Beta Presentation
Gate Hazard Geo-Mapping

The Capstone Experience
Team United Airlines Airport Operations

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Project Overview

• United Airlines is a leading American airline headquartered in Chicago, Illinois.

• United Airlines Safety & Compliance staff record data on hazards faced at each airport gate.

• Our software unifies the hazard-data recording process, visualization, and allows geo-mapping of the entries.

• This is accomplished through an Android and iOS mobile app, as well as a website.
System Architecture

Applications

User

Xamarin SDK

iPhone Application

iOS

android

TC75 Application

Web App

WWW

php

Web App

PHP Backend

phpMyAdmin

phpMyAdmin Server hosted by MSU

MySQL Database

MySQL

Server-Side
Main Map View
Hazard List View

- **FWD pit access**
  - Map: 1
  - Maintenance vehicles can be in the way during 737 arrivals. Advise SOC if vehicles need to be moved to access FWD pit or NLG.
  - Departments: CG, SOC, MT
  - Revised: 10-14-2021
  - Low

- **Supertugs blocked**
  - Map: 2
  - Golf Carts occasionally block Supertugs from accessing space under the terminal. Call the SOC to have them removed.
  - Departments: MT
  - Revised: 10-23-2021
  - Low

- **fire lane**
  - Map: 3
  - Keep access to the fire lane/no parking area clear at all times.
  - Departments: CG, MT
Edit & History Pages

[Image of two smartphones showing a mobile application interface for managing hazards.]

- **Edit Hazard** screen:
  - **Fire Lane**: Keep access to the fire lane/no parking area clear at all times.
  - **Affected Departments**: CG, MT, SOC
  - **Risk Rank**: High

- **History** screen:
  - Image added: hazardid20-imageid119.txt
    - By: FaheyCandace@united.com
    - Nov-14-2021 6:35 PM
  - Rank updated from "Moderate" to "High"
    - CS set to True
    - SOC set to True
    - By: FaheyCandace@united.com
    - Nov-14-2021 6:34 PM
  - Hazard was created
    - By: FaheyCandace@united.com
    - Oct-14-2021 9:05 AM

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Website – Add Hazard Page
What’s left to do?

• Features
  ▪ None

• Stretch Goals
  ▪ Companion AR mobile app

• Other Tasks
  ▪ Transfer backend to AWS
  ▪ Retain website data entry fields between screens
Questions?