



# A Drupal Module for Room Reservations Using 25Live

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Hartley Calendar

Hartley Home  
 Booking Instructions  
 Use Instructions  
 View Floorplan

April 2016 Today

25Live x Kenneth

CollegeNET [US] https://25live.collegenet.com/stanford/#details&obj\_type=event&obj\_id=691549[4]

STANFORD UNIVERSITY

Welcome, Sharp, Kenneth • Preferences • Today is Tue Dec 06 2016 Help

Home Event Wizard Events Locations Resources Organizations Tasks Reports Publisher

Search For Events Pre-Defined Event Searches Advanced Event Search My Test Event

## My Test Event

Details Calendar Task List Pricing E-Commerce Audit Trail

Edit this Event Event State: Confirmed More Actions... Refresh

### Event Details

**Event Name:** My Test Event

**Event Title:**

**Event Type:** SE3 Event

**Reference:** 2016-ADNRCX

**State:** Confirmed

**Organization:** SE3 - Schl of Earth, Enrgy, & Envm Sci

**Scheduler:** Sharp, Kenneth

**Requestor:** Sharp, Kenneth

**Event Categories:** SE3 Events

**Head Count:** 10 expected 0 registered

**Description:**  
My very important meeting.

**Comments:**

**Internal Notes:**

**Confirmation Text:**

**Tasks Completed:**  
Approvals: 0/0

### Event Occurrences

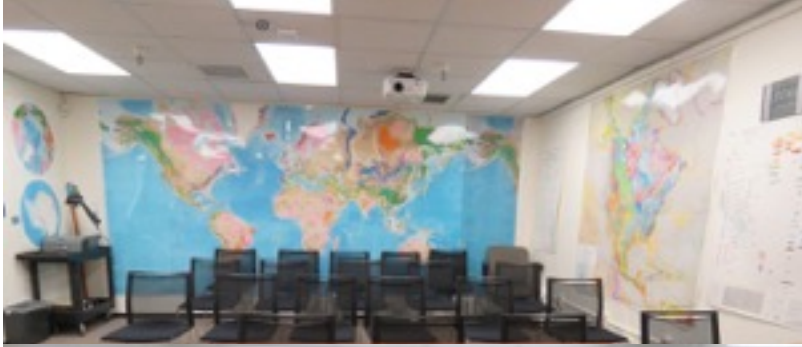
Start Date	Start Time	End Date	End Time	Assignments
Sat Dec 10 2016	8:00pm	Sat Dec 10 2016	9:00pm	
Sun Dec 11 2016	8:00pm	Sun Dec 11 2016	9:00pm	
Sat Dec 17 2016	8:00pm	Sat Dec 17 2016	9:00pm	
Sun Dec 18 2016	8:00pm	Sun Dec 18 2016	9:00pm	
Sat Dec 24 2016	8:00pm	Sat Dec 24 2016	9:00pm	
Sun Dec 25 2016	8:00pm	Sun Dec 25 2016	9:00pm	
Sat Dec 31 2016	8:00pm	Sat Dec 31 2016	9:00pm	
Sun Jan 01 2017	8:00pm	Sun Jan 01 2017	9:00pm	
Sat Jan 07 2017	8:00pm	Sat Jan 07 2017	9:00pm	
Sun Jan 08 2017	8:00pm	Sun Jan 08 2017	9:00pm	
Sat Jan 14 2017	8:00pm	Sat Jan 14 2017	9:00pm	
Sun Jan 15 2017	8:00pm	Sun Jan 15 2017	9:00pm	
Sat Jan 21 2017	8:00pm	Sat Jan 21 2017	9:00pm	
Sun Jan 22 2017	8:00pm	Sun Jan 22 2017	9:00pm	
Sat Jan 28 2017	8:00pm	Sat Jan 28 2017	9:00pm	
Sun Jan 29 2017	8:00pm	Sun Jan 29 2017	9:00pm	

- Powerful, but complex with many options and features.
- Complicated security and workflow configuration.
- Requires training to use effectively.





Meeting Rooms



Seminar Rooms



Teaching Labs



Event Spaces



Vehicles

Each room type has its own rules for

- who can reserve,
- for how long,
- under what constraints,
- at what cost,
- and with whose approval.

- Not practical for all Stanford Earth faculty, staff, and students.
- Only admin staff will have direct access to 25Live.
- How will others reserve rooms?

**Meeting Rooms (reservations needing no approval):****From 25Live:**

Stanford Earth admin staff may reserve/cancel rooms for complex (recurring, multi-day, or multi-location) events.

**From Drupal page:**

All Stanford Earth associates may login and reserve rooms for one-time events of up to 4 hours.

**Rooms/Vehicles/Event Spaces (any needing approval):****From 25Live:**

Only members of R25 Security Group (Stanford Workgroup) who “own” the room may reserve in 25Live.

**From Drupal page:**

All Stanford Earth associates may login and make tentative reservation for rooms for one-time events of up to 4 hours. Email sent (by Drupal, not 25Live) to members of room-owning security group to confirm/deny reservation. 25Live “To Do” task created for members of room-owning security group.

Some rooms may honor “blackout dates” set in Drupal module. Different from 25Live blackout dates.

**Computer Lab:****From 25Live:**

Only IT manager group may reserve space via 25Live.

**From Drupal page:**

Read-only calendar view.

**Hartley Conference Center:****From 25Live:**

Only Hartley manager and backup admins may view/reserve space or confirm/deny requests via 25Live.

**From Drupal Page:**

All Stanford University associates may login and make tentative reservations. Non-SE3 associates must provide PTA for billing. Other event attributes added to Drupal form. Cost calculated from 25Live price sheets for inclusion in confirmation email.

# Let's Integrate with Drupal!

Why?

1. Most Stanford Earth websites are Drupal.
2. It's a CMS \*and\* an application framework.
3. Deep familiarity with Drupal API (Maslow's Hammer).
4. Rapid deployment within Stanford Earth.
5. Large potential user base in Drupal community.



## Sample Room Reservation Request

View Edit Manage display Webform Results Track Grant

Look at the calendar, find your preferred day, time, and location for your meeting, and enter into the form below. Your department admin will get back to you and let you know when your reservation is confirmed.

View: Day

PRINT | SUBSCRIBE | iCAL |

SE3 MITCHELL 1 SE3 MITCHELL 3 SE3 MITCHELL 3 SE3 MITCHELL B. Mix-

Select: All | None Add To My Cal Remind Me By! Other Event Actions

TUESDAY, APRIL 18, 2017

7 am		
8 am		
9 am	EARTHSYS 136 (MITCHB04, Mitchell Earth Sciences)	
10 am		
11 am		SE3 Student Services (MITCH138, Mitchell Earth Sciences)
12 pm		
1 pm	Dept. Mgrs. Meeting (Amy) (MITCH138, Mitchell Earth Sciences)	SPR 16-17 ESS 107 (MITCHB04, Mitchell Earth Sciences)
2 pm		
3 pm	GP90 Office Hours (MITCH360, Mitchell Earth Sciences)	GP150/250 Office Hour (MITCHB04, Mitchell Earth Sciences)
4 pm	GP250 TA Office Hours (MITCH360, Mitchell Earth Sciences)	
5 pm		
6 pm		
7 pm		
8 pm		
9 pm		
10 pm		

Select: All | None Add To My Cal Remind Me By! Other Event Actions

Events calendar powered by 25Live

Description \*

Date \*

Apr 18

Time \*

Hour : 00 am pm

Room \*

- Select -

Submit

## Attempt 1:

25Live Publisher “spud” displays read-only calendar along with a Drupal web form to email request to department admin.

Department admin then books room in 25Live and notifies user that room has been reserved.

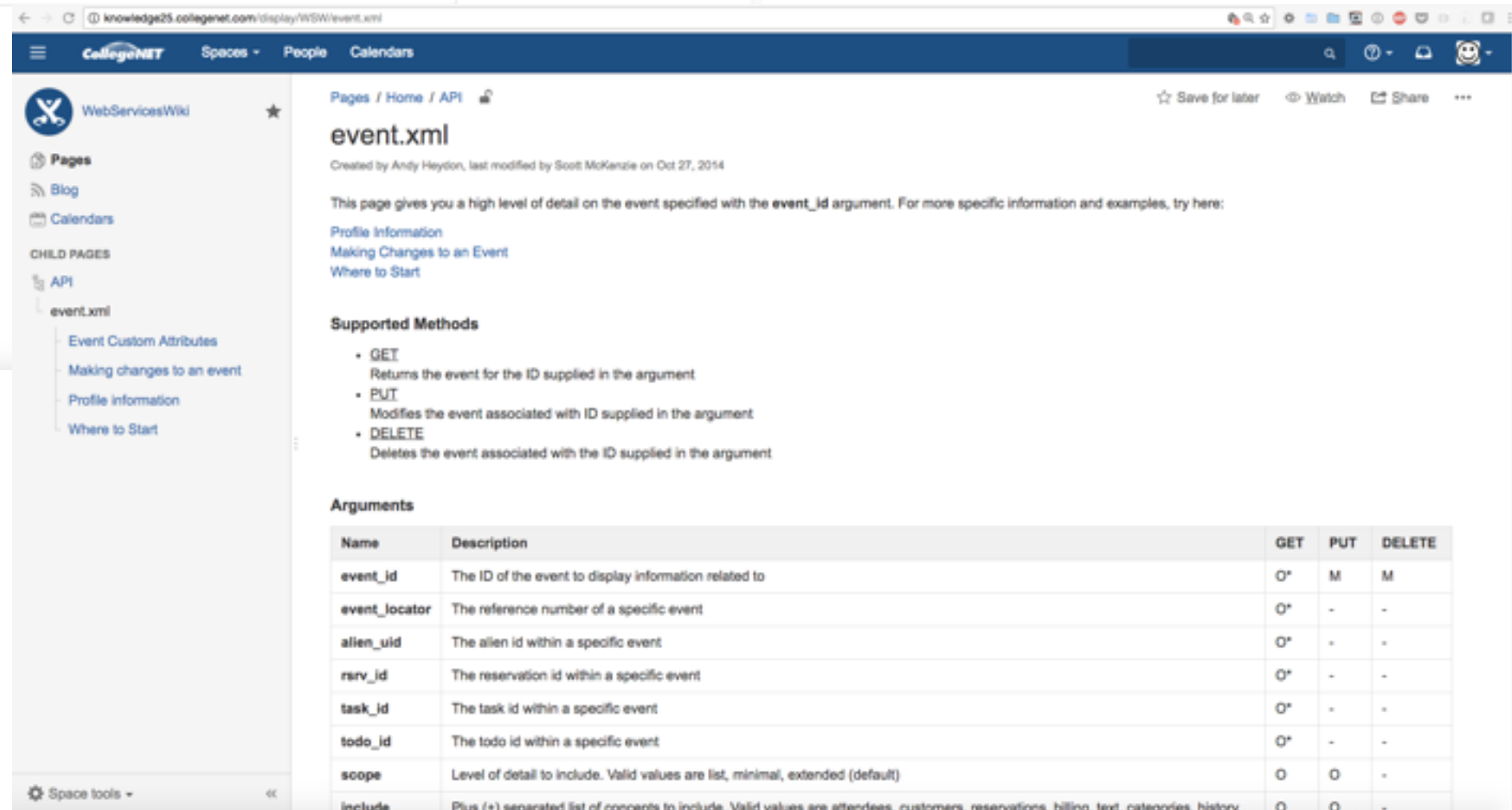
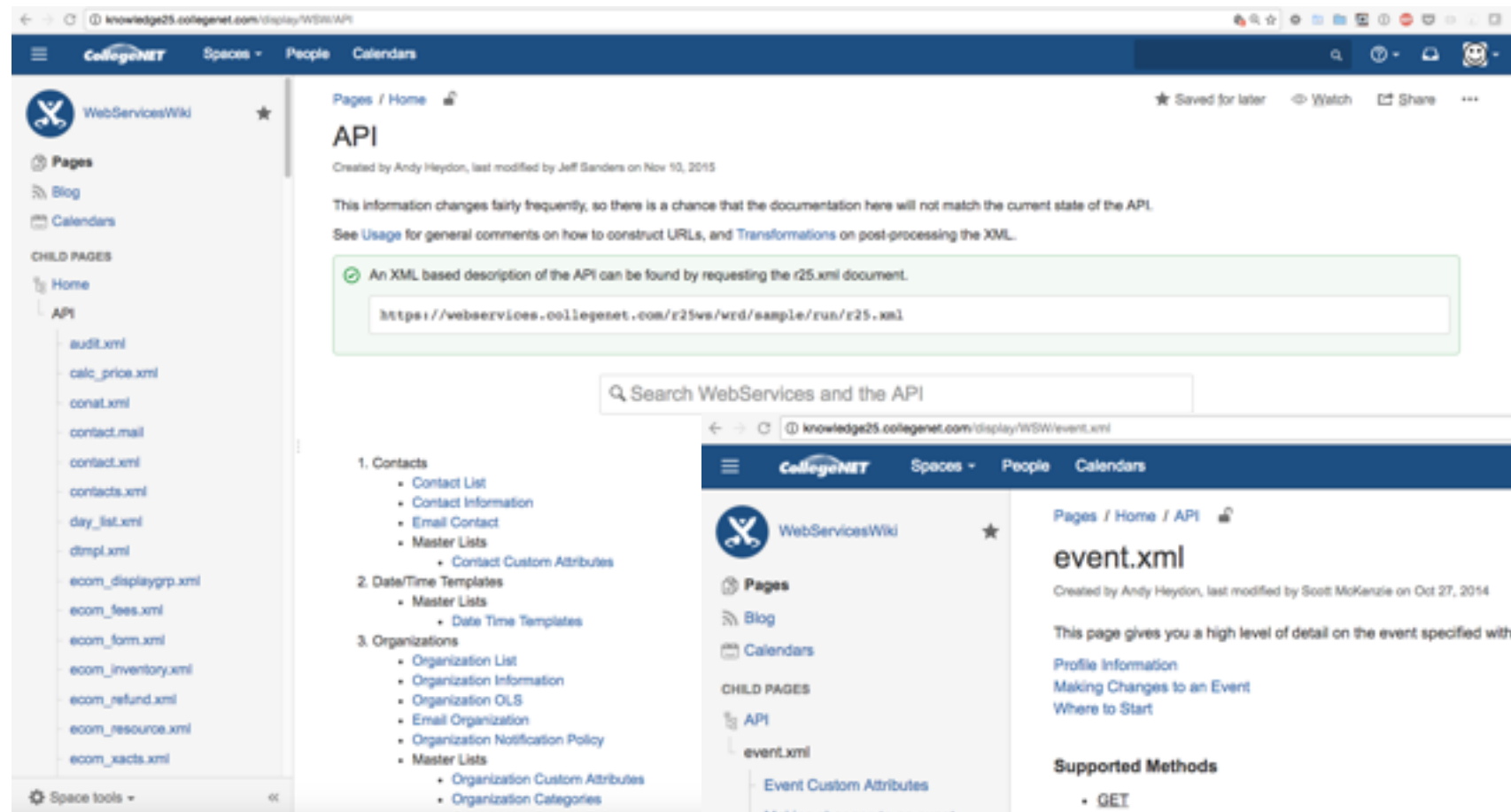
## Problems:

- 1) Admins hated it because more work for them.
- 2) Users hated it because no immediate feedback.



# 25Live Web Services API

- RESTful, XML-based
- One can build complete custom front end to 25Live






Stanford University sesadmin | Logout

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## Mitchell 138 mit Spud



This room may not be booked for seminars and conferences.  
 Layout: Boardroom [BR]  
 Capacity: 12  
 Features: Internet, Wired, Monitor, LED  
 Instructions: This room is accessible only from outside the Mitchell building, on the Mitchell terrace. A room key is needed for entry. Please lock after use.

View:

**APRIL 2017**

Select:

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
26	27 <input type="checkbox"/> 10:30a Discuss Multiple Requests of Donor <input type="checkbox"/> 2:30p Web Hosting Call	28 <input type="checkbox"/> 9a Sandy & Felicia 1:1 <input type="checkbox"/> 10a Advisory Board Meeting walk-through <input type="checkbox"/> 2p Specs Review <input type="checkbox"/> 3p ER Team Meeting	29 <input type="checkbox"/> 9:30a SE3 Comms Team meeting <input type="checkbox"/> 10:30a SE3 collections project mtg <input type="checkbox"/> 2p SE3 Facilities Weekly Team Meeting <input type="checkbox"/> 3p SE3 - CRC weekly meeting	30 <input type="checkbox"/> 10a Acquia Conf Call <input type="checkbox"/> 1:30p Health and Safety variance reporting <input type="checkbox"/> 2:30p Facilities maint/projects variance rpt	31	1
2	3	4 <input type="checkbox"/> 2:30p AV Testing	5 <input type="checkbox"/> 9:30a SE3 Comms Team meeting <input type="checkbox"/> 2p SE3 Facilities Team Meeting <input type="checkbox"/> 3p SE3 - CRC weekly meeting	6 <input type="checkbox"/> 9a John F - AV Planning <input type="checkbox"/> 10a Earth Matters staff briefing <input type="checkbox"/> 11a Project Management Standing Meeting <input type="checkbox"/> 1p Web Hosting U of Iowa <input type="checkbox"/> 2p Stanford Earth Development <input type="checkbox"/> 3p Annual Fund - stewardship	7 <input type="checkbox"/> 1p Hartley Refresh Project Discussion	8
9	10	11 <input type="checkbox"/> 11a Student Data BI Dashboards Meet./John F. <input type="checkbox"/> 12:30p Food-Water Initiative Group Meeting <input type="checkbox"/> 1p SE3 Food-Water Group	12 <input type="checkbox"/> 9:30a SE3 Comms Team meeting <input type="checkbox"/> 10:30a SE3 collections project mtg <input type="checkbox"/> 11:30a AV Cabling work	13 <input type="checkbox"/> 9a Mitchell renovation project <input type="checkbox"/> 10a Ad Board Video - bbuell <input type="checkbox"/> 1:30p Ad Board Video - bbuell	14 <input type="checkbox"/> 9a Ad Board Video - bbuell <input type="checkbox"/> 12:30p Martha Roberts interview - Dee tucker <input type="checkbox"/> 1:30p Kai Anderson interviews	15 <input type="checkbox"/> 1p Kai Anderson interviews - bbuell

### RESERVE MITCHELL 138 MIT SPUD

Start Date/Time \*

Date   
E.g., 2017-04-18

Time   
E.g., 11:30 am

Duration \*

Headcount \*

Reason \*

Reservations may only be made for single occurrences of up to 4 hours. For longer or recurring reservations, please contact your department administrator. All reservations are subject to approval by your department and the Dean's Office.

Attempt 2:

25Live Publisher  
 “spud” displays read-only calendar along with a Drupal custom form to reserve room via 25Live API.

Solves Problem 1: no extra work for admins.

Problem 2 remains: no immediate feedback for users. Spuds take 15-20 minutes to update.

## Mitchell 138



This room may not be booked for seminars and conferences.

Layout: Boardroom [BR]

Capacity: 12

Features: Internet, Wired, Monitor, LED

Instructions: This room is accessible only from outside the Mitchell building, on the Mitchell terrace. A room key is needed for entry. Please lock after use.

&lt; &gt; today

Apr 16 — 22, 2017

month week day

	SUN 4/16	MON 4/17	TUE 4/18	WED 4/19	THU 4/20	FRI 4/21	SAT 4/22
6am							
7am							
8am							
9am		9:00 - 10:00 EI team meeting		9:30 - 10:30 SE3 Comms Team meeting	10:00 - 12:00 EI Full team meeting		
10am		10:30 - 12:00 E-IPER Match Meeting					
11am			11:00 - 12:30 SE3 Student Services				
12pm							
1pm			1:30 - 2:30 Dept. Mgrs. Meeting (Amy)				
2pm				2:00 - 3:00 SE3 Facilities Team Meeting			
3pm				3:00 - 4:00 SE3 - CRC weekly meeting			
4pm							
5pm							

## RESERVE MITCHELL 138

Start Date/Time \*

Date

2017-04-18

E.g., 2017-04-18

Time

03:00 pm

E.g., 03:00 pm

Duration \*

30 minutes

Headcount \*

- Select -

Reason \*

Reserve

Reservations may only be made for single occurrences of up to 4 hours. For longer or recurring reservations, please contact your department administrator. All reservations are subject to approval by your department and the Dean's Office.

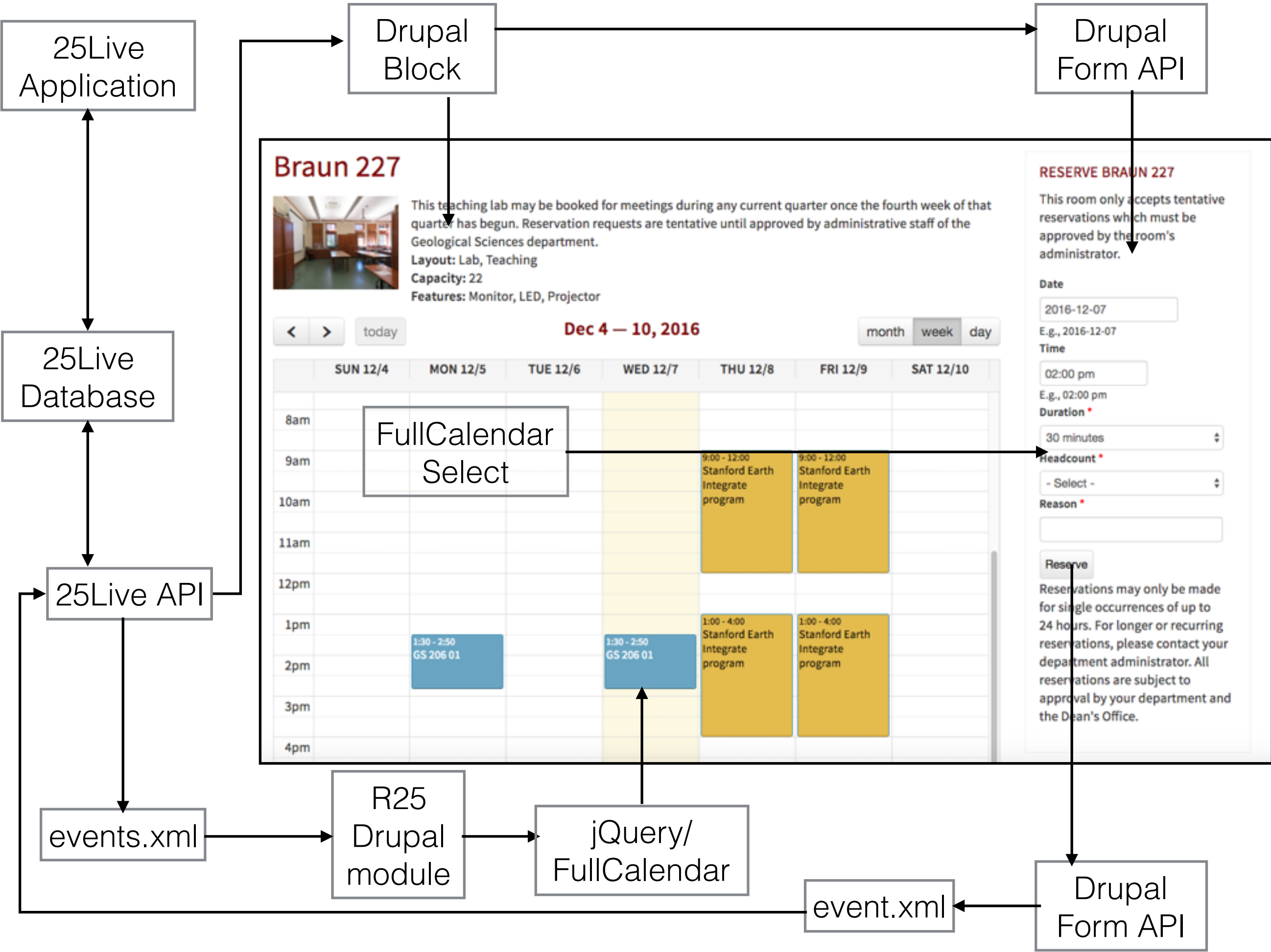
Attempt 3:

At server, get list of events from 25Live API, format as needed by FullCalendar, and feed to browser.

Populate form by click&drag on calendar.

Happy, happy, joy, joy.





## What still needs doing?

1. Move some functionality to platform-agnostic library.
2. Migrate to Drupal 8.
3. Replace WebAuth awareness with SAML awareness.
4. Improve config to populate select lists with locations from 25Live instead of making user input location codes.
5. Make use of short-term caching to store reservation data.
6. Define rooms as entity objects.





Module is available at:  
[https://code.stanford.edu/ksharp/  
stanford\\_r25](https://code.stanford.edu/ksharp/stanford_r25)

Thank you!

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