Mobile Application Customizations – The Hidden TCO Killer

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Executive Overview

Customizing ERP software is inevitable in most real-world IT environments. Customizing mobile applications such as inventory management, shipping, receiving and warehouse functions is almost always required to make sure that the software enhances the business process, not hampers it. Many times simple customizations are not enough to satisfy an organizations mobile requirements, often times whole new transactions must be built from the ground up. It's vital that IT organizations ensure they include the cost of these customizations when determining the total cost of ownership (TCO) for a mobile application or framework. Organizations that select an application or module simply because it is "bundled" into the rest of the system are leaving themselves vulnerable to this hidden TCO killer.

Introduction

Given this inevitable situation, companies are looking for solutions that allow them to implement the "phase 1" process now, and yet provide them the tools to develop out "phase 2" in a rapid, cost-effective manner. Consider some of the requirements of such a system:

- A pre-built set of existing transactions to enable the standard mobile activities.
- A configuration and development environment that is rapid, easy to use and doesn't require exotic technical skill sets.
- Tools that automatically generate the interface code required to communicate with the ERP and other external systems.
- Well-documented development and user guides to assist IT resources.
- Easy to use testing tools.
- Visual drag and drop environment.
- Simple deployment mechanism for introducing new modules and changes into the system.

To further explore such requirements, consider the following scenario using a company called XYZ Widgets. XYZ Widgets is a manufacturing organization that wants to implement mobile applications to improve accuracy and speed into their manufacturing process. The company realizes that they need to make a number of modifications to the standard shop floor transactions to fit their business requirements.

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Customization #1: Alternate Interface

One of the project requirements for XYZ Widgets is they need an alternate interface for a device that is used in one of their manufacturing areas. Since they are using a touch screen device in one of their cleanrooms, they need to build an interface that will allow their workers (who are wearing gloves and cleanroom suits) to issue material to a manufacturing job. There is also the possibility the users are multi-lingual and have a preference of the language displayed.

The developer at XYZ Widgets opens the RFgen Mobile Development Studio. The developer at XYZ Widgets creates an additional display of the standard transfer transaction.

Within a matter of minutes, the developer can create a new transaction that will meet his organizations business requirements.

English   Spanish

Using the RFgen Mobile Development Studio, the developer modifies the alternate displays of the transaction to create a transaction that is optimized for the large touch screen that the cleanroom users will be using. The developer changes the font to present a larger text and possibly create an alternate language version of Spanish native language users. In a matter of minutes, the developer now has a new transaction that will meet his organizations business requirements.
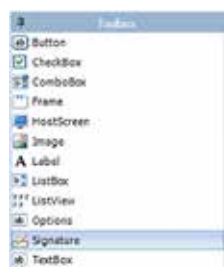
PC- or Forklift-sized display version.

Customization #2: Proof of Delivery

Another requirement for this project is to capture the signature of the worker when goods are received at the receiving dock. Due to the nature of the inventory being received, the business has requested that the actual signature of the person receiving the goods be captured.

Again, the developer at XYZ Widgets opens the RFgen Mobile Development Studio and creates a copy of the standard PO receipt transaction. He then selects the Controls tab and drags a new Signature field onto the PO receipt transaction.

He then edits the label for the text to "Please sign here:" and sets the OnEnter event for the signature block. Then using the following one line of code, the developer saves the signature to the database in a custom table:

```
Private Sub sigName_OnEnter(ByRef Rsp As String, ByRef Cancel
As Boolean, ByRef ErrMsg As String)
        On Error Resume Next

        DB.SaveBitmap("CUSTOM_SIGNATURE_TABLE", "SIGNATURE_IMAGE",
Rsp, "PURCHASE_ORDER=%txtPO>Text")

End Sub
```
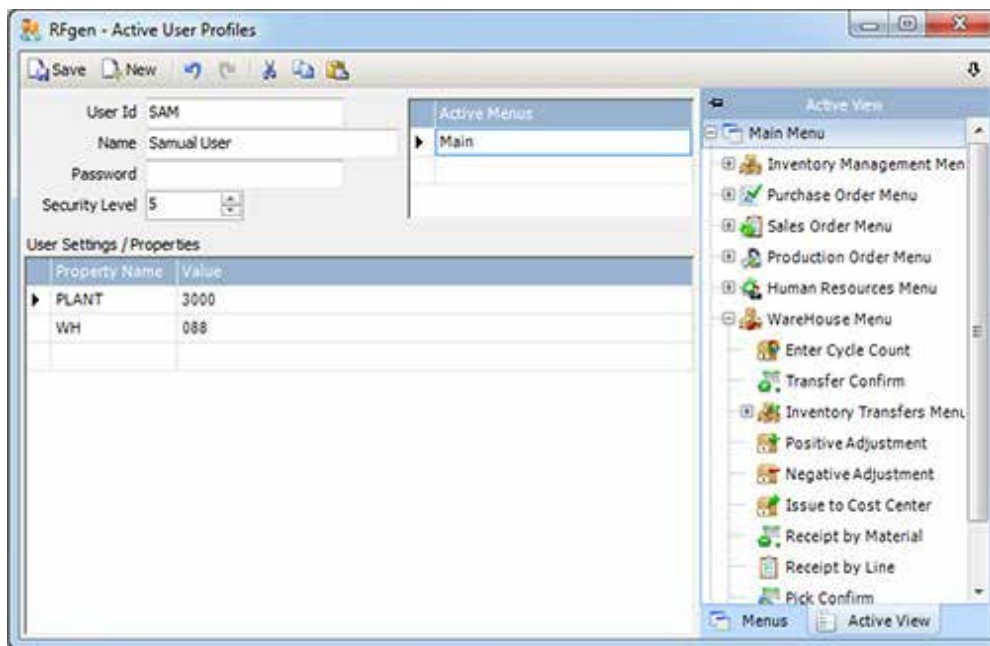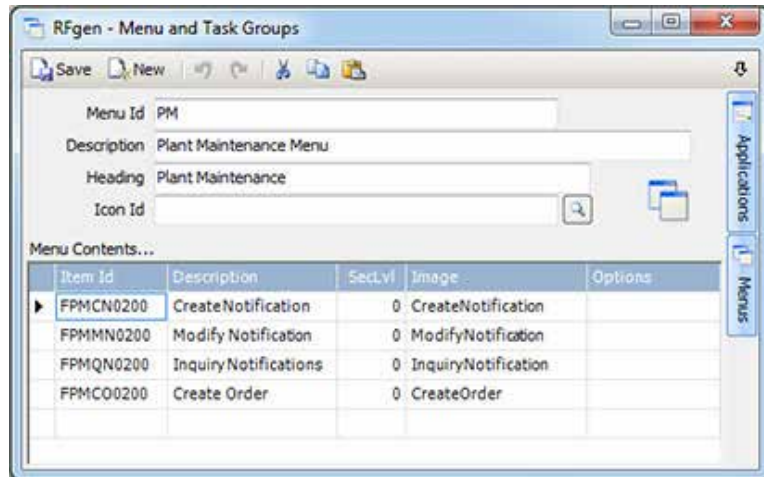
Automatically Generated Code {

The result is a new PO receiving transaction with signature capture capability.

Customization #3: New Transaction

A third requirement for XYZ Widgets is to quickly adjust the available forms that any one person has access to in order to tighten down the security. In this case Sam has a security level of 5 as shown in his profile. This means Sam can access any forms that are at or below his security level.

The first option would be to simply look at the user profile as shown above and select individual forms that Sam should not have access to and remove them using the left/right arrow buttons. Alternatively, if there are a large number for menus it may make more sense to increase the security level requirement for specific forms. In this case the Plant Maintenance menu contains four forms and the Create Order form has had the security level increased to 10.

When Sam logs on and navigates to this Plant Maintenance menu, only three forms will be available. This is an extremely fast way to tailor user rights without having to manage them in the backend ERP system.

Questions to Ask When Evaluating a Mobile Platform or Application

The above examples are just a sampling of what might be needed for a typical mobile project. The needs of your organization will, of course vary, but selecting the right mobile platform at the beginning of the project can go a long way to reducing costs down the line.

The following questions can help IT organizations uncover the hidden costs of implementing a mobile application or framework.

1. *What kind of development environment is included in the purchase of this mobile application or framework?*
2. *Does this application allow me to pull data or interface easily with legacy or external systems?*
3. *Is the development framework documented? Are there any training classes available?*
4. *What skill sets do my application developers need in order to build new applications or change existing applications?*
5. *Is there a library of existing transactions that can be easily modified?*
6. *How are upgrades handled? Will I lose my customizations or will they break in future releases?*

Conclusion

The need for customizations in the enterprise is inevitable and even more so when considering mobile applications for the enterprise. Selecting the right mobile framework or application can considerably reduce your total cost of ownership when you factor in the costs of customizations. The RFgen Mobile Development Studio provides some unique benefits and cost savings to customers looking to mobilize their enterprise. The ability to easily modify standard transactions with minimal or no cost and to rapidly develop new transactions is a must in selecting a mobile platform.

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