



# Case Study

## Smart Transmitter

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### Business Requirement

A global radio control company entrusted us for a project with the business objective to develop a smart transmitter powered by Android.

Transmitter is a hand held device used to control scaled airplanes, helicopters, quadcopters and other radio control equipment. Transmitters are in existence from more than two decades. These are microcontroller based sophisticated piece of equipment running a specifically designed program infinitely. User interface was functional and widely accepted but with limited functionality. Programming this legacy transmitter was time consuming and tiring, in all not much of a breeze.

### Scope

Legacy transmitter needed a major overhauling. **With everything getting smarter, now is the time for transmitter to get Smart.** Touch screen programmable, Voice assisted, BLE and WiFi supported, Android shell over the legacy transmitter could release their true potential. Client was looking for a solution provider who could convert the idea into a working solution. The major challenge was the non-stock Android on a custom hardware. Android shell was interfaced with legacy hardware via serial port.

### Our Approach

In order to overcome the above mentioned challenge a non-standard Android app was required. **ODA with years of app development experience and RC domain expertise accepted the challenge.** After analysis of client’s requirements, our team suggested Xamarin as best suited technology. The proposed solution was a Xamarin native android app that interacts with legacy hardware over serial port. App exposes two way communications between the user and legacy hardware. App includes a high speed data processing engine to respond to user inputs. App also includes a custom telemetry data processor to convert raw sensor data into meaning full audio data.

### Benefit to Client

**For a product based company TTM (Time To Market) is performance evaluation criteria.** ODA adapted to client working culture and completed the project with in given timeframe. Xamarin team comprised of 10 developers and TFS was used for effective team and project management. **A continuous build environment was setup to ensure every release met the quality standards.**