CS255: Cryptography and Computer Security **Winter 2000**

iButton extra credit

Due: Wednesday, January 26th, 2000.

Before you start

You must complete programming project 2 before continuing on to this extra credit assignment. It is also recommended that you submit both versions of your project (with and without extra credit).

In addition, be advised that you will most likely need access to a Windows 95/NT machine to do this project. As with many new projects, expect to spend some time just getting everything setup.

This handout is a guide on how to setup the iButton IDE and get you started exploring the interface and becoming familiar with it.

Downloading relevant software

In order to run the iButton-IDE, you will need to install the Java Development Kit 1.2.1. Note that this is NOT the most current version available (jdk 1.2.2). In fact if you already have this version installed, it is recommended that you uninstall it first, before installing the older version.

You can download jdk 1.2.1 at:
http://java.sun.com/products/jdk/1.2.1
After installing jdk 1.2.1, you can find the iButton-IDE at:
http://www.iButton.com/jibkit
Run the setup executable.

Inside the IDE, under the Compile menu, select Options and be sure that the compiler command is correct. It should be something like: C:\jdk1.2.1\bin\javac.exe. Be sure to specify the correct path for javac.exe.

You may also want to download and install the hardware diagnostic utility which can also be found at the iButton website. It is a useful tool to verify that your hardware setup is correct, and to find out what applets are actually on your iButton, after you program them and load them.

Examples and Documentation

Bundled with the IDE are several examples and the documentation for most of the relevant APIs. After you have setup the iButton IDE, spend some time going through the examples, running them and understanding how the architecture works.

You will also want to download the API for the Java Card 2.0 specification (which is not the most current version available). Get it at:
http://java.sun.com/products/javacard/javacard20.html
You will find the cryptographic functions in this API.