



# BBIS University Planning Calendar

**DAN KECK, THOMAS LEE**

*The Ohio State University*



## Dan Keck

### TITLE

Web Application Developer

### HOMETOWN

Wellston, Ohio

### I BELIEVE

- Appalachian sounds best pronounced “App-a-latch-an”
- people are in too much of a hurry



## Thomas Lee

### TITLE

Senior Systems Analyst

### HOMETOWN

Brunswick, Ohio

### I BELIEVE

- that hockey gonna take all my money
- a meal without meat is a snack

HI!



# PROJECT STAFF

**Samantha Frost**      **Senior Director of Alumni Experiences**

**Angela Theaker**      **Project Manager**

**Michael Detwiler**      **Developer**

**Dan Keck**      **Developer**

# Background

- 1) Why did we need a shared planning calendar?
- 2) How did we accomplish business before?
- 3) What were the project goals?
- 4) New system overview
- 5) Review project benefits
- 6) Questions

# Why did Advancement need a Planning Calendar?

- To communicate more efficiently during the event planning process
- To use information for event planning decision making
- To prevent conflicts and negative experience for event attendees
- To collaborate with other partners across the university

## How was this accomplished before?

- Director of Advancement Events(AE) held regular meetings with event planners around the university to share information
- Director of AE asked colleges and units to provide event information in spreadsheets that were consolidated by staff and redistributed
- Advancement Events staff checked various calendars around the University to share information with event planners(e.g. outside events that impact campus)

## Project Goals

- 1) Improve Collaboration Among Colleges/Units
- 2) Implement Process Efficiencies
- 3) Improve Event Attendee Experience
- 4) Reduce Staff Workload
- 5) Collect Additional Data Elements for Reporting

# Previous System Challenges

- Maintenance of event planning information around the university was cumbersome
- Finding event information for decision making purposes was difficult
- Duplication of efforts and expenses for events with similar purpose and audience
- Event reporting was not easily accessible by all



## New System Benefits

- Improved event planning collaboration across the university
- Increased awareness and opportunities for efficiencies and shared expenses
- Improved data collection, search ability and reporting
- Reduction of workload to collect and distribute information



# DEMO

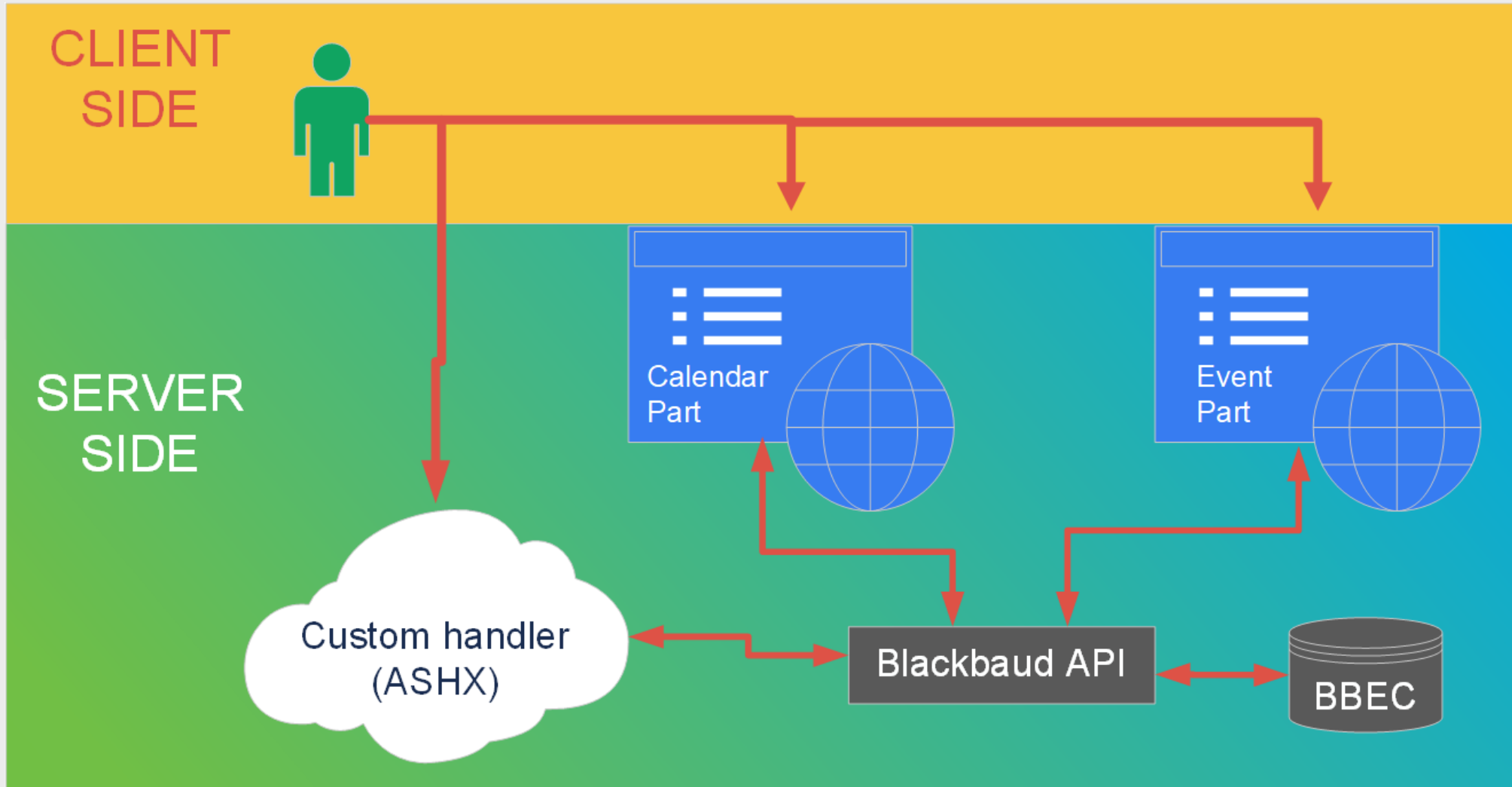


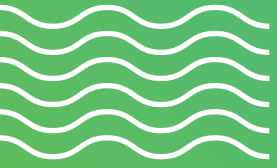
# IMPLEMENTATION

## Why BBIS?

- Existing login using University Single Sign-On
- Existing API for retrieving data from CRM
- Development time (pre-existing CMS)

# Structure





# CUSTOM HANDLER (ASHX)

```
System;  
System.Collections.Generic;  
System.Data;  
System.Data.SqlClient;  
System.IO;  
System.Linq;  
System.Reflection;  
System.Threading;  
System.Web;  
System.Xml;
```

pace Event.Web

references | Detwiler, Michael, 53 days ago | 3 authors, 12 changes

```
public class AdvancementEventsCalendarDataHandler : CustomHandlerBase
```

```
private AdvancementEventsCalendar mContent;  
private HttpApplicationState Application;  
private UserSettings userSettings;
```

0 references | Detwiler, Michael (Admin), 188 days ago | 2 authors, 2 changes

```
public override void ProcessRequest(HttpContext context)  
{  
    string action = "";  
    try  
    {  
        var Request = context.Request;
```



## CUSTOM HANDLER

- Inherits from **CustomHandlerBase** in BBNCEExtensions.dll
- Must handle ProcessRequest()
- URL: /components/custom.ashx?handler={classname}
- User defined set of actions
- Output is JSON

## ping, logout, package

- ping: prevent idle timeout
- logout
  - `Blackbaud.Web.Content.Core.BBWebPrincipal.LogUserOut("/")`
- package
  - Multiple actions in one call
  - Used to get initial calendar data





# Filters

- status\_list
- department\_list
- audience\_list
- category\_list

Stewardship

Boards and Committees

Fundraising

Alumni Tours

Cultivation

Engagement

Internal

Student Event

Continuing Education

Uncategorized

▼ Audience

▼ Status

▼ College/unit

▼ Other Calendars

▼ Sesquicentennial

## event\_list

- Results based on date parameters
- Cached at application level  
and in local browser with `sessionStorage`
  - Look for recent EVENT.DATEUPDATED
- Also get external events
  - Pulled once a day and cached at application level

## Sticky user settings

- Associated with BBIS user ID  
`API.Users.CurrentUser.UserID`
- `save_user_setting`,  
`get_user_setting`
- `clear_user_setting`
- Disabled by request\*

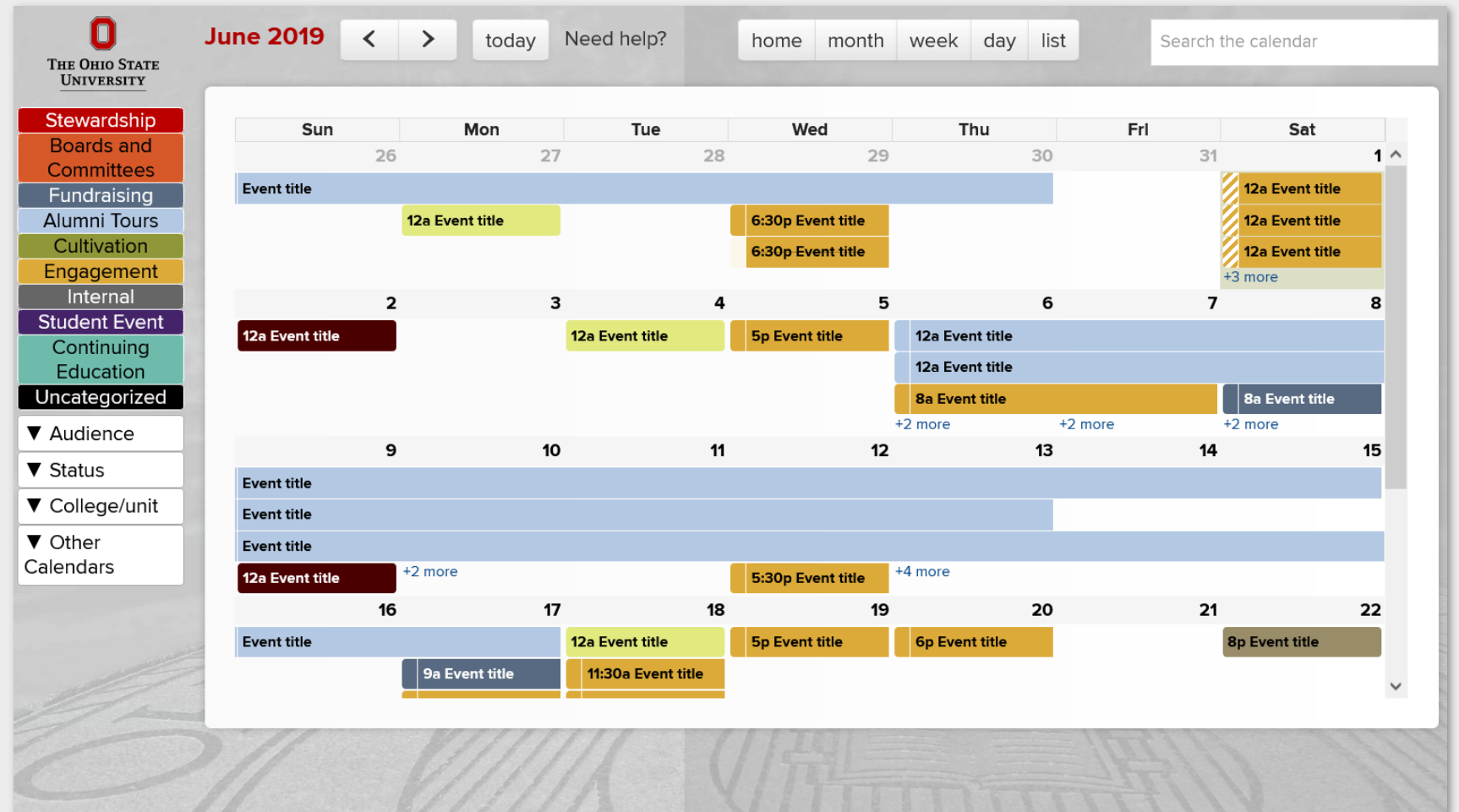




# CALENDAR DISPLAY

# Calendar Display

- Custom framework display part
- Most of the logic is in JavaScript (the rest is in the display part)



```

<script src="https://cdnjs.cloudflare.com/ajax/libs/fullcalendar/3.9.0/fullcalendar.js"></script>
<div id='calendar'></div>
<script>
  $('#calendar').fullCalendar
  (
    {
      height: $(window).height() - 50,
      defaultView: defaultViewForInit,
      navLinks: true,
      customButtons:
      {
        home:
        {
          text: 'home',
          click: function() { $('#calendar').fullCalendar('changeView', 'HomeV';
        },
        listgrid:
        {
          text: 'list',
          click: function() { $('#calendar').fullCalendar('changeView', 'Li
        },
        monthcustom:
        {
          text: 'month',
          click: function()
          {
            // For some reason, month view does not always come up
            // This is a workaround.
            $('#calendar').fullCalendar('changeView', 'month');
            $('#calendar').fullCalendar('changeView', 'ListGridV';
            $('#calendar').fullCalendar('changeView', 'month');
          }
        }
      },
      header: {
        left: 'title prev,next today ',
        center: 'home,monthcustom,basicWeek,basicDay,listgrid',
        right: ''
      },
      eventLimit: 4,
      viewRender: function(view)
      {
        AdvEvtCal.Debug.log("View rendering started.");

```



# FULLCALENDAR

- Free open source JavaScript component
- Used for calendar Month, Week, Day views
- Customizable (e.g., views, buttons, # events per day)
- Hooks (e.g., data fetched, event rendered, event clicked)

```
<script src="https://cdn.datatables.net/1.10.16/js/jquery.dataTables.min.js"></script>
```

```
<table id='eventsgrid'/>
```

```
<script>
```

```
var dt = $("table#eventsgrid").DataTable
({
  dom: 'RltripB',
  autoWidth: false,
  data: gridevents,
  pageLength: 20,
  lengthChange: false,
  columns:
  [
    { title: 'OrderDate', data: 'orderdate', visible: false, searchable: false },
    { title: 'Date', data: 'startdate', width: '80px', className: "dt-center", order:
      factored in.
    { title: 'Time', data: 'starttime', width: '72px', className: "dt-center", sort
    { title: 'TAS Lookup ID', data: 'lookupid', className: "td-title dt-center",
      AdvEvtCal.WebPage.TASUrl + row.event.id + "' target='_blank'>" + data + "<
    { title: 'Title', data: 'title', className: "td-title" },
    { title: 'Location', data: 'location', width: '180px' },
    { title: 'State', data: 'state', width: '120px' },
    { title: 'Status', data: 'status', width: '90px', className: "dt-center" }
    { title: 'Category', data: 'category', width: '120px', className: "dt-ce
    { title: 'Audience', data: 'audiences', width: '120px', className: "dt
    { title: 'College/unit', data: 'department', width: '100px', classNam
    { title: '150', data: 'sesquicentennial', width: '50px', className: '
    { title: '&nbsp;', width: '30px', data: null, className: "td-edit dt-r
      event"></i></button>' }
  ],
  //columnDefs:
  //[
  // {
  //   "targets": [8],
  //   "visible": false
  // }
  // ],
  createdRow: function(row, data, dataIndex)
  {
    if(data.event.external) $(row).find(".td-edit button i").
  },
  language:
```



# DATATABLES

- Free open source JavaScript component
- Used for calendar list view
- Customizable  
(e.g., page length, auto width, hide columns)
- Hooks (e.g., row created, table created)
- Search, sort, export to PDF and Excel

- JQuery UI styled checkboxes
- Fancytree JS component for hierarchies
- Stored as per-user sticky settings



## Calendar Display

- Search – substring match
- Tooltip for additional event data
- Event lookup ID has hyperlink to event record in BBEC
- Export event to Outlook (ICS)



# EVENT ADD/EDIT

## Event Add/Edit

- Custom framework display part

The screenshot shows a web interface for adding or editing an event. At the top, there's a header with the Blackbaud logo, the month 'August 2019', navigation arrows, a 'today' button, a 'Need help?' link, and a search bar labeled 'Search the calendar'. Below the header, on the left, is a vertical sidebar with various colored buttons and labels like 'S', 'C', 'A', 'B', 'S', 'U', 'Ca', 'Se'. The main content area is titled 'Event Details' and contains several form fields. A 'View In TAS' button is in the top left of the form area. A note '\* indicates required' is in the top right. The fields are: 'Lookup ID\*' with value '8-10023708', 'Event Name\*' with value 'Pelotonia', 'Description\*' with a text area containing 'Founded in 2008, Pelotonia was established with the objective to fund life-saving cancer research. Pelotonia is a three-day experience that includes a weekend of cycling, entertainment, and volunteerism.' and a character count '204/255', 'Status\*' with a dropdown menu showing 'Confirmed' and a help icon '?', and 'Start Date\*' with a date picker showing '08 / 02 / 2019'. A close button 'X' is in the top right corner of the form window.

View In TAS

\* indicates required

### Event Details

**Lookup ID\***

8-10023708

**Event Name\***

Pelotonia

**Description\***

Founded in 2008, Pelotonia was established with the objective to fund life-saving cancer research. Pelotonia is a three-day experience that includes a weekend of cycling, entertainment, and volunteerism.

204/255

**Status\***

Confirmed ?

**Start Date\***

08 / 02 / 2019

## Event Add/Edit

- Date pickers use HTML if available, falls back to jQuery UI if not
- Time pickers use jQuery.timepicker
  - The time parser mimics BBEC (e.g., for 5:00 p.m., user can type “5:00PM”, “5 PM”, “1700”)

On Campus

Off Campus

**Event Location**

Finley Farm - Equine Research Barn (0691) (2108 State Route 142

**Notes**

**Location**

Finley Farm - Equine Research Barn (0691)

**Address**

2108 State Route 142 NE

**City**

West Jefferson

**State**

Ohio



## LOCATION SELECTOR

- On-campus: Ohio State's API
- Off-campus: address validator
  - Prevents user from saving event

## JS libraries used

jQuery

jQuery UI

Mustache – templating

Moment – date formatting

Fullcalendar

Fancytree

Datatables

Timepicker

Selectize

Jquery-timeago

## Future enhancements

- Better update system for JS components
- Revisit caching (application cache size)
- Responsive design
- Accessibility
- Make more configurable (e.g., category colors)
- Search – fuzzy match (e.g., Lucene.NET)



# LET'S CONNECT

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THANK YOU!

Blackbaud CRM™  
DEVELOPERS' CONFERENCE