



# Solution Highlights

## Prepaid balance management

- A single balance for simultaneous voice, data & content
- Quota and hot-billing modes
- Multiple network interfaces

### Managing a single balance in a multi-service environment

2.5G/3G mobile networks and other broadband technologies offer subscribers numerous new services and multi-session connectivity. To meet today's market challenges, service providers operate a complex hybrid environment consisting of circuit-switched, packet-switched and content infrastructures. As various services are delivered on different platforms by different applications, service providers require unified credit control functionality and a single view of subscribers and services. This functionality becomes critical in supporting prepaid subscribers, when multiple simultaneous services consume one balance.

### Multiple concurrent prepaid services

The MIND-iPhonEX Balance Manager is a real-time, scalable and highly interoperable solution for the management and

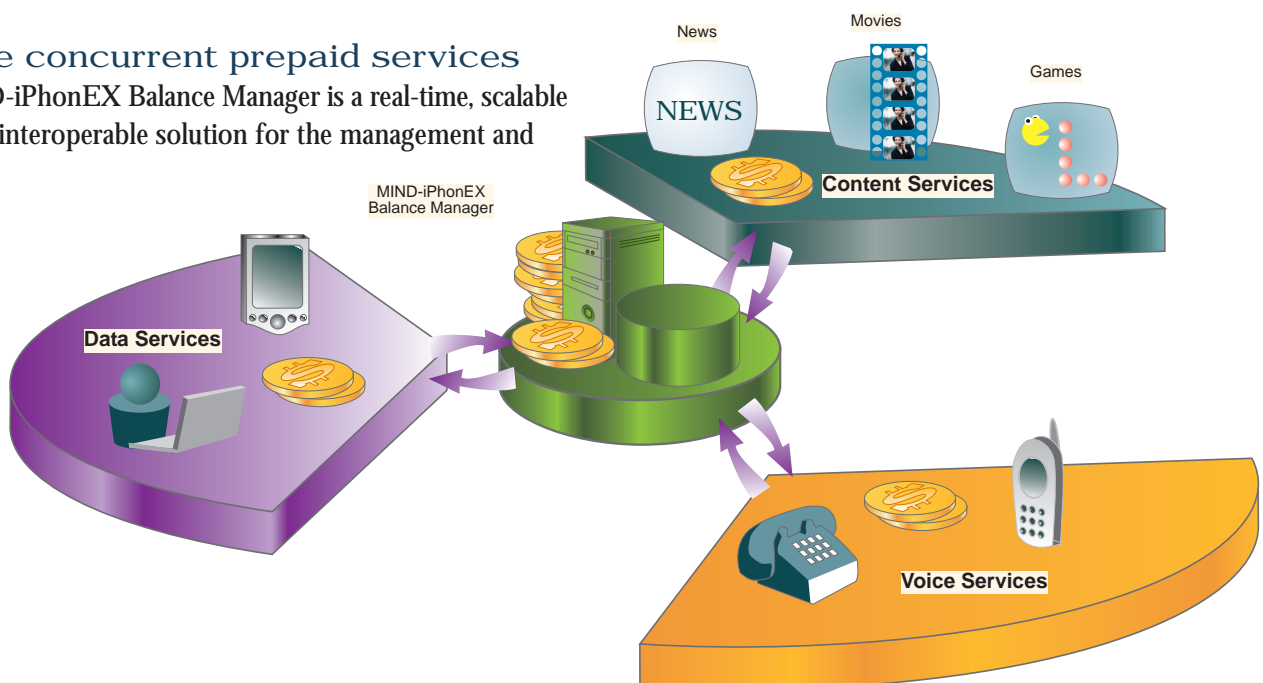
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Billing & Customer Care

control of the subscriber's balance.

The Balance Manager allows prepaid and limited-credit subscribers to get the same service portfolio as post-paid ones, as well as make multiple concurrent sessions, giving them full command of their expenses. Service providers gain strict credit control that prevents revenue leakage in real time and ensures revenue.

### Intelligent proxy balance management

MIND-iPhonEX's enhanced credit control is available to service providers even if the subscriber balance resides elsewhere. The MIND-iPhonEX Balance Manager interfaces with the legacy prepaid IN/SCP or any other system holding the subscriber balance, and acts as an intelligent proxy. When the legacy system's functionality is limited to certain methods, for instance debit and credit only, the Balance Manager bridges



the gap and serves as a comprehensive quota-reservation system for the other client applications.

## Two balance management modes: quota reservation and hot billing

The MIND-iPhonEX Balance Manager checks the subscriber's permissions upon session initiation and authorizes the session if the balance and profile permit it. The Balance Manager then handles the balance in one of these two modes: quota reservation and hot billing.

In the quota-reservation mode, the Balance Manager reserves a quota for the authorized session. The quota is specified in usage units such as minutes, bytes or items. Prior to the complete consumption of the reserved quota, the client application sends another reservation request to the Balance Manager, asking for an additional quota. The Balance Manager either reallocates a new quota or denies the request, causing the client application to terminate the session.

Service providers can flexibly configure quota reservation policies and base them on the subscriber's profile, current balance and the nature and number of concurrent sessions. Each service can be configured with a specific quota reservation policy suitable for its unique characteristics.

In the hot-billing mode, interim messages are sent from the client application at predefined intervals during the session, updating the Balance Manager on the usage consumed so far. Each interim message is rated in real time and the Balance Manager updates the account's balance immediately. When the balance reaches a predefined threshold, the Balance Manager sends a cut-off message to the client application, securing the service provider from any revenue leakage.

## Flexible rating and reverse rating

The Balance Manager uses MIND-iPhonEX's flexible and powerful rating engine. Rating schemes can be based on various parameters per service, such as duration, data volume, content type, Quality of Service (QoS) and location. These rating parameters can be applied either separately or in combinations. In addition, the same service can be rated differently based on the time-of-day, access device (mobile phone vs. PDA) or service activation date.

MIND-iPhonEX's reverse-rating capability allows the Balance Manager to convert a monetary quota into a quota specified in units such as bytes or seconds, based on the rating scheme of the specific service.

## Standard and proprietary interfaces

The MIND-iPhonEX Balance Manager offers a flexible proprietary interface to client applications, compatible with the Parlay/OSA standard, implemented in RADIUS, SOAP/XML and other message-based (TCP/IP) protocols. The Balance Manager also delivers several interfaces with IN systems. Additional interfaces are implemented upon request.

## Revenue assurance with the MIND-iPhonEX Balance Manager

Real-time balance management is crucial for 2.5G/3G mobile as well as for fixed-line broadband operators offering simultaneous services to prepaid and limited-credit subscribers. The Balance Manager controls and manages subscribers' balances in real time and enables concurrent drawing of funds from a single balance, preventing leakage and ensuring revenue.

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