The Bedework Enterprise Calendar Project

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Who We Are

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What Is Bedework?

• Bedework is
  - a comprehensive calendaring and events system
  - open source
  - platform independent (Java)
  - modular & extensible
  - intended for higher education
  - and...

STANDARDS COMPLIANT

Calendaring Standards

- iCal : RFC 2445 (2446, 2447)
  http://www.ietf.org/rfc/rfc2445.txt
- CalDAV : RFC 4791
  http://www.ietf.org/rfc/rfc4791.txt
- CalDAV Scheduling (in draft)
- Vavailability (in draft)

Why? ...interoperability!

A Calendar System for Higher Ed

- Low "buy-in" cost
  - Integrates with extant campus directories
  - Integrates with extant campus authentication
  - No license or usage fees
  - Works with a number of database systems
  - Distributed administration
  - Easily skinned
- JSR-168 (portal) "Friendly"
- Used and developed by multiple universities
- Not idiosyncratic of a particular institution
  - What’s good for higher ed as a whole is good for Bedework
- Assume not the only calendaring system on campus
  - Access server with "non-native" client
  - R25, Exchange, Oracle calendar, etc.
  - Design point is to promote interoperability between systems

"Total Calendaring System?"

- "Total Calendaring System" must meet all the following needs and more:
  - personal / group / public events calendaring
  - interoperable calendaring
  - shared calendars
  - scheduling
  - events publication / event submission
  - subscriptions / event pool
  - multi-language support / internationalization
  - structured venues / contacts, sponsors / etc.
  - much, much, more ...
- Priorities driven by standards requirements & user feedback
Who’s Using Bedework?

• In production
  - Bennington College (US)
  - Bishop’s University (Canada)
  - Carleton University (US)
  - Dalhousie University (Canada)
  - Montana State University (US)
  - Public University of Navarra (Spain)
  - Queen’s University (Canada)
  - Rensselaer Polytechnic Institute (US)
  - University of British Columbia (Canada)
  - University of Maine, Fort Kent (US)
  - University of Maryland (US)
  - University of Washington (US)

• In development
  - Cornell (US)
  - Duke (US)
  - Stockholm University (Sweden)
  - University of Chicago (US)
  - Others…
  - Public University of Navarra (Spain)
  - Queens University (Canada)
  - Rensselaer Polytechnic Institute (US)
  - University of British Columbia (Canada)
  - University of Maine, Fort Kent (US)
  - University of Maryland (US)
  - University of Washington (US)

• Deployment
  - stand-alone system
  - portlet or proxied portlet
    - uPortal
    - LifeRay
    - PlumTree (BEA)
Bedework was among the 10 initial recipients of The Andrew W. Mellon Foundation’s Technology Collaboration (MATC) award for leadership in the collaborative development of open source software.

The State of Calendaring

Current Calendaring Model

Future Calendaring Model

As the calendaring world becomes more CalDAV aware, two-way sync will be the norm in user clients without the need for third-party conduits.

Desktop and mobile clients appear to be heading this way.

Cross-Organization Calendaring:

- real-time freebusy aggregation
- real-time scheduling

This model was demonstrated at CalConnect in February 2008. See http://calendarswamp.blogspot.com/2008/02/calconnect-progress-report.html
**Why Do Standards Matter?**

• The interoperable exchange of calendar information is what the standards community is trying to solve and promote.
• What’s going to happen when the iPhone becomes CalDAV aware? (Apple’s iCal already is...) ...how about other mobile devices?
• Public events: The web is important, but this information goes well beyond web presentation.
• As IMAP is to email, CalDAV is to calendaring.
• Users want interoperability!!!

*Let’s make Jorn’s life easier.*

**Interoperability**

• Bedework’s preoccupation with standards and interoperability is in large part recognition that in many organizations, Bedework is unlikely to be the only calendaring product.
• The ability to share and exchange data with other calendaring products and environments is an important key to Bedework’s future well-being as a product and a project.

**Bedework Features**

• Five main components:
  • public suites
  • personal client
  • administrative client
  • event submission client
  • CalDAV

• Features:
  - Distributed, fine grained administration
    • Administrative groups
    • Location and contacts management
  - Access control & sharing
  - Scheduling
  - Stand-alone & portlet implementations
  - Highly customizable look and feel
  - Interoperable with CalDAV desktop clients – currently Mozilla Lightning and Apple’s iCal

**Bedework Components**

• Event Pool Model
  
  - Public Events
  - Personal & Group Events

  - Tagging: specifically tagged

  - Subscription: tagged with categories

  - Freebusy: calendar

  - Location: subscribe

  - Privacy: calendar

  - Availability:
    - make Jorn’s life easier.

  - Interoperability:
    - Bedework’s preoccupation with standards and interoperability is in large part recognition that in many organizations, Bedework is unlikely to be the only calendaring product.
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Agnosticisms of Bedework

- Platform (Java)
- Database - Hibernate
- Application server
- Authentication
- Internationalization / localization
- Portal – JSR168
- Presentation
- Standards compliance
- Scalability

New Features

- In 3.4.1.1
  - Event Submission web client
  - Support for RFC 2445 X-properties
  - Ability to include images, maps, etc with an event
  - Default support for category filters in the UI
  - Support for arbitrary named filters in public client

- Coming soon
  - Stronger support of multiple languages and internationalization/localization
  - Subscribe to email reminders, change notifications, “tell a friend”, etc for events
  - Many UI enhancements, stronger use of AJAX
  - Refactoring of the UI to make upgrading simpler

Demonstration

- Web client overview
- CalDAV (Lightning)

Mozilla Lightning

- See http://www.bedework.org/trac/bedework/wiki/BedeworkUserHelp for instructions on using Bedework with Mozilla Lightning or Apple’s iCal

Open Connector

- Bedework is a sponsor of the Open Connector project, developers of open-source extensions for Microsoft Outlook.
- Bedework has been working with Open Connector to better support CalDAV in Microsoft Outlook.
Server to Server Realtime Scheduling

Today’s State of the Art

- Deficiencies:
  - No immediate freebusy access across organizations
  - Scheduling process averages 21 hours per meeting (researched by Boeing, Danish Government)

University A
- attendee
- event organizer

University B
- attendee
- event organizer

Meeting...3 days later?

明日の実装...今すぐ扱える！

Bedework Vision, Community, and Futures

• Advantages:
  - Immediate freebusy!
  - Near 100% success on 1st attempt (...assuming calendars are in order...)
  - Allows for cross-organizational auto-accept

• Limitations
  - Security (client?)

Enlightened self interest
- Deliver value locally – but develop for global community
- Make Bedework attractive enough to other universities that they adopt the software and contribute to its development.

• Make Bedework the leading open source Java-based calendar in higher education
- Continue to grow the user community
- Continue to grow the contributor community

Standards compliance is key to Bedework’s success, present and future

Some Needs

- Address book support (CardDAV, vCard?)
- Notifications, e.g. email, sms ... push instead of polling
- Structured locations (vVenue? vCard?)
- Mid-level administration of public events
Bedework Steps It Up

• We are working hard to continue building our community and to keep up with the momentum
  - Enhance our community tools and infrastructure
  - Develop a richer documentation set
  - Continue to collaborate with an ever growing group of informed developers

CalConnect

• CalConnect - The Calendaring and Scheduling Consortium: http://www.calconnect.org

• “The Consortium is focused on the interoperable exchange of calendaring and scheduling information between dissimilar programs, platforms, and technologies.”

• Membership consists of industry leaders and a large number of universities
  - http://www.calconnect.org/mbrlist.shtml

• Interoperability testing!

Bedework & CalConnect

• Bedework Participates in interoperability testing and a number of technical committees:
  - CalDAV: notifications, scheduling (draft), ACL alternatives
  - FreeBusy Gary Schwartz, Chair: standardizing URL formats for freebusy lookup
  - Realtime: server to server scheduling/freebusy, security issues (dkim?)
  - Timezones Mike Douglass, Chair: DST issues, normalization, infrastructure
  - XML: semantically equivalent representation of iCalendar (RFC 2445), two-way conversion, standardized interpretation
  - EventPub: handling of public events, efforts on vVenue or vCard, structured locations, multi-language support

Get Involved!

• Join CalConnect
  - http://www.calconnect.org
  - promotes calendar interoperability by way of standards

• Join Calsify
  - http://tools.ietf.org/wg/calsify/
  - Calendaring and Scheduling Standards Simplification working group

• Read the standards!
  - http://www.calconnect.org/calendaringstandards.shtml

Get Involved With Bedework

• Want to participate in Bedework?
  - Join the Bedework Mailing lists
  - Contact us directly
  - Get informed about the standards
  - Help us spread the message
  - Give us feedback

*Please note that all code contributors must sign a Contributor License Agreement
Considering a Deployment?

- Bedework is open source, and capable people can modify it significantly.
  
  Whereas Bedework is highly skinnable and configurable, approach Bedework as you might a future life partner — assume, modulo the potentially empty promises we have made about “future enhancements”, that what you see is what you will be getting.

Bedework your way?

- You can modify Bedework any way you like, but Bedework does have a coherent design, architecture and implementation.
  
  Major changes are possible — but you need a high level of holistic understanding to get the kind of result you anticipate getting.
  
  Without this level of understanding, major changes you make are unlikely to make their way back into the official Bedework distribution.

Bedework Futures

- Bedework 3.5 – Q2 2008
  - Additional features and bug fixes to 3.4.1.1

- Bedework 4.0 Q4 2008
  - Major milestone
  - Significant refactoring
  - First “functionally complete” release

Thank You

bedework.org