



SIM and Subscription On-Demand Activation

SmartODA™ allows the operator to dynamically activate and provision the subscription and SIM at the moment the subscriber is going active for the first time. The subscriber may also search and choose MSISDN. This eliminates the cost of inactive subscriptions and improves SIM costs and logistics.

The Challenge

Every registered inactive subscription generates license costs and other costs for the resources consumed. Even if it is not activated for months or never activated, the subscription uses valuable operator resources. A special challenge comes from the large numbers of prepaid cards that are stored at independent point-of-sale locations, waiting to get sold.

The handling, logistics and storage of SIM card products is a vital activity for the mobile operator. The effort for this activity increases significantly when the variety of different SIM card types and products that are handled by the operator increases.

In addition, the SIM is essential to many parts of the organization holding information required for their operations. The later this information can be put on the SIM, the more efficiently the process for activating new subscribers can be managed. It is essential to the mobile operator to keep the amount of different SIM card products to a minimum, ideally only one.

The Solution

The SmartODA product supports activation, personalization and provisioning of the mobile subscription and the SIM card the moment the subscriber is going active for the first time. During the activation, the subscriber may search and choose MSISDN or, alternatively, choose to replace a lost sim.

SmartODA manages subscriptions and generic profile SIM cards which are distributed, but not yet sold. When SmartODA detects that the generic profile SIM card is used for the first time, the subscription is created and activated. In this way, SmartODA removes the need for the HLR and other service platforms to handle subscriptions that are not yet used. This saves capacity and licensing costs.

The operator comes closer to the concept of a single generic profile SIM card because SmartODA is able to configure the SIM with the needed subscription type at the time of activation.

Based on the configuration of event-driven business logic in SmartODA and subscriber data, such as subscription type and location, the subscription is created at activation. Further, parameters and files on the SIM are updated according to the subscription. These parameters include IMSI, MSISDN, priority lists for roaming, SIM-based value added services (such as SmartTrust WIBlets or Java cardlets), customer care entry in SIM-based phonebook and Service Provider Name. The final subscription is provisioned in the business support system, and the SIM is updated OTA.

Users may make selections from SIM-based menus during the activation process. The degree of subscriber personalization increases and operators gain valuable customer data.

Benefits

Conserve network resources

SmartODA makes sure that only subscriptions becoming active are provisioned. This saves operators money by avoiding the purchase of unnecessary resources in the network like HLR capacity. This creates a substantial savings for operators with a large proportion of pre-paid customers.

Same generic profile SIM in every package

All point of sale packages contain the same generic profile SIM that is then provisioned by the SmartODA system. Operators have then the opportunity to reduce the number of SIM profile types in stock. This simplifies logistics and ensures that cards can be quickly distributed to satisfy the demands of multiple market segments. Multinational operator groups can use a generic profile SIM that covers all national operations.

Fully automated or with user interaction

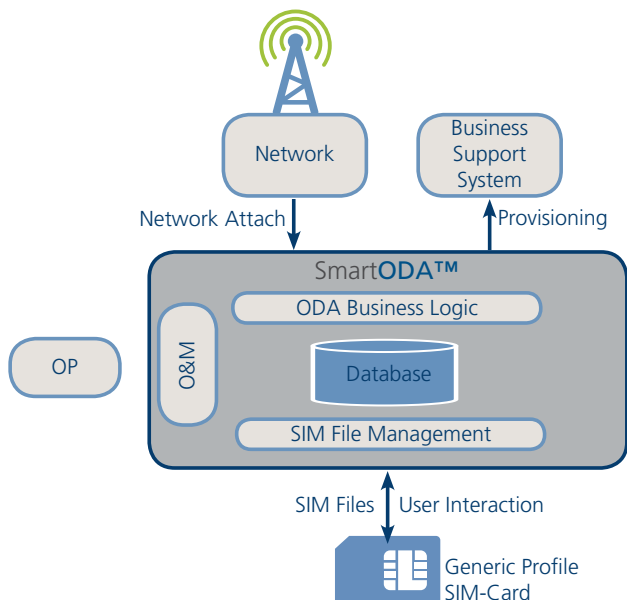
SmartODA may operate in fully automated mode, where no input is required at the PoS when the subscription is purchased. This allows the operator to implement the system with no need for PoS system modifications or staff training.

Additionally, the system also allows for user interaction, like language or subscription type selection during the activation process. Allowing the user to search and select the mobile number enables new revenue streams from differential pricing of premium numbers as well as the possibility of replacing a lost SIM reduces churn.

SmartODA may also retrieve cell-id for network based positioning. Ultimately, the operator gains valuable knowledge about their pre-paid customers.

Fits existing processes and infrastructure

SmartODA contains advanced technologies to flexibly fit into the operator's SIM process and work flow. It uses the existing data generated by the SIM manufacturer and it supplies the process in the same format the existing process uses. The operator does not need to modify its present business support systems. There is no need to buy extra network elements, the GSM network is used without modification.



Features

Integrates into existing infrastructure

- Activation trigger using standard SS7 MAP signaling. Triggering of the activation is achieved without any modification to the GSM network. Existing network is reused.
- Integration to business support systems. SmartODA integrates to the existing business support system via well-defined interfaces and configurable templates allowing it to start third party applications during the activation process.
- Existing processes are re-used with minimal additions required to workflows.
- No extra network elements needed. The existing HLRs are used during the activation process, making the system network agnostic. The handling of sensitive information, like authentication keys, remains within the existing network. This information is not revealed by the ODA system.

Just-in-time activation of subscriptions and SIM cards

- Activates subscriptions and SIM cards in the network and business support system when they are used the first time.

Event-driven Over-the-Air (OTA) updates at activation

- Ability to perform event-driven SIM OTA updates at activation, based on configurable business logic using parameters like subscription type, geographic location and other subscription data.

OTA activation of MVNO SIM cards

- Just-in-time activation and personalization of MVNO SIM cards, including Service Provider Name file, and MVNO specific phonebook entries.

SmartTrust or 3rd party OTA system

- The system is part of the SmartTrust application framework and is based on SmartTrust DP. The robust design of the SmartTrust DP supports high availability and geographic redundancy configurations.
- The system is optionally able to interface to 3rd party OTA platforms.

Generic SIM for the operator group

- Activation is possible from any compatible network in any country. The system is able to determine the country and network from where the activation takes place. This information may be used to select the proper operator profile, out of the group of operations in an operator group. This allows an operator group to have one generic SIM for all national operations.

High resolution location information

- The system can determine the cell used by the user at the time of activation. This information may be used to aid in the selection of regionalized numbers and provide valuable demographic information about the user to the operator.

User interaction menu and feedback

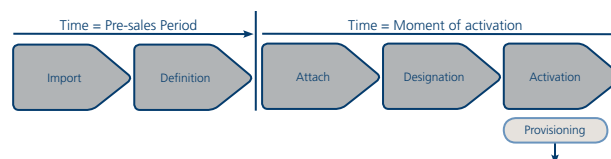
- The user may make various selections in user interaction menus. The information may be used to customize the subscription, for example select language, replace a lost SIM, or allow the user to select MSISDN from a list of choices. The system also manages welcome and progress messages to keep the user informed.

Open and Configurable

- The system is flexible and configurable using open standards like XML configuration files. The operator may in real-time modify the subscription designation behavior of the system.

Report and Statistics

- Statistics and reports help marketing, logistics and operation to get the most out of the new possibilities of SmartODA



Related SmartTrust Products and Services

SmartAct™

The SmartTrust SIM management platform - a total solution for reliable Over-the-Air management of the SIM life cycle over-the-air. It uses the Remote File Management standard, supports vendor specific OTA protocols from all major SIM suppliers and supports Remote Applet Management according to the ETSI specifications for Java™ Card based SIMs.

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