

How to use the ORWARAndroid Chat

The following document describes how to run the ORWARchat application on the Android Development Phone 1 (ADP1/G1/HTC Dream) with OS version greater than 1.6 (Donuts). In order to run the chat application you need to have root privileges on your device.

To install the application on your device you can directly install the .apk file located under “code/ORWAR/OrwarAndroidProject/bin/” or if you want to modify and work on this project you can import the project into Eclipse. For now the only device supported is the ADP1 since the installation file doesn't include the wlan card driver for other devices.

The chat application runs on top of the ORWAR protocol, this is why when you start the chat application it may take some time in order to set up the network in ad-hoc mode. The chat UI is made up of two views, the main view that allows the user to send and receive messages, and the settings view that allows to modify some protocol parameters.

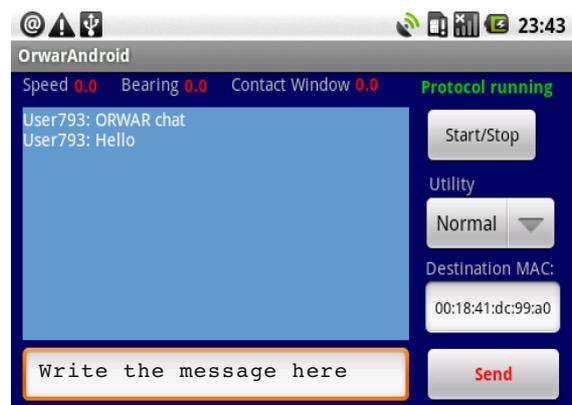
Main View

In order to send a message you need to run the protocol by pressing the "Start/Stop" button (this will set up the network in ad-hoc mode the first time), once the protocol is running you can send a text message to a known node by specifying its MAC address in the apposite field “Destination MAC”.

The protocol provides for a specific message three utility levels (High, Normal and Low) that can be selected from the drop-down menu before the sending of the message.

The message in the text box at the bottom will be sent by pressing the “Send” button. The main text area will show all the messages received and sent together with the name of the node that has sent them.

The three labels on top will show information about the actual speed (m/s), the bearing (degrees) and the estimated value of the contact window (seconds).



Settings View

In order to access the settings view you have to press the menu button of your Android device and a menu will appear, then select “Settings”.

Here you can change the “nick name” used in the chat and some protocol parameters like the duration of the Time-to-live (TTL) and the beacon rate (the default value is one beacon every second). The

beacon rate represents the interval between the sending of two beacons, shorter intervals will lead to an increase in energy consumption.

In order to apply the new settings the protocol must be stopped. The new settings will be applied when the protocol will be restarted from the main view.

In order to close the application you have to stop the protocol and press the “exit” button from the Android menu.

