

# **FAMU/FSU College of Engineering**

## **Department of Electrical and Computer Engineering**

### **Project Deliverables**

#### **Team 304: ATS Training Application**

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# Team 304: AR Training Application

## Project Deliverables

Our main project deliverable is an iPad application that can be used by Florida Power and Light (FPL) to train their employees on the Automatic Transformer Switch (ATS). Within the app, there are several key features that are used to accomplish that task: the Main Menu, the ATS playground, the training videos, the ATS documentation, and the quizzes.

### Current State

#### Main Menu -

The main menu is complete. The application successfully loads and displays the main menu upon start up. Within the main menu, there are buttons that will direct the user to the other components of the application, namely the tutorial, ATS documentation, ATS videos and ATS playground.

#### ATS Playground -

Currently we can get the ATS beta model to move based on keyboard and mouse click commands, we are working on getting the ATS to move based on Mouse/finger drag. We also have not been able to get the proper file for the ATS Model. The contact at S&C has stated that they will attempt to provide the proper file, but given the history of response time it is possible the file does not arrive in time to incorporate in the final design.

#### Training Videos -

Currently we have the video player in Unity, it is able to play the videos needed, we are just working on the orientation of the viewing angles and we are also trying to make the video player as user friendly as possible.

#### ATS Documentation -

The PDF links for the various documentation available have been gathered and consolidated into a menu. The links come from the S&C website (the manufacturer of the ATS) and have been placed within the documentation menu. When a button pertaining to a specific link is pressed, the native web browser (Safari for an iPad) will open and display the link.

## Quizzes -

A modular component to create the various quiz modules has been constructed and a JSON file is employed to store the questions and answers for each question. The final draft of the quiz questions is currently taking place and the actual quizzes for each module in the tutorial should be fully complete within the next week.

## Deliverables:

### Main Menu -

#### Details:

A main menu that is loaded upon start-up of the application that enables users to traverse through the various components of the application, namely documentation, videos, ATS playground and the tutorial consisting of pieces of the aforementioned components and the quiz modules

#### Completion:

Complete

### ATS Playground

#### Details:

A fully interactive 3D model of the ATS, that the user can manipulate and interactive with to help familiarize themselves with it. It will include labels of the various parts of the ATS, and allow them to move the switches and components appropriately so they can practice the different operations they are required to learn.

#### Completion:

So far we have gotten the ATS to move based on keyboard and mouse click commands, we are now working on getting the ATS to move based on mouse/finger drag. We are currently coding this into our animations and will be finished in the next few days.

### Training Videos

#### Details:

Are videos that will give the user information about the ATS, on how to perform maintenance on the ATS, how to interact with it, and different safety guidelines to keep both the user and the environment safe.

#### Completion:

So far we have been able make a video player and get the video running in Unity, we are working on getting the orientation of the video player right and we are also working on making the player much more user friendly

## ATS Documentation

A menu with links to several different documents about the ATS provided from FPL and S&C. The user can click on the links and it will open the PDF's in a web browser on the iPad.

## Quizzes

### Details:

A way for the user to assess their knowledge on the different modules and ATS operating procedures. The quizzes are embedded within the tutorial to ensure that knowledge from a module is retained.

### Completion:

A modular component capable of running a quiz using data from a JSON file has been constructed. Once the final draft of the quiz questions is complete, quizzes for each training module will be instantiated providing a full line of quizzes available throughout the tutorial.