Project Plan
Multi-Video Case Management

The Capstone Experience

Team Technology Services Group

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Spring 2019

Functional Specifications

- Insurance claims have a lot of video content
  - Time consuming to review multiple videos of one event

- Building upon existing OpenContent Management Suite's (OCMS) architecture

- Two new actions
  - Add videos from a map view
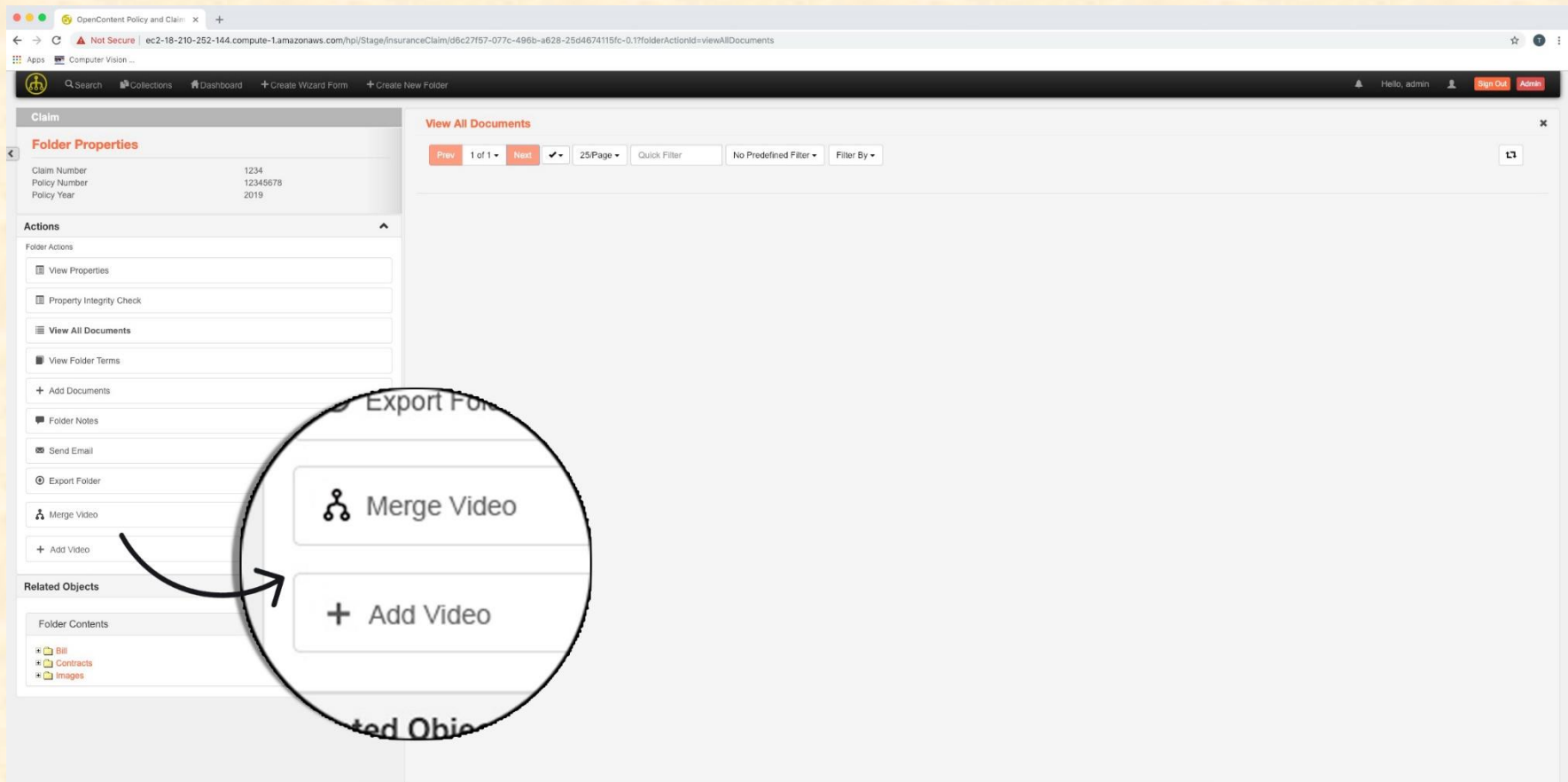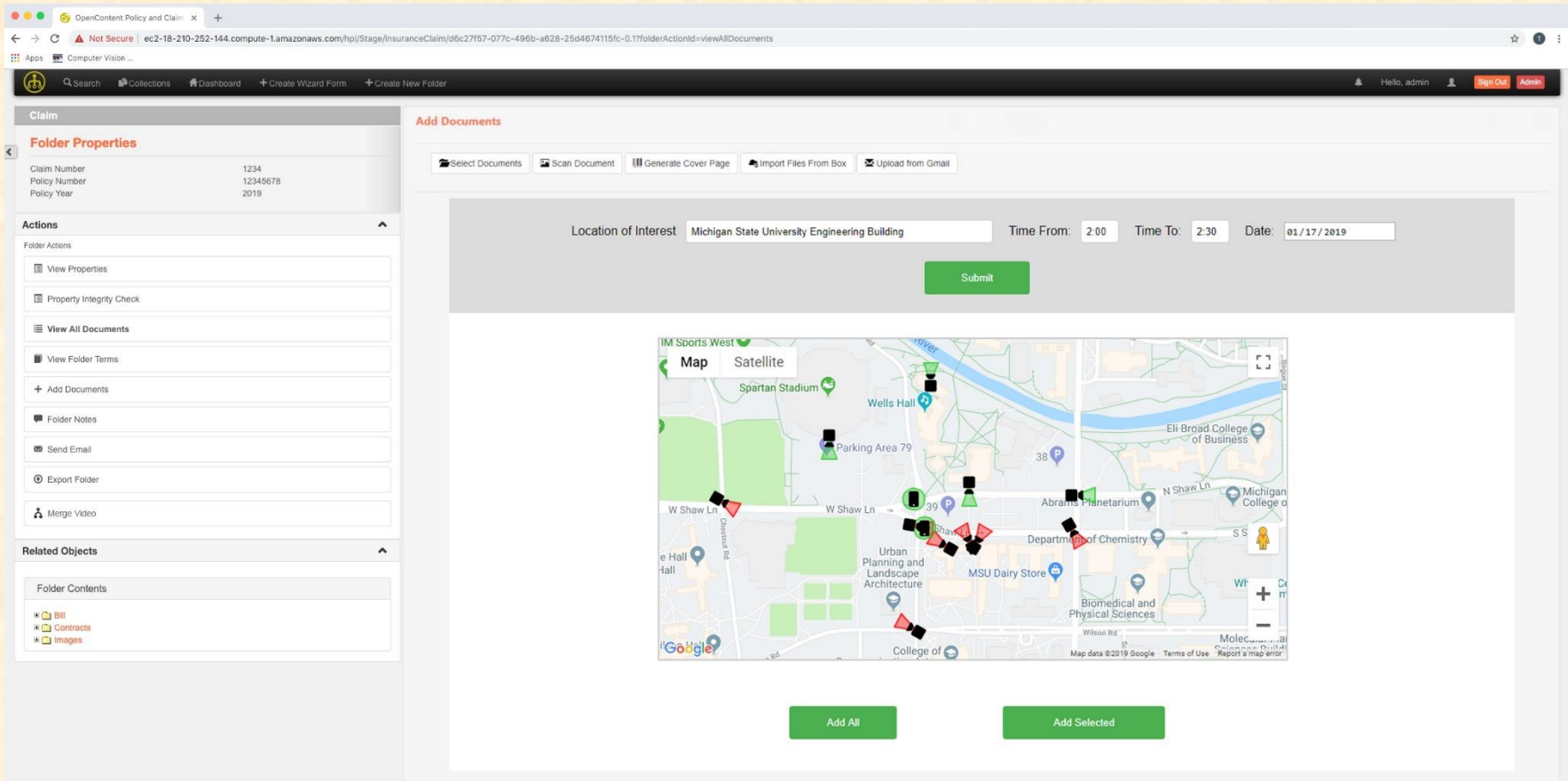 - Merge multiple videos together

Design Specifications

- Add Video
  - Enter location and time
  - Select videos from a map

- Map View of Folder
  - Shows the location of the videos on a map

- Annotating Videos
  - Give video annotations priority

- Merge Videos
  - Single view of desired videos
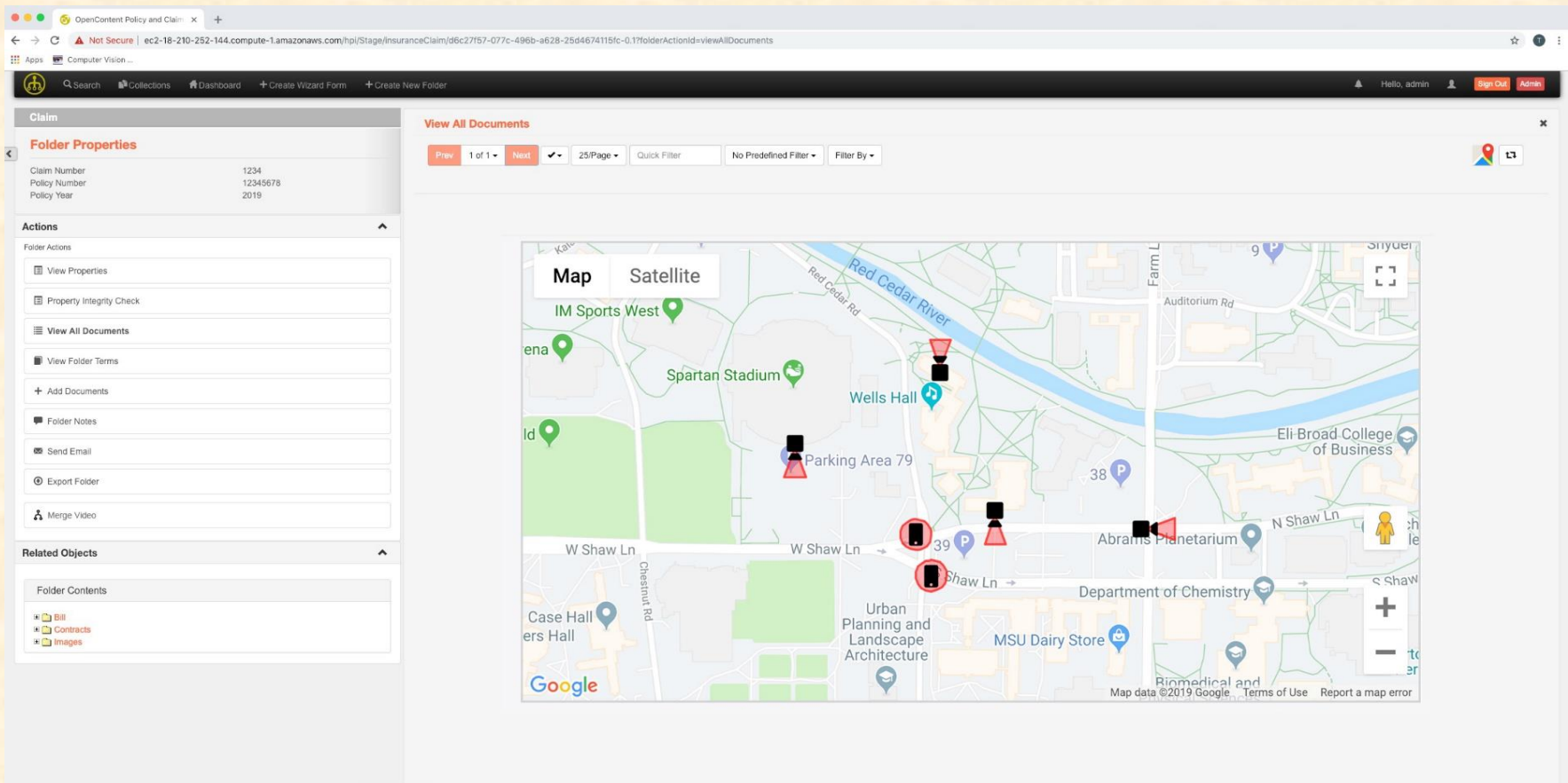 - Display highest priority video larger
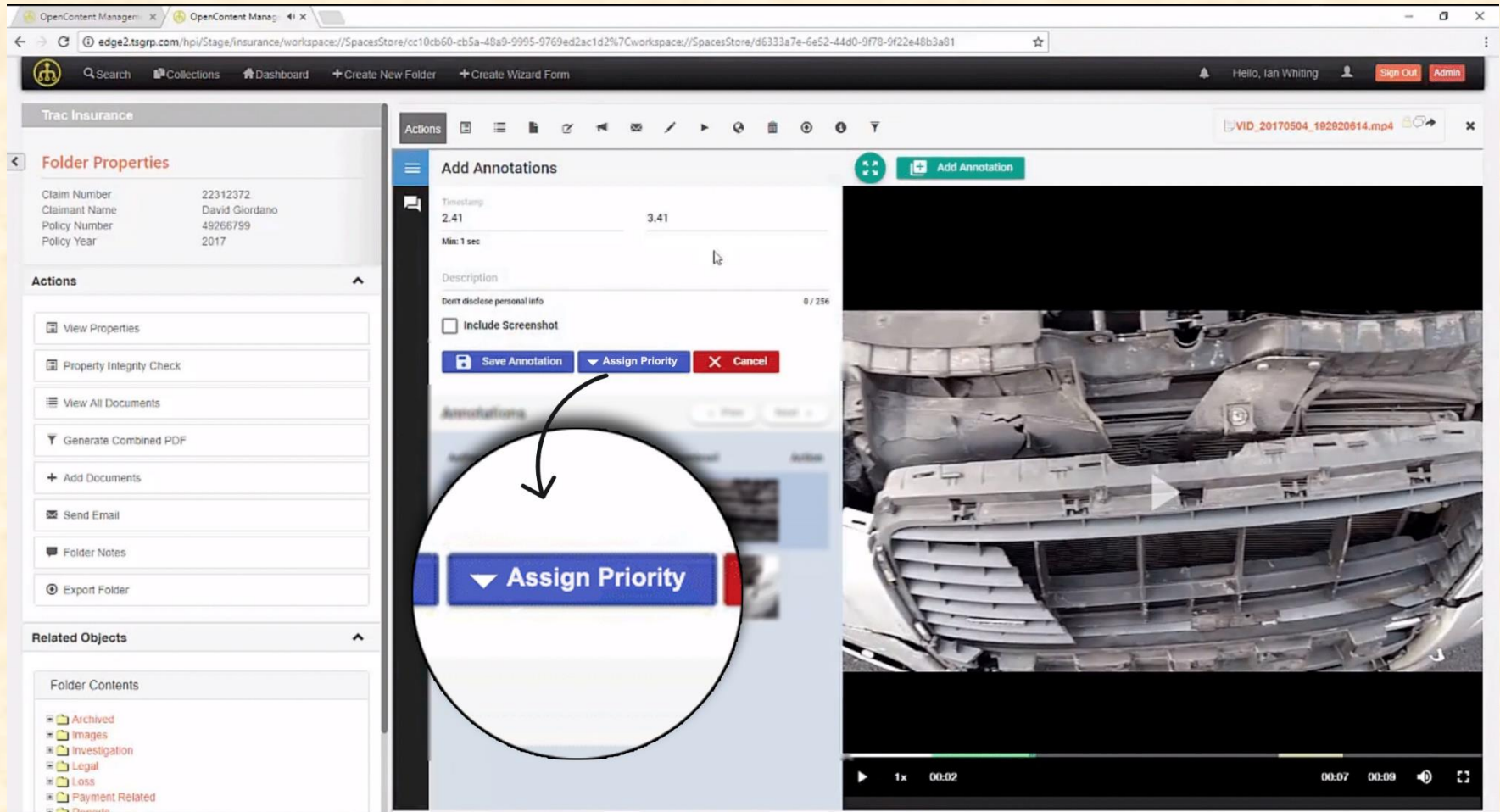
Screen Mockup: New Folder Actions
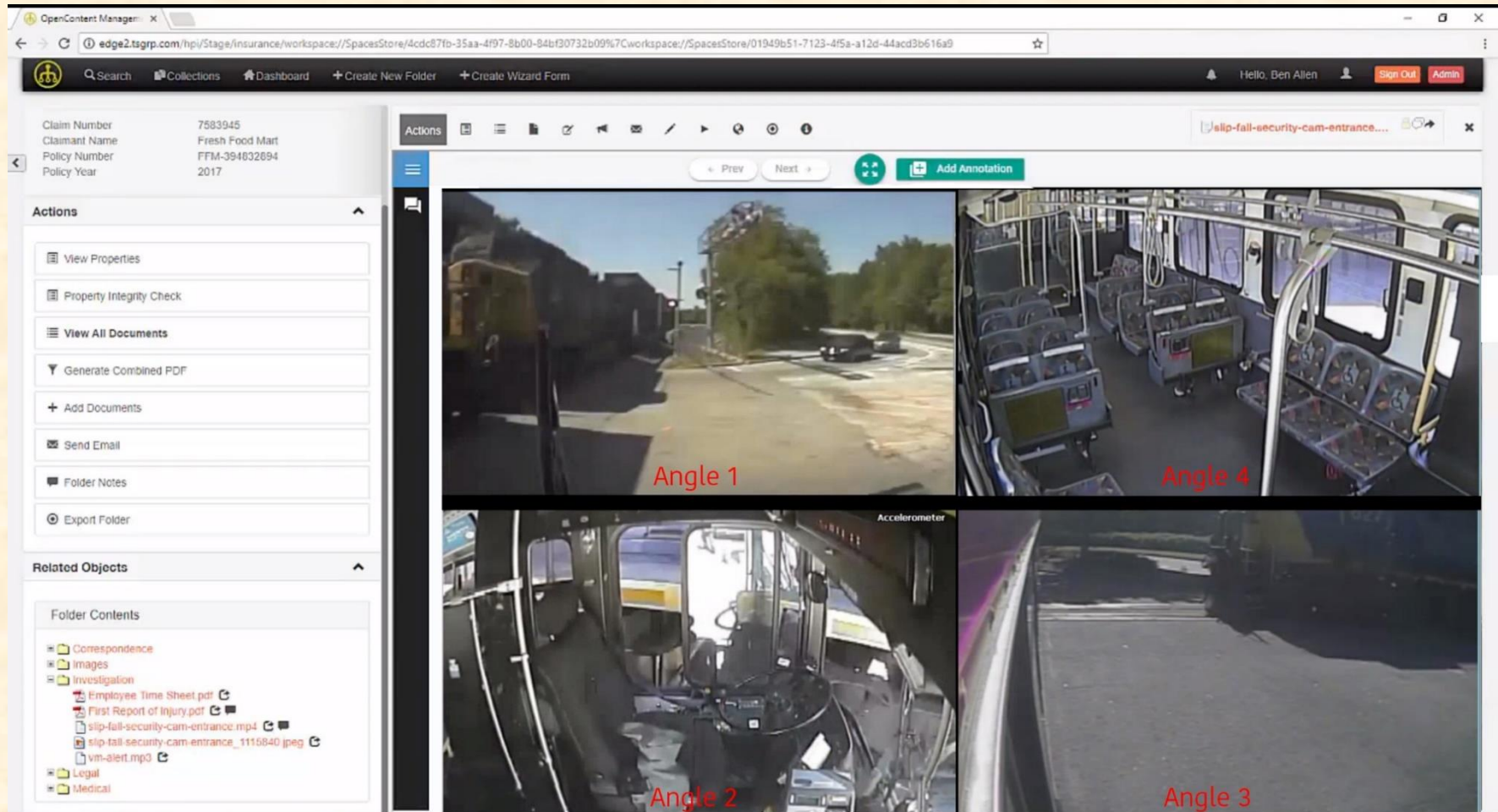
Screen Mockup: Add Video Action
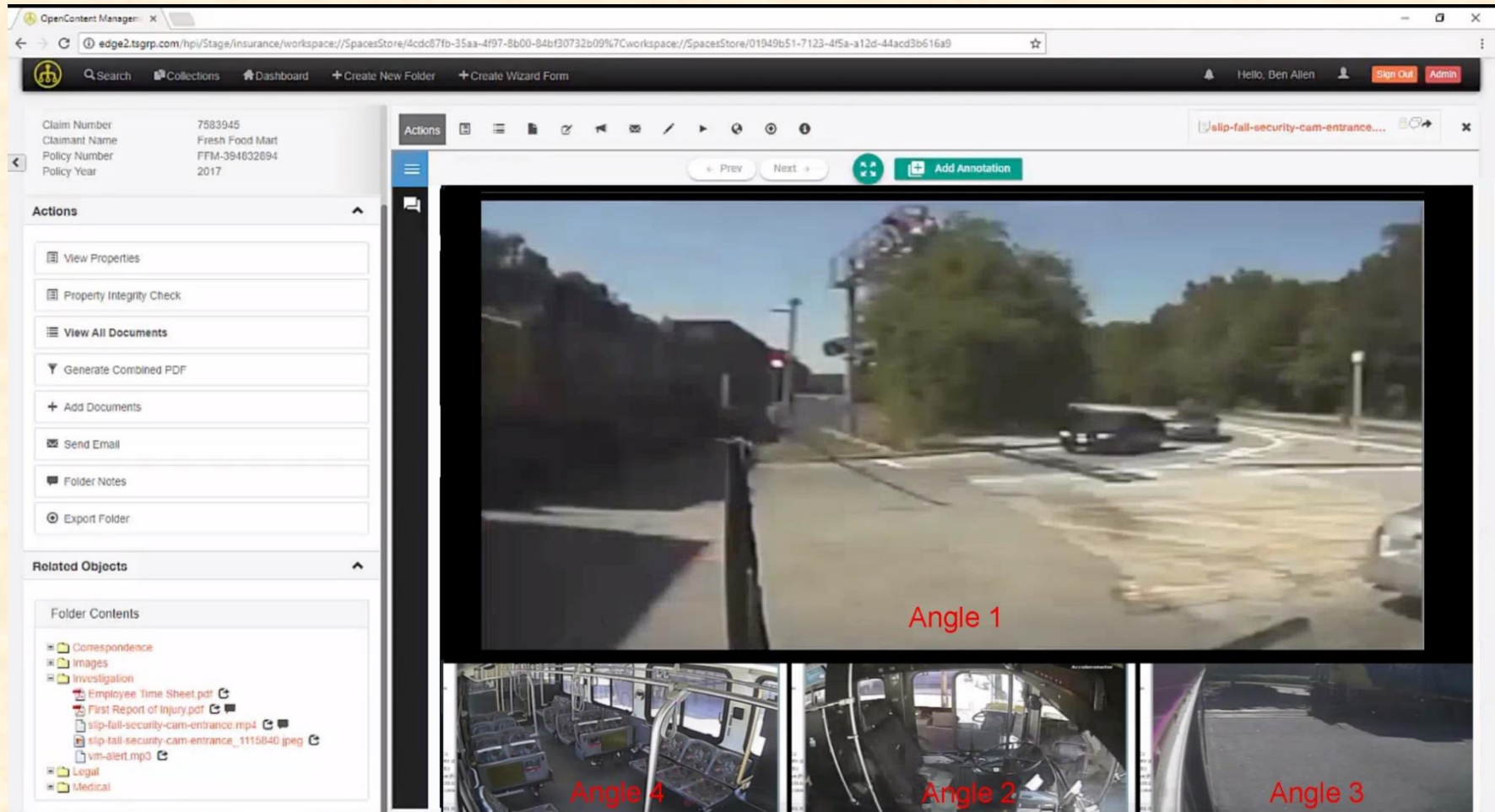
Screen Mockup: Map View of Folder

Screen Mockup: Annotating Videos

Screen Mockup: Merged Video Default

Screen Mockup: Merged Video Priority

Technical Specifications
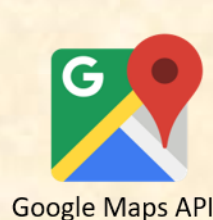
- **Add Video Action**
  - Software Used: *OCMS, Google Maps API, OpenContent Web Services, S3 Bucket, DyanmoDB, Apache Solr*
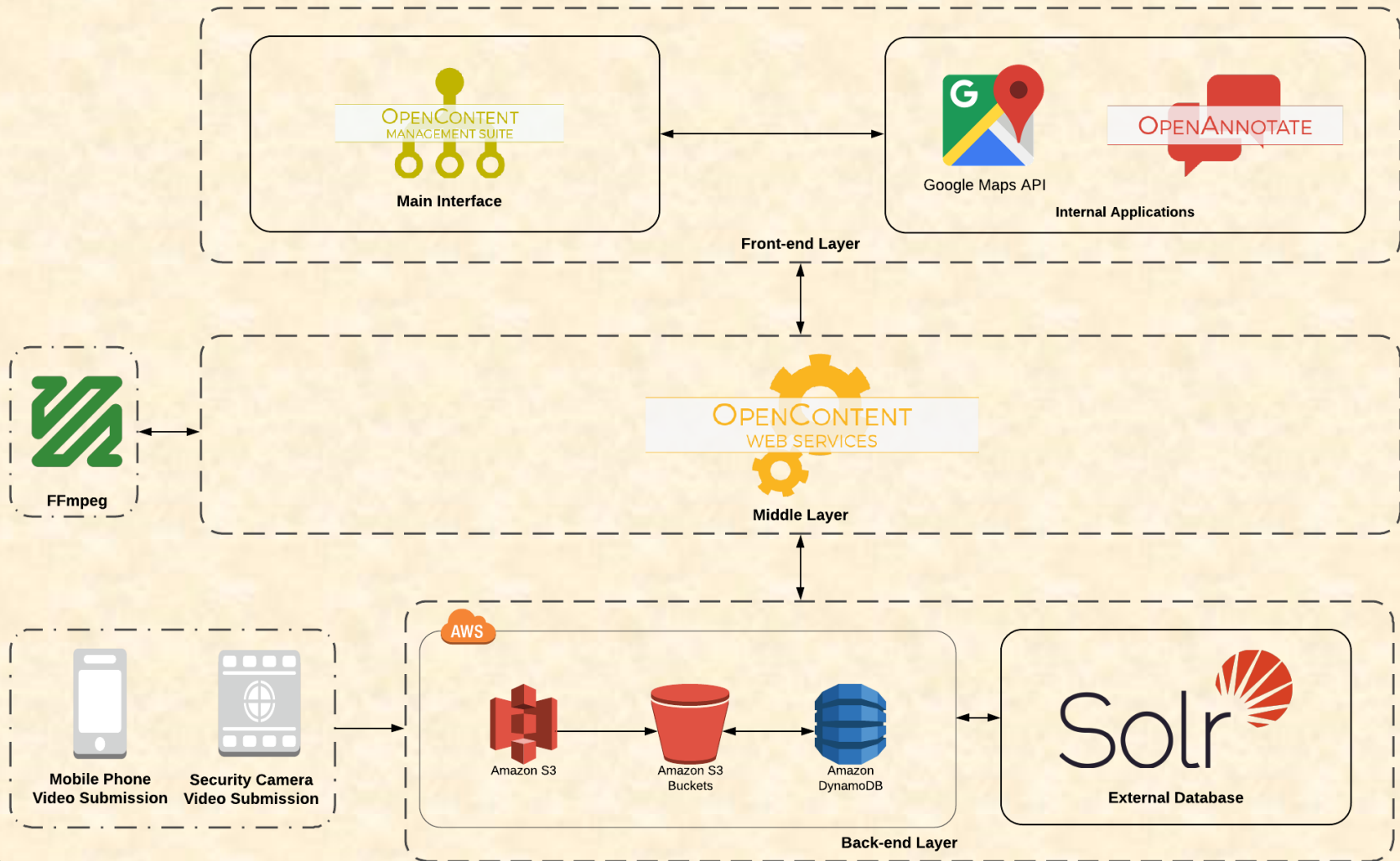
- **Annotating Videos**
  - Software Used: *OCMS, OA, OpenContent Web Services, DynamoDB, Apache Solr*

- **Merge Videos Action**
  - Software Used: *OCMS, FFmpeg, OpenContent Web Services, S3 Bucket, DynamoDB, Apache Solr*

OPENCONTENT MANAGEMENT SUITE

Google Maps API

Solr

OPENCONTENT WEB SERVICES

Amazon DynamoDB

Amazon S3

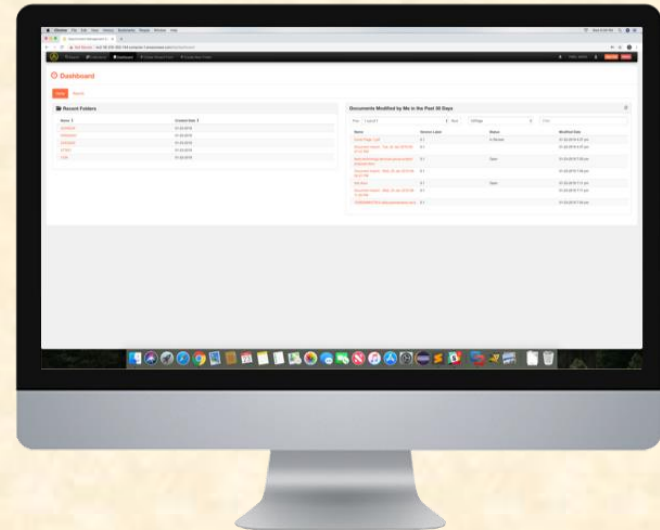OPENANNOTATE

FFmpeg

Amazon S3 Buckets

System Architecture

System Components

- Software Platforms / Technologies
  - TSG OCMS
  - TSG OpenAnnotate (OA)
  - TSG OpenContent Web Services
  - Amazon DynamoDB
  - Amazon S3 Buckets
  - Apache Solr
  - FFmpeg
  - Google Maps API

Risks

- MSU Security Video
  - Unsure of the quantity of accessible footage or which specific cameras will be accessible for the team to use
  - Mitigation: Plan meeting with MSU's Chief Information Security Officer; if the dataset is insufficient, create mock security video footage with phone video

- Integrating into TSG's Environment
  - Integrating into TSG's existing architecture could be difficult because of newly added products like DynamoDB and OpenAnnotate Video
  - Mitigation: Constant communication with TSG, continually familiarizing with their codebase, and actively resolving issues with configuration between DynamoDB and OpenContent Web Services

- Linking Video Files to the Map View
  - Unsure how to retrieve the security video footage from the S3 bucket and pass it to an OCMS Folder
  - Mitigation: Tutorials on simple S3 bucket queries and studying similar S3 actions within OCMS

- Video Manipulation
  - Using FFmpeg to correctly handle video priority and video focus within a defined grid
  - Mitigation: Creating prototype using FFmpeg, can currently merge 4 videos into 1 with multiple different layouts

Questions?