



## Case Study Kimal PLC

## THE COMPANY

As part of a planned upgrade of their IFS ERP solutions, Kimal Plc had to include a review of the Automated Data Capture (ADC) solution incumbent with their existing version of IFS.

Cedar Bay, who are preferred IFS partner, were invited to present the options on software and hardware solutions as part of a competitive process. Cedar Bay has the ability to work with the entire solution software, software development, hardware and consultancy across the ADC solution.



## Software Options

Cedar Bay was in a position to present and review all three software options available with its close working relationship with IFS;

Potential IFS Upgrade Solution  
Cedar Bay IFS Data Capture Solution  
Kimal in house developed solution

## Hardware Options

Kimal needed to look at supplying hardware and wireless systems across 2 main sites, Bromsgrove and Droitwich and a 3<sup>rd</sup> distribution site in Uxbridge.

## Handheld Computers

Kimal invited Cedar Bay to visit the two main sites, a production facility at Bromsgrove and a modern despatch warehouse at Droitwich. At the time of the visits an existing data capture solution existed at both sites. This consisted of Symbol PDT6842 wireless handheld data capture terminals connecting to Symbol AP3021 access points.

Conversations with personnel on each site revealed that there were parts of the warehouse at Droitwich where the handheld terminals performed poorly. The majority of the warehouse was racked

and assessment of the quantity and placement of the existing access points suggested that the racking aisles at the far end of the warehouse are likely to suffer from poor Wi-Fi coverage. The handheld terminals themselves were of the 'pistol grip' variety with built-in standard range barcode laser scanner engines.

Tony Guest and Cedar Bay made sure that all hardware options were put in the hands of the operators as well as taking into account of technical requirements for the maintenance and use of software on the devices.

The current handheld terminals at the two main Kimal sites use laser barcode scanner technology. Many manufacturers of data capture products have moved away from this technology as the scan engine requires a number of complex mechanical moving components that are prone to damage with prolonged use of the handheld terminals. The imager technology is the preferred barcode scanner technology with a number of distinct advantages. They have no mechanical moving parts and hence have proven to be much more reliable than laser technology scanners. They also support the decoding of both 1D and 2D barcode symbologies.

Very early on it became apparent that the team at Droitwich preferred a handheld computer that had a scan handle, while the team based at Bromsgrove did not. This in general terms should not present a problem but Cedar Bay will always try and follow a policy of providing the simplest solution that will also strategically benefit a business in the medium to long term.

Cedar Bay determined that the best solution would be the Intermec CK3 Standard Range handheld computer with linear imager scan engine, we had reviewed the options for the alternative scan engines (EA20 & EX25 area imagers) for 2D barcode but these were discounted. The criteria Cedar Bay set for this solution was based on;

- Robust hardware devices Cedar Bay has deployed at multiple sites
- Proven technology Cedar Bay has worked with multiple generations of Intermec devices prior to the CK3
- Interchangeable, Cedar Bay wanted to present a solution that would be versatile, meeting the differing requirements across all departments and sites
- Single solutions providing easily managed maintenance, in house technical support and swap out across site if necessary

## Wi-Fi Solution - Access Points

Cedar Bay conducted Wi-Fi site surveys at the Bromsgrove and Droitwich sites. This is an essential first step in any data capture project where a wireless network deployment is required to support connectivity of the wireless data capture terminals. Cedar Bay views this essential step as of paramount importance. In advance of the survey visits we gather essential information to help establish the requirements of the Wi-Fi network to be proposed. This includes factors such as the type of Wi-Fi clients requiring connection (some customers opt to connect Wi-Fi PDAs, smartphones, laptops, Voice-over-IP handsets in addition to the Wi-Fi data capture terminals). We assess the required bandwidth to support the needs of these devices moving forward as well as any redundancy requirements in the event of an access point hardware failure.

**“Cedar Bay has proven to be a strong business partner for Kimal’s Data Capture Solution requirements for the long term, maintaining their convictions on the solution direction for day one.”**

**Tony Guest, Project Leader Kimal Plc**

The onsite Wi-Fi survey process works on the principal of deploying a mobile access point in an optimum position and measuring the Wi-Fi signal quality throughout the facility to establish the boundary of the access point coverage cell. This process is repeated to enable a Wi-Fi network to be designed with overlapping Wi-Fi coverage cells. Cedar Bay use experienced Wi-Fi engineers with many years experience to ensure the Wi-Fi network is designed using ‘best practice’ techniques.

Cedar Bay have also invested in Wi-Fi analysis tools (Air Magnet Analyser Pro™ and Wi-Spy™) to enable the environment to be assessed for sources of interference from existing Wi-Fi access points (both on and off site) and third party interference. This is essential to ensure that when the access points are deployed, they are configured to be co-exist, where possible, should there be existing transmissions on the radio frequencies used by the Wi-Fi access points.

Cedar Bay opted to propose Cisco model 1242 dual radio Wi-Fi access points. This access point contains both an 5GHz 802.11a and a 2.4GHz 802.11b/g radio interface.

The advantage of this is that the 802.11a radio operates at a different frequency to the 802.11b/g radio and hence provides a contingency in the event that radio interference increases on the 2.4GHz frequencies at any time in the future.

Cedar Bay opted to propose Intermec CK3 Wi-Fi handheld terminals. These terminals have an integrated 802.11abg radio capable of connected to both the 802.11a and 802.11b/g radio interfaces in the access points. The 802.11a radio interface in the access points will be disabled unless required.

Cedar Bay has many years experience of working with wireless networks and data capture terminals from all of the leading manufacturers. Based on this experience our preference is to propose Cisco Wi-Fi access points in conjunction with Intermec Wi-Fi data capture terminals.

## The benefits we have identified are as follows:

- Cisco and Intermec are strong brands with global presence
- Cisco is recognised by Gartner as the leader in the supply of Wi-Fi access points
- Intermec has proven to be a long standing manufacturer of quality and reliable data capture products with an excellent pre and post sales support structure.
- Intermec put their Wi-Fi products through Cisco’s CCX certification process to ensure the highest levels of compatibility and compliance. This provides the added benefits of the Intermec terminals being able to take advantage of some advanced radio power management techniques in conjunction with the Cisco access points. This enables Wi-Fi interface in the Intermec terminals to be configured in ‘FAST PSP’ mode to conserve battery life (important for long shifts).



- Intermec are well respected in the industry for owning a significant number of patents for the technology they deploy in their products. Cedar Bay has observed that their imager scanner technology is superior to their competitors.

Whilst conducting the Wi-Fi survey Cedar Bay where given permission by Kimal to test the scanner performance of an Intermec CK3 Handheld terminal. This was important to ensure an appropriate barcode scan engine was testing with the variety of barcode labels on the Kimal products. It also provided Kimal with the advantage of testing the CK3 first hand to enable them to make a more informed decision when selecting their solution.

## Chosen Solution

*'Kimal PLC chose to partner with Cedar Bay as they proved from the first engagement that they clearly understood the requirements, could project and provide the most efficient solutions to meet the targets and long term objectives for Kimal..... The simple straight forward belief in a single hardware solution was demonstrated to us very early on in the process and never changed, we believe this was the right approach for Kimal.'*

Tony Guest, Kimal Project leader.

## Software

Early on it was noted that The IFS upgrade solution would not be ready to meet the target go-live date for Kimal by some margin, so it was discounted. The next decision was based on functionality and cost leaving Cedar Bay Solution or an in house development solution. With collaboration with Cedar bay reviewing the functional capabilities of the Intermec CK3 plus the manufacturing, distribution and stock control requirements it was quickly determined that in house solution would pose the least threat to the project in terms of budget and timeline.

Throughout the decision process and project working to go-live Dave Woodall, Cedar Bays Senior Technology Consultant, Mark Allington - Kimal IFS/Oracle DBA and Darren Widdowson - Kimal Project Developer have worked closely to ensure the correct software and resource was available.

*'The combination of the single hardware solution plus the Intermec browser software allowing custom lock down enabled the IT Team at Kimal to have the functionality that provides robust connectivity while moving through the factory and warehouse environment.'*

Dave Woodall, Technical Support Cedar Bay



## Hardware

As described above it was a very clear format that Cedar Bay recognised would be the right hardware Solution for Kimal

22 Intermec CK3SR Linear imager handheld computers have been deployed with the state of the art scanning engine with no moving parts, variable read ranges and ability to better handle the variety of supplier barcodes that Kimal has to manage. In addition cedar Bay helped develop the a bespoke Intermec browser that is sympathetic to loss of connectivity.

The final solution went live as part of a gradual process starting at Bromsgrove and ending with Droitwich the main warehouse. The business is already looking at extending the functionality and reviewing complimentary application, such as wireless print solutions to improve efficiency in the stores are at Bromsgrove.

For any further detail or specifics on this project and solution please contact Bruce Mills at Cedar Bay.

## HOW CAN WE HELP YOU?:

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