RFID BASED AUTOMATED MATERIAL TRACKING

CASE STUDY

PRODUCTS USED

Impinj R420 Reader
Impinj Hub
Impinj GPIO Adapters
TSL handheld Reader
Times 7 9dbi UHF Antenna
On-Metal UHF RFID Tags

BENEFITS

- 10x Faster material tracking
- Accurate location information
- 80% reduction in lost material
- Decreased preparation time
- Quicker availability of items
- Automated muster roll calls
- Reduced item receiving time
- Reduced item issuing time
- 9x improved productivity

FEATURES

Real-Time Locating System
Zone Based Tracking
Live Dashboard View
Search Item from live location
Dashboard & Reports

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AN INTRODUCTION

This case study examines how HexaTrack a global track-and-trace system from Hexahash Technologies saves industrial megaprojects millions of dollars by providing accurate real-time locations, status updates and progress information for material and equipment via RFID and IoT sensor networks, image processing using AI enabled depth cameras, wearable devices with auto-identification systems and cloud based web applications.

THE CHALLENGE

CHALLENGE WITH OPEN YARD-LARGE AREA PROJECTS

A Challenge with Mega Projects

- Span Multiple large-area properties
- Multiple stakeholders
- Vast amount of equipment,material and personnel generates logistics challenges
- Often succumb to large cost overrun and long schedule delays

ONE OF THE MOST SIGNIFICANT FACTORS CURRENTLY IMPACTING WORKER PRODUCTIVITY IS LIMITED VISIBILITY AND CONTROL OF MATERIAL AND EQUIPMENT IN THE FIELD

A SOLUTION

Hexahash implemented UHF RFID based material tracking system for the customer to track materials spread across combined open and closed locations. UHF RFID fixed readers installed in strategic locations to identify presence and movement of the materials. Another RFID device fixed on the forklift/vehicles which transmit the material availability to the central server automatically hence item presence updated at all time. Hand held readers also in use in the site for a synchronized material tracking.

Phase-II is in progress for integrating AI enabled depth camera to analyse articles in the work location.