

Presentation of Route Tracker Application Features & Capabilities Requiring Testing by End-users in Real Time

To create an application that is to be used by a massive organisation such as DoD, logical people may conclude that system design should be as broad as possible in order to accommodate as many users as possible. However, some believe that the best way to successfully design an application is to construct user requirements for specific types of individuals w/ specific needs to maximise their intellectual utility by making use of real-world behaviour patterns that are present in day-to-day activities. When an application is designed with a goal to satisfy a broad audience of users, arbitrarily extending the application to include many constituencies, the workload & navigational overhead of the application is increased, to the detriment of coordinated, centralised dispatch operations serving the mission requirements of multiple installations.

Good application models emphasise the salient features of the structures or relationships that they represent & de-emphasise the details that are not as important to the success of end-users during critical operations. Application designers must create user models based on raw, observed behaviour of end-users & intuitive integration of patterns in routing information. Only after formalisation of this information can designers systematically create a protocol for the patterns that match the behaviour & goals of the end-users at a high level of system design.

The most powerful tools promoted by the application are simple in design, but require advanced user skills to operate & must be constructed with a solid definition of end-user goals in specific context to provide the ability to construct critical tools for translating spare parts-specific information into application design frameworks. The most powerful interactive design tools must address: 1) a precise descriptive design of the user 2) What must be accomplished and why. The requirements for advanced end-user skills becomes apparent in the way the application is constructed and how it is used. Without comprehensive design principles built into the application, end-users are left with the impossible task of interpreting massive amounts of raw routing information, without benefit of the big picture or any real & practical organisational principles.

Design consensus & commitment must be involved in building the application for dispatchers. With a common language comes a greater understanding. Good applications eliminate the need for complex diagrammatic charts because end-user find it much easier to understand the many nuances of user behaviour through development of the narrative structure of design in formulating the administration of application tasks.

The effectiveness of application design choices must be evaluated in end-user testing in the same way as can be shown to a real user during the formative process. Although this does not eliminate the need for the application to be deployed in real-world operations, it provides for a powerful reality check for designers trying to solve high-level design problems in the development of the application. This allows design iteration to occur rapidly & at reduced cost, resulting in a far stronger design baseline when the time comes to test the utility of the application to adapt to the behaviour of end-users in real-time.

We plan to test & deploy an application that accounts for equipment upgrade/replace quote scheduling and the routing of repair work orders through the deployment of spare part-specific inventory components. The application automatically generates lists & tables containing multiple unique equipment sourcing field reports for review each time a new work order is added to the table in an active state. When spare parts-specific information is displayed in other tables, the entered code is immediately visible.

Assembly codes are used in routing equipment repair work orders to identify what spare part-specific components of equipment are subject to upgrade/replace operations. Operational expenses resulting from sourcing decisions can be reported by equipment assembly codes. The expense code table contains the work order routing identifications of expense codes used for equipment upgrade/replace provided for condition repair action work orders.

The department code table contains the identity of the spare part-specific components employed and work order routing provisions have been listed according to installation. The location code table contains the sourcing field of installations where equipment upgrade/replace service is performed. Location codes have identified installations where spare part-specific components are deployed in the unit master table.

Locations codes have also identified installations where the spare part inventory is maintained by the provision of detailed work orders. Installations have reported equipment upgrade/replace work order quote expenses by location code & spare parts inventory transaction/value present in the sourcing decision by location.

The model code table contains the supplier identities of spare parts-specific components & installation vectors have been entered & deployed per unit time. Sourcing parameters have been used to validate the information entered on equipment upgrade/replace work order tickets.

The general/other code table contains the identities of codes used in the unit tracker module, which tracks the location of spare parts-specific components over time to identify installation sites where equipment upgrade/replace work orders are routed. Spare parts-specific components have been assigned to different installations for routing condition repair/maintenance quotes by work order identity or other code.

The part code table contains the identities of spare part-specific components required to route the work orders detailing repair conditions. The component codes have been used in the upgrade/replace work orders to identify the replaced component required in the spare parts inventory cache.

A description of spare parts-specific components is used to identify alternate codes for a component and enter the temporal variable covered by an expiration factor for providing equipment upgrade/replace quotes. The repair work orders serve as notifications detailed when a spare parts-specific component has been issued during the expiration time frame. Equipment upgrade/replace codes are contained in a table and have been used to create a work order schedule, a list of items scheduled for a given temporal variable entered into the application.

The group code table contains a list used to create a equipment upgrade/replace schedule for routing work order quotes. The temporal variable may differ depending on how many work orders are routed. Quote codes have also used in the unit master table to identify the group routing schedule that a spare parts-specific component belongs to. When a new unit in the application is recorded, the application automatically creates a quote schedule report are automatically created.

The cost/expense codes for the equipment upgrade/replace work order quote tables contain the names of cost/expense codes used to identify the costs of scheduling quotes at different installations, and the application generates a rate & mark-up percentage for spare parts-specific components used on work orders. Work order routing codes have allowed for the standardisation of quotes by each equipment upgrade/replace procedure.

An assembly code/expense code is assigned when creating the equipment upgrade/replace procedure & automatic default instructions are produced when the code is added to the work order. The code is representative of a particular type procedure and displays a reminder to update the spare parts-specific component inventory measures with the temporal constraints of the quote request.

The terms code table contains the list of terms codes and the dates used in spare parts-specific component inventory receipts to create an invoice, and the unit status code table contains the names of unit status codes used in the unit master table to identify the equipment upgrade/replace status and has allows the application to indicate if the routing of quote schedule for the unit is active. Units remain in the unit master table after they have been deployed, allowing the operational work order history and costs to remain available for reports.

Sourcing Ticket entry is used to input temporal variables routing and is used to update the quote schedules & display cost/expenses per temporal variable reporting. The quote information is displayed from the unit master and calculated as entry parameters are set in the system control table, making ticket generation a quick and easy process. The posted ticket table maintains all of the posted tickets to entered in the ticket entry table & used for reporting. If the ticket must be edited, requirements are established to change information in the unit master table, unit statistics table, and the routing of unit work order schedules.

The recurring cost/expenses table contains information about costs/expenses that are incurred during equipment upgrade/replace jobs. A tickler system contains routing quotes derived from inspection of work order parameters designed to turn up equipment condition instances that do not need to be corrected immediately but action is required the next quotes are issued. When a work order is opened for the unit, the application automatically displays a reminder that ticklers are open for the job.

The statistics table contains summary information of spare parts-specific units, collecting & compiling quotes and other metered expenses on a scheduled basis. This information appears on automatically generated reports to provide a complete cost/expense notification detailing equipment upgrade/replace services.

The equipment upgrade/replace service action code describes the routing quotes to be performed, creating a schedule of quotes to be assessed. The first item in the quote schedule is generated before the addition of a second quote schedule through the selection of the same unit identification code but a different work order action code for the route.

The routing frequency determines how often quotes are scheduled based on temporal variables. For example, one schedule may indicate that the work order has been rescheduled based on when it was actually completed, while another schedule means that it should be rescheduled based on when it should have been completed.

The primary information entered in the equipment upgrade replace service report is the unit identification code which, after selection, the installation location, routing expiration & meter information will be displayed in the unit master table, becoming the default information for the work order.

The installation code is important because reports can be generated automatically in the work order, summarising the costs/expenses incurred over temporal variables by installation. Spare parts-specific component deployment has at times been reported at one installation rather than at another. When a work order code is selected, the assembly code, cost/expense code & default notes are displayed. Codes are created in the spare parts-specific component code master table & work order cost/expense considerations can be added when the deployment code is selected.

Spare parts-specific components can be selected based on use & quantity. If the components have been removed from the inventory cache, the costs/expenses of the work order are displayed automatically. If the component is replaced again within the time frame of expiration, a notification message is displayed which addresses the current information from the work order. This status defaults to closed, the date & time to the current date & time. The temporal meter information can be changed and used to update the quote schedule if the identification codes are included on the work order.

The spare parts-specific component inventory master table maintains information on work orders which maintains the quantity of components present and the cost/expenses associated with the work order, as well as codes detailing routing levels. An essential aspect of the application is that the spare parts-specific component inventory is tracked at multiple installations. The inventory master table is used to review the components in inventory & has been modified to support material adjustments to information regarding the availability of components.

Spare parts-specific components in inventory are deployed through either a work order or a quick receipt. If the quantity present changes, an adjustment transaction is required or, if the component cost/expense has a required change, a return transaction is generated. If components are no longer required, an order for subsequent deployment is composed. Finally, if components must be transferred from one installation to another, a transfer transaction is required.

All of these transaction types create a record history in the inventory transaction tables and spare parts-specific components are assigned to work orders within the records of the respective installations with requirements for administrative routing requirements.

The adjustment report provides the ability to change the quantity of spare parts-specific components on hand or to change the associated cost/expense factors . Adjustments are used to create a record of changes in the inventory master table and consist of three processes. First, the location of the installation is recorded at which inventory fields are adjusted. Second, the fleet components to be adjusted are selected. Third, the adjustments are posted to update the fields in the inventory system.

Quick receipts are generated with the date & time of the receipt entered along with any routing information on the spare parts-specific component receipt. The cost/expense rate is entered in the code table & is used to calculate the required cost/expenses incurred by provision of the work order services. When the quantity deployed is determined, along with the component cost/expenses, the cost/expense is automatically subject to a weighted average with existing spare parts/specific components in the inventory fields to calculate the updated cost/expenses.

The spare parts-specific component inventory transfer process provides for issuing the components to another installation and the transfer transaction is posted to update the inventory system fields. In summary, the routing application allows an unlimited number of spare parts-specific components to be tracked in inventory at multiple installations.

FLEETWISE VB .NET

YOUR COMPANY NAME HERE

INSIDE MAINTENANCE REPORT BY DEPARTMENT CODE
FROM: BASRA - UNKNOWN
DATE RANGE: 12/18/2011 - 1/18/2012

DATE: 01/18/2012
TIME: 4:58 pm
PAGE #: 1

DEPARTMENT:

| RO NUMBER | UNIT ID | COMPLETED | LABOR | PARTS | OTHER | TOTAL COST |
|-----------|---------|-----------|-------|-------|-------|------------|
|-----------|---------|-----------|-------|-------|-------|------------|

TOTALS

TOTALS

FLEETWISE VB .NET

YOUR COMPANY NAME HERE

LOW STOCK REPORT
FROM: BASRA - UNKNOWN
ACTIVE ONLY: YES

DATE: 01/18/2012
TIME: 4:37 pm
PAGE #: 1

LOCATION CODE:

VENDOR CODE:

| PART CODE | QTY. ON HAND | QTY. ON ORDER | QTY. TO ORDER | PART COST | ESTIMATED COST |
|-----------|-----------------|------------------|------------------|--------------|-------------------|
|-----------|-----------------|------------------|------------------|--------------|-------------------|

TOTALS

FLEETWISE VB .NET

YOUR COMPANY NAME HERE

OUTSIDE MAINTENANCE REPORT BY LOCATION CODE

FROM: BASRA - UNKNOWN

DATE RANGE: 12/18/2011 - 1/18/2012

DATE: 01/18/2012

TIME: 4:33 pm

PAGE #: 1

LOCATION CODE:

VENDOR CODE:

| RO NUMBER | UNIT ID | COMPLETED | LABOR | PARTS | OTHER | TOTAL |
|-----------|---------|-----------|-------|-------|-------|-------|
|-----------|---------|-----------|-------|-------|-------|-------|

TOTALS

FLEETWISE VB .NET

YOUR COMPANY NAME HERE

UNIT RO COST REPORT
FROM: BASRA - UNKNOWN
DATE RANGE: 12/18/2011 - 1/18/2012
FILTER: ALL STATUS CODES

DATE: 01/18/2012
TIME: 4:30 pm
PAGE #: 1

| UNIT ID | VIN NUMBER | YEAR | TOTAL PARTS | TOTAL LABOR | TOTAL OTHER | TOTAL COST |
|---------|------------|------|-------------|-------------|-------------|------------|
| <hr/> | | | | | | |
| TOTALS | | | | | | |

FLEETWISE VB .NET

YOUR COMPANY NAME HERE

ASSEMBLY CODE CHART
FROM: BASRA - UNKNOWN
DATE RANGE: 12/18/2011 - 1/18/2012
PERCENTAGE: 100%

DATE: 01/18/2012
TIME: 4:26 pm
PAGE #: 1

CLASS CODE:

| ASSEMBLY CODE | LABOR | PARTS | OTHER | TOTAL COST |
|---------------|-------|-------|-------|------------|
|---------------|-------|-------|-------|------------|

TOTALS

ASSEMBLY CODE CHART
FROM: BASRA - UNKNOWN
DATE RANGE: 12/18/2011 - 1/18/2012
PERCENTAGE: 100%

DATE: 01/18/2012
TIME: 4:26 pm
PAGE #: 2

ASSEMBLY CODE CHART

TOTAL
COST

ASSEMBLY CODE

ASSEMBLY CODE CHART
FROM: BASRA - UNKNOWN
DATE RANGE: 12/18/2011 - 1/18/2012
PERCENTAGE: 100%

DATE: 01/18/2012
TIME: 4:26 pm
PAGE #: 3

TOTALS

FLEETWISE VB .NET

YOUR COMPANY NAME HERE

INSIDE MAINTENANCE REPORT BY LOCATION CODE
FROM: BASRA - UNKNOWN
DATE RANGE: 12/18/2011 - 1/18/2012

DATE: 01/18/2012
TIME: 4:59 pm
PAGE #: 1

LOCATION CODE:

| RO NUMBER | UNIT ID | COMPLETED | LABOR | PARTS | OTHER | TOTAL COST |
|-----------|---------|-----------|-------|-------|-------|------------|
|-----------|---------|-----------|-------|-------|-------|------------|

TOTALS

TOTALS

FLEETWISE VB .NET

YOUR COMPANY NAME HERE

INSIDE MAINTENANCE REPORT BY DEPARTMENT CODE
FROM: BASRA - UNKNOWN
DATE RANGE: 12/18/2011 - 1/18/2012

DATE: 01/18/2012
TIME: 4:58 pm
PAGE #: 1

DEPARTMENT:

| RO NUMBER | UNIT ID | COMPLETED | LABOR | PARTS | OTHER | TOTAL COST |
|-----------|---------|-----------|-------|-------|-------|------------|
|-----------|---------|-----------|-------|-------|-------|------------|

TOTALS

TOTALS

FLEETWISE VB .NET

YOUR COMPANY NAME HERE

LOW STOCK REPORT
FROM: BASRA - UNKNOWN
ACTIVE ONLY: YES

DATE: 01/18/2012
TIME: 4:37 pm
PAGE #: 1

LOCATION CODE:

VENDOR CODE:

| PART CODE | QTY. ON HAND | QTY. ON ORDER | QTY. TO ORDER | PART COST | ESTIMATED COST |
|-----------|-----------------|------------------|------------------|--------------|-------------------|
|-----------|-----------------|------------------|------------------|--------------|-------------------|

TOTALS

FLEETWISE VB .NET

YOUR COMPANY NAME HERE

OUTSIDE MAINTENANCE REPORT BY LOCATION CODE

FROM: BASRA - UNKNOWN

DATE RANGE: 12/18/2011 - 1/18/2012

DATE: 01/18/2012

TIME: 4:33 pm

PAGE #: 1

LOCATION CODE:

VENDOR CODE:

| RO NUMBER | UNIT ID | COMPLETED | LABOR | PARTS | OTHER | TOTAL |
|-----------|---------|-----------|-------|-------|-------|-------|
|-----------|---------|-----------|-------|-------|-------|-------|

TOTALS

FLEETWISE VB .NET

YOUR COMPANY NAME HERE

UNIT RO COST REPORT
FROM: BASRA - UNKNOWN
DATE RANGE: 12/18/2011 - 1/18/2012
FILTER: ALL STATUS CODES

DATE: 01/18/2012
TIME: 4:30 pm
PAGE #: 1

| UNIT ID | VIN NUMBER | YEAR | TOTAL PARTS | TOTAL LABOR | TOTAL OTHER | TOTAL COST |
|---------|------------|------|-------------|-------------|-------------|------------|
| <hr/> | | | | | | |
| TOTALS | | | | | | |

FLEETWISE VB .NET

YOUR COMPANY NAME HERE

COST CODE COST REPORT
FROM: UNKNOWN - UNKNOWN
DATE RANGE: 12/18/2011 - 1/18/2012

DATE: 01/18/2012
TIME: 4:48 pm
PAGE #: 1

| COST CODE | COUNT | LABOR | PARTS | OTHER | TOTAL |
|-----------|-------|-------|-------|-------|-------|
|-----------|-------|-------|-------|-------|-------|

COUNT:

FLEETWISE VB .NET

YOUR COMPANY NAME HERE

INSIDE MAINTENANCE REPORT BY LOCATION CODE
FROM: BASRA - UNKNOWN
DATE RANGE: 12/18/2011 - 1/18/2012

DATE: 01/18/2012
TIME: 4:59 pm
PAGE #: 1

LOCATION CODE:

| RO NUMBER | UNIT ID | COMPLETED | LABOR | PARTS | OTHER | TOTAL COST |
|-----------|---------|-----------|-------|-------|-------|------------|
|-----------|---------|-----------|-------|-------|-------|------------|

TOTALS

TOTALS

FLEETWISE VB .NET

YOUR COMPANY NAME HERE

INVENTORY VALUATION REPORT BY PART CODE

FROM: BASRA - UNKNOWN

FROM: UNKNOWN - UNKNOWN

AS OF DATE: 1/18/2012 4:40 PM

DATE: 01/18/2012

TIME: 4:40 pm

PAGE #: 1

LOCATION CODE:

| PART CODE | QTY. ON HAND | AVG. COST | TOTAL COST | PERCENT |
|-----------|--------------|-----------|------------|---------|
|-----------|--------------|-----------|------------|---------|

| | | | | |
|--------|--|--|--|---------|
| COUNT: | | | | 100.00% |
|--------|--|--|--|---------|

COUNT:

FLEETWISE VB .NET

YOUR COMPANY NAME HERE

LOW STOCK REPORT
FROM: BASRA - UNKNOWN
ACTIVE ONLY: YES

DATE: 01/18/2012
TIME: 4:37 pm
PAGE #: 1

LOCATION CODE:

VENDOR CODE:

| PART CODE | QTY. ON HAND | QTY. ON ORDER | QTY. TO ORDER | PART COST | ESTIMATED COST |
|-----------|-----------------|------------------|------------------|--------------|-------------------|
|-----------|-----------------|------------------|------------------|--------------|-------------------|

TOTALS

FLEETWISE VB .NET

YOUR COMPANY NAME HERE

OUTSIDE MAINTENANCE REPORT BY LOCATION CODE

FROM: BASRA - UNKNOWN

DATE RANGE: 12/18/2011 - 1/18/2012

DATE: 01/18/2012

TIME: 4:33 pm

PAGE #: 1

LOCATION CODE:

VENDOR CODE:

| RO NUMBER | UNIT ID | COMPLETED | LABOR | PARTS | OTHER | TOTAL |
|-----------|---------|-----------|-------|-------|-------|-------|
|-----------|---------|-----------|-------|-------|-------|-------|

TOTALS

FLEETWISE VB .NET

YOUR COMPANY NAME HERE

UNIT RO COST REPORT
FROM: BASRA - UNKNOWN
DATE RANGE: 12/18/2011 - 1/18/2012
FILTER: ALL STATUS CODES

DATE: 01/18/2012
TIME: 4:30 pm
PAGE #: 1

| UNIT ID | VIN NUMBER | YEAR | TOTAL PARTS | TOTAL LABOR | TOTAL OTHER | TOTAL COST |
|---------|------------|------|-------------|-------------|-------------|------------|
| <hr/> | | | | | | |
| TOTALS | | | | | | |