Exercise Sheet 5  
Due: November 30, 2009

Exercise 5.1 (JADE, FIPA, and Contract Net)

(a) **JADE bookTrading Example (1pt; written)**

In JADE, there is a “bookTrading” example. Use a contract net (with concrete messages) to describe the behaviors of the buyer and the seller.

(b) **Steal the highest price (1pt; programming)**

Based on the bookTrading example, change the behaviors of the agents according to the following descriptions.

- The buyer will reject the proposal unless the price is no more than an acceptable price (predefined).
- The seller will inform “sold” unless the price cannot be added more than 1 [Euro].

Exercise 5.2 (Communication Subsystem)

(a) **Implement a communication subsystem (0.5pt; programming)**

Copy the CommInterface.java and CommObject.java from the map09/directory to your grp/directory as a base for a communication system. Fill out the missing features marked by TODOs in the code base.

(b) **Implement the IDToken and IDListToken classes for later use. (0.5pt; programming)**

Assume an id is a 4 byte integer and use little endian encoding. For the IDList start with 1 byte encoding the number of ids and then list the ids.