

User Manual - Toothfairy v0.2b

A Java midlet for chatting via Bluetooth on Mobile Devices



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1 General

With Toothfairy you can establish a chat connection between mobile devices via Bluetooth fast and easily. It is possible to exchange messages in a group or within a private chat between two devices.

Toothfairy is released under GNU General Public License. If you want further information about the GPL, please visit the website of the GNU project.

(<http://www.gnu.org/licenses/gpl.txt>)

1.1 System requirements

To run Toothfairy on your mobile device, it is important that the following requirements are fulfilled by your device:

- Java ME support (at least MIDP 2.0, CLDC 1.1, JSR-82)
- Bluetooth support

1.2 Installation

The installation of Toothfairy is done the same way as the installation of any other Java application on your device. All you need to do, is to transfer the `jar` (and maybe also the `jad`) file onto your mobile device and execute either one of them. After that just follow the instructions given by your device's operating system.

1.3 What Toothfairy Can Do

- Automatically find and connect to other devices using Toothfairy in range
- Sending simple text messages to all devices in the network or just to one
- Using nicknames as identification and the ability to change the own nickname
- Setting and saving diverse options about look and feel
- Notifications about incoming private messages (vibration) if supported

1.4 What Toothfairy Can Not Do

- Search for other devices on the user's demand
- Encryption and decryption of messages
- File sharing
- Logging of messages
- Administration of the chat

2 The Graphical User Interface

2.1 About The GUI

The graphical user interface was designed using the kuix framework also licensed under GPL. For further information take a look at the webiste of the kalmeo project. (<http://www.kalmeo.org>)

2.2 First Start

Depending on the security settings of you mobile device, you might get asked on first launch or even every start of Toothfairy if you want to give it permission to use your Bluetooth dongle. To use Toothfairy you will have to confirm this dialog. Most devices have the possibility to automatically give Java applications permission to use Bluetooth. To do so, please take a look at the manual of your device.

If you deactivated Bluetooth and want to start Toothfairy the following things might happen:

1. Bluetooth starts automatically.
2. You are asked if you want to activate Bluetooth.
3. Bluetooth does not start automatically and you will not be asked.

In case 1 Toothfairy will work without any problems, in case 2 you will have to confirm the activation of Bluetooth in order for Toothfairy to work. In case 3 Toothfairy might start, but it will not be able to start a Bluetooth connection, so you will have to activate Bluetooth manually.

2.3 Start Screen And Main Menu

After start of Toothfairy the start screen will show for about three seconds while the networking components are initialised. After that the main menu will show up automatically.



Figure 1: start screen

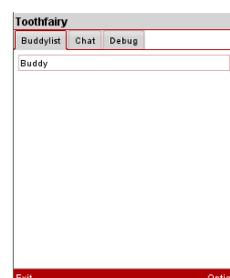


Figure 2: main menu

In the main menu you can see the contact list, which should be empty directly after the start of the program. After your device found another one using Toothfairy,

that device and all the ones in its contact list will be added to your list. Through the tabs on top of the screen you can go to the group chat or single chats. Because the program is still beta, there is also a debug-tab, which will not be further mentioned as it is for testing and debugging purposes.

2.4 Group Chat (Multicast)

The group or multicast chat (short chat) gives you the possibility to exchange text messages with all users in your contact list (often called buddy list) just like a usual chat room on the Internet. To get to the chat just use the navigation buttons of your device to select the tab “chat”. To send a message scroll to the textinput-line and push your device’s confirm-button.



Figure 3: Chat

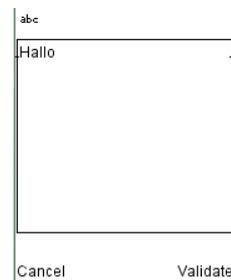


Figure 4: Textinput

After that your device will provide you a standard text input mechanism in which all the features your device supports (like T9 or a QWERTY/Z-keyboard) are available. To send a message just push the button that is assigned to the keyword “Validate”.

2.5 Single Chat

In the single chat you can exchange messages with only one person in your buddylist (even if you are not connected directly with the user’s device). To start a single chat, just go to the contact list, select the person’s nickname from the list and click your confirm button. After you have done that a new tab with you buddy’s name will pop up.



Figure 5: single chat

The usage of a single chat tab is the same as the chat tab, except that you can close the single chat tab after you are done chatting with your buddy.

Since v0.2 of Toothfairy it is possible to have a vibration notification if a unicast message was sent to you. However, this feature has not been tested very well yet.

2.6 Options

With a click on “Options” (or the button assigned to “Options”) you will open the options menu, in which you can take a look into a brief help or the statistics. You can also go to the settings menu or quit the application.



Figure 6: options menu

Just use the navigation buttons to choose the option you want and click on “Select”.

2.6.1 Help And Statistics

In the help menu you can see short information about using Toothfairy as well as some tips. This help is not a replacement for but an addition to this manual.

In the statistics menu you can see the received and sent Bytes during this session. The statistics only count the traffic made by sending and receiving messages and not the traffic that is caused by searching other devices and exchanging the contacts. Also, if you have chatted for quite some time, the variables used to save the number of bytes will overflow, so the numbers are (not yet) quite accurate.



Figure 7: help



Figure 8: statistics

2.6.2 Settings

The settings menu is also organised in tabs since v0.2 of Toothfairy. Navigation here is just like navigation in the main menu. You can - by now - change the following things in the settings menu:

1. General
 - Your custom name (nickname)
 - The Language
2. Notifications
 - Enable or disable showing the messages you have sent in every chat
 - Enable or disable highlighting of your own messages
 - The duration of vibration if a unicast message was sent to you
 - Notifications about joining or leaving buddies and nickname-changes
3. Font
 - Change the font size



Figure 9: settings (old) Figure 10: confirmation Figure 11: text size

After you changed your nickname, it will be told the other devices via special messages and (if activated by the other users) shown in their group chats. Your default nickname is the so called “friendly name” of your Bluetooth adapter. If you change your name into a name that already exists, you will get a (1) after your name - the next one to change his name into the same would get a (2) and so on. This feature however is not tested very well yet and it is very recommended to avoid having the same nickname twice in one Toothfairy-net.

The Language can by now only set to English or German. For this change to take fully effect, you will have to restart Toothfairy (we’re sorry for that ;-)).

You can (to save space on small screens) disable showing your own sent messages on your device. However, this is not recommended as you won’t later know what you’ve written and as Toothfairy is used by mobile devices writing back often may take a while longer than on “normal chats”.

Since v0.2 it is possible to highlight own messages sent to the group or a single chat. This is recommended (and therefore activated by default) as you might want to see

what you've written in the past more quickly.

Vibration is (as already mentioned before) also one of the new features in v0.2. It gives you the possibility of activating Vibration (if supported by your device) when you get an incoming unicast (single chat) message. This feature will not affect the group chat as your device might not stop to vibrate if too many messages are sent ;-).

Buddy notifications are special messages indicating that a buddy has joined the network, changed his nickname or left. Since v0.2 they are printed in red and it is now possible to disable these notifications (they will only be printed in the group chat). Changing the font size will only affect the sent and received messages on your own device, as Toothfairy does not send and interpret any formatting-commands. It will also not affect the layout of the program itself.

3 Tips And Hints

Because of technical issues mostly caused by the Bluetooth-implementation itself, not everything within Toothfairy works as it is known from usual chat programs and protocols. That is already recognisable at the state of creating a network. The following tips and hints shall help you to build up a solid and stable network to use Toothfairy as long as possible.

3.1 Controlled Network Build-Up

One of the limitations of Bluetooth in mobile devices is the disability of scanning for other devices and being able to be found by a scanning device simultaneously. That's why it is recommended to launch Toothfairy on two or three devices first and after these are connected start the application on one of the other devices at a time. That lowers the chance of having multiple smaller networks instead of one big network, as devices that are already connected to other devices will scan less frequently. Therefore it would take a long time for two networks to join into one big network - and that's the best way to avoid this problem.

3.2 Prefer "Advantageous" Devices

Not all mobile devices can establish many connections to other devices (e.g. my mobile device can only be connected to one other device). If you know the connection abilities of your devices, it is recommended, to start Toothfairy first on those devices, that can establish a connection to multiple devices.

If you would first start devices that can only hold one or two connections you soon would not be able to expand the network anymore and therefore all new devices would create a second Toothfairy-net.

3.3 The Debug Tab

As long as Toothfairy is still in a testing phase there will be a debug tab showing you system information about all ongoing actions, so you might see, what kinds of

errors occur (and send a bug report, of course ;-)).

4 Common Errors

Error	Possible cause	Possible solution
I can't install the program.	Your device does not support Java ME.	Unfortunately Toothfairy can not be installed on your device.
The application does not start.	Your device does not fulfill the minimum requirements	Look into your device's manual if the needed requirements are fulfilled. If that is the case, please check the installation and the rights given to the program.
Toothfairy often crashes.	Your device does not have enough memory for Java applications.	Unfortunately there is nothing that can be done, if you can't change the amount of memory guaranteed to the Java VM.
	Bluetooth has not been activated automatically.	You will have to activate Bluetooth manually before starting the program.
No device can be found.	There is no other device running Toothfairy in range.	Make sure that there is at least one device to connect to in range.
	No search is being made at this moment	Wait one to two minutes until a search for new devices has been made.
Two devices in range can't find each other.	The search frequency of the devices is too similar.	Because of technical reasons one device can't search and be found at the same time. One user should restart Toothfairy to change the search-frequency.
Two smaller networks in range don't connect to one big network.	The search frequency of a device will be decreased when it already has an established connection.	You need to wait for about 5 - 10 minutes. Until then at least one device should have made another successful search.