SHIKUN BINUI MODERNIZES AND MOBILIZES ITS ORACLE FORMS BASED BUILDING MANAGEMENT SYSTEM USING ORACLE FUSION MIDDLEWARE, ADF MOBILE AND AURAPLAYER

"When we sought to modernize our client server Oracle Forms 6i system we thought it would require migration and extensive QA. Oracle Fusion Middleware 11g, Oracle ADF Mobile, and AuraPlayer allowed us to achieve both a web-based, scalable back-office system and a native mobile app solution using our existing system without redevelopment, saving us endless headache, time and money." - Eran Gutman - CIO, Shikun Binui

Executive Summary

The Shikun Binui Group, a multi-billion dollar conglomerate operating in the field of real estate and infrastructure, was looking to upgrade its Oracle Forms 6i building management system developed by Top-Ramdor. The aim was to try and modernize the company's existing system and enable mobile access to certain forms for improved efficiency without compromising security. After successfully upgrading to a web-enabled Oracle Forms 11g architecture, Shikun Binui employed the flexible AuraPlayer solution to allow mobile access to critical business processes on a user-friendly Oracle ADF Mobile application. Oracle Fusion Middleware 11g and ADF Mobile together with AuraPlayer provided a modernization solution that took Shikun Binui's existing investment into a web-based mobile environment, simply and efficiently, with no migration required.

"Shikun Binui is a brilliant example of how to leverage existing investments while launching legacy applications into the next generation. AuraPlayer and Oracle ADF Mobile are so flexible and easy to use that Shikun Binui was able to go from a desktop client server system to a mobile enabled system in record time. Using this combination, companies can easily expose their Oracle Forms systems to suit their business needs; the possibilities are endless." - Mia Urman CEO, AuraPlayer

The Business Issue

To meet their evolving business needs, Shikun Binui was looking for a way to modernize its building management system to a web-based architecture providing forms accessibility from a mobile UI. Mobile access to these forms would allow building inspectors to update the system in real time when they were on location. This would ensure timely reporting by allowing inspectors to perform their reporting responsibilities quickly and easily while on-site. With over 2,000 housing units and over 200,000 square meters of space under construction at once, tracking onsite progress was not only prudent, it was a financial necessity. In addition, due to the expanding nature of the business, the company was also looking to enable rapid distribution and greater availability of the back-end system by running it on the web. This would ensure both administrators and inspectors had up-to-the minute access to data when and where they needed it most.

Shikun Binui wanted a simple solution to provide multiple user interfaces for one system in a way that matched the needs and workflow of its different employees. A simple mobile UI for building inspectors to use onsite while the more detailed web-based UI would be used by managers at the company's headquarters. The challenge was to fashion a solution to leverage the company's existing building system and make it accessible on multiple platforms without extensive redevelopment or migration. The solution needed to be user-friendly and compatible with all mobile devices.

Modernization / Multi-Channel Access Project

Shikun Binui found a solution to its business needs in a 2-phase modernization project: First, the Oracle Forms system would be upgraded to the web-enabled Oracle Fusion Middleware 11g. Then, the system would be further modernized to run on all mobile devices using a combination of the Oracle ADF Mobile development framework and AuraPlayer's unique web-service generating technology. At the start of the project, Top-Ramdor upgraded the company's system from Forms 6i client server to a web-based Oracle Forms 11g architecture with Weblogic at its core. This solved an important corporate challenge, by enabling managers to access the system remotely via browser, simultaneously supporting hundreds of users. After successfully upgrading in this manner, Shikun Binui had a solid,

robust, scalable, and mobile-ready infrastructure.

While the upgrade to 11g was a substantial boost to the entire system, alone it didn't provide a complete solution for the company's broader mobile needs. The new infrastructure enabled mobile access to the system only using Remote Desktop on tablets, and provided no support for smart phones. Moreover, when running the system on a tablet it did not respond to any of the native device functions (ie. swipe and gestures) as it was only visualized on the tablet. In addition, without a keyboard the inspectors could not use any of the usual system key shortcuts (ie. Ctrl+S, F8). The users found that running the system in this manner was confusing and cumbersome. More importantly, the complex forms on the small tablet screen were crowded, heavy and slow to load. This made the form fields virtually indecipherable and impractical for extensive daily use.

Leveraging Oracle ADF Mobile together with AuraPlayer, Shikun Binui found a way to meet all of its complex mobile needs. First, in Oracle ADF Mobile's user-friendly development environment, the company easily created a lightweight, native mobile app that supported both iOS and Android from one code base. Then they connected the app to AuraPlayer's unique web-services generated from the existing Oracle Forms system. This joint solution allowed Shikun Binui to expose only specific fields from the full Forms system so the new Oracle ADF Mobile app was streamlined and simple and displayed only those fields required by the inspectors. In addition by using Oracle ADF Mobile framework, the new app fully supported native mobile features.

With this simple interactive application, inspectors can easily record and update the progress of any construction project on the go. In addition, the company only has to maintain one source of business logic in the Oracle Forms system for the 2 UI's: a Java applet-based UI for the back-end users and a lightweight Oracle ADF Mobile app based on a Forms webservice for on-the-go users.

The Solution
Now that the Oracle Forms system modernization is complete, Shikun Binui has a single building management system with different user interfaces, both web-based and mobile, that access the same core system, a true, multi-channel application. This provides a flexible on-the-go solution for managing and reporting without compromising the robust back-end for making managerial decisions and tracking progress and costs. Using Oracle Fusion Middleware 11g, Oracle ADF Mobile, and AuraPlayer, Shikun Binui was able to protect, extend, and evolve its existing Oracle Forms investment to meet its growing corporate needs. The solution required no migration or redevelopment and was up and running in record time, saving the company valuable resources and allowing it to maximize profit and efficiency.

About AuraPlayer
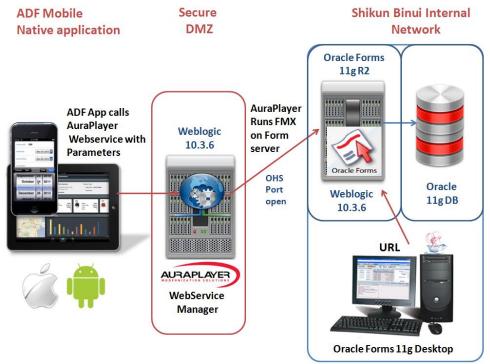http://www.AuraPlayer.com/
AuraPlayer is a cutting-edge technology company dedicated to breathing new life into Oracle technologies. The company's innovative solutions optimize and automate Oracle Forms and ERP systems. AuraPlayer solutions allow companies to enter the world of cloud/mobile by leveraging their existing systems without redevelopment.

About TOP-Ramdor
Top Ramdor Systems & Computers develops and markets Internet based software applications for the construction and engineering sectors. The company also provides implementation, assimilation, and training services. Its products are used by construction initiators, project managers, planners, and contractors in the private and institutional sectors. Top Ramdor is headquartered in Tel Aviv, Israel with sales principally in Israel, Europe, and the United States.
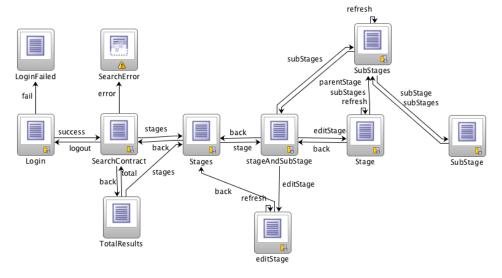
Project Architecture

Architecture leveraged by AuraPlayer in the modernization and exposure of services through ADF Mobile.

TaskFlow Diagram

This diagram illustrates the flow of the ADF Mobile application from authentication all the way through searching for contracts and the modification of various stages within a contract.

Shikun Binui's Oracle ADF Mobile app

Login Screen

Inserting the building
completion percentage
manually

Double tap or swipe gesture
Increases the building
completion percentage
by 25% automatically