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

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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
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
"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

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
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 Published/year versus IESG Cohort Publication Decisions (10% Estimate)
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
Compute
Store
Video
Net-model
(Day)
Did IP/RTG match Physical nets growth 1980-2016?
How did security get added to IP + Net?
Ask if Changing Areas WGs - focuses WG efforts

Consensus Decision-Making in Internet Standards (Dr. Susan Hares)
Your AD as a IESG Team Player

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

Solidarity

Bad Teamplayers

- Blockers
- Attackers
- Recognition Seekers
- Jokers
- Withdrawers

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

% IESG Decision causing Results
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

• 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)
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%
Thank you

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

And you ... for your feedback!
Antecedents of Effective Consensus Decision making – PhD thesis

group behaviors that predict decisions with results

3 phase Research Study
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)
- **Standard publication process:**
  - Impact of IPR, who participates
  - IESG review in this process is “fixed value”
H1: An increase in multiple person discussions will increases the effectiveness of consensus decision made in team consensus decision-making

H1: An increase in solidarity will increase the effectiveness of consensus decisions 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

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

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

Data Triangulation
6 views on same events

Methodological Triangulation
Within-Method (HRM + 2)
Between-Methods
QUAN-qual (3)
QUAL-quan (3)

Theory Triangulation
Two Theories:
1. Hares Reduced Model
2. OD-model + Change Leadership
### Behavior Instrument

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

### 10% Minutes 1991-2016

**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%

### 100% Minutes 2015-2016

**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)

### 2013 Survey Cohort mean

**Correlations:**
- S-Results: 0.517
- PR-Results: 0.451
- S-PR: 0.531

**HRM:**
- Solidarity predicts 22-26%

### 2017 Survey Cohort mean

**Correlations:**
- S-OCB: 0.637
- S-PR: 0.713
- C-PR: -0.479

**HRM:**
- Solidarity predicts 51-58% of perceived results

### 2017 Survey All Responses

**Correlations:**
- S-OCB: 0.637
- S-PR: 0.706
- C-PR: -0.509

**HRM:**
- Solidarity predicts 51-58% of perceived results
**Historical data collected in Phase 3**

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

Total IPA analysis = IBA * 39 questions = 1.5 million items
References (1)


References (2)


