Name TBD

Deliverable 4 Report

Feature Description

The feature we created will allow the user to add a calendar that is linked to a room or a resource like blackboards and projectors to the list of calendars they have subscribed to. Unlike other mail clients like Microsoft Outlook, Thunderbird did not have the capability of allowing users to book a room to use as a meeting or see the availability of a room in their calendars. We believed that Thunderbird should have this feature so we decided to implement this feature as our Deliverable 4 project.

This feature allows users to subscribe to a calendar for a specific room to see its availability and remove the calendar if they no longer wish to have it as a part of their subscribed calendars. In addition this feature allows users to use the address book to book a room by sending an event invite message using the emailing system that thunderbird currently has. One does not need to be subscribed to the calendar for the room to use the room booking system in the address book, but subscribing to the calendar does add the room to the address book for later use.

User Guide

Room/Resource Calendar

How to add a room/resource calendar to the list of subscribed calendars

Steps:

1. Navigate to the calendars section of Thunderbird.

2. Right click in the left bar where your subscribed calendars are located and click New Calendar.

3. Select the appropriate calendar type and check off the Room resource checkbox.

4. Once the calendar has been designated as a room/resource, paste the link to the calendar into the appropriate box.

5. Set a nickname for the calendar and select the color you want it to show up as in the main calendar section and ensure that the information is correct.

6. Click Finish and you will see your room/resource's calendar in the main calendar display as well as in your sidebar under subscribed calendars.

7. Note that an entry will be added to the address book that contains this room's email and information so that one can invite people to events.

How to remove a calendar from the list of subscribed calendars

Steps:

1. Navigate to the calendar section of Thunderbird.

2. Under the left subbar, right click on the calendar you wish to remove.

3. Select the Unsubscribe Calendar option.

4. A popup will appear asking you if you really want to unsubscribe from this calendar, clicking unsubscribe will unsubscribe you from that calendar.

How to Book a room for an event

Steps:

1. In a calendar you own, right click on the day you wish the event to take place.

2. Select the New Event option and input the information for your event

3. Click the Invite Attendees button at the top of the popup and add the people you wish to invite

4. To book the room, you need to select the room you wish to have the event in. It must be in your contacts in the Address Book to do so. If you try to book a room that has a conflicted timeslot, then it will fail to book.

5. After adding all the invitees and the room, click Send and Close.

Room/Resource Contact

How to add a room/resource to the address book

Steps:

1. Navigate to the Address Book tab at the top of the inbox tab. A pop up will appear containing the address book.

2. Click on the New Contact button at the top of the address book window to add the email for the room/resource.

3. Paste the email of the room/resource into the email section of the contact and set a display name for the entry. Check the box that says "is a room/resource" to ensure that it is properly noted as a room/resource.

4. Click the OK button to save the changes and the new contact will appear in the address book under Collected Addresses

How to remove a room/resource from the address book

Steps:

1. Click the address book section at the top of the inbox tab. Once clicked a pop up will open up and it will contain the address book and list all contacts you have saved up.

2. Click on the calendar you wish to delete.

3. Click on the delete button at the top, a pop up will appear asking you to confirm that you want to delete the calendar.

4. Your calendar is now deleted.

Technical Documentation

UI Changes

Create/Edit Calendar

Summary:

- Added new fields in create calendar to indicate room/resource
- Added new fields in create calendar to indicate email of room/resource
- Updated validation so that users must enter email if it is room/resource
- Added new labels to support above
- Updated Edit properties of Calendar to show room/resource flag and room/resource email
- Updated Create Calendar to create a contact entry in Collected Addresses for emails of room/resource

Detailed Implementation Notes:

- Added checkbox (id="`is-room-resource`") and input field (id="`room-resource-email`") to calendarCreation.xhtml in order to support input for the new properties and contact
- Added script abCommon.js to xhtml in order to retrieve contact directory information and be able to update contact directory
- Updated calendarCreation.js with the following changes:
    - Updated checkRequired() to have new validation where if we are on the location page and room/resource is checked then it will fail validation
    - Created helper function parseEmail() to check if string is an email and made use of that above
    - Create function onRoomResource() to manage the hidden property of the new email field and made it run at initLocationPage() and on click of room resource checkbox
    - Created function createContactInCA() to create a new contact in Collected Addresses book using the email provided in the new input field.
    - Create function generateEmptyContact() to help the above
    - Updated doCreateCalendar() to properly save Room Resource
    - Create a new entry in the validation error enum with a new label INVALID_EMAIL, the label is stored in calendarCreation.properties
- Added label calendarproperties.roomResource and calendarproperties.roomResourceEmail to calendar.dtd
- Added label calendarCreation.roomResource.email to calendarCreation.dtd
- Added checkbox (id="`room-resource`") to calendar-properties-dialog.xhtml
- Updated calendar-properties-dialog.js
    - Gets new properties in the onLoad() function and sets the properties properly in onAcceptDialog() function
    - Updates address book by searching for the contact representing the room/resource and updating its email if appropriate

Developer Notes:

Fairly straight forward, most of the contact card generation was done already in abCard.js just needed to take out extra

Two different types of labels, most in dtd files but some stored in a properties

Calendar Management Pane

Summary:

- Added new icon for room/resource calendar
- Updated Calendar Management Listener to properly update with new room/resource icon on create/edit changes
- Updated tooltip of icons to show room/resource tooltip

Detailed Implementation Notes:

- Created the svg image room-resource.svg to be used on the calendar management pane to indicate if a calendar is a room/resource calendar and declared import in CalDavCalendar.jsm
- In calendar-management.js updated addCalendarItem() to set calendar-roomResource as true and create a RoomResource icon if calendar's roomResource is true
- In calendar-management.js updated Event Listener on edit to check RoomResource changed and set the row item with the appropriate values to display the new icon
- In calendar-management.js updated calendarListTooltipShowing() to force a room resource tooltip for if over the room resource icon

Developer Notes:

Updating Edit properties was relatively easy, however of note is the display of the icons actually hooks onto an event listener and therefore required a manual addition of the roomResource property in order to update.

The tooltip was handled as a row in the calendar manager. This caused issues as the room/resource image was implemented as another icon sitting beside warning and read-only. As such added a new case to grab the actual image in order to separate the tooltips.

Invite Attendees Dialog

Summary:

- Added a warning message for if a Google resource calendar is selected.
- Added a feature to automatically change a contact's icon if it's a resource

Detailed Implementation Notes:

- To implement warning message created a label at the bottom of the calendar-event-dialog-attendees.xhtml file
- created the label `event.warning.google.resource` in calendar-event-dialog-attendees.properties
- modified the calendar-event-dialog-attendees-custom-elements.js file
    - Created the function areWarnings()
    - Created the function setWarningText()
    - Created the function checkGoogleResourceEmailWarning()

- Added a call to areWarnings() in bottom of MozCalendarEventAttendeesList.appendNewRow()
- Feature to automatically change the contact icon to the resource icon was done by an event listener. This is extra from deliverable 3, as a quality of life feature.
    - Files changed:
        - calendar\base\content\dialogs\calendar-event-dialog-attendees.xhtml
            - Add script for reading address book
        - calendar\base\content\dialogs\calendar-event-dialog-attendees.js
            - Modify event listener of adding new attendee to trigger script
        - calendar\base\content\dialogs\calendar-event-dialog-attendees-custom-elements.js
            - Addition of setAttendeeIcon(), which checks whether the contact is a resource from the address book, and if it is, change its icon to that of the resource type's
    - Interactions:
        - mail\components\addrbook\content\abCommon.js
            - Code for reading from address book, namely whether the contact is a room/resource

Developer Notes:

Had to create a new warning system which was surprising.

Hard block on setting innerhtml so I used label instead of headers

Tried to make it more extensible by keeping the functions with defined roles

Address Book

Summary

- Added a checkbox to indicate whether the contact is a room/resource
- Added a column in the contacts list of the address book to indicate whether each contact is a room/resource
- Users are able to sort address book contacts by room/resource.

Detailed Implementation Notes

Added an indication for whether the contact in the address book is a room/resource, in the edit contact dialog. This was done in place of the new tab described in deliverable 3, because it turns out the only information needed for a room/resource is its calendar id, which is an email address.

Files changed:

- mail\components\addrbook\content\abCard.inc.xhtml
- mail\locales\en-US\chrome\messenger\addressbook\abCard.dtd

Interactions:

- mail\components\addrbook\content\abCard.js
    - The controller for abCard.inc.xhtml.

Added an indication for whether the contact in the address book is a room/resource, in the result pane (the list of contacts). This is extra from deliverable 3, as a quality of life feature.

- mail\components\addrbook\content\addressbook.xhtml
- mail\locales\en-US\chrome\messenger\addressbook\abResultsPane.dtd
- mail\locales\en-US\chrome\messenger\addressbook\abMainWindow.dtd

Testing Documents

Acceptance Tests:

Test 1. Ensure adding/removing Resources to/from the set of Calendars is successful.

Steps:

1. Navigate to the Calendar tab.

2. Right Click on the list of Calendars.

3. Press "New Calendar".

4. Choose the "On the Network" option and press "Next".

5. Choose the appropriate calendar format and provide the link to the location of the Resource's remote calendar.

6. Click the checkbox that identifies the Calendar as a "Room/Resource Calendar" and insert the Resource's email in the "Resource Email" field.

7. Press "Next", add any additional identifying info, and press "Next".

8. Press "Finish" and ensure the Resource appears as a Calendar.

9. Switch to the "Home" tab.

10. Click on "Address Book".

11. Click on "Collected Addresses".

12. Ensure the newly-added Resource appears, with a positive value under the "Room or Resource" tab.

13. Close the Address Book.

14. Switch to the "Calendar" tab.

15. Right-click on the Calendar.

16. Choose "Unsubscribe Calendar".

17. Press "Unsubscribe".

18. Ensure the Calendar no longer appears.

Test 2. Ensure adding a Resource to an Event works.

Steps:

1. Right click on a Calendar.

2. Click "New Event...".

3. Click "Invite Attendees"

4. Type in the name of the Resource.

5. Press Enter.

6. Ensure the Resource has been added to the Attendees list.

7. Press "OK".

8. Press "Attendees".

9. Ensure the Resource appears in the Attendees list.

10. Ensure "Notify Attendees" is checked.

11. Press "Save and Close".

12. Switch to the "Home" tab.

13. Ensure you receive an email from the Resource confirming attendance.

14. Switch to the "Calendar" tab.

15. Ensure that the selected time slot appears busy on the Resource's calendar.

Test 3. Ensure removing a Resource from an Event works.

Steps:

1. Right click on a Calendar.

2. Click "New Event...".

3. Click "Invite Attendees"

4. Type in the name of the Resource.

5. Press Enter.

7. Press "OK".

8. Ensure "Notify Attendees" is checked.

9. Press "Save and Close".

10. Switch to the "Home" tab.

11. Ensure you receive an email from the Resource confirming attendance.

12. Switch to the "Calendar" tab.

13. Double-click on the added Event.

14. Press "Invite Attendees".

15. Remove the Resource from the Attendees list by deleting its name.

16. Press "OK".

17. Press "Save and Close".

18. Press "Attendees".

19. Ensure the Resource no longer appears in the Attendees list.

20. Press "Save and Close".

21. Switch to the "Home" tab.

22. Ensure you receive an email from the Resource confirming the cancellation.

23. Switch to the "Calendar" tab.

24. Ensure that the selected time slot does not appear busy on the Resource's calendar.

Test 4. Ensure adding a Resource with a busy time slot to an Event in that time slot fails, and modifying the time-slot to an empty one succeeds.

Steps:

1. Right click on a Calendar.

2. Click "New Event...".

3. Click "Invite Attendees".

4. Type in the name of the Resource.

5. Press Enter.

6. Select a time slot for the Event.

7. Press "OK".

8. Ensure "Notify Attendees" is checked.

9. Press "Save and Close".

10. Switch to the "Home" tab.

11. Ensure you receive an email from the Resource confirming attendance.

12. Switch to the "Calendar" tab.

13. Right click on the same Calendar as in Step 1.

14. Click "New Event...".

15. Click "Invite Attendees".

16. Type in the name of the same Resource as in Step 4.

17. Press Enter.

18. Select the same time slot for the Event as the one in Steps 2-9.

19. Press "OK".

20. Ensure "Notify Attendees" is checked.

21. Press "Save and Close".

22. Switch to the "Home" tab.

23. Ensure you receive an email from the Resource declining/not accepting attendance.

24. Switch to the "Calendar" tab.

25. Double-click on the Event created in Steps 12-19.

26. Modify the time slot on the Event such that it does not conflict with the time slot on the Event from Steps 2-9.

27. Press "Save and Close".

28. Ensure you receive an email from the Resource confirming acceptance.

Unit Tests:

Description of Included Tests:

Tests have been added to check that properties of the calendar and address book persist between uses.

In the calendar set (comm/calendar/test/browser/browser_calendarList.js), a test has been added to check that the room/resource checkbox is maintained when changed, and that it defaults to a false value.

In the address book set (comm/mail/components/addrbook/test/browser/browser_search.js), tests have been added to check that the room/resource has the correct property and that it maintains the previous ordering of address book members.

How to run Tests:

After building, run:

"./mach mochitest -f browser comm/calendar/test/browser" to test the calendar portion.

Or:

"./mach mochitest -f browser mail/components/addrbook/test/browser" to test the address book portion.

Completion Dates

Task	Start Date:	Completion Date:
Design	March 15th 2020	March 17th 2020
Acceptance Tests	March 17th 2020	April 7th 2020
Unit Tests	March 21st 2020	April 7th 2020
Implementation ● UI ○ Address Book ○ Create/Edit ● Import/Export	March 23th 2020 (UI) April 3rd 2020 (Import/Export)	April 6th 2020 (Create/Edit UI) April 7th 2020 (Address Book UI) April 7th 2020 (Import/Export)
Verification	March 31st 2020	April 7th 2020
Delivery	April 6th 2020	April 7th 2020

Meeting Details:

Meeting	Date Held	Details Discussed
Meeting 1	March 15th 2020	An overview of the task was given as a part of the research done to select the feature the team would implement.
Meeting 2	March 23rd 2020	Tasks and responsibilities were assigned for Deliverable 4 such as Backend, UI, Tests and Documentation.
Meeting 3	March 26th 2020	Discussed progress made in tasks and what details of note were found. Clarification as to what the task entailed was discussed.
Meeting 4	March 30th 2020	Overall design details were discussed by the backend team and UI team. Assistance was asked for by Julian as he started to encounter rebuilding issues
Meeting 5	April 1st 2020	Research was shared to other group members and members split off to do their parts. Julian officially swapped tasks with Lintao as the issues were unresolvable.
Meeting 6	April 5th 2020	Meeting between the Backend and UI Teams occured where specific implementation details were discussed and shared. Assistance was offered by Lintao to other members.
Meeting 7	April 7th 2020	Final check of documentation

		was performed. Team members added any details that were not present at the time of the check.