

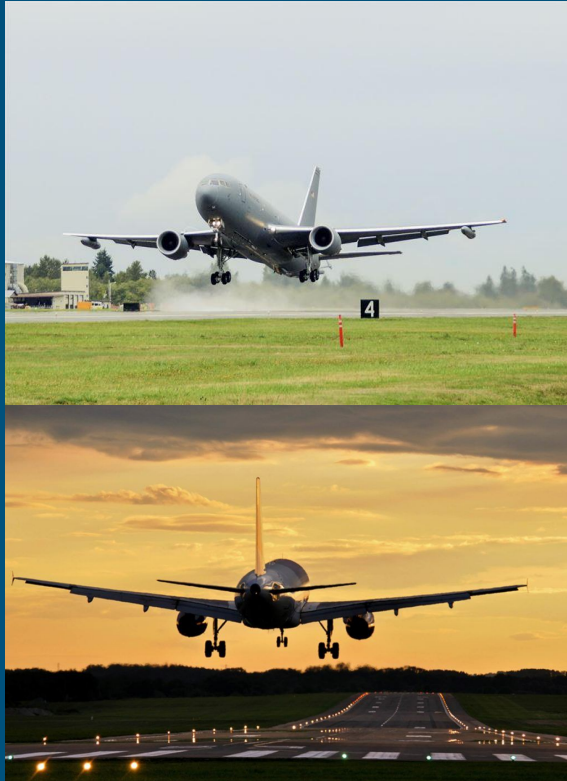
Design Review 1

TLD WorkerBee
Mentor: Austin Sanders



Austen Christensen
Morgan Lovato
Wei Song

Introduction



Harlan Mitchell

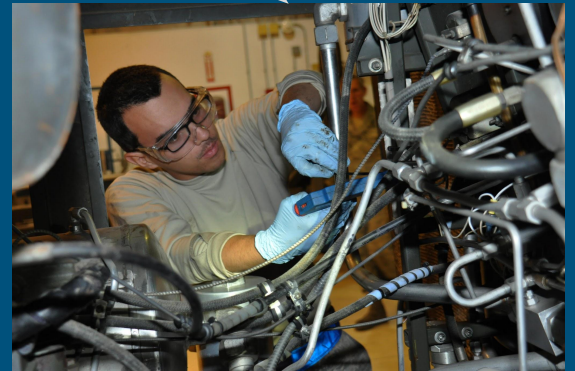
- Systems Technical Manager at Honeywell
- Graduated from NAU in 1997 with a degree in Computer Science

Honeywell

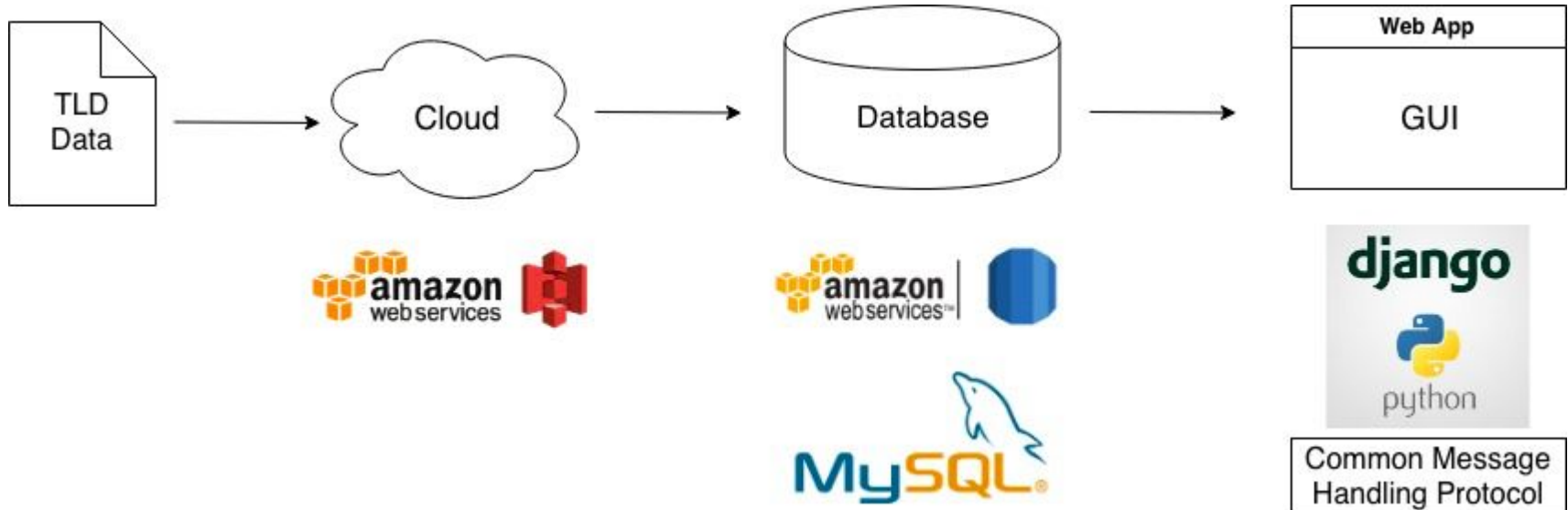
THE POWER OF **CONNECTED**



Current Process



Proposed Solution



Requirements Acquisition

- Use cases to start brainstorming
- Meeting with Harlan and slides from Honeywell
- 9 top level requirements, 3 of which have lower level requirements

Requirements

- User logs in
- User finds plane they are interested in
- Web page accesses TLD data in the cloud
- TLD data is pulled from the database to be displayed on the web page
- Data is authenticated and verified every step of the way

Functional Requirements

[SYS1] The system shall allow the website to gain access to the file in the cloud.

[SYS2] The system shall be able to transfer data from a cloud to a web browser.

[SYS3] The system shall be able to explicitly validate the data after receiving it from the cloud before displaying it on the web browser.

[DT1] The data shall be accessible to anyone with an account and an internet connection.

[DT2] The data shall only be viewed by the owner.

[US4] The user shall login before viewing any data.

[SYS4] The system shall be able to authenticate a user login.

Non-functional Requirements

[US5] The user shall be able to navigate to the data in under two minutes of gaining access to the website.

[DT3] The data shall be verified for correctness before being displayed to the user.

[SYS5] The system shall be able to display accurate data 100% of the time.

Environmental - [SYS6] The software development shall comply to the DO-178C.

Risks

- **Cloud and database error**
 - Introduce a backup mechanism
 - Medium severity
 - Likelihood: 3/10
- **Network connectivity**
 - Keep using the current EEI solution as a backup plan
 - High severity
 - Likelihood: 7/10
- **Network security**
 - Techniques to avoid SQL injections
 - Medium severity
 - Likelihood: 7/10

Team Schedule

| ID | Task Name | Duration | Oct 2018 | | | Nov 2018 | | | | Dec 2018 | | | | Jan 2019 | | | | Feb 2019 | | | | Mar 2019 | | | | Apr 2019 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------|----------------------------|----------|----------|----|----|----------|----|----|----|----------|----|-----|----|----------|---------|----|----|----------|----|----|----|----------|---------|----|----|----------|----|----|----|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| | | | 2W | 3W | 4W | 1W | 2W | 3W | 4W | 1W | 2W | 3W | 4W | 1W | 2W | 3W | 4W | 1W | 2W | 3W | 4W | 1W | 2W | 3W | 4W | 1W | 2W | 3W | 4W | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.0 | Tech Analysis | 5 | 5 Weeks | | | 100% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2.0 | Requirements Acquisition | 9 | 9 Weeks | | | | | | | | | 66% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3.0 | Tech Demo | 3 | 3 Weeks | | | | | | 0% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4.0 | Implementation and Support | 9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| - 4.1 | Cloud | 2 | | | | | | | | | | | | | 2 Weeks | | 0% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| - 4.2 | Database | 3 | | | | | | | | | | | | | 3 Weeks | | | 0% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| - 4.3 | Django | 2 | | | | | | | | | | | | | 3 Weeks | | | 0% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| - 4.4 | CMHP integration | 4 | | | | | | | | | | | | | 4 Weeks | | | | 0% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5.0 | Evaluation | 5 | | | | | | | | | | | | | | | | | | | | | 5 Weeks | | | | | 0% | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Conclusion

- Project overview
 - Current solution: slow and inefficient
 - Proposed solution: fast and secure

- Solution overview:
 - Cloud - Amazon S3
 - Database - Amazon RDS/ MySQL
 - GUI - Django
 - Protocol - Common Message Handling Protocol