S-38.115 Signaling Protocols, Exercise 5 Appendix

During the exercise students will use Windows Messenger as a sip client and Ethereal for packets capturing. The SIP proxy will act as a SIP communication controlling entity.

Connecting to the proxy server at Netlab

1. Run Window Messenger
2. Set up
- Select [Tools]-[Options] from the menu to open the options.
- Click on the [Accounts] tab.
- In the "Sign in with this account first:"
  - Check the box for "Communication Service".
- In the "Communication service account"
  - At the "Sign-in name" text field fill out an SIP-URL.
    - Students doing the exercise in the room G212 have the following SIP-URLs: StudentNumber@fii.lab.netlab.hut.fi, where the StudentNumber is a student number written in capital letters e.g. 54321A@fii.lab.netlab.hut.fi (with this SIP-URL a user can receive calls from other users).
    - Students doing the exercise at home have the following SIP-URLs: StudentNumber@set.netlab.hut.fi, where the StudentNumber is a student number written in capital letters e.g. 54321A@set.netlab.hut.fi (with this SIP-URL a user can receive calls from other users).
  - Click on the [Advanced] button to open "SIP Communications Service Connection Configuration".
  - Check the box for "Configure setting" to activate the setting.
  - Fill out the computer name of the proxy server:
    - Students doing the exercise in the room G212 have to fill out the following computer name: **fii.lab.netlab.hut.fi**.
    - Students doing the exercise at home have to fill out the following computer name: **set.netlab.hut.fi**.
  - Under "Connection using", check the box for "UDP".
  - Press [OK] to save the configuration.
- Uncheck the box for "My contacts include users of Exchange Instant Messaging"
- Press [OK] to save the configuration.
3. Start session
- In the Windows Messenger main window, click the **Click here to sign in** link.
- Add a contact to the My Contacts list.
  - At the bottom of the main Windows Messenger window, under **I want to...**, click **Add a Contact**.
  - In the Add a Contact Wizard, click **By e-mail address or sign-in name.**
  - Type your contacts (other student(s) SIP-URL(s)).

How to use Windows Messenger

Please refer to the following webpage:
http://messenger.msn.com/

Capturing packet traces

1. Run Ethereal
2. Select [Capture]-[Start] from the menu to open the capture options.
3. Choose proper interface from the interface list. If there are no interfaces available, it means that Winpcap has not been properly installed.
4. In order to see packets in real time select the **Update list of packets in real time** option.
5. Press OK.
A list of packets will be presented in the upper part of the main window.
The lower part of the main window presents a protocol stack. This information should be used for SIP messages analysis.
6. Press the red cross mark or the **stop** button in second window to finish packet capturing.
7. In order to filter only SIP or RTP messages you can use the **display filter** functionality (in the left-down corner of the main window). Type **sip** or **rtp** respectively in the **filter** text box.
8. You can save packet traces in an Ethereal format file [File]-[Save] or in a text file [File]-[Print] and select the **Plain text** and the **Output to file** options.

More information can be found on the following webpage:
http://www.ethereal.com/publications.html

Using computers in the room G212

The computers have installed Windows 2000. In order to login type **SIPLAB** as a user name and leave a password dialog box empty. In case of problems with preinstalled software, please restart a computer and chose the second boot option.

Software Installation

Those students (**and only those!!!**) who decided to do the exercise at home have to download and install the following software (keep attention to the software version you are downloading):

- **Sip client**
    - **Windows Messenger 4.6**
      http://www.microsoft.com/exchange/downloads/2000/imclient46.mspx
    - **or other sip client that supports voice conversation, instant messaging, and presence service**
      http://www.iptel.org/info/products/index.php?category=softphone&name=

[Softphones&siponly=1](http://...) (please note that not all of the clients presented on the web page support all of the required functionalities).

- **Winpcap** (http://winpcap.mirror.ethereal.com/install/default.htm). It has to be installed prior to Ethereal.
- **Ethereal** (http://www.ethereal.com/download.html)