Building an Automated Desktop Application for Microwave Network Sites

Overview

Company's Transport Automation is a desktop application designed to automate network transport data and provide an efficient way to manage topology, calculate planned network capacity, and offer suggestions based on data for microwave network sites in Pakistan. The goal of the project was to create an installable desktop application that would streamline data management and enable faster decision-making based on the data.

CUSTOMER

A Finnish multinational telecommunications, information technology, and consumer electronics corporation.

Country: USA

Industry: Private Sector

Customer Size: 500 - 1000

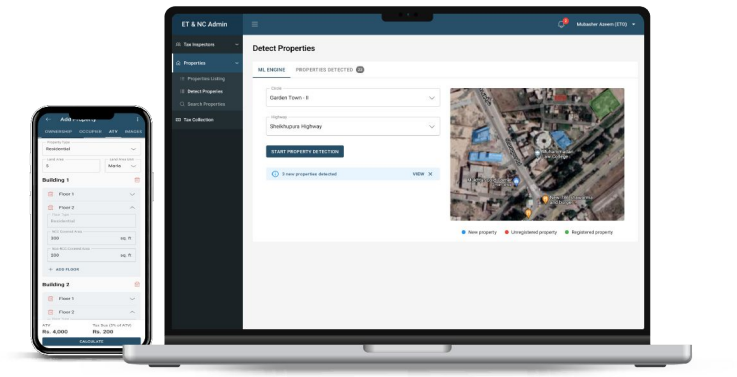
Publish Date: 24/02/2023

Problem Statement

The Company was facing several challenges in managing the MW network sites in Pakistan. The existing manual system was time-consuming, prone to errors, and inefficient. It was difficult to manage topology and plan network capacity accurately, which resulted in suboptimal decision-making. Company needed a solution that would automate the process, eliminate errors, and provide real-time data to enable faster decision-making.

Technical Solution

To address Company's challenges, Red Buffer developed an installable desktop application using Python, Pandas, and PyQt. The application included several components such as topology/route management, planned network capacity calculation, and data analysis. The application allowed Company to manage topology efficiently, automate sorting and calculations, and generate heatmaps and suggestions for faster decision-making based on the data.



Results

The application developed by Red Buffer allowed Company to automate network transport data management for MW network sites in Pakistan. It provided an efficient way to manage topology, carry out sorting and calculations, and generate heatmaps and suggestions for faster decision-making based on the data. The application eliminated errors, reduced manual effort, and provided real-time data to enable faster decision-making. Company was able to optimize network capacity, reduce costs, and improve network performance, resulting in improved customer satisfaction. Overall, the project was a success, and Company was pleased with the results achieved with Red Buffer's technical expertise.

Technologies	Domain
Python, Node.js, Flask, Electron, MapInfo, electron-builder, HTML, jQuery, CSS/Bootstrap 4	Automation