



# **Telco Service Manager Application Guide**

**Business Edition**

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### 1.1 Introduction to Telco Service Manager

The Business and Consumer Editions of edocs' Telco Service Manager enable customers of communications service providers to manage every aspect of their service relationship online. From a single convenient interface, customers can easily activate and manage subscriptions and order new products and services. Business customers are able to complete these activities for individual employees, as well as company departments and divisions or across their entire organization by navigating their billing or organizational structure hierarchies and selecting bulk operations.

The TSM application is built on the edocs' eXtensible Modular Architecture (XMA™). XMA is a J2EE platform developed for rapid deployment of industry specific Customer Self service and e-Billing applications. XMA offers multi-channel presentation, configurable business logic, real-time and batch integration, several data repositories, and system management tools.

#### 1.1.1 edocs' Customer Self service Solution

Customer Self service (CSS) gives customers direct control over the full range of account-related tasks, from finding information to executing transactions, all independent of the device used to engage with the payer. It empowers customers to perform functions that might otherwise go through a call center. CSS combines electronic presentment and payment (EPP), transaction processing, knowledge management, personalization and application integration technologies to create an integrated, natural and preferred starting point for all customer service issues.

Contact centers provide the key to unlocking potential benefits through self service. Analyzing contact center statistics shows that the vast majority – often 60-90 percent – of customer service issues related to a customer's account. For this reason, edocs' CSS product solutions provide direct access to detailed account information, and also interface with complementary front and back-office systems to provide access to a variety of account-related services.

### 1.2 Problem Statement

Telco business customers (B2B) manage from tens to tens of thousands of plans, activations, and profiles for the many services that they subscribe to. Similarly, individual consumers (B2C) and consumers with family plans also must be able to manage and change their services as well.

Telco customers typically change their service characteristics on a line by line basis, which makes the tasks difficult and time consuming to complete. Telco companies need to support hundreds of thousands to millions of registered users making changes to their accounts, services, and features.

The undesired result of these requirements is:

1. Increased call volume to customer care centers.
2. Poor end customer satisfaction, which negatively impacts retention and new customer acquisition.

edocs develops an online self service solution optimized for Telco clients' business and consumer customers to provide an easy to use online self service tools for managing rate plans, features, activations, and profiles

## 1.3 Application Benefits

TSM provides the following benefits to the business:

1. Reduce Costs
  - Reduced call volume to customer care centers.
  - Seamless integration with the client's legacy back-end systems.
3. Increase Customer Retention
  - Increase customer satisfaction
  - Barrier to Churn:
    - B2B Hierarchies are loaded.
    - Historical usage patterns and costs are loaded.
    - Users are trained.
4. Increase Revenue
  - Attract new customers with competitive differentiator.
  - Single service management environment for B2C, B2E, and B2B customers
  - Incentive to acquire greater percentage of customers telco service purchases because customer can use TSM as their preferred tool for consolidated management of their telco services.
  - Platform on which to up-sell new value added services by offering stepped pricing to a customer based on how much of TSM's functionality is being used as well as related capability such as an integrated eCommerce catalog and shopping cart application, Rate Plan Advisor (RPA) and Customer Service Representative (CSR) Manager

The application provides the following benefits to customers.

1. Reduce Costs:

Decreases the time it takes to manage, add, remove, or modify one or more services simultaneously through a consolidated view.

2. Confirms Appropriateness of Services and Usage:

Simplifies understanding how customers are using telco services by viewing and managing services in a consolidated view. In addition to giving them comfort that they are reducing service errors, they can consolidate and manage their services to be the most appropriate for their usage.

## 1.4 edocs Telco Manager Suite

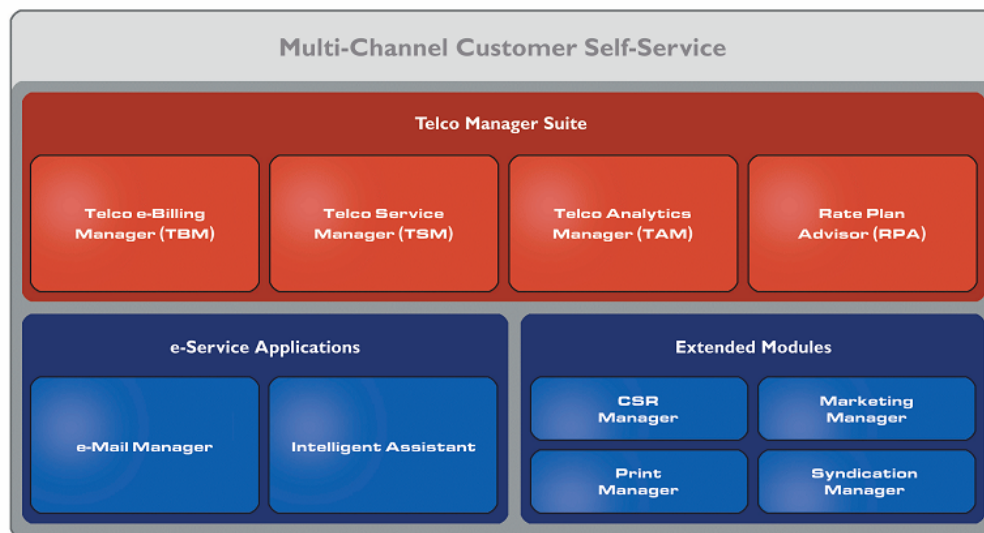
edocs *Telco Manager Suite* is a set of packaged software solutions designed specifically for the communications industry. These applications enable service providers to realize the full benefits of customer self service and e-Billing.

The suite includes a rich set of applications and functionality that give providers a complete multi-channel customer-self service capability. The suite includes packaged solutions for:

- e-Billing and Payment
- Service and Order Management
- Reporting and Analytics
- Rate Plan Advice

edocs solutions are packaged applications with sophisticated out-of-the-box capabilities. They can be tailored to meet specific customer requirements and business concerns, while establishing a solid platform for future business development.

## The edocs Telco Manager Suite



The Suite includes the products described below.

### 1.4.1 Telco e-Billing Manager (TBM) – Business, Consumer, and Split Billing Editions

edocs Telco e-Billing Manager is a complete e-billing application for communications service providers that gives business and consumer customers valuable and convenient access to their communications bills along with the ability to easily make online payments. TBM Split Billing Edition contains powerful rules engines that “split” business and personal calls or services allowing service providers to identify and recover personal usage charges by their employees.

### 1.4.2 Telco Service Manager (TSM) – Business and Consumer Editions

edocs Telco Service Manager enables business and consumer customers of communications service providers to manage every aspect of their service relationship online. From a single convenient interface, customers can easily activate and manage subscriptions, order new products and services, and report and resolve problems. Business customers are able to complete these activities for individual employees, as well as company departments and divisions, across the entire organization.

### 1.4.3 Telco Analytics Manager (TAM) – Business Edition

edocs Telco Analytics Manager is a reporting solution for business customers that empowers both individual employees and business managers to analyze and understand their communications costs and usage by investigating and identifying trends and patterns across multiple views of their own unique organization.



### 1.4.4 Rate Plan Advisor (RPA) – Business and Consumer Editions

edocs Rate Plan Advisor is a web-based application that recommends the ideal rate plan for wireless subscribers in real-time. Individual consumers as well as large businesses can analyze their actual historical voice/mobile/data usage, find the best-fit rate plans, and compare the features offered by those plans. With its intuitive wizard user interface, RPA quickly guides end-customers or customer service representatives through the entire analysis process. In addition, a service provider's customer care and marketing groups can also use RPA to identify pre-churn subscribers, simulate new rate plans, and run predictive analytics.

## 1.5 e-Service Applications

Whether customers are visiting an organization's web site, communicating by email, or seeking to chat real-time with a CSR, edocs e-Service Applications ensure the ability to deliver knowledgeable and exceptional customer service. Driven by sophisticated intelligence engines and automation technologies, these solutions replicate the knowledge of an organization's most experienced personnel, providing timely, accurate responses to customer inquiries.

### **e-Mail Manager**

e-Mail Manager is an automated e-mail response management system that determines the intent of the incoming e-mail messages and composes personalized answers that can be automatically dispatched to customers or routed to service agents for a single-click review.

### **Intelligent Assistant**

Intelligent Assistant is an advanced natural language-based self service application that empowers customers, prospects and customer service representatives (CSRs) to leverage all of an organization's knowledge assets -web pages, account data, documents, databases, existing legacy data sources, and knowledge bases -to quickly and accurately find answers to their specific billing, account, product and service questions.

## 1.6 Extended Customer Service Modules

edocs Extended Customer Service Modules augment its core online self--service and e-Billing capabilities and extend them to your customers' other preferred service channels. This enables carriers to provide more effective and efficient service regardless of what channel your customers choose.

## **Print Manager**

Print Manager is a complete solution for data consolidation, visual statement formatting and design, and print output generation that significantly reduces the cost and complexity of producing paper bills, invoices and statements. edocs combined electronic and print output solution handily solves the challenge of account consolidation avoiding the need to alter complex back-end legacy systems to present a consolidated account view online or on paper.

## **Syndication Manager**

Syndication Manager is an account content distribution system that handles all the complexities of securely distributing summary account information to any endpoint, while also enabling customers to go back to the billing organization's website to take advantage of more comprehensive self service capabilities.

## **CSR Manager**

CSR Manager enables customer service representatives (CSR) to access critical account data and service-related information and capabilities to effectively service both online and off line customers.

CSR Manager is a browser-based application that couples traditional customer-facing online self service capabilities with CSR-specific features including case management, facilitating better service at the point of customer contact.

## **Marketing Manager**

Marketing Manager is a personalization, campaign and content management solution that weaves personalized marketing and customer service messages based on specific account information throughout the customer self service and e-billing experience. The browser-based application facilitates collaboration between internal marketing and customer service departments as they create, deploy and track the performance of campaigns.

# 2

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## Business Processes and Application Logic

### 1.7 Overview

TSM is designed specifically for Telco companies and has been optimized to quickly return summary information on large volumes of data. The user can easily change the scope of their service requests from a single line to all lines within a consolidated billing environment by graphically changing their position within their hierarchy, sort on any column displayed, and present a printer friendly transaction confirmation for the customers' records. Every service request is assigned a tracking number, which allows the customer to monitor the status online.

The objective of the Telco Service Manager (TSM) application is to provide the customer self service infrastructure necessary to submit a change to a current account, manage telephone service, and manage subscriber profiles, as a stand-alone application or as a component within edocs' Telco Application Suite.

The main features of Telco Service Manager are:

- **Manage Account** – Provides a customer with the ability to change rate plan, add or remove features, change device associated with a phone number (change DSN, device serial number), change phone number, port a phone number from another carrier.
- **Manage Service** – Provides a customer with the ability to activate or deactivate a phone number, suspend or resume service, change voice mail password, and change subscriber profile information.
- **Hierarchy Scope Selection** – A B2B customer may select one line, all the lines within a group or cost center from an organizational structure hierarchy, or all lines within an account from a billing hierarchy to determine the scope of the self service action.

- **Individual and Bulk Operations** – A single line customer such as B2C consumer and B2E business single line customers are sent directly to take action on their individual service, plan, features, activation or profiles since there is only one phone number associated with the account. B2C Family plan accounts or B2B customers may select between 1 and n services service agreements on which to perform the same service agreement.

## 1.7.1 What's New in Version 5.01?

This is the GA release for TSM – Service. For a more detailed break down of what alternate paths are in what release, please refer to the RTM.

### General

1. Set Hierarchy Position

The ability to search the hierarchy structure in order to find a node to “set position”

2. Printer Friendly

### Manage Account

1. Add and delete features to the existing plan

Provides ability for the administrator to change rate plan features in bulk (alternate path).

2. Change Device (Device Serial Number, aka ESN)

Enables the business user to change the device associated with a service agreement either in bulk or individually. This transaction is performed by changing the device serial number associated with the service agreement.

3. Port Number

Provides the ability for a business user to port numbers in bulk and individually. Port number enables the user to replace an existing number with a new number from different service provider.

### Manage Service

1. Activate Service

Enables the business user to activate service agreements in bulk or individually.

2. Suspend Service

Enables the business user to suspend an individual service agreement and specify an effective date

3. Resume Service

Enables the business user to resume service for individual service agreements or in bulk

#### 4. Deactivate Number

Enables customer service representatives to deactivate service.

### Other

#### 1. Self-Service Overview

TSM overview screen displays 'dashboard' metrics and provides quick links to self-service functions.

#### 2. Trouble Report

Enables customer to submit trouble reports for any service related issues.

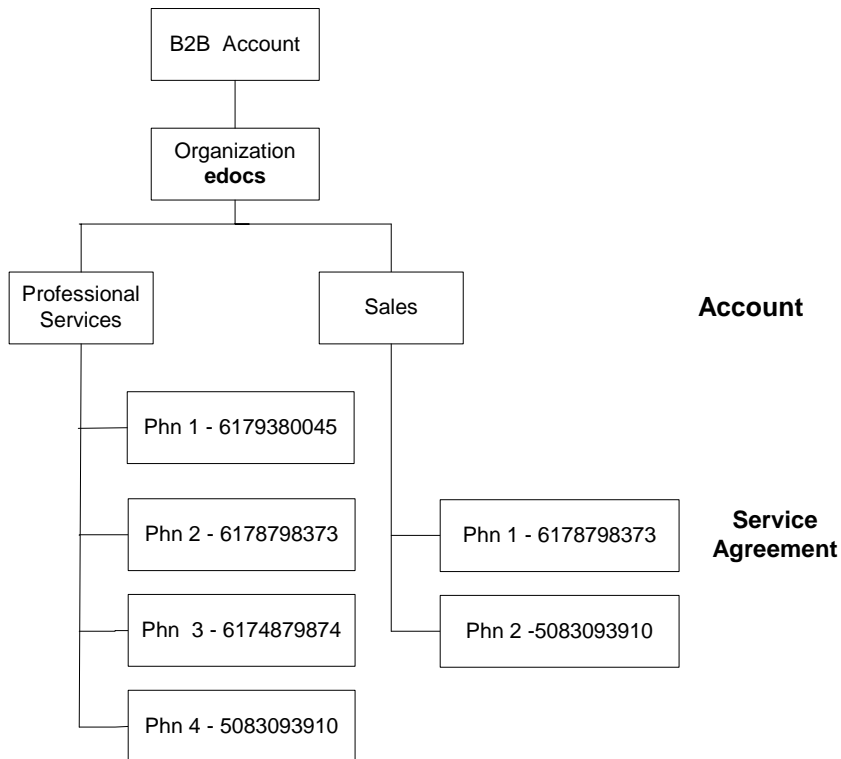
## 1.7.2 Hierarchy Overview

This section is intended to give a high level overview of hierarchy and to define how it impacts TSM.

The hierarchy navigation enables business users pick from different named hierarchy structures, navigate their tree structure, and select a node position in order to filter the service agreements displayed in the TSM service request screens.

There are two types of hierarchies.

- **Billing Hierarchy:** Billing hierarchies are created automatically at the time the bill is loaded and includes only information from within the bill. For instance, a simple billing hierarchy might include only two levels: account (an account defines the payment responsibility for service usage) and service agreement (defined by a phone number). A complex billing hierarchy could contain an unlimited number of accounts and sub-accounts.
- **Non-Billing Hierarchy:** A user can create an unlimited number of non-billing hierarchies in order to organize usage and charges to consolidate payments or manage usage and usage charges in their organization.



**Figure 1.7-1 B2B Hierarchy Model**

### Enabled Hierarchy Functionality

The existence of these hierarchies enables the following TSM functionality (explained in more detail in the “Set Hierarchy Position” use case.

- **Navigate Hierarchy:** The business user expands tree nodes to navigates through the hierarchy structure to define users’ scope. Depending on which hierarchy is selected and at what node the user’s hierarchy context position is, the system displays only service agreements associated with the user’s node and below in the tree structure.
- **Search Hierarchy:** Enables the user to search for folders, accounts, or phone numbers in an organizational hierarchy.
- **Set Position:** Users perform this action to set their context and limit the service agreements displayed in any of the TSM service transaction screens.

# 3

## Site Web Flows

The site web flows in this chapter describe the essential interaction between the user and the system. The system is based on Telco Service Manager and a customizable set of screens. The User Interface (UI) consists of a set of screens and navigation elements with interfaces (APIs) to TSM platform functions. The user presentation is driven by a set of HTML templates (Tiles). The navigation and control is driven through a standard Java framework (Struts).

Each use case specifies a set of activities performed by a user, or other type of actor, to complete a task. Use cases describe the flow of contingent actions the user takes.

There may be many possible paths through a site web flow:

- **The Main Path** – This describes the successful completion of the use case without encountering any exceptional conditions.
- **Alternate Paths** – These describe one or more related paths through the use case (for example, add, edit and delete) that are considered not part of the common flow of the use-case.
- **Exception paths** - These describe exception conditions and how they are handled; [E1], [E2], [E3]...
- **Business Rules** - These describe logical decisions that determine the behavior are listed separately, where appropriate; [B1], [B2], [B3]...

A use case may also interact with external systems, which are systems that are outside the boundary of the TSM implementation.

### 2.1 Actors

ACTOR	EXAMPLE ROLES	NOTES
Administrator	Corporate Telco Manager View, Pay, Order, Approve, Manage hierarchy & Modify company profile	A Telco business customer responsible for determining if the company is receiving the proper service from the provider. Also responsible for managing and administrating their organization accounts, telecommunications device, rate plans and services.

ACTOR	EXAMPLE ROLES	NOTES
<b>B2B - Business User</b>	View, Pay & Order	A Telco business customer responsible for managing accounts and ordering telecommunications device, rate plans and services.
<b>B2B - Corporate Liabile</b>	View Only	A Telco business customer uses the B2B application to view their accounts and/or telecommunications devices.
<b>B2B - Subscriber</b>	View & Pay	A Telco business customer uses the B2B application to view and pay their accounts.
<b>B2E - Subscriber</b>	View, Pay and Order	A Telco business customer uses the B2B application to view their accounts and telecommunications devices and provide payment when necessary.
<b>User</b>	CSR	Customer Service Representative

## 2.2 General Use Cases

There are functions that appear on many pages throughout the TSM application. The following use cases detail common functionality that is applied to one or more pages.

This section consists of the following use case sub-flows:

- **Cancel** – System cancels the process on a series of one or more pages.
- **Display Error Message** – System re-displays page with an error message.
- **Page through data in a table** – User pages through large amounts of data.
- **Sort data in a table** – User sorts data by a single column header.
- **Printer Friendly** – Print confirmation page
- **Set Hierarchy Position** – Navigate tree hierarchy structure and select a position to set the scope of service agreements that are displayed for selection at the beginning of each TSM transaction.
- **Search & Select Service Agreement** - This generalized use case describes how the list of service agreements are displayed for selection at the beginning of all TSM use cases and how the user can filter this list and select one or more service agreements.

### 2.2.1 Cancel

<b>Name:</b>	<b>Cancel</b>
<b>Brief Description:</b>	Describes the navigational experience when a Cancel action is selected.



Main Path:	<ol style="list-style-type: none"> <li>1. User selects a Cancel action.</li> <li>2. System returns User to first page of current sequence of pages. [E1]</li> <li>3. System clears any data or selections made by the User.</li> <li>4. Use Case Ends.</li> </ol>
Alternate Paths:	None
Exception Paths:	<b>[E1] User encounters a system error:</b> <ol style="list-style-type: none"> <li>1. System invokes Error Message use case.</li> </ol>
Business Rules:	None
Notes:	Invoking the cancel action returns the first sequence of the use case.

## 2.2.2 Back

Name:	<b>Back</b>
Brief Description:	Describes the navigational experience when a back action is selected. Back buttons are only present on select screens. They enable the user to return to the previous screen to make changes and then proceed.
Main Path:	<ol style="list-style-type: none"> <li>1. User selects a <b>back</b> action.</li> <li>2. System returns User to the previous page [E1]</li> <li>3. Data previously displayed on the page is displayed.</li> <li>4. User optionally performs any function available on the screen</li> <li>5. Use Case Ends.</li> </ol>
Alternate Paths:	None
Exception Paths:	<b>[E1] User encounters a system error:</b> <ol style="list-style-type: none"> <li>1. System invokes Error Message use case.</li> </ol>
Business Rules:	None
Notes:	None

### 2.2.3 Display Error Message

Name:	<b>Display Error Message</b>
Brief Description:	System redisplay page with an error message.
Main Path:	<ol style="list-style-type: none"><li>1. User performs an action that cannot be completed.</li><li>2. System determines required error actions.</li><li>3. System reads error message text from a configuration file.</li><li>4. System updates information on page as necessary.</li><li>5. System re-displays page with error message (displayed in Red) below navigational bars.</li><li>6. Use Case Ends.</li></ol>
Alternate Paths:	None
Exception Paths:	None
Business Rules:	None
Notes:	None

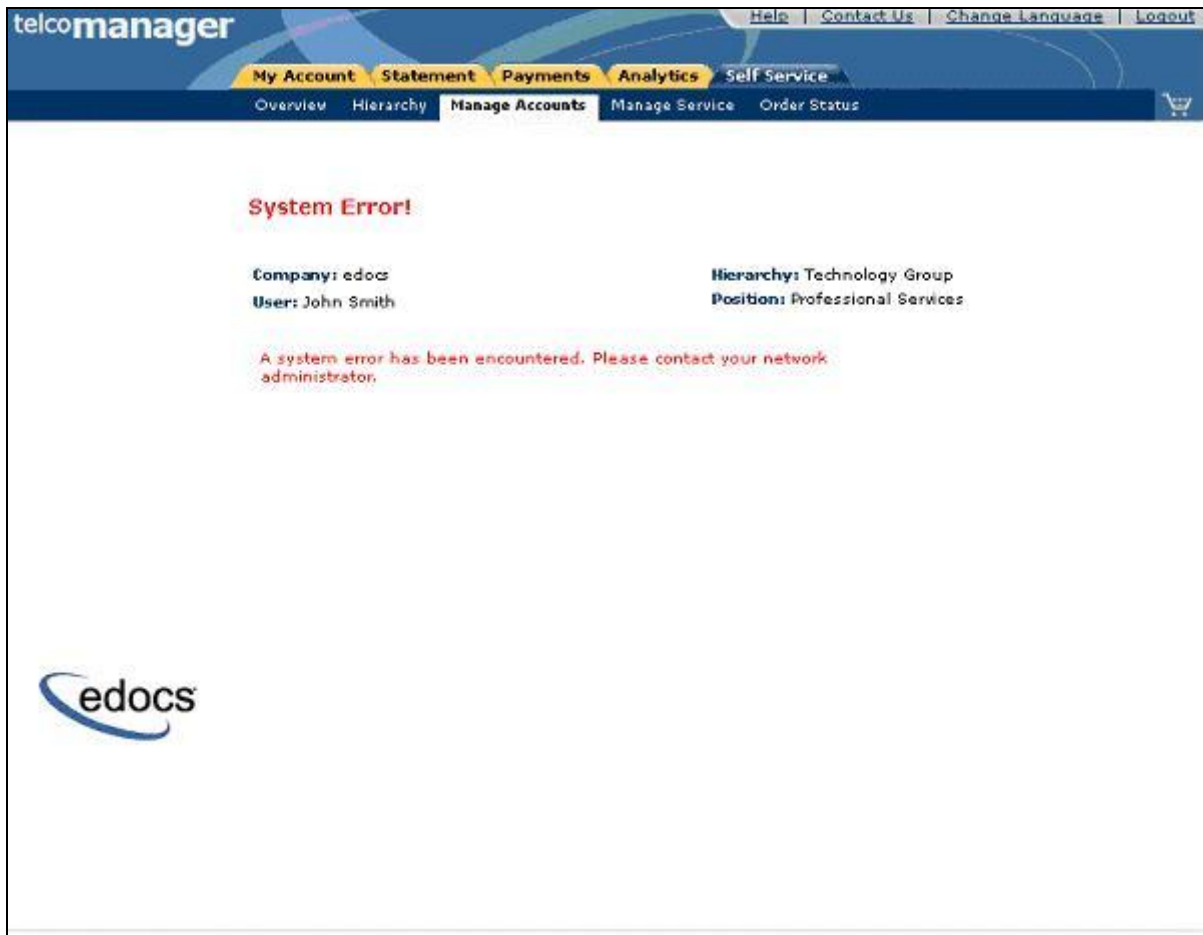


Figure 2.2-1 System Error Screen

## 2.2.4 Paging

Name:	<b>Page through data in a table</b>
Brief Description:	Large amounts of data are divided into page sets and each page set is presented on a single view.
Main Path:	<ol style="list-style-type: none"> <li>1. User selects single forward arrow. [A1]</li> <li>2. System returns the next page of data. [E1]</li> <li>3. User selects single backward arrow. [A1]</li> <li>4. System returns the previous page of data. [E1]</li> <li>5. User selects double forward arrow. [A1]</li> <li>6. System returns the last page of data. [E1]</li> <li>7. User selects double backward arrow [A1]</li> <li>8. System returns the first page of data. [E1]</li> <li>9. Use case ends.</li> </ol>
Alternate Paths:	<p><b>[A1] User enters a number in the input box.</b></p> <ol style="list-style-type: none"> <li>1. System returns the data on the inputted page number.</li> </ol>
Exception Paths:	<p><b>[E1] User encounters a system error:</b></p> <ol style="list-style-type: none"> <li>1. System invokes Error Message use case.</li> </ol>
Business Rules:	<p><b>[B1]</b> For data set that is divided into two or more pages, page must display number of the current page and total number of pages, e.g., page 3 of 5. If the data set results to one page, page numbering is suppressed.</p> <p><b>[B2]</b> Report Total line is always displayed at the bottom of the table on each page.</p> <p><b>[B3]</b> The number of lines displayed on each page is configurable and will be set initially to 10.</p>
Notes:	None

## 2.2.5 Sort Data in a Table

<b>Name:</b>	<b>Sort data in a table</b>
<b>Brief Description:</b>	Enables user to sort the data in a specific table.
<b>Main Path:</b>	<ol style="list-style-type: none"> <li>1. User selects a sorting link (a column header that supports sorting)</li> <li>2. System sorts the data in the table by the selected column in ascending order.</li> <li>3. User selects the same sorting link.</li> <li>4. System sorts the data in the table by the selected column in descending order.</li> <li>5. User selects a different sorting link.</li> <li>6. System sorts the data in the table in by the newly selected column in ascending order.</li> </ol>
<b>Alternate Paths:</b>	None
<b>Exception Paths:</b>	<p><b>[E1] User encounters a system error:</b></p> <ol style="list-style-type: none"> <li>1. System invokes Error Message use case.</li> </ol>
<b>Business Rules:</b>	None
<b>Notes:</b>	If there are enough line items displayed to cause paging to be enabled, the sort will occur over all data, not just the data currently displayed on the page.

## 2.2.6 Printer Friendly Version

<b>Name:</b>	<b>Printer Friendly Version</b>
<b>Brief Description:</b>	A printer friendly version of the page is generated.
<b>Main Path:</b>	<ol style="list-style-type: none"> <li>1. User selects Printer Friendly action. System redisplay the confirmation screen as follows:             <ol style="list-style-type: none"> <li>1. Without HTML header or navigational elements except for Back to Application action on the top right hand corner.</li> <li>2. Below the Back to Application link, the following text is added: "Should you experience any difficulty printing this page, please adjust your printer margin settings or set your layout setting to landscape."</li> </ol> </li> <li>2. User selects File&gt;Print to print the page.</li> <li>3. User browser displays a dialog box containing printing options.</li> <li>4. User selects the Print action. [A1]</li> <li>5. System prints the page without Back to Application action. [B2]</li> <li>6. User selects the Back to Application action on the top.</li> <li>7. System displays the page with HTML header and navigational elements. [E1]</li> <li>8. Use Case Ends.</li> </ol>
<b>Alternate Paths:</b>	<p><b>[A1] User selects browser Cancel function:</b></p> <ol style="list-style-type: none"> <li>1. System invokes Cancel use case.</li> </ol>
<b>Exception Paths:</b>	<p><b>[E1] User encounters a system error:</b></p> <ol style="list-style-type: none"> <li>1. System invokes Error Message use case.</li> </ol>
<b>Business Rules:</b>	<p><b>[B1]</b> If the data set is large causing paging to be enabled on the HTML view, the printer-friendly version will display the entire data set without paging.</p> <p><b>[B2]</b> When printing a printer-friendly page, system must remove the Back to Application action on the top right hand corner.</p>
<b>Notes:</b>	<p>Uses standard browser printer function.</p> <p>Printer friendly functionality is available on all confirmation screens.</p>

## 2.2.7 Set Hierarchy Position

The hierarchy use cases cover the requirements to navigate and search the billing and non- billing, hierarchies. The hierarchy functions described in this section are capabilities of the edocs hierarchy module used in conjunction with TSM. All other hierarchy functions are described in the hierarchy application guide.

Name:	<b>Set Hierarchy Position</b>
Brief Description:	<p>Enables the user to select a hierarchy, navigates its nodes and set a new position.</p> <p><i>Rationale:</i> Selecting this position sets the scope of what service agreements are displayed for selection at the beginning of each TSM transaction. This list can be further filtered at the beginning of each of these TSM transactions.</p>
Actors:	Admin, Manager
Entry Points	<ol style="list-style-type: none"> <li>1. Hierarchy Tab</li> </ol> <p>Hierarchy and hierarchy position hyperlink on the top right of every screen.</p>
Main Path:	<ol style="list-style-type: none"> <li>1. Initial Display <ol style="list-style-type: none"> <li>1. If a hierarchy and hierarchy position has been previously selected or if the user has access to only one hierarchy <ol style="list-style-type: none"> <li>i) That hierarchy's first level is expanded and displayed in the left pane.</li> <li>ii) The current position is highlighted (or root if none selected) and the properties are displayed in the left pane</li> </ol> </li> <li>2. If no hierarchy has been selected the user is presented with the option to choose a hierarchy</li> </ol> </li> <li>2. Select Hierarchy <p>At any point, the user can select a different hierarchy</p> <ol style="list-style-type: none"> <li>1. From the hierarchy dropdown, the user selects from the list of billing and non-billing hierarchies to which the user has access. [B2]</li> <li>2. Selects the go action</li> <li>3. The selected hierarchy is displayed in the left pane.</li> </ol> </li> <li>3. Expand Tree <ol style="list-style-type: none"> <li>1. User expands nodes in order to navigate down into different branches of the tree.</li> <li>2. User selects a new position in the hierarchy. [A2]</li> <li>3. System refreshes the screen and displays the selected hierarchy node and sub level of the tree.</li> <li>4. System displays the selected node details in the node properties window.</li> </ol> </li> <li>4. Set Position <ol style="list-style-type: none"> <li>1. User continues to navigate the tree, selects a folder, and selects Set Position action. [B2]</li> <li>2. Message is displayed that the new hierarchy position has been set.</li> <li>3. System persists this hierarchy name and position throughout the user's session, displaying the new selection at the top of every screen.</li> </ol> </li> </ol>

	<p>The implication of this persistence is that when the user selects another TSM transaction the same hierarchy filter will be applied to the service agreements initially displayed in step 1.</p>
<p><b>Alternate Paths:</b></p>	<p><b>[A1] User selects Cancel action:</b></p> <ol style="list-style-type: none"> <li>1. System invokes Cancel use case.</li> </ol> <p><b>[A2] Search</b></p> <p>This functionality should be similar to what is deployed in TBM hierarchy 1.0 and only include the action to select a folder, account, or phone number that has been returned in the search.</p> <ol style="list-style-type: none"> <li>1. User selects search criteria (folder, account, phone number), enters search value, and selects search action.</li> <li>2. Search results are displayed</li> <li>3. User selects a hierarchy folder, account, or phone number and selects the “set position” action.</li> <li>4. System performs remaining steps according to the main path</li> </ol> <p><b>[A3] Old numbers visually differentiated and non-selectable</b></p> <p>When a phone number has been successfully changed in TSM, both the old and new number will be immediately available in a hierarchy view. The old number will be visually differentiated (such as a phone icon with a line through it). Also, the user will not be allowed to select an individual ‘old’ phone number and then select “set position”.</p> <p>Note the user should be able to select hierarchy nodes that contain old phone numbers.</p> <p>Note that this visual differentiation only applies to the “set hierarchy position” in the TSM application. The TBM application will still be able to view both the old and new numbers with no visual differentiation.</p>
<p><b>Exception Paths:</b></p>	<p><b>[E1] User encounters a system error:</b></p> <p>System invokes Error Message use case.</p>
<p><b>Business Rules:</b></p>	<p><b>[B1]</b> System persists this hierarchy name and position throughout the user’s session until otherwise user changes it.</p> <p><b>[B2]</b> User can not view hierarchies or hierarchy nodes to which they have not been granted view access privileges</p> <p><b>[B3]</b> Any unassigned accounts or contracts are attached on the top of the hierarchy.</p> <p><b>[B4]</b> Hierarchy Access Control: Users can only view hierarchies to which they have been assigned and positions at or below the positions to which they have been assigned.</p>
<p><b>Notes:</b></p>	<p>If an Admin User is not associated with a default hierarchy when a user first enters TSM (before performing a "set hierarchy position" action), the system will assume the default hierarchy as the billing hierarchy.</p>



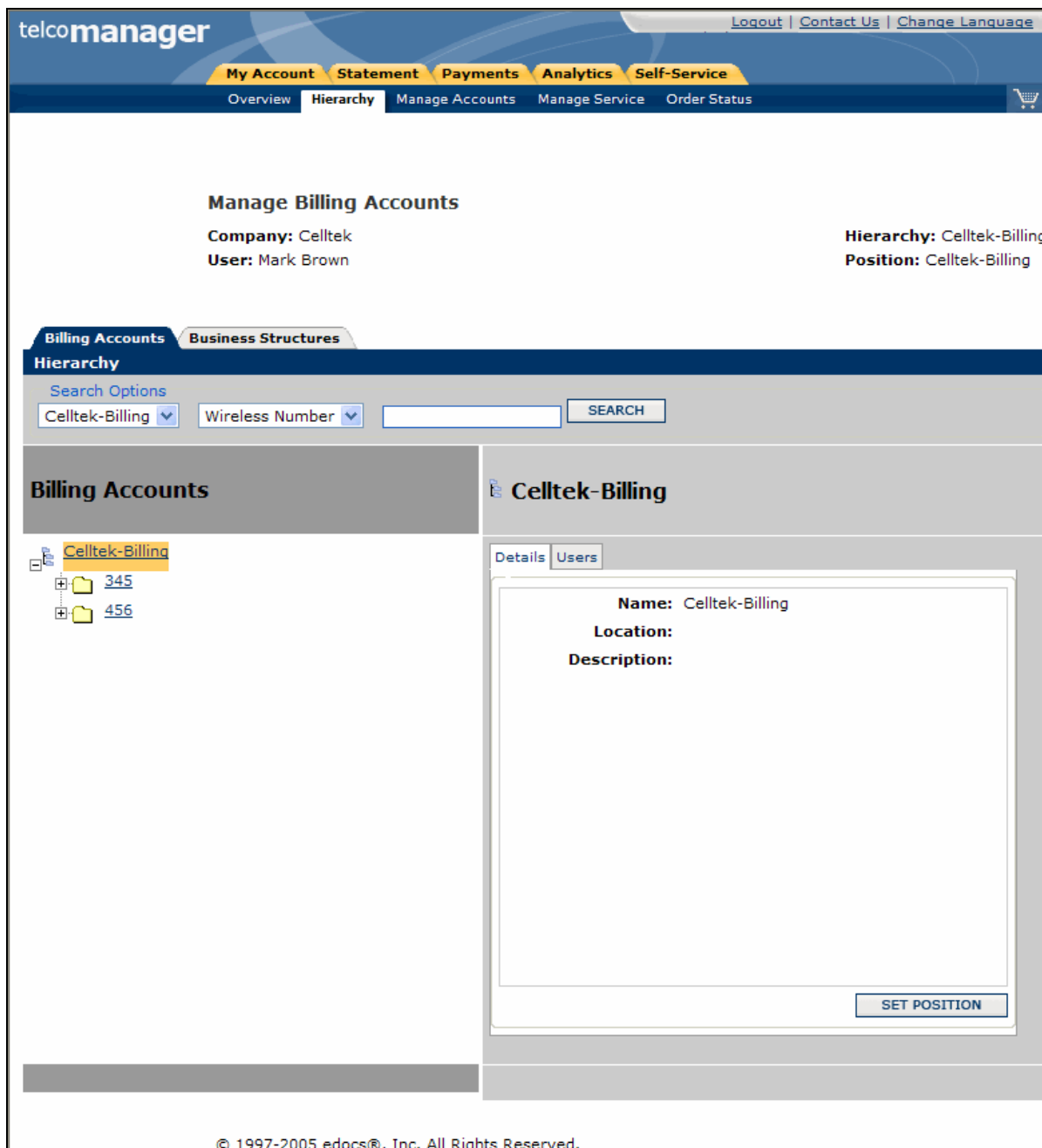


Figure 2.2-2 Set Hierarchy Position

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**My Account** | **Statement** | **Payments** | **Analytics** | **Self-Service**

Overview | **Hierarchy** | Manage Accounts | Manage Service | Order Status

**Manage Billing Accounts**

**Company:** Celltek **Hierarchy:** Celltek-Billing  
**User:** Mark Brown **Position:** Celltek-Billing

**Search Options**

Celltek-Billing Wireless Number 7817568264

**Search Results**

Your Search Results

Type	Name	Location
handset	7817568264	<a href="#">Celltek-Billing\345\7817568264</a>

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Figure 2.2-3 Hierarchy search result screen

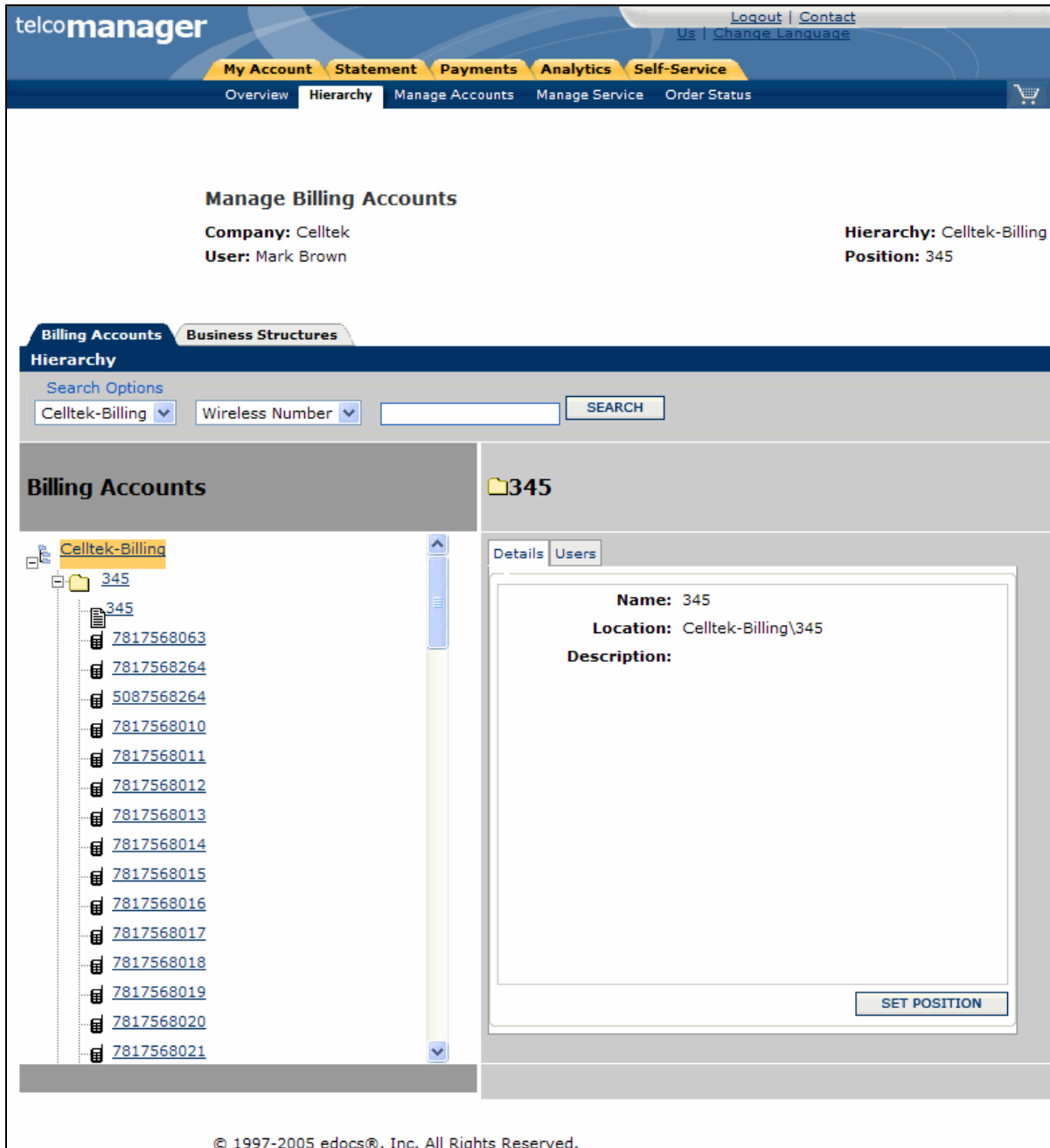


Figure 2.2-4 Set hierarchy position confirmation screen

## 2.2.8 Search & Select Service Agreement

Name:	Search & Select Service Agreement
Brief Description:	This generalized use case describes how the list of service agreements are displayed for selection at the beginning of all TSM use case and how the user can filter this list and select one or more service agreements. For all TSM use cases that have a workflow, this is step/screen 1.
Actor:	Administrator, CSR
Main Path:	<ol style="list-style-type: none"> <li>1. Filtered service agreement's             <p>On the first screen of each TSM use case, a list of service agreement's is listed in order to enable the user to select one or more service agreement on which to perform a service transaction.</p> <ol style="list-style-type: none"> <li>1. Hierarchy: If the user previously selected a hierarchy position from the hierarchy screen, then only service agreement's under that selected hierarchy position will be displayed.</li> <li>2. Each TSM use case may utilize additional filters, such as only showing service agreement's of status suspend for the "Resume Service" use case.</li> </ol> </li> <li>2. Select Search By Category             <p>User optionally selects a search category from the "Search By" drop down field and selects the Go action.</p> <ol style="list-style-type: none"> <li>1. Phone Number</li> <li>2. Subscriber Last Name</li> <li>3. Rate Plan Group</li> <li>4. Device Type</li> <li>5. Status</li> </ol> </li> <li>3. Search Value Field Refreshed             <p>System refreshes the page and displays "search value" field. This field should appear as either a drop down or text field.</p> </li> <li>4. Enter Search Value             <p>User selects or enters "search value" and selects search action.</p> <ol style="list-style-type: none"> <li>1. Phone Number [text field]</li> <li>2. Subscriber Last Name [text field]</li> <li>3. Rate Plan Group [dropdown field]</li> </ol> <p>This dropdown works a little differently than the other dropdowns because there can be more than one value dropdown box to further narrow the search criteria.</p> <p>User selects a rate plan group from the dropdown field</p> <p>User either:</p> <ol style="list-style-type: none"> <li>1. Selects search to display all service agreements of the selected plan type.</li> <li>2. Selects "Individual Rate Plan" option to display a drop down field of plan names associated with the previously selected rate plan group. User then selects a specific plan name and search to</li> </ol> </li> </ol>

	<p>display all service agreements of the selected plan name.</p> <ol style="list-style-type: none"><li>3. Device Type [dropdown]</li><li>4. Status [dropdown]</li><li>5. Display service agreement's All service agreement's matching the previous filter criteria (main path step one) and service agreement's whose search value contains the text entered (or selected) in the "search by value" field are displayed. <i>Note:</i> For text fields, the match logic is "starts with" or "exact match". Drop down fields use "exact match" logic. Columns displayed include<ol style="list-style-type: none"><li>i) Subscriber Name [primary sort]</li><li>ii) Phone Number</li><li>iii) Rate Plan</li><li>iv) Device</li><li>v) Status</li></ol></li><li>6. User selects a service agreement and selects one (or more for bulk) service agreement(s) and the continue action.</li><li>7. Use case ends.</li></ol>
--	--

## Alternate Paths:

**[A1] Visually differentiate service agreement's with outstanding transactions**

If any service agreements have any of the following service requests with an incomplete status (any status other than successfully completed or failed), the service agreements will be visually differentiated (grey) and will not have active check boxes to prevent the user from being able to select them.

1. Add/Delete Features
2. Change Device
3. Change Phone Number
4. Port Number
5. Activate service
6. Suspend service
7. Resume Service
8. Deactivate Service

**[A2] Visually differentiated old service agreement's**

If any of the service agreement's have been successfully changed to new service agreement's, these old service agreement records will be visually differentiated (grey) and will not have active check boxes to prevent the user from being able to select them.

**[A3] Bulk selection from multiple pages**

Rationale: The user needs to be able to select service agreements from multiple pages and at any time see a list of those service agreements selected.

The screen flow is identical to individual selection described in the main path except:

1. User selects more than one service agreement from more than one page.
2. At any point the user selects the continue button in step 2 to see the selected service agreements.
3. User can either
  - a. Select the remove action to remove any of the selected service agreements. This action should have the same impact as going back to the first screen, finding the service agreement on one of the pages, un-checking it, and selecting continue to return to step 2.
  - b. Choose the back action to return to step 1 and continue selecting/unselecting service agreements. When the user returns to step 1, all the previously selected service agreements should still be displayed.
  - c. Perform the actions required to complete step 2.

**[A4] Remove one of multiple service agreements**

Rationale: When viewing the list of selected service agreements from step 2, the user should be able to easily remove a record from the list without having to return the first selection screen and page through multiple screens to find the service agreement.

When viewing the list of selected service agreements on the second screen, the user selects the remove action and accepts the confirmation to remove the service agreement. If no service agreements remain selected, the user is returned to step 1 to selected service agreements.

	<p><b>[A5] Remove All Service Agreements</b>  Rationale: Enable the user to remove all selected service agreements with one action.  This alternate path is implemented by selecting the cancel action which returns the user to step 1 with no service agreements selected.</p> <p><b>[A6] Sort Displayed Service Agreements</b>  Rationale: Enable the user to view service agreements with a common attribute different than the search by category.  By clicking a column label, the user alternates between ascending and descending sorts.</p> <p><b>[A7] User continues without selecting a service agreement .</b>  System displays an error message and prompts to select a service agreement to perform any self-service action.</p> <p><b>[A8] Select all service agreements in the current page.</b>  Rationale: Enables the user to select all service agreements with one action.</p>
<p>Exception Paths:</p>	<p><b>[E1]</b> System displays “<b>Search result not found</b>” message.  1. System prompts to select valid search criteria.</p>
<p>Configuration Points:</p>	<p>Service agreements displayed in the selection screen is based on the users default hierarchy scope and the filter (configurable) for each self-service transaction.</p>
<p>Business Rules:</p>	<p><b>[B1]</b> System makes an external call to the database, retrieves user details and displays ten records per page ( or whatever number is configured for this use case). System also provides ability to sort the search results based column header labels.</p> <p><b>[B2]</b> System persists the users hierarchy scope throughout the session.</p>
<p>Notes:</p>	<p>1. System supports paging function. The number of user records displayed on each page is initially set to 10. System enables and displays paging icon if the search result has user records greater than 10.</p>

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**My Account** | **Statement** | **Payments** | **Analytics** | **Self-Service**

Overview | Hierarchy | **Manage Accounts** | Manage Service | Order Status

### Add/Delete Features

1 → 2 → 3 → 4

**Company:** Celltek **Hierarchy:** Celltek-Billing  
**User:** Mark Brown **Position:** Celltek-Billing

Search for and select service agreements to change.

**Rate Plan** | **Features** | **Change Number** | **Change Device** | **Port Number**

**Search Criteria**

Search By:

Search By:  **Plan Type or**  **Indiv Rate Plan:**

[Multiple Selections](#)

**Search Results**

	Name	Phone Number	Rate Plan	Device	Status
<input type="radio"/>	Jones, Brendan	617-126-2471	INTERNATIONAL600	BLACKBERRY7280	Active
<input type="radio"/>	Brown, Benjamin	508-309-3946	INTERNATIONAL600	BLACKBERRY7280	Active
<input type="radio"/>	Buel, Christina	803-397-4516	NATDIRECT600	MOTOROLA80	Active
<input type="radio"/>	Jones, Tanya	617-487-9873	NATDIRECT600	MOTOROLA80	Active
<input type="radio"/>	Brown, Ed	617-765-5666	REGION700	NOKIAI730	Active
<input type="radio"/>	Brown, Amy	617-765-5541	REGION700	NOKIAI730	Active
<input type="radio"/>	Jones, Theresa	617-487-9891	NATDIRECT600	MOTOROLA80	Active
<input type="radio"/>	Jones, Susan	508-309-3903	INTERNATIONAL600	BLACKBERRY7280	Active
<input type="radio"/>	Brown, Tracy	828-980-3843	NATDIRECT600	BLACKBERRY7280	Active
<input type="radio"/>	Jones, Larry	508-309-3239	INTERNATIONAL600	BLACKBERRY7280	Active

76 items found, displaying 1 to 10. [First/Prev] 1, 2, 3, 4, 5, 6, 7, 8 [Next/Last]

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**Figure 2.2-5 Search for Service Agreements based on plan type**



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My Account | Statement | Payments | Analytics | Self-Service

Overview | Hierarchy | **Manage Accounts** | Manage Service | Order Status

### Add/Delete Features

1 → 2 → 3 → 4

**Company:** Celltek **Hierarchy:** Celltek-Billing  
**User:** Mark Brown **Position:** Celltek-Billing

Search for and select service agreements to change.

Rate Plan | **Features** | Change Number | Change Device | Port Number

**Search Criteria**

**Search By:** Rate Plan Group  [Hide Rate Plans](#)

**Rate Plan Name:** NATDIRECT600

[Multiple Selections](#)

**Search Results**

Name	Phone Number	Rate Plan	Device	Status
<input type="radio"/> Jones, Brian	617-487-9774	NATDIRECT600	MOTOROLA80	Active
<input checked="" type="radio"/> Jones, Kristy	617-765-5610	NATDIRECT600	MOTOROLA80	Active
<input type="radio"/> Lee, Amy	847-349-4106	NATDIRECT600	BLACKBERRY7280	Active
<input type="radio"/> Virgo, Diego	397-894-2113	NATDIRECT600	MOTOROLA80	Active
<input type="radio"/> Jones, Priscilla	617-765-0066	NATDIRECT600	MOTOROLA80	Active
<input type="radio"/> Baker, John	847-349-4113	NATDIRECT600	BLACKBERRY7280	Active
<input type="radio"/> Jones, Theresa	617-487-9891	NATDIRECT600	MOTOROLA80	Active
<input type="radio"/> Wood, John	508-309-3910	NATDIRECT600	BLACKBERRY7280	Active
<input type="radio"/> Jones, Angel	803-397-3246	NATDIRECT600	MOTOROLA80	Active
<input type="radio"/> Jones, Bryan	617-765-5671	NATDIRECT600	MOTOROLA80	Active

28 items found, displaying 1 to 10. [First/Prev] 1, 2, 3 [Next/Last]

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**Figure 2.2-6 Search and select service agreement based on rate plans**

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**My Account** | **Statement** | **Payments** | **Analytics** | **Self-Service**

Overview | Hierarchy | **Manage Accounts** | Manage Service | Order Status

### Add/Delete Features

1 → 2 → 3 → 4

**Company:** Celltek **Hierarchy:** Celltek-Billing  
**User:** Mark Brown **Position:** Celltek-Billing

Edit features and continue.

**Rate Plan** | **Features** | **Change Number** | **Change Device** | **Port Number**

#### Service Agreement

Name	Phone Number	Rate Plan	Device	Status
Jones, Kristy	617-765-5610	NATDIRECT600	MOTOROLA80	Active

#### Selected Plan

Name	Peak Minutes	Weekend Minutes	Nights Minutes	Amount
<a href="#">NATDIRECT600</a>	800	1000	1000	\$50.99

#### Included Features

Plan Features	Amount
WEEKENDMINUTES	Included
CALLWAITING	Included
CALLWAITING	Included
CALLFORWARDING	Included
CALLERID	Included
CALLFORWARDING	Included
VM	Included
CALLERID	Included
VM	Included
NIGHTMINUTES	Included

11 items found, displaying 1 to 10. [First/Prev] 1, 2 [Next/Last]

#### Optional Features

<input type="checkbox"/> Features	Amount
<input type="checkbox"/> THREEWAYCALLING	\$3.95
<input type="checkbox"/> TEXTMESSAGING500	\$5.95
<input type="checkbox"/> MULTIMEDIAMAIL	\$9.95
<input type="checkbox"/> VOICEDIAL	\$6.75
<input type="checkbox"/> MULTIMEDIAMAIL	\$9.95
<input type="checkbox"/> VOICEDIAL	\$6.75

8 items found, displaying all items. 1

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Figure 2.2-7 Step 2, View Service Agreement Selected

## 2.3 Self service Overview Use Case

The TSM self service overview use case is addressed below.

### 2.3.1 B2B – Self service Overview

<b>Name:</b>	<b>TSM self service.</b>
<b>Brief Description:</b>	TSM overview screen displays ‘dashboard’ metrics and provides quick links to self-service functions.
<b>Actor</b>	Admin User
<b>Main Path:</b>	<ol style="list-style-type: none"> <li>1. Admin user selects self-service tab.</li> <li>2. System displays services overview page including: <ol style="list-style-type: none"> <li>1. User name, company name, hierarchy name and the current position in the hierarchy.</li> <li>2. Displays new rate plans available. [A1] (Static image displayed to illustrate possible visions for how this screen could be used).</li> <li>3. Top 5 Phone Numbers List of top 5 phone numbers with highest billings from most recent statement (from TBM overview screen) Column headers are “Number”, “Last Bal”, “Rate Plan”.  If the user clicks on any of the phone numbers, system invokes the “Change Rate Plan” use case with this service agreement selected.</li> <li>4. Link to rate plan advisor. [A2] (Until integrated in [A2] this should be just a static image displayed to illustrate possible visions for how this screen could be used).</li> <li>5. Search bar, to track service request status. [A3]</li> <li>6. Quick Links to the self-service actions. [A4]</li> <li>7. Recent Service Requests [A5]</li> </ol> </li> <li>3. Use case ends.</li> </ol>

Name:	<b>TSM self service.</b>
Alternate Paths:	<p><b>[A1] User clicks on new rate plans links.</b></p> <ol style="list-style-type: none"> <li>1. System displays static popup screen with an image of phones and the text "&lt;service provider text here&gt;"</li> </ol> <p><b>[A2] User enters tracking number and selects search action.</b></p> <ol style="list-style-type: none"> <li>1. System invokes order status use case displaying the tracking number entered in the overview screen.</li> </ol> <p><b>[A3] User selects a quick link.</b></p> <ol style="list-style-type: none"> <li>1. System invokes self service actions and corresponding use case.</li> </ol> <p><b>[A4] Recent Service Requests</b></p> <p>Count of submitted service transactions within the last month.</p> <p><u>Fields Displayed</u></p> <ul style="list-style-type: none"> <li>◆ Description See Service Transactions Displayed List below. If the user clicks on this hyperlink, the Order Status screen is launched with only the selected service requests displayed.</li> <li>◆ Service Lines Count of service requests initiated within the last month (service provider configurable time period) matching the status and transaction type of the description</li> </ul> <p><u>Service Transactions Displayed</u></p> <ul style="list-style-type: none"> <li>◆ Pending – All transactions (Count of any transaction requests [individual count, not bulk] submitted within a configurable time period (default 30 days) with a status of "pending")</li> <li>◆ Failed – All Transactions (Count of any transaction requests [individual count, not bulk] submitted within a configurable time period (default 30 days) with a status of "failed")</li> <li>◆ Success - Change Rate Plan Transactions (Count of any transaction requests [individual count, not bulk] with any status submitted within the last month (configurable time period) to change rate plan)</li> <li>◆ Success - Change Features (Count of any transaction requests [individual count, not bulk] with any status submitted within the last month to change features)</li> </ul>
Exception Paths:	<p><b>[E2] User encounters a system error:</b></p> <ol style="list-style-type: none"> <li>1. System invokes <a href="#">Error Message</a> use case.</li> </ol>
Business Rules:	<p><b>[B3]</b> The scope of the content in the dashboard depends upon the user (Administrator, Business or Subscriber) login..</p>
Notes	<p>Self-service tab in the TSM dashboard provides a quick link capability to B2B functionalities and other features of TSM.</p>

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**My Account** | **Statement** | **Payments** | **Analytics** | **Self-Service**


**Overview** | Hierarchy | Manage Accounts | Manage Service | Order Status Shopping Cart

---

**Overview**

**Company:** Celltek **Hierarchy:** Celltek-Billing  
**User:** Mark Brown **Position:** Celltek-Billing

**New Rate Plan**




800 minutes  
**\$65.95**

**Account Status**

Number	Last Bal	Rate Plan
<a href="#">7817568047</a>	\$203.45	RatePlan1000
<a href="#">7817568045</a>	\$689.83	RatePlan800
<a href="#">7817568055</a>	\$335.59	RatePlan800
<a href="#">7817568035</a>	\$853.82	RatePlan800
<a href="#">7817568034</a>	\$987.15	RatePlan800

**Rate Plan Advisor**

[Run a Rate Plan Advisor & Save](#)



**Order Status**


Tracking Number

**Quick Links**

- [Add/Delete Features](#)
- [Activate Service](#)
- [Change Rate Plan](#)
- [Change Subscriber Profile](#)
- [Port Number](#)

**Recent Service Requests**

Description	Service Lines
Change Rate Plan	1



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Figure 2.3-1 Overview Screen for Admin User

## 2.4 Manage Account Use Cases

The comprehensive self service capabilities available to the user are addressed in the following use cases below.

The self service features covered includes:

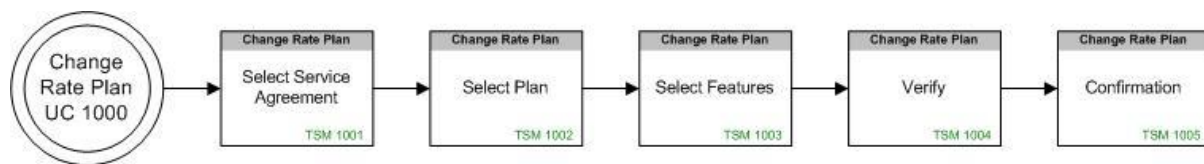
- **Change rate plan**  
Provides ability for the administrator to change an individual rate plan (main path) or a bulk request for multiple service agreements (alternate path).
- **Add / Delete features**  
Provides ability for the administrator to change an individuals rate plan features (main path) or bulk request for multiple service agreements (alternate path).
- **Change Device**  
Enables the business user to change the device associated with an individual service agreement (main path) or in bulk. This transaction is performed by changing the device serial number associated with the service agreement.
- **Change Phone Number**  
Enable a business user to change the phone numbers associated with an individual service agreement.
- **Port number**  
Enables the user to replace an existing number with a new number from different service provider.

### 2.4.1 Change Rate Plan

<b>Name:</b>	<b>Change Rate Plan</b>
<b>Brief Description:</b>	Provides ability for the administrator to change an individual rate plan (main path) or a bulk request for multiple service agreements (alternate path).
<b>Actors:</b>	Admin, Manager
<b>Main Path:</b>	<ol style="list-style-type: none"> <li>1. User selects Manage Account &gt; Change Rate Plan option.</li> </ol> <p><u>Step 1: Select service agreement</u></p> <ol style="list-style-type: none"> <li>2. User optionally invokes the Search &amp; Select use case (uc0060) to filter displayed service agreement's.</li> <li>3. User selects a service agreement from the list and selects continue action.</li> </ol> <p><u>Step 2: Select Plan</u></p> <ol style="list-style-type: none"> <li>4. System displays the selected service agreement, its rate plan, and its selected features.</li> <li>5. User selects a new rate plan group from the drop down and search action.[B1]</li> </ol> <p>Plan Group dropdown field displays all plan groups available for the</p>

	<p>company to which the service agreement belongs.</p> <p><b>6.</b> System displays list of plans with the following columns:</p> <ol style="list-style-type: none"> <li>1. Plan Name</li> <li>2. Peak Minutes</li> <li>3. Weekend Minutes</li> <li>4. Night minutes</li> <li>5. Amount</li> </ol> <p><b>7.</b> User selects plan and continue action [A2]</p> <p><u><b>Step 3: Select Features</b></u></p> <p><b>8.</b> System displays selected rate plan details with included and optional features. [B2] [A1]</p> <p>System makes an external call and based on the selected rate plan displays the set of included and optional features.</p> <p><b>9.</b> User selects optional features and selects continue action.</p> <p>Features that are included with the plan at no charge cannot be modified.</p> <p><u><b>Step 4: Verify Selections</b></u></p> <p><b>10.</b> System displays the summary of :</p> <ol style="list-style-type: none"> <li>1. selected rate plan and included features.</li> <li>2. Selected optional features and the estimated total amount changes.</li> <li>3. System allows the user to go back to the previous screen to edit the selection.</li> </ol> <p><b>11.</b> User verifies and selects confirm action.</p> <p><u><b>Step 5: Confirmation</b></u></p> <p><b>12.</b> System displays a confirmation message and tracking number with options to print the confirmation page for user records.</p> <p><b>13.</b> Use case ends</p>
<p><b>Alternate Paths:</b></p>	<p><b>[A1] Bulk Change</b></p> <p>User selects more than one service agreement on which to perform a rate plan change.</p> <p>This alternate path is the same as the main path except that the Step 2, "Select Plan" screen</p> <ol style="list-style-type: none"> <li>1. displays the multiple service agreements selected.</li> <li>2. does not display the current plan and plan features for the selected service agreements because it would not be clear which plan and features related to which service agreement.</li> </ol> <p><b>[A2] User selects continue action without selecting a rate plan.</b></p> <p>System displays an error message and prompts to select a rate plan and continue.</p> <p><b>[A3] User clicks on a rate plan for details</b></p> <p>When this hyperlink is selected, another screen is displayed with more information about the plan and a single action to return to the previous screen.</p>

	<p><b>[A4] User clicks on feature for more detail</b>                  When this hyperlink is selected, another screen is displayed with more information about the feature and a single action to return to the previous screen.</p>
Standard Features	<ol style="list-style-type: none"> <li>1. Cancel action</li> <li>2. Back action</li> <li>3. Paging action (number of lines configurable by use case)</li> <li>4. Track service request</li> </ol>
Exception Paths:	<p><b>[E1]</b> User encounters a system error:</p> <ol style="list-style-type: none"> <li>1. System invokes <a href="#">Error Message</a> use case.</li> </ol>
Business Rules:	<p><b>[B1]</b> Service agreements with device features that do not support the selected features are not modified.</p> <p><b>[B2]</b> System makes an external call and based on the selected rate plan displays the set of included and optional features.</p> <ol style="list-style-type: none"> <li>1. Features that are included with the plan at no charge cannot be modified.</li> <li>2. System allows to select optional features.</li> </ol>
Notes	<ol style="list-style-type: none"> <li>1. Devices not compatible to the selected plan and features are not affected.</li> <li>2. System displays a non-monetary value for all the optional features.</li> </ol>





### Individual user flows for Change Rate Plan (as opposed to bulk)

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#### Change Rate Plan

**Company:** Celltek  
**User:** Mark Brown

**Hierarchy:** Celltek-Billing  
**Position:** Celltek-Billing

Search for and select service agreements to change.

**Rate Plan** | Features | Change Number | Change Device | Port Number

**Search Criteria**

Search By:

Search By:  Plan Type or  Indiv Rate Plan:

Page 1 of 6

**Search Results (54 items)**

<input type="checkbox"/>	Name	Phone Number	Rate Plan	Device	Status
<input checked="" type="checkbox"/>	Brown59, John	7817568059	RatePlan800	Nokia5800	Active
<input type="checkbox"/>	Brown15, John	7817568015	RatePlan800	Nokia5800	Active
<input type="checkbox"/>	Brown43, John	7817568043	RatePlan800	Nokia5800	Active
<input type="checkbox"/>	Brown57, John	7817568057	RatePlan800	Nokia5800	Active
<input type="checkbox"/>	Brown35, John	7817568035	RatePlan800	Nokia5800	Active
<input type="checkbox"/>	Brown55, John	7817568055	RatePlan800	Nokia5800	Active
<input type="checkbox"/>	Brown56, John	7817568056	RatePlan800	Nokia5800	Active
<input type="checkbox"/>	Brown19, John	7817568019	RatePlan800	Nokia5800	Active
<input type="checkbox"/>	Brown33, John	7817568033	RatePlan800	Nokia5800	Active
<input type="checkbox"/>	Brown51, John	7817568051	RatePlan800	Nokia5800	Active

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Figure 2.4-1 Search and Select service agreement

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---

### Change Rate Plan

1 → **2** → 3 → 4 → 5

**Company:** Celltek  
**User:** Mark Brown

**Hierarchy:** Celltek-Billing  
**Position:** Celltek-Billing

Search for and select a rate plan.

**Rate Plan** | Features | Change Number | Change Device | Port Number

**Selected Service Agreement**

Name	Phone Number	Rate Plan	Device	Status
Brown59, John	781-756-8059	RatePlan800	Nokia 5800 XL	Active

**Current Plan**

Name	Peak Minutes	Weekend Minutes	Nights Minutes	Amount
<a href="#">International</a>	800	Unlimited	Unlimited	\$45.95

**Included Features**

Plan Features	Amount
<a href="#">Call Waiting</a>	Included
<a href="#">Caller ID</a>	Included
<a href="#">Voice Mail</a>	Included

**Optional Features**

Features	Amount
<a href="#">3-way Calling</a>	\$3.95
<a href="#">No Answer/Busy</a>	\$2.95
<a href="#">TXT Messaging</a>	\$3.95
<b>Total</b>	<b>\$56.80</b>

**Search Criteria**

Plan Type:

**Rate Plans**

Name	Peak Minutes	Weekend Minutes	Nights Minutes	Amount
<input type="radio"/> <a href="#">International</a>	400	Unlimited	Unlimited	\$25.95
<input type="radio"/> <a href="#">International</a>	500	Unlimited	Unlimited	\$29.95
<input type="radio"/> <a href="#">International</a>	600	Unlimited	Unlimited	\$35.95
<input type="radio"/> <a href="#">International</a>	700	Unlimited	Unlimited	\$39.95
<input type="radio"/> <a href="#">International</a>	800	Unlimited	Unlimited	\$45.95
<input checked="" type="radio"/> <a href="#">International</a>	900	Unlimited	Unlimited	\$49.95
<input type="radio"/> <a href="#">International</a>	1000	Unlimited	Unlimited	\$59.95
<input type="radio"/> <a href="#">International</a>	1100	Unlimited	Unlimited	\$69.95

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Figure 2.4-2 Displays users current plan and available rate plans

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**Change Rate Plan** 1 → 2 → 3 → 4 → 5

**Company:** Celltek **Hierarchy:** Celltek-Billing  
**User:** Mark Brown **Position:** Celltek-Billing

Select optional features.

**Rate Plan** | **Features** | **Change Number** | **Change Device** | **Port Number**

**Selected Service Agreement**

Name	Phone Number	Rate Plan	Device	Status
Brown59, John	781-756-8059	RatePlan800	Nokia 5800	Active

**Selected Plan**

Name	Peak Minutes	Weekend Minutes	Nights Minutes	Amount
<a href="#">International</a>	900	Unlimited	Unlimited	\$49.95

**Included Features**

Plan Features	Amount
<a href="#">Call Waiting</a>	Included
<a href="#">Caller ID</a>	Included
<a href="#">Voice Mail</a>	Included

**Optional Features**

<input type="checkbox"/> Features	Amount
<input checked="" type="checkbox"/> <a href="#">3-way Calling</a>	\$3.95
<input type="checkbox"/> <a href="#">411-Connect</a>	\$1.95
<input checked="" type="checkbox"/> <a href="#">No Answer/Busy</a>	\$2.95
<input checked="" type="checkbox"/> <a href="#">TXT Messaging</a>	\$3.95
<input type="checkbox"/> <a href="#">Call Forwarding</a>	\$2.95

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Figure 2.4-3 Select optional features

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### Change Rate Plan

1 → 2 → 3 → **4** → 5

**Company:** Celltek **Hierarchy:** Celltek-Billing  
**User:** Mark Brown **Position:** Celltek-Billing

Please verify changes. Devices that are not compatible with the selected plan and features will not be affected.

**Rate Plan** | **Features** | **Change Number** | **Change Device** | **Port Number**

**Selected Service Agreement**

Name	Phone Number	Rate Plan	Device	Status
Brown59, John	781-756-8059	RatePlan800	Nokia 5800	Active

**Selected Plan**

Name	Peak Minutes	Weekend Minutes	Nights Minutes	Amount
<a href="#">International</a>	900	Unlimited	Unlimited	\$49.95

**Included Features**

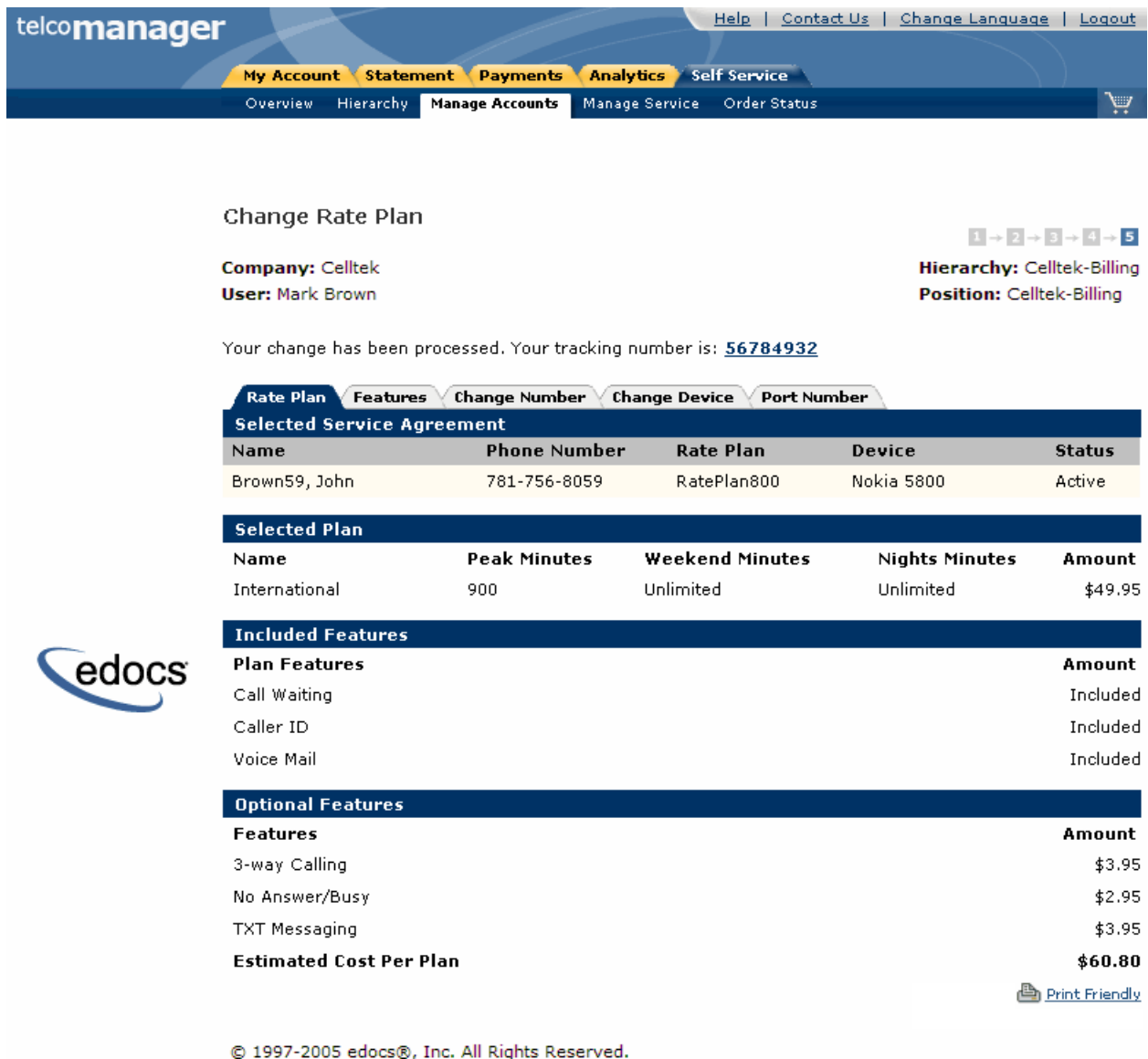
Plan Features	Amount
<a href="#">Call Waiting</a>	Included
<a href="#">Caller ID</a>	Included
<a href="#">Voice Mail</a>	Included

**Optional Features**

Features	Amount
<a href="#">3-way Calling</a>	\$3.95
<a href="#">No Answer/Busy</a>	\$2.95
<a href="#">TXT Messaging</a>	\$3.95
<b>Estimated Cost Per Plan</b>	<b>\$60.80</b>

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Figure 2.4-4 Verify selected plan and features



**Change Rate Plan**

1 → 2 → 3 → 4 → 5

**Company:** Celltek  
**User:** Mark Brown  
**Hierarchy:** Celltek-Billing  
**Position:** Celltek-Billing

Your change has been processed. Your tracking number is: [56784932](#)

**Rate Plan** | Features | Change Number | Change Device | Port Number

Selected Service Agreement				
Name	Phone Number	Rate Plan	Device	Status
Brown59, John	781-756-8059	RatePlan800	Nokia 5800	Active

Selected Plan				
Name	Peak Minutes	Weekend Minutes	Nights Minutes	Amount
International	900	Unlimited	Unlimited	\$49.95

**Included Features**

Plan Features	Amount
Call Waiting	Included
Caller ID	Included
Voice Mail	Included

**Optional Features**

Features	Amount
3-way Calling	\$3.95
No Answer/Busy	\$2.95
TXT Messaging	\$3.95
<b>Estimated Cost Per Plan</b>	<b>\$60.80</b>

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Figure 2.4-5 Confirmation screen

B2B screen flows for Change Rate Plan in bulk.

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Overview | Hierarchy | **Manage Accounts** | Manage Service | Order Status

---

**Change Rate Plan** 1 → 2 → 3 → 4 → 5

**Company:** Celltek **Hierarchy:** Celltek-Billing  
**User:** Mark Brown **Position:** Celltek-Billing

Search for and select service agreements to change.

**Rate Plan** | Features | Change Number | Change Device | Port Number

**Search Criteria**

Search By: Rate Plan Group

Search By:  Plan Type or  Indiv Rate Plan: International

Page 1 of 6

**Search Results (54 items)**

<input checked="" type="checkbox"/>	Name	Phone Number	Rate Plan	Device	Status
<input checked="" type="checkbox"/>	Brown20, John	7817568020	RatePlan800	Nokia5800	Active
<input checked="" type="checkbox"/>	Brown30, John	7817568030	RatePlan800	Nokia5800	Active
<input checked="" type="checkbox"/>	Brown53, John	7817568053	RatePlan800	Nokia5800	Active
<input checked="" type="checkbox"/>	Brown, Tom	7817568063	RatePlan800	Motorola80	Active
<input checked="" type="checkbox"/>	Brown33, John	7817568033	RatePlan800	Nokia5800	Active
<input checked="" type="checkbox"/>	Brown15, John	7817568015	RatePlan800	Nokia5800	Active
<input checked="" type="checkbox"/>	Brown39, John	7817568039	RatePlan800	Nokia5800	Active
<input checked="" type="checkbox"/>	Brown40, John	7817568040	RatePlan800	Nokia5800	Active
<input checked="" type="checkbox"/>	Brown43, John	7817568043	RatePlan800	Nokia5800	Active
<input checked="" type="checkbox"/>	Brown31, John	7817568031	RatePlan800	Nokia5800	Active

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**Figure 2.4-6** User filters the list based on plan type, rate plan and select multiple service agreement

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Overview | Hierarchy | **Manage Accounts** | Manage Service | Order Status

### Change Rate Plan

1 - 2 - 3 - 4 - 5

**Company:** Celltek  
**User:** Mark Brown  
**Hierarchy:** Celltek-Billing  
**Position:** Celltek-Billing

Search for and select a rate plan.

**Rate Plan** | Features | Change Number | Change Device | Port Number

**Search Criteria**

Plan Type:

Rate Plans				
Name	Peak Minutes	Weekend Minutes	Nights Minutes	Amount
RatePlan1000	1000	1000	1000	1000.0

Page 1 of 2

**Selected User Details (10 items)**

Name	Phone Number	Rate Plan	Device	Status
Brown20, John,	7817568020	RatePlan800	Nokia5800	Active <a href="#">Remove</a>
Brown30, John,	7817568030	RatePlan800	Nokia5800	Active <a href="#">Remove</a>
Brown53, John,	7817568053	RatePlan800	Nokia5800	Active <a href="#">Remove</a>
Brown, Tom,	7817568063	RatePlan800	Motorola80	Active <a href="#">Remove</a>
Brown33, John,	7817568033	RatePlan800	Nokia5800	Active <a href="#">Remove</a>

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Figure 2.4-7 Screen displays the available rate plans

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---

**Change Rate Plan** 1 - 2 - 3 - 4 - 5

**Company:** Celltek **Hierarchy:** Celltek-Billing  
**User:** Mark Brown **Position:** Celltek-Billing

Select optional features.

**Rate Plan** | **Features** | **Change Number** | **Change Device** | **Port Number**

**Current Plan**

Name	Peak Minutes	Weekend Minutes	Nights Minutes	Amount
<a href="#">RatePlan1000</a>	1000	1000	1000	\$1000.0

**Included Features**

Plan Features	Amount
VoiceMail	Included

**Optional Features**

<input type="checkbox"/> Features	Amount
<input checked="" type="checkbox"/> WeekendFreeMinutes	\$100.0

Page 1 of 2

**Selected User Details (10 items)**

Name	Phone Number	Rate Plan	Device	Status	
Brown20, John,	7817568020	RatePlan800	Nokia5800	Active	<a href="#">Remove</a>
Brown30, John,	7817568030	RatePlan800	Nokia5800	Active	<a href="#">Remove</a>
Brown53, John,	7817568053	RatePlan800	Nokia5800	Active	<a href="#">Remove</a>
Brown, Tom,	7817568063	RatePlan800	Motorola80	Active	<a href="#">Remove</a>
Brown33, John,	7817568033	RatePlan800	Nokia5800	Active	<a href="#">Remove</a>

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**Figure 2.4-8** Screen displays selected plan with included and optional features



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### Change Rate Plan

1 -> 2 -> 3 -> **4** -> 5

**Company:** Celltek **Hierarchy:** Celltek-Billing  
**User:** Mark Brown **Position:** Celltek-Billing

Please verify changes. Devices that are not compatible with the selected plan and features will not be affected.

**Rate Plan** | Features | Change Number | Change Device | Port Number

Current Plan				
Name	Peak Minutes	Weekend Minutes	Nights Minutes	Amount
<a href="#">RatePlan1000</a>	1000	1000	1000	\$1000.0

Included Features	
Plan Features	Amount
VoiceMail	Included

Optional Features	
Features	Amount
WeekendFreeMinutes	\$100.0

**Estimated Cost Per Plan** **\$1100.0**

Page 1 of 2 >>

Selected User Details (10 items)					
Name	Phone Number	Rate Plan	Device	Status	
Brown20, John,	7817568020	RatePlan800	Nokia5800	Active	<a href="#">Remove</a>
Brown30, John,	7817568030	RatePlan800	Nokia5800	Active	<a href="#">Remove</a>
Brown53, John,	7817568053	RatePlan800	Nokia5800	Active	<a href="#">Remove</a>
Brown, Tom,	7817568063	RatePlan800	Motorola80	Active	<a href="#">Remove</a>
Brown33, John,	7817568033	RatePlan800	Nokia5800	Active	<a href="#">Remove</a>

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Figure 2.4-9 Displays the summary of plan package

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Overview | Hierarchy | **Manage Accounts** | Manage Service | Order Status

### Change Rate Plan

1 - 2 - 3 - 4 - 5

**Company:** Celltek  
**User:** Mark Brown

**Hierarchy:** Celltek-Billing  
**Position:** Celltek-Billing

Your change has been processed. Your tracking number is: [127007](#)

**Rate Plan** | Features | Change Number | Change Device | Port Number

#### Current Plan

Name	Peak Minutes	Weekend Minutes	Nights Minutes	Amount
<a href="#">RatePlan1000</a>	1000	1000	1000	\$1000.0

#### Included Features

Plan Features	Amount
VoiceMail	Included

#### Optional Features

Features	Amount
WeekendFreeMinutes	\$100.0

**Estimated Cost Per Plan** **\$1100.0**

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#### Selected User Details (10 items)

Name	Phone Number	Rate Plan	Device	Status
Brown20, John,	7817568020	RatePlan800	Nokia5800	Active
Brown30, John,	7817568030	RatePlan800	Nokia5800	Active
Brown53, John,	7817568053	RatePlan800	Nokia5800	Active
Brown, Tom,	7817568063	RatePlan800	Motorola80	Active
Brown33, John,	7817568033	RatePlan800	Nokia5800	Active

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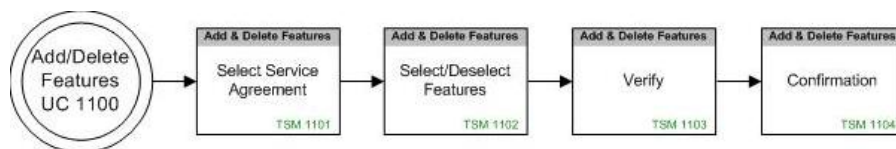
Figure 2.4-10 Confirmation screen displays rate plan change

## 2.4.2 Add / Delete Features

<b>Name:</b>	<b>Add and delete features to the existing plan.</b>
<b>Brief Description:</b>	Provides ability for the administrator to change an individuals rate plan features (main path) or bulk request for multiple service agreements (alternate path).
<b>Actors:</b>	Admin, Manager
<b>Main Path:</b>	<ol style="list-style-type: none"> <li>1. User selects Manage Account &gt; Add/Delete features option.</li> </ol> <p><u>Step 1: Select service agreement</u></p> <ol style="list-style-type: none"> <li>2. User optionally invokes the Search &amp; Select use case to filter displayed service agreement's.</li> <li>3. User selects a service agreement from the list and selects continue action.</li> </ol> <p><u>Step 2: Select/Deselect Features</u></p> <ol style="list-style-type: none"> <li>4. System displays the selected service agreement, its rate plan, included and optional features list with price details and the current selections checked.</li> <li>5. User selects and deselects features and selects continue action.[B1]</li> </ol> <p><u>Step 3: Verify selections</u></p> <ol style="list-style-type: none"> <li>6. System displays the summary of rate plan and its included and optional features selected and the price details (if available for bulk selection from service provider).</li> <li>7. System also displays the estimated total amount changes for the plan based on the current selection.</li> <li>8. User verifies and selects confirm action.</li> </ol> <p><u>Step 4: Confirmation</u></p> <ol style="list-style-type: none"> <li>9. System displays confirmation message and tracking number with options to print the confirmation page for user records.</li> <li>10. Use case ends</li> </ol>
<b>Alternate Paths:</b>	<p><b>[A1] Bulk Change</b></p> <p>User selects more than one service agreement to add/delete features in bulk.</p> <p>This alternate path is the same as the main path except for the following steps.</p> <p><u>Step 1 : "Select Service Agreements"</u></p> <ol style="list-style-type: none"> <li>1. User selects the "Multiple Selections" action. (note this action changes to "Individual Selection" so if selected again returns the screen to the individual non-bulk mode).</li> </ol> <p>The search criteria changes to only include Rate Plan Group and Rate Plan Name fields. (guarantees that all selected service agreements have the same optional features).</p>

<p>Name:</p>	<p><b>Add and delete features to the existing plan.</b></p>
	<p>2. User selects a rate plan name and 'continue' and is presented with the same selection criteria as for individual selection except selected the rate plan group and names are displayed at the top of the screen with an edit action next to them.</p> <p>3. User selects a value criteria from the Search By field (which excludes rate plan since it was already selected), select 'Go', enters the search value, and selects search.</p> <p>The search includes both the search by value as well as the previously selected rate plan name and displays the matching service agreements with checkboxes rather than radio buttons.</p> <p>4. User selects multiple service agreements.</p> <p><i>Step 2</i> : "Select Features" screen displays the following</p> <p><i>Instructional text</i>: "Edit whether feature is included in all, some, or none of the selected service agreements"</p> <p>Service provider returns a list of features for which it will allow changes based on the selected service agreements. <i>Note</i>, that if the service agreements have different plans, the service provider may need to apply logic to determine what features it will allow the user to change.</p> <ol style="list-style-type: none"> <li>1. Feature prices may or may not be displayed.</li> <li>2. Feature radio buttons will be:             <ol style="list-style-type: none"> <li>a. All: if all selected service agreements have this feature</li> <li>b. Some: If only some service agreements have this feature.</li> <li>c. None: If no service agreements have this feature</li> </ol> </li> </ol> <p><i>Step 3</i>: "Confirm Selections" screen only displays features and price details (if available for bulk selection from the service provider.</p> <p><b>[A2] User clicks on the rate plan for details</b></p> <p>When this hyperlink is selected, another screen is displayed with more information about the plan and a single action to return to the previous screen.</p> <p><b>[A3] User clicks on feature for more detail</b></p> <p>When this hyperlink is selected, another screen is displayed with more information about the feature and a single action to return to the previous screen.</p> <p><b>[A5] Partial Success</b></p> <p>If a user selects multiple features to be added to a service agreement and the service provider only adds some of these service agreements than the transactions status should be "Partial Success". If this individual transaction is part of a bulk transaction, the bulk status should be "Closed-Success".</p> <p>The Service Agreement rate plan feature instance will only be updated with the features the service provider activates.</p> <p>Rationale: If the service agreement device type does not support a requested feature and the service provider does not filter the service agreements displayed to the user, than this alternate path would exist.</p>

<b>Name:</b>	<b>Add and delete features to the existing plan.</b>
<b>Standard Features:</b>	<ol style="list-style-type: none"> <li>1. Cancel action</li> <li>2. Back action</li> <li>3. Paging action</li> <li>4. Track service request</li> </ol>
<b>Exception Paths:</b>	<p><b>[E1] User encounters a system error.</b></p> <ol style="list-style-type: none"> <li>1. System invokes Error Message use case.</li> </ol>
<b>Business Rules:</b>	<p><b>[B1] System makes an external call and displays those optional features available for change for the selection (bulk) of service agreements.</b></p> <ol style="list-style-type: none"> <li>1. Optional features already selected are marked with solid (all selections) or grey (some of selections) check in the checkbox.</li> <li>2. System allows to either select all(add) or none(delete) option</li> </ol>
<b>Notes:</b>	<ol style="list-style-type: none"> <li>1. Users with device that do not support the selected features are not modified.</li> <li>2. System displays a non-monetary value for all the optional features.</li> </ol>



**Individual user flows for Add/Delete Features (as opposed to bulk)**

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### Add/Delete Features

1 → 2 → 3 → 4

**Company:** Celltek **Hierarchy:** Celltek-Billing  
**User:** Mark Brown **Position:** Celltek-Billing

Search for and select service agreements to change.

**Rate Plan** **Features** **Change Number** **Change Device** **Port Number**

**Search Criteria**

Search By:

[Multiple Selections](#)

**Search Results**

<input type="radio"/>	Name	Phone Number	Rate Plan	Device	Status
<input type="radio"/>	Jones, Brian	617-487-9774	NATDIRECT600	MOTOROLA80	Active
<input type="radio"/>	Jones, Kristy	617-765-5610	NATDIRECT600	MOTOROLA80	Active
<input type="radio"/>	Lee, Amy	847-349-4106	NATDIRECT600	BLACKBERRY7280	Active
<input type="radio"/>	Virgo, Diego	397-894-2113	NATDIRECT600	MOTOROLA80	Active
<input type="radio"/>	Jones, Priscilla	617-765-0066	NATDIRECT600	MOTOROLA80	Active
<input type="radio"/>	Baker, John	847-349-4113	NATDIRECT600	BLACKBERRY7280	Active
<input type="radio"/>	Jones, Theresa	617-487-9891	NATDIRECT600	MOTOROLA80	Active
<input type="radio"/>	Wood, John	508-309-3910	NATDIRECT600	BLACKBERRY7280	Active
<input type="radio"/>	Jones, Angel	803-397-3246	NATDIRECT600	MOTOROLA80	Active
<input type="radio"/>	Jones, Bryan	617-765-5671	NATDIRECT600	MOTOROLA80	Active

28 items found, displaying 1 to 10. [First/Prev] 1, 2, 3 [Next/Last]

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Figure 2.4-11 Search for a service agreement

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### Add/Delete Features

1 → 2 → 3 → 4

**Company:** Celltek **Hierarchy:** Celltek-Billing  
**User:** Mark Brown **Position:** Celltek-Billing

Search for and select service agreements to change.

Rate Plan | **Features** | Change Number | Change Device | Port Number

**Search Criteria**

Plan Group: International  Plan Name: NATDIRECT

[Single Selection](#)

**Search Results**

Name	Phone Number	Rate Plan	Device	Status
<input type="radio"/> Jones, Brian	617-487-9774	NATDIRECT600	MOTOROLA80	Active
<input checked="" type="radio"/> Jones, Kristy	617-765-5610	NATDIRECT600	MOTOROLA80	Active
<input type="radio"/> Lee, Amy	847-349-4106	NATDIRECT600	BLACKBERRY7280	Active
<input type="radio"/> Virgo, Diego	397-894-2113	NATDIRECT600	MOTOROLA80	Active
<input type="radio"/> Jones, Priscilla	617-765-0066	NATDIRECT600	MOTOROLA80	Active
<input type="radio"/> Baker, John	847-349-4113	NATDIRECT600	BLACKBERRY7280	Active
<input type="radio"/> Jones, Theresa	617-487-9891	NATDIRECT600	MOTOROLA80	Active
<input type="radio"/> Wood, John	508-309-3910	NATDIRECT600	BLACKBERRY7280	Active
<input type="radio"/> Jones, Angel	803-397-3246	NATDIRECT600	MOTOROLA80	Active
<input type="radio"/> Jones, Bryan	617-765-5671	NATDIRECT600	MOTOROLA80	Active

28 items found, displaying 1 to 10. [First/Prev] 1, 2, 3 [Next/Last]

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Figure 2.4-12 Select a service agreement

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**My Account** | **Statement** | **Payments** | **Analytics** | **Self-Service**

Overview | Hierarchy | **Manage Accounts** | Manage Service | Order Status

### Add/Delete Features

1 → 2 → 3 → 4

**Company:** Celltek **Hierarchy:** Celltek-Billing  
**User:** Mark Brown **Position:** Celltek-Billing

Edit features and continue.

**Rate Plan** | **Features** | **Change Number** | **Change Device** | **Port Number**

**Service Agreement**

Name	Phone Number	Rate Plan	Device	Status
Jones, Kristy	617-765-5610	NATDIRECT600	MOTOROLA80	Active

**Selected Plan**

Name	Peak Minutes	Weekend Minutes	Nights Minutes	Amount
<a href="#">NATDIRECT600</a>	800	1000	1000	\$50.99

**Included Features**

Plan Features	Amount
WEEKENDMINUTES	Included
CALLWAITING	Included
CALLWAITING	Included
CALLFORWARDING	Included
CALLERID	Included
CALLFORWARDING	Included
VM	Included
CALLERID	Included
VM	Included
NIGHTMINUTES	Included

11 items found, displaying 1 to 10. [First/Prev] 1, 2 [Next/Last]

**Optional Features**

<input type="checkbox"/> Features	Amount
<input type="checkbox"/> THREEWAYCALLING	\$3.95
<input type="checkbox"/> TEXTMESSAGING500	\$5.95
<input type="checkbox"/> MULTIMEDIAMAIL	\$9.95
<input type="checkbox"/> VOICEDIAL	\$6.75
<input type="checkbox"/> MULTIMEDIAMAIL	\$9.95
<input type="checkbox"/> VOICEDIAL	\$6.75

8 items found, displaying all items. 1

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Figure 2.4-13 Screen displays selected plan and features



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### Add/Delete Features

1 -> 2 -> **3** -> 4

**Company:** Celltek **Hierarchy:** Celltek-Billing  
**User:** Mark Brown **Position:** Celltek-Billing

Please confirm changes. Devices that are not compatible with the selected features will not be affected.

**Rate Plan** | **Features** | **Change Number** | **Change Device** | **Port Number**

Service Agreement				
Name	Phone Number	Rate Plan	Device	Status
Jones, Kristy	617-765-5610	NATDIRECT600	MOTOROLA80	Active

Selected Plan				
Name	Peak Minutes	Weekend Minutes	Nights Minutes	Amount
<a href="#">NATDIRECT600</a>	800	1000	1000	\$50.99

Included Features	
Plan Features	Amount
WEEKENDMINUTES	Included
CALLWAITING	Included
CALLWAITING	Included
CALLFORWARDING	Included
CALLERID	Included
CALLFORWARDING	Included
VM	Included
CALLERID	Included
VM	Included
NIGHTMINUTES	Included

11 items found, displaying 1 to 10.[First/Prev] 1, 2 [Next/Last]

Optional Features	
Features	Amount
THREEWAYCALLING	\$3.95
TEXTMESSAGING500	\$5.95
VOICEDIAL	\$6.75
VOICEDIAL	\$6.75
<b>Estimated Cost Per Plan</b>	<b>\$74.39</b>

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Figure 2.4-14 Verification Screen

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Overview | Hierarchy | **Manage Accounts** | Manage Service | Order Status

### Add/Delete Features

1 → 2 → 3 → 4

**Company:** Celltek **Hierarchy:** Celltek-Billing  
**User:** Mark Brown **Position:** Celltek-Billing

Your change has been processed. Your tracking number is: [108038](#)

**Rate Plan** | **Features** | **Change Number** | **Change Device** | **Port Number**

#### Service Agreement

Name	Phone Number	Rate Plan	Device	Status
Jones, Kristy	617-765-5610	NATDIRECT600	MOTOROLA80	Active

#### Selected Plan

Name	Peak Minutes	Weekend Minutes	Nights Minutes	Amount
<a href="#">NATDIRECT600</a>	800	1000	1000	\$50.99

#### Included Features

Plan Features	Amount
WEEKENDMINUTES	Included
CALLWAITING	Included
CALLWAITING	Included
CALLFORWARDING	Included
CALLERID	Included
CALLFORWARDING	Included
VM	Included
CALLERID	Included
VM	Included
NIGHTMINUTES	Included

11 items found, displaying 1 to 10. [First/Prev] 1, 2 [Next/Last]

#### Optional Features

Features	Amount
THREEWAYCALLING	\$3.95
TEXTMESSAGING500	\$5.95
VOICEDIAL	\$6.75
VOICEDIAL	\$6.75
<b>Estimated Cost Per Plan</b>	<b>\$74.39</b>

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Figure 2.4-15 Confirmation Screen

B2B screen flows for add/delete features use case in bulk.

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Overview Hierarchy **Manage Accounts** Manage Service Order Status

### Add/Delete Features

1 → 2 → 3 → 4

**Company:** Celltek **Hierarchy:** Celltek-Billing  
**User:** Mark Brown **Position:** Celltek-Billing

Search for and select service agreements to change.

**Rate Plan** **Features** **Change Number** **Change Device** **Port Number**

**Search Criteria**

Plan Group: International  Plan Name: RatePlan1000

[Single Selection](#)

**Search Results**

<input type="checkbox"/>	Name	Phone Number	Rate Plan	Device	Status
<input type="checkbox"/>	Jones, Brendan	617-126-2471	INTERNATIONAL600	BLACKBERRY7280	Active
<input type="checkbox"/>	Brown, Benjamin	508-309-3946	INTERNATIONAL600	BLACKBERRY7280	Active
<input type="checkbox"/>	Buel, Christina	803-397-4516	NATDIRECT600	MOTOROLA80	Active
<input type="checkbox"/>	Jones, Tanya	617-487-9873	NATDIRECT600	MOTOROLA80	Active
<input type="checkbox"/>	Brown, Ed	617-765-5666	REGION700	NOKIAI730	Active
<input type="checkbox"/>	Brown, Amy	617-765-5541	REGION700	NOKIAI730	Active
<input type="checkbox"/>	Jones, Theresa	617-487-9891	NATDIRECT600	MOTOROLA80	Active
<input type="checkbox"/>	Jones, Susan	508-309-3903	INTERNATIONAL600	BLACKBERRY7280	Active
<input type="checkbox"/>	Brown, Tracy	828-980-3843	NATDIRECT600	BLACKBERRY7280	Active
<input type="checkbox"/>	Jones, Larry	508-309-3239	INTERNATIONAL600	BLACKBERRY7280	Active

76 items found, displaying 1 to 10. [First/Prev] 1, 2, 3, 4, 5, 6, 7, 8 [Next/Last]

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**Figure 2.4-16** User first filters by Rate Plan Name before further filtering and selecting service agreements

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Overview Hierarchy **Manage Accounts** Manage Service Order Status

### Add/Delete Features

1 → 2 → 3 → 4

**Company:** Celltek **Hierarchy:** Celltek-Billing  
**User:** Mark Brown **Position:** Celltek-Billing

Search for and select service agreements to change.

**Rate Plan** **Features** **Change Number** **Change Device** **Port Number**

**Search Criteria**

**Plan Group:** International **Plan Name:** RatePlan1000 [Edit](#)

**Search By::** Phone Number  [Single Selection](#)

**Search Results**

<input checked="" type="checkbox"/>	Name	Phone Number	Rate Plan	Device	Status
<input checked="" type="checkbox"/>	Lee, Cooney	847-349-4114	INTERNATIONAL400	MOTOROLA80	Active
<input checked="" type="checkbox"/>	Patel, Lila	847-349-4110	INTERNATIONAL400	NOKIA5800	Active
<input checked="" type="checkbox"/>	Jones, Richard	847-349-4104	INTERNATIONAL400	MOTOROLA80	Active
<input checked="" type="checkbox"/>	Baker, Amy	847-349-4101	INTERNATIONAL400	MOTOROLA80	Active

4 items found, displaying all items.1

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Figure 2.4-17 User selects multiple service agreements

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### Add/Delete Features

1 → 2 → 3 → 4

**Company:** Celltek **Hierarchy:** Celltek-Billing  
**User:** Mark Brown **Position:** Celltek-Billing

Edit whether feature is included in all, some, or none of the selected service agreements.

Rate Plan Features Change Number Change Device Port Number

Optional Features				
Features	All	Some	None	Amount
3-way Calling	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	\$3.95
411-Connect	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	\$1.95
No Answer/Busy	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	\$2.95
TXT Messaging	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	\$3.95
Call Forwarding	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	\$2.95

**Selected User Details**

Name	Phone Number	Rate Plan	Device	Status
Lee, Cooney	847-349-4114	INTERNATIONAL400	MOTOROLA80	Active <a href="#">Remove</a>
Patel, Lila	847-349-4110	INTERNATIONAL400	NOKIA5800	Active <a href="#">Remove</a>
Jones, Richard	847-349-4104	INTERNATIONAL400	MOTOROLA80	Active <a href="#">Remove</a>
Baker, Amy	847-349-4101	INTERNATIONAL400	MOTOROLA80	Active <a href="#">Remove</a>

BACK CANCEL SUBMIT

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Figure 2.4-18 Sample screen displays current selections

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### Add/Delete Features

1 → 2 → **3** → 4

**Company:** Celltek **Hierarchy:** Celltek-Billing  
**User:** Mark Brown **Position:** Celltek-Billing

Please verify changes. Devices that are not compatible with the selected features will not be affected.

Rate Plan | **Features** | Change Number | Change Device | Port Number

#### Optional Features

Features	All	Some	None	Amount
3-way Calling	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	\$3.95
No Answer/Busy	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	\$2.95
TXT Messaging	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	\$3.95

Selected User Details				
Name	Phone Number	Rate Plan	Device	Status
Lee, Cooney	847-349-4114	INTERNATIONAL400	MOTOROLA80	Active <a href="#">Remove</a>
Patel, Lila	847-349-4110	INTERNATIONAL400	NOKIA5800	Active <a href="#">Remove</a>
Jones, Richard	847-349-4104	INTERNATIONAL400	MOTOROLA80	Active <a href="#">Remove</a>
Baker, Amy	847-349-4101	INTERNATIONAL400	MOTOROLA80	Active <a href="#">Remove</a>

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Figure 2.4-19 Verify screen displays current plan features and amount changes

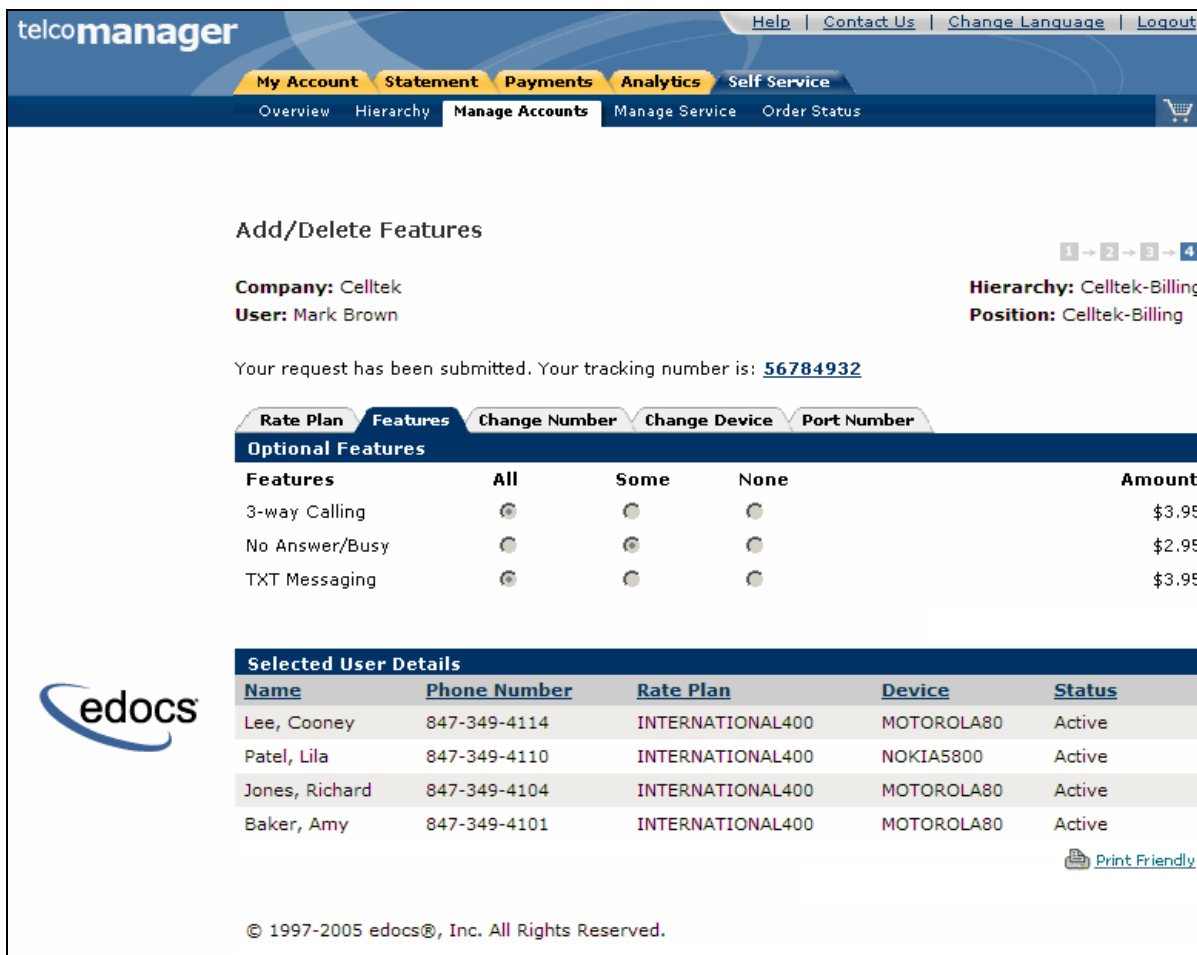


Figure 2.4-20 Confirmation page displays selected features

### 2.4.3 Change Device

Name:	Change Device
Brief Description:	Enables the business user to change the device associated with an individual service agreement (main path) or in bulk. This transaction is performed by changing the device serial number associated with the service agreement.
Actors:	Admin, Manager
Main Path:	<ol style="list-style-type: none"> <li>1. User selects Manage Account &gt; Change Device option.</li> </ol> <p><i>Step 1: Select service agreement</i></p> <ol style="list-style-type: none"> <li>2. User optionally invokes the Search &amp; Select use case to filter displayed service agreement's.</li> <li>3. User selects a service agreement from the list and selects</li> </ol>

	<p>continue action.</p> <p><u>Step 2: Enter New DSN</u></p> <ol style="list-style-type: none"> <li>4. System displays details for the selected service agreement including the current DSN and prompts the user to enter a new device ID.</li> <li>5. User enters the DSN and selects continue action. [A2]</li> </ol> <p><u>DSN Step 3: Verify</u></p> <ol style="list-style-type: none"> <li>6. User verifies and selects confirm action.</li> </ol> <p><u>Step 4: Confirmation</u></p> <ol style="list-style-type: none"> <li>7. System displays a tracking number and confirmation message for DSN change with an option to print the page for user records.</li> <li>8. Use case ends.</li> </ol>
<p>Alternate Paths:</p>	<p><b>[A1] Bulk Change</b></p> <ol style="list-style-type: none"> <li>1. User selects more than one service agreement to change DSN.</li> <li>2. This alternate path is the same as the main path expect that the Step 2 displays multiple service agreements selected.</li> </ol> <p><b>[A2] Invalid DSN</b></p> <p>If one or more DSNs are invalid</p> <ol style="list-style-type: none"> <li>1. A warning message is displayed “The following DSN’s are not recognized. Please enter new ones.</li> <li>2. The system highlights invalid device Ids.</li> <li>3. User either:             <ol style="list-style-type: none"> <li>a. Enters new device IDs.</li> <li>b. Selects the remove action for the service agreement(s) with the invalid Ids.</li> </ol> </li> <li>4. Selects continue</li> </ol>
<p>Standard Features:</p>	<ol style="list-style-type: none"> <li>1. Cancel action</li> <li>2. Back action</li> <li>3. Paging action</li> <li>4. Track service request</li> </ol>
<p>Exception Paths:</p>	<p><b>[E1]</b> User encounters a system error:</p> <ol style="list-style-type: none"> <li>1. System invokes Error Message use case.</li> </ol> <p><b>[E2]</b> System prompts to re-enter DSN.</p> <ol style="list-style-type: none"> <li>1. System populates the DSN entry from the user session for the error screen.</li> <li>2. System displays an error message stating that the DSN is not valid for the network and to contact the service provider.</li> </ol>
<p>Business Rules:</p>	<p><b>[B1]</b> System checks the network compatibility based on DSN.</p> <p><b>[B2]</b> DSN validation – combination of Hex and Decimal characters</p> <p><b>[B3]</b> System checks the current plan and support features of the device based on DSN.</p>
<p>Notes:</p>	





**B2B screen flows for Change Device use case in bulk.**

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Overview | Hierarchy | **Manage Accounts** | Manage Service | Order Status

### Change Device Serial Number (DSN) 1 → 2 → 3 → 4

**Company:** Celltek **Hierarchy:** Celltek-Billing  
**User:** Mark Brown **Position:** Celltek-Billing

Search for and select service agreements.

Rate Plan | Features | Change Number | **Change Device** | Port Number

**Search Criteria**

Search By:   Search Value:

**Search Results**

<input type="checkbox"/>	Name	Phone Number	Rate Plan	Device	Status
<input type="checkbox"/>	Brown, Samuel	508-309-3246	NATDIRECT600	BLACKBERRY7280	Active
<input checked="" type="checkbox"/>	Brown, Tom	397-894-2100	INTERNATIONAL600	MOTOROLA80	Active
<input type="checkbox"/>	Brown, Pam	508-309-3209	INTERNATIONAL600	BLACKBERRY7280	Active
<input checked="" type="checkbox"/>	Brown, Charles	847-349-4112	NATDIRECT600	BLACKBERRY7280	Active
<input type="checkbox"/>	Brown, Beulah	508-309-3963	INTERNATIONAL600	BLACKBERRY7280	Active
<input checked="" type="checkbox"/>	Brown, David	508-309-3966	INTERNATIONAL600	BLACKBERRY7280	Active
<input checked="" type="checkbox"/>	Brown, George	508-309-3241	INTERNATIONAL600	BLACKBERRY7280	Active
<input type="checkbox"/>	Brown, Kenneth	508-309-3249	INTERNATIONAL600	BLACKBERRY7280	Active
<input type="checkbox"/>	Brown, Amy	617-765-5541	REGION700	NOKIAI730	Active
<input checked="" type="checkbox"/>	Brown, Ed	617-765-5666	REGION700	NOKIAI730	Active

30 items found, displaying 1 to 10. [First/Prev] 1, 2, 3 [Next/Last]

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**Figure 2.4-21 Select service agreements**

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### Change Device Serial Number (DSN)

1 -> **2** -> 3 -> 4

**Company:** Celltek **Hierarchy:** Celltek-Billing  
**User:** Mark Brown **Position:** Celltek-Billing

Please enter a device serial number(s) you wish to change and click submit.

**Rate Plan** | **Features** | **Change Number** | **Change Device** | **Port Number**

Selected Service Agreement					
Name	Phone Number	Current DSN	New DSN	RatePlan	
Brown, Tom	397-894-2100	DSN36	QR23225343434343	INTERNATIONAL600	<a href="#">Remove</a>
Brown, Charles	847-349-4112	DSN08	QR3434543E353455	NATDIRECT600	<a href="#">Remove</a>
Brown, David	508-309-3966	DSN68	QR3434543E353455	INTERNATIONAL600	<a href="#">Remove</a>
Brown, George	508-309-3241	DSN71	QR3434543E353234	INTERNATIONAL600	<a href="#">Remove</a>
Brown, Ed	617-765-5666	DSN58	QR34345BE5342355	REGION700	<a href="#">Remove</a>

5 items found, displaying all items.1

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Figure 2.4-22 User enters new device serial numbers

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### Change Device Serial Number (DSN)

1 → 2 → **3** → 4

**Company:** Celltek **Hierarchy:** Celltek-Billing  
**User:** Mark Brown **Position:** Celltek-Billing

Please confirm changes.

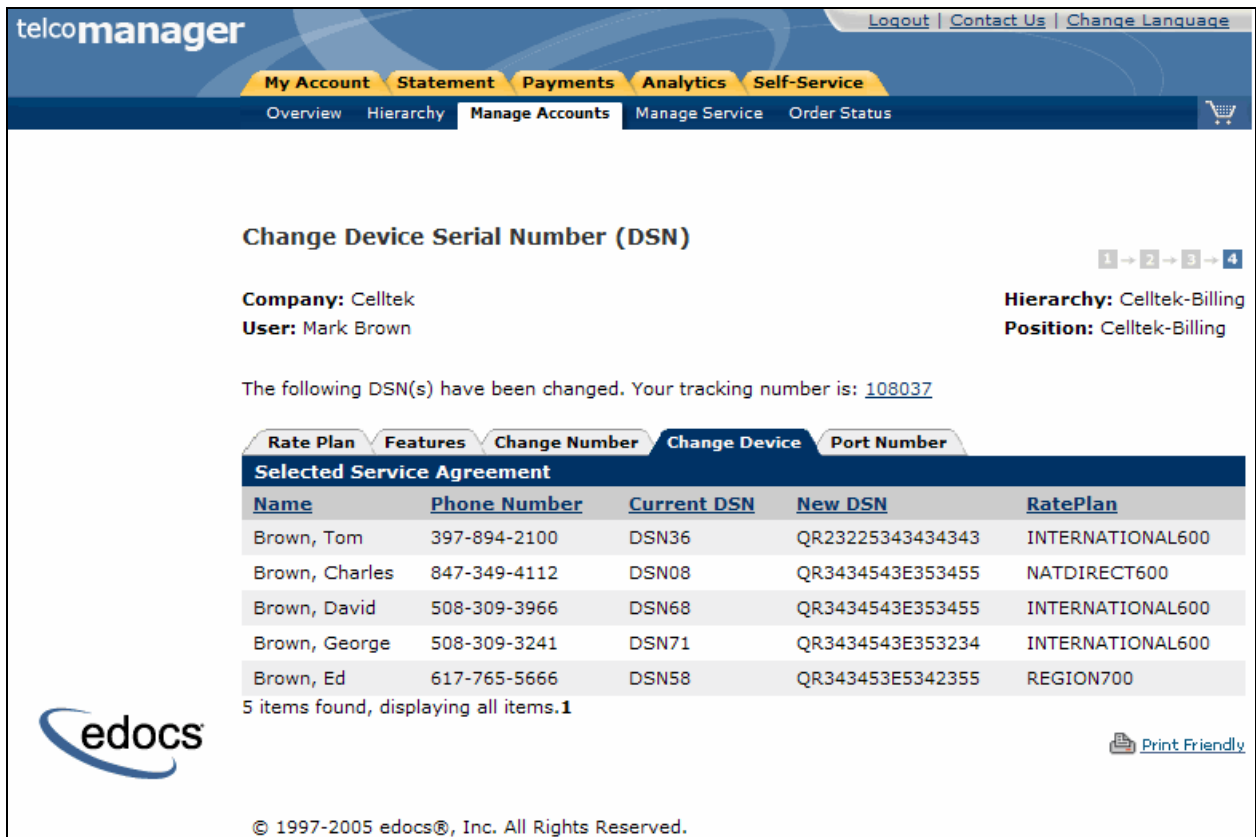
Rate Plan | Features | Change Number | **Change Device** | Port Number

Selected Service Agreement					
Name	Phone Number	Current DSN	New DSN	RatePlan	
Brown, Tom	397-894-2100	DSN36	QR23225343434343	INTERNATIONAL600	<a href="#">Remove</a>
Brown, Charles	847-349-4112	DSN08	QR3434543E353455	NATDIRECT600	<a href="#">Remove</a>
Brown, David	508-309-3966	DSN68	QR3434543E353455	INTERNATIONAL600	<a href="#">Remove</a>
Brown, George	508-309-3241	DSN71	QR3434543E353234	INTERNATIONAL600	<a href="#">Remove</a>
Brown, Ed	617-765-5666	DSN58	QR343453E5342355	REGION700	<a href="#">Remove</a>

5 items found, displaying all items.1

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Figure 2.4-24 Verify DSN change



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Overview | Hierarchy | **Manage Accounts** | Manage Service | Order Status

### Change Device Serial Number (DSN)

1 → 2 → 3 → 4

**Company:** Celltek  
**User:** Mark Brown


**Hierarchy:** Celltek-Billing  
**Position:** Celltek-Billing

The following DSN(s) have been changed. Your tracking number is: [108037](#)

**Rate Plan** | **Features** | **Change Number** | **Change Device** | **Port Number**

Selected Service Agreement				
Name	Phone Number	Current DSN	New DSN	RatePlan
Brown, Tom	397-894-2100	DSN36	QR23225343434343	INTERNATIONAL600
Brown, Charles	847-349-4112	DSN08	QR3434543E353455	NATDIRECT600
Brown, David	508-309-3966	DSN68	QR3434543E353455	INTERNATIONAL600
Brown, George	508-309-3241	DSN71	QR3434543E353234	INTERNATIONAL600
Brown, Ed	617-765-5666	DSN58	QR343453E5342355	REGION700

5 items found, displaying all items. 1

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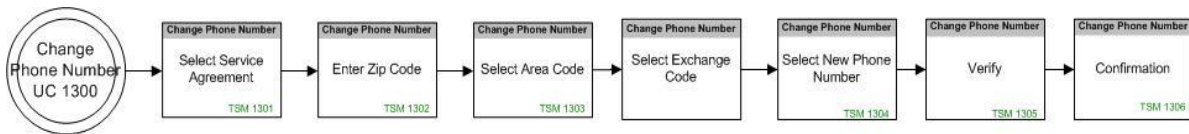
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Figure 2.4-25 Confirmation screen for DSN change

## 2.4.4 Change Phone Number

Name:	<b>Change Phone Number.</b>
Brief Description:	Enable a business user to change the phone numbers associated with an individual service agreement.
Actor(s):	Administrator, Manager
Main Path:	<ol style="list-style-type: none"> <li>1. User selects Manage Account &gt; Change PHONE NUMBER option.</li> </ol> <p><u>Step 1: Select service agreement</u></p> <ol style="list-style-type: none"> <li>2. User optionally invokes the Search &amp; Select use case to filter displayed service agreement's.</li> <li>3. User selects an individual service agreement from the list and selects continue action.</li> </ol> <p><u>Step 2: Enter Zip Code</u></p> <ol style="list-style-type: none"> <li>4. System displays selected service agreement details and prompts to enter zip code.</li> <li>5. User enters billing or primary point of usage zip code and selects continue action.</li> </ol> <p><u>Step 3: Select Area Code</u></p> <ol style="list-style-type: none"> <li>6. System displays list of area codes in a dropdown.</li> <li>7. User selects an area code and selects continue action.</li> </ol> <p><u>Step 4: Select Exchange Code</u></p> <ol style="list-style-type: none"> <li>8. System displays list of exchange codes in a dropdown.</li> <li>9. User selects an exchange code and selects continue action.</li> </ol> <p><u>Step 4: Select New Phone Number</u></p> <ol style="list-style-type: none"> <li>10. System displays a list of new numbers. [B1]</li> <li>11. User selects a number and selects continue action.</li> </ol> <p><u>Step 5: Verify Phone Number</u></p> <ol style="list-style-type: none"> <li>12. System displays selected number for verification.</li> <li>13. User verifies and selects confirm action. [A4]</li> </ol> <p><u>Step 6: Confirmation</u></p> <ol style="list-style-type: none"> <li>14. System displays confirmation message with tracking number and an option to print the page for user records.</li> <li>15. Use case ends.</li> </ol>
Alternate Paths:	<p><b>[A1] Update hierarchy upon successful completion</b></p> <p>When the change phone number transaction completes successfully, the new phone number is added to the list of phone numbers displayed in the hierarchy module.</p> <p>As noted in the "Search &amp; Select Service Agreement" use case, old numbers selected in the "Set Hierarchy Position" use case will be visually differentiated in TSM so that they can not be selected.</p>

	<p><b>[A2] User selects continue action without selecting a new phone number from the list.</b></p> <ol style="list-style-type: none"> <li>1. System displays error message and prompts to select a new number and continue</li> </ol>
Standard Features:	<ol style="list-style-type: none"> <li>1. Cancel action</li> <li>2. Back action</li> <li>3. Paging action</li> <li>4. Track service request</li> </ol>
Exception Paths:	<p><b>[E1] User encounters a validation error:</b></p> <ol style="list-style-type: none"> <li>1. System invokes <a href="#">Error Message</a> use case.</li> </ol>
Business Rules:	<p><b>[B1] System makes an external call to the TNI. The generated number are based on primary point of usage or billing address zip code, area code and exchange code.</b></p>
Notes:	<ol style="list-style-type: none"> <li>1. System displays 5 new phone numbers to the user. (Display list is configurable).</li> <li>2. System supports paging function. The number of user records displayed on each page is initially set to 10. System enables and displays paging icon if the search result has user records greater than 10.</li> </ol>



Following are the screen flows to Change phone number

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Overview Hierarchy **Manage Accounts** Manage Service Order Status

### Change Phone Number

1 → 2 → 3 → 4 → 5 → 6 → 7

**Company:** Celltek **Hierarchy:** Celltek-Billing  
**User:** Mark Brown **Position:** Celltek-Billing

Search for and select service agreement to change.

**Rate Plan** **Features** **Change Number** **Change Device** **Port Number**

**Search Criteria**

**Search By:** Subscriber Last Name  **Search Value:** Bak

**Search Results**

<u>Name</u>	<u>Phone Number</u>	<u>Rate Plan</u>	<u>Device</u>	<u>Status</u>
<input type="radio"/> Baker, Carren	397-894-2101	INTERNATIONAL600	MOTOROLA80	Active
<input checked="" type="radio"/> Baker, Amy	847-349-4118	INTERNATIONAL500	NOKIA5800	Active
<input type="radio"/> Baker, Jim	617-561-2366	INTERNATIONAL600	BLACKBERRY7280	Active
<input type="radio"/> Baker, Shelly	803-397-4513	INTERNATIONAL600	MOTOROLA80	Active
<input type="radio"/> Baker, Amy	847-349-4101	INTERNATIONAL400	MOTOROLA80	Active
<input type="radio"/> Baker, Ryan	617-345-3312	NATDIRECT600	BLACKBERRY7280	Active
<input type="radio"/> Baker, John	847-349-4113	NATDIRECT600	BLACKBERRY7280	Active
<input type="radio"/> Baker, Ted	617-938-0012	INTERNATIONAL600	BLACKBERRY7280	Active
<input type="radio"/> Baker, Carren	397-894-2101	INTERNATIONAL600	MOTOROLA80	Active
<input type="radio"/> Baker, Ryan	617-345-3312	NATDIRECT600	BLACKBERRY7280	Active

16 items found, displaying 1 to 10. [First/Prev] 1, 2 [Next/Last]

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Figure 2.4-26 Change Phone Number – Select Service Agreement

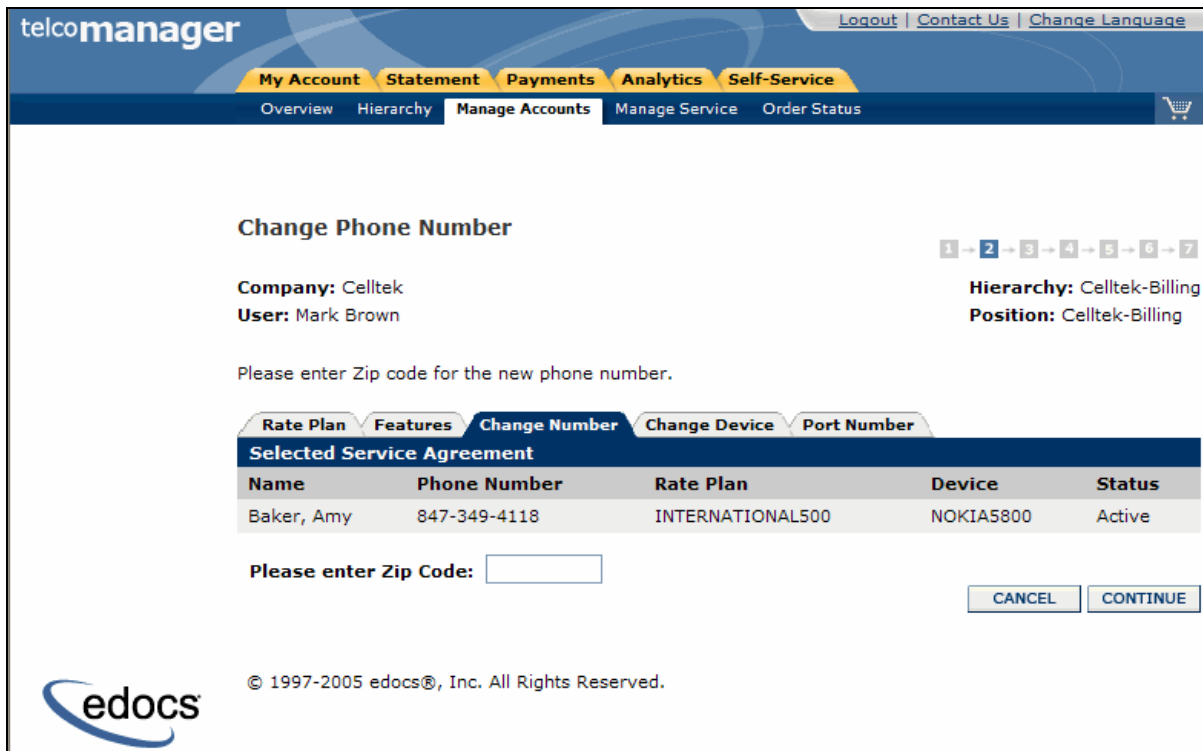


Figure 2.4-27 Change Phone Number – Enter Zip Code

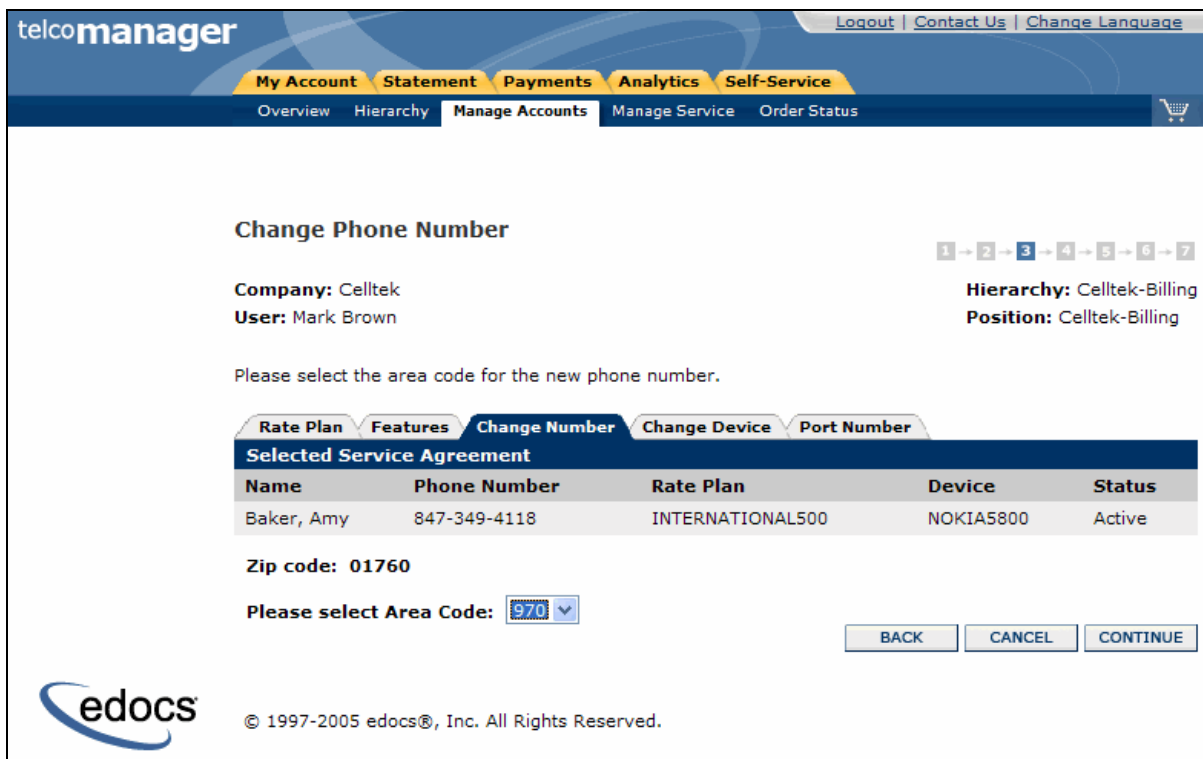


Figure 2.4-28 Change Phone Number – Select Area Code



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### Change Phone Number

1 → 2 → 3 → **4** → 5 → 6 → 7

**Company:** Celltek  
**User:** Mark Brown

**Hierarchy:** Celltek-Billing  
**Position:** Celltek-Billing

Please select the exchange code for your new phone number.

**Rate Plan** | **Features** | **Change Number** | **Change Device** | **Port Number**

Selected Service Agreement				
Name	Phone Number	Rate Plan	Device	Status
Baker, Amy	847-349-4118	INTERNATIONAL500	NOKIA5800	Active

**Zip code:** 01760  
**Area code:** 970

**Please select Exchange Code:** 973

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Figure 2.4-29 Select Exchange Code

Figure 2.4-30 Select New Phone Number

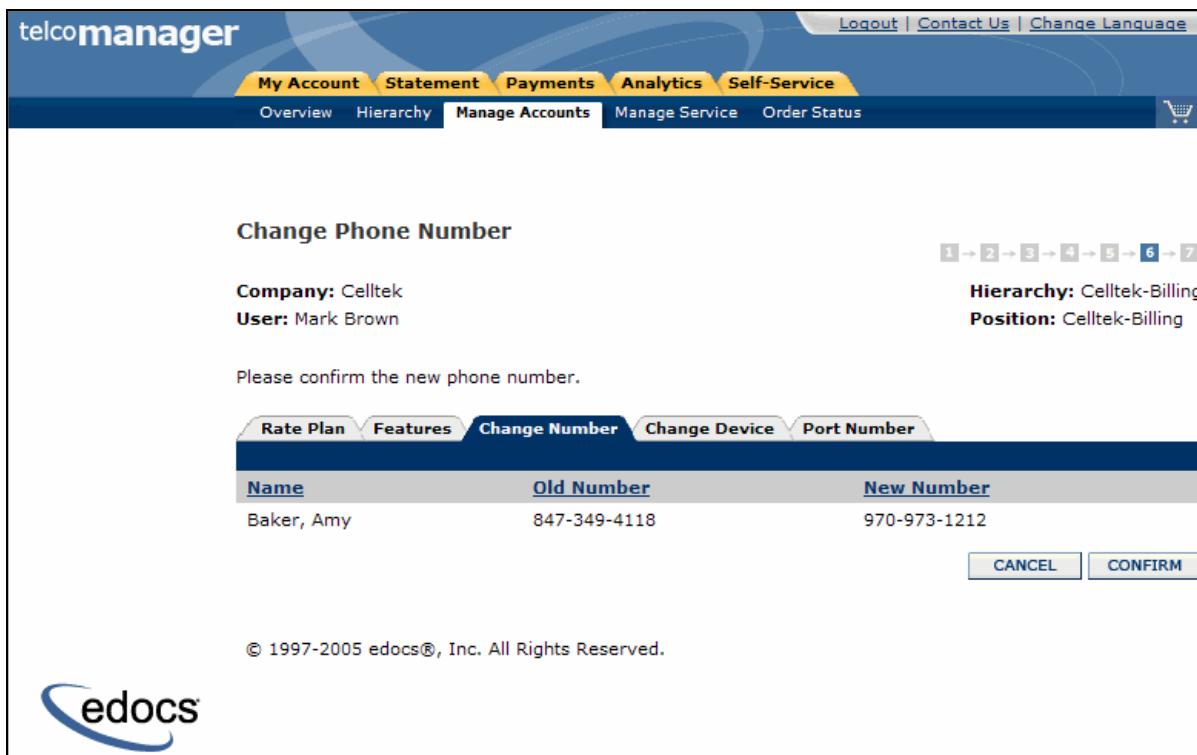


Figure 2.4-31 Confirm New Phone Number

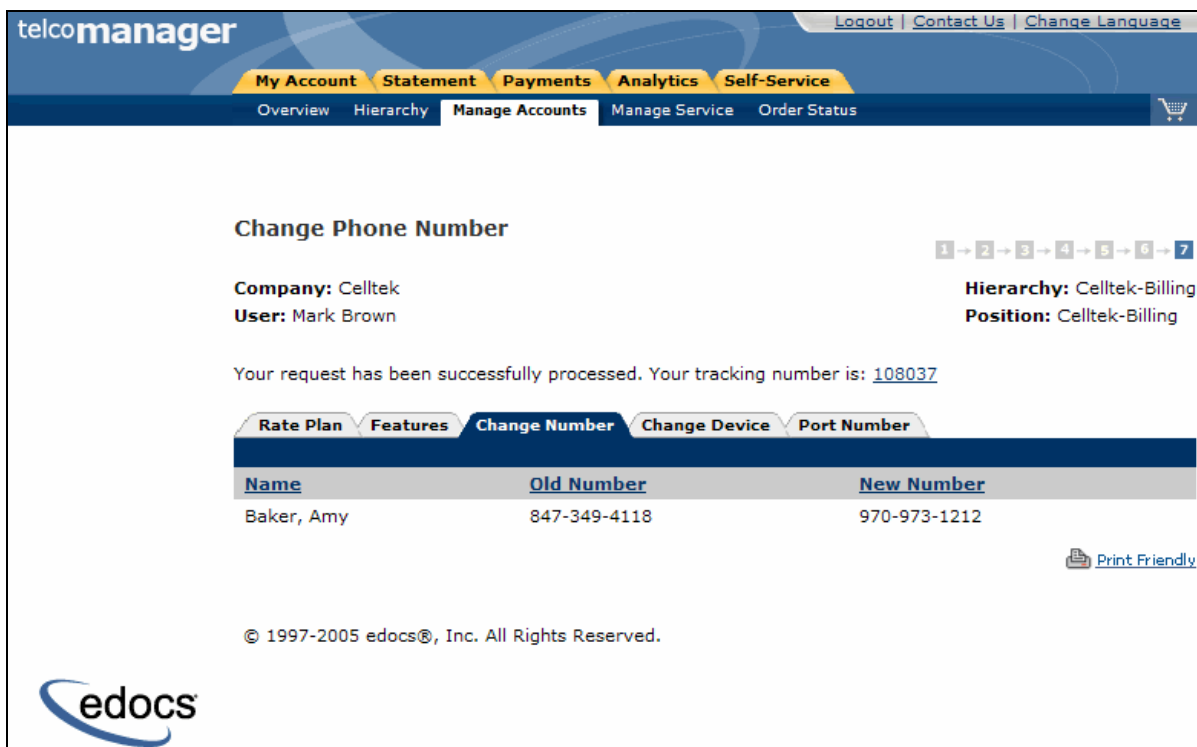
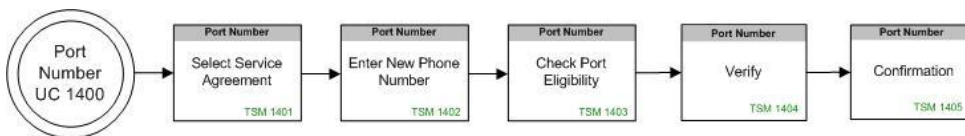


Figure 2.4-32 Change Phone Number – Confirmation

## 2.4.5 Port Number

<p><b>Name:</b></p>	<p><b>Port Telephone Number</b></p>
<p><b>Brief Description:</b></p>	<p>Provides the ability for a business user to port numbers in bulk (alternate path) and individually (main path).  <i>Rationale:</i> Port number enables the user to replace an existing number with a new number from different service provider.</p>
<p><b>Actors:</b></p>	<p>Admin, Manager</p>
<p><b>Main Path:</b></p>	<ol style="list-style-type: none"> <li>1. User selects Manage Account &gt; Port Number option.</li> </ol> <p><u>Step 1: Select service agreement</u></p> <ol style="list-style-type: none"> <li>2. User optionally invokes the Search &amp; Select use case to filter displayed service agreement's</li> <li>3. User selects a service agreement from the list and selects continue action.</li> </ol> <p><u>Step 2: Enter New Phone Number</u></p> <ol style="list-style-type: none"> <li>4. System displays the details for the selected service agreement including the current phone number and prompts the user to enter the following:             <ol style="list-style-type: none"> <li>1. New Phone Number [validation: 10 numbers with optional separator characters]</li> <li>2. Account Number [optional]</li> <li>3. Address, State, City and Zip Code [optional]</li> </ol> </li> <li>5. User enters new number to port for the selected service agreement and selects the continue action. [E2 - E4]</li> </ol> <p><u>Step 3: Check Port eligibility</u></p> <ol style="list-style-type: none"> <li>6. System validates and displays the number to port. [A2]</li> </ol> <p><u>Step 4: Verify</u></p> <ol style="list-style-type: none"> <li>7. User verifies and selects confirm action.</li> </ol> <p><u>Step 5: Confirmation</u></p> <ol style="list-style-type: none"> <li>8. System displays confirmation page with tracking number to check port status and an option to print the page for user records.</li> </ol>
<p><b>Alternate Paths:</b></p>	<p><b>[A1] Number ineligible to port</b></p> <p>If the service provider can respond to an interim request and identifies that one or more numbers are ineligible to port</p> <ol style="list-style-type: none"> <li>1. A warning message is displayed "The following numbers are not eligible to be ported. Please enter a new ones or remove the service agreements.</li> <li>2. The system highlights ineligible numbers.</li> <li>3. User either:             <ol style="list-style-type: none"> <li>a. Enters new number.</li> <li>b. Selects the remove action for the service agreement(s) with the invalid Ids.</li> </ol> </li> <li>4. Selects continue</li> </ol>

<p><b>Standard Features:</b></p>	<ol style="list-style-type: none"> <li>1. Cancel action</li> <li>2. Back action</li> <li>3. Paging action</li> <li>4. Track service request</li> </ol>
<p><b>Exception Paths:</b></p>	<p><b>[E1]</b> User encounters a system error:  <ol style="list-style-type: none"> <li>1. System invokes <a href="#">Error Message</a> use case.</li> </ol></p> <p><b>[E2]</b> System displays error message for 'Invalid Phone number' entries.</p> <p><b>[E3]</b> System displays error message – "Phone number is not eligible to port."</p> <p><b>[E4]</b> System displays error message if the port number is repeated by the user and prompts to re-enter</p>
<p><b>Business Rules:</b></p>	<p><b>[B1]</b> System validates phone number and checks the network compatibility for these numbers to port from different service provider.</p>
<p><b>Notes:</b></p>	<ol style="list-style-type: none"> <li>1. System does not support to change to another existing number that they own within the same service provider.</li> </ol>



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### Select Service Agreement

1 → 2 → 3 → 4

**Company:** Celltek **Hierarchy:** Celltek-Billing  
**User:** Mark Brown **Position:** Celltek-Billing

Search for and select service agreements.

**Rate Plan** | **Features** | **Change Number** | **Change Device** | **Port Number**

**Search Criteria**

**Search By:** Subscriber Last Name  **Search Value:**

**Search Results**

Name	Phone Number	Rate Plan	Device	Status
<input checked="" type="radio"/> Virgo, Diego	397-894-2113	NATDIRECT600	MOTOROLA80	Active
<input type="radio"/> Jones, Barbara	508-309-3210	INTERNATIONAL600	BLACKBERRY7280	Active
<input type="radio"/> Baker, Amy	847-349-4118	INTERNATIONAL500	NOKIA5800	Active
<input type="radio"/> Brown, Kenneth	508-309-3249	INTERNATIONAL600	BLACKBERRY7280	Active
<input type="radio"/> Brown, Charles	847-349-4112	NATDIRECT600	BLACKBERRY7280	Active
<input type="radio"/> Brown, Tom	397-894-2100	INTERNATIONAL600	MOTOROLA80	Active
<input type="radio"/> Jones, Eve	508-309-3943	INTERNATIONAL600	BLACKBERRY7280	Active
<input type="radio"/> Baker, Ted	617-938-0012	INTERNATIONAL600	BLACKBERRY7280	Active
<input type="radio"/> Baker, Jim	617-561-2366	INTERNATIONAL600	BLACKBERRY7280	Active
<input type="radio"/> Peter, Tom	617-281-5959	NATDIRECT600	BLACKBERRY7280	Active


76 items found, displaying 1 to 10. [First/Prev] 1, 2, 3, 4, 5, 6, 7, 8 [Next/Last]

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Figure 2.4-33 Search and select service agreements

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### Enter New Phone Number

1 → **2** → 3 → 4

**Company:** Celltek **Hierarchy:** Celltek-Billing  
**User:** Mark Brown **Position:** Celltek-Billing

Please enter the number you wish to port.

**Rate Plan** | **Features** | **Change Number** | **Change Device** | **Port Number**

Service Agreement				
Name	Phone Number	Rate Plan	Device	Status
Virgo, Diego	397-894-2113	NATDIRECT600	MOTOROLA80	Active

**Edit Details**

**New Number:**

**Account Number:**

**Address:**

**City:**

**State:** MA

**Zip/Postal Code:**

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Figure 2.4-34 Sample screen to input numbers to port in bulk

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### Enter New Phone Number

1 → **2** → 3 → 4

**Company:** Celltek  
**User:** Mark Brown

**Hierarchy:** Celltek-Billing  
**Position:** Celltek-Billing

Please enter the number you wish to port.

**Please enter a valid Phone Number**

**Rate Plan** | **Features** | **Change Number** | **Change Device** | **Port Number**

Service Agreement				
Name	Phone Number	Rate Plan	Device	Status
Virgo, Diego	397-894-2113	NATDIRECT600	MOTOROLA80	Active

**Edit Details**

**New Number:**

**Account Number:**

**Address:**

**City:**

**State:**

**Zip/Postal Code:**

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Figure 2.4-35 Port Number – System error screen



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### Enter New Phone Number

1 → 2 → 3 → 4

**Company:** Celltek  
**User:** Mark Brown

**Hierarchy:** Celltek-Billing  
**Position:** Celltek-Billing

Please enter the number you wish to port.

Rate Plan
Features
Change Number
Change Device
Port Number

Service Agreement				
Name	Phone Number	Rate Plan	Device	Status
Virgo, Diego	397-894-2113	NATDIRECT600	MOTOROLA80	Active

**Edit Details**

**New Number:**

**Account Number:**

**Address:**

**City:**

**State:**  ▼

**Zip/Postal Code:**

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### Confirm New Phone Number

1 → 2 → **3** → 4

**Company:** Celltek  
**User:** Mark Brown  
**Hierarchy:** Celltek-Billing  
**Position:** Celltek-Billing

Do you wish to port the following number?

Rate Plan | Features | Change Number | Change Device | **Port Number**

Service Agreement				
Name	Phone Number	Rate Plan	Device	Status
Virgo, Diego	397-894-2113	NATDIRECT600	MOTOROLA80	Active

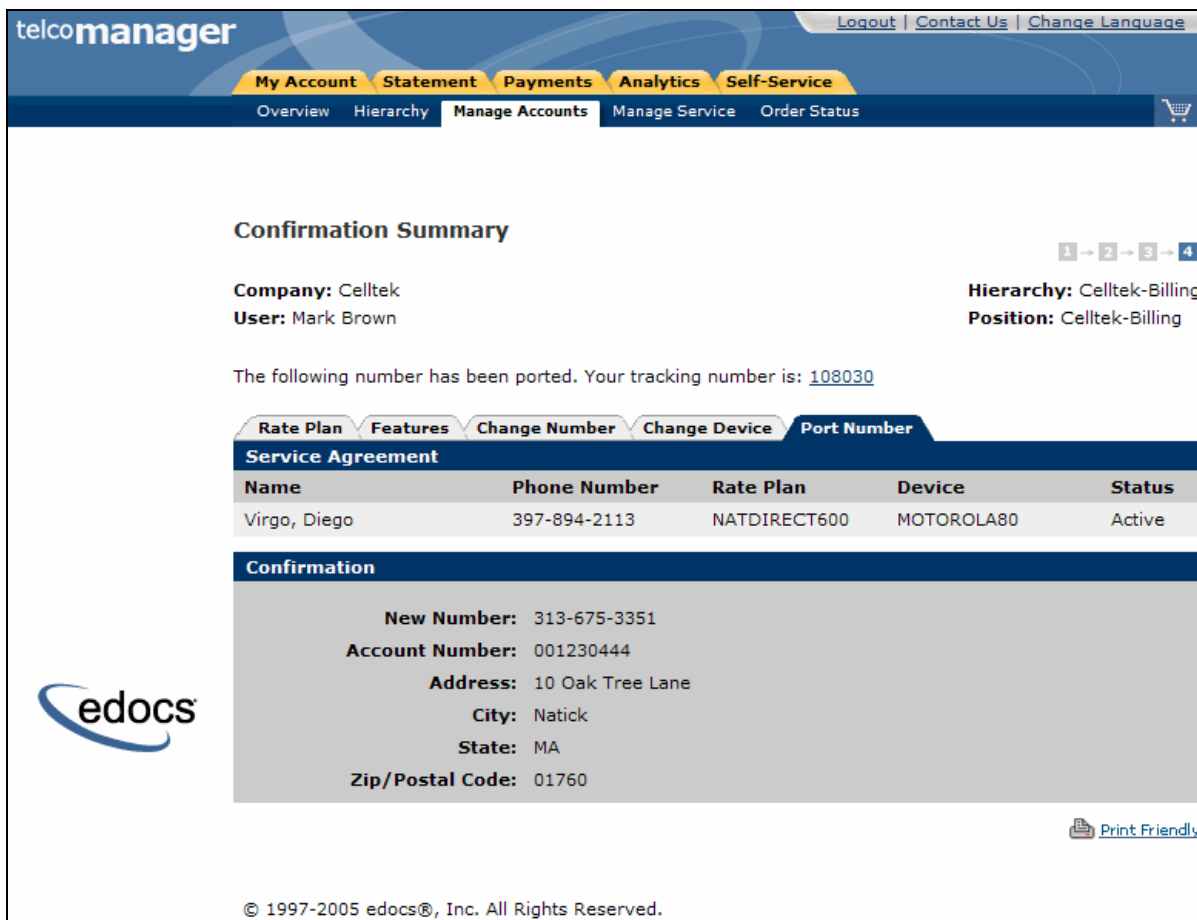
**Valid Number**

**New Number:** 313-675-3351  
**Account Number:** 001230444  
**Address:** 10 Oak Tree Lane  
**City:** Natick  
**State:** MA  
**Zip/Postal Code:** 01760

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Figure 2.4-36 Verify Phone Number



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### Confirmation Summary

1 → 2 → 3 → 4

**Company:** Celltek  
**User:** Mark Brown

**Hierarchy:** Celltek-Billing  
**Position:** Celltek-Billing


The following number has been ported. Your tracking number is: [108030](#)

**Rate Plan** | **Features** | **Change Number** | **Change Device** | **Port Number**

Service Agreement				
Name	Phone Number	Rate Plan	Device	Status
Virgo, Diego	397-894-2113	NATDIRECT600	MOTOROLA80	Active

**Confirmation**

**New Number:** 313-675-3351  
**Account Number:** 001230444  
**Address:** 10 Oak Tree Lane  
**City:** Natick  
**State:** MA  
**Zip/Postal Code:** 01760

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Figure 2.4-37 Port Number – Confirmation screen

## 2.5 Manage Service Use Cases

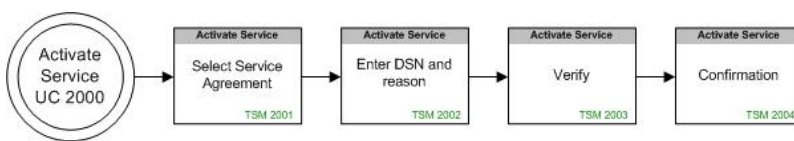
The following use cases cover the business requirements for enabling the existing business customer and CSR to manage services. The administrator can also perform these functions.

- Activate Service
- Suspend Service
- Resume Service
- Deactivate Service
- Change Voicemail Password
- Change Subscriber Profile

### 2.5.1 Activate Service

<b>Name:</b>	<b>Activate service</b>
<b>Brief Description:</b>	Enables the business user to activate an individual service agreement (main path) or in bulk (alternate path).
<b>Actors:</b>	Admin, Manager
<b>Main Path:</b>	<ol style="list-style-type: none"> <li>1. User selects Manage Service &gt; Activate option.</li> </ol> <p><u>Step 1: Select service agreement</u></p> <ol style="list-style-type: none"> <li>2. User optionally invokes the Search &amp; Select use case to filter displayed service agreement's. [B2]</li> <li>3. User selects a service agreement from the list and selects continue action.</li> </ol> <p><u>Step 2: Enter DSN and reason for activation</u></p> <ol style="list-style-type: none"> <li>4. System displays the selected service agreement details.</li> <li>5. System prompts to enter DSN and reason for activation from the list below. [E2-E3] [B1]             <ol style="list-style-type: none"> <li>a. Received phone from service provider</li> <li>b. Received phone from another source.</li> </ol> </li> <li>6. User enters DSN , selects a reason and selects continue action.[A3]</li> </ol> <p><u>Step 3: Verify</u></p> <ol style="list-style-type: none"> <li>7. System displays the phone number and reason selected for verification.</li> <li>8. User verifies and selects confirm action.</li> </ol> <p><u>Step 4: Confirmation</u></p> <ol style="list-style-type: none"> <li>9. System displays confirmation page with tracking number and an option to print the page for user records.</li> <li>10. Use Case Ends.</li> </ol>

<p>Alternate Paths:</p>	<p><b>[A1] Bulk Change</b></p> <ol style="list-style-type: none"> <li>1. User selects more than one service agreement to activate in bulk</li> <li>2. This alternate path is the same as the main path except that the Step 2 displays the multiple service agreements selected.</li> </ol> <p><b>[A2] DSN Default</b></p> <ol style="list-style-type: none"> <li>1. If the service agreement has a DSN stored in TSM or if the service provider returns one with an interim request, this value is displayed in the DSN field. The user can accept or edit this value and follow the main path.</li> </ol> <p><b>[A3] Invalid DSN entry.</b></p> <ol style="list-style-type: none"> <li>1. System displays an error message for invalid DSN entry. [E3]</li> <li>2. System prompts to reenter ESN. [E2]</li> </ol>
<p>Standard Features:</p>	<ol style="list-style-type: none"> <li>1. Cancel action</li> <li>2. Back action</li> <li>3. Paging action (number of lines configurable by use case)</li> <li>4. Track service request</li> </ol>
<p>Exception Paths:</p>	<p><b>[E1]</b> User encounters a system error:</p> <ol style="list-style-type: none"> <li>1. System invokes <a href="#">Error Message</a> use case.</li> </ol> <p><b>[E2]</b> System prompts to re-enter ESN.</p> <ol style="list-style-type: none"> <li>1. System populates the DSN from the user session.</li> </ol> <p><b>[E3]</b> System displays error message not valid for network.</p>
<p>Business Rules:</p>	<p><b>[B1]</b> System validates DSN and checks device compatibility.</p> <p><b>[B2]</b> System filters service agreement's based on status and displays only service agreement's that are "INACTIVE".</p>
<p>Notes:</p>	<p>The reasons displayed are configurable by the service provider.</p>



The following are the B2B screen flows for Activate Service in bulk

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### Activate Phone Number

1 → 2 → 3 → 4

**Company:** Celltek **Hierarchy:** Celltek-Billing  
**User:** Mark Brown **Position:** Celltek-Billing

Search and select service agreements.

Activate | Suspend | Resume | Deactivate | Voicemail | Subscriber Profile

**Search Criteria**

Search By: Subscriber Last Name GO Search Value: BAKE SEARCH

< << Page 1 of 5 >> >

**Search Results**

<input type="checkbox"/>	Name	Phone Number	Rate Plan	Device	Status
<input checked="" type="checkbox"/>	Baker, Amy	617-345-3312	INTERNATIONAL600	Nokia R20	Inactive
<input checked="" type="checkbox"/>	Baker, Ted	617-281-5959	INTERNATIONAL600	Nokia R20	Inactive
<input checked="" type="checkbox"/>	Baker, Ryan	617-281-1422	INTERNATIONAL500	Nokia R20	Inactive
<input checked="" type="checkbox"/>	Baker, Peter	617-422-3556	NATDIRECT600	Nokia R20	Inactive
<input type="checkbox"/>	Baker, John	617-765-5666	NATDIRECT600	Nokia R20	Inactive
<input type="checkbox"/>	Baker, Jim	617-765-1224	INTERNATIONAL600	Nokia R20	Inactive

< << Page 1 of 5 >> >

CANCEL CONTINUE

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Figure 2.5-1 Sample selection screen for bulk changes

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### Activate Phone Number

1 → 2 → 3 → 4

**Company:** Celltek **Hierarchy:** Celltek-Billing  
**User:** Mark Brown **Position:** Celltek-Billing

To activate a phone number please enter the device serial number

**Activate** | Suspend | Resume | Deactivate | Voicemail | Subscriber Profile

**Selected Service Agreement**

Name	Phone Number	DSN	Reason	
Baker, Amy	617-345-3312	<input type="text"/>	Received Phone from Other	<a href="#">Remove</a>
Baker, Ted	617-281-5959	<input type="text"/>	Received Phone from Other	<a href="#">Remove</a>
Baker, Ryan	617-281-1422	<input type="text"/>	Received Phone from Other	<a href="#">Remove</a>
Baker, Peter	617-422-3556	<input type="text"/>	Received Phone from Other	<a href="#">Remove</a>

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Figure 2.5-2 Sample screen to input ESN

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The following device serial number(s) have been detected as invalid.  
Please reenter the invalid DSN or remove the service agreement.

**Activate Phone Number** 1 → **2** → 3 → 4

**Company:** Celltek **Hierarchy:** Celltek-Billing  
**User:** Mark Brown **Position:** Celltek-Billing

If you wish to process the valid DSN changes click submit.

**Activate** | **Suspend** | **Resume** | **Deactivate** | **Voicemail** | **Subscriber Profile**

Invalid Phone Number(s)			
Name	Phone Number	Enter New DSN	Reason
Baker, Amy	617-345-3312	! Q345646346444-A	Received Phone from Other <input type="button" value="Remove"/>

Valid Phone Number(s)			
Name	Phone Number	DSN	Reason
Baker, Ted	617-281-5959	Q34564634621111-B	Received Phone from Other <input type="button" value="Remove"/>
Baker, Ryan	617-281-1422	R34564634622222-C	Received Phone from Other <input type="button" value="Remove"/>
Baker, Peter	617-422-3556	M34564634624444-D	Received Phone from Other <input type="button" value="Remove"/>

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Figure 2.5-3 System error screen for invalid DSN entry



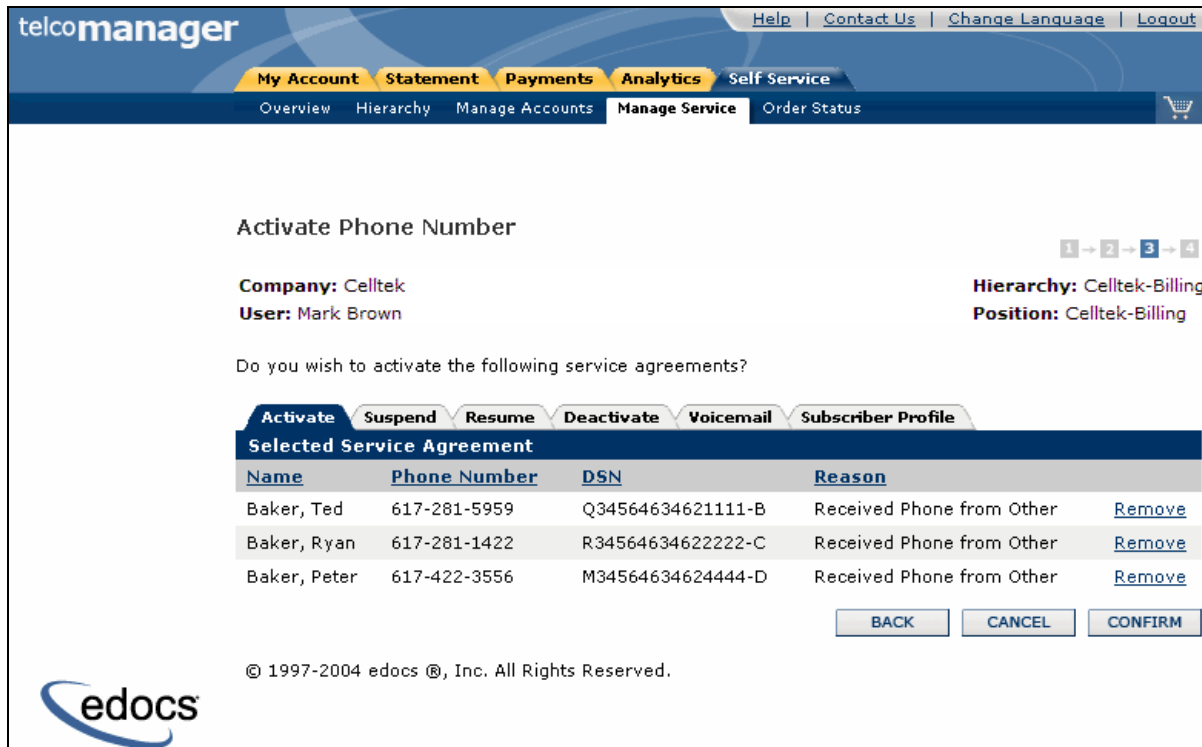


Figure 2.5-4 Verify Service Agreement Screen

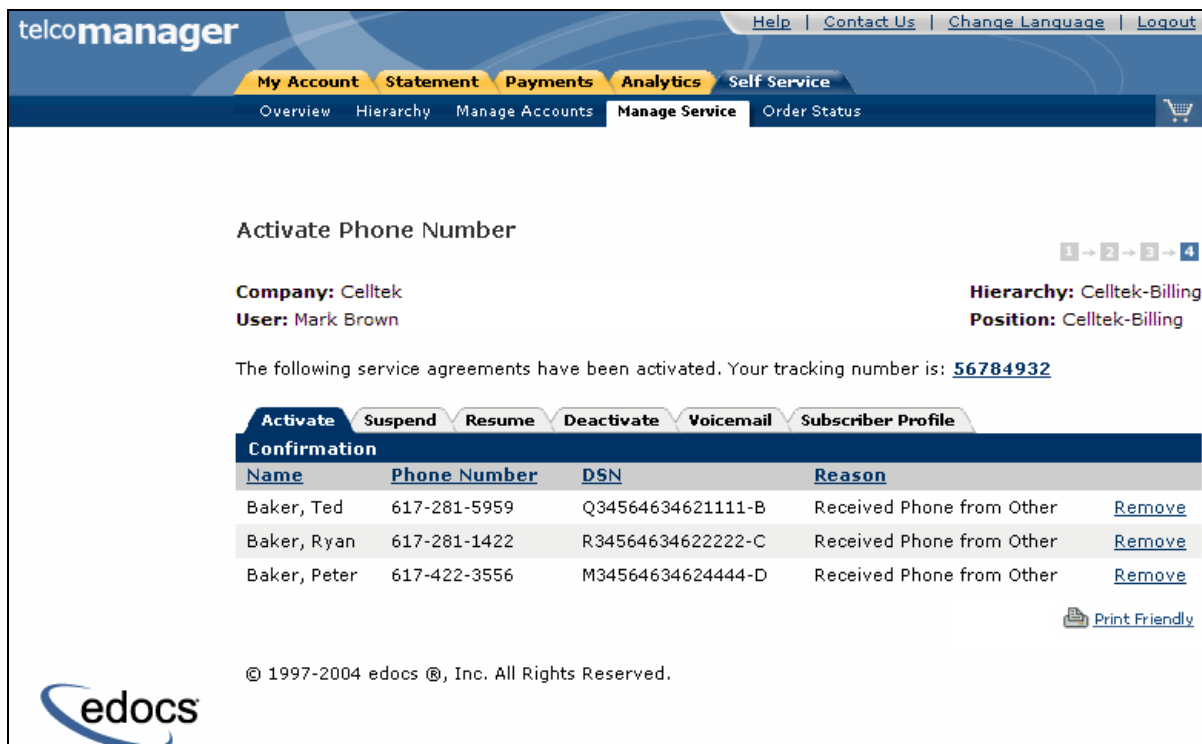


Figure 2.5-5 Activate Service Agreement Confirmation Screen

## 2.5.2 Suspend Service

<b>Name:</b>	<b>Suspend service</b>
<b>Brief Description:</b>	Enables the business user to suspend an individual service agreement and specify an effective date
<b>Actors:</b>	Admin, Manager
<b>Main Path:</b>	<ol style="list-style-type: none"> <li>1. User selects Manage Service &gt; Suspend option.</li> </ol> <p><u>Step 1: Select service agreement</u></p> <ol style="list-style-type: none"> <li>2. User optionally invokes the Search &amp; Select use case to filter displayed service agreement's. [B2]</li> <li>3. User selects a service agreement and selects continue action.</li> </ol> <p><u>Step 2: Select reason and date</u></p> <ol style="list-style-type: none"> <li>4. System displays selected service agreement details and prompts to:             <ol style="list-style-type: none"> <li>1. Enter reason for suspension [B1]                 <ol style="list-style-type: none"> <li>i) Equipment trouble</li> <li>ii) Missing or Stolen Equipment</li> <li>iii) Sold the Unit</li> <li>iv) Vacation</li> </ol> </li> <li>2. Enter an effective date.</li> </ol> </li> <li>5. User selects a reason, enters an effective date and selects continue action.</li> </ol> <p><u>Step 4: Verify</u></p> <ol style="list-style-type: none"> <li>6. System displays the effective date to confirm.</li> <li>7. User verifies and selects confirm action.</li> </ol> <p><u>Step 5: Confirmation</u></p> <ol style="list-style-type: none"> <li>8. System displays confirmation page with tracking number and an option to print the page for user records.</li> <li>9. Use case ends.</li> </ol>
<b>Alternate Paths:</b>	<p><b>[A1] Bulk Change</b></p> <p>User selects more than one service agreement</p> <p>Alternate path is the same as the main path, except that multiple rows are displayed for each selected service agreement</p>
<b>Standard Features:</b>	<ol style="list-style-type: none"> <li>1. Cancel action</li> <li>2. Back action</li> <li>3. Paging action (number of lines configurable by use case)</li> <li>4. Track service request</li> </ol>
<b>Exception Paths:</b>	<p><b>[E1] User encounters a system error:</b></p> <ol style="list-style-type: none"> <li>1. System invokes <a href="#">Error Message</a> use case.</li> </ol>

<p><b>Business Rules:</b></p>	<p><b>[B1]</b> System populates reason based on reason codes based on the user login. User needs to provide reason to suspend each phone.</p> <p><b>[B2]</b> System filters service agreement's based on status and displays only service agreement's that are "ACTIVE".</p>
<p><b>Notes:</b></p>	<p>The reasons displayed are configurable by service provider.</p>



The following are the B2B screen flows for Suspend Service in bulk.

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### Select Service Agreement

1 → 2 → 3 → 4

**Company:** Celltek  
**User:** Mark Brown

**Hierarchy:** Celltek-Billing  
**Position:** Celltek-Billing

Search for and select service agreements.

**Activate** | **Suspend** | **Resume** | **Deactivate** | **Voicemail** | **Subscriber Profile**

**Search Criteria**

**Search By:** Device Type  **Search Value:** MOTOROLA80

**Search Results**

<input type="checkbox"/>	Name	Phone Number	Rate Plan	Device	Status
<input checked="" type="checkbox"/>	Jones, Kenneth	617-765-5613	NATDIRECT600	MOTOROLA80	Active
<input checked="" type="checkbox"/>	Brown, Dennis	397-894-2104	INTERNATIONAL600	MOTOROLA80	Active
<input checked="" type="checkbox"/>	Jones, Richard	847-349-4104	INTERNATIONAL400	MOTOROLA80	Active
<input type="checkbox"/>	Cooney, Liam	397-894-2109	NATDIRECT600	MOTOROLA80	Active
<input checked="" type="checkbox"/>	Jones, Brenda	617-487-9771	NATDIRECT600	MOTOROLA80	Active
<input checked="" type="checkbox"/>	Baker, Carren	397-894-2101	INTERNATIONAL600	MOTOROLA80	Active
<input type="checkbox"/>	Buel, Christina	803-397-4516	NATDIRECT600	MOTOROLA80	Active
<input type="checkbox"/>	Virgo, Perter	617-938-0011	INTERNATIONAL500	MOTOROLA80	Active
<input type="checkbox"/>	Jones, Lawrence	617-765-5617	NATDIRECT600	MOTOROLA80	Active
<input type="checkbox"/>	Jones, Barbara	617-765-5627	NATDIRECT600	MOTOROLA80	Active

29 items found, displaying 1 to 10. [First/Prev] 1, 2, 3 [Next/Last]

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Figure 2.5-6 Sample selection screen to suspend service

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My Account | Statement | Payments | Analytics | Self-Service

Overview | Hierarchy | Manage Accounts | **Manage Service** | Order Status

### Enter Reason to Suspend Service

1 → 2 → 3 → 4

**Company:** Celltek **Hierarchy:** Celltek-Billing  
**User:** Mark Brown **Position:** Celltek-Billing

Please select the reason for the suspension and specify the effective date.

Activate | **Suspend** | Resume | Deactivate | Voicemail | Subscriber Profile

Selected Service Agreement			
Name	Phone Number	Reason for Suspension	Effectiv
Jones, Kenneth	617-765-5613	Equipment Trouble	<input type="checkbox"/> /
Brown, Dennis	397-894-2104	Equipment Trouble	<input type="checkbox"/> /
Jones, Richard	847-349-4104	Equipment Trouble	<input type="checkbox"/> /
Jones, Brenda	617-487-9771	Equipment Trouble	<input type="checkbox"/> /
Baker, Carren	397-894-2101	Equipment Trouble	<input type="checkbox"/> /

5 items found, displaying all items.1

HeaRt - Cale... [Close]

February 2005

<< < Today > >>

Su	Mo	Tu	We	Th	Fr	Sa
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28					

L600 Remove  
L400 Remove  
L600 Remove

CONTINUE

Select Cancel

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**My Account** | **Statement** | **Payments** | **Analytics** | **Self-Service**

Overview | Hierarchy | Manage Accounts | **Manage Service** | Order Status

### Enter Reason to Suspend Service

1 → 2 → 3 → 4

**Company:** Celltek  
**User:** Mark Brown

**Hierarchy:** Celltek-Billing  
**Position:** Celltek-Billing

Please select the reason for the suspension and specify the effective date.

**Activate** | **Suspend** | **Resume** | **Deactivate** | **Voicemail** | **Subscriber Profile**

**Selected Service Agreement**

Name	Phone Number	Reason for Suspension	Effective Date	Rate Plan
Jones, Kenneth	617-765-5613	Vacation	02 / 25 / 2005	NATDIRECT600 <a href="#">Remove</a>
Brown, Dennis	397-894-2104	Vacation	02 / 25 / 2005	INTERNATIONAL600 <a href="#">Remove</a>
Jones, Richard	847-349-4104	Missing or Stolen Equipment	02 / 4 / 2005	INTERNATIONAL400 <a href="#">Remove</a>
Jones, Brenda	617-487-9771	Vacation	02 / 25 / 2005	NATDIRECT600 <a href="#">Remove</a>
Baker, Carren	397-894-2101	Equipment Trouble	02 / 27 / 2005	INTERNATIONAL600 <a href="#">Remove</a>

5 items found, displaying all items.1

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**Figure 2.5-7** Screen to input a reason and effective date

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**My Account** | **Statement** | **Payments** | **Analytics** | **Self-Service**

Overview | Hierarchy | Manage Accounts | **Manage Service** | Order Status 🛒

### Confirm Service Agreements

1 → 2 → **3** → 4

**Company:** Celltek **Hierarchy:** Celltek-Billing  
**User:** Mark Brown **Position:** Celltek-Billing

Do you wish to suspend the following service agreements?

**Activate** | **Suspend** | **Resume** | **Deactivate** | **Voicemail** | **Subscriber Profile**

Selected Service Agreement					
Name	Phone Number	Reason for Suspension	Effective Date	Rate Plan	
Jones, Kenneth	617-765-5613	Vacation	02/25/2005	NATDIRECT600	<a href="#">Remove</a>
Brown, Dennis	397-894-2104	Vacation	02/25/2005	INTERNATIONAL600	<a href="#">Remove</a>
Jones, Richard	847-349-4104	Missing or Stolen Equipment	02/4/2005	INTERNATIONAL400	<a href="#">Remove</a>
Jones, Brenda	617-487-9771	Vacation	02/25/2005	NATDIRECT600	<a href="#">Remove</a>
Baker, Carren	397-894-2101	Equipment Trouble	02/27/2005	INTERNATIONAL600	<a href="#">Remove</a>

5 items found, displaying all items.1

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Figure 2.5-8 Verify status

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**My Account** | **Statement** | **Payments** | **Analytics** | **Self-Service**

Overview | Hierarchy | Manage Accounts | **Manage Service** | Order Status

### Confirmation Summary

1 → 2 → 3 → 4

**Company:** Celltek  
**User:** Mark Brown

**Hierarchy:** Celltek-Billing  
**Position:** Celltek-Billing

Your status change has been completed. Your tracking number is: [56784932](#)

**Activate** | **Suspend** | **Resume** | **Deactivate** | **Voicemail** | **Subscriber Profile**

Confirmation				
Name	Phone Number	Reason for Suspension	Effective Date	Rate Plan
Jones, Kenneth	617-765-5613	Vacation	02/25/2005	NATDIRECT600
Brown, Dennis	397-894-2104	Vacation	02/25/2005	INTERNATIONAL600
Jones, Richard	847-349-4104	Missing or Stolen Equipment	02/4/2005	INTERNATIONAL400
Jones, Brenda	617-487-9771	Vacation	02/25/2005	NATDIRECT600
Baker, Carren	397-894-2101	Equipment Trouble	02/27/2005	INTERNATIONAL600

5 items found, displaying all items.1

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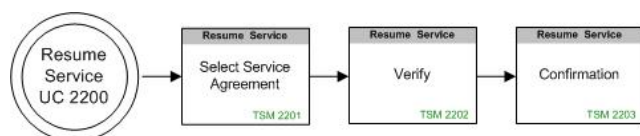
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**Figure 2.5-9 Confirm Service Agreements**



### 2.5.3 Resume Service

<b>Name:</b>	<b>Resume Service.</b>
<b>Brief Description:</b>	Enables the business user to resume service for an individual service agreement(main path) or bulk request for multiple service agreements (alternate path).
<b>Actors:</b>	Admin, Manager
<b>Main Path:</b>	<ol style="list-style-type: none"> <li>1. User selects Manage Service &gt; Resume option.</li> </ol> <p><u>Step 1: Select service agreement</u></p> <ol style="list-style-type: none"> <li>2. User optionally invokes the Search &amp; Select use case to filter displayed service agreement's. [B1]</li> <li>3. User selects a service agreement from the list and selects continue action.</li> </ol> <p><u>Step 2: Verify</u></p> <ol style="list-style-type: none"> <li>4. System displays service agreement details to confirm.</li> <li>5. User verifies and selects confirm action.</li> </ol> <p><u>Step 3: Confirmation</u></p> <ol style="list-style-type: none"> <li>6. System displays confirmation page with tracking number and an option to print the page for user records.</li> <li>7. Use case ends.</li> </ol>
<b>Alternate Paths:</b>	<p><b>[A1] Bulk Change</b></p> <ol style="list-style-type: none"> <li>1. User selects more than one service agreement</li> <li>2. Alternate path is the same as the main path, except that multiple rows are displayed for each selected service agreement</li> </ol>
<b>Standard Features:</b>	<ol style="list-style-type: none"> <li>1. Cancel action</li> <li>2. Paging action (number of lines configurable by use case)</li> <li>3. Track service request</li> </ol>
<b>Exception Paths:</b>	<p><b>[E1] User encounters a system error:</b></p> <ol style="list-style-type: none"> <li>1. System invokes <a href="#">Error Message</a> use case.</li> </ol>
<b>Business Rules:</b>	<p><b>[B1]</b> System filters service agreement's based on status and displays only service agreement's that are "SUSPENDED".</p>
<b>Notes:</b>	The reasons displayed are configurable by the service provider.



The following are the B2B screen flows for Resume Service in bulk.

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**My Account** | **Statement** | **Payments** | **Analytics** | **Self-Service**

Overview | Hierarchy | Manage Accounts | **Manage Service** | Order Status

### Select Service Agreement

1 → 2 → 3

**Company:** Celltek  
**User:** Mark Brown

**Hierarchy:** Celltek-Billing  
**Position:** Celltek-Billing

Search for and select service agreements.

**Activate** | **Suspend** | **Resume** | **Deactivate** | **Voicemail** | **Subscriber Profile**

**Search Criteria**

**Search By:** Subscriber Last Name  **Search Value:**

**Search Results**

<input checked="" type="checkbox"/>	Name	Phone Number	Rate Plan	Device	Status
<input checked="" type="checkbox"/>	Brown, Dennis	397-894-2104	INTERNATIONAL600	MOTOROLA80	Suspended
<input checked="" type="checkbox"/>	Jones, Brenda	617-487-9771	NATDIRECT600	MOTOROLA80	Suspended
<input checked="" type="checkbox"/>	Baker, Carren	397-894-2101	INTERNATIONAL600	MOTOROLA80	Suspended
<input checked="" type="checkbox"/>	Jones, Richard	847-349-4104	INTERNATIONAL400	MOTOROLA80	Suspended
<input checked="" type="checkbox"/>	Jones, Kenneth	617-765-5613	NATDIRECT600	MOTOROLA80	Suspended

5 items found, displaying all items.1

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Figure 2.5-10 Sample selection screen

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**My Account** | **Statement** | **Payments** | **Analytics** | **Self-Service**

Overview | Hierarchy | Manage Accounts | **Manage Service** | Order Status

### Confirm Service Agreements

1 → **2** → 3

**Company:** Celltek  
**User:** Mark Brown


**Hierarchy:** Celltek-Billing  
**Position:** Celltek-Billing

Do you wish to resume the following service agreements?

**Activate** | **Suspend** | **Resume** | **Deactivate** | **Voicemail** | **Subscriber Profile**

Selected Service Agreement			
Name	Phone Number	Rate Plan	
Brown, Dennis	397-894-2104	INTERNATIONAL600	<a href="#">Remove</a>
Jones, Brenda	617-487-9771	NATDIRECT600	<a href="#">Remove</a>
Baker, Carren	397-894-2101	INTERNATIONAL600	<a href="#">Remove</a>
Jones, Richard	847-349-4104	INTERNATIONAL400	<a href="#">Remove</a>
Jones, Kenneth	617-765-5613	NATDIRECT600	<a href="#">Remove</a>

5 items found, displaying all items. 1



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Figure 2.5-11 Verify status

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**My Account** | **Statement** | **Payments** | **Analytics** | **Self-Service**

Overview | Hierarchy | Manage Accounts | **Manage Service** | Order Status

### Confirmation Summary

1 → 2 → 3

**Company:** Celltek **Hierarchy:** Celltek-Billing  
**User:** Mark Brown **Position:** Celltek-Billing

Your status change has been completed. Your tracking number is: [56784932](#)

**Activate** | **Suspend** | **Resume** | **Deactivate** | **Voicemail** | **Subscriber Profile**

Confirmation		
Name	Phone Number	Rate Plan
Brown, Dennis	397-894-2104	INTERNATIONAL600
Jones, Brenda	617-487-9771	NATDIRECT600
Baker, Carren	397-894-2101	INTERNATIONAL600
Jones, Richard	847-349-4104	INTERNATIONAL400
Jones, Kenneth	617-765-5613	NATDIRECT600

5 items found, displaying all items.1

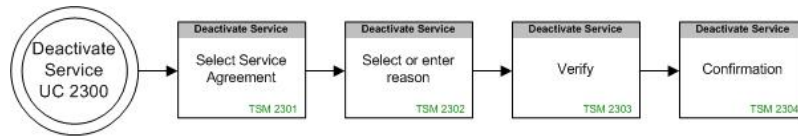
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Figure 2.5-12 Confirmation screen

## 2.5.4 Deactivate Service

Name:	<b>Deactivate Service</b>
Brief Description:	Enables customer service representatives to deactivate service.
Actor:	CSR only
Main Path:	<ol style="list-style-type: none"> <li>1. User selects Manage Service &gt; Deactivate option.</li> </ol> <p><u>Step 1: Select service agreement</u></p> <ol style="list-style-type: none"> <li>2. User optionally selects the Search &amp; Select use case to filter displayed service agreement's</li> <li>3. User selects a service agreement from the list and selects continue action.</li> </ol> <p><u>Step 2: Select or enter reason</u></p> <ol style="list-style-type: none"> <li>4. System displays selected service agreement details and prompts to enter a reason for deactivation. [E1] <ol style="list-style-type: none"> <li>1. Original DSN incorrect</li> <li>2. Phone being repaired</li> <li>3. Phone was stolen</li> <li>4. Account closed</li> </ol> </li> <li>5. User selects a reason and selects continue action. [A1]</li> </ol> <p><u>Step 3: Verify</u></p> <ol style="list-style-type: none"> <li>6. System displays the service agreement to verify.</li> <li>7. User verifies and selects confirm action.</li> </ol> <p><u>Step 4: Confirmation</u></p> <ol style="list-style-type: none"> <li>8. System deactivates number displays confirmation page with tracking number and an option to print the page for user records.</li> <li>9. Use case ends.</li> </ol>
Alternate Paths:	<p><b>[A1] Bulk Change</b></p> <ol style="list-style-type: none"> <li>1. User selects more than one service agreement</li> <li>2. Alternate path is the same as the main path, except that multiple rows are displayed for each selected service agreement</li> </ol>
Standard Features:	<ol style="list-style-type: none"> <li>1. Cancel action</li> <li>2. Back action</li> <li>3. Paging action (number of lines configurable by use case)</li> <li>4. Track service request</li> </ol>
Exception Paths:	<p><b>[E1] User encounters a system error:</b></p> <ol style="list-style-type: none"> <li>1. System invokes <a href="#">Error Message</a> use case.</li> </ol>
Business Rules:	None
Notes:	None



The following are the B2B screen flows for Deactivate Service Agreement in bulk.

**Deactivate Service**

Company: Celltek  
User: Mark Brown

Hierarchy: Celltek-Billing  
Position: Celltek-Billing

Search for and select service agreements.

Activate Suspend Resume **Deactivate** Voicemail Subscriber Profile

**Search Criteria**

Search By: Subscriber Last Name  Search Value

**Search Results**

<input type="checkbox"/>	Name	Phone Number	Rate Plan	Device	Status
<input checked="" type="checkbox"/>	Jones, Marie	617-126-2441	INTERNATIONAL600	BLACKBERRY7280	Active
<input type="checkbox"/>	Jones, Bryan	617-765-5671	NATDIRECT600	MOTOROLA80	Active
<input checked="" type="checkbox"/>	Scott, Judy	847-349-4109	INTERNATIONAL400	MOTOROLA80	Active
<input checked="" type="checkbox"/>	Brown, John	847-349-4117	INTERNATIONAL600	BLACKBERRY7280	Active
<input checked="" type="checkbox"/>	Cooney, John	617-487-9899	INTERNATIONAL600	BLACKBERRY7280	Active
<input type="checkbox"/>	Jones, Tim	617-765-5619	NATDIRECT600	MOTOROLA80	Active
<input type="checkbox"/>	Jones, Eve	508-309-3943	INTERNATIONAL600	BLACKBERRY7280	Active
<input checked="" type="checkbox"/>	Baker, William	397-894-2107	INTERNATIONAL600	MOTOROLA80	Active
<input type="checkbox"/>	Patel, Lila	847-349-4110	INTERNATIONAL400	NOKIAS800	Active
<input type="checkbox"/>	Virgo, Perter	617-938-0011	INTERNATIONAL500	MOTOROLA80	Active

81 items found, displaying 1 to 10. [First/Prev] 1, 2, 3, 4, 5, 6, 7, 8 [Next/Last]

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Figure 2.5-13 Sample selection screen

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**My Account** **Statement** **Payments** **Analytics** **Self-Service**

Overview Hierarchy Manage Accounts **Manage Service** Order Status

### Deactivate Service

1 → 2 → 3 → 4

**Company:** Celltek **Hierarchy:** Celltek-Billing  
**User:** Mark Brown **Position:** Celltek-Billing

Please select the reason for deactivation.

**Activate** **Suspend** **Resume** **Deactivate** **Voicemail** **Subscriber Profile**

**Selected Service Agreement**

Name	Phone Number	DSN	Reason for Deactivation
Jones, Marie	617-126-2441	DSN56	Account closed
Scott, Judy	847-349-4109	DSN11	Phone was stolen
Brown, John	847-349-4117	DSN21	Phone was stolen
Cooney, John	617-487-9899	DSN50	Account closed
Baker, William	397-894-2107	DSN37	Original DSN incorrect Original DSN incorrect Phone being repaired Phone was stolen Account closed

5 items found, displaying all items.1

**BACK** **CANCEL** **CONTINUE**

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Figure 2.5-14 Sample screen to input a reason

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**My Account** | **Statement** | **Payments** | **Analytics** | **Self-Service**

Overview | Hierarchy | Manage Accounts | **Manage Service** | Order Status

---

**Deactivate Service** 1 → 2 → **3** → 4

**Company:** Celltek **Hierarchy:** Celltek-Billing  
**User:** Mark Brown **Position:** Celltek-Billing

Do you wish to deactivate the following service agreements?

**Activate** | **Suspend** | **Resume** | **Deactivate** | **Voicemail** | **Subscriber Profile**

Selected Service Agreement				
Name	Phone Number	DSN	Reason for Deactivation	
Jones, Marie	617-126-2441	DSN56	Account closed	<a href="#">Remove</a>
Scott, Judy	847-349-4109	DSN11	Phone was stolen	<a href="#">Remove</a>
Brown, John	847-349-4117	DSN21	Phone was stolen	<a href="#">Remove</a>
Cooney, John	617-487-9899	DSN50	Account closed	<a href="#">Remove</a>
Baker, William	397-894-2107	DSN37	Account closed	<a href="#">Remove</a>

5 items found, displaying all items.1

**edocs** BACK | CANCEL | CONFIRM

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Figure 2.5-15 Deactivate flow – Verify service agreement screen



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**My Account** | **Statement** | **Payments** | **Analytics** | **Self-Service**

Overview | Hierarchy | Manage Accounts | **Manage Service** | Order Status

### Deactivate Service

1 → 2 → 3 → 4

**Company:** Celltek **Hierarchy:** Celltek-Billing  
**User:** Mark Brown **Position:** Celltek-Billing

Your phone number deactivations have been completed. Your tracking number is: [56784932](#)

**Activate** | **Suspend** | **Resume** | **Deactivate** | **Voicemail** | **Subscriber Profile**

**Selected Service Agreement**

Name	Phone Number	DSN	Reason for Deactivation
Jones, Marie	617-126-2441	DSN56	Account closed
Scott, Judy	847-349-4109	DSN11	Phone was stolen
Brown, John	847-349-4117	DSN21	Phone was stolen
Cooney, John	617-487-9899	DSN50	Account closed
Baker, William	397-894-2107	DSN37	Account closed

5 items found, displaying all items.1

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Figure 2.5-16 Confirmation screen for deactivation

## 2.5.5 Change Voicemail Password

Name:	<b>Change Voicemail Password</b>
Brief Description:	Provides the ability for a business user to change voicemail password for an individual service agreement. User can enter new password or have the system generate one.
Actor(s):	Business User, Administrator, CSR
Main Path:	<ol style="list-style-type: none"> <li>1. User selects Manage Service &gt; Change Voicemail password option.</li> </ol> <p><u>Step 1: Select service agreement</u></p> <ol style="list-style-type: none"> <li>2. User optionally invokes the Search &amp; Select use case to filter displayed service agreement's</li> <li>3. User selects a service agreement from the list and selects continue action.</li> </ol> <p><u>Step 2: Create Password</u></p> <ol style="list-style-type: none"> <li>4. System displays selected service agreement details along with following options:             <ol style="list-style-type: none"> <li>1. Please choose a password for me</li> <li>2. I wish to create my own password                 <ol style="list-style-type: none"> <li>i) Password</li> <li>ii) Re-enter password</li> </ol> </li> </ol> </li> <li>5. User selects "I wish to create my own password" option             <ol style="list-style-type: none"> <li>1. User enters and re-enters password</li> <li>2. and selects continue action. [A1]</li> </ol> </li> </ol> <p><u>Step 3: Verify Password</u></p> <ol style="list-style-type: none"> <li>6. System displays entered password for confirm.</li> <li>7. User verifies and selects confirm action.</li> </ol> <p><u>Step 4: Confirmation</u></p> <ol style="list-style-type: none"> <li>8. System displays confirmation message and tracking number with options to print the page for user records.</li> <li>9. Use case ends.</li> </ol>
Alternate Paths:	<p><b>[A1]</b> Automatically generate password</p> <ol style="list-style-type: none"> <li>1. User selects: "Please choose a password for me" option and continue</li> <li>2. System displays automatically generated password on confirmation screen</li> </ol> <p><b>[A2]</b> User selects continue action without selecting an option to create password.</p> <ol style="list-style-type: none"> <li>1. System displays an error message and prompts to select an option and continue.</li> </ol>

<p>Standard Features:</p>	<ol style="list-style-type: none"> <li>1. Cancel action</li> <li>2. Back action</li> <li>3. Paging action (number of lines configurable by use case)</li> <li>4. Track service request</li> </ol>
<p>Exception Paths:</p>	<p><b>[E1]</b> User encounters a system error:</p> <ol style="list-style-type: none"> <li>1. System invokes <a href="#">Error Message</a> use case.</li> </ol>
<p>Business Rules:</p>	<p><b>[B1]</b> Password Validation (configurable, default 4 digit number)</p>
<p>Notes:</p>	



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**My Account** **Statement** **Payments** **Analytics** **Self-Service**

Overview Hierarchy Manage Accounts **Manage Service** Order Status

### Change Voicemail Password

1 → 2 → 3 → 4

**Company:** Celltek **Hierarchy:** Celltek-Billing  
**User:** Mark Brown **Position:** Celltek-Billing

Search for and select service agreement to change voicemail password.

**Activate** **Suspend** **Resume** **Deactivate** **Voicemail** **Subscriber Profile**

**Search Criteria**

**Search By:** Subscriber Last Name  **Search Value:** Bak

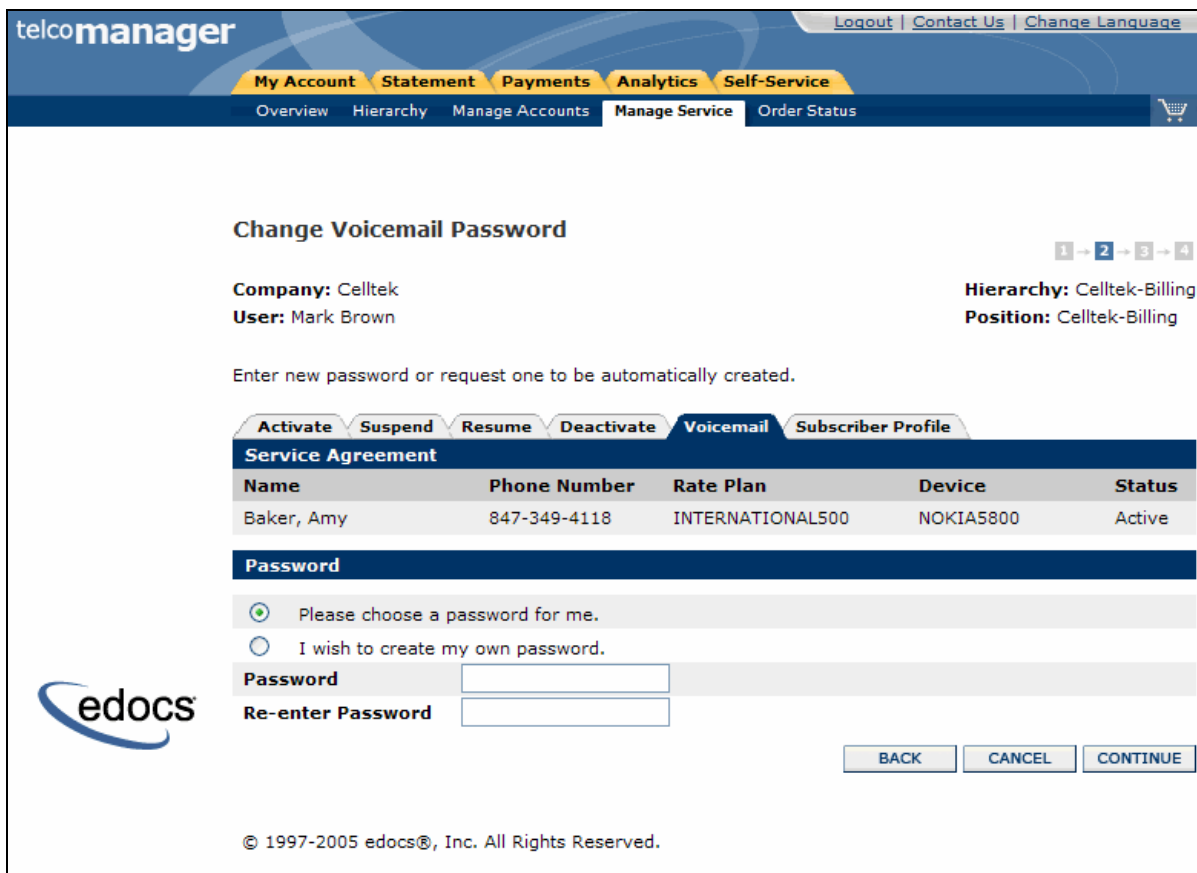
**Search Results**

Name	Phone Number	Rate Plan	Device	Status
<input checked="" type="radio"/> Baker, Amy	847-349-4118	INTERNATIONAL500	NOKIA5800	Active
<input type="radio"/> Baker, Jim	617-561-2366	INTERNATIONAL600	BLACKBERRY7280	Active
<input type="radio"/> Baker, Ryan	617-345-3312	NATDIRECT600	BLACKBERRY7280	Active
<input type="radio"/> Baker, John	847-349-4113	NATDIRECT600	BLACKBERRY7280	Active
<input type="radio"/> Baker, Shelly	803-397-4513	INTERNATIONAL600	MOTOROLA80	Active
<input type="radio"/> Baker, Ted	617-938-0012	INTERNATIONAL600	BLACKBERRY7280	Active
<input type="radio"/> Baker, Amy	847-349-4101	INTERNATIONAL400	MOTOROLA80	Active
<input type="radio"/> Baker, Carren	397-894-2101	INTERNATIONAL600	MOTOROLA80	Active
<input type="radio"/> Baker, John	847-349-4113	NATDIRECT600	BLACKBERRY7280	Active
<input type="radio"/> Baker, Ted	617-938-0012	INTERNATIONAL600	BLACKBERRY7280	Active

16 items found, displaying 1 to 10. [First/Prev] 1, 2 [Next/Last]

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Figure 2.5-17 Selection Screen



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**My Account** | **Statement** | **Payments** | **Analytics** | **Self-Service**

Overview | Hierarchy | Manage Accounts | **Manage Service** | Order Status

### Change Voicemail Password

1 → 2 → 3 → 4

**Company:** Celltek  
**User:** Mark Brown

**Hierarchy:** Celltek-Billing  
**Position:** Celltek-Billing

Enter new password or request one to be automatically created.

**Activate** | **Suspend** | **Resume** | **Deactivate** | **Voicemail** | **Subscriber Profile**

Service Agreement				
Name	Phone Number	Rate Plan	Device	Status
Baker, Amy	847-349-4118	INTERNATIONAL500	NOKIA5800	Active

**Password**

Please choose a password for me.  
 I wish to create my own password.

**Password**

**Re-enter Password**

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Figure 2.5-18 Select Password

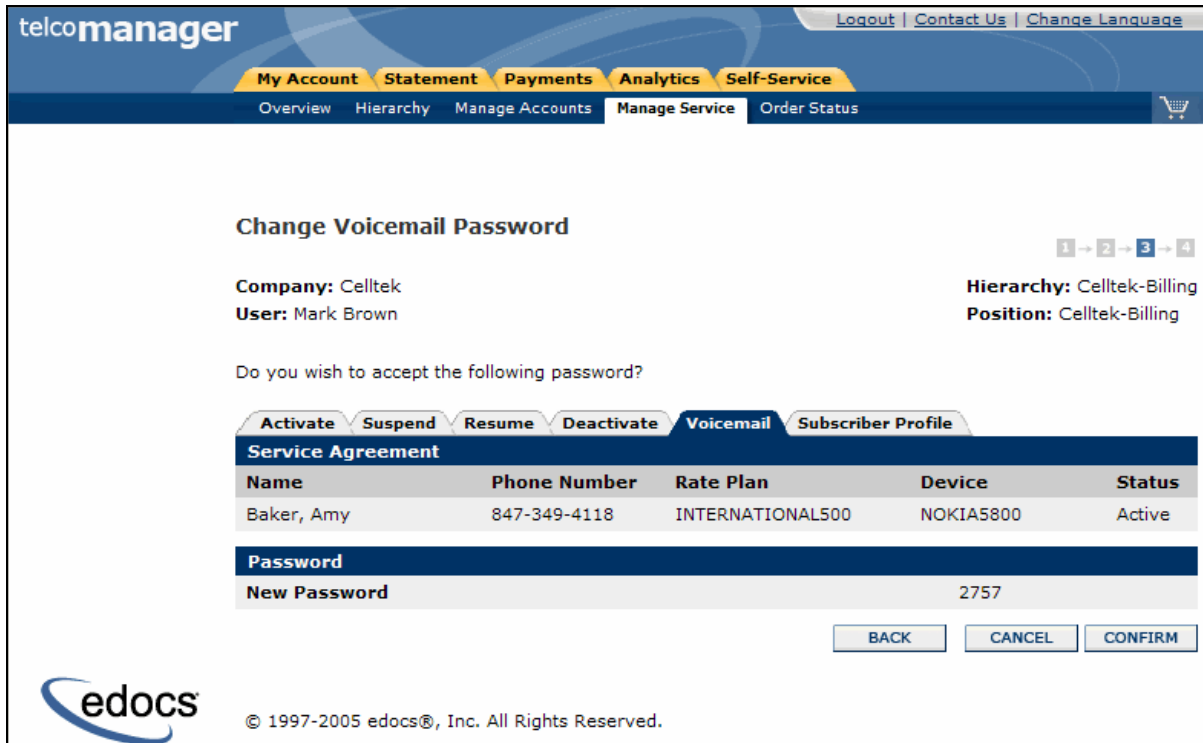


Figure 2.5-19 Verify screen displays system generated password

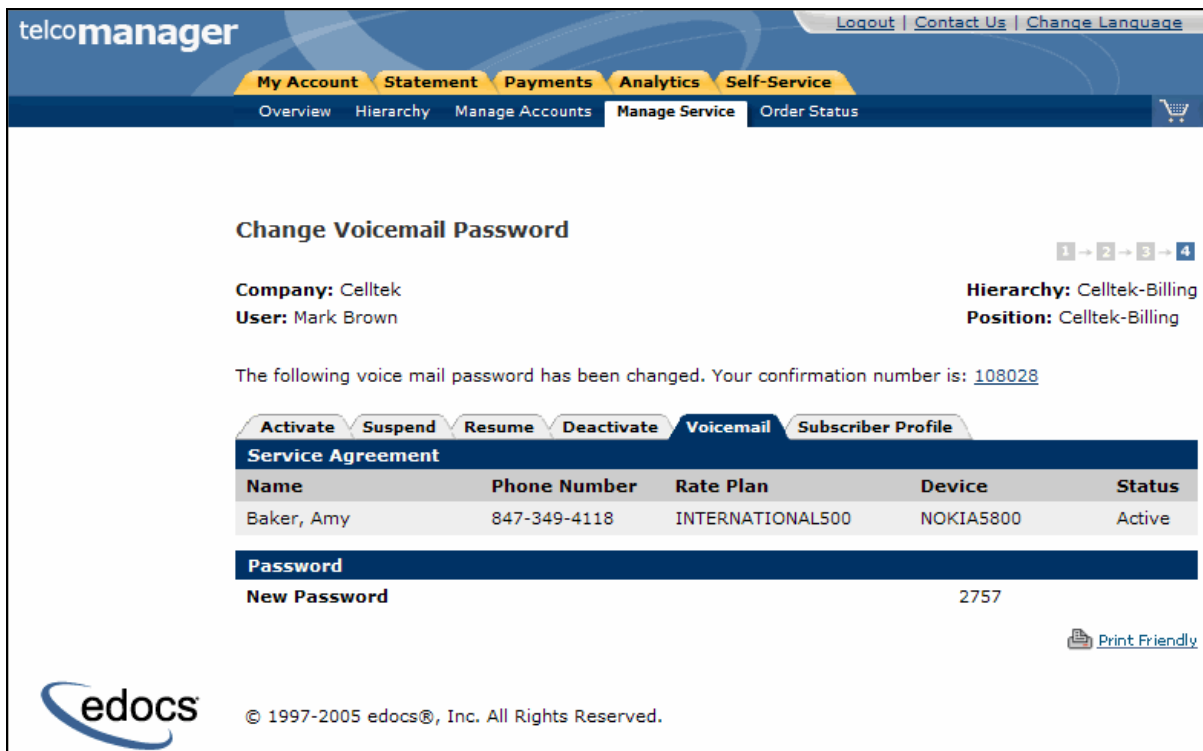


Figure 2.5-20 Confirmation Screen

## 2.5.6 Change Subscriber Profile

<b>Name:</b>	<b>Change Subscriber Profile</b>
<b>Brief Description:</b>	Provides the ability to the admin user to edit an individual service agreement's attributes such as subscriber's name and the primary point of usage (PPU) address.
<b>Actor:</b>	Administrator.
<b>Main Path:</b>	<ol style="list-style-type: none"> <li>1. User selects Manage Service &gt; Subscriber Profile option.</li> </ol> <p><u>Step 1: Select service agreement</u></p> <ol style="list-style-type: none"> <li>2. User optionally invokes the Search &amp; Select use case to filter displayed service agreement's.</li> <li>3. Admin user selects a service agreement and selects continue action.</li> </ol> <p><u>Step 2: Edit Subscriber details</u></p> <ol style="list-style-type: none"> <li>4. System displays edit subscriber profile screen including:             <ol style="list-style-type: none"> <li>1. First Name</li> <li>2. Last Name</li> <li>3. Subscriber Address (point of primary usage)                 <ol style="list-style-type: none"> <li>iii) Street Address</li> <li>iv) City</li> <li>v) State</li> <li>vi) Zip code (9 characters)</li> </ol> </li> <li>4. E-mail</li> <li>5. Home Phone no</li> <li>6. Work Phone no - ext</li> </ol> </li> <li>5. User enters details and selects continue action [A1] [E2]</li> </ol> <p><u>Step 3: Verify Changes</u></p> <ol style="list-style-type: none"> <li>6. System displays the changes to verify.</li> <li>7. User verifies and selects confirm action.</li> </ol> <p><u>Step 4: Confirmation</u></p> <ol style="list-style-type: none"> <li>8. System updates and displays confirmation message along with an option to print the page for user records.</li> <li>9. Use case ends.</li> </ol>
<b>Alternate Paths:</b>	<p><b>[A1] Invalid data entry</b></p> <p>System displays invalid warning message and prompts to re-enter the details.</p>
<b>Standard Features:</b>	<ol style="list-style-type: none"> <li>1. Cancel action</li> <li>2. Paging action (number of lines configurable by use case)</li> <li>3. Track service request</li> </ol>

<p><b>Exception Paths:</b></p>	<p><b>[E1]</b> User encounters a system error:          1. System invokes <a href="#">Error Message</a> use case.</p> <p><b>[E2]</b> System displays invalid data entry error message.</p>
<p><b>Business Rules:</b></p>	<p><b>[B1]</b> Form validation</p> <p><b>[B2]</b> System updates and caches the primary usage address to perform other bulk transactions based on this zip code (change rate plan).</p>
<p><b>Notes:</b></p>	<p>None</p>





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**My Account** **Statement** **Payments** **Analytics** **Self-Service**

Overview Hierarchy Manage Accounts **Manage Service** Order Status Shopping Cart

### Change Subscriber Profile

1 → 2 → 3 → 4

**Company:** Celltek **Hierarchy:** Celltek-Billing  
**User:** Mark Brown **Position:** Celltek-Billing

To change the Subscriber Profile, please select the Subscriber below.

**Activate** **Suspend** **Resume** **Deactivate** **Voicemail** **Subscriber Profile**

**Search Criteria**

Search By: Phone Number   Search Value:

**Search Results**

Name	Phone Number	Rate Plan	Device	Status
<input type="radio"/> Peter, Tom	617-281-5959	NATDIRECT600	BLACKBERRY7280	Active
<input type="radio"/> Jones, Angel	508-756-8269	REGION700	NOKIA5800	Active
<input type="radio"/> Baker, John	847-349-4113	NATDIRECT600	BLACKBERRY7280	Active
<input checked="" type="radio"/> Jones, Barbara	617-765-5627	NATDIRECT600	MOTOROLA80	Active
<input type="radio"/> Peter, John	847-349-4111	NATDIRECT700	BLACKBERRY7280	Active
<input type="radio"/> Peter, Dennis	397-894-2112	INTERNATIONAL500	BLACKBERRY7280	Active
<input type="radio"/> Lee, Amy	847-349-4106	NATDIRECT600	BLACKBERRY7280	Active
<input type="radio"/> Patel, Lila	847-349-4110	INTERNATIONAL400	NOKIA5800	Active
<input type="radio"/> Jones, Brad	508-309-3240	INTERNATIONAL600	BLACKBERRY7280	Active
<input type="radio"/> Jones, Theresa	617-487-9891	NATDIRECT600	MOTOROLA80	Active

76 items found, displaying 1 to 10. [First/Prev] 1, 2, 3, 4, 5, 6, 7, 8 [Next/Last]

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Figure 2.5-21 Select service agreement

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**My Account** | **Statement** | **Payments** | **Analytics** | **Self-Service**

Overview | Hierarchy | Manage Accounts | **Manage Service** | Order Status

### Change Subscriber Profile

1 → 2 → 3 → 4

**Company:** Celltek **Hierarchy:** Celltek-Billing  
**User:** Mark Brown **Position:** Celltek-Billing

Enter the Subscriber Profile details and continue.

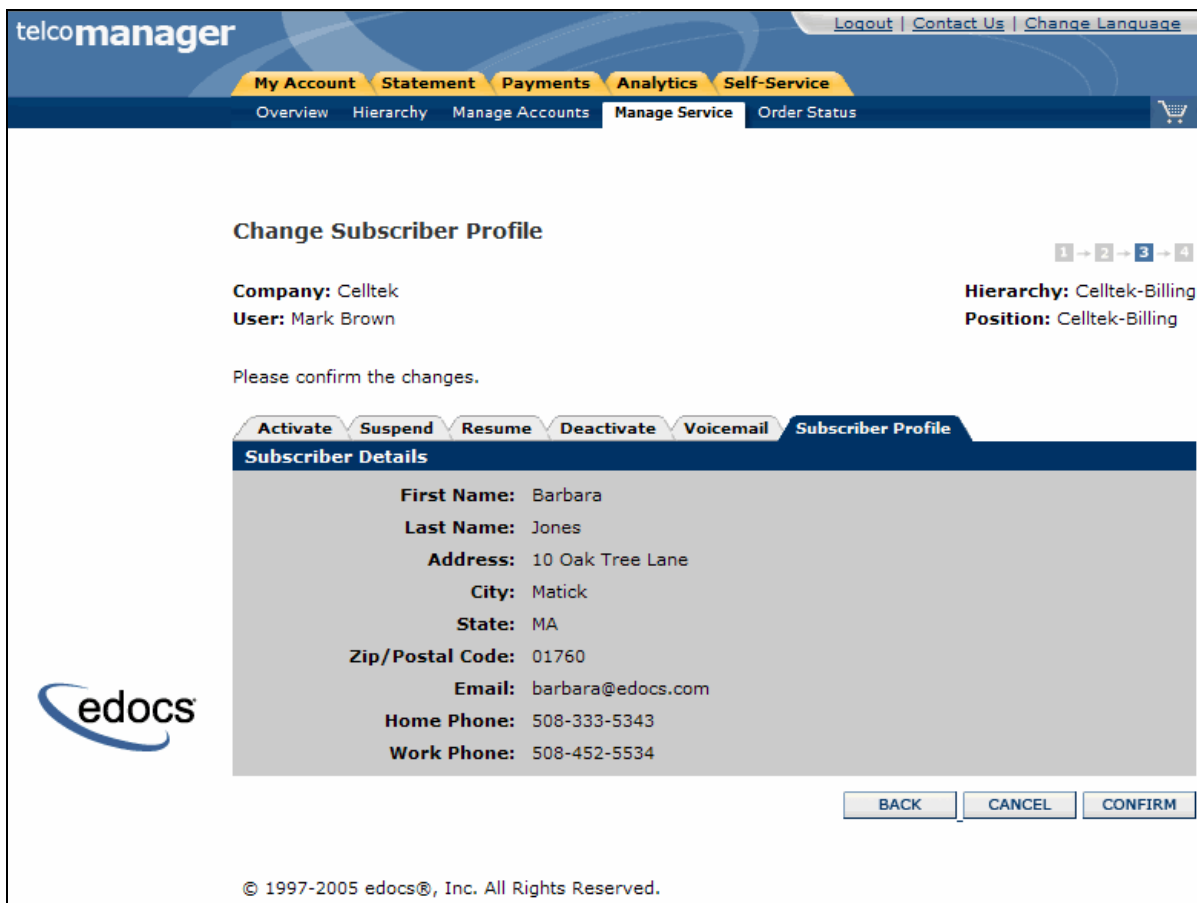
**Activate** | **Suspend** | **Resume** | **Deactivate** | **Voicemail** | **Subscriber Profile**

#### Subscriber Details

**First Name:** Barbara  
**Last Name:** Jones  
**Address:** 10 Oak Tree Lane  
**City:** Matick  
**State:** MA  
**Zip/Postal Code:** 01760  
**Email:** barbara@edocs.com  
**Home Phone:** 508-333-5343  
**Work Phone:** 508-452-5534

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Figure 2.5-22 Edit Subscriber Details



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**My Account** | **Statement** | **Payments** | **Analytics** | **Self-Service**

Overview | Hierarchy | Manage Accounts | **Manage Service** | Order Status

### Change Subscriber Profile

1 → 2 → **3** → 4

**Company:** Celltek  
**User:** Mark Brown


**Hierarchy:** Celltek-Billing  
**Position:** Celltek-Billing

Please confirm the changes.

**Activate** | **Suspend** | **Resume** | **Deactivate** | **Voicemail** | **Subscriber Profile**

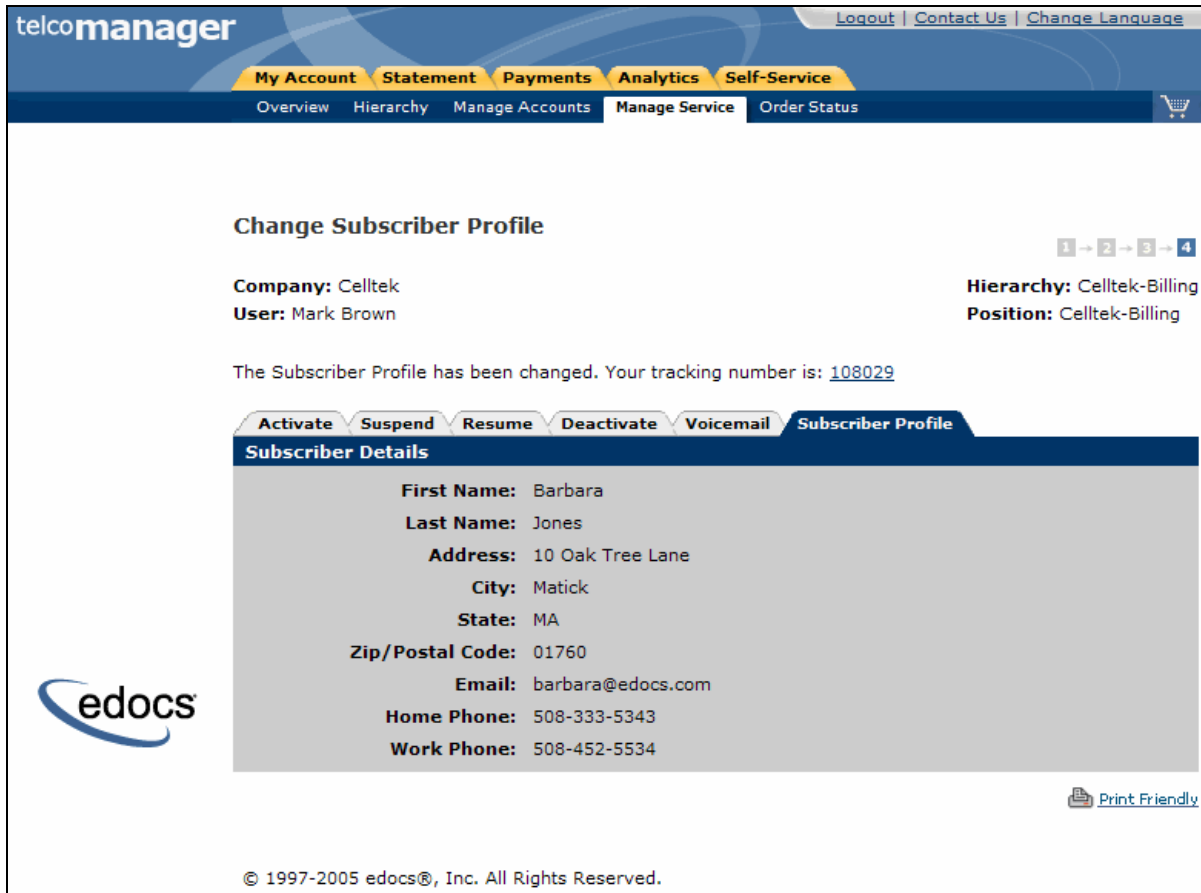
#### Subscriber Details

**First Name:** Barbara  
**Last Name:** Jones  
**Address:** 10 Oak Tree Lane  
**City:** Matick  
**State:** MA  
**Zip/Postal Code:** 01760  
**Email:** barbara@edocs.com  
**Home Phone:** 508-333-5343  
**Work Phone:** 508-452-5534



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Figure 2.5-23 Verify changes



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**My Account** | **Statement** | **Payments** | **Analytics** | **Self-Service**

Overview | Hierarchy | Manage Accounts | **Manage Service** | Order Status

### Change Subscriber Profile

1 → 2 → 3 → **4**

**Company:** Celltek  
**User:** Mark Brown


**Hierarchy:** Celltek-Billing  
**Position:** Celltek-Billing

The Subscriber Profile has been changed. Your tracking number is: [108029](#)

**Activate** | **Suspend** | **Resume** | **Deactivate** | **Voicemail** | **Subscriber Profile**

#### Subscriber Details

**First Name:** Barbara  
**Last Name:** Jones  
**Address:** 10 Oak Tree Lane  
**City:** Matick  
**State:** MA  
**Zip/Postal Code:** 01760  
**Email:** barbara@edocs.com  
**Home Phone:** 508-333-5343  
**Work Phone:** 508-452-5534

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Figure 2.5-24 Confirmation Screen

## 2.6 Order Status Use Cases

The following use cases cover the business requirements for tracking service requests.

### 2.6.1 Order Status

<b>Name:</b>	<b>Order Status.</b>
<b>Brief Description:</b>	Enables the user to view transaction details of all service requests.
<b>Actors:</b>	CSR, Admin, Manager, Corporate/Subscriber User
<b>Main Path:</b>	<p><b>10.</b> User selects Order Status tab from the menu or a hyperlink from the overview page.</p> <p><b>11.</b> Display Tracking Number [A1] [A2]</p> <ol style="list-style-type: none"> <li>1. System displays a list of most recent service requests with a status of "In process" along with the following attributes: [B1-B2] <ol style="list-style-type: none"> <li>i) Tracking Number</li> <li>ii) Phone Number (aka MTN)</li> <li>iii) Date/Time</li> <li>iv) Status (Service Request Status)</li> <li>v) Status Description</li> </ol> </li> </ol> <p><b>12.</b> User selects tracking number</p> <p><b>13.</b> System displays transaction details page, with a summary of</p> <ol style="list-style-type: none"> <li>1. Tracking number</li> <li>2. Phone Number</li> <li>3. Date/Time</li> <li>4. Status (Service Request Status)</li> <li>5. Status Description</li> </ol> <p>Including one or more lines of state change history:</p> <ol style="list-style-type: none"> <li>i) Date/Time (of state change)</li> <li>ii) Source (whether event was initiated by the system or a user)</li> <li>iii) Status (Service Request Status)</li> <li>iv) Description/Comments</li> </ol>
<b>Alternate Paths:</b>	<p><b>[A1] Search – Common Filters</b></p> <p>User optionally uses the search facility to search for and filter tracking numbers.</p> <ol style="list-style-type: none"> <li>1. Enters values for one or more of the following search criteria <ol style="list-style-type: none"> <li>i) Tracking Number (text box)</li> <li>ii) Status (Service Request Status - dropdown) Service request status for individual transactions are</li> </ol> </li> </ol>

	<p>as follows:</p> <ol style="list-style-type: none"> <li>(1) Pending</li> <li>(2) Success</li> <li>(3) Partial Success</li> <li>(4) Failed</li> </ol> <ol style="list-style-type: none"> <li>2. System displays all matching tracking numbers System uses match logic for text box fields (as “starts with” or “exact match” logic)</li> <li>3. User selects a tracking number and follows the main path.</li> </ol> <p><b>[A2] Search – More Filters</b></p> <p>This is identical to [A2] “Search – Common Filters” except the user selects the “Show More Filters” action to display these additional search filters.</p> <ol style="list-style-type: none"> <li>1. Phone Number (text box)</li> <li>2. User (text box) Online user ID of the person who initiated the service request.</li> <li>3. Date range (from / to fields for calendar selection or direct entry)</li> <li>4. Transaction Type (dropdown) Use case service request name</li> </ol> <p>These filters can also be suppressed by selecting “Hide Filters”.</p> <p><b>[A3] Bulk order transaction tracking</b></p> <p>Same as main path except</p> <ol style="list-style-type: none"> <li>1. Tracking numbers for bulk orders are visually differentiated (such as separate column with a “*” or “bulk”). Tracking status for group transactions are as follows:             <ol style="list-style-type: none"> <li>iii) Open-Pending (Request submitted , no transaction failed)</li> <li>iv) Open-Mixed (Transactions Failed &gt; = 1)</li> <li>v) Closed-Success (All Success)</li> <li>vi) Closed-Mixed ( Transactions Failed &gt;=1)</li> <li>vii) Closed-Failed (All Transactions Failed)</li> </ol> </li> <li>2. Bulk numbers are returned in searches if any of their associated individual tracking numbers match the search criteria.</li> <li>3. Clicking on a bulk tracking order displays a screen of individual tracking numbers.</li> <li>4. Individual tracking number screen behaves the same as the main path except that the screen displays the bulk tracking number as a header to the individual tracking numbers and the ability to navigate back to the page where the bulk tracking number was an individual line.</li> </ol>
<p><b>Exception Paths:</b></p>	<p><b>[E1]</b> User encounters a system error:</p> <ol style="list-style-type: none"> <li>1. System invokes <a href="#">Error Message</a> use case.</li> </ol>

<b>Business Rules:</b>	<p><b>[B3]</b> System displays all service transactions for service agreements to which the user has access in the hierarchy.</p> <p>Also setting the hierarchy position, narrows the scope to track service request for service agreements under the "set position" node in the hierarchy.</p> <p><b>[B4]</b> System provides ability to sort the transactions displayed based on column header labels</p> <p><b>[B5]</b> List of self-service transaction includes:</p> <ol style="list-style-type: none"><li>1. Change Rate Plan</li><li>2. Add/Delete features</li><li>3. Change DSN</li><li>4. Change phone number</li><li>5. Port Number</li><li>6. Activate service</li><li>7. Suspend service</li><li>8. Resume service</li><li>9. Deactivate service</li><li>10. Change Voicemail password</li><li>11. Change Subscriber profile</li></ol>
<b>Notes:</b>	<ol style="list-style-type: none"><li>1. System defaults the status to 'In Process' status type in the search bar.</li></ol>

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**My Account** | **Statement** | **Payments** | **Analytics** | **Self-Service**

Overview | Hierarchy | Manage Accounts | Manage Service | **Order Status**

### Order Status

**Company:** Celltek **Hierarchy:** Celltek-Billing  
**User:** Mark Brown **Position:** Celltek-Billing

Search for and select a tracking number.

**Search Criteria**

Enter Tracking Number  Status   [Show More Filters](#)

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**Figure 2.6-1 Order Status – In-process requests.**



The screenshot shows the 'telcomanager' interface. At the top, there are navigation tabs: 'My Account', 'Statement', 'Payments', 'Analytics', and 'Self-Service'. Below these are sub-tabs: 'Overview', 'Hierarchy', 'Manage Accounts', 'Manage Service', and 'Order Status'. The 'Order Status' sub-tab is active. In the top right corner, there are links for 'Logout', 'Contact Us', and 'Change Language'.

The main content area is titled 'Order Status'. It displays user information: 'Company: Celltek', 'User: Mark Brown', 'Hierarchy: Celltek-Billing', and 'Position: Celltek-Billing'. Below this is a search instruction: 'Search for and select a tracking number.'

The 'Search Criteria' section contains several input fields:
 

- 'Enter Tracking Number' with the value '108038'
- 'Phone Number' with an empty field
- 'Date Range' with 'From' and 'To' date pickers
- 'Transaction Type' with a dropdown menu
- 'Status' with a dropdown menu
- 'User' with an empty field

 There are 'RESET' and 'SEARCH' buttons, and a 'Hide Filters' link.

The 'Search Results' section shows a table with one row of results:

Group	Tracking Number	Phone Number	Date/Time	Status	Description
	<a href="#">108038</a>	617-765-5610	02/04/2005 - 13:45 PM	Success	Add/Delete Features

Below the table, it says 'One item found.1'. The edocs logo is visible on the left side of the page. At the bottom, there is a copyright notice: '© 1997-2005 edocs®, Inc. All Rights Reserved.'

Figure 2.6-2 Order Status – Additional Filters

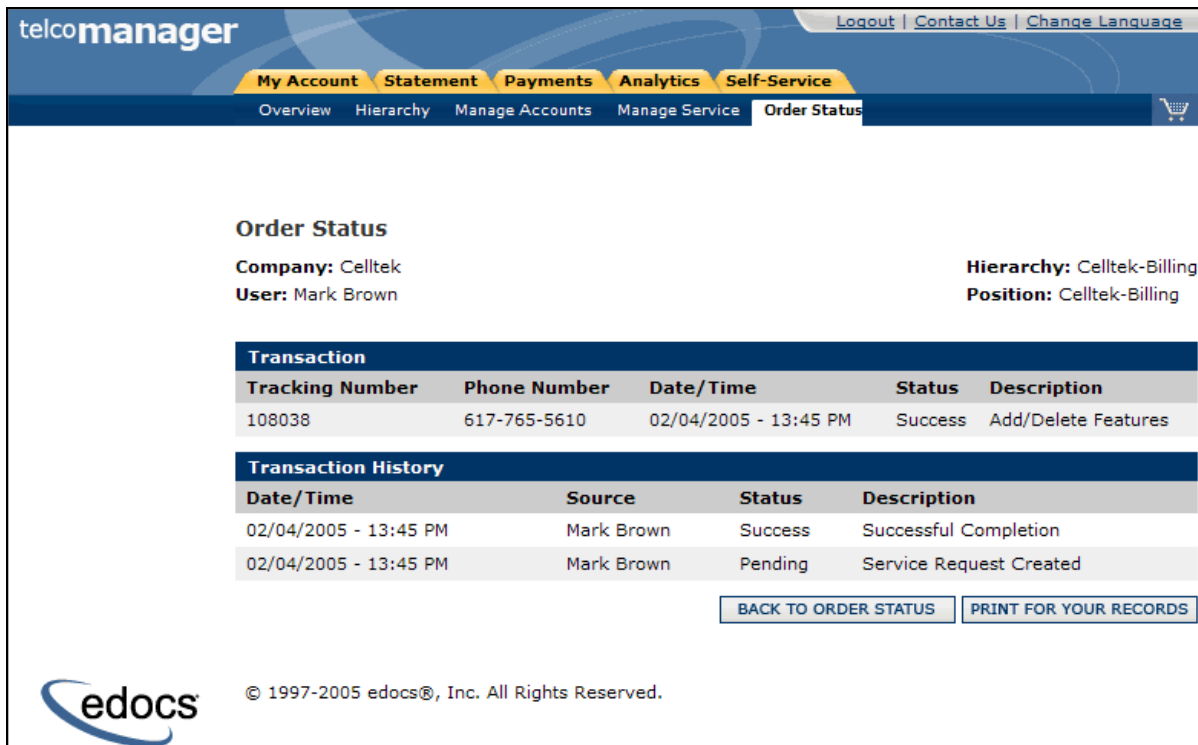


Figure 2.6-3 Sample status change history details page

## 2.7 Message Center Use Case

### 2.7.1 Trouble Reports

Name:	<b>Trouble Reports</b>
Brief Description:	Enables customer to submit trouble reports for any service related issues.
Actors:	CSR, Admin
Main Path:	<ol style="list-style-type: none"> <li>1. Select Trouble Reports User accesses this screen from a link on the "Overview" page or from the message center option under the "contact us"</li> <li>2. System displays <i>Trouble Reports</i> page containing: <ol style="list-style-type: none"> <li>1. Drop down list containing Message Categories</li> <li>2. Message name</li> <li>3. Message description</li> </ol> </li> <li>3. User selects a Message Category from dropdown list [E1] [A1] [A2]</li> <li>4. User enters Message Name in text box [E2]</li> <li>5. User enters Description (full question) in text box [E3]</li> <li>6. User selects submit action. [A3]</li> </ol>

	<p>7. Order Status: Record written to the order status table</p> <p>8. System displays confirmation screen explaining that the message has been sent and references a tracking number.</p>
Alternate Path:	<p><b>[A1]</b> User selects Message Category that is covered by an online service</p> <p>1. System displays pop-up box informing user that service can be ordered online with link to service page</p> <p><b>[A2]</b> User selects link to online service</p> <p>1. System redirects user to service page.</p>
Exception Paths:	<p><b>[E1]</b> User does not select a category:</p> <p>1. System redisplay s page with an error messages asking the user to select a category.</p> <p><b>[E2]</b> User does not enter text for message name:</p> <p>1. System redisplay s page with an error messages asking the user to enter a message name</p> <p><b>[E3]</b> User does not enter text for message:</p> <p>1. System redisplay s page with an error messages asking the user to enter a message</p>
Notes	<p>The categories displayed in the pull-down menu are: Select Category; List of Self-Service Transactions (from above use cases); Suggestions. These will be displayed in alphabetic order. The default should be Select Category.</p>
Configuration Options	<p>If the client purchases edocs CSR Manager, the Trouble Reports functionality referenced here could be enhanced by interfacing it to the service provider's CSR Manager system and adding end user functionality to review message response and case history as well as reply, close, and reopen cases.</p>

telcomanager [Help](#) | [Contact Us](#) | [Change Language](#) | [Logout](#)

**My Account** | **Statement** | **Payments** | **Analytics** | **Self Service**

Overview | Hierarchy | Personal | Company | **Message Center**

### Submit Trouble Report

**Company:** Edocs **Hierarchy:** Technology Group  
**User:** John Smith **Position:** [Professional Services](#)

Please enter a message and submit a trouble report.

**Message**

**Category**

**Message Name**

**Description**

Figure 2.7-1 Sample trouble report screen

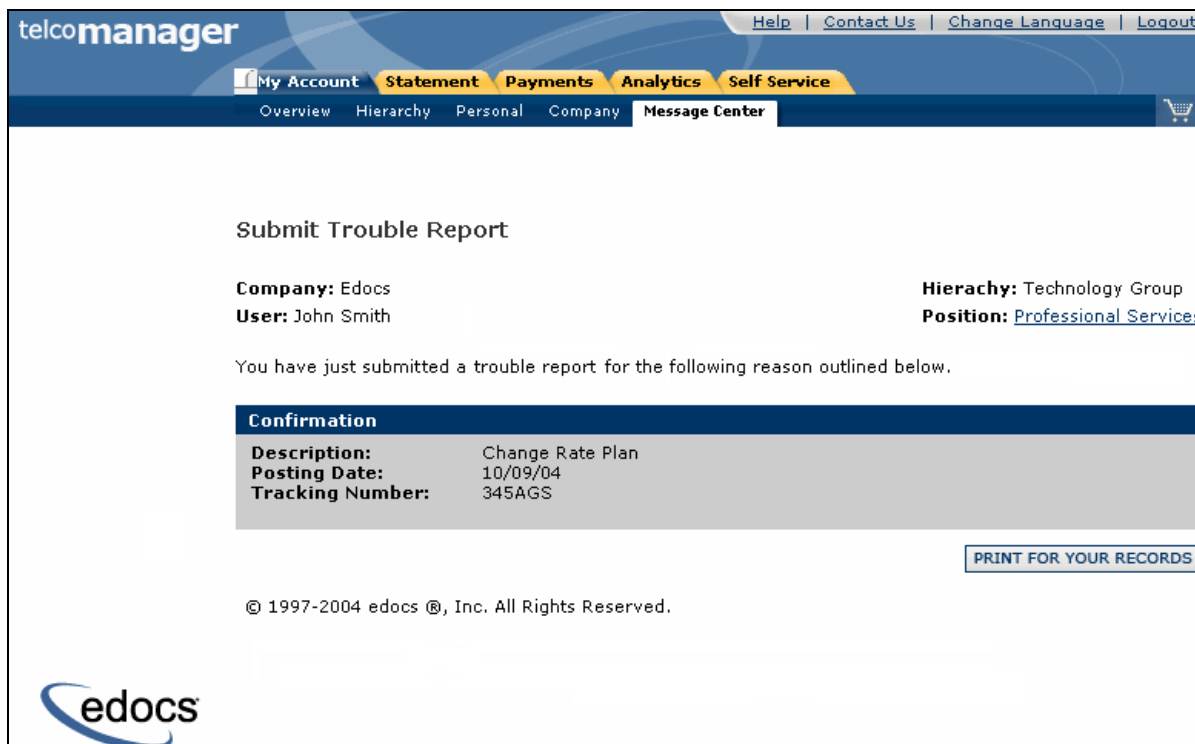


Figure 2.7-2 Confirmation screen



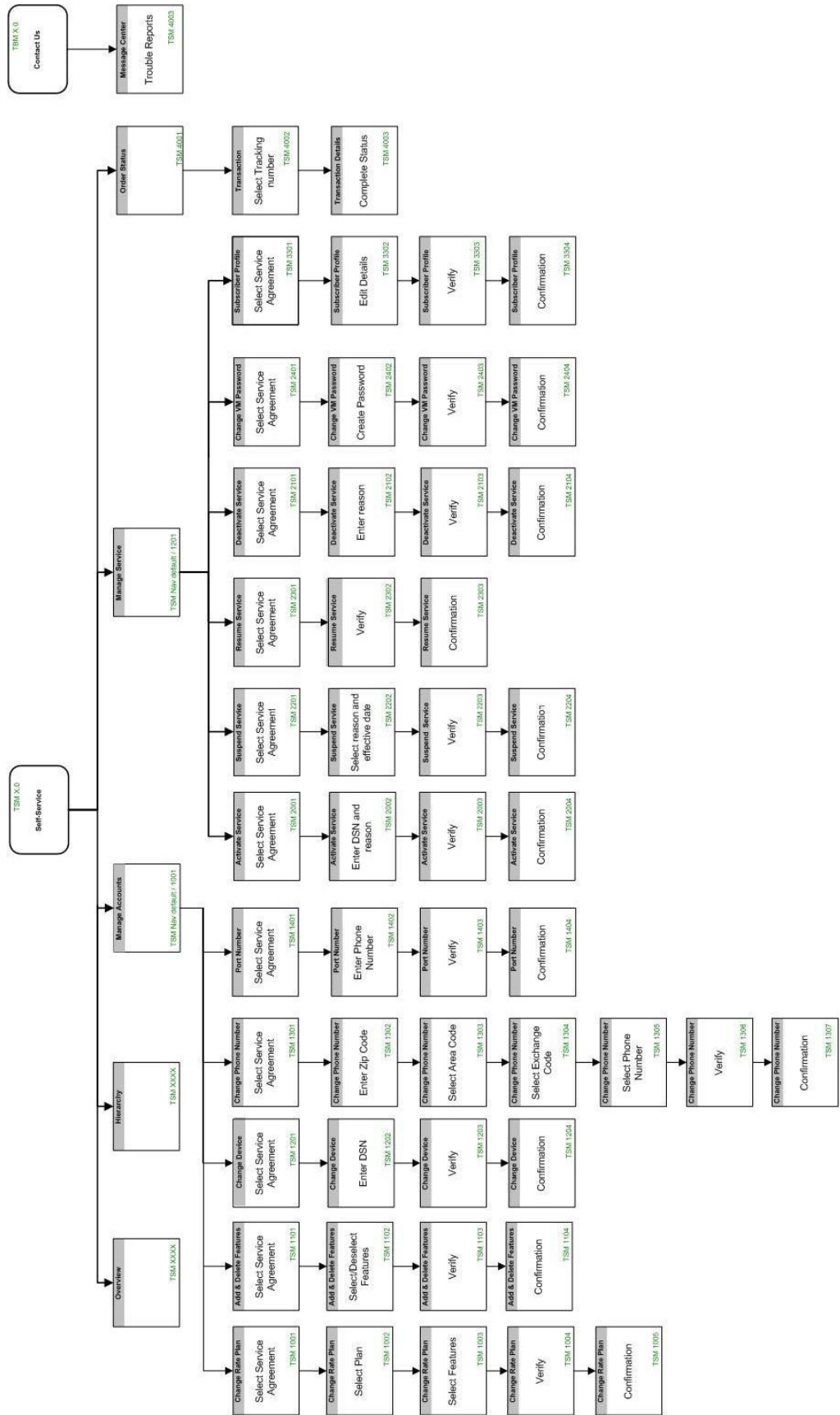
# 4

---

## User Interface

### 3.1 TSM Site Map

The following page shows the site map for the 5.01 version of TSM.





**Figure 4.1 1 TSM Site Map**

## **3.2 Compatibility Requirements**

This section outlines requirements for the User Interface (UI) of the system. The solution will be compatible for the following browsers:

- IE 6 and above
- FireFox 0.9
- Netscape 7.X and above