

### Exercise 3

#### Instructions:

- The exercises are to be done individually (direct copying of code from friends is not allowed), but you can of course ask your friends for advice. Good place for discussing the assignments and the course in general is channel **#aaltomomib** at IRCNet.
  - Some individuals will be asked to present their work to the group at the exercise sessions.
  - Support for Android development is provided by the course staff.
  - You can also use IOS, Windows phone, Meego etc., but with less support.
  - Testing on real mobile devices is recommended, but not mandatory.
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- Be prepared to demo and explain your solution at the exercise session 10.4.2013 **12-14** in T6.

### Assignment

Modify Spydroid so that it communicates the “rtsp://” URL of the video stream shown in the Spydroid user interface to a server using the CoAP protocol. When the server receives the URL, it should send an acknowledgement message back to the mobile device. Communicate the “rtsp://” URL to the CoAP server using the POST operation to the URI “/devices/*your\_device\_id*/camera”.

#### Hints for developers:

The CoAP specification can be found in: <http://datatracker.ietf.org/doc/draft-ietf-core-coap/>.

Jcoap is an open-source Java implementation of CoAP <http://code.google.com/p/jcoap/>. Jcoap works on both Android and Java SE, and it also includes a simple CoAP server. A good way to work is to run the jcoap CoAP server on your computer, and use the Jcoap client library on your mobile device or emulator. **Jcoap does not work out-of-the box on Android** as log4j has compatibility issues on this platform. The simplest way to fix this is to comment out all the log4j references in Jcoap, but you can also try to find a more elegant solution.

You can find discussion about Android device IDs in:

<http://stackoverflow.com/questions/2785485/is-there-a-unique-android-device-id>

Wireshark supports CoAP and it is a good tool for debugging the communication  
<http://www.wireshark.org/docs/dfref/c/coap.html>.