

For a richer mobile experience

Series 60 Platform version 1.0 Product Overview

This document is the functional product overview of the Series 60 Platform's version 1.0. It is intended as a sales and technology backgrounder for device manufacturers, wireless network operators, technology integrators, technology adopters, and content developers.

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PURPOSE OF THIS DOCUMENT

This document describes briefly main functionality of the Series 60 Platform version 1.0.

OVERVIEW

The Nokia Series 60 platform is designed to provide manufacturers with a complete smartphone reference design, including a host of wireless applications. It contains a set of robust components that are intended to be re-used across those applications, including a configurable user interface, WAP browser, MMS client, SMS client, Email client, short range connectivity OBEX engine, PC-connectivity, Bluetooth and IR stacks, PIM and telephony applications, and the necessary system services to ensure portability across platforms.

The Nokia Series 60 Platform is a source code product that the customer can port and integrate to their own smartphone hardware designs.

FUNCTIONAL DESCRIPTION

User Interface

The Series 60 User Interface is designed for one-hand operation of advanced and consumer-friendly data services. It mandates a color screen with a pre-determined size of 176 x 208 pixels, and includes support for a variety of different functions, which include: two softkeys, 4-way scrolling, an application launching and swapping key, as well as 'send' and 'end' keys. To improve and facilitate text input, it includes a 'clear' key and an 'alpha toggle' key. Furthermore, it uses a standard 12-key number keypad with alpha printings.

It is possible for terminal vendors to make significant customizations to the Series 60 User Interface in order to ensure their own distinct look and feel. Following customization is possible to do:

- Replace all Nokia provided bitmaps with manufacturer-specific graphics
- Embed manufacturer-specific sounds, animations, color schemes, and fonts

- Manufacturer-specific localization, including terminology
- Key applications such as the menu system or screen savers can be modified in a straightforward manner.

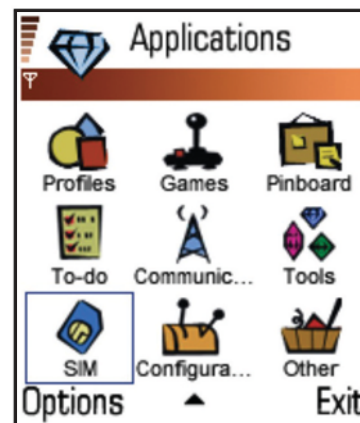


Figure 1. The intuitive Series 60 User Interface mandates a color screen with a resolution of 176x208 pixels, two softkeys, and 4-way navigation, among other elements.

Smartphone Telephony Applications

Following applications are provided as part of the 1.0 version of the product: Personal Information Management, Synchronization, GSM Telephony Applications and Application Installation & Management.

Personal Information Management

The PIM applications function as both stand-alone features, but can also be easily synchronized with Microsoft Outlook and other major PC-based software. Specific applications include:

Phonebook, Calendar, Notepad, Photo Album, Pinboard, Clock, Calculator, To-Do, Composer, Unit Converter, Voice Recorder

Synchronization

The Series 60 Platform comes with a SyncML synchronization engine. The Series 60 version 1.0 supports the synchronization of calendar and contacts data over-the-air. The engine is based on the SyncML 1.0.1 specification and is used for both over-the-air and local synchronization (local sync will be included in later versions of the product). Over-the-air synchronization works over WAP 1.2 protocol stacks.

GSM Telephony Applications

A number of telephony applications are included as standard features in the Series 60 Platform:

Advanced Phone features, Call Logs & Message Indications, User Profiles, Speed Dialing, framework support for Voice dialling & Voice tags

Application Installation & Management

An installation engine is provided as part of the Series 60 Platform that supports adding and removing new applications to the platform via PC connectivity or over-the-air downloads. Also Java applications are supported, but the actual Java implementation is licensed through Symbian. Series 60 Platform implements UI integration for Symbian's kJava.

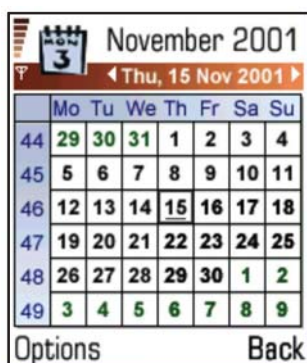
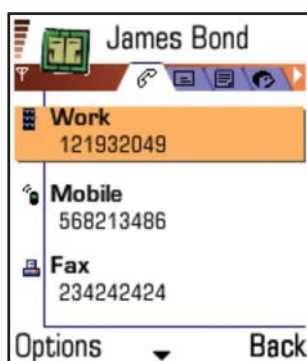


Figure 2. Examples of Telephony and PIM applications that are integral part of series 60 Platform offering

Download of Content & Applications

Messaging-based download for relatively small and inexpensive content items will be supported by the Series 60 Platform version 1.0..

As such, the Series 60 Platform will inherently support the handling of multiple MIME content types. All types supported will be accessible through a URL on a WML page, as well as through WAP Push messages, MMS messages, email, IrDA, and PC-based provisioning.

Summary of Supported Content Formats

Ringtone: Nokia Smart Messaging 3.0.0

Wallpaper / Screen Savers / Animations: GIF 87a/89a

Pictures: WBMP (defined as mandatory by the WAP Forum) and GIF image formats

Java MIDlets: JAD and JAR files

Series 60 Native Symbian Applications: Symbian OS installation file ".sis" format

Operator Logo Icons: as defined in Nokia Smart Messaging 3.0.0.

Calling Line Identification Logos: as defined in Nokia Smart Messaging 3.0.0.

WAP Browsing

Series 60 Platform version 1.0 contains a WAP 1.2.1 browser with features such as Push, WTAI, and enhanced security.

Messaging

The Series 60 Platform supports the following messaging services:

- Multimedia Messaging Service (MMS) based on WAP Forum and 3GPP specifications. MMS is used for user-to-user messaging, storing-and-forwarding, as well as email messaging.
- Short Message Service (SMS) based on the GSM specifications.
- Nokia Smart Messaging based on the Nokia Smart Messaging Specification 3.0.0.
- Standard POP3/IMAP4 Email

All messaging activities in the Series 60 Platform are concentrated into a single application entitled "Messaging". It offers common functionality to all supported message types. This includes the composition and viewing of messages, as well as the editing of messaging settings.

MMS Client

The MMS client complies with the following specifications:

WAP Forum specifications, WAP205-WAP209

R99 3GPP specifications, TS 22.140 (Multimedia Messaging Service, Stage1) and TS23.140 (Multimedia Messaging Service, Stage 2)

MMS Conformance Document, from Nokia and Sony Ericsson

SMS

The Series 60 Platform will include an SMS client capable of sending long SMS (up to 450 characters) in a single user interface operation. The client will be able to receive long SMS (up to 450 characters).

Nokia Smart Messaging

The Series 60 Platform will include a Nokia Smart Messaging specification 3.0.0 client with support for Over the air profiles (screen savers).

POP3/IMAP4/SMTP Email

The Series 60 Platform will contain a standard POP3/IMAP4/SMTP Email client provided as part of the Symbian operating system

The Symbian Operating System

The Series 60 Platform runs on Symbian's Generic Technology Version 6.1, which is a common core of Symbian APIs and operating system technology. It contains all the interfaces to the UI applications, dynamic link libraries, executables and device drivers for controlling the keyboard, display, RTC, Bluetooth, IrDA, and Flash file devices. The Symbian OS communicates with the device's core cellular software through a well-defined and documented messaging architecture.

The Symbian operating system is not delivered as part of the Series 60 Platform and must be licensed separately from Symbian.

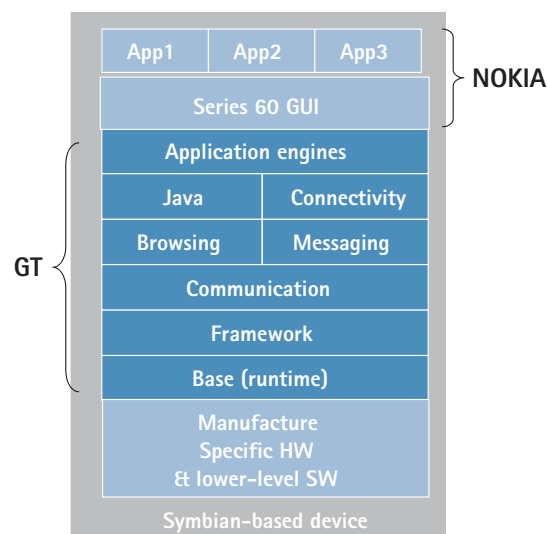


Figure 3. Symbian OS and Series 60 Architecture Diagram

Target Platform Requirements

The following are specific minimum requirements for device being targeted for the port of the Series 60 Platform:

Display: Mandatory 176 x 208 pixel color display.

Input: Four-way navigation and two soft keys, hard keys as defined by Nokia.

Processor: It is recommended that the target device utilize a 32-bit ARM processor.

Code Size (ROM): 16 MB

RAM Usage: 8 MB