

# SPHERE CONSULTING GROUP, LLC



Corporate Management Services

## Customer Relationship Management (CRM) Web-based Feature Availability Application (FAA) Tool Product Development -Product Requirements Document (PRD)

Presented to:

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# Feature Availability Application

## A Web Based Product

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### Executive Summary

The Feature Availability Application (FAA) will identify relationships between existing voice switch feature capabilities, provisioning capabilities and billing codes to maximize revenue potential, supported by a Web based architecture and database design.

This document defines the technical and managerial approach to the Feature Availability Application, supported by the creation of a senior level Management Advisory Group (MAG) and a FAA Project Management Team.

Feature Availability Application demonstration and validation first build "Pilot" will be completed by June 6, 2002. The Phase I deliverables will include a data model/data mart, ColdFusion Web front end, WebFocus reports and translation tables to support only the Nortel DMS10 switch type. A performance review will be presented to the Management Advisory Group for approval.

The Phase II software development will incorporate the remaining switch types (DMS100, EWSD, DCO, DGT5, 5ESS) prior to software deployment, operation and support. During Phase II, a switch polling process will be demonstrated and validated to automate new switch type data into the FAA database.

Prior to Phase II, allocation of manpower resources will be decided in order to shorten the deployment time to full-scale completion. A Management Advisory Group (MAG) review on this issue is recommended prior to Phase II.

The software development effort has been approved for the Feature Availability Pilot and the FAA cross-functional departments are absorbing the cost associated with the Pilot. However, the cost for deployment, operations and support functions in production has not been approved. No additional infrastructure resources will be required.

Full-scale completion of Feature Availability is currently scheduled for July 2003. It is estimated that this Information Systems effort would entail approximately 1740 hours with a reoccurring 40 hours per month for ongoing support. If the project schedule is accelerated or ILEC resources are unavailable, contractor costs would have to be incurred.

# Feature Availability Application

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**Web Based Product**

**Volume I: Technical Approach**

**March 21, 2002**

**Submitted to:**

**ILEC**

**Customer Service, Marketing, Engineering, Operations, and  
Operations Support Senior Management**



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## **1.0 SUMMARY OF DELIVERABLES**

ILEC FAA Project Team will deliver to ILEC Senior Management (Management Advisory Group) the following:

### **1.1 Technical and Management/Cost Proposal**

This comprehensive document defining Feature Availability Application Product Definition and Work Breakdown, Scope, Planning, Scheduling and Control Practices.

### **1.2 Feature Availability Application**

All of the software modules composing the Feature Availability Application will be delivered to Operations Support Organizations.

### **1.2 Software Development Meeting Reports**

Weekly reports on the effort will be provided summarizing the progress and reporting technical progress versus schedule and cost commitments.

### **1.3 Performance Reviews**

Three performance Gate Reviews are scheduled to provide Management Advisory Group (MAG) with results of the development efforts and establish baselines for success development direction and progression.

### **1.4 Software Development “Pilot” Demonstration**

A comprehensive demonstration of Feature Availability Application will be presented at the end of Beta or Pilot Phase. The functionality and capabilities of the Beta or Pilot “prototype” will be explained.

### **1.5 Software Deployment “Production” Demonstration**

A comprehensive demonstration of Feature Availability Application will be presented at the end of adding ALL the voice switch types source data. The full functionality and capabilities of the Feature Availability will be explained.

### **1.6 Integration and User Interface**

The reminder of the tasks will integrate the Pilot (Switches and DMS 10 Master S/W Release 501 and 502 source data) prototype with the reminding switch types and billing code source data. The Web design will be designed and implemented in the Pilot Phase. Pilot prototype demonstration and data mapping will be completed prior to integration of the additional five switch source data.



## 1.7 Description of Results, Products and Transferable Technology

### 1.7.1 Transferable Technology

FAA can integrate into CRM and CMS technology.

### 1.7.2 Results

FAA will consolidate existing and future switch source data as new voice switches are added and map billing code for the marketability of wireline products and functionality.

### 1.7.3 Benefits

FAA will identify existing voice switch feature functionality and map against billable functionality to maximize revenue potential supported by a Web base architecture and database design.

## 2.0 SUMMARY SCHEDULE AND MILESTONES

FAA Project Schedule	2002 Months after ATP									2003 Months after ATP										
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		
<b>1.3 Develop Pilot DMS 10</b>	3/4																			
<b>-Design/Develop Data Model</b>	█																			
-Design Data Model																				
-Identify Data Sources																				
-Create Pilot Database																				
-Load Test Data																				
-Verify Data Design																				
-Gather and Load Pilot Data																				
<b>-Design/Develop ColdFusion Front End</b>	█																			
-Gather User Requirements																				
-Design Prototype Site																				
-Approval of Prototype Design																				
-Develop Front-End	3/18																			
<b>-Design/Develop WebFocus Report</b>	█																			
-Gather User Reporting Requirements																				
-Design Prototype																				
-Approval of Prototype Reports																				
-Develop Reports	5/31																			
<b>-Research/Map Translations Tables</b>	█																			
-Cleanup of Switch Data																				
-Cleanup of MARTENS Data																				
-Cleanup of Billing Codes																				
-Switch to MARTENS Mapping																				
-MARTENS to Billing Mapping																				
-Data Entry for Mapping Tables																				
-Validation of Mapping via Reports																				
-Pilot Demonstration and Approval	6/3																			
<b>1.2 Research/Map DMS100,EWS,D,DCO,DGT5,5ESS</b>						█													7/25	
-Cleanup of Switch Data																				
-Cleanup of MARTENS Data																				
-Cleanup of Billing Codes																				
-Switch to MARTENS Mapping																				
-MARTENS to Billing Mapping																				
-Data Entry for Mapping Tables																				
-Validation of Mapping via Reports																				
-Pilot Demonstration and Approval	6																			



### 3.0 STATEMENT OF WORK

#### 3.1 Scope

Feature Availability Application (FAA) is a Web-based product that shall integrate browser, server and database technologies to centralize voice switch features with corresponding provisioning, tariff and billing codes.

The Feature Availability Application (FAA) design will incorporate usage at the Corporate and Regional offices. It will enable data entry, maintenance, tracking and reporting of feature information for users with access to ILEC's Intranet.

#### 3.1.1 Product Requirements Definition (PRD)

Feature Availability Application (FAA) shall incorporate dynamic Web page publishing (ColdFusion) and shall query using WebFOCUS from a relational database (Oracle). ColdFusion is a tag-based language that is used to build dynamic Web applications. WebFOCUS is a browser based reporting tool used to build self-service Web reports that are accessed via a Web application.

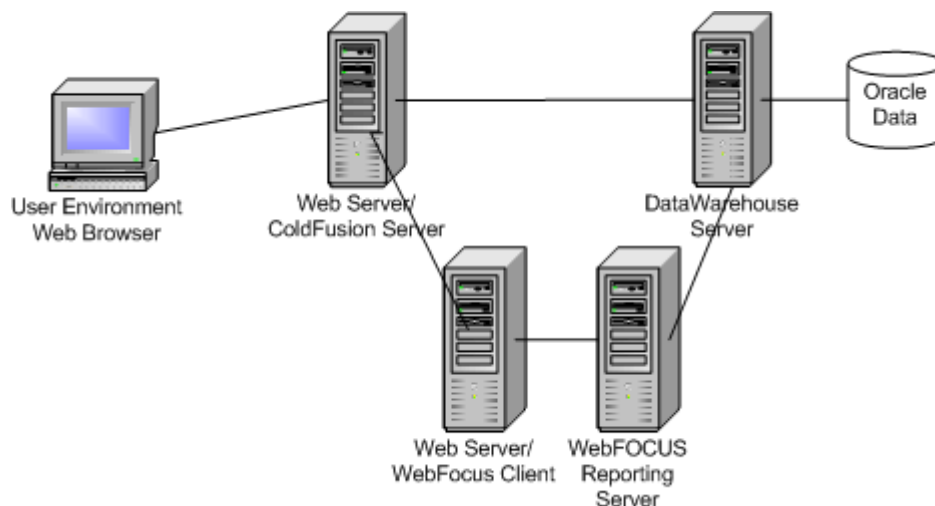


Figure 1.0: Web Based Architecture

#### 3.1.1.1 Components and Features

The components include the ColdFusion Application Server and ColdFusion Studio. ColdFusion provides an effective way to build and deliver scalable Web Applications that integrates browser, server and database technologies.



Some of the ColdFusion features include advanced database connectivity, native database drivers and file management capabilities. It can be managed and administered from any Web browser.

It offers scalable deployment and can be deployed on multi server clusters, and offers security for remote development across Intranets and Extranets.

The ColdFusion server will connect to the Data Warehouse Oracle tables and shall process the data and convert it to a HTML output format. Security of database files, simultaneous viewing, database support for multi-users, data maintenance operations, and the data shall be stored in Oracle's relational database management system.

Oracle also supports backup and recovery routines, disk space management, open connectivity to other vendor software, and supports a wide range of development tools. Oracle is referred as the database engine.

### **3.1.1.2 Oracle Database Server**

*3.1.1.2. Systems Architecture, Data Management and Network Server Groups* shall determine sample and actual data retrieval and storage requirements.

*3.1.1.2 Systems Architecture, Data Management and Network Server Groups* shall determine data retrieval, storage feasibility and validation of data from the Data Warehouse, Switches and Martens.

### **3.1.1.3 Oracle Objects**

The Oracle objects shall store and access Feature Availability data in a manner consistent with a defined model known as the relational model. Data in a database is stored in tables. Relational tables shall be defined by their columns, and are given a name.

Tables can be related to each other, and the database can be used to enforce these relationships. Oracle uses an SQL query statement to view a customized selection of one or more tables that are stored in the database. WebFocus utilizes SQL to retrieve desired data and formats it into Web-enabled reports.

#### **3.1.1.3.1 Tables**

Tables are storage mechanisms for data within the Oracle database and comprised of a fixed set of columns. The columns of a table describe the attributes of the entity being tracked by the table. Each column has a name and specific characteristics of the attribute.

#### **3.1.1.3.2 Oracle Database Object Hierarchy**

The following tables have been identified to provide the type of logical hierarchy needed to produce the various feature availability reports. These tables will be created and maintained only if existing hierarchy tables in the data warehouse cannot be utilized for this project.



### 3.1.1.3.2.1 Region

This table shall define the name for each Region code. These fields shall be a CHAR data type and used to provide a Region pull down menu.

➤ Great Lake Region \*Wireless/Realigned

Defined as Northern Michigan Market, Southern Michigan Market, and Ohio-Indiana Market.

➤ Midwestern Region

Defined as Appleton, Wisconsin Market, La Crosse, Wisconsin Market, and Northern Wisconsin Market.

➤ Southern Region

Defined as Louisiana-Arkansas Market, Northern Arkansas Market, Southern Louisiana Market, and Mississippi-Tennessee Market.

➤ Western Region

Defined as Montana Market, Oregon Market and Washington Market. Montana Market shall include Arizona, Colorado, Idaho, Montana, Nevada, New Mexico and Wyoming Markets.

### 3.1.1.3.2.2 Market Cluster

This table shall define the name for each Market Cluster code. These fields shall be a CHAR data type and used to provide a Market Cluster pull down menu.

➤ Great Lake Region \*Wireless/Realigned

Defined as Northern Michigan Market, Southern Michigan Market, and Ohio-Indiana Market.

➤ Midwestern Region

Defined as Appleton, Wisconsin Market, La Crosse and Northern Wisconsin Market.

➤ Southern Region

Defined as Louisiana-Arkansas Market, Northern Arkansas Market, Southern Louisiana Market, and Mississippi-Tennessee Market.



➤ Western Region

Defined as Montana Market, Oregon Market and Washington Market. Montana Market shall include Arizona, Colorado, Idaho, Montana, Nevada, New Mexico and Wyoming Markets.

### **3.1.1.3.2.3 State**

This table shall define the name for each State code. These fields shall be a CHAR data type and used to provide a State pull down menu.

➤ Wireline Local Exchange Service Areas

Missouri, Washington, Oregon, Montana, Arizona, Colorado, Idaho, Nevada, New Mexico, Wyoming, Mississippi, Tennessee, Arkansas, Louisiana, Wisconsin, Michigan, Ohio, Indiana, Texas, Minnesota and Iowa.

### **3.1.1.3.2.4 Company Number**

This table shall define the name for each Company code. These fields shall be a CHAR data type and used to provide a Company pull down menu.

### **3.1.1.3.2.5 County and Parish**

This table shall define the name for each County/Parish code. These fields shall be a CHAR data type and used to provide a County/Parish pull down menu.

### **3.1.1.3.2.6 City/Exchange Name**

This table shall define the name for each City/Exchange code. These fields shall be a CHAR data type and used to provide a City/Exchange pull down menu.

### **3.1.1.3.2.7 NPA/NXX**

This table shall define list of valid NPA/NXX. These fields shall be a NUMBER data type and used to provide a NPA/NXX pull down menu.

### **3.1.1.3.3 Wireline Switch Feature Tables**

#### **3.1.1.3.3.1 Central Office Table**

This table shall define each Central Office where a switch is physically located.

➤ Attributes



Defined as Clli Code, Effective Date, Switch Type, Switch Release, Location City, Location State, Contact Name and Contact Telephone Number.

#### **3.1.1.3.3.2 Switch Feature Master Table**

This table shall define a Master list of Switch Features by Switch Type and Switch Software Release that will be provided by each switch vendor.

➤ Attributes

Defined as Switch Type, Switch Release, Feature Code, Feature Type, and Usage Sensitive Flag.

#### **3.1.1.3.3.3 Switch Feature Table**

This table shall define a list of actual Switch Features by Switch Type and Switch Software Release from each switch location.

➤ Attributes

Defined as Clli Code, Effective Date, Switch Type, Switch Release, Feature Code, and Feature Availability Indicator.

#### **3.1.1.3.3.4 Switch Feature Master Description Table**

This table shall define a name and detailed description for each Switch Feature code.

➤ Attributes

Defined as Switch Type, Feature Code, Feature Name and Feature Description.

#### **3.1.1.3.3.5 Martens Feature Tables**

##### **3.1.1.3.3.5.1 Martens Feature**

This table shall define each Switch Feature Option currently defined in Martens by Switch Type, Central Office and Base Area (NPA/NXX).

➤ Attributes

Defined as Clli Code, Base Area, Switch Type, Feature Availability Indicator, and Feature Code.

##### **3.1.1.3.3.5.2 Martens Feature Description**

This table shall define a description for each Martens Feature code.



➤ Attributes

Defined as Feature Code and Feature Code Description.

### **3.1.1.3.3.6 Translation Tables**

#### **3.1.1.3.3.6.1 Switch To Martens**

This table shall define the mappings between each Switch Feature Code and each Martens Feature Code by Switch Type.

➤ Attributes

Defined as Switch Type, Switch Release, Switch Feature Code, Martens Switch Type, and Martens Feature Code..

#### **3.1.1.3.3.6.2 Martens To Billing**

This table shall define the mappings between each Martens Feature Code and each Billing Code by Switch Type.

➤ Attributes

Defined as Switch Martens Switch Type, Martens Feature Code, and Billing Code.

### **3.1.1.3.3.7 Security Tables**

#### **3.1.1.3.3.7.1 FA Security**

This table shall define each users security access by their SAP User Id.

➤ Attributes

Defined as User ID, User Name, Security Maintenance Flag, Switch Martens Flag, and Martens Billing Flag.

### **3.1.1.4 WebFocus Reports**

*3.1.1.4.1* WebFocus Reports shall query data from Oracle database tables. Systems Architecture and Data Management group shall determine modeling design, importing and exporting of data to the Data Warehouse for use in reporting.

### **3.1.1.5 Oracle Modeling**



*3.1.1.5.1 Systems Architecture and Data Management group* shall determine Oracle modeling design. Table modeling and relationships will be developed during the *Proof of Concept Phase 0*, however additional objects/tables may need to be added in following phases.

#### **3.1.1.5.1 Oracle Sample Data**

Sample data will be retrieved from the MS Excel spreadsheets containing switch dumps provided by Engineering Support and extracted flat files provided by Martens Support/Systems Administration.

#### **3.1.1.5.2 Data Sources**

Creating and populating the Data Warehouse-Oracle database tables, data will be extracted from actual switches, Martens, Legacy Service Order and Billing. Translation tables will be created and maintained to establish mappings between the various data sources for reporting purposes.

Data sources include Martens switch feature options, Martens billing feature options, switch type feature masters, switch downloads, tariff code table, customer records, and billing cycles records.

#### **3.1.1.6 Network Server Requirements**

*3.1.1.6 The Systems Architecture, Network Server Group, Web Development and Database Management Group* shall determine hardware and system requirements, and make recommendations.

##### **3.1.1.6.1 ColdFusion Configuration**

*3.1.1.6.1 Network Server Group and Web Development* shall determine the best server scenarios for ColdFusion Application Server.

##### **3.1.1.6.2 WebFocus Configuration**

*3.1.1.6.2 Systems Architecture and Network Server Group* shall determine the best server scenarios for WebFocus Reporting Server.

#### **3.1.1.7 Administration and Development**

Web Development assumes responsibility for managing the ColdFusion Application Server and maintaining the ColdFusion application. Data Management shall manage the Oracle development environment that shall consist of database design, development, loading, validation and deployment of data. Network Server Group shall manage and support the WebFocus Reporting Server.

*3.1.1.7 Systems Architecture Group* shall manage the application development that shall consist of demonstration, feasibility, testing and validation, evaluation, identification, construction, design, deployment, operations and support determination and recommendation, Web and



database development and recommendations to the FAA Project Team regarding the Feature Availability Application architecture.

### **3.1.1.7.1 Web Administration and Development**

The work of Web Development may include but not limited to server and system requirements, along with ColdFusion pages for maintaining system tables, WebFocus reports for publishing database content, reusing template, building forms, building search interfaces, building drill-down interfaces, process for inserting and updating data, and securing the Web pages.

### **3.1.1.7.2 Database Administration and Development**

The work of Data Management may include but not limited to contributing to the effective operation of all systems that run with Oracle. Oracle database development, installation and upgrades of Oracle Server, performance tuning, backup and recovery strategies, allocation of resources to support Oracle: memory, disk space, and user account management, consultation with Web Development and Network Server Groups, and developers.

## **3.2 Tasks to Develop Feature Availability Application**

### **3.2.1 Technical Rationale**

The **Feature Availability Application (FAA) Statement of Work (SOW)** Phases I-IV shall consist of evaluating, identifying, constructing and designing a fully interactive, database driven web application tool called **Feature Availability Application (FAA)**.

The FAA Tool design and development shall be used for Corporate and Regional data entry supporting a Web-based application that shall integrate browser, server and database technologies to centralize voice switch features with corresponding provisioning, tariff and billing codes.

FAA shall provide Intranet access in an HTML format and shall retrieve data from database(s) that shall:

- Establish a Master list of features for each switch type and software release.
- Identify switch features with one generic name across all types.
- Reconcile individual switch loads to the master list, switch feature with Martens switch feature, Martens billing feature and option with Tariff Code Table billing codes.
- Identify marketable features for each switch by NPA/NXX though out all modules.
- Develop variance reports to identify discrepancies between the Switch, Martens, and Tariff Code Table.



- Maintain screens and processes to update Switch-to-Martens and Martens-to-Billing mappings.
- Provide a consistent description of feature in billing/switch/Martens.

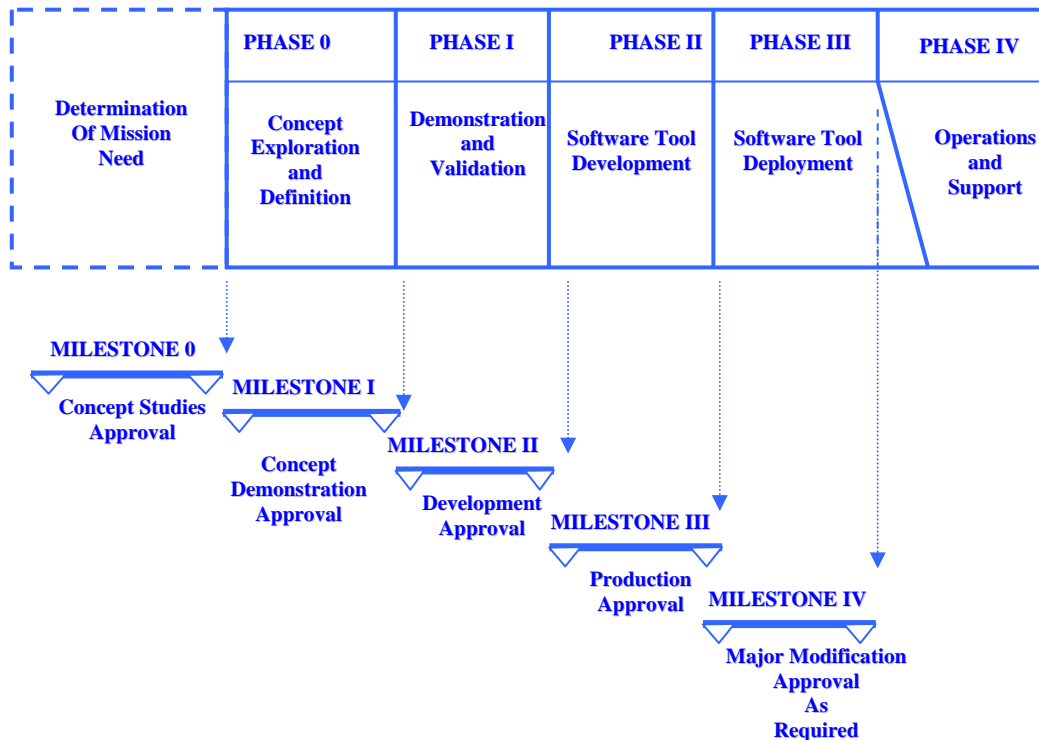


Figure 2.0 Software Development Milestones

### 3.2.2 Phase “0”-Milestone I

#### 3.2.2.1 Concept Exploration and Definition

The business requirements, conceptual design, proof of concept and risk analysis were considered during the concept exploration and definition phase and shall be defined in Product Requirements Definition and Statement of Work document.



3.2.2.1.1 *Engineering Support* shall determine and identify ALL voice switch data types and software versions across ALL switch types and work closely with the OEMs that consist of Nortel DMS10, Nortel DMS 100, Siemens EWSD, Siemens DCO, Lucent DGT5, and Lucent 5ESS.

3.2.2.1.2 *Engineering Support, Systems Administration and Marketing* shall identify ALL switch features by a common generic name across ALL Switch types.

3.2.2.1.3 *Engineering Support* shall provide a Master List of switch types and associated features from each vendor and reconcile individual exchange switch downloads to the Master.

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3.2.2.1.4 *Engineering Support and Systems Administration* shall identify and map switch feature codes with MARTENS feature codes by ALL Switch types.

3.2.2.1.5 *Engineering Support* shall identify ALL vendor loaded marketable, revenue generating features across ALL switch types with mapping through all relevant modules.

3.2.2.1.6 *Customer Service* shall work with Product Marketing to simplify the marketing promotion process to avoid promoting feature that is not available, unify the process for tracking switch feature changes, tariffing throughout ALL states, legal compliance and requirements to notify customers when new features are available.

3.2.2.1.7 *Customer Service* shall provide billing codes rationalization and validation and will orchestrate efforts with other cross-functional groups.

3.2.2.1.8 *Wireline Product Marketing* shall provide billing code rationalization and validation and will orchestrate efforts with other cross functional groups.

3.2.2.1.9 *Wireline Product Marketing* shall provide consistent product definition and description and will orchestrate efforts with other cross-functional groups.

3.2.2.1.10 *Systems Administration* shall identify, assist in mapping and provide MARTENS billing/switch feature and option codes, and work with Tariff Table Billing Codes representative/s and Switch Codes representative/s to successfully map and submit to Systems Architecture for pilot and software deployment.

3.2.2.1.11 *Systems Architecture, Web Development and Data Management* shall determine the Web browser, Web server, ColdFusion Application Server, ColdFusion Studio, WebFocus Reporting Server, WebFocus Developer Studio, Oracle database and connectivity software.

3.2.2.1.11 *Systems Architecture, Web Development and Data Management* shall determine the integration of FAA database and application design to support Corporate and Regional usage needs.



3.2.2.1.12 *Systems Architecture, Web Development and Data Management* shall determine ColdFusion Web application development work and WebFocus report development that may include but not limited to:

- Testing the development environment and processes; creating a Web page using ColdFusion Studio; creating Web enabled reports using WebFocus Developer Studio;
- Create an ODBC data source (Oracle); create a home page using ColdFusion Studio; create WebFocus reports to query Oracle database tables;
- Display query data on a Web page; provide output options for Excel, Word and PDF formats;
- Create HTML form; code conditioning; detect form variables;
- Create ColdFusion insert form; implement server-side validation;
- Build update forms and update action pages for translation tables;
- Perform server and client-side validation, update a database using SQL,
- Create Self-Service parameter driven WebFocus reports to verify data; present variances between data sources;
- And securing the Web pages using user sign-on page and Security table.

3.2.2.1.13 *Systems Architecture, Web Development and Data Management* shall determine Oracle table relationship design and validation.

3.2.2.1.14 *Systems Architecture, Web Development and Data Management* shall determine ColdFusion Web page design, data modeling, sample data retrieval and WebFocus report design.

3.2.2.1.15 *Systems Architecture* shall present and make FAA development recommendations to the FAA Project Management Team consistent with Phase A & B, and Milestones I-IV of the Feature Availability Application Life Cycle approval process.

3.2.2.1.16 *Systems Architecture, Web Development and Data Management* shall determine feasibility and validation regarding the on-line reporting and determine pull down designs, and manual data entry recommendations defined by the functional requirements.

3.2.2.1.17 *Systems Architecture, Web Development, Data Management and Network Server Groups* shall determine server and software requirements and make recommendations to the FAA Project Management Team.

3.2.2.1.18 *Systems Architecture, Web Development and Data Management* shall determine feasibility and validation and method to deliver the FAA deliverables in a timely matter.

3.2.2.1.19 *Systems Architecture, Web Development and Data Management* shall determine feasibility and validation and design for the user sign-on page and business rules.



3.2.2.1.20 *Systems Architecture, Web Development, Decision Support and Data Management* shall determine feasibility and validation, design, parameter pull downs, sample data and querying on-line WebFocus reports during Phase A and Phase B.

3.2.2.1.21 *Systems Architecture, Web Development and Data Management* shall determine feasibility and validation and design of Oracle object/tables and sourcing for the Oracle database hierarchy.

3.2.2.1.22 *Systems Architecture, Web Development and Data Management* shall determine feasibility and validation and WebFocus code design for querying Oracle objects/table data exceptions that were not defined during Phase 0.

3.2.2.1.23 *Systems Architecture, Web Development and Data Management* shall determine feasibility and validation and responsibility for importing the actual data for the Final Build and deployment of the Feature Availability Application.

3.2.2.1.24 *Project Management, Corporate Marketing and Systems Architecture* shall determine Product Requirement Definition and Statement of Work by 3/2002.

3.2.2.1.25 *Engineering Support and Network Services* shall determine the feasibility, validation and development of polling voice switch data and connectivity into FAA.

### 3.2.3 Phase I – Milestone II

The work shall include but not limited to identifying system requirements, designing a logical design, and constructing and evaluating the *first build* or **Pilot**.

**Demonstration and validation** shall consist of evaluating, identifying, designing and constructing a *first build* design that will consist of the following Oracle tables:

Central Office Table, Switch Feature Master Table, Switch Feature Table, Switch Feature Master Description Table, Martens Feature Table, Martens Feature Description Table, Switch Feature/Martens Feature Table, Martens Billing Feature Options Table, Service Order Tariff Code Table, Aggregate Base Area Table-Marketing Hierarchy for the Web in HTML format.

Phase I- Demonstration and validation of “*Phase I Pilot*” source data shall consist of Nortel DMS 10 Master Features for software release 501 and 502, and the following actual switches for Company, Switch Type, Exchange and Town:

<i>Company</i>	<i>Switch Type</i>	<i>Exchange</i>	<i>Town Name</i>
<i>Chatham T121</i>	<i>DMS10</i>	<i>318-249</i>	<i>Chatham, La</i>
<i>Ringgold</i>	<i>DMS10</i>	<i>318-894</i>	<i>Ringgold, La</i>



T140			
East LA T048	DMS10	225-222	Greensburg, La

### 3.2.3.1 Phase I- First Build

The *first build* deliverables shall include but not limited to a dynamic Web page publishing (ColdFusion) demonstration that shall query a relational database (Oracle) to generate switch feature type list and variance WebFocus Reports.

#### 3.2.3.1.1 FAA Data Model

A logical and physical Data Model will be developed for FAA. This process will include research and analysis of the external data sources as well as application data requirements. The physical Data Model will be used to create the Oracle tables and indexes. Test data will be loaded into the Oracle tables to validate the design and implementation.

#### 3.2.3.1.2 ColdFusion Front End

A ColdFusion Web Application will be developed for FAA. This process includes identifying business requirements, developing style templates and navigation flows, prototyping of Web pages and implementing to the test server. The ColdFusion Web Application will include logon procedures, navigation menus and maintenance screens.

#### 3.2.3.1.3 WebFocus Reporting

WebFocus self-service reporting will be utilized to present FAA information via the Web browser to the FAA signed on user. The process of developing the WebFocus Reports includes gathering business requirements from each business area, creating reporting templates and master file descriptions, prototyping Web reports and publishing the developed reports to the test server.

#### 3.2.3.1.4 Translation Tables.

Two Translation Tables will be designed and developed for FAA to capture the mapping between Switch feature codes, Martens and billing codes. ColdFusion Web pages will be designed and developed to maintain these translation tables.

The responsible business areas will cleanse and map the Switch-to-Martens and Martens-to-Billing translation tables via the ColdFusion Web pages. Validation of mappings will be performed using the WebFocus Self-Service reports.

Software development shall consist of evaluating, identifying, designing and constructing a *first build* design for on the Web in HTML format and translation tables between Switch, Martens and billing databases.



A screen display for relational search, identifying system requirements, design a logical system design, constructing *first build* (Beta or Pilot) and evaluation of the *first build* and include:

- System requirements
- Construct *first build from a Beta or Pilot Demonstration*
- Resources required
- Cost and time estimate to cross functional sponsors
- Risks for the project
- Schedule
- Goals for *first build*
- Activities and tasks
- Logical system design
- System testing
- Evaluation and recommendations and
- Presentation for management approval-Milestone II on or near 6/02

### 3.2.4 Phase II- Milestone III

The work shall include but not limited to identifying subsystem requirements, design physical design, construct *final second build*, and evaluate physical design.

#### 3.2.4.1 Map DMS100, EWSD,DCO, DGT5, 5ESS

The final second build shall include but not limit to determine final physical design of list and variance WebFocus Reports and Web screen design.

#### 3.2.4.2 Phase II- Second Build

The *second build* deliverables shall include a final physical design of WebFocus List and Variance Reports, along with Web screen display physical designs.

The *second build* deliverable shall include the remaining DMS 100, EWSD, DGT5, DCO and 5ESS switch data, along with Martens and billing data.

- Subsystem requirements
- Activities and tasks
- Schedule
- Goals for *second build*
- Physical design
- System test plans
- Evaluate *second build* and make recommendations and
- **Presentation for Management Approval-Milestone III by 6/2002.**

### 3.2.5 Phase III- Milestone IV



The work shall include but not limited to identifying unit requirements, design final design, construct the *final build*, test and deploy *final build*.

Software deployment shall consist of evaluating, identifying, designing and constructing a *final build* design for FAA.

### 3.2.5.1 Phase III- Final Build

The *final build* deliverables shall include an approved and constructed final design and build for FAA Web based list and variance reports per scope requirements.

- Completed unit requirements,
- *Final design*
- Activities and tasks
- Schedule
- Construct and approved *final build*
- Perform unit, subsystem, system and acceptance tests.
- Determine Operations and Production supports.
- **Presentation for Management Approval-Milestone IV by 7/2003.**

### 3.2.6 Phase IV - Operations and Support

*3.2.6 Web Development, IS Sales Marketing and Data Management shall determine operations and support requirements of the FAA deliverables after release and approval of the final build and handoff to Operations and Support by 10/2002.*

- *Web Development* shall support ColdFusion applications.
- *IS Sales Marketing* shall support the WebFocus applications.
- *Data Management* shall support the DataWarehouse database.
- *Engineering Support and Systems Administration* shall maintain the translation tables in the database and cleanup of switch and Martens feature codes.
- *Marketing and Customer Service* shall maintain the business processes and procedures that govern the rollout of new features to customers and cleanup of billing codes.



# Feature Availability Application

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**Web Based Product**

**Volume II: Management/Cost Approach**

**March 21, 2002**

**Submitted to:**

**ILEC**

**Customer Service, Marketing, Engineering, Operations, and  
Operations Support Senior Management**

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## 1.0 MANAGEMENT APPROACH

### 1.1 Introduction

System Architecture Group will administer the FAA Software Development portion. Richard Rawles was assigned as the Project Leader for System Architecture. Engineering Support Project Manager will be Bruce Collins. Corporate Marketing Project Manager will be Dennis Savoie, along with Darlene Ducan acting as the Wireline Project Manager. System Administration Project Manager will be Michael Book. Customer Service Project Manager will be Debbie Demaree.

### 1.2 Project Organization

#### 1.2.1 Project Management

Systems Architecture Project Manager will: oversee all System Architecture project requirements, tasks and schedules; perform all administrative functions to support the project; and coordinate meetings which include performance and status reviews of milestones I-IV with the MAG, Web Development, Database Development, Network Services, and IS Sales and Marketing, Customer Service, Marketing, Systems Support, and System Administration.

Engineering Support Project Manager will: oversee all Engineering Support project requirements, tasks and schedules, supported by Butch Guthrie who shall perform all administrative functions to support the project, which include determining and identifying all voice switch source data and software versions across all switch types for Systems Architecture.

Corporate Marketing Project Manager will: oversee all Corporate Marketing project requirements, tasks and schedules, perform all administrative functions to support the project, which include Product Requirements Definition and Statement of Work, orchestrate efforts with cross functional groups to meet FAA software development budget and schedule milestones.

Corporate Marketing Wireline Project Manager will: oversee all wireline product requirements, perform all administrative functions to support the project, which include voice switch billing code information and validation: Ensure the capability of the network is leveraged to maximize the company's revenue opportunity; define consistent product definitions and lead in the standardization of the billing code and tariff descriptions.

Corporate Customer Service Project Manager will: oversee all wireline customer service requirements, perform all administrative functions to support the project, which include voice switch billing code information, validation and standardization.

Systems Administration Project Manager will: oversee all Systems Administration requirements, perform all administrative functions to support the project, which include

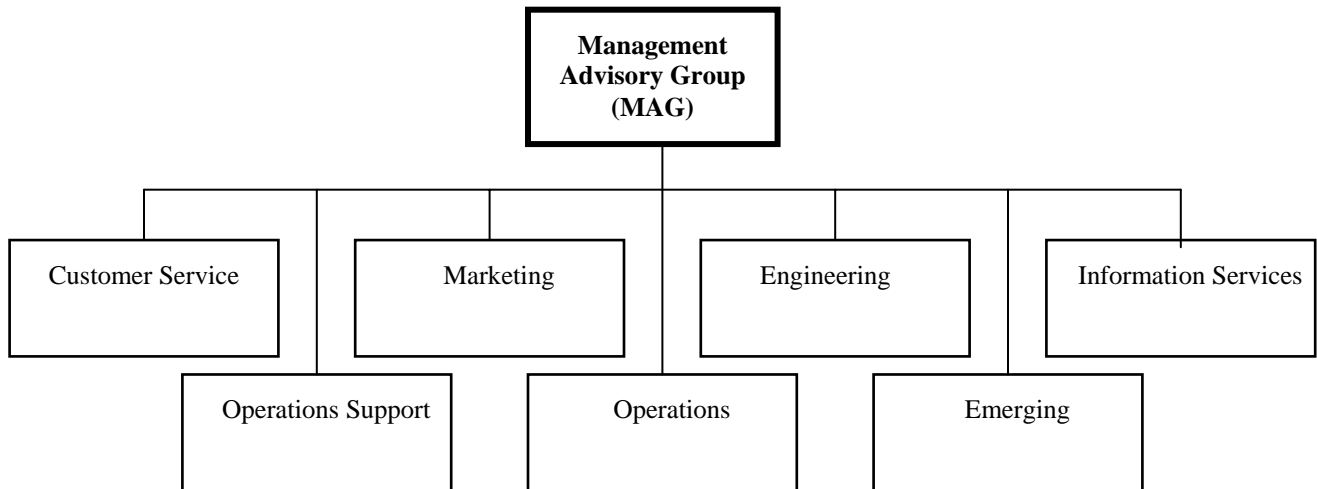


providing all MARTENS related voice switches switch/billing code source data for Systems Architecture.

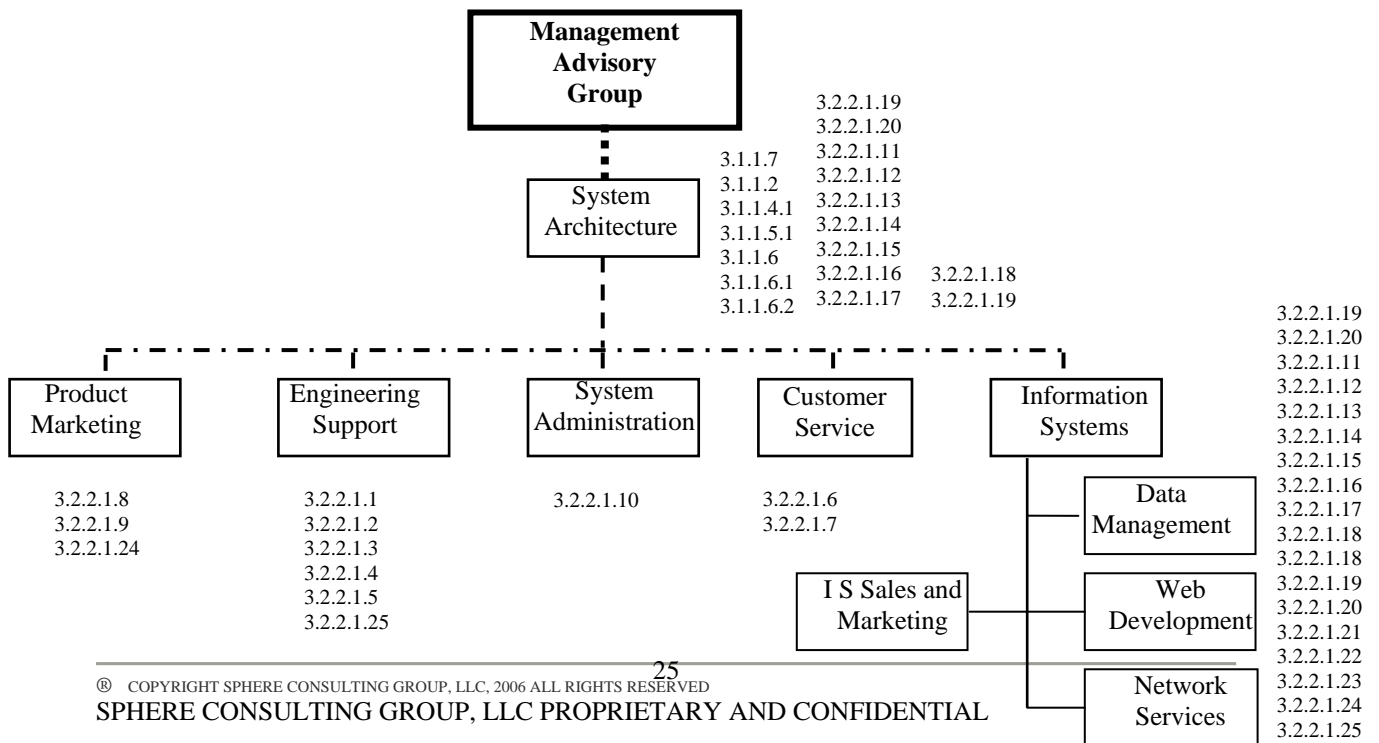
### 1.2.2 Management Advisory Group (MAG)

To assure this project receives the maximum benefit of Corporate resources, the Corporate Sponsors for FAA at the Vice President level would conduct gate reviews at the end of Milestones I-IV to approve or dis-approve Concept Definition, Software Development and Software Deployment for budget approval and SOW status.

#### 1.2.2.1 MAG Organization Chart

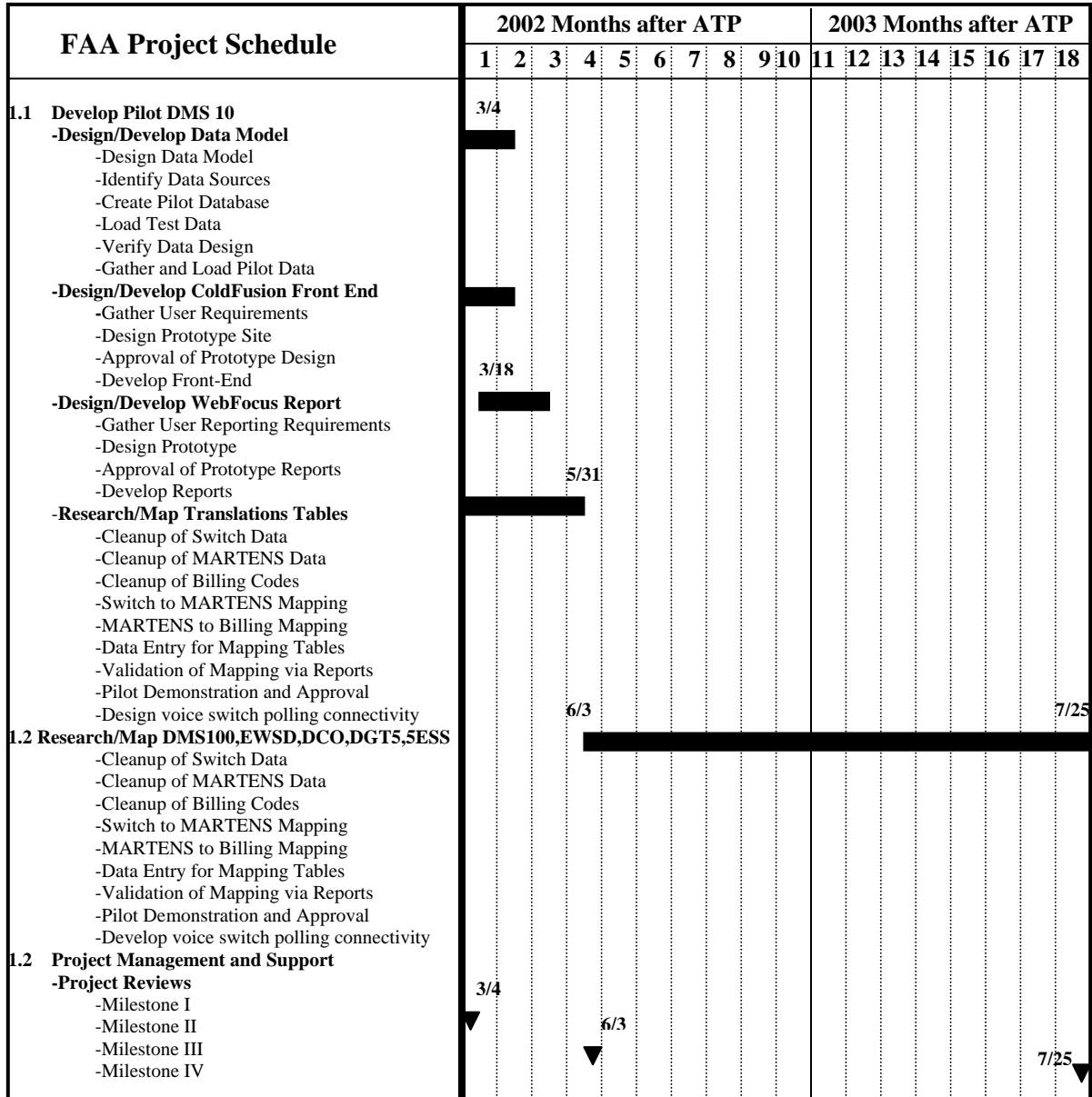


#### 1.2.2.2 Project Organization Task Tree and Matrix Organization





### 1.3 Planning, Scheduling and Control Practices



#### 1.3.1 Planning

A work breakdown structure was developed showing all FAA Project tasks to the first level (reference Section 1.2.2.2 Project Tree). The time-phased man loading to accomplish both the completions of Phase III and Phase IV will be accelerated if man loading is in parallel.

#### 1.3.2 Scheduling



Project Summary Schedule and Milestones was prepared displaying all tasks and the monthly time period estimated for their performance. As indicated in the schedule, will provide weekly progress reports to the MAG. These reports will contain a quantitative description of work performed during the period and action items and indication of any current problems, which may impede performance, impact project schedule and present proposed corrective action(s).

Also, we will provide total cumulative costs, estimated cost to complete the project and estimated percentage of physical completion of project, and a statement relating the cumulative costs to the percentage of physical completion with explanation of any significant variation.

Our schedule also proposes that three performance reviews be conducted with cognizant MAG members to present the results of the FAA software development effort and mutually establish baselines for successive development and direction and progression. The last review will include a demonstration of the deliverable system. The performance review documentation will consist of information in sufficient depth and detail to allow for comprehensive evaluation of the software development effort and will be compiled in the form of viewgraph format conducted by System Architecture Project Manager.

### 1.3.3 Control

The MAG will authorize, control and monitor the progression of FAA Project Task through performance reviews.

## 1.4 Technology Transition Plans

FAA integration into CRM and CMS management systems to add value to selecting and segmenting customers, tracking their interactions, measuring the results of those contacts and then reviewing and modeling them for ways of improving the marketing effectiveness of future interactions.

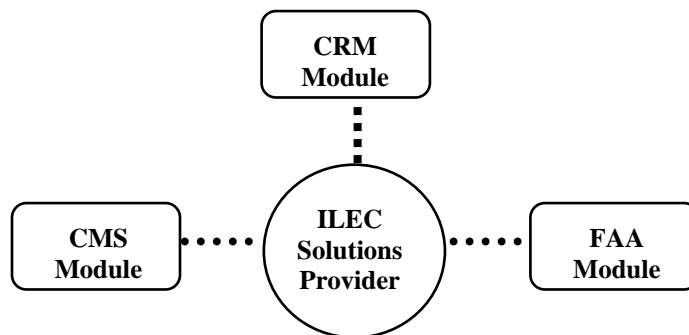


Figure 3-Technology Roadmap



## 1.5 Estimated Effort (Cost)

Man-Power Resource Allocation Worksheet							
IS Departments/Roles	Estimated	Phase 0 - Concept Definition	Phase I - Concept Demonstration	Phase II - Software Development	Phase III - Software Deployment	Phase IV - Operations and Support (Hours per Month)	GRAND TOTALS
<b>Systems Architecture</b>							
Project Management	<i>Est. Hours</i>	160	240	80	80	0	560
Systems Architect	<i>Est. Hours</i>	80	240	80	80	0	480
<b>Data Management</b>							
DBA	<i>Est. Hours</i>	8	80	40	40	8	176
DW Developer	<i>Est. Hours</i>	40	160	80	80	8	368
<b>Web Development</b>							
Web Developer	<i>Est. Hours</i>	8	8	8	8	8	40
<b>IS Sales Marketing</b>							
Report Developer	<i>Est. Hours</i>	8	8	8	8	8	40
<b>Network Server Group</b>							
Network Analyst	<i>Est. Hours</i>	10	10	10	10	10	50
<b>TOTAL HOURS</b>		<b>314</b>	<b>746</b>	<b>306</b>	<b>306</b>	<b>42</b>	<b>1714</b>
<b>Total \$\$</b>		<b>\$ 29,830.00</b>	<b>\$ 70,870.00</b>	<b>\$ 29,070.00</b>	<b>\$ 29,070.00</b>	<b>\$ 3,990.00</b>	<b>\$ 162,830.00</b>
<b>Estimated Costs</b>							
CenturyTel Resourced	\$	162,830.00					
Reoccurring per Month	\$	3,990.00					
Outsourced	\$	257,100.00					