



Elegant MicroWeb
Delivering the Value of Technology

Case Study

**Security Guard & Route Tracking BLE-Based Beacon App for India
CPVC Pipe & Fitting Manufacturer**



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Case Study

Security Guard & Route Tracking BLE-Based Beacon App for India CPVC Pipe & Fitting Manufacturer

The Client

The enterprise is a large manufacturer of CPVC pipes and fittings with factories located across India. The client serves millions of residents and contractors, providing quality plumbing products and services with production facilities across India, supplying plumbing systems, drainage systems, agricultural plumbing products and industrial and electrical conduit pipe products.

The Objective

The client engaged Elegant MicroWeb to design and develop an application to track the security guards employed at their various facilities, and to mitigate ongoing theft issues experienced at these facilities. Every security guard is assigned a specific route and route frequency to ensure that all key security points are covered during the shift. The goal was to provide an application that would provide 24x7 tracking with exception reporting to identify instances and time slots when guards were not available or when a guard was not following the surveillance route allocated for the time and place specified.

The Solution

Elegant MicroWeb designed and developed a beacon-based solution and worked with the client IT team and security experts to provide this security monitoring solution. Security checkpoints, routes and frequency were defined and Beacons were installed at these checkpoints. An easy to use interface was provided to configure routes and frequencies for each guard. The beacons register guards passing by and confirm guards positioned and passing by at certain checkpoints and this data is submitted to the central server to produce standard and exception reports for management review.

The solution includes:

- Web portal and native mobile application in android using beacon
- Design and development of BLE/IOT based system
- Multiple interfaces for guards, managers and admin



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- BLE
 - Beacon integration with mobile app through BLE
 - Beacon setup and configuration
 - Beacon proximity settings for mobile app
 - Auto check-in and check-out scanning from mobile app
 - Identification of next Check-in place
- Guards real-time tracking on Google Maps
- Exception and notification reporting
- A variety of standard reports to meet client requirements

The Technology

- Web Portal
 - Server: PHP
 - Database: MySQLs
- Mobile App
 - Android 5.4.x

Elegant MicroWeb Role

The Elegant MicroWeb team provided support, knowledge and skill in the following areas and activities:

- Requirement understanding in close consultation with IT managers & business managers
- Technical feasibility
- Architecture, Development, Maintenance and Support
- Testing, including User Acceptance Testing
- Implementation, integration and support
- Support and Training to IT team



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Conclusion

The enterprise is a large manufacturer of CPVC pipes and fittings with factories located across India. The client serves millions of residents and contractors, providing quality plumbing products and services with production facilities across India, supplying plumbing systems, drainage systems, agricultural plumbing products and industrial and electrical conduit pipe products. The client needed an application to track security guards employed at various facilities, and to mitigate ongoing theft issues experienced at these facilities. Every security guard is assigned a specific route and route frequency

to ensure that all key security points are covered during the shift. Elegant MicroWeb designed and developed a BLE-based beacon security monitoring solution with an easy to use interface to configure routes and frequencies for each guard. The beacons register guards passing by and confirm guards positioned and passing by at certain checkpoints and this data is submitted to the central server to produce standard and exception reports for management review. This project resulted in improved security, and productivity, reduced theft, and a seamless checkpoint and guard tracking process.



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Contact Us

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