



## Platform for universally accessible Value Added Services on the SIM

SmartTrust Wib™ is the world's most widely deployed DSTK interpreter. It provides mobile application developers with the benefits of multiple mature technologies including DSTK, JAVA, Cell Broadcast, USSD and GPRS. It allows operators to address all subscriber customer segments with advanced Value Added Services and new innovative services.

### The Challenge

The diversity of mobile phones continues to increase. Mobile services have their reach limited by the varying capabilities of the phone and network. A common ubiquitous platform, that has comprehensive support by mobile infrastructure vendors, is required for delivering mobile services.

Mobile services access is hampered as well by the various user interfaces implemented by phone vendors. Having a menu structure that is uniform across terminal hardware platforms is required to ensure mobile operators do not experience revenue declines as subscribers change terminals.

The SIM has therefore emerged as the key component in the relationship between the subscriber and operator as mobile operators look for new business models to address their changing markets.

Mobile operators need to be able to leverage the SIM to ensure that all of their subscribers have access to operator centric and value added services. They require a platform that is supported on SIM cards from multiple vendors as they look to reduce customer acquisition costs. This means being able to develop applications without requiring vendor specific adaptations for the service to work.

### The Solution

SmartTrust Wib is a DSTK (Dynamic SIM ToolKit) interpreter independent of card vendor. Developed initially in 1999, it has become the de facto standard for SIM based application interpreters. It has the support of a full set of development tools and the SmartTrust Certified™ program.

The specification for Wib has been developed in cooperation with major card vendors, application developers and operators to ensure its openness and usability.

Mobile application developers can take advantage of proven technologies such as Cell Broadcast, USSD and DSTK to create mobile services that can reach a potential customer base of one billion subscribers. All major SIM vendors have implemented SmartTrust Wib. To date over 110 implementations from over 25 vendors have been certified.

### Benefits

SmartTrust Wib has evolved over the past 10 years, drawing upon the experience gained from over 200 mobile networks worldwide. Operators are able to deploy a value added service platform that is available to all subscribers.

The open nature of SmartTrust Wib allows for integration with other environments like JAVA and the Open Mobile Alliance specified Smart Card Web Server. This permits operators to leverage the availability and ease-of-use of WIB and new SIM technologies as supported by phones and cards.

USSD and BIP are supported as bearers ensuring short response times for services. Additionally, Cell Broadcast is supported allowing for targeted campaigns and information distribution to subscribers in specific geographic areas.

Built in support for event triggered services means that applications can be developed to be initiated as specific triggers occurs. For instance, applications can be triggered by changes in the access technology used, incoming Cell Broadcasts, call termination and roaming abroad.

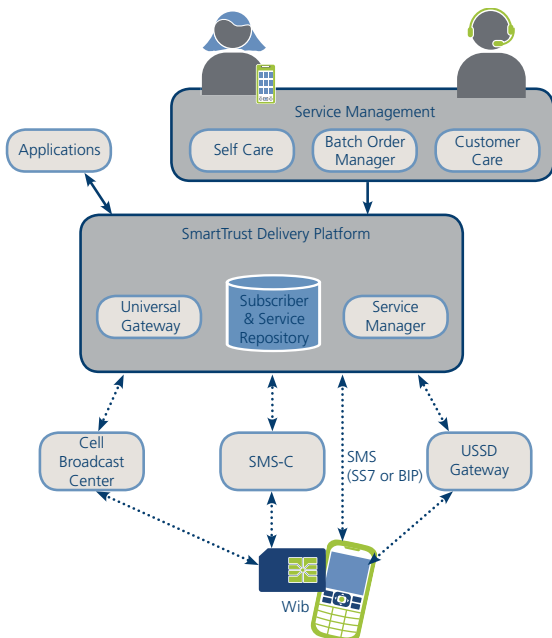
Dynamic code execution permits the execution of WIB applications, WIBlets, on the fly. Wiblets can be stored for later access and action at a time convenient for the subscriber.

Network services can be initiated by SmartTrust Wib including setup call and sending text messages. Error handling support ensures improved subscriber experience. This eases and simplifies subscriber access to network services.

Multiple instances of SmartTrust Universal Gateway can be addressed by SmartTrust Wib. Message routing is flexible and the mobile application can address different gateways. Trusted Service Managers and financial institutions are able to control their own services end-to-end.

A well-defined and certified service management schemes allows for interoperable update of locally installed services on the card. The light-weight nature of Wiblets make large scale service update feasible thus ensuring the subscriber relevant services at all times.

The SmartTrust Certified program tests and certifies implementations based on SmartTrust specifications. Mobile operators that select a SmartTrust Certified card get a card that is thoroughly tested, and for which no extra fees are charged. A certified SIM card makes the start-up process faster and reduces the effort required for the operator to get mobile services on-line.



- Display Parameters Change
- Incoming Cell Broadcast
- I-WLAN Access status
- Local Connection Status
- Network Available
- Network Change
- Network Search Mode Change

#### Roaming Support

- Support for Roaming List updates
- Built-in support for Location information
- WIB can be used a roaming client

#### High Speed Bearer Support

- Support USSD and BIP
- Rapid service response times
- Encourages usage of interactive services
- Perfect for download of dynamic menus

## Features

### Support for Cell Broadcast

- Intelligent broadcast to groups of subscribers
- Can be defined by geographic area or Cell Broadcast channel identity

### Dynamic Code Execution

- Ability to dynamically construct and execute Wiblets
- Execution of Wiblets stored as data allowing subscribers to access and act upon alerts and promotions when it is most convenient for them

### Flexible Message Routing

- Multiple gateways can be used allowing service providers to deploy services to subscribers of different networks
- Allows operators to offer a truly open environment to third party service providers like Trusted Service Managers and financial institutions

### Large Variable Support

- Use variables up to 8 kilobytes in size
- Allows use of WPKI RSA keys exceeding 2048 bits
- Increase flexibility in designing and building new services
- Large Wiblets can be transferred as data

### Integration with other SIM environments

- On JAVA cards Wib implements the JAVA WIB API
- WIB services can be accessed from Smart Card Web Server

### Extensive Event and Event Trigger Support

- Access Technology Change
- Browsing Status
- Country Change

## Related SmartTrust Products and Services

### SmartàLaCarte™

A turnkey solution for value added and operator centric services to the entire subscriber base through standard SIM cards. Simplifies application development and distribution while ensuring availability to all subscribers independent of handset model.

### SmartTrust City™

A portfolio of applications that run on SmartàLaCarte, provided both by SmartTrust and application partners.

### 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.

### SmartTrust Certified™

SIM card certification, ensuring correct implementation of SmartTrust Wib™, RFM, RAM and S@T. The certification program is open to all SIM card vendors.

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