

MIDP 2.0: Wireless Messaging API Example

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Java™

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Change History

March 15, 2005	Version 1.0	Initial document release

1 Introduction

This document describes what the Wireless Messaging API (WMA) Example for MIDP 2.0 does and how it is used.

2 Overview of the WMAExample for MIDP 2.0

The WMA Example for MIDP 2.0 demonstrates the use of the following Java Application Descriptor (JAD) attributes that are introduced in MIDP 2.0:

- **MIDlet-Permissions:** The security permissions needed for the Push registry to be able to start the MIDlet automatically. For example,
MIDlet-Permissions: javax.microedition.io.PushRegistry
- **MIDlet-Push-n:** The Push registry that allows the MIDlet to start automatically. For example,
MIDlet-Push-1: sms://:7500, WMAExample, *

The use of these entries in the JAD file allows a MIDlet to be provisioned with a listener that prompts the user to start the installed MIDlet when data that is destined for that MIDlet is received — in this case, the WMAExample MIDlet.

The WMAExample was designed and tested using the Series 40 Developer Platform 2.0 SDK 1.0, which is available on the Forum Nokia Web site at <http://forum.nokia.com/tools>.

2.1 Use Case Example

Two SMS users have the WMAExample MIDlet installed on their device.

User A sends user B an SMS message.

User B's device is idle.

User B gets an incoming message notification, as shown in Figure 1.

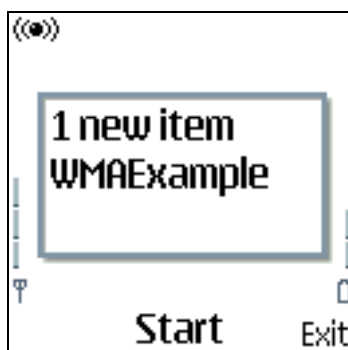


Figure 1: Message notification to user B

User B sees the notification and chooses **Start**. The MIDlet is started and the message is received by the MIDlet and displayed to user B, as shown in Figure 2.

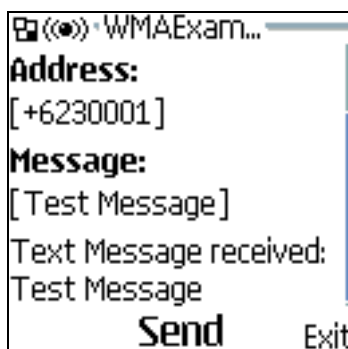


Figure 2: Message displayed to user B

3 How to Use the WMAExample MIDlet

This section describes how to set up and use the MIDlet.

3.1 Setting Up the Run-Time Environment

To do SMS messaging between two running instances of the Series 40 Developer Platform 2.0 SDK:

1. Start the NCF Lite application by selecting:
Start > Programs > Nokia Developer Tools > Nokia Connectivity Framework > Nokia Connectivity Framework Lite.
2. Start two instances of the Series 40 Developer Platform 2.0 SDK by making the following selection twice:
Start > Programs > Nokia Developer Tools > DP 2.0 SDKs > Series 40 > S40 DP 2.0 SDK 1.0
3. Make sure that both instances are in OTA provisioning mode: In the SDK main window, select Tools > Preferences > MIDP Tab, and uncheck the check box "Overrule default handset behavior".

3.2 Installing the WMAExample MIDlet

To install the MIDlet:

1. In the SDK main window, select File > Open, and browse to the MIDlet.
2. When the SDK presents you with some questions, choose **yes** to install the MIDlet and **yes** to allow networking.
3. During the installation of the MIDlet on the sending instance, choose **YES** when you are prompted to run the MIDlet.
4. On the receiving instance, choose **NO** when you are prompted to run the MIDlet.

This setup lets you see the incoming message notification that is displayed when a MIDlet is listening for incoming messages but is not running.

3.3 Composing and Sending the Message

To compose and send a message:

1. On the sending instance, make sure the MIDlet is running and the form is pre-filled with the information shown in Figure 3.

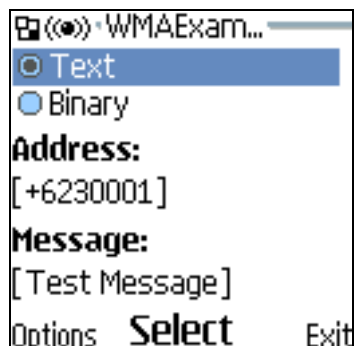


Figure 3: Pre-filled information

The default values are used for sending a text message. The text sent in the SMS message will be the text contained in the `Message :` field. The default text is `Test Message`. You can edit this field.

2. Verify that the address of the SDK you're sending the message to (that is, `+62300001`) is correct.
3. To send the message, choose the **Options** menu softkey and then choose **Send**.

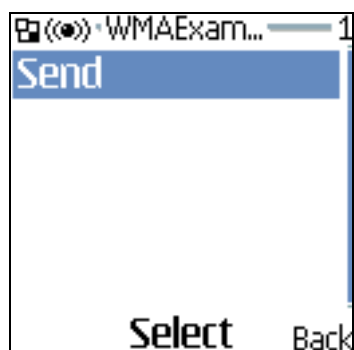


Figure 4: Sending the message

The message is then received on the receiving SDK instance.

4. Choose to start the MIDlet to receive the sent text.
5. Once the MIDlet is started, scroll down to the bottom of the form to see the incoming text message.

To send binary messages, the process is the same except that you click the **Binary** radio button. When you make this selection, the MIDlet removes the `Message :` field from the GUI and replaces it with `Ready to send /test.bin`, as shown in Figure 5.

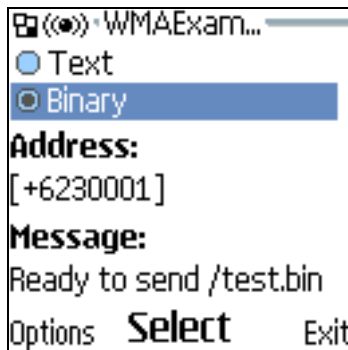


Figure 5: Sending binary messages

4 JAD File Attributes

Contents of the JAD file:

```
MIDlet-Name: WMAExample
MIDlet-Version: 2.1
MIDlet-Vendor: Forum Nokia
MicroEdition-Profile: MIDP-2.0
MicroEdition-Configuration: CLDC-1.1
MIDlet-Jar-URL: WMAExample.jar
MIDlet-Jar-Size: 8872
MIDlet-Description: Demonstration MIDlet for Wireless Messaging on MIDP
2.0 devices.
MIDlet-Push-1: sms://:7500, WMAExample, *
MIDlet-Permissions: javax.microedition.io.PushRegistry
Message-Address: +6230001
Message-Text-Body: Test Message
Binary-Message-Body-File: /test.bin
ServerPort: 7500
MIDlet-1: WMAExample, /N.png, WMAExample
```

The following are explanations for the optional JAD attributes:

- **Message-Address: +6230001**
How the MIDlet sets the default sending instance address.
- **Message-Text-Body: Test Message**
How the MIDlet sets the default text message.
- **Binary-Message-Body-File: /test.bin**
How the MIDlet finds the included binary file in the Java Archive (JAR) file.
- **ServerPort: 7500**
The port that the MIDlet listens to for incoming messages.
- **MIDlet-Push-1: sms://:7500, WMAExample, ***
The Push registry that allows the MIDlet to start automatically.
- **MIDlet-Permissions: javax.microedition.io.PushRegistry**
The security permissions needed for the Push registry to be able to start the MIDlet automatically.

This MIDlet was designed and tested on the Series 40 Developer Platform 2.0 SDK 1.0.

5 Terms and Abbreviations

Term or abbreviation	Meaning
JAD	Java Application Descriptor
JAR	Java Archive
MIDP	Mobile Information Device Profile
WMA	Wireless Messaging API

6 Evaluate This Resource

In order to improve the quality of documentation, we kindly ask you to fill in the [survey](#).