Nokia Eseries SDK Plug-ins for S60 C++ SDKs

Nokia Eseries SDK Plug-ins for the S60 3rd Edition SDKs

Introduction

The Nokia Eseries SDK Plug-ins [1] enable developers to take full advantage of the additional features present in such Nokia Eseries enterprise-grade devices as the Nokia E55 messaging device and Nokia E75 business smartphone. Each Nokia Eseries SDK Plug-in enhances and extends a specific S60 3rd Edition SDK.

With the plug-ins, C++ applications can be developed and tested in an SDK emulator. Each SDK plug-in includes the APIs for using the features that have been added to Nokia Eseries devices, such as printing and the e-mail LED, along with device skins for the SDK emulators. Use of the APIs is supported by comprehensive documentation and example applications.

A Nokia Eseries SDK plug-in, used in combination with the appropriate S60 3rd Edition SDK, provides all the tools required to build and test enterprise applications for Nokia Eseries devices.

Nokia Eseries SDK Plug-in for the S60 3rd Edition, Feature Pack 2 SDK for Symbian OS

Features

Printing framework

The printing framework enables developers to create new or update existing applications with the capability to produce hard copy via an external printer. The emulator supports the testing and debugging of applications that need printing capabilities. In S60 3rd Edition, Feature Pack 2 Eseries devices, the printing framework has been updated with a new AIW interface, which simplifies the addition of printing features to S60 applications for Nokia Eseries devices.

E-mail LED API

The E-mail LED API allows applications to initiate blinking of the e-mail LED that is present on certain Eseries devices via the Central Repository using the Symbian Publish and Subscribe API. When initiated, the e-mail LED blinks in accordance with the device's preference settings.

Nokia Eseries Device Identification API

The Nokia Eseries Device Identification API allows applications to detect whether they are being installed on or are running in an Eseries device. An installation check can be used to trigger the installation of a different version of the application on a device that is not an Eseries device. The runtime check can be used to vary the behaviour of an application based on the device on which it is installed.

Supported devices

The following table shows the skins and features supported by the plug-in for S60 3rd Edition, Feature Pack 2 Eseries devices:

Device	Skins	Printing Framework API	E-mail LED API	Nokia Eseries Device Identification API
Nokia E55	epoc_240x320.ini	X		X
Nokia E75	epoc_240x320.ini with keypad and 320x240.ini with QWERTY keyboard	X		X

Nokia Eseries SDK Plug-in for the S60 3rd Edition, Feature Pack 1 SDK for Symbian OS for C++

Features

Printing framework

The printing framework enables developers to create new or update existing applications with the capability to produce hard copy

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via an external printer. The emulator supports the testing and debugging of applications that need printing capabilities. In S60 3rd Edition, Feature Pack 1 Eseries devices, the printing framework has been updated to make use of the EPOC Component Object Model (ECOM) interface. This enables applications that implement printing functionality to work in devices without a printing capability.

E-mail LED API

The E-mail LED API allows applications to initiate blinking of the e-mail LED that is present on certain Eseries devices via the Central Repository using the Symbian Publish and Subscribe API. When initiated, the e-mail LED blinks in accordance with the device's preference settings.

Nokia Eseries Device Identification API

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Preview pop-up API

The preview pop-up component is a new UI component that enables applications to use areas of a wide screen easily and efficiently. Note: Although this API is present on all S60 3rd Edition, Feature Pack 1 devices, it has an effect only on the Nokia E90 Communicator. On all other devices, calling the API has no effect.

List stretching API

List stretching enables double-row-style lists to be shown as single-row-style lists, allowing applications to make better use of wide-screen devices. Note: Although this API is present on all S60 3rd Edition, Feature Pack 1 devices, it has an effect only on the Nokia E90 Communicator. On all other devices, calling the API has no effect.

Supported devices

The following table shows the skins and features supported by the plug-in for S60 3rd Edition, Feature Pack 1 Eseries devices:

Device	Skins (See note 1)	Printing framework	E-mail LED API	Nokia Eseries Device Identification API	Preview pop-up API	List stretching API
Nokia E51	epoc_240x320.ini	X	X	X	X (See note 2)	X (See note 2)
Nokia E63	epoc_320x240.ini	X	X	X	X (See note 2)	X (See note 2)
Nokia E66	epoc_320x240.ini	X	X	X	X (See note 2)	X (See note 2)
Nokia E71	epoc_320x240.ini	X	X	X	X (See note 2)	X (See note 2)
Nokia E90	epoc_800x352.ini (PDA side with QWERTY keyboard) and epoc_320x240.ini (cover side)	X	X	X	X	X

1. An additional skin (epoc_320x240_qw.ini) provides the representation of a device with a QWERTY keyboard and an integrated numeric keypad.
2. The APIs for the preview pop-up and list-stretching features are present in all S60 3rd Edition, Feature Pack 1 devices, including the Nokia E51 device. However, these APIs function only in the Nokia E90 Communicator. On all other devices, they have no effect on the information displayed to the user. Because the APIs are present on all S60 3rd Edition, Feature Pack 1 devices, developers can make use of the preview pop-up and list-stretching APIs in a single application binary designed for use on all S60 3rd Edition, Feature Pack 1 devices.

Nokia Eseries SDK Plug-in for the S60 3rd Edition SDK for Symbian OS, for C++

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Features

External-view framework

The external-view framework facilitates the development of applications and associated device drivers to allow enterprise users to utilise an external-viewing or display device (for example, a projector). The framework enables the development and testing of such applications and drivers in the emulator environment. This framework was first introduced in Series 80 2nd Edition devices.

Printing framework

The printing framework enables developers to create new or update existing applications with the capability to produce hard copy via an external printer. The emulator supports the testing and debugging of applications that need printing capabilities. The same framework was first introduced in Series 80 2nd Edition devices.

E-mail LED API

The E-mail LED API allows applications to initiate blinking of the e-mail LED that is present on certain Eseries devices via the Central Repository using the Symbian Publish and Subscribe API. When initiated, the e-mail LED blinks in accordance with the device's preference settings.

Camera API

The camera API present in the Nokia E70 device conforms to the Symbian Onboard Camera API. Thus, applications written using this API can be run on the Nokia E70. The camera feature of the SDK enables emulation of the Nokia E70 camera in the emulator environment. Developers can, therefore, build and test applications that take and process images from within the emulator environment, using real-life images.

Supported devices

The following table shows the skins and features supported by the plug-in for S60 3rd Edition Eseries devices:

Device	SDK skin	External-view framework	Printing framework	E-mail LED API	Camera
Nokia E50	epoc_240x320.ini	X	X	X	X
Nokia E60	E60_352x416.ini or epoc_352x416.ini	X	X	X	X
Nokia E65	epoc_240x320.ini	X	X	X	X
Nokia E61	E61_320x240.ini or epoc_320x240.ini	X	X	X	X
Nokia E61i	E61_320x240.ini or epoc_320x240.ini	X	X	X	X
Nokia E62	E61_320x240.ini or epoc_320x240.ini	X	X	X	X
Nokia E70	epoc_352x416.ini (flip closed) and epoc_352x416_qwerty.ini (flip open)	X	X	X	X

Installation

Before any Eseries plug-in can be installed, the relevant S60 SDK must already be installed. The Nokia Eseries SDK Plug-in for the S60 3rd Edition SDK for Symbian OS, for C++ is supplied as a ZIP archive. For installation of the plug-in, the content of the ZIP file should be extracted, with the folder structure preserved, to the root folder of the SDK's installation folder, for example, C:\Symbian\9.1\S60_3rd_MR.

The Nokia Eseries SDK Plug-in for the S60 3rd Edition, Feature Pack 1 SDK for Symbian OS for C++ is delivered as a Windows installation file and is installed in the normal way. Using the skins

Selecting a skin in the emulator

Once installed, the plug-ins add the Eseries skins to the list of skins available for use in the emulator. With the emulator running, the available skins can be cycled through from the Tools > Switch Configuration menu option or by pressing the skin button in the

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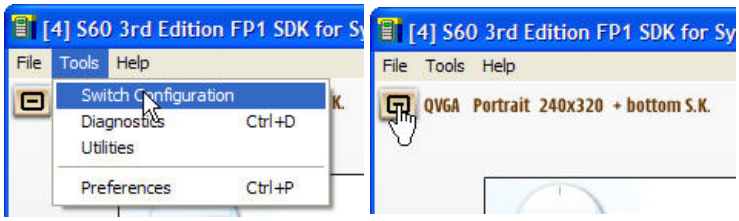
emulator window, as shown below.



Altering the skins order

The available skins and the order in which they are cycled when using the Switch Configuration menu option or the emulator button are determined by settings in the emulator's epoc.ini file. This file is found in the SDK's Epoc32\Data folder (such as C:\Symbian\9.1\S60_3rd_MR\Epoc32\Data for the S60 3rd Edition Maintenance Release SDK). The available skins and the order in which they are cycled can, therefore, be changed by editing the epoc.ini file.

For example, the following epoc.ini file will display the skin for the Nokia E61 (shown below) when the emulator is launched, and will switch to the skin for the E60 on the first cycle:

```
configuration E61_320x240.ini
configuration E60_352x416.ini
configuration epoc_352x416.ini
configuration epoc_416x352.ini
configuration epoc_176x208.ini
configuration epoc_208x176.ini
configuration epoc_240x320.ini
configuration epoc_320x240.ini

# NOTICE! Below lines are read only for the first resolution (ini file) above.
PlatSecDiagnostics ON
PlatSecEnforceSysBin ON
PlatSecProcessIsolation ON
PlatSecEnforcement OFF
PlatSecDisabledCaps NONE
LogToFile 1
LogToDebugger 1
JUSTINTIME debug
_EPOC_DRIVE_D \epoc32\winscw\d
_EPOC_LocDrv_1 E:
MegabytesOfFreeMemory 32
MultiMediaCardSize=16000
```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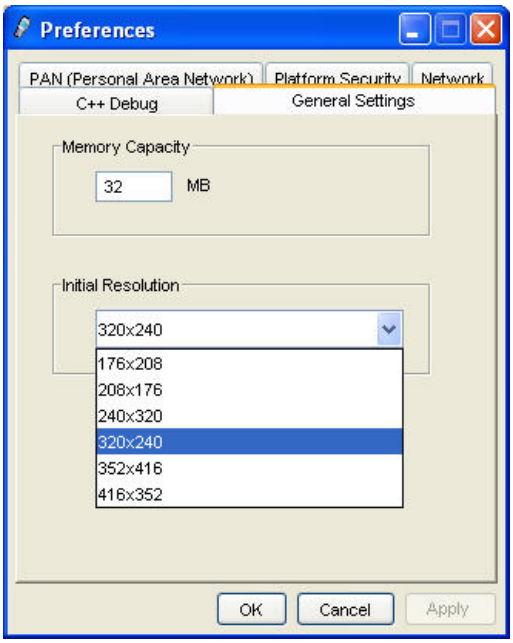
The emulator does not, however, determine the initial S60 screen canvas on the basis of the skin displayed initially. The initial resolution of the screen is determined by the emulator's preferences. These are set using the Tools > Preferences menu option, selecting the General Settings, and choosing the resolution and orientation under Initial Resolution, as shown below.



Therefore, if the order of the skins is altered, the Initial Resolution should be set to match that of the first skins.

Note: The S60 3rd Edition, Feature Pack 1 emulator always starts by displaying either a QVGA landscape or portrait canvas regardless of the first skin defined in epoc.ini. As a result, it is advisable always to define a QVGA skin as the first one displayed in the emulator.

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