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Contents

1. Is webdav restful?

Roy Fielding says no: http://tech.groups.yahoo.com/group/rest-discuss/message/5874

> PROP* methods conflict with REST because they prevent important resources from having URIs and effectively double the number of methods for no good reason. Both Henrik and I argued against those methods at the time. It really doesn't matter how uniform they are because they break other aspects of the overall model, leading to further complications in versioning (WebDAV versioning is hopelessly complicated), access control (WebDAV ACLs are completely wrong for HTTP), and just about every other extension to WebDAV that has been proposed.
>
> [...]
>
> The problem with MOVE is that it is actually an operation on two independent namespaces (the source collection and destination collection). The user must have permission to remove from the source collection and add to the destination collection, which can be a bit of a problem if they are in different authentication realms. COPY has a similar problem, but at least in that case only one namespace is modified. I don't think either of them map very well to HTTP.

The discussion also continued on the microformats mailing list http://microformats.org/discuss/mail/microformats-rest/2006-April/thread.html#217.

see Amundsen2010 for a restful approach to properties.

Is ATOM an alternative to WebDAV?

> AtomPub is different from DAV in two key respects:
>
> - The client doesn't control where things go, the server does
> - It is allowed and expected that an AtomPub server will look at the incoming information and change it (generate ID, timestamps, sanitize HTML, etc)

Tim Bray, http://www.imc.org/atom-protocol/mail-archive/msg11271.html

Examples of APIs that use REST instead of WebDAV:

- Amazon S3 http://awsmedia.s3.amazonaws.com/pdf/RESTandS3.pdf http://docs.amazonwebservices.com/AmazonS3/latest/dev/RESTAPI.html

2. Kolab and its use of IMAP

Kolab uses an IMAP server as the data store and synchronization protocol for calendar and contact informations. I want to compare this approach to a restful one.

Advantages of IMAP:

- already there, since Mail uses it
- can store blobs/files so no need to map the iCal/vCard files to a relational scheme
- out of the box support for offline work and later synchronization (How does it solve editing conflicts?)

Disadvantages of IMAP:

- Complicate, 38 RFCs according to http://de.wikipedia.org/wiki/Internet_Message_Access_Protocol see also: http://www.apps.ietf.org/rfc/ipoplist.html

- All clients directly access the iCal/vCard files with no moderation layer in between. This means that no validation or normalization can be done. Schema updates can only be done if all clients cooperate.
- IMAP imposes a folder structure. Google's gmail is an example for another, tag based approach. Messages could have several tags. It is therefor hard to access Gmail via IMAP.
- Sam Varshavchik, the author of the courier Mail Transfer Agent explains the history of IMAP and claims that the IMAP standard is broken: http://www.courier-mta.org/fud/
- IMAP is so complicate that the IMAP wiki holds 10 pages of advises for IMAP client authors: http://www.imapwiki.org/ClientImplementation RFC 2683 "IMAP4 Implementation Recommendations" is a 23 pages document (cut 5 pages for verbosity) explaining how to implement another RFC standard. Is there any widely used standard that needs another RFC explaining how to implement it?
- `http://en.wikipedia.org/wiki/Internet_Message_Access_Protocol#Disadvantages`
- Some attempts to create a simpler alternative to IMAP:
  - http://en.wikipedia.org/wiki/POP4
  - `http://en.wikipedia.org/wiki/Simple_Mail_Access_Protocol` also here http://www.co mta.org/cone/smap1.html
  - `http://en.wikipedia.org/wiki/Internet_Mail_2000`
  - HTTP restful: http://tools.ietf.org/id/draft-dusseault-httpmail-00.txt mailing list: https://www.ietf.org/mailman/listinfo/httpmail
  - BikINI is not IMAP http://bikini.caterva.org
  - Outlook uses HTTP to communicate with Hotmail
  - another rest mail proposal: http://www.prescod.net/rest/restmail/
- more rants: http://blog.gaborcselle.com/2010/02/how-to-replace-imap.html
- IMAP issues found by the chandler project http://chandlerproject.org/bin/view/Jungle/IntrinsicI

3. Persistency for Groupware Data

Relational Databases vs. NoSQL databases vs. plain files

Relational databases are not practical for contacts, events or todos. Common patterns in systems that use relational DBs for that purpose:

- artificial limits of entries, e.g. only 3 email addresses per contact, because there are only three columns email1, email2 and email3.
- Fields for custom data like custom1 to customX
- EAV pattern: tables like: id, foreign_id, type, value

A. Standards

A.1. Contacts

RFC 6450 vCard Format Specification

This document defines the vCard data format for representing and exchanging a variety of information about individuals and other entities (e.g., formatted and structured name and delivery addresses, email address, multiple telephone numbers, photograph, logo, audio clips, etc.). This is the new version and obsoletes RFCs 2425, 2426, and 4770, and updates RFC 2739.

RFC 6351 xCard: vCard XML Representation

This document defines the XML schema of the vCard data format.

Portable Contacts

Portable Contacts defines contact data structures and a ReST API. It has been integrated in the OpenSocial standard.

Nepomuk Semantic Desktop Contact Ontology

Friend of a friend (FOAF)

FOAF is a

hCard

A.2. Calendaring

RFC 5545 Internet Calendaring and Scheduling Core Object Specification

iCalendar is the core data schema for calendaring information. This is the new version and obsoletes RFC2445

RFC 6321 xCal: The XML format for iCalendar

This specification defines a format for representing iCalendar data in XML. More specifically, is to define an XML format that allows iCalendar data to be converted to XML, and then back to iCalendar, without losing any semantic meaning in the data. Anyone creating XML calendar data according to this specification will know that their data can be converted to a valid iCalendar representation as well.

CalWS RESTful Web Services Protocol for Calendaring

This document, developed by the XML Technical Committee, specifies a RESTful web services Protocol for calendaring operations. This protocol has been contributed to OASIS WS-CALENDAR as a component of the WS-CALENDAR Specification under development by OASIS.

Google Calendar API V3

While not being a standard, the Google Calendar API is RESTful and will surely be implemented by many client applications. It's remarkable that the API supports partial GETs returning only specified fields and the HTTP PATCH verb to update only specified fields.

A.3. Scheduling

RFC 5546 iCalendar Transport-Independent Interoperability Protocol (iTIP)

Scheduling Events, BusyTime, To-dos and Journal Entries; Specifies the mechanisms for calendaring event interchange between calendar servers. This is the new version and obsoletes RFC2446

RFC 6047 iCalendar Message-Based Interoperability Protocol (iMIP)

Specifies how to exchange calendaring data via e-mail. This is the new version and obsoletes RFC2447.

A.4. out of scope

OMA Converged Address Book V1.0

Standard by the Open Mobile Alliance defining data structures and synchronization of contact data. It references vCard.

W3C Contacts API

A standard on how address books cold be accessed on devices or from JavaScript inside a Web Browser. The standard references vCard, OMA Converged Address Book and Portable Contacts.

W3C vCard ontology

W3C PIM ontology

HR XML

The HR-XML Consortium is the only independent, non-profit, volunteer-led organization dedicated to the development and promotion of a standard suite of XML specifications to enable e-business and the automation of human resources-related data exchanges.

B. People, Groups and Organizations

People

Eliot Lear ¡lear@cisco.com¿
IETF Calsify WG chair

Lisa Dusseault

Lisa Dusseault is a development manager and standards architect at the Open Source Applications Foundation, where she's involved in the Chandler, Cosmo and Scooby projects. Previously, Lisa came from Xythos, an Internet startup where she was development manager for four years. She has also been an IETF contributor on various Internet applications protocols for eight years now, and continues to do this kind of work at OSAF. She co-chairs the IETF IMAP extensions and CALSIFY (Calendaring and Scheduling Standards Simplification) Working Groups. She is also the author of a book on WebDAV and co-author of CalDAV, an open and interoperable protocol for calendar access and sharing.

Peter Saint-Andre ¡stpeter@stpeter.im¿

IETF Calsify WG area director

Joseph Smarr

former Plaxo now Google presentation about portable contacts at vcarddav wg http://tools.ietf.org/age
2.pdf http://josephsmarr.com http://anyasq.com/79-im-a-technical-lead-on-the-google+-team

Mike Conley

`http://mikeconley.ca/blog/` working on a new address book for Thunderbird: `https://wiki.mozilla.org/Thunderbird/tb-planning`

C. Implementations

C.1. Servers

Cyn.in
Python, Open Core

DAViCal

PHP, SQL storage, CalDAV, CardDav

eGroupWare

eXo Platform
Open Core, Java, AGPL, participates in OpenSocial?

Group-Office
PHP, AGPL

Horde

OBM Groupware
PHP, GPL

owncloud

ownCloud supports syncing of calendar and contacts information via the CalDAV and CardDAV protocols.

Scalix
Open Core Scalix Public License (SPL) based on MPL, requires to show the Scalix Logo

Simple Groupware
PHP, GPL, SQL

SOGo
CalDAV and CardDAV, written in Objective-C

Tiki Wiki
PHP, SQL Contacts `http://doc.tiki.org/Contacts`, Calendar `http://doc.tiki.org/Calendar` iCal export apparently no CardDAV/CalDAV many many features!

Tine 2.0
Tine is not eGroupWare

Zarafa

Zimbra
Open Core

C.2. Clients

Spicebird
built on top of Thunderbird with Calendar

Thunderbird

CardDAV via SoCO connector `http://www.sogo.nu/fr/downloads/frontends.html`

Evolution, Evolution Data Server

KDE Kontact, Akonadi

more CardDAV
`http://wiki.davical.org/w/CardDAV/Clients` `http://en.wikipedia.org/wiki/CardDAV#Implementations`

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C.3. Web Services

C.4. Portable Contacts

D. Links

- `http://thesocialweb.tv`
- `http://www.vogella.de/articles/REST/article.html` REST with Java (JAX-RS) using Jersey - Tutorial
- `https://addons.mozilla.org/de/firefox/addon/restclient/`

E. TODO

- Does funambol.org has interesting implementations?