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QAT Flow Provides Business Logic for Critical Applications

by Randy Parsons

Today's IT applications are based on complicated business rules that require tight integration across multiple systems, dynamic processing capabilities to accommodate multiple business scenarios and coordination across multiple business units. For a Project Manager, identifying and defining the myriad of business rules can be a full time job in itself. For an IT developer, programming the complex business rules can be a nightmare too. Not to mention the never ending task of keeping the application current with the changing business environment. QAT Flow goes a long way in solving these challenges.

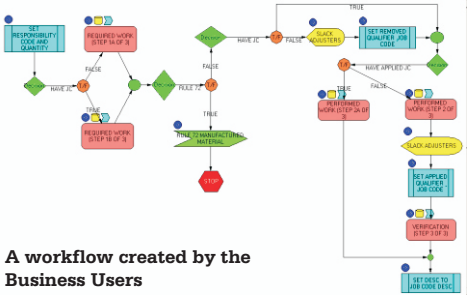
QAT Flow is a dual purpose process automation engine. For the IT community it provides Business Process Orchestration with seamless integration to AllFusion Gen Action Blocks and/or Web Services. For the Business Community, it provides a Work Flow Management System with process modeling and automated data collection. A simple graphical environment is provided for the business users (not the IT developers) to model interactive or transactional business processes. An AllFusion Gen software engine interprets the business user's process definitions interacts with workflow participants and where required, invokes the use of IT tools, applications and integration services. A queue administration function permits workflow participants to actively manage their work load (inboxes). A robust integration platform results in tight integration of transactions across multiple systems to create a single automated business transaction.

Case Study: Repair Billing Process for the transportation industry.

A new application was required to automate the collection of billing information related to equipment repairs. If the customer repairs equipment belonging to another owner, the company providing the repairs is allowed to bill the end owner for these repairs. The billing process is governed by an association of owners who publish a set of rules defining the requirements for billing. All billing charges are sent to a 3rd party vendor for processing. The actual tracking of repair work was already being accomplished by an existing application. The goal of this effort was to integrate the existing repair tracking application with a new billing application that would apply the billing rules and format the data for processing, provide the user with a custom entry screen for each repair task and present this information to the user in a seamless manner.

There were many challenges facing the developers. A strict standard had to be applied to every billing record. The field manuals contained over 1,000 pages of rule based data covering 55 different types of rules and 1,200 job codes. To interpret the business rules required a deep understanding of the underlying business process. The time required to translate the business rules to coding specs was not feasible and to further complicate matters, updates to the rules are published every quarter.

QAT Flow was selected to implement a solution. The business users were trained to design work flow processes within QAT Flow. With their extensive knowledge of the business, they were able to build 180 workflows in a matter of months to accommodate the 1,200 job codes defined in the field manuals. The IT department published interfaces that the business users could call from within QAT Flow to exchange data between the workflow and the existing application. The IT department also provided the integration that allowed a user to flow seamlessly from the Repair Tracking System to a workflow in QAT Flow. Based on the type of repair being done, the business rules designed by the users are applied to provide the field user with a custom data entry window. When the data is collected, additional interfaces are called that update the billing records and transmits the data to the 3rd party processor.



A workflow created by the Business Users

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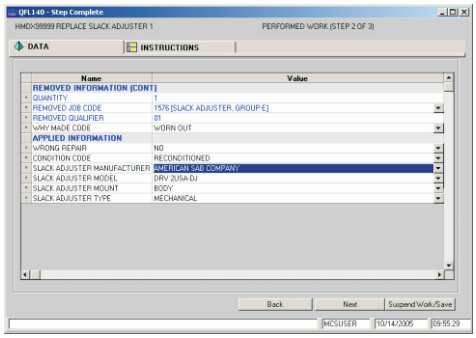
The benefits of this solution were many. IT was able to focus on what they do best, i.e., providing integration services that guarantee the integrity of the corporate data. The business users were able to directly apply their knowledge to interpret and apply the business rules and the field user received a customized entry screen that eliminates the need for them to understand the details of the billing rules. In addition, the continued maintenance of the application is in the hands of the business users. When changes to the business rules are required, they can make the updates to the workflows and implement them immediately with no additional IT support.

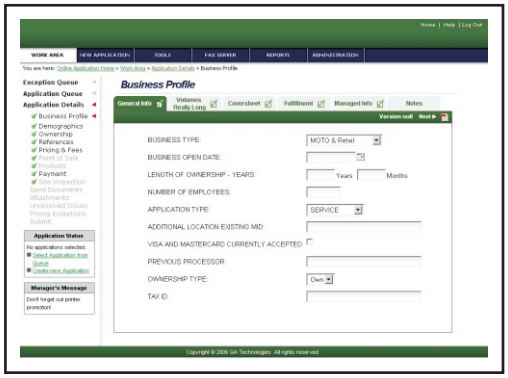


Custom data entry based on the rules of the Workflow.

Case Study: Web based application processing and approval for a financial customer.

A web based solution was required to support the creation, processing and approval of applications submitted to the financial customer. The goal was to provide web based windows to collect the data, however, QAT Flow would be responsible for all of the back end processing. With the “business intelligence” controlled by QAT Flow, future changes to the business process would require minimal changes to the web windows.

Based on the type of application being processed and the data collected, QAT Flow controls the sequencing of the client application and the data displayed to the user. The application is started from the client application and a workflow within QAT Flow is initiated. Through the use of QAT Flow Web Services, the client application reads, creates and updates data in the work flow. The work flow provides information to the client application to control what data is displayed and the sequence it is displayed along with permitted values and edit rules so that the end user is provided a customized data entry window. Help messages and error messages are also provided by QAT Flow. At different points during the data collection, the client application calls QAT Flow to execute validation routines and execute other external applications that have been integrated with the workflow. Once the application data has been collected, QAT Flow is used to control the approval process. Based on the type of application, the process is routed to different queues for approval and additional processing. Business logic is imbedded in the Work Flow through the use of Decisions and Switches to sequence and control the steps of the approval process. During the approval, the application can be returned (re-routed) to the original workflow steps to collect additional information.



The above image shows the basic web interface used to communicate with QAT Flow. The window uses web services to retrieve information from QAT Flow about the navigation bar on the left and the data tabs. The data entry fields, permitted value drop downs and default values are also provided by QAT Flow. Upon data entry completion, additional web services are called to update the QAT Flow database and process the workflow logic. Validation routines are executed and the next step in the process is determined by QAT Flow.

As with the 1st case study, the primary benefits to this solution are that the business rules are owned and maintained by the business users. Changes to the process can be implemented as required without any additional input from IT. Empower your business users to do more, and provide IT with more time to do what they do best. That’s the beauty of QAT Flow.