

User Experience Checklist for Java™ ME Applications

Version 1.0; March 16, 2005

Usability

NOKIA

Copyright © 2005 Nokia Corporation. All rights reserved.

Nokia and Forum Nokia are registered trademarks of Nokia Corporation. Java and all Java-based marks are trademarks or registered trademarks of Sun Microsystems, Inc. Other product and company names mentioned herein may be trademarks or trade names of their respective owners.

Disclaimer

The information in this document is provided “as is,” with no warranties whatsoever, including any warranty of merchantability, fitness for any particular purpose, or any warranty otherwise arising out of any proposal, specification, or sample. Furthermore, information provided in this document is preliminary, and may be changed substantially prior to final release. This document is provided for informational purposes only.

Nokia Corporation disclaims all liability, including liability for infringement of any proprietary rights, relating to implementation of information presented in this document. Nokia Corporation does not warrant or represent that such use will not infringe such rights.

Nokia Corporation retains the right to make changes to this specification at any time, without notice.

License

A license is hereby granted to download and print a copy of this specification for personal use only. No other license to any other intellectual property rights is granted herein.

Contents

1	Introduction	5
2	User experience checklists	6
2.1	Quick checklist.....	6
2.2	Installation and start-up checklist.....	7
2.3	Navigation checklist.....	7
2.4	Series 40 UI style checklist	8
2.5	S60 UI style checklist.....	8
2.6	Series 80 UI style checklist	9
2.7	Accessibility and clarity checklist.....	9
2.8	Mobility checklist.....	10
2.9	Security checklist.....	10
2.10	Connectivity checklist.....	11
2.11	Games checklist.....	11
2.12	Help and documentation checklist.....	12
2.13	Application closing and uninstall checklist.....	12
3	References	13
4	Evaluate this resource	14

Change history

March 16, 2005	Version 1.0	Initial document release Revision on October 3, 2006: minor editorial changes

1 Introduction

This document lists fundamental user-experience issues that must be taken into account when designing Java™ Platform, Micro Edition (Java™ ME)-based applications. Many of these issues are also part of Unified Testing Criteria (UTC), which is used in Java Verified test program. The checklist is extremely useful for ensuring that an application passes Java Verified testing, and for that reason, it is strongly recommended that this checklist be used as a part of application self-testing.

Good usability is the basis for a good application and a pleasant user experience. Usability does not just happen by accident — it is often the result of hard work. This checklist *is not* a substitute for usability testing with real users. To ensure user satisfaction, developers should arrange separate usability tests and start testing the application in the early phases of development. It is easier and cheaper to fix possible problems in these earlier stages.

2 User experience checklists

2.1 Quick checklist

This checklist contains items for checking the most common and the most serious usability problems — those which may cause the application to fail in certification tests.

Guideline	True	False
Softkey usage and navigation style are consistent with UI style.	[]	[]
Error notes are informative and clear; they do not contain too technical terminology.	[]	[]
Application contains Help. Help contains brief description of application purpose and controls.	[]	[]
User can cancel actions easily, especially those related to connectivity.	[]	[]
About screen contains application's name and version, vendor's name, and support contact. Version numbering and naming is up to date and consistent with information in .JAD file.	[]	[]
Errors are handled correctly, especially those related to connectivity.	[]	[]
Application remembers user settings and saves them on exit.	[]	[]
Application closes network connections and Bluetooth connections on exit.	[]	[]
Application handles multitasking correctly. In Series 40 devices, it saves and exits on End key press. In other platforms, it can be switched to background (and closed) with Application key (S60 devices) or from Task List (Series 80 devices).	[]	[]
Application handles interruptions correctly. Phone calls, messages, or battery warnings are indicated properly.	[]	[]
Application starts in less than 10 seconds. A clear progress bar or animation is displayed quickly after the launch.	[]	[]
Application can be resumed after shorter or longer technical or social interruptions. Sounds work correctly after the interruption.	[]	[]
Application menus do not contain multiple instances of the same command.	[]	[]
Every selectable item in menu has got some action. Items that cannot be currently selected do not appear as selectable.	[]	[]
Terminology is not technical, but is familiar to target users. Truncations, abbreviations and foul language are not used.	[]	[]
Application handles rapid button pushing correctly.	[]	[]
Application has been tested on actual devices, not just simulated.	[]	[]
Application has been tested with actual end-users, not just in-house developers.	[]	[]

2.2 Installation and start-up checklist

Guideline	True	False
Installation of application is straightforward, obvious, and reasonably fast.	[]	[]
Application can be installed via OTA.	[]	[]
Application starts in less than 10 seconds.	[]	[]
If application startup takes more than few seconds, a clear progress bar or animation is displayed.	[]	[]
The details of the application described in the .JAD file are readable.	[]	[]
Installation has been tested on actual device(s).	[]	[]
Sounds work according to selected profiles (if possible).	[]	[]
User has control over intro sounds.	[]	[]

2.3 Navigation checklist

Guideline	True	False
The default Navigation key is used as a primary control, for moving focus (and for navigating forwards).	[]	[]
The most important actions are presented first. Main features are available from application main view, including Exit, About, and Help.	[]	[]
User is always allowed to cancel or navigate backward, with the default Back key.	[]	[]
It is clearly indicated to user <i>Where s/he is</i> , and <i>what s/he can do</i> . Screen layout is consistent with UI style guide.	[]	[]
Feedback on user actions is provided immediately. If any action takes more than 0.5 seconds, the user is provided with an indication that something is happening.	[]	[]
If action takes more than 2 seconds, animation or progress bar is displayed and user is allowed to cancel action.	[]	[]
Application terminology, especially softkey labels, is consistent with similar pre-installed applications on the device.	[]	[]
Menus and selection lists do not contain duplicate items, or items with no valid actions. Items that do not contain valid actions are either clearly disabled or hidden.	[]	[]
Application UI is consistent with itself and with the UI style.	[]	[]
Application is responsive and application performance is acceptable, also with different sound settings.	[]	[]
Sequences of actions are organized into groups with a beginning, a middle, and an end. Appropriate feedback is provided after completion.	[]	[]
Application handles rapid button pushing correctly.	[]	[]

Guideline	True	False
Terminology familiar to users is used instead of technical terminology.	[]	[]
The navigation structure is simple and straight-forward. The number of screens is minimal.	[]	[]

2.4 Series 40 UI style checklist

Guideline	True	False
The Navigation key is used as a primary control, for moving focus (and for navigating forwards in devices with middle softkey).	[]	[]
If the middle softkey is used, it must have a label.	[]	[]
The middle softkey does not have any negative/backward functioning commands.	[]	[]
Full screen mode is implemented according to UI style.	[]	[]
Left softkey (LSK) is used as an Options menu, (or selection key in devices with no middle softkey), and for positive actions (Options/Yes).	[]	[]
Right softkey (RSK) is used for safe backward navigation, negative actions, and closing the application in application main menu. (Back/Exit/Cancel/Done/No),	[]	[]
No essential information is displayed with icons only. Textual presentation of the information is also available.	[]	[]
Settings are also saved if application is closed by pressing End key.	[]	[]

2.5 S60 UI style checklist

Guideline	True	False
The Navigation key is used as a primary control, for moving focus, and for navigating forward.	[]	[]
Default actions available from Navigation key are also available from Options menu.	[]	[]
Full screen mode is implemented according to UI style.	[]	[]
Exit is not the only item in Options menu. (For example, Help or Select is placed first, to prevent accidental exiting.)	[]	[]
Left softkey (LSK) is used as an Options menu, or as a secondary selection key, and for positive actions (Options/Yes).	[]	[]
Right softkey (RSK) is used for safe backward navigation, negative actions, and closing the application in application main menu (Back/Exit/Cancel/Done/No).	[]	[]
Application handles interruptions — such as phone calls, messages, battery warnings, or user pressing power key — correctly.	[]	[]
If use of an application requires knowledge of multitasking, users are assisted in this.	[]	[]

Guideline	True	False
Settings are saved when application is exited from the application list.	[]	[]
If the user exits the application with the End key or Application key, the application does not close, but is switched to background and paused, if necessary.	[]	[]

2.6 Series 80 UI style checklist

Guideline	True	False
Application main features can be used with CBA, Scroll key, Enter, and QWERTY keyboard.	[]	[]
Scroll select and Enter are generally used as default action keys.	[]	[]
Scroll key and Enter are not used as default action keys if the user cannot undo the action or when a user error would have significant consequences.	[]	[]
CB1 is used as the primary key for positive actions, context-sensitive actions, selecting, accepting, and navigating forward. Default action available from Scroll key and Enter is placed to CB1.	[]	[]
CB2 is used as a secondary key for positive actions, context-sensitive actions, additive actions, and navigating forward.	[]	[]
CB3 is used for destructive actions, navigating backward, and context-sensitive actions.	[]	[]
CB4 is used as the primary key for navigating backward safely and for closing the application in application main menu.	[]	[]
CBA usage is consistent within application.	[]	[]
Menu is designed according to Series 80 UI Style Guide.	[]	[]
Full screen mode is implemented according to UI style.	[]	[]
Application handles interruptions, such as phone calls and messages, correctly.	[]	[]
Application acts properly when switched to background. e.g., backlight is not kept active, sounds are not played, game is paused.	[]	[]
Settings are saved when application is exited from the Task list.	[]	[]

2.7 Accessibility and clarity checklist

Guideline	True	False
The user is not forced to guess the right format for information.	[]	[]
Terminology is not technical, but is familiar to target users. Truncations, abbreviations and foul language are not used.	[]	[]
When information is displayed with different colors, they are clearly distinguishable from each other by different levels of contrast.	[]	[]
The application provides reasonable default values for data requested from the user.	[]	[]

Guideline	True	False
The application does not ask for data that it can find on its own.	[]	[]
The amount of text in applications is minimal.	[]	[]
Text is not truncated.	[]	[]
Text is not ALL CAPS.	[]	[]
Text has good contrast with the background.	[]	[]
Text is not right justified.	[]	[]
Sounds are used in conjunction with a visual indication.	[]	[]
Simple, readable fonts are used.	[]	[]
Paragraphs and headings are used to make long text more readable.	[]	[]
Obscenity or foul language is not used.	[]	[]
No essential information is displayed with icons only. Textual presentation of the information is also available.	[]	[]
Date and time formats are localized for target users.	[]	[]
Application is localized to the target users' native language.	[]	[]
Application does not contain spelling or grammatical errors.	[]	[]

2.8 Mobility checklist

Guideline	True	False
Application handles interruptions, e.g. phone calls or messages correctly and battery warnings are displayed accordingly.	[]	[]
Application can be resumed after shorter or longer technical or social interruptions. Also sounds work properly after interruption.	[]	[]
The user always has control over sounds.	[]	[]
Sounds work according to selected profile. (In devices where it is possible).	[]	[]
Pressing keys rapidly does not crash the application or cause it to act in a way that is inconvenient to the user.	[]	[]

2.9 Security checklist

Guideline	True	False
Sensitive data such as credit card numbers are not stored.	[]	[]
The user is allowed to erase his/her data.	[]	[]

Guideline	True	False
Sensitive data is sent with appropriate encryption.	[]	[]
The user is not forced to enter passwords repeatedly.	[]	[]

2.10 Connectivity checklist

Guideline	True	False
Errors in connectivity are handled correctly; error messages are not overly technical.	[]	[]
The user can cancel actions easily. If the user decides not to establish connection or send a message, no error message is displayed.	[]	[]
Terms that refer to closing the application, establishing connection with the server, and logging in or out are unlikely to be confused with each other.	[]	[]
Current status is displayed clearly. For example “Not connected” or “Not logged in” is displayed when appropriate.	[]	[]
Feedback clearly communicates if an action succeeded or not. If possible, it also provides additional information.	[]	[]

2.11 Games checklist

Guideline	True	False
Application handles multitasking correctly. In Series 40, it closes on red key press. In S60 and 80 devices, it can be switched to background and closed or resumed later.	[]	[]
Application <i>always</i> handles interruptions, such as phone calls, messages, or battery warnings correctly. This includes interruptions during game level loading.	[]	[]
Full screen mode is implemented according to UI style guide and usability guideline documents. Default controls behave consistently with UI style, even if the softkey labels are not displayed.	[]	[]
Important game information, such as player health, is displayed clearly, with good contrast.	[]	[]
Movement should be possible with numeric keypad as well as with navigation key (if applicable).	[]	[]
Help is brief, and focuses on goal of the game and controls.	[]	[]
Softkey actions in full screen mode are mentioned in Help.	[]	[]
Game contains settings for sound effects, background music, and vibration.	[]	[]
Sound effects, background music, and vibration options are separate, and their status is displayed clearly.	[]	[]
Settings and preferences are saved.	[]	[]
Game can be played in short sessions and continued later.	[]	[]
Game performance and screen refresh rate are acceptable, also with sound on.	[]	[]

2.12 Help and documentation checklist

Guideline	True	False
Error notes are informative and clear; they do not contain technical terminology.	[]	[]
Application contains Help and About screens.	[]	[]
Help screen is brief, and contains goal or aim of the program, and controls used.	[]	[]
About screen contains application's name and version, vendor's name, and support contact.	[]	[]
Information in About screen is consistent with other information in the application and in the .JAD file.	[]	[]
Version numbering and naming is up to date and consistent in file name, Help and About screens, and in the .JAD file.	[]	[]
The application works as specified in the documentation and the Help screen.	[]	[]
Terminology is not technical, but is familiar to target users. Truncations, abbreviations, and foul language are not used.	[]	[]

2.13 Application closing and uninstall checklist

Guideline	True	False
When application closes, settings are saved.	[]	[]
Settings are also saved in special cases, for example if application is closed while loading a new level, or is closed after user has pressed red key or application is closed from the task list.	[]	[]
Application closes network connections and Bluetooth connections on closing.	[]	[]
Uninstall is straightforward and does not require any special actions.	[]	[]

3 References

Unified Testing Criteria for Java™ Technology-based Applications for Mobile Devices,
<http://www.javaverified.com/docs.jsp>

Usability documents can be downloaded from <http://www.forum.nokia.com/usability>:

[S60 UI Style Guide](#)

[Nokia 7710 UI Style Guide](#)

[Series 80 UI Style Guide](#)

[Series 80 2nd Edition: Usability Guidelines for Enterprise Applications](#)

[Game User Experience Library](#)

[Terminology and Localization Checklist](#)

[Full Screen Usage in S60](#)

4 Evaluate this resource

Please spare a moment to help us improve documentation quality and recognize the resources you find most valuable, by [rating this resource](#).