
S60 2nd Edition Feature Pack 1: What's New – Lead Features and APIs

Version 1.0
July 13, 2004

S60 platform

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Change History

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|---------------|-------------|--|
| July 13, 2004 | Version 1.0 | Initial document release. Revision on April 28, 2006: minor editorial changes including S60 terminology update. |
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1. Overview

1.1 Introduction to the document

This document describes the new features in S60 2nd Edition, Feature Pack 1. The key feature of the platform release is support for Enhanced Data Rates for Global Evolution (EDGE) technology, which provides faster data connectivity. S60 2nd Edition, Feature Pack 1 is based on Symbian OS v7.0s.



Note: S60 2nd Edition, Feature Pack 1 introduces various new features but all of them may not be supported in all devices compliant with Feature Pack 1. This document describes all the new features but it is recommended to see detailed information about supported features in specific devices from relevant documents, such as Device Specifications at www.forum.nokia.com/devices.

1.2 Introduction to S60 2nd Edition and Feature Packs

S60 2nd Edition, Feature Pack 1 is on top of S60 2nd Edition. New lead features of Feature Pack 1 are not part of the S60 2nd Edition specification.

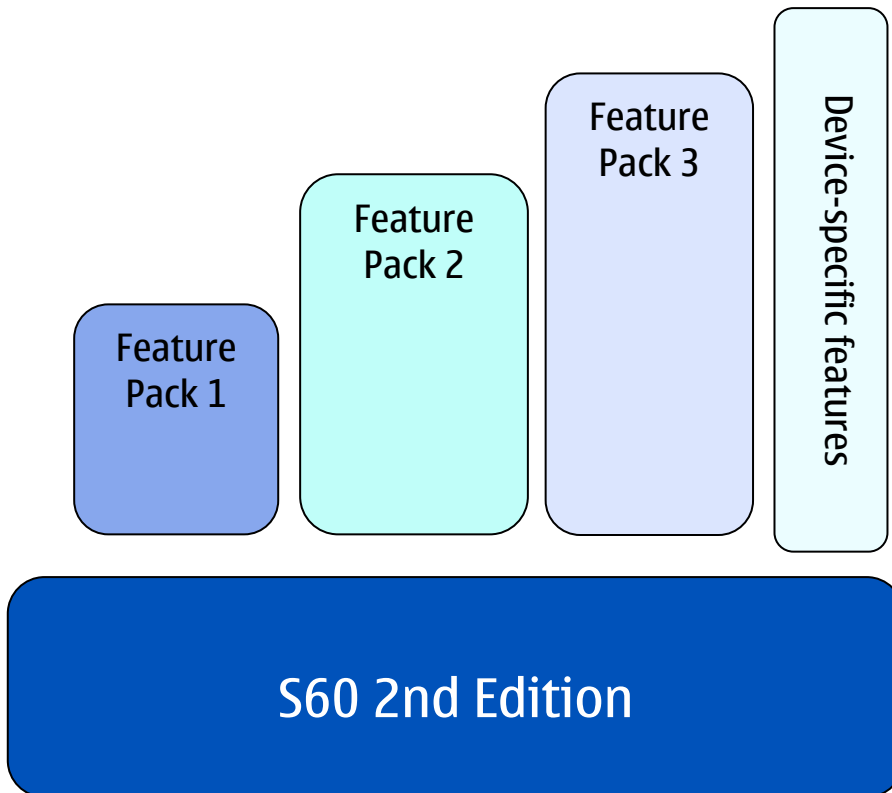


Figure 1: S60 2nd Edition and Feature Packs

The first Nokia products that are compliant with S60 2nd Edition, Feature Pack 1 are the Nokia 6260 device, the Nokia 6620 device, and the Nokia 7610 imaging device.

2. New features in S60 2nd Edition, Feature Pack 1

2.1 New features of the S60 platform

2.1.1 EDGE support

EDGE, a new radio interface technology with enhanced modulation, increases the High-Speed Circuit Switched Data (HSCSD) and General Packet Radio Service (GPRS) data rates by up to three-fold. EDGE modulation increases the data throughput provided by the packet switched service theoretically over 400 Kbps; however, actual speed is dependent on the device and network implementations.

S60 2nd Edition, Feature Pack 1 is verified against EDGE. The applications that use GPRS connections can benefit from higher data rates provided by EDGE.

2.1.2 Location application

S60 2nd Edition, Feature Pack 1 enables support for mobile terminated location requests (MT-LR). As location functionality is added to devices, it becomes necessary for the user to control how the location functionality behaves. The Location application enables the user to switch the location functionality on and off, and to determine how incoming location requests are handled.

2.1.3 Profiles

New features in the Profiles application are:

- Possibility to create new profiles
- Presence availability
- Status message

2.1.4 Mexapixel camera

S60 2nd Edition, Feature Pack 1 supports enhanced Camera with 1 megapixel image resolution (1152 x 864 pixels). 4x digital zoom and image formats JPEG, GIF87a/89a, EXIF, DCF, WBMP, BMP, MBM, PNG are supported.

2.2 Java™ enhancements

The S60 platform supports installing and running Java™ applications. The supported Java technology consists of MIDP 2.0 (Mobile Information Device Profile, JSR-118) and CLDC 1.0 (Connected Limited Device Configuration) with CLDC HotSpot virtual machine implementation that are delivered as part of Symbian OS v7.0s. For more information about J2ME and related specifications, see <http://java.sun.com/j2me/>.

As new feature, S60 2nd Edition, Feature Pack 1 includes implementation for the Mobile Media API (MMAPI) JSR-135 specification version 1.1. The JSR-135 specification defines a Mobile Media API that enables Java applications to use images, audio and video clips (<http://jcp.org/jsr/detail/135.jsp>). The Mobile Media API also supports image capturing with camera in the VideoControl interface. The supported video, image and sound formats are as supported in the S60 platform in general.

The following interfaces/features of the Mobile Media API are implemented:

- Sound playback
- Video playback
- Media file download from RMS, JAR, and over HTTP1.1
- Streaming is supported as in the S60 platform in general
- PlayerListener
- Sound playback/sampled audio: formats are supported as in the S60 platform in general. Methods: VolumeControl and StopTimeControl
- Sound playback/MIDI: VolumeControl, StopTimeControl, Tone Sequence: VolumeControl, ToneControl, and StopTimeControl
- Tone Sequence
- VideoPlayback: VideoPlayback, VideoControl, VolumeControl, StopTimeControl
- Animation Playback: Supported methods: VideoControl, StopTimeControl
- Camera (if the device supports camera): VideoControl, GetSnapShot
- Recording: for audio
- Recording: for video (new feature in MMAPI 1.1)

2.3 New browser features

S60 2nd Edition, Feature Pack 1 browser has evolved from the WAP 2.0 browser of S60 2nd Edition to a comprehensive mobile Internet browser by adding the following enhancements:

- Support for HTML 4.01, adding support for HTML elements such as image maps, background images, frames, <meta> tags, and <object> tags.
- Additional performance enhancements for faster downloading and displaying of full Internet pages.
- UI improvements:
 - Full-screen mode: Gives the opportunity to use the entire large screen to view content.
 - A download progress bar: Gives an idea of the status of the download process.
 - Scrollbars: Allows scrolling the page both vertically and horizontally.
 - Adaptive history list: An extra list of bookmarks that automatically records the visited URLs and sorts them according to the frequency of the visits.
 - An Auto-Complete feature: For manually entering a previously visited URL.

In addition to the core browsing features, S60 2nd Edition, Feature Pack 1 also introduces support for Push Service Load (also known as SL Push as specified by OMA 2.0) and Simple Push messages (for example, a vCard or some other type of content). Push Proxy Gateway (PPG) whitelisting for authenticating who is allowed to send Push messages to the user's device is also supported.

By adding support for the <meta> and <object> tags (mandatory for XHTML Mobile Profile), S60 2nd Edition, Feature Pack 1 browser fully conforms with the WAP 2.0 standards as specified by OMA.

Note: See *Browser Characteristics in Nokia GSM Devices* and *S60 Platform: Designing XHTML Mobile Profile Content* at www.forum.nokia.com/documents to find out which devices support the new browser features.

2.4 Messaging enhancements

2.4.1 E-mail

The Mail application supports the use of port number 995 for encrypted connections over SSL in POP for Microsoft Exchange Server. The Mail application supports the use of port number 993 for encrypted connections over SSL in IMAP4 for Microsoft Exchange Server.

2.4.2 MMS

S60 2nd Edition, Feature Pack 1 supports standard Multimedia Messaging Service (MMS) conforming to the OMA Multimedia Messaging Service 1.1 enabler release. MMS in the S60 platform also implements certain features defined in the MMS Conformance Document 1.2, which is a part of the OMA Multimedia Messaging Service 1.2 enabler release. These features have been included so that the MMS implementation can use all the capabilities of the S60 platform without impairing interoperability. It is possible to create only such multimedia messages that comply with the restrictions of MMS SMIL.

2.5 Instant Messaging and Presence

S60 2nd Edition, Feature Pack 1 supports instant messaging (IM) and Presence using the OMA Instant Messaging and Presence Service (IMPS) v1.1 specifications. The use of these services requires network support, that is, the mobile terminal must be able to contact a server or servers supporting the needed service elements.

Communication with the IMPS server is done using OMA IMPS Client-Server Protocol (CSP) v1.1 and packet data bearers using the HTTP binding that is defined in the OMA IMPS specifications. The CSP messages are encoded using the WAP Binary XML (WBXML) format defined in the OMA IMPS specifications. Supported elements are: OMA IMPS Instant Messaging service element, OMA IMPS Group service element, and OMA IMPS Presence service element. OMA IMPS Connection Initiation Requests are supported using WAP Push over SMS and UDP/IP, and standalone requests are supported using UDP/IP and TCP/IP.

Note: See Device Specifications at www.forum.nokia.com/devices to find out which devices support Instant Messaging and Presence.

2.5.1 Chat application

The Chat application supports instant messaging based on conversations and chat rooms. Conversations support private exchange of instant messages between two individual users, while chat rooms provide messaging among specific groups of users. The only message content type supported in the Chat application is plain text.

The Chat application also supports the Friends list, which allows the user to view and manage the user's instant messaging contact list. The Friends list provides a view to a subset of the contact information maintained by the Phonebook

application. The integration of Phonebook and the Friends list means that the management of the local instant messaging contact list can also be done using the Phonebook application and that the Chat application can be started from Phonebook.

2.5.2 Presence services

S60 2nd Edition, Feature Pack 1 supports the Presence service as defined in the OMA IMPS v1.1 specifications. With the Presence service, the user is able to publish own Presence (availability) information to other users and also view the Presence information published by other users. The Presence service requires network support, that is, there has to be a Presence server in the network with which the mobile terminal can communicate.

The implementation of the OMA IMPS v1.1 Presence service consists of the following:

- Presence application. With the Presence application, the user is able to view and manage the user's Presence attributes. The user is also able to control who are able to access the user's own Presence information.
- Presence support in the Phonebook application. With the Phonebook application, the user is able to view the Presence information published by other users.
- Presence support in the Logs application. With the Logs application, the user is able to view the Presence information published by other users.
- Presence support in the Profiles application. With the Profiles application, the user is able to associate Presence attributes with a certain profile.
- Open Presence API for third-party applications.

2.5.3 Presence API

S60 2nd Edition, Feature Pack 1 provides an open Presence API for enabling third-party applications to utilize the Presence service. The open Presence API consists of three main parts: Presence Fetcher, Presence Subscriber, and Presence Notifier. This first increment has some limitations due to the current implementation of the Presence engine and also due to the Architecturally Significant Requirements (ASR) described in OMA IMPS, version 1.1 (Approved Enabler Release), <http://www.openmobilealliance.org/>.

Currently the following functionality is supported:

- Limited attribute support.
 - UserAvailability
 - StatusText
 - StatusContent
- Third-party applications can only make local subscriptions. They cannot make direct subscriptions to Presence information on the network. This is available to third-party applications only if the user first manually creates the corresponding local subscription using the Phonebook application.
- Presence notifications can be added for the subscribed Presences.
- Limited fetching support.

Detailed documentation of the Presence API can be found from the SDK Help of S60 2nd Edition, Feature Pack 1 SDK.

2.6 Multimedia

2.6.1 Enhanced Media Player

As a new feature, the Media player has playlist support. It allows the user to create and manage a playlist of MP3 and possible MP4 files. The file format for the playlist is M3U.

2.6.2 New codecs

Multimedia Framework in S60 2nd Edition, Feature Pack 1 supports two new codecs: MP3 and AAC.

3. Terms and abbreviations

| Term or abbreviation | Meaning |
|----------------------|--|
| API | Application Programming Interface |
| CBS | Cell Broadcast Service |
| CLDC | Connected Limited Device Configuration |
| CSP | Client-Server Protocol |
| DRM | Digital Rights Management |
| EDGE | Enhanced Data Rates for Global Evolution |
| GPRS | General Packet Radio Service |
| HSCSD | High-Speed Circuit Switched Data |
| HTML | Hypertext Markup Language |
| HTTP | Hypertext Transfer Protocol |
| IM | Instant messaging |
| IMPS | Instant Messaging and Presence Service |
| JAR | Java Archive file format |
| JSR | Java Specification Request |
| MIDP | Mobile Information Device Profile |
| MMC | MultiMediaCard |
| MMS | Multimedia Messaging Service |
| MP | Mobile Profile |
| MT-LR | Mobile terminated location requests |
| OMA | Open Mobile Alliance |
| OS | Operating System |
| PPG | Push Proxy Gateway |
| SL | Service Loading |
| SMIL | Synchronized Multimedia Integration Language |
| UI | User Interface |
| USB | Universal Serial Bus |
| URL | Uniform Resource Locator |
| WAP | Wireless Application Protocol |

| Term or abbreviation | Meaning |
|-----------------------------|------------------------|
| WBXML | WAP Binary XML |
| WMA | Wireless Messaging API |

4. References

Bluetooth API (JSR-82) specification, <http://jcp.org/jsr/detail/82.jsp>

Browser Characteristics in Nokia GSM Devices, <http://www.forum.nokia.com/documents>

J2ME specifications, <http://java.sun.com/j2me/>

Mobile Media API (JSR-135) specification, <http://jcp.org/jsr/detail/135.jsp>

OMA IMPS v1.1 specifications, <http://www.openmobilealliance.org/>

Wireless Messaging API (JSR-120) specification, <http://jcp.org/jsr/detail/120.jsp>

5. Evaluate this resource

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