ComSubsystem

Short introduction
Rescue Comms

- Each agent can send/hear 4 msg/cycle
- Each center can send/hear 2 x #agents
- One msg is 256 bytes
- hear(...) decodes byte[]
- tell(...) sends byte []

- channel selects channels to listen to
  - 0 – „say“/speaking, don‘t use
public abstract class CommObject {
    protected byte type;
    protected byte channel;

    public CommObject(byte type) {
        this.type = type;
        this.channel = 1;
    }

    public abstract int encode(byte[] msg, int start);
    public abstract int decode(byte[] msg, int start);
}
public class CommInterface {
    public final static byte NO_TOKEN = 0x00;
    public final static byte EXPLORED_ID = 0x01;
    public final static byte EXPLORED_ID_LIST = 0x20;

    protected Agent myAgent;
    protected List<CommObject> sendQueue;

    public CommInterface(Agent myAgent);

    public void add(CommObject obj);
    public void tellAll();

    public boolean willListenHear(int from);
    public Collection<CommObject> hear(int from, byte[] msg);

    protected final void tell(int channel, byte[] message) {
        // NOTE: need to make Agent.tell() public
        myAgent.tell(channel, message);
    }
}
Example

```java
hear(int from, byte[] msg) {
    Collection<CommObject> newInfo = com.hear(from,msg);
    // handle newInfo
}

sense() {
    // reasoning code
    IdToken idt ...
    idt.setChannel(1);
    com.add(idt);
    // choose actions, etc.
    com.tellAll();
}
```
The Jade Exercise

Steal the highest price

Task: use the weakness of the protocol.

Dishonesty would be punished in real world but not in the book trading example.

BookTrading further reading

Jade Tutorial

Get the package

    grp[X]@augusta:/home/dapeng/public/jade_pkg.tgz

    “cp” to your group directory and “tar zxvf ...”

Compile

    “cd ~/jade” → “ant” → “ant examples”

    You need install ant if you want to use your own computer.

Run ssh -X grp#@augusta

    “cd ~/jade/classes” → “java jade.Boot
    seller:examples.bookTrading.BookSellerAgent