

CALCONNECT DOCUMENT CD 0608

Type: Presentation
Title: The Open Group Federated Freebusy Challenge Demo
Version: 1.0
Date: 2006-07-17
Status: Published
Source: FREEBUSY Technical Committee

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Federated FREEBUSY Challenge Demo
The Open Group Quarterly Meeting
17th-20th July 2006
Coral Gables, Florida

Wen Fang (Boeing)

Mike Douglass (RPI)

Gary Schwartz (RPI)

Why We are here

- "Increasingly in business, there is a need to schedule meetings with people (within or outside of the company) using different calendaring systems without multiple interactions and iterations, which prove to be time consuming and inefficient. What is needed is a simple mechanism to see when a group of people would be available for a meeting."

Open Group Vendor Challenges

- A vendor challenge is a very practical way to address the blockages that prevent deployment of a new technology, and in the context of work within The Open Group, this means the deployment of a new standards-based technology.
- The whole project is completed within the context of a very specific problem reported by one or more IT user organizations. This is important because it demonstrates to product vendors that there is a ready market for a solution to the problem, and encourages their active participation.

Who We Are The Open Group

- The Open Group is a vendor- and technology-neutral consortium, whose vision of Boundaryless Information Flow™ will enable access to integrated information within and between enterprises based on open standards and global interoperability.
- In accordance with its vision and mission, The Open Group works towards enabling access to integrated information within and between enterprises based on open standards and global interoperability.

Who We Are

CalConnect - The Calendaring and Scheduling Consortium

- The Consortium is focused on the interoperable exchange of calendaring and scheduling information between dissimilar programs, platforms, and technologies.
- The Consortium's mission is to promote general understanding of and provide mechanisms to allow interoperable calendaring and scheduling methodologies, tools and applications to enter the mainstream of computing.

Who We Are – the Presenters

- Wen Fang
Sr. System Analyst
The Boeing Company
- Mike Douglass
Sr. Systems Programmer
Lead architect of Bedework
RPI
- Gary Schwartz
Director, Communications & Middleware Technologies
RPI
- Drew Garcia
Director, Product Management
Timebridge

Chronology

- 2005/Q1 Brought to the Messaging Forum by The Boeing Company and Noventum Consulting
- 2006/Q1 Messaging Forum issued Federated Free/Busy Challenge
- 2006/Q1 Representatives of Open Group brought FREEBUSY Challenge to CalConnect
- 2006/Q2 proof of concept solution sketched out at Quarterly Meeting in Washington, D.C. to be promoted as a joint project between The Open Group and the Calendaring & Scheduling Consortium
- 2006/Q3 Demo of Proof of Concept Solution at Quarterly Meeting in Miami
- 2006/Q4 The Challenge final report to be published

What We Will be Showing You

- Requests to multiple calendar servers in multiple locations from multiple vendors for FREEBUSY information for multiple users
- Management of these requests and aggregation of requested information from web-based applications
- An interim solution which (adroitly) sidesteps some issues that will be need to addressed at some point.

Why this is Significant

- Major groupware applications already do this, but not in a heterogeneous calendaring environment which spans administrative and geographical domains.
- It is the first step towards solving a problem which needs to be solved.

The Requirements

- Uses open standard protocols
- Can be implemented today
- Crosses timezones, cultures, calendaring systems, corporate and network boundaries

Relaxed Constraints

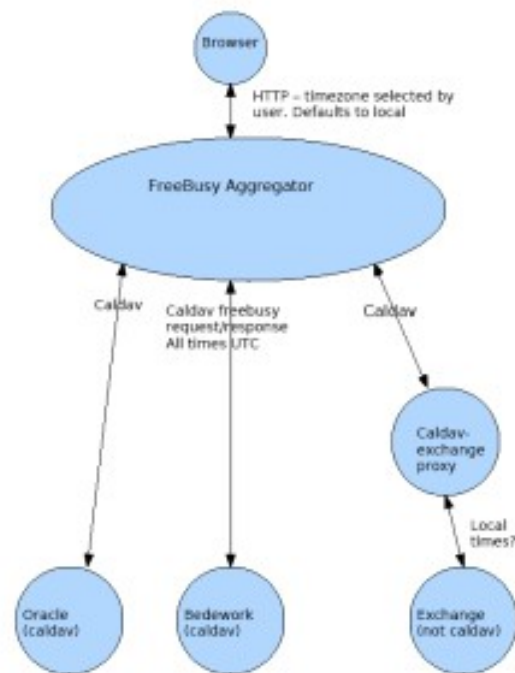
- For a constrained list of named attendees
- For a constrained list of times.
- Restricted to organizations that have server based calendaring systems
- No provision for confirmation that times are acceptable or for updating calendars
- Can initially exclude provision for recurring meetings

Architectural overview

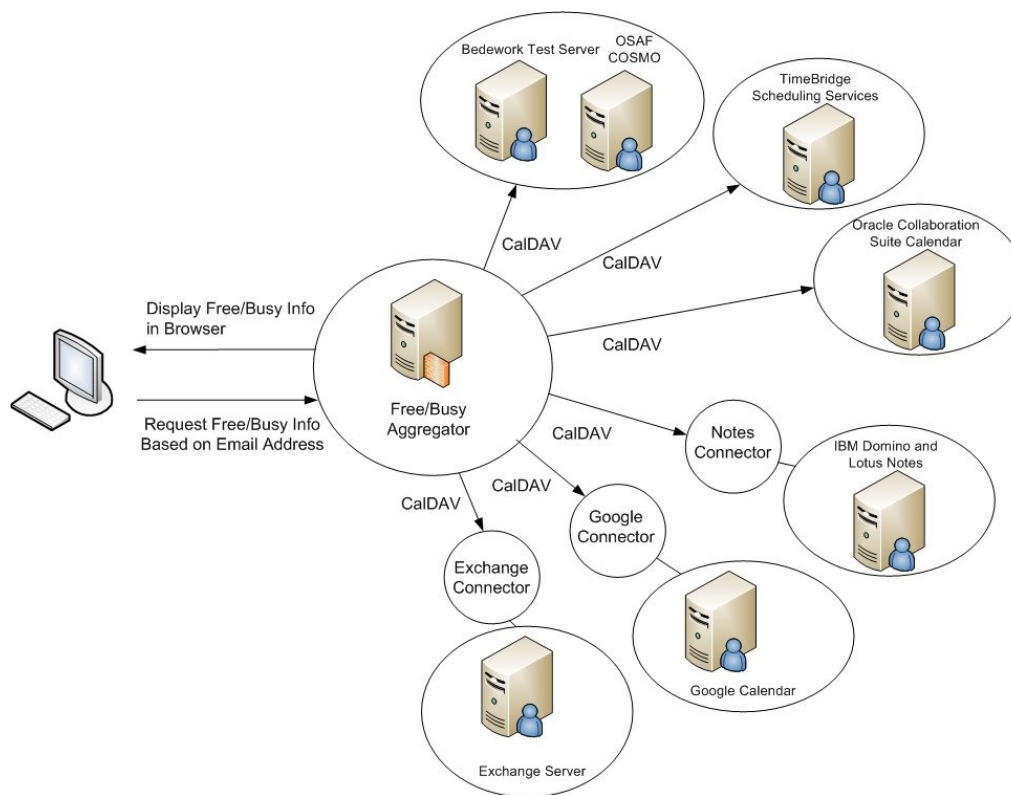
- An organizer, aggregator, "avatar" program (or controller) providing the user interface, having knowledge of attendee lists and groups, perhaps embed local business logic, and some useful level of functionality aggregating and displaying results from the FREEBUSY queries.
- A CalDAV-compliant free/busy interface (CC-FBI) layer (or "proxy" which would field CalDAV free/busy queries from, and return results to, the organizer program. This interface would only have to support enough CalDAV to support free/busy queries.
- A number of "connector" servers or services, at the edge of the network, to interface to systems which do not support CalDAV.

Architectural Overview – from the clouds

RPI-20060705 FreeBusy Aggregator



Architectural View – “From the Clouds”



How we did it

- Coordinated in the CalConnect FREEBUSY technical committee
- Modified code from the open source Bedework calendar
- “Connector” code contributed by IBM, Boeing, and TimeBridge
- Cooperative and collegial development and testing among calendar developers

The Secret of Our Success - CalDAV

- CalDAV is designed for implementation by any collaborative software, client or server that needs to maintain, access, or share collections of events. It is being developed as an open standard to foster interoperability.
- CalDAV builds upon extant standards (RFC 2445, WebDAV) while anticipating and allowing changes in the future such as XML representations of calendaring formats
- Mozilla, Oracle, Open Software Applications Foundation, Novell, Bedework have publicly announced plans to support CalDAV
- CalDAV provides enterprises the promise of comprehensive, interoperable, global calendaring solution

What We Learned

- Enlightened self interest and open standards are a powerful combination
- Even calendar developers who claim they use “open calendar standards” may have non-conforming implementations.
- Open APIs are good. Widely adopted open standards are better.
- Open standards need to be unambiguous ensure implementations will interpret those standards in interoperable way.

What remains to be done?

- **Adroitly solve the problems we are presently adroitly sidestepping:**
 - ◆ **Discovery**
 - ◆ **Authentication and access control**
 - ◆ **Enfranchising additional calendaring systems**
- **Migrate this solution to use the richer functionality of the still developing "Scheduling Extensions to CalDAV" specifications.**
- **Encourage wider participation among calendar developers and calendar users**

Resources & References

- <http://www.opengroup.org/>
- <http://www.calconnect.org/>
- <http://www.bedework.org/>
- <http://www.timebridge.org/>
- <http://www.opengroup.org/messaging/challe>
- <http://ietf.osafoundation.org/caldav/index.ht>

Open Group Demo – July 18, 2006

- Accessed FREEBUSY information from
 - ◆ Bedework Calendar (native CalDAV)
 - ◆ Oracle Collaboration Suite Calendar (native CalDAV)
 - ◆ OSAF Cosmo (native CalDAV)
 - ◆ Google Calendar (RPI-supplied connector)
 - ◆ IBM Lotus Domino/Notes (IBM-supplied connector)
 - ◆ Microsoft Outlook (TimeBridge-supplied connector)
 - ◆ Microsoft Exchange (Boeing-supplied connector)

Aggregator Main Screen

CALCONNECT BOEING CALDAV FREEBUSY AGGREGATOR

[Display Freebusy](#) | [Register User](#)

| | | |
|---|---|----------------------------|
| <p>aggregation</p> <p>Start date: <input type="text" value="20060717"/> </p> <p>End date: <input type="text" value="20060722"/> </p> <p><i>yyyymmdd</i></p> <p style="text-align: center;"><input type="button" value="aggregate"/></p> | <h2 style="margin: 10px 0;">CalDAV Freebusy Aggregator</h2> <p>To begin, select or create a group of attendees, enter a date range on the left and click "aggregate".</p> | <p>participants</p> |
| <p>current group</p> <p><input type="text" value="fb-participants"/> </p> <ul style="list-style-type: none"> modify <ul style="list-style-type: none"> MikeADouglass@gmail.com boeing01@bedework.org douglm@rpi.edu rpitest@osaf.org simon.vaillancourt@oracle.com | | |

Internet

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Calendar

Chandler Calendar Screen Shot

The screenshot shows the Chandler calendar application window. The title bar reads "Chandler". The menu bar includes "File", "Edit", "View", "Item", "Collection", "Test", and "Help". The toolbar contains icons for "All", "Mail", "Tasks", "Calendar", "Sync All", "New", and "Send".

On the left side, there is a sidebar with a list of calendars: "My calendar", "Trash", "Test Collection", and "calendar". Below this is a mini-calendar for "Today" (July 2006) and "August 2006".

The main area displays a weekly view for "July 2006". The days of the week are labeled: Sun 16, Mon 17, Tue 18, Wed 19, Thu 20, Fri 21, and Sat 22. The time slots are numbered from 7 to 8. Several events are shown as orange blocks:

- 8:00 AM Tentative planning introduction**: A vertical block on Monday, July 17, spanning from 8:00 AM to approximately 5:00 PM.
- 12:00 PM Lunch date**: A horizontal block on Tuesday, July 18, spanning from 12:00 PM to 1:00 PM.
- 10:45 AM All-hands meeting**: A horizontal block on Thursday, July 20, spanning from 10:45 AM to 12:00 PM.
- 1:30 PM Planning meeting**: A vertical block on Wednesday, July 19, spanning from 1:30 PM to approximately 7:00 PM.

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2006-07-01

Bedework Calendar Screen Shot

The screenshot shows the 'Personal Calendar' interface for July 2006. The header includes the 'calendar bedework' logo and navigation links for 'Public Calendar', 'School Term', 'Other users', and 'Change Calendar Help'. The main area displays a weekly calendar grid for the period 'Saturday, July 1, 2006 - Monday, July 31, 2006'. The calendar is currently set to 'July, 2006' and shows a grid with days of the week as columns and dates as rows. A mouse cursor is hovering over the date '11' (Tuesday). A blue event bar is visible on the 17th (Monday), spanning from 10:00 AM to 12:00 PM, with the text 'Meeting 1' and 'Check the agenda'. The interface includes navigation buttons for 'DAY', 'WEEK', 'MONTH', and 'YEAR', and a 'TODAY' button. The user is logged in as 'bjp@redhat.com'.

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Boeing Exchange Calendar Screen Shot

Microsoft Office Outlook Web Access Calendar

Calendar

July 2006

| Sun | Mon | Tue | Wed | Thu | Fri |
|--------|---|----------------------------------|-------------------------------|---|----------------------------|
| Jun 25 | 26 | 27 | 28 | 29 | 30 |
| 2 | 3 | 4 | 5 | 6 | 7 |
| 9 | 10 | 11 | 12 | 13 | 14 |
| 16 | 17 2:00 PM fb (virtual) 3:00 PM Daily Lunch (v) | 18 3:00 PM Daily Lunch (v) | 19 3:00 PM Daily Lunch (v) | 20 2:00 PM fb (virtual) 3:00 PM Daily Lunch (v) | 21 2:00 PM fb (virtual) |
| 23 | 24 2:00 PM fb (virtual) 3:00 PM Daily Lunch (v) | 25 3:00 PM Daily Lunch (v) | 26 3:00 PM Daily Lunch (v) | 27 2:00 PM fb (virtual) 3:00 PM Daily Lunch (v) | 28 2:00 PM fb (virtual) |
| 30 | 31 2:00 PM fb (virtual) 3:00 PM Daily Lunch (v) | Aug 1 3:00 PM Daily Lunch (v) | 2 3:00 PM Daily Lunch (v) | 3 2:00 PM fb (virtual) 3:00 PM Daily Lunch (v) | 4 2:00 PM fb (virtual) |