iOnAsset ™

For

Asset Tracking and Management System

Solution By:

Octaware Technologies www.octaware.com

Microsoft Partner

Gold Collaboration and Content Silver Application Development Silver Cloud Productivity Silver Communications

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iOnAsset Key Features

- Web based Asset Management
- Offline Asset Inventory
- Auditing
- Reconciliation
- Check-in Check-out Asset Allocation
- Automated Asset Movement
- Asset Security
- Asset History
- Online/Offline Asset Search
- Business Intelligence Reports

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1 About Octaware Technologies

Octaware Technologies is a global software development and information technology company with offshore development center in India and offices around the world in countries like USA, Qatar, Saudi Arabia, UAE, Nigeria & Zimbabwe. Combining proven expertise in technology, and an understanding of emerging business domains, Octaware delivers a range of products & services as below -

Products	Services		
» PowerERM	» Custom Software Development		
» iOnAsset	» Enterprise Portal		
» Hospice	» ERP & CRM Implementation		
» RealWin	» Consulting Services		
» eDocNet	» Mobile & RFID Solutions		
» eQuire	» Cloud & Infrastructure Services		
	» GIS Services		

Octaware Technologies positioned as one of the emerging Software Services and product companies in various areas of application development, maintenance & Support, Portal Technologies, CRM/ERP implementation, RFI/GIS and CAD Services.

Our products provide comprehensive security-protecting the privacy and integrity of the data while increasing the productivity and the efficiency of the processes. Octaware Technologies offers high caliber products with a bid to provide locally developed solutions, which are pragmatic and user-friendly. We engineer and design reliable products and services to help businesses and communities thrive and perform better. We focus on creating value by understanding our customers, working side-by-side to develop solutions that make our customers, experience technology which are simple and manageable. Octaware is one of the world's leading software companies, providing solutions to the world's largest and most successful businesses. The company is focused on making technology and its benefits accessible to all. Octaware has combined its ingenuity, engineering prowess and customer focus to help people around the world apply technology in meaningful ways to their businesses, communities and to their lives. Octaware utilizes the power of innovative positioning technology to provide real business benefits through radio-frequency identification. Octaware fueled by its fresh thinking and unique ideas creates more valued experiences with technology.

2 Preface - Asset Tracking and Management

Today firms have started to burn the midnight oil in an attempt to strive to increase business, increase revenues and thereby have landed up increasing the number of their resources and assets. It may be easy to track assets in a small organization but as soon as this number crosses a few thousands, it is a pain to Know how many and where the assets are located.

Asset tracking and asset management means:

- Knowing where the assets are located.
- Knowing where the assets were last located.
- knowing the assets which have gone missing and
- Also knowing how many assets the company possesses.

Often this information proves to be beneficial when an asset contributing highly to the overall revenue has gone missing leading to losses. The concern is not always the value of the asset but the cost of not knowing where and how many assets there are.

Evaluating the Existing System

- 1. Ineffective present technology: Today barcode technology is used for asset tracking but it is not a viable in critical processes because often it is time consuming and labour intensive. Also it is more prone to errors due to the tags not being properly read.
- **2. Chaotic work-flow:** People and equipment do not necessarily move along a fixed path. It does become difficult to get accurate and timely data on location and status of assets disrupting the work-flow and leading to reduced efficiencies.
- **3. Loss of revenue:** Difficulty in locating a asset that has to be directly delivered to a customer leads to delays resulting in loss of sales and hence revenue.
- **4. Inefficient utilization of assets:** Often inability to track assets results in under utilization of the assets currently present and unnecessary purchase of new assets thus reducing throughput.
- **5. Improper Maintenance Schedule:** Where large volumes of assets are involved the difficulty lies in not only tracking of assets but also tracking their maintenance on a regular basis as outdated and worn out assets may decrease efficiencies and lower productivity.

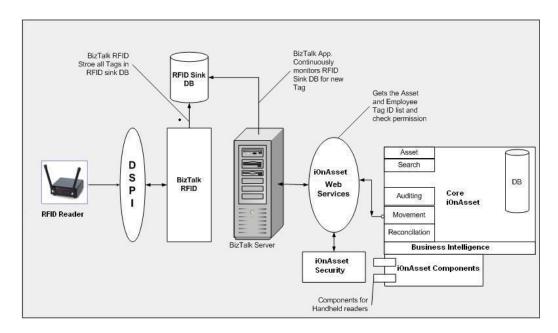
2.1 iOnAsset Solution

iOnAsset (Asset Tracking and Management) - i.e., the acquisition, use, maintenance, modification and disposal of critical assets and properties - is vital to most businesses' performance and success. The more capital-intensive the operation, the more business performance is tied to the availability, maintenance and deployment of the assets. iOnAsset prides in being able to deal with tough asset situations and solving problems with their equipment, vehicles and property. This solves the problem of most managers spending their time reacting to breakdowns and emergencies, or planning ahead on how they optimize their assets for business performance?

iOnAsset refers to an eagle eye on assets, which continuously monitors every asset in an organization, it has the ability to pinpoint, locate, and count every individual asset.

iOnAsset is a web based Asset tracking and management system, it has the ability of end to end asset management and sophisticatedly tracking of every individual asset, here asset administrator can control all the asset by sitting at one place, can manage every individual asset in an organization, and can smartly identify the movement of every individual asset. It uses tagging mechanism; every asset will be attached with RFID Tag. It also tracks the history of asset movement, asset allocation (check in-checkout), including their current location, past location and movements throughout the facility i.e. at all times.

2.1.1 Architecture:

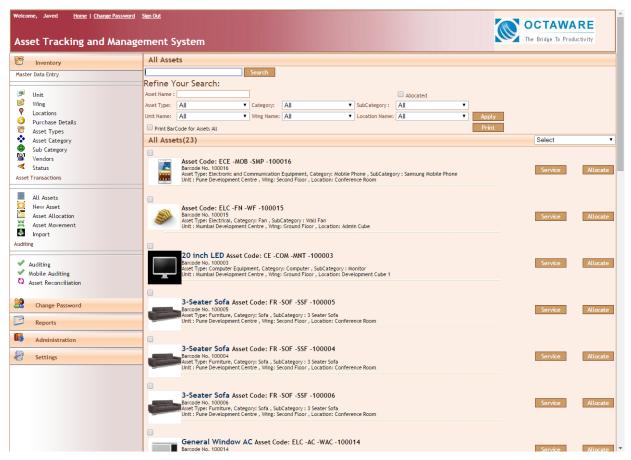


iOnAsset is a complete solution for Asset Tracking and Management System. It includes:

- Web based Asset Management
- Offline Asset Inventory
- Import existing asset inventory data
- Auditing
- Reconciliation
- Check-in Check-out Asset Allocation
- Automated Asset Movement
- Asset Security
- Asset History
- Online/Offline Asset Search
- Business Intelligence Reports

2.1.2 Web based Asset Management

iOnAsset provides a smart web based solution of asset tracking and management for medium to large organization.



2.1.3 Offline Asset Inventory



iOnAsset has a solution for offline asset inventory. It is used in the area where local network, wifi or connectivity to iOnAsset is not available. Offline inventory is done through RFID handheld reader. It reads tag/write tags and stores into it. After getting all offline asset inventories, it is synced with iOnAsset system, all offline asset inventories gets stored into iOnAsset database.

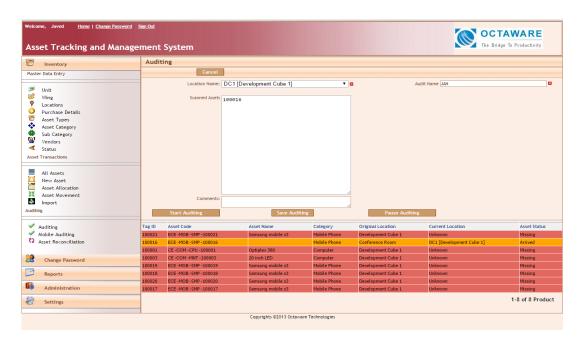
2.1.4 Import existing asset inventory data

iOnAsset provides export feature for the organization having existing asset inventories. It imports all existing inventories from an MS Excel format to iOnAsset database. Thus it helps organization to reduce time for the new inventory in iOnAsset system.

2.1.5 Asset Auditing

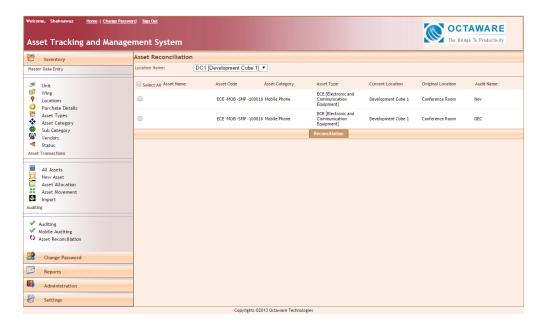
Audit of an Asset can be done by iOnAsset on a periodic basic by a responsible person and various useful reports can be generated such as new arrived asset, misplaced/missing asset etc.

Audit can be done on assets present in a location through RFID readers. RFID readers will contain all asset information which can be compared with the list available in the database for selected location. On comparing, various reports described above can be generated which is very useful for an organization.



2.1.6 Reconciliation

Reconcile an entire Location/room asset using a simple form. It is a very useful process for the admin or supervisor when he finds some assets has permanently moved from one location to other location. After audit, when he finds in the report that some assets has been moved and henceforth he wants to reconcile with the current assets. This functionality reconcile for the entire present assets.



2.1.7 Check-in / Check-out: Asset Allocation

Check-in / Check- out keeps track of an asset through iOnAsset solution. It allocates and de-allocates asset from an user. At any point of time, iOnAsset provides report for allocated assets. Thus it helps organization to know about their asset and their owner.

2.1.8 Automated Asset Movement



RFID Reader Placed over the Door

iOnAsset provides automated asset movement tracking. When a person moves asset with proper permission from one location to other, iOnAsset automatically tracks location and put into its database. RFID reader is placed over the Door at every location to be tracked. Thus it avoids manual entry of asset movement.

2.1.9 Asset Security

Each and every asset for iOnAsset is assigned with proper security policy for various roles such as administrator, supervisor, normal user, site engineer etc. iOnAsset provides asset level security. Each user has its own as well as assigned role policy. As per the given policy, users are allowed or disallow to move asset through particular location or door.

iOnAsset disallow users to move asset if it finds following

- 1- User has no permission to move this asset
- 2- User has permission to move but has no permission to move through this particular location.

Thus iOnAsset has a very tight security on asset as well as on location. iOnAsset keeps all the movement of an asset.



2.1.10 Asset History

At any point of time iOnAsset provides ability to find asset history. It gives all asset record such as original location, current location, date and time etc

2.1.11 Online Asset Search

iOnAsset provides online/offline search capability. It is a very helpful feature to find the assets in an organization. User puts asset code and it gives complete detail of an asset such as its current location, category etc.



2.1.12 Offline Asset Search

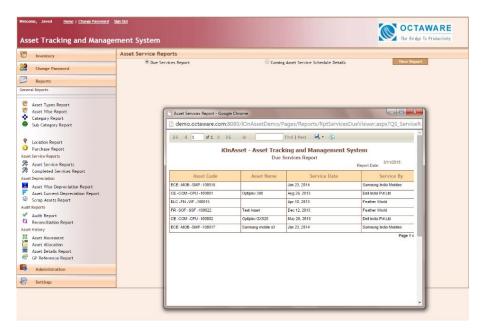
Offline asset search capability through handheld reader gives a perfect way to find an asset on any location. User selects assets and start searching asset by RFID handheld reader, it gives beep as soon as it finds it, thus reducing time in searching asset.

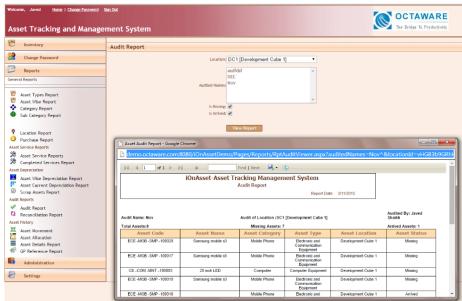


2.1.13 Business Intelligence Reports

iOnAsset provides a very high end business intelligence reports which are as follows.

- 1- Asset information
- 2- Audit Report (missing, not found asset)
- 3- Asset history (current location, previous location, date and time)
- 4- Asset Allocation (owner of asset, allocated asset, date and time etc)
- 5- All master entry report such as location, category etc





2.1.14 Multilingual Support

iOnAsset provides multilingual support such English and Arabic.



2.2 Hardware requirements:

(1) RFID Handheld Reader:



UHF RFID reader for offline inventory, auditing, asset searching. It can read both EPC Gen 1 and Gen 2 RFID tags and comes with embedded RFID middleware and Windows CE 5.0 for easy integration. Connectivity options include WLAN 802.11b/g and Bluetooth.

(2) RFID Tags:

(i) UHF Hard Tags



Works on metallic environment; 96bit EPC Memory; Wide frequency range 860 - 960 MHz; Ideal to track metallic assets.

(ii) UHF Inlays



Operates in broadband; EPC Class1 Gen 2 standard IC; 96 bit EPC Memory; Fast and reliable data transfer through the UHF reader.

(3) Door RFID Reader:



UHF Door Reader range up to 2- 3m. It is located at each entry point of the location for tracking assets.

2.2.1 Software

- iOnAsset application
- BizTalk Server with BizTalk RFID component
- IIS server (Web Server)
- .Net 3.5 Framework
- SqlServer 2005

2.2.2 Computer Server

Intel processor-based servers, Scale up and scale out x86 users, P4, Xeon, and High-Performance scalable, 4 to 16- ways, compatible with Windows,x86 operating systems. Intel Xeon processors at up to 3.2GHz with 533MHz front-side bus speed 2GB standard/8GB max PC2100 ECC memory RAID V enabled.

Integrated hard disk drives mirroring, Light Path Diagnostics and Predictive Failure Analysis.

Ultra320 SCSI controller with integrated RAID-1 and two PCI-X slots, Standard Keyboard Mouse, 1 Parallel 2 Serial Port, TFT monitor DVD combo drive, 40 GB DAT Drive

2.2.3 Desktop System

Any Standard Desktop configuration like

Pentium IV/ Xeon processor - 1 x Xeon 3.6 GHz

- RAM 1 GB
- HD 1 x 73.4
- CD ROM Drive
- Key board
- Mouse
- 2 serial 1 parallel port
- 1USB port
- TFT color monitor

3 Advantages of Complete System

- Automated tracking of assets: It encompasses automated tracking of fixed or capital assets, engineered assets such as process instrumentation, IT assets, or reusable containers.
- Track mobile assets: It helps in tracking of mobile assets, such as forklift trucks or even handheld computers.
- **Provides Security:** It prevents unauthorized movement of custom bonded equipment out of the premise.
- No direct line of sight needed: It enables automated gathering and sending
 of information without a person needing direct line of sight or contact with
 that asset.
- **Features:** The technology yields larger memory capacities, wider reading ranges and faster processing.
- Cost effective in the long run: It helps in saving money by locating and redeploying existing assets instead of buying or producing new ones.
- Increased customer satisfaction: It increases customer satisfaction by
 making sure that the products arrive at the right location at the right time
 and in the right condition.
- Improves Maintenance Schedule: Periodically monitoring the asset will help in providing better assistance to maintain the assets and keep them running in sound condition. This will increase the asset's efficiency and will have a positive impact on productivity.
- Positive financial return on RFID investment: RFID provides visibility in enterprise asst management by providing accurate and timely information that allows companies to take better business decisions thus driving ROI.

4 Appendix - A

4.1 Some Octaware Client Feedback



"Octaware Technologies is a great partner. Their staff is professional with topnotch skill sets. We can think of nobody better than Octaware Technologies to entrust our software services"

Nasser Saleh, AGM IT & Operations (CIO), Dlala Holding Qatar. Leading investment

AskMe Network Your Employees' Knowledge

"AskMe takes great care in identifying and selecting long-term partners. Octaware Technologies as our new partner has provided us with an efficient, flexible, and cost-effective solution

Exceeding our expectations"

Anil Kumar, General Manager AskMe

<u>http://www.askme.com/</u>: AskMe provides proven, cost-effective software and services for collaboration and knowledge management



"Octaware Technologies was quick and accurate in understanding our business needs and provided creative solutions. They are very conscious of their client's time and money, but at the same time willing to spend as much time as needed with their customers. We would recommend Octaware without hesitation."

Hossein Mousavi, Co-founder, VP of Product Development

<u>http://www.mporia.com/</u>: mPoria enables merchants to market and sell their products via mobile phones.

Worksharpergonomics

"Octaware Technologies understood our need and provided creative solutions with in depth analysis. They are very conscious of the quality of the deliverables and are willing to go an extra mile to ensure the quality work gets done. We would recommend Octaware without hesitation." –

Robin Gill, Director and founder, 1092923 Alberta Ltd: Alberta Ltd. provides the e-Learning management system in the area of healthcare.

4.2 Global Presence & Capabilities

- 2 Software Development centers in the city of Mumbai & Pune, India
- Offices Globally:
 - Seattle, USA
 - Singapore
 - UAE
 - Qatar
 - Saudi Arabia
 - Nigeria
 - Zimbabwe



Our Membership -

- » National Association of software & service Companies (NASSCOM)
- » Electronics and Computer Software Export Promotion Council, India (ESC)
- » Micro, Small & Medium Enterprises Associations (MSME)
- » International Association of Microsoft Channel Partners (IAMCP)
- » Washington's Technology Association
- » Indo-Arab Chamber of Commerce & Industries (IACCI)
- » Data Security Council of India (DSCI)

4.2.1 Octaware Research and Development

Octaware offerings are backed by its investment in Research and Development in cutting edge technology. Octaware management believes and invests heavily in the research and development areas of the new technology. The Emerging Technology Group (ETG) continuously evaluates the new offering in the technology domain and builds expertise within the organization.

4.2.2 Octaware Consultants

At Octaware, technology specialists and business management experts share expertise to gain a thorough insight into the client's business, and look for innovative ways to apply technology for lasting solutions. We believe in enhancing the competitive edge of our customers by providing the best of the IT solutions meeting their needs.

4.2.3 Octaware Quality - a key business driver

The quality is embedded in Octaware software development life cycle processes. From the inception of the project to the end, at each level the quality of the deliverables are quantified and evaluated. The Quality Assurance team at Octaware works very closely with the Development team to ensure the end deliverables meets the requirement.

4.2.4 Octaware Alliances

Octaware increases the diversity of its offerings through strategic alliances and vendor membership with the global leaders in technology and e-Business, such as Microsoft. The Microsoft membership allows the Octaware to be in touch with the latest happening in the IT industry and evaluate the offering for our customer best use before the technology is released.

4.2.5 Octaware Products & Business/Technical Verticals

Besides providing end-to-end solutions to its clients, Octaware also develops and markets innovative software products and tools for the worldwide market. The Octaware has the e-Learning platform for the organization to deploy and publish the e-Learning needs. Octaware e-Learning provides an enterprise with the complete end to end e-Learning Management solution. At Octaware the groups are segregated by Industry practices and Service Practices to gain both the domain and technical knowledge. The IP and SP are as follows

<u>Industry Expertise</u>: Healthcare, Education, Government, Telecom, Oil & Gas, Banking & Financial, Real Estate & Construction and Manufacturing

<u>Service Expertise</u>: Custom Software Development, Enterprise Portal Services, ERP/CRM Implementation, Mobile & RFID Solutions, Cloud & Infrastructure Services, Geospatial Services & Consulting

Octaware provides end-to-end IT consulting and software services to its clients. Octaware offers products and services in e-Business, Application Development, Architecture & Technology Consulting, Engineering Services and Infrastructure Development, across verticals such as Airline, Banking, Financial Services, Oil & Gas, Insurance, Telecom, Manufacturing, Retail, Transportation, Healthcare, Government and Utilities.

Octaware' proven combination of established methodology, quality processes, experienced project management, skilled business analysts, deep technical integration ability and knowledge results in maximum return on investment and lower risk for our customers. In

4.3 Emerging Technology Group (ETG)

Octaware has well defined Emerging Technology Group to track the technology changes in the industry. The ETG serves the project by training the new resources in the project technology with its repositories of best practices and technology knowledge. The senior resources of Octaware are assigned to the ETG. On completion of the project, the best practices are compiled by ETG for reuse. The ETG adds value to the customer project by jump starting with reusable components/best practices/ coding guidelines.

