Series 40

Overview

The Series 40 platform provide the features for the creation of mass-market featurephones. The platform is implemented using a Nokia operating system and offers developers the opportunity to create applications using Java ME APIs and Adobe Flash Lite.

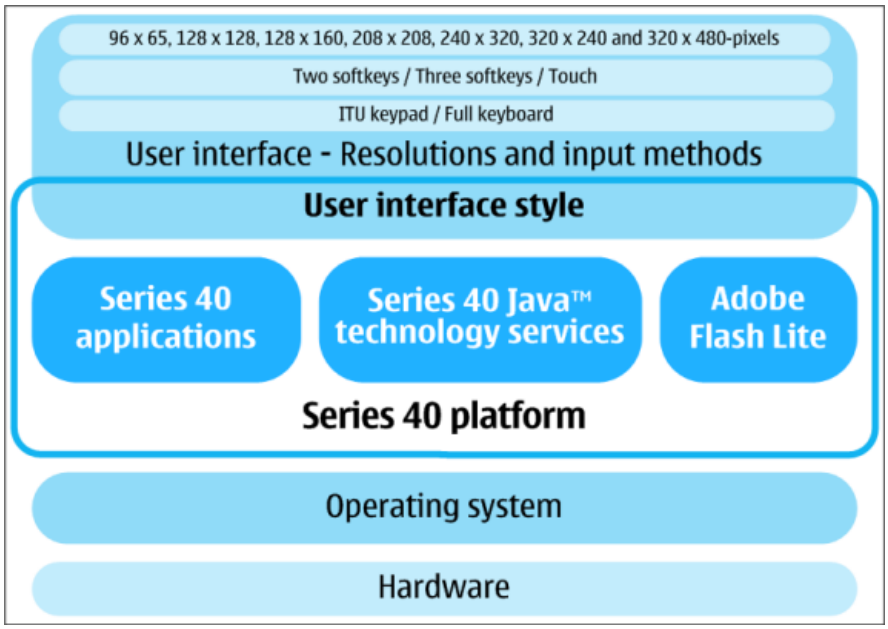
There are also features for content developers with a browsing environment, various messaging capabilities, and support for a wide range of media types.

Open Mobile Alliance (OMA) digital rights management (DRM) to protect both content and applications is also provided, as are OMA Client Provisioning (CP) and OMA Device Management (DM) to enable remote device configuration.

The Series 40 platform is designed to enable a wide range of devices, to address the needs of different market segments. This means there are variations in user interfaces, APIs, and device software. However, Nokia's goal in taking a platform approach is to minimise the effort developers need to expend, by offering common API implementation within and among editions and feature packs of the Series 40 platform.

Architecture

All devices based on the Series 40 platform share a common architecture, as shown below:



The device architecture consists of the hardware (the device hardware, CPU, memory, and so forth); the operating system, which provides fundamental services to the platform; and the platform, which for the Series 40 platform consists of:

- Series 40 applications — Functionality provided to the user, including:
  - Communication applications such as telephone, messaging, and internet browser.
  - Media applications such as image viewer, camera, music player, voice recorder, and FM radio.
  - Personal information manager (PIM) with calendar, tasks, and contacts applications.
- Series 40 Java™ technology services — The Java technology implemented within the platform.
- Adobe Flash Lite — The services to provide the ability to run Flash Lite applications (on selected versions).
- User interface style: resolution and input methods — A common set of UI components with defined behaviour used in one of a range of different screen orientations, resolutions, keyboards, and so forth, implemented on devices that use platforms.

User interface

The Series 40 platform UI style represents an evolution of the two-softkey UI introduced by Nokia in 1994, with three labelled softkeys being used on most newer devices. Using a simple but effective list-driven paradigm, the current Series 40 UI style is optimised for use on compact devices with main displays of 128x160, 240x320, or 320x480 pixels.

Series 40 3rd Edition introduced a number of improvements to the Series 40 UI, including:

- Improved support for high-quality colour screens.

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- Context-sensitive icons.
- Enhanced photorealism effects.

The introduction of Series 40 6th Edition, Feature Pack 1 brought significant UI changes to the platform, with the introduction of the Touch and Type UI. This UI combines the use of a touch screen, for navigating and using applications, with a standard UTI keypad. This design is intended to provide users with the familiar keypad for text entry and editing while embracing the trend for touch screen devices.

Since its introduction, the Series 40 platform has implemented a number of different UI orientations, resolutions, and input methods. Screen sizes supported have included 96x65, 128x128, 128x160, 208x208, 240x320, 320x240, and 320x480 pixels. With the introduction of Series 40 3rd Edition, Feature Pack 2, main screens of 128x160 or 240x320 pixels have been supported, with support for 320x480-pixel screens being added in Series 40 6th Edition.

The range of Series 40 devices is continually updated, and both new resolutions and input methods may be implemented in the future.

More information on the Series 40 UI style can be found in the Design and User Experience Library.

For details of the UI supported on a particular Series 40 phone, see the Device Specifications section of the Nokia Developer website.

Network support

The Series 40 platform can be incorporated into devices that support a range of wireless network standards:

- All Series 40 devices support either GSM and GPRS networks or CDMA networks, providing compatibility with mobile phone networks throughout the world.
- Some devices support EDGE networks and 3G Universal Mobile Telecommunications System (UMTS) networks for fast wireless and data transfer.

In addition, Series 40 devices may offer one or several local network-connectivity protocols from the supported options: Bluetooth wireless technology, Universal Serial Bus (USB), IrDA, and WLAN using Unlicensed Mobile Access (UMA) technology.

Bluetooth profile support includes: Advanced Audio Distribution Profile (A2DP), Audio/Video Remote Control Profile (AVRCP), Basic Imaging Profile (BIP), Basic Printing Profile (BPP), Dial-Up Networking (DUN) Profile, FTP profile, Generic Object Exchange Profile (GOEP), Hands-Free Profile (HFP), Object Push Profile (OPP), Personal Area Network (PAN) profile, SIM Access Profile (SAP), and Service Discovery Application Profile (SDAP).

For details of the network technologies provided on a particular Series 40 phone, see the Device Specifications section of the Nokia Developer website.

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