#### Sync&Share—Ripe for Standardization?



# SWITCH

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#### **Standard Admonition on Standards**

HOW STANDARDS PROLIFERATE: (SEE: A/C CHARGERS, CHARACTER ENCODINGS, INSTANT MESSAGING, ETC.)



https://xkcd.com/927/



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# **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<sup>th</sup> 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 <sup>(c)</sup>
- Sharing protocol
  - -Inseparable from synchronization protocol?

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## **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?

