ComSubsystem

Short introduction

Why?

- byte[] conversions are not practical
- Dealing with objects is
- optimizations, changes to com should be in one place
- Don't want to care about com anymore, when writing agent's code

How?

- Serialization
- Each token for com can convert itself to and from a byte[]
- New type of information → only implement new token class
- CommInterface encapsulates this

CommObject (Token base class)

```java
public abstract class CommObject {
    protected byte type;
    protected byte channel;

    public CommObject(byte type) {
        this.type = type;
        this.channel = 0;
    }
    public abstract int encode(byte [] msg, int start);
    public abstract int decode(byte [] msg, int start);
}
```

CommInterface

```
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);
    }
}
```