

# Project Management for IETF WG Chairs

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2015-01-28

# What is Project Management?

- Project management (PM) is the application of processes, methods, knowledge, skills and experience to achieve project objectives<sup>1</sup>
- PM is a discipline, complete with formal certifications
  - Full formality is overkill for most IETF needs
  - But the core ideas behind PM very much apply to managing IETF work
- WG Chairs should use and apply PM thinking to the management of WG activities

<sup>1</sup> <http://www.apm.org.uk/WhatIsPM>

# Key PM Activities

- Identify goals, i.e., where does WG want to be in 3-9 months? E.g.,
  - Have document ready to send to IESG in 3 months?
  - Have WG adopt single/merged document at next IETF?
  - Strawman proposal for WG to address topic X?
- Organize workplan to meet goals
  - Develop realistic timelines with checkpoints
  - Identify owners and get commitments for each deliverable
- Execute the workplan
  - Monitor checkpoints, nudge parties, address problems that come up, adjust plan, etc.
- Key points:
  - Chairs actively manage their work
  - Don't be afraid to have WG review and provide feedback on work plan, especially on goals/priorities.

# Setting Goals

- Look at big picture
- Don't confuse activity (lots of drafts) with progress
- A year from now, what does WG need to have done to be considered a “success”?
- Are there gaps where insufficient activity is taking place (e.g., security, management, ...)?
  - What does WG need in order to make progress?
- Keep your eye on the 8-ball
  - What are they key/core documents that MUST get finished?

# Components of Project Management

# Artifacts

- Artifacts are the *things* that are you managing.
- In the case of the IETF, these are mostly documents.
  - Some documents are formal, such as Internet-drafts
  - Some documents are living, such as wiki pages or version control repositories

# Artifacts

- Tracking your artifacts is a big part of your job running working groups.
  - The chairs or the WG secretary ultimately own this tracking responsibility.
  - You care about *who* owns the document.
  - Where is the document? In most cases it's in someone's personal computer. In a better world, it'd be in a public version-control repository.

# Artifacts

- Tracking issues is another artifacts maintenance chore.
  - IETF supports trac but I loathe it.
  - Some WGs, e.g. netmod, track their stuff in a text file in SVN.
  - Wiki pages aren't a bad place to do this, but they must be *actively* maintained.
  - datatracker actually does a good job tracking I-Ds throughout the RFC lifecycle.



# Dependencies

- The RFC process describes most of our dependencies for a specific document.
- Groups of documents/work may share a fate. This fate tends to be:
  - Finish to Start. You can't begin work on B until A is complete.
  - Finish to Finish. This is very common in IETF document groups. A and B aren't done until they're both done.
  - Start to Start. B can't begin until A begins.
  - Start to Finish. B can't finish until A starts.
  - [http://en.wikipedia.org/wiki/Dependency\\_%28project\\_management%29](http://en.wikipedia.org/wiki/Dependency_%28project_management%29)

# Dependencies

- In practice, dependencies may exist not only in your WG but also on work elsewhere.
- Using standard PM dependency terminology is frustrating because IETF work tends to be highly parallelized. Ask yourself instead:
  - Can a piece of work start yet? If not, what is holding it up?
  - Is this piece of work finished? Does it finish alone or depend on a group of things?

# Timetables and Milestones

- IETF too often falls into “1 draft per IETF meeting” cycle
  - PM can help break that cycle
  - Best progress is made when documents revised 2-3 times between meetings
- Develop workplan with reasonable checkpoints that keep key contributors and the WG active/engaged
  - Understand interdependencies of components

# Timing

- Time management is highly frustrating for WG chairs and the WG as a whole. The idiom, “herding cats” is used for a reason.
- IETF work is often a lower-priority “second job” for many WG members. Their “day job” work and schedule pressures will frustrate getting things done.
- Be realistic about deadlines
  - E.g., don’ t expect any work during the week after IETF
  - We are all have day jobs, but that also does not excuse folk disappearing for weeks at a time

# Timing

- Dates on the calendar impact work and should be included in the PM considerations:
  - IETFs. The dates for these are known in advance by quite some time. In practice, the cut-off date for documents is the real calendar date to track.
  - Holiday schedules should be understood to help coordinate people within task groups. Given the multi-cultural nature of IETF this can be tricky. Known big blocks of time:
    - End of year holidays for many cultures. This effectively blocks off the three weeks surrounding end of year and start of new year.
    - Lunar new year for eastern cultures, in February.
    - Much of Europe seems to take off the month of August.
    - Diwali, November.
  - This list isn't meant to be comprehensive. Ask those working on WG tasks what impacts their calendar. *Be understanding that they may not be able to tell you why.*

# Timing

- It is useful to frame “buffer time” around the actual IETF conferences.
  - Work should be done two weeks *before* the conference to give people time to read things. Our cut-off date reflects this.
    - In reality, there’s always last minute submissions. AKA the “IETF scramble”.
  - The week after IETF is usually not a useful work week either due to collocated vacation with the conference site or simply catching up on missed day job work.
  - Depending on your WG, there may be other conferences to be mindful of. MPLS, IEEE, ITU-T, etc.

# Herding the Cats

- Know *who, what, when and what it interacts with*.
  - The document owner(s) are to produce a revision for review for the WG by this date.
  - A slip in the completion of a sub-task has *X* impact on other work.
- Help remind people of their work.
  - You're not a manager in the traditional sense, but you all share responsibility for the work.
  - Dates, dependencies, etc.
  - Helpful nudge rather than scolding parent.
- Encourage work to happen publicly.
  - This is not only good IETF practice, but helps you track things even if you can't fully participate.
  - Provide resources for this: Public version control (git, svn), a secretary to maintain issues tracking, mailing lists with archive.

# Execution and Follow Through

- Use the workplan to track activities
  - Be active, don't assume silence means everything is on track
  - Nudge authors, have status calls, etc.
- Adjust workplan as circumstances change
  - But also be willing to find others to do the work
- Revisit goals on a regular basis



# Tracking

- Tracking the work is the single most important thing you can do to manage the projects.
- Again: *who, what, when, what dependencies?*
- Build lists of the things.
  - WG milestones are helpful, but too coarse granularity in many cases.
  - WG documents in datatracker helpful once things are in-process.
  - Public tracking of the list also provides opportunity for useful annotation. E.g.  
<http://trac.tools.ietf.org/wg/bfd/trac/wiki>
  - Entries on a calendar are a list

# Tools (Jeff)

- The single biggest thing I find helpful to keep work moving when I am busy is to have my tools provide low-level nags to do something.
- For example, the Mac TODO application lets me build groups of work, place tasks in them, tell them to alert me on a given date and to repeat that alert at some appropriate time.
- There are opportunities for IETF to add tools that integrate with datatracker to do this work.

# Tools

## IETF-BFD



- Edit bfd MPLS MIB  
Yesterday 9:00 AM, Repeats Every Day
- Next edition multipoint from Santosh.  
1/26/15, 9:00 AM, Repeats Every Week  
[2015-01-19 -05](#) posted addressing iss...
- BFD Track draft-snyder-bfd-proxy-con...
- Nudge along BFD performance work  
12/8/14, 11:00 AM, Repeats Every Week  
2014-10-24 Work has progressed. Nee...
- Clarifications to RFC 5884 WGLC?  
2/2/15, 9:00 AM, Repeats Every 2 Weeks
- Need to invent BFD v2 - demux criteria...  
12/22/14, 9:00 AM, Repeats Every 2 W...
- WGLC sbfd use cases  
1/10/15, 9:00 AM, Repeats Every Day

From my Mac TODO app.

# Tools

- “But what about Microsoft Project” (or your favorite PM software...)
  - If you know how to use such a tool effectively, this talk was probably not for you.
  - Our workflow and time tracking also make it difficult to give useful inputs for traditional projects.
  - Finally, exposing artifacts, timing and dependencies outside your tool of choice is something we need to do for WG participants.

# Visualization

- No talk about PM would be finished without at least mentioning Gantt charts.
- [http://en.wikipedia.org/wiki/Gantt\\_chart](http://en.wikipedia.org/wiki/Gantt_chart)
- They are useful for modeling tasks, durations and dependencies along with interrupts due to calendar.
- They are difficult to use since our work is less effort-based and more coordination based.
- I do not personally recommend their use for IETF work.