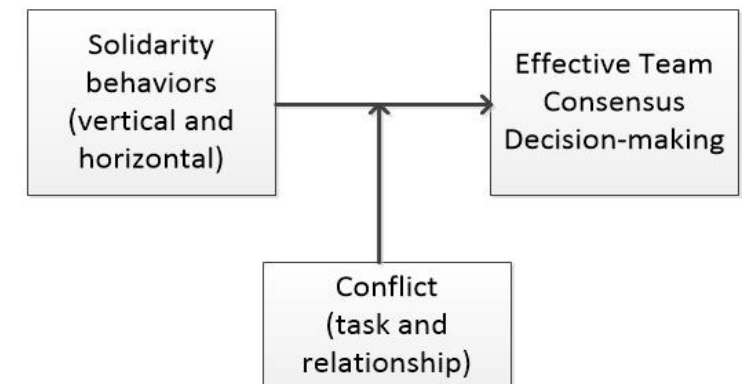
Phase 1



Phase 2



Phase 3



What Predicts Effective Decision-making

Leadership theories for antecedents

- **Collaborative and reciprocal leadership:** “more adaptable” when “no one person has the solution to a multi-faceted problem” (Allen and co-authors (2010))
- **Solidarity** – An individual who contributes more effort toward a group or person has greater solidarity (Hetcher (1987)).
- **OCB** – “discretionary” efforts outside of their normal roles indirectly “or explicitly recognized by the formal reward system, that in the aggregate, promote organizational goals”. (Organ, 1997)
- **Conflict** – task and relationship ((Jenn, 1995, 1997), (Jehn and Chatman, 2000))
- **Task interdependence** – the extent to which members rely on others to complete their jobs

Research on IETF Processes

- **ICT impact:**
 - Gençer, 2012 - Most actors in software and hardware embrace open standards” so delays in standards result in delays in new ICT products.
 - McQuistin et al. (2021) - Deployment of RFCs
- **WG mail list review** -
 - Protocol Adoption - Nikkhah, Mangal, Dovrolis, and Guérin (2017)
 - Activities on Mail list + Social Media - Niedermayer, et al. (2017)
 - Collaboration on QUIC (Web) Protocols for [20 years) Welzl, et al. (2021)
- **Standard publication process:**
 - Simcoe (2007, 2013) Individual “draft” document to published standard
 - Impact of IPR, who participates
 - IESG review in this process is “**fixed value**”

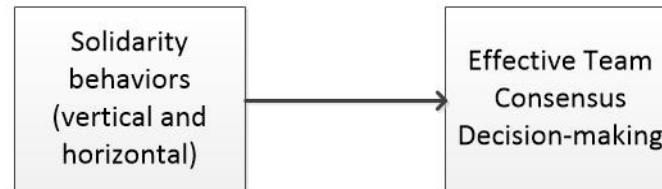
Models

Phase 1



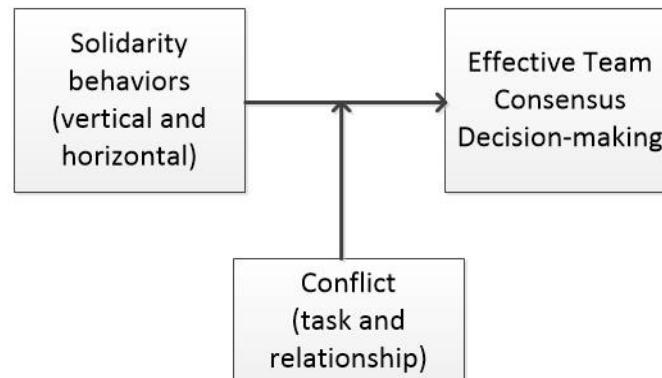
H1: An increase in multiple person discussions will increase the effectiveness of consensus decision made in team consensus decision-making

Phase 2



H1: An increase in solidarity will increase the effectiveness of consensus decisions made in team consensus decision-making

Phase 3



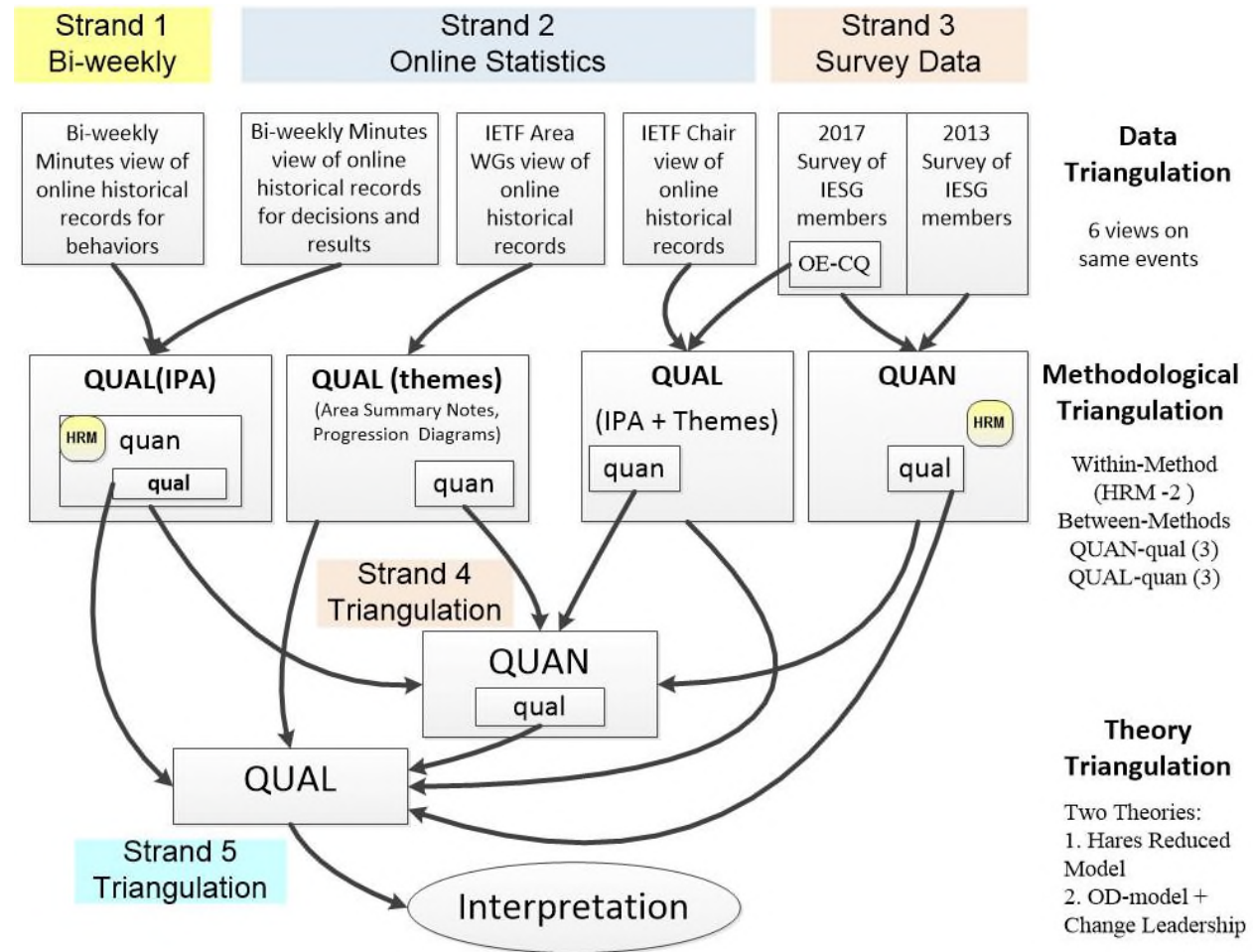
H1: An increase in solidarity will increase the effectiveness of consensus decision made in team consensus decision-making

H2: Controlling for task interdependence an increase in solidarity moderated by conflict will increase the effectiveness of consensus decisions made in team consensus decision-making

Three Phases

	Phase 1 (2012)	Phase 2 (2013)	Phase 3 ('17-'21)
Strands	Exploratory (QUAL→ quan)	Explanatory (QUAN→ qual)	Concurrent triangulation
Theory	Allen & co-authors: Collaborative and reciprocal leaders	Hares Model Solidarity Control: TI	Hares Model Solidarity, Conflict Control: TI
Alternate Theory	Fielder's LPC (Least Preferred Coworker)	Hares Model with OCB replaces solidarity	Hares Model with OCB replaces solidarity
Data	IPA analysis of IESG formal minutes: 5 per year 2003, 2006, 2011	Survey with solidarity, OCB, TI, and self-reported Effectiveness	IESG Minutes 10% 1991-2016 Online WG, Online Chair 2 Surveys ('13, '17)
Analysis	Quantitative: Theme counts totals behavior (multiple person, dyad) , decisions	HRM with IETF totals + perceived totals per year	HRM (cohort mean) Solidarity predicts Better than OCB
Interviews	Post-analysis 3 chairs	Post Analysis 8 IESG members	Dissertation online for IESG members prior to publication

Phase 3 - historio- metric



Survey Instrument [Themes for IPA]

Behavior Instrument	Reliability (Cronbach Alpha)		
	Previous Research	2013 Survey	2017 Survey
Survey responses [2013: 28 questions behaviors + 5 effective decision-making [2017: added 6 conflict behaviors + 2 open-ended conflict]	100s	41 IESG (46%) 94 slots (41%) 25 years	25 IESG (26%) 88 slots (26%) 28 years
Solidarity instrument from Koster and Sanders (2006) (10 horizontal, 10 vertical)	HS: 0.85-0.95 VS: 0.78-0.89	0.90	0.91
OCB from Wayne & Cordeiro (2003) Generalized Compliance (3) Altruism (2)	0.70 0.70	0.70 0.76	0.80
TI from Van Der Vegt et al. (1998) (3 questions)	0.81	0.85	0.89
Jehn's (1995) Intragroup Conflict scale (task (3), relationship (3))	0.72 - 0.91	Not on Survey	0.88
Self-Reported Effectiveness		2013 survey	2017 survey
IESG Perceived Effectiveness (PR) (Documents (2), WG (1), Admin (1))	no history	0.85	0.79

Correlation and HRM results

10% Minutes 1991-2016	100% Minutes 2015-2016	2013 Survey Cohort mean	2017 Survey Cohort mean	2017 Survey All Responses
Correlations: S-OCB: 0.902 S-Results: 0.845 C-Results: 0.409 TI-Results: 0.738 OCB-Results: 0.784 HRM: Solidarity predicts 62-73% of results OCB predicts 61%	Correlations: S-OCB: 0.919 S-Results: 0.804 C-Results: 0.545 TI-Results: 0.798 OCB-Results: 0.855 HRM: Solidarity predicts 65% ('15), 44% ('16) OCB predicts 73% ('15), 71% ('16)	Correlations: S-Results: 0.517 PR-Results: 0.451 S-PR: 0.531 HRM: Solidarity predicts 22-26%	Correlations: S-OCB: 0.637 S-PR: 0.713 C-PR: -0.479 OCB and S did not correlate to results HRM: Solidarity predicts 51-58% of perceived results	Correlations: S-OCB: 0.637 S-PR: 0.706 C-PR: -0.509 OCB and S did not correlate to results HRM: Solidarity predicts 51-58% of perceived results

Historical data collected in Phase 3

	IESG Minutes	WG information	IETF Chairs
Minutes	Formal Minutes Narrative Minutes	Online IETF WG information	Online IETF proceedings
Files	599 formal ('91-'16) 246 Narrative ('05-'16) 78 BOF	768 WG 281 BOFS [1049 Pages]	95 meetings ('89-'17) 110 meetings ('89-'21) (IESG 1989-2020)
Sample	Formal: 78 (26 years) (52 meetings + 12 BOF) Narrative: 35 (2005-2016) (23 meetings + 12 BOFs)	100% WG pages read	100% of Plenary presentations with IETF chair presentations
Decisions	10% - 1853 100%: 1605 (2015: 820, 2016: 785)	Content Analysis Per Area standards progression	IETF chairs were surveyed 2013: 4 chairs (16 yrs) 2017: 4 chairs (17 yrs)
IBA -	10% - 21643 100%: 17543 (2015: 8816, 2016: 8721) [39 questions]	WG looked at the progression of documents	Look at Chair's environment via SWOT, Goals versus Accomplishments, Conflict

Total IPA analysis = IBA * 39 questions = 1.5 million items

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