1 **DECOUPLED DRUPAL**
CASE STUDY:

Scan Stations For Visitor Authentication
Drupal GovCon 2018

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Drupal developers > 11 years
Supporting National & International Public Health programs (USAID, NIH, SAMHSA and Fed Contractors)
Project websites–public & management; field data collection, learning management, online training of health professionals; multi-lingual; certification testing

3 **IDENTIFY & AUTHENTICATE**

Who are the people wanting to enter?
Are they eligible to participate?
- Registered?
- Paid?
- Signed waiver within past year?
- In good standing?

4 **CLIENT APPLICATION BACKGROUND**

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- Client operates multiple Sportsplexes
- 80,000+ registered users
- 3 facilities, multiple areas in each
- Scan stations–kiosks can be in lobby and/or in an area/room
- Before scanning, an unregistered user can register on-site at the Service Desk
- If scan determines person is Ineligible: deny entry and send to Service Desk
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- Application runs at AWS
  - EC2, RDS, S3, Route53, AutoScale, CF, Elastic IP, et al
- Drupal 7

- Decoupled functions
  - Kiosk scan stations
  - Mobile app
  - Large screen display of attendees (rosters)

5 ☐ **KIOSKS**

1 • Photo or video here
2 Hardware < $200 per kiosk
Computer, touchscreen display, scanner, speaker
Built-in ports: WiFi, Ethernet, HDMI, Bluetooth, Audio, 4-USB
All software open source & free

6 ☐ **ABLE TO SCAN MULTIPLE ID FORMATS**

1 Images for scanner
- ○ Smart Phone
- ○ Keytag
- ○ Printed IDs (temporary or permanent)
- ○ Plastic Cards
- •
- •
- •

2 Formats
- • QR Code
- • Any Standard Bar Code

7 ☐ **OUR APP**
USER SCAN AND RESPONSE

1 Digital ID

2 • photo
3 Users

8 ☐ **KIOSK SPECS**

1 Low cost
2 Other
3 Software
4 Raspberry Pi computer ($30)

MicroSD (preloaded software)
$200 total per unit (quantity 1)

5 7” color touchscreen display
WiFi connected to Internet
Scanner USB connected
Speaker audio port connected
6 Open source (free) software:
- Raspbian OS (Linux)
- Chromium browser

9 **OPERATIONAL FLOW**

10 **INFO MEASUREMENT & EVALUATION**

- User account data and Facility records
- Views reports–a few examples
  - List all people who scanned in, by area/room, by facility – show scan date/times, UID, Name, Photo, etc.
  - Rosters for Trainers/Coaches
  - Revenue reporting (payment journals)
  - Statistics

11 **KIOSK CONFIGURATION**

- Power on to boot kiosk to browser
  - scan QR code to configure
- New/replacement Kiosks assembled at support site, shipped to facility, configured by non-technical staff
  - Enter the site’s WiFi password
  - Documentation –> simple explanations
- Tech support for facilities

12 **APP LOGIC**

1 Scan QR–Get User Data
2 If User Registered/Paid…
3 Update User Account
4 Scanner converts QR code into a text string (it’s just like a keyboard)

and adds it to the input form and submits
App retrieves user account data from the Drupal database, including relevant registration data.

5 Review registration data:
- Paid?
- Still valid for this entry? (Or expired?)

Kiosk screen displays User Name, User Picture, and either “Go” or “See Service Desk”
Kiosk provides audio feedback for “Go” or “Stop”

6 Save Scan date/time
Scan is valid for 12 hours
Typical transaction time is less than one second

13 **MAJOR DEVELOPMENT HURDLE**

14 **SOFTWARE AND NETWORKING**

1 Chromium Browser
2 WiFi <–> Drupal Backend

15 **3 DECOUPLED WEB APPS**

JavaScript: AngularJS, React and NodeJS
Drupal 7 API Endpoints, or
read MySQL tables directly

1. Kiosk scanner
2. Mobile app
3. Local Presence Display

16 **2. MOBILE APP**

AngularJS
Drupal 7 API Endpoints
Registration
Name, address, take/choose photo
Sign waiver
Pay membership or event fee
Scannable ID – QR code

17 **3. LOCAL PRESENCE DISPLAY**

- Event has 5-40 people; who scanned in?

- Video screen listing–updates as people scan in
- Local staff – rosters on their PC
- Displays driven from Raspberry Pi HDMI port

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THANKS!

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