

# Nokia Test Criteria for Java™ ME Applications

Version 1.4; September 23, 2009

# Testing

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## Change history

April 4, 2006	Version 1.0	Initial document release Revision on October 3, 2006: minor editorial changes.
January 18, 2008	Version 1.1	Overlapping test cases with Java Verified used criteria removed. Test cases for Series 80 removed.
October 24, 2008	Version 1.2	New test cases added for touch UI.
September 2, 2009	Version 1.3	Energy consumption test case added.
September 23, 2009	Version 1.4	Pause test case removed.

## 1 Introduction

This document describes the test cases conducted for Java™ Platform, Micro Edition (Java™ ME) applications in addition to Unified Testing Criteria (UTC). Meeting Unified Testing Criteria is a requirement for the Java Verified™ Program. All applications that will be embedded to Nokia devices as part of a Total Product Offering (TPO) or operator variant project should be tested according to these test cases. Meeting Nokia test criteria is a requirement for third-party applications that are delivered via Nokia sales channels, including:

- Applications preinstalled to ROM, memory card, or hard-disk drive;
- CD-ROMs in devices' sales packages;
- Downloads, Nokia Web/mobile Web page downloads.

The test cases are applicable for applications targeted at Series 40 and S60 devices. These tests are done simultaneously with Unified Testing Criteria available at [www.javaverified.com](http://www.javaverified.com).

## 2 Test cases

### 2.1 Nokia values for applications

#### NOK-01: Nokia values

##### Test description:

Applications must be in line with Nokia values and therefore must not have any references to the issues listed below.

##### Steps to conduct the test:

While using the application, check that the application does not have any references to:

- Excessive violence and gratuitous depiction of violence against humans/animals (for example, no suicidal bombers, killing of innocent or outsiders);
- Depictions of pornography or pedophilic imagery;
- Drinking of alcohol;
- Substance abuse including drugs and drug taking;
- Smoking;
- Overuse of swearing;
- Racism;
- Overtly political messages, such as terrorism, generic battles/fights between the races, slavery/slave trade. Contentious political/global events in historical context, for example Battle Field 1942, are OK;
- Religious imagery, unless in real-life context;
- Gambling using real money;
- Promotions of criminality, criminal actions (depiction of criminal activity where the player is the perpetrator of the crime);
- Material targeted and marketed solely at young children, for example Teletubbies;
- Nokia, for example name or logo (except if explicitly agreed upon with Nokia).

##### Expected test result:

The application does not have any references to the listed items.

Notes:

Exceptions:

Pass  Fail  Pass with exception

Notes:

Exceptions:

Pass  Fail  Pass with exception

## 2.2 Specific tests for games

### NOK-02: Specific tests for games

#### Test description

The game indicates the current status clearly and provides feedback. Each rule/function of the game is clear. When the game is over, feedback is provided and there is no paused game session to continue.

#### Steps to conduct the test:

1. Open the game and start playing.
2. Check that the current status of the game is clear and feedback is provided.
3. Check that the rule/function of each element is clear.
4. Quit the game.
5. Check that some feedback is provided when the game is over.
6. Check that there is no paused game session to continue when the game is over.

#### Expected test result:

- The current status of the game is clear and feedback is provided (for example, number of lives available, current level, current score).
- The rule/function of each element of the game is clear (for example, how the player and the enemies are represented and how they interact).
- When the game is over, feedback is provided. This includes a warning that the game is over, total score (if any), who won (for example, if the game is played between the device and the player), other game-dependent features (for example, level), and what to do next.
- When a game is over, there is no paused game session to continue.

#### Notes:

#### Exceptions:

Pass  Fail  Pass with exception

## 2.3 Energy consumption

**NOK-03: Energy consumption (PowerTest tool)****Test description**

The application must have a minimal energy footprint. (*The PowerTest tool required for this test case is not yet publicly available. You can run similar tests using the [Nokia Energy Profiler](#) tool available at [Forum Nokia](#).)*

**Steps to conduct the test:**

1. Ensure that you are using a clean device (if you are not sure, format the device before continuing).
2. Install the PowerTest package (and the needed additional components).
3. Install the application to be tested.
4. If necessary, perform the setup steps of the application to be tested.
5. Start the PowerTest application.
6. Start a new test from the **Options** menu and select the application that should be tested.
7. Wait for the automatic test to finish (35 min). You will hear a beep when the test has finished.
8. Bring the PowerTest tool to the foreground and click **OK** to start the active test phase.
9. Use the test application as you would use it normally. Note that this is not a stress test.
10. Send the test results to your PC and attach the .png image to your final test report.

For more detailed instructions, refer to the user guide supplied with the PowerTest tool.

**Expected test result:**

- The application should not drop the battery lifetime below 4 days (the result should not be “fail”).
- The power consumption should not be excessive for this type of application (< 40 mAh/h in standby mode). If the tested application uses WLAN, Bluetooth, or another network connection, the power consumption is higher than usually. The power consumption is also higher when playing MP3s or listening to the radio.

**Notes:**

- Failing this test is not fatal for now. The result should be reported as an observation only.
- The battery level does not need to be full when running this test.
- The device must not be connected to a charger when running this test.

**Exceptions:**

The tool works on devices compatible with S60 3rd Edition, FP1 and onwards. **This test cannot be run on older S60 devices or on Series 40 devices.**

Pass  Fail  Pass with exception

## 2.4 Touch UI specific test cases

NOKT-01: UI element size (touch UI only)	
<b>Test description</b>	
<b>The application UI elements must be large enough for a pleasant user experience.</b>	
<p>Steps to conduct the test:</p> <ol style="list-style-type: none"> <li>1. Start the application.</li> <li>2. While using the application, check UI element sizes and visible areas vs. active areas in the following application features: <ul style="list-style-type: none"> <li>• Main menu and submenus;</li> <li>• Settings menu;</li> <li>• Main functionality of the application.</li> </ul> </li> </ol>	<p>Expected test result:</p> <ul style="list-style-type: none"> <li>• The target minimum size of a UI element is 7 x 7 mm. In the Nokia 5800 XpressMusic device, the 7 x 7 mm is equivalent to 70 x 70 pixels.</li> <li>• The active area of the component must not be smaller than the visible area of the component.</li> </ul>
<p>Notes:</p> <p>For more UI and user experience guidelines and a usability checklist, visit <a href="http://www.forum.nokia.com/usability">www.forum.nokia.com/usability</a>. The test house will randomly choose one item per feature for measuring. The developer is expected to make sure that all items are in the correct size range.</p>	<p>Exceptions:</p> <p>When components are located near the edge of the display, the touchable area can be fully extended to the edge of the display (that is, beyond the component's visible graphics).</p> <p>For example in games where the game board is essential to fit the screen (for example, Sudoku) or in applications that are meant to be used with Stylus, the size of the UI element can be smaller than 7 x 7 mm (equivalent to 70 x 70 pixels).</p>
Pass <input type="checkbox"/> Fail <input type="checkbox"/> Pass with exception <input type="checkbox"/>	

**NOKT-02 Touch interaction: Select and activate (touch UI only)****Test description****Touch interaction must follow the S60 UI Style Guide.****Steps to conduct the test:**

1. Start the application.
2. While using the application, check the interaction styles in the following areas of the application:
  - Main menu and submenus;
  - Settings menu;
  - Main functionality of the application.

**Expected test result:**

1. The following will operate with one tap:
  - Buttons
  - Icons
  - Items within Options menus
2. The first tap selects the item and the second tap opens the item unless another item is selected.

**Notes:**

For more UI and user experience guidelines and a usability checklist, visit [www.forum.nokia.com/usability](http://www.forum.nokia.com/usability).  
The test house will randomly choose one item per feature for measuring. The developer is expected to make sure that all items behave correctly.

**Exceptions:**

It is possible to open or activate an item from a focusable view directly with a single tap if the focus is already on the given item.

Pass  Fail  Pass with exception