Overview
The Wireless InSite browser software is meant to be an internet service that customers can use to view the 3D output files of the electromagnetic simulation desktop software. Eventually, it might supplant the desktop version so that project viewing and creation both happen within the browser.

Objectives
The key objective this semester was to further the development of the Wireless InSite web tool. Our overarching goal entailed many smaller ones including but not limited to: refactoring the existing codebase (both for scalability and improved data flow), expanding the viewing options, and fixing known bugs that hamper the viewing experience.

Approach
● We met with the Remcom sponsors on a biweekly basis to get a better understanding of how they wanted to enhance their existing web tool
● We listed the bugs/enhancements that Remcom wanted on the project’s GitHub issues page, and we then separated those issues among group members
● We took the agile approach so that we could just pick features in what seemed the most sensible order and added them to the product, while always making sure to keep the tool in a stable, relatively bug-free state

Outcomes
● Integrated the Flux pattern by creating a centralized data store, dispatcher, and handler
● Implemented EM path rendering via the Cesium API. The EM paths are togglable, start at the transmitters, and end at the receivers. Additionally they are colored according to their relative power (dBm)
● Added a backend using the Express framework. This allows us to render grid layouts as they require server-side computation
● The build no longer breaks if a dependency updates, and the initial build process was drastically simplified
● Google Chrome can now open projects
● Added search bar to quickly navigate to any location
● Added Cesium terrain and grid options
● Minor UI fixes (Remcom logo fixed, menu UI fixed, opacity fixed, render resolution changed, etc.)