USSD Gateway Simulator

User Guide

Table of Contents

Introduction

LeibICT UDK (USSD Developer Kit) is the first comprehensive kit for documentation, samples and simulators that enables any Java or C++ programmer -either on Linux (32 and 64bit variants) or Windows- to develop a USSD Service within minutes.

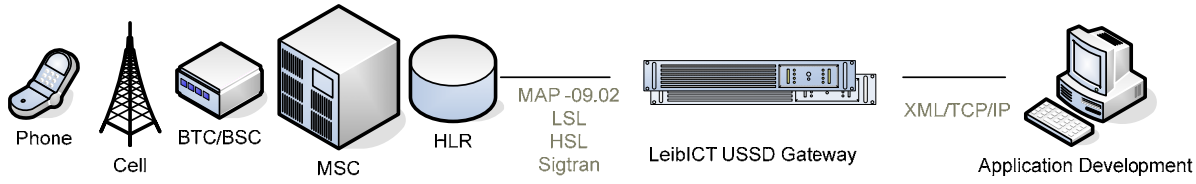
The kit includes **LeibICT Phone Simulator**, a revolutionary tool based on the LeibICT USSD GW Simulator, that enables the developers to test their application within a 'phone skin', very useful for presentations too!.

The Simulators are applications for near-to-live testing of your USSD services without need of access to a real UMTS/GSM network and they behave as a real HLR with MAP interface, so that your services can send and receive messages, however nothing will get delivered anywhere as all the responses are only made-up by the Simulator. The Simulators also support multiple simultaneous USSD transactions.

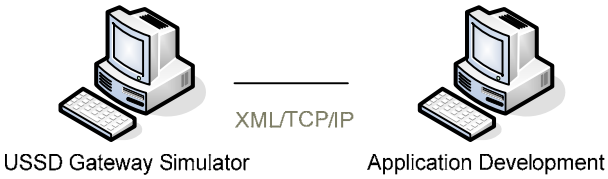
Switching from the Phone Simulator or the USSD GW Simluator to our USSD S-Gateway links is an effortless task, making time to market even shorter.

Simulation

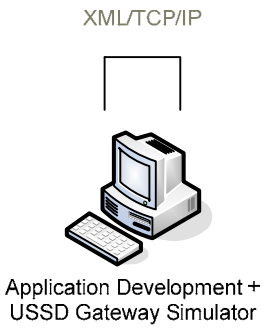
The normal operation of a USSD Gateway involves the utilization of a real UMTS/GSM network:



The simulator simple removes the need of all the UMTS/GSM network components:



Also enabling a loopback configuration if you run the the simulator module in the development environment:



The simulators are Windows Applications, so you will be able to develop only Windows Applications running on the same machine of the Simulator although you may use VMWare and other tools to avoid this.

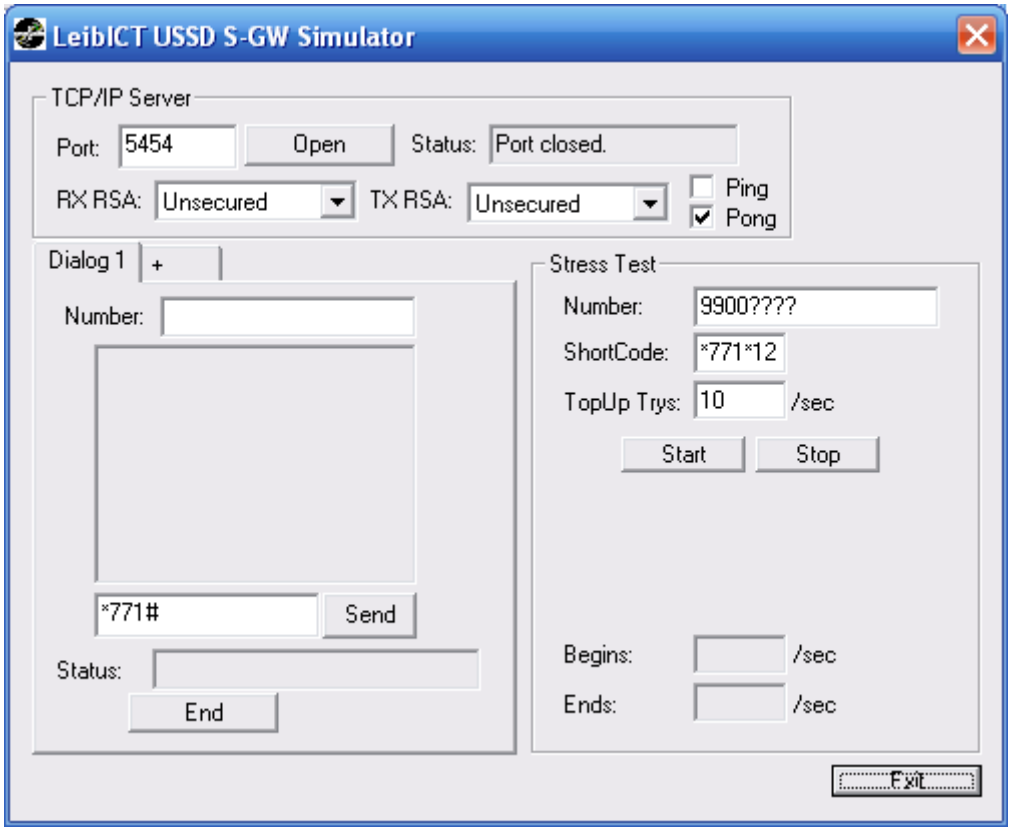
If you like to develop Linux, Solaris, or Mac based applications, a VMWare or another machine is required.

Running the Simulator

To run the Windows based Simulator just double-click on the exe file:

Important note: there are two simulators provided on the UDK and you must only use one at a time, both simulators cannot be used in parallel or in other cooperative way.

The multi session USSD GW Simulator:



To star a simulation, first open the TCP/IP port: click the “Open” button.

The Status will change to “Port open. Waiting for App.”

The Phone skinned Simulator:

To star a simulation, first open the TCP/IP port: click the “Open” button.

The Status will change to “Port open. Waiting for App.”

Running the Application

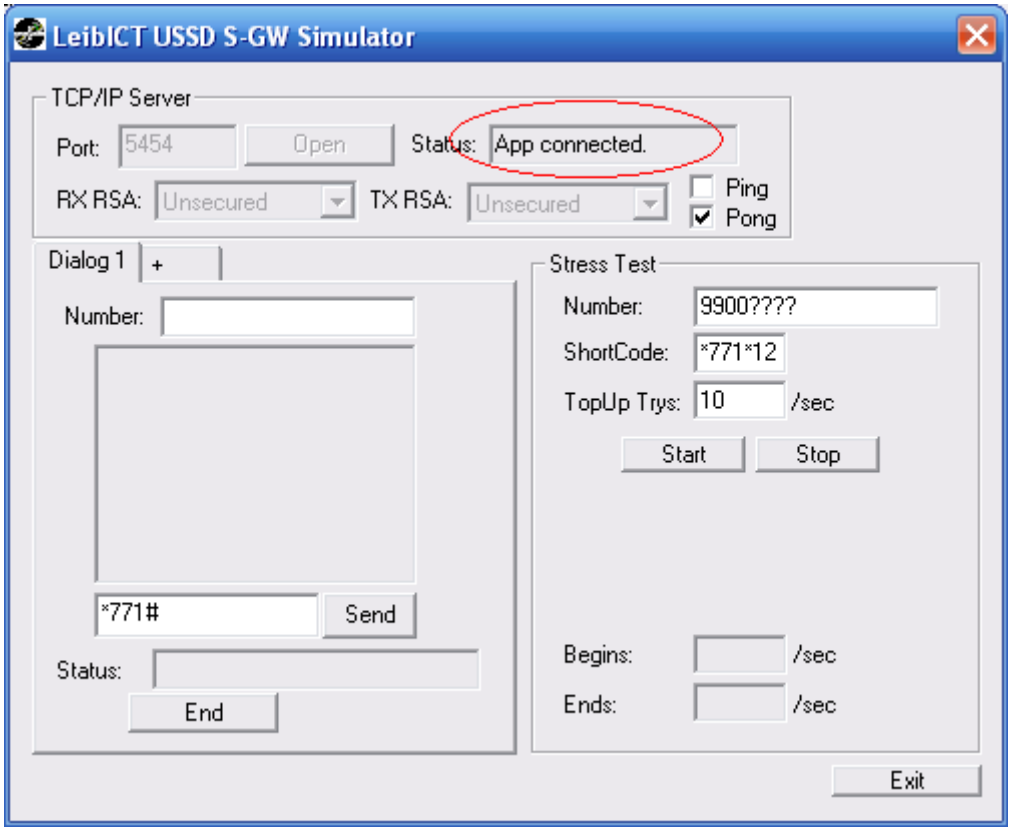
In the samples directory you will find several sample applications, we will use the Java based USSDTest:

java -jar USSDTest.jar

The result screen is:

LeibICT - USSD Java Native Interface Windows Library v1.0b build 1002
logDir = c:\logs
logDebug = 0
log = 1
logFileName = ussdjni.log
logTrafficFileName = ussdjniTraffic.log
logTraffic = 0
logErrorsFileName = ussdjniErrors.log
JavaVM JNI Load...
JavaVM JNI Load OK
Creating USSD JNI Object...
Creating USSD JNI Object OK
Xpath version 1001
Creating Class Reference...
Creating Class Reference OK
Registering Callbacks...
Registering Callbacks OK
Initializing Socket...
Initializing Socket OK
Connecting localhost:5454...
Connected to localhost:5454
Securing connection...
Securing connection OK
cb_connected

Note that the cb_connected callback is fired and the simulator Status is changed to “App Connected”:



Simulating a Service

The Simulator is ready and the Application is ready, its time to simulate a USSD Service transaction.

To start a service just click “Send” with the text on any USSD short code you need:

The application will receive that:

1 *771#

And in case of the USSDTest.jar I will end the USSD transaction with a “bye” message: