



Vessel Operating Container Solution with MasterKube Technology

Business Situation

This customer is a leading logistics player in Dubai. They wanted to set up a new container coast line delivering containers door to door in India. The system had to work with the local constraints of network and also had to work with minimum IT infrastructure on the agent's side. All this had to be online before they went online in 4 months.

The different modules that had to come online were vessel management, Container management, cargo operations both on load and discharge side and also to provide documentation both on load and discharge. They had plans to move from the current single vessel to a multi vessel operating from many ports throughout India.

Solution

Objectives:

The objective of the solution was to a) to provide entire solution with interface to tally accounting system so the operations can be managed from Dubai, b) it had to be browser enabled so that the agents office could operate with minimum computer infrastructure, c) Operation was distributed, but had to run at real time especially near to the sailing time of the vessel, d) System had to generate all the required documentation for coastal customs, etc, and e) It had to integrate with their current Tally accounting system.

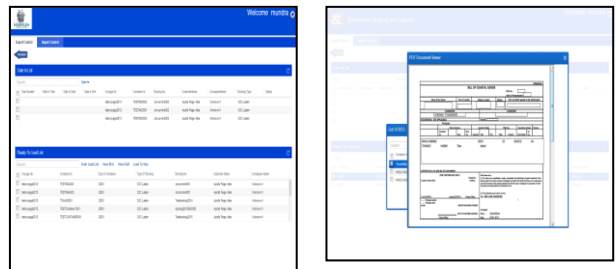
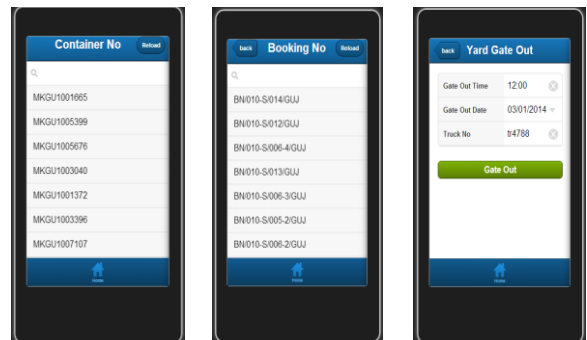
Our Solution

Solution was delivered in three man months with two people working full time for that time. It was fully html5 compatible. Surveyors were provided with mobile application, to keep container movement real time, so there was no latency of information. It could print all necessary custom documents, bill of lading, invoices, container aging, vessel performance.

The whole solution was delivered under 30KLOC. Due to this concise line of code, the defects were very limited. The tight review cycle between client and developers also contributed the small defect density.

Challenges faced

The different challenges that were faced during the implementation were A) As it was a new shipping line, the requirements were not fully available, the learnings as the business evolved





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were able to be quickly incorporated in software. B) Agents wanted a fully paperless environment, which were able to achieve with MasterKube solution, c) There was tremendous turnover in people in project, but because of the simplicity of platform other people were able to pick up and support.

Benefits to Client

The biggest benefit was the accuracy of information, After the MasterKube implementation; the errors of wrong billing were completely eliminated. Before the software solution, the aging of containers at a location was manually tabulated. With MasterKube, this was available to senior management so they could re-position containers from terminals to reduce demurrage costs due to overstay of containers in yard. The ease with which mobile solutions were able to be generated to reduce the latency of information had direct impact due to the reduction in overstay costs of containers in terminal.

Technology Decision

For a successful implementation of the solution it was mandatory to have a technology which needed to have the following characteristics. They are:

- The technology needed to generate very rich User Interface (UI), so that the application gets interactive over the web with a very stateless server side programming environment which was a requirement.
- The technology had to be flexible so it could have task specific, context aware mobile interface.
- Technology had to be evolvable so complex process could be developed and changed easily.
- All these technical features need to be packaged in a simple easy to use platform, so that people with simple skills and understanding can effortlessly run this program.

Benefits of MasterKube

MasterKube is an open system platform built ground up to serve an interactive world. MasterKube technology is based on a new computer science algebra that has a unique agent based technology. This reliance on new programming paradigm leads to a systems that has

- a) No exception Management and concurrency management.
- b) Light weight state less systems,
- c) Simple to learn but power programming language,
- d) Ability to deliver process and context aware mobile applications.

Most importantly, the system also provides language constructs to build complex business processes. The system is exposed as REST services. The UI has a rich internet application interface that talks to MasterKube through REST interfaces.

MasterKube technology was selected precisely because of these unique advantages.