

CalConnect, Calendaring Interoperability and Calendaring Standards

Published Administrative

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The Calendaring and Scheduling Consortium, Inc. 2007

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Foreword

This document incorporates by reference the CalConnect Intellectual Property Rights, Appropriate Usage, Trademarks and Disclaimer of Warranty for External (Public) Documents as located at

<http://www.calconnect.org/documents/disclaimerpublic.pdf>.

CalConnect, Calendaring Interoperability and Calendaring Standards

1. Terms and definitions

For the purposes of this document, the following terms and definitions apply.

1.1.

Calendar

A collection of events, tasks, journal entries, etc. Examples include a person's or group's schedule, resource availability, and event listings.

1.2.

Scheduling

The exchange of request/invitations and responses between organizers and attendees of scheduled events, tasks or journal entries.

1.3.

CalConnect

The Calendaring and Scheduling Consortium, consisting of vendors and user groups interested in promoting and improving calendaring and scheduling standards and interoperability.

2. Why CalConnect was established

2.1. 1995-1999

- 1996 Versit Consortium issued vCalendar specification
- 199x IETF CALSCH working group started on iCalendar specification
- 1998 iCalendar (RFC 2445), iTIP (RFC 2446) and iMIP (RFC 2447) became a proposed standard
- 199x Work began on draft for Calendaring Access Protocol (CAP)
- 1998 — 2000 Some interoperability testing

2.2. 2000-2004

- Work on CAP — stopped
- Interoperability testing — stopped
- Work on iCalendar, iTIP and iMIP — stopped
- IETF CALSCH working group — stopped
- **The draft RFCs were not ready**
 - Too ambiguous
 - Too complex
 - Untested
- Calendaring and Scheduling Vendors continued to use the RFCs as they could
- Where the RFCs were inadequate vendors were forced to develop workarounds or unique extensions
- Work on follow-on or related specifications was hampered by being “built on sand”
- Vendors — and users — became more and more frustrated by the lack of movement in calendaring standards and interoperability
- Interoperability between calendaring systems was mostly still a dream
- Somewhere around 2004 things started to move again
- Some vendors began moving towards alternatives to the base RFCs
- Interoperability seemed less important than progressing products

- Work was begun on CalDAV as a prospective standard for a calendar access protocol, recognizing that CAP was a dead end

2.3. Establishment of CalConnect

CalConnect was founded in January of 2004 to promote interoperable Calendaring and Scheduling.

The driving premise behind the Consortium is that interoperability between calendaring programs and systems is essential to achieving the promise and future growth of calendaring.

We believe that our work towards interoperability is a major factor driving the future of internet calendaring, and are actively working to involve significant players (vendors and customers) in the calendaring arena.

2.4. Why a Consortium?

A focused environment to:

- Re-energize Calendaring and Scheduling
- Provide a forum to discuss the direction for standards and implementations
- Validate the existing standards
- Provide interoperability testing between implementations and against standards
- Drive requirements for changes to existing standards, new and complementary standards back into IETF, other bodies
- Where necessary develop initial specifications and submit them to SDOs for progression to standards
- Promote standards and technologies to the vendor and user communities

3. Overview of CalConnect

3.1. What is CalConnect?

A Partnership between Calendaring & Scheduling Vendors and Customers

- To provide a general understanding of, promote, and provide mechanisms so that Calendaring and Scheduling methodologies, tools and applications can enter the mainstream of computing

Not a standards development organization (SDO)

- Develop use cases, requirements, papers, specs
- Promote development and adoption of standards
- Introduce specifications into SDOs for progression
- Influence SDOs and vendors

3.2. The Vision

Our vision of the future is not only interoperable calendaring, but ubiquitous interoperable calendaring. Calendaring should—and can—be as ubiquitous as electronic mail.

— Dave Thewlis, CalConnect Executive Director

Being able to schedule meetings with my work group is important. But being able to schedule an appointment with my hairdresser could change the world.

— Pamela Taylor, CalConnect Board Member

3.3. CalConnect Members

3.3.1. Institutional Members

- Apple Inc.
- Boeing
- California State University, Fresno
- Carnegie Mellon
- Dartmouth
- Duke University¹
- Eventful¹
- Google
- IBM
- Kerio Technology
- MailSite Software
- Marware
- M.I.T.¹
- Microsoft
- Mirapoint
- Mozilla Foundation¹
- New York University
- Open Connector Groupware
- Oracle Corporation¹
- Open Source Applications Foundation¹
- PeopleCube¹
- Princeton University OIT
- Rensselaer Polytechnic Institute (RPI)
- Scalix
- Sony Ericsson
- Stanford University¹
- Sun Microsystems
- Symbian¹
- Synchronica
- Timebridge
- Trumba Corp
- University of California, Berkeley¹
- University of Chicago
- University of Michigan
- University of Pennsylvania
- University of Washington¹
- University of Wisconsin, Madison¹
- Yahoo!¹
- Zimbra

3.3.2. Individual Members

- Patricia R. Egen

¹Founding member

3.4. CalConnect

What we do:

- Promote Calendaring & Scheduling (C&S)
- Help drive the evolution of open standards for Calendaring & Scheduling
- Conduct interoperability testing
- Develop a shared vision for C&S community

How we do it:

- All members have same rights & privileges
- Collegial, consensus environment
- Completed work products are published
- Non-member organizations may attend one Roundtable as Observers
- Member may have unlimited participants
- Any member may propose new TC, provide Chair

3.5. How CalConnect Works

- All members have same rights & privileges
- Collegial, consensus environment
- Completed work products are published
- Non-member organizations may attend one Roundtable as Observers
- Member may have as many representatives involved as it wishes

3.6. Technical Committees

3.6.1. Membership

- TC participants from member organizations

3.6.2. Operations

- Determined by TC Chair and TC membership
- TC Chair provides regular status to Steering Committee

3.6.3. Governance

- Any Consortium member may propose new work
- Charter, scope and deliverables identified in the proposal
- Chair confirmed by SC
- Committee terminates when chartered work is complete

3.6.4. Operational policies

- In-progress work confidential to Consortium members only
- Completed work published and freely available on Consortium web site
- No proprietary information discussed

3.7. TC CHAIRS

- Management committee for TCs
 - Composed of Chairs of all TCs
- Weekly conference calls

- Ongoing TC coordination on behalf of Steering Committee
- Approves document publication following last call process
- Chair of TC CHAIRS participates in Steering Committee

3.8. Steering Committee

3.8.1. Membership

- Founding Members plus first member from each membership category

3.8.2. Operations

- Monthly teleconference
- Meetings at Roundtables or other activities if needed

3.8.3. Governance

- Chair chosen by Steering Committee members
- Chair participates in Board of Directors meetings

3.8.4. Activities

- Overall technical direction
- Management of Technical Committees via TC CHAIRS committee
- Consortium program elements
- Advice to the Board of Directors

3.9. Why Get Involved in CalConnect

- Help shape the evolution of calendaring and scheduling specifications, standards and products
- Develop real-world use cases and requirements
- Make sure needs are considered
- Work directly with developers/major customers
- Help drive the calendaring community towards interoperability
- Member may have as many representatives as desired in Consortium Activities

3.10. Membership

3.10.1. Eligibility

Any company, institution or individual who:

- supports the goals of the Consortium
- agrees to abide by its rules
- submits the proper membership application
- pays the appropriate membership fee

3.10.2. Fees

- Published on the Consortium web site
- Based on membership category
- Due annually upon anniversary of joining the Consortium

3.10.3. Categories

- Commercial Vendor

- >\$100 million annual revenue
- \$10-100 million annual revenue
- >\$10 million annual revenue

- Customer Organizations/Companies
- Non-Profit Organizations
- Open Source Organizations
- Academic Institutions
- Standards Setting Organizations
- Individuals

3.11. Organizational Structure

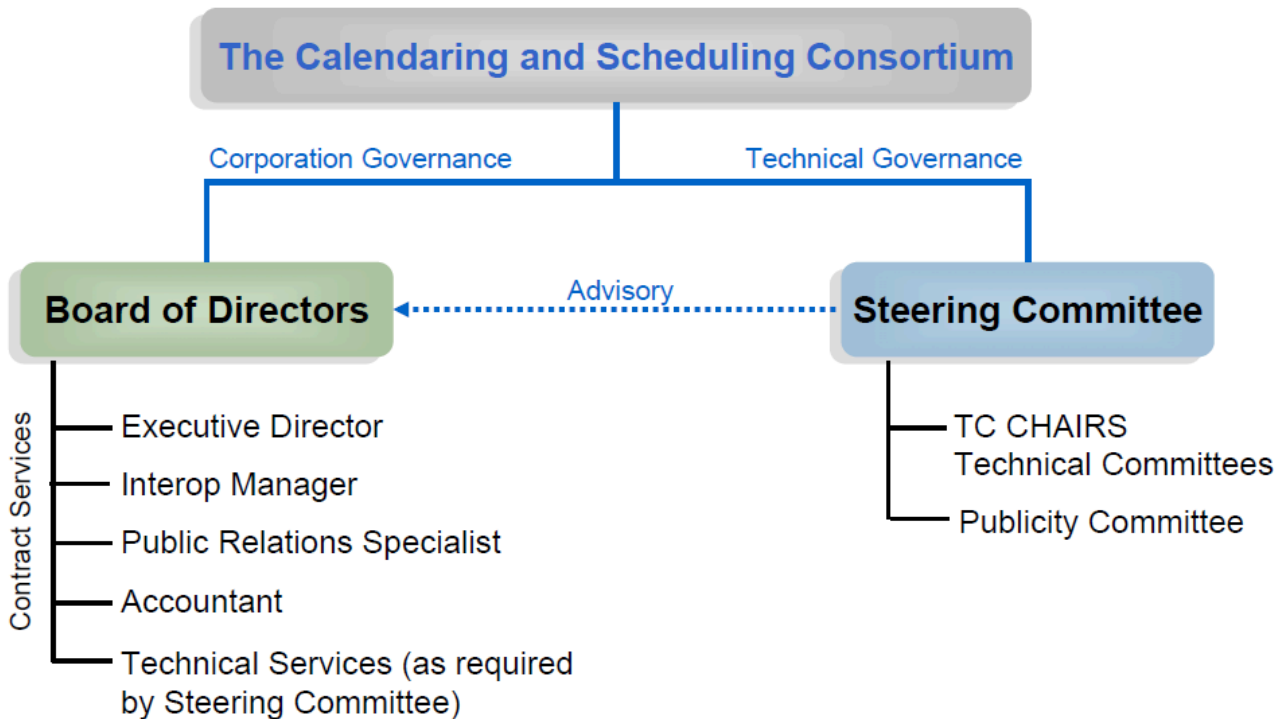


Figure 1 — Organizational structure

3.12. Events

- 1) Interops (Interoperability Testing)
 - Open to members and non-members
 - Two day event usually co-located with Roundtable
 - Results published to relevant standards development organizations
 - Public reports are “sanitized”
- 2) Roundtables
 - “All hands” plenary meeting of membership
 - Three per year, midway between IETF meetings
 - Held in conjunction with Interops
 - Technical committee working meetings
 - Steering Committee meeting
 - Review and status of technical committees
- 3) Workshops
 - Open or invitational depending on goal & topic
 - May involve non-Consortium members and liaisons
 - Co-hosted with Roundtable or independent event
- 4) Calendaring & Scheduling Public Conference

- **Under evaluation**
- Would offer technology and product overviews, tutorials and classes, demonstrations and vendor offerings

3.13. Current Technical Committees

3.13.1. CALDAV

Define problems CalConnect wishes to solve with extensions to WebDAV; assist IETF with development of CalDAV Specification

3.13.2. EVENTPUB

Define event publishing & establish differences from regular calendaring and scheduling

3.13.3. FREEBUSY

Develop and conduct Federated Free/Busy Challenge Response; review Free/Busy related proposals

3.13.4. IOPTTEST

Support interoperability testing for all technical committees, develop test suites & reference implementation, publish Interop results

3.13.5. MOBILE

Define issues for mobile support of standards-based Calendaring and recommend extensions to standards for mobile support

3.13.6. REALTIME

Clarify issues involved with realtime server-to-server calendaring and scheduling issues & provide recommendations

3.13.7. TIMEZONE

Develop proposals for a formal, authoritative Timezone Registry and a Timezone Service Protocol

3.13.8. USECASE

Develop sets of real world use cases that can be used to validate identified functionality & testing scenarios for existing & future C&S implementations

4. The Current State of Calendaring Standards

4.1. Calendaring Standards Today

4.1.1. IETF-CALSCH Working Group

- Developed RFCs 2445/6/7
- Shut down in 2004 at same time as CAP removed from table

4.1.2. Original CAP (Calendar Access Protocol)

- Assigned “experimental draft” status by IETF in 2004 (effectively removed from program of work in IETF)

4.1.3. vCalendar

- Still in use especially in mobile calendaring, travel industry websites
- Not fully compatible with iCalendar (e.g. recurrence); encourage move to iCalendar
- [The Benefits of iCalendar for the Mobile Industry](#)

4.1.4. vCard

- Not precisely “calendaring” — but contacts/address book central to calendaring
- Current version 3.0 needs work
- Mobile calendaring mostly obsolete vCard 2.1
- [CalConnect vCard workshop](#)

4.1.5. IETF “CALSIIFY” Working Group

- Simplify (rationalize) RFCs 2445/6/7

4.1.6. RFCs 2445/6/7 (iCalendar, iTIP, iMIP)

- Target of initial CalConnect work products
- All have revised drafts underway
- Expect publication of revised RFCs in 2008
- Still require interoperability demonstration to progress to Draft Standards (i.e. CalConnect)

4.1.7. CalDAV

- “Calendaring Extensions to WebDAV” published as Proposed Standard, RFC 4791
- “Scheduling Extensions to CalDAV” is under review for submission
- Several CalDAV implementations today
 - Apple iCal Server (Darwin Calendar Server)
 - Bedework
 - Evolution
 - Kerio Technologies (Kerio MailServer)
 - Marware (Project X Client)
 - Mozilla Lightning & Sunbird (CalDAV client)
 - Mulberry (Client)
 - Oracle Calendar
 - OSAF Cosmo (Chandler Project)
 - Etc.

4.1.8. iCalendar Extensions

- Proposed extensions (additions) to the revised iCalendar when it is complete
- VAVAILABILITY
 - New iCalendar component allowing publication of available and unavailable time periods associated with calendar user
- VVENUE

- New iCalendar component allowing the specification of structured location data for publishing event information

4.1.9. EVENTMAP protocol

- Identifies location on website of structured event information for use by event publication aggregators

5. CalConnect Activities and Accomplishments

5.1. TC CALDAV

5.1.1. Charter

- Begin: October 2004
- Define problems CalConnect wishes to resolve with *CalDAV Extensions to WebDAV*
- Assist IETF with CalDAV Specifications

5.1.2. Projects, Topics

- Act as “real world” input to CalDAV Specification authors (two of three are members of TC CALDAV)
- Develop CalDAV testing matrices for TC IOPTTEST
- Develop VAVAILABILITY with TC FREEBUSY
- Develop use cases and requirements for CalDAV Scheduling
- **CalDAV scheduling extensions (discovery, auth/auth, etc.)**

5.1.3. Products

- CalDAV testing matrices for Interoperability testing
- CalDAV Use Cases and Requirements
- CalDAV Scheduling Requirements
- **VAVAILABILITY extension to iCalendar**

5.2. TC EVENTPUB

5.2.1. Charter

- Begin: March 2005
- Define Event Publication and distinguish from regular calendaring
- Determine requirements for event publication not met by existing specifications and propose remedies

5.2.2. Projects, Topics

- Review of possible extensions to iCalendar to support event publication and venue information
- **Develop mechanism for event “crawlers” to find and consume event information on websites, analogous to “sitemap”**

5.2.3. Products

- VVENUE extension to iCalendar
- **EVENTMAP proposal under development**

5.3. TC FREEBUSY

5.3.1. Charter

- Begin: May 2006
- Act as CalConnect Liaison with The Open Group for the Federated Freebusy Challenge in 2006
- Inform the work of CALDAV, REALTIME, and other TCs
- Participate in drafting the final report for The Open Group

5.3.2. Projects, topics

- Demo-ed a Federated Freebusy Aggregator at The Open Group meeting in July 2006
- Assist Boeing to “productize” components used in the demo as well as those being further developed by Boeing
- **Addressing “office hours”/“availability” — joint VAVAILABILITY project with TC CALDAV**
- **Standardize and simplify FREEBUSY URL**

5.3.3. References

- <http://tools.ietf.org/html/draft-daboo-calendar-availability-00>
- <http://calconnect.org/publicity/060724freebusydemorelease.pdf>
- <http://calconnect.org/presentations/freebusydemo.pdf>

5.4. TC IOPTTEST

5.4.1. Charter

- Begin: October 2004
- Conduct CalConnect Interoperability Test Events and publish results

5.4.2. Projects, topics

- CalConnect Interoperability Test Events scheduled with each Consortium event week (i.e. together with Roundtables)

5.4.3. Products

- Public and CalConnect-internal IOP test event reports

5.5. TC MOBILE

5.5.1. Charter

- Begin: September 2005
- Identify issues related to mobile calendaring and scheduling and develop recommendations to address

5.5.2. Projects, topics

- Determine mobile calendaring issues and problems
- Survey mobile users about calendaring
- Evaluate continued reliance on vCalendar and develop ways to move vendors forward
- Develop Mobile Calendaring Interoperability Test Suite
- **Implement Mobile IOP Test Events (with TC IOPTTEST)**

— Define Mobile Calendaring issues for CalDAV

5.5.3. Products

- Report on Mobile Calendaring Questionnaires
- Mobile Calendaring Interoperability Test Suite
- Benefits of iCalendar for the Mobile Industry

5.6. TC REALTIME

5.6.1. Charter

- Begin: June 2007
- Identify issues related realtime server-server scheduling and make recommendations to address

5.6.2. Projects, topics

- Discovery, Authentication and Authorization
- iTIP evaluation and extensions
- Work with TC CALDAV, TC FREEBUSY

5.6.3. Products

5.7. TC RECURR

5.7.1. Charter

- Begin: October 2004 (completed February 2006)
- Identify problems with Recurrences in iCalendar
- Make recommendations to IETF CALSIFY effort (revision of RFC 2445 iCalendar)

5.7.2. Projects, topics

- Questionnaires to determine problems with recurrence in implementations of iCalendar
- Develop problem statement and recommendations

5.7.3. Products

- Results from Recurrence Questionnaire
- iCalendar Recurrence Problems and Recommendations

5.8. TC TIMEZONE (Phase 1)

5.8.1. Charter

- Begin: October 2004 (completed February 2006)
- Identify problems with timezone usage in iCalendar and timezone support in genera

5.8.2. Projects, topics

- Conduct survey on problems with timezone management
- Develop problem statements and recommendations for IETF CALSIFY effort for iCalendar

5.8.3. Products

- Timezone Questionnaire
- Report on Timezone Questionnaire
- Timezone Problems and Recommendations
- Timezone Registry and Service Recommendations

5.9. TC TIMEZONE (Phase 2)

5.9.1. Charter

- Begin: May 2007
- Continue work of TC TIMEZONE by developing formal proposals based on Timezone Registry and Service Recommendations

5.9.2. Projects, topics

- **Develop proposal for formal, authoritative Timezone Registry for submission to IETF to be published as an RFC**
- **Develop requirements for Timezone Registry Service**
- **Develop proposals for Timezone Registry Service implementations using current protocols**

5.9.3. Products

5.10. TC USECASE

5.10.1. Charter

- Begin: October 2004
- Develop use cases for calendaring and scheduling and their contextual environments
- Establish the ways that users actually want to use calendaring environments
- Establish "Minimum Interoperable Subsets" (the minimum set of functions which must be interoperable to make an implementation useful to a customer)

5.10.2. Projects, topics

- **Assessment of access control in existing calendaring implementations for TC CALDAV**
- **Develop Min-IOP use cases for Resources**

5.10.3. Products

- Min-IOP Use Cases for iCalendar
- CalDAV Use Cases (with TC CALDAV)
- Min-IOP Use Cases for Tasks
- Calendaring and Scheduling Glossary of Terms
- **Min-IOP Use Cases for Resources**

5.11. DST AD HOC

5.11.1. Charter

- Begin: June 2005
- Establish CalConnect position on Extended Daylight Savings Time Proposal by U.S. Congress

- Continue DST Advisory Work

5.11.2. Projects, topics

- Develop CalConnect position on EDST and communicate to U.S. Congress prior to enactment of law
- Develop guidance for industry on planning for and implementing EDST Changes in March and October
- Work with TC TIMEZONE on recommendations on future of timezone and DST support

5.11.3. Products

- Extended Daylight Savings Time Advisory
- Extended Daylight Savings Time Review and Considerations
- EDST Links, Advisories and Changes
- CalConnect Reflections and Recommendations

5.12. vCard Ad Hoc

5.12.1. Charter

- Begin: January 2007
- Determine interest in and support for revision of vCard standard

5.12.2. Projects, topics

- vCard Workshop planning and implementation
- Liaisons with OMA/DS on interest in vCard Revision
- **Identify products of vCard Technical Committee**
- **Develop charter for vCard Technical Committee in support of IETF working group on vCard revision**
- **Recommendation on establishment of vCard TC**

5.12.3. Products

- vCard Workshop (September 2007)
- Draft Charter for vCard Technical Committee

5.13. XML Ad Hoc

5.13.1. Charter

- Begin: May 2007
- Plan for and explore XML representations of iCalendar
- Determine need for XML Technical Committee

5.13.2. Projects, topics

- Conduct BOFs to determine level of support for roundtrip iCalendar/XML
- Review prior art in this area
- **Develop charter for XML Technical Committee**
- **Identify potential products of XML TC**
- **Recommendation for establishment of XML TC**

5.13.3. Products

- Draft charter for XML Technical Committee

6. Summary: New and Proposed Work

6.1. New Activities

- Mobile Calendaring Interoperability Test Suite
- Planning for Mobile Calendaring Interoperability Test Events
- Min-IOP Use Cases for Resources
- Expansion of IOP Testing areas
 - EDST
 - iTIP
 - CalDAV Scheduling
- Formal Timezone Registry and Timezone Registry Service proposals
- FREE/BUSY URL
- VAVAILABILITY (“Office Hours”)
- EVENTMAP protocol
- Event Sharing between servers
- Automated Scheduling Updates (CalDAV)
- External Attachments (CalDAV)
- vCard Revision
- XML iCalendar Representations
- REALTIME issues for iTIP and scheduling
 - Addressability
 - Discovery
 - Authentication/Authorization/Access Control
- Diverse calendaring specifications & tools (CalATOM, RSS/SSE, microformats, CalDAV, proprietary calendaring systems)
 - Develop and publish guide and comparison
 - Work towards ensuring interoperability and synergy between various tools and specs

7. More Info

- 1) Website: <http://www.calconnect.org>
- 2) Contact us: info@calconnect.org
- 3) For more information:
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Bibliography

- [1] CalConnect Web Site, <http://www.calconnect.org>
- [2] CalConnect Published Documents, <http://www.calconnect.org/aboutproducts.shtml>
(Questionnaires, Recommendations, Use Cases and Requirements, Mobile Interoperability Test Suite, Calendaring and Scheduling Glossary of Terms, Event Reports, vCard Workshop Report)
- [3] CalConnect Calendaring Standards, <http://www.calconnect.org/calendaringstandards.shtml>
- [4] CalConnect Presentations, <http://www.calconnect.org/presentations.shtml>
- [5] CalConnect DST Documents, <http://www.calconnect.org/dstdocs.shtml>