Sync&Share—Ripe for Standardization?

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Standard Admonition on Standards

How standards proliferate:
(see: A/C chargers, character encodings, instant messaging, etc.)

Situation: There are 14 competing standards.

14?! Ridiculous! We need to develop one universal standard that covers everyone's use cases. Yeah!

Soon:

Situation: There are 15 competing standards.

https://xkcd.com/927/
14 Competing Standards?

- Dropbox
- Google Drive
- Microsoft OneDrive
- ownCloud
- Box
- WebDAV
- BitTorrent Sync
- Git
- … (I could continue)

✓
14 Standards => 15 Standards

• Doesn’t help anyone other than keep people busy
  (“Many fine lunches and dinners” at SDO meetings)
  SDO = “Standards Development Organization”, e.g. IETF, W3C, ISO, ECMA, ETSI…

• Except if your 15\textsuperscript{th} thing is WAY better than everything else
  – in which case, good luck!
14 Standards => 14 Standards

• What if we elevate one of the *de-facto* standards to a *de-jure* one?
• This may seem pointless except as marketing tool ("open")
• Seems like waste of time, but could bring benefits
  – If change control is moved to a standards organization
    *and that organization does a “better” job managing the protocol*
  – If it lowers the bar for new entrants
  – Eventually it may start taking over the other 13…
• Whether this can happen depends on
  – Quality of the base standard
  – Which SDO takes care of this
  – Whether prior standard “owner” is willing to give up change control
14 Standards => 13 or less

• That’s the desired case, right?
• Why would multiple players agree on a common standard?
  – Altruism (“not bloody likely”)
  – To improve their competitive position
    (often with respect to a dominant player)
  – To reduce/amortize development effort
    (in areas where they don’t want to differentiate themselves)
Possible areas for standardization

• Terminology
  – somewhat useful, especially as basis for other aspects

• Synchronization protocol
  – Attempted at IETF—unclear whether this is “ripe” yet: Vendors still trying to differentiate themselves by improving this.
  – Apply/extend existing protocols such as WebDAV (or Git or rsync)
    => don’t forget to “upstream” extensions 😊

• Sharing protocol
  – Inseparable from synchronization protocol?
Possible Venues (SDOs)

• “BYO” (build your own) consortium
  – Can be good for *focused* standards development
  – Needs to get over critical mass
• OASIS, OGF, OpenStack… ???
• IETF
  – Has produced long-term viable protocols (TCP/IP, HTTP, WebDAV…)
  – Many NRENs have been active there and know how it works
  – Better at lower layers—sufficient synergies?
  – Can be slow (because high standards and “rough consensus”)
Who benefits (directly)?

• The user (choice of clients independent of who she shares files with; fewer clients -> less battery drain)
• Existing market players (standard/”open” as PR win)
• New market players, by lowering barriers to entry (network effects!)
• Evolution, by creating a stable layer above (and below) innovation can take place
Go forth and standardize!

• Questions?
• Opinions?