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Revisions

This document is a part of I-Demo demonstration suite. It was written for I-X version 4.5. This demo was produced from an application created by Thomas French.

1 Introduction

I-Demo-SL is a part of the I-Demo suite of demonstrators which is intended to illustrate the different aspects of configuring and using I-X technologies. I-Demo-Second Life illustrates how to use I-X process panels to link to Second Life (SL). In more detail, I-Demo- Second Life shows how to perform the following tasks using I-X technologies:

- Set up communications between I-X and SL,
- Initiate changes in SL from an I-X Process Panel,
- Update the state of an I-X process panel with (dynamic) information from SL.

This document assumes you are familiar with the following concepts:

- Basic I-X technology
- SL, in particular SL objects, communication and scripting.

See I-Demo-Basic and See I-Demo-Cooperation for more basic aspects of I-X process panels, and the I-X User Guide for more detail on how to use I-X applications and process panels.

1.1.1 The Scenario

I-X can be used to manipulate objects in SL, to communicate with avatars, and to provide support and services in SL. This simple scenario shows how I-X can be used to switch an SL Greeter on and off, and to start a fire using chat to an effects generator object in SL. In addition, I-X will note any avatars that the SL Greeter welcomes as having been in the room. This kind of scenario can be extended to provide meeting room facilities, where I-X is used to support the flow of the meeting.

Three components are required to demonstrate the I-X SL Application: an I-X Process Panel, an SL Greeter I-X Agent and an SL Greeter object (running necessary scripts in SL). The I-X Process Panel does not communicate directly with the SL Greeter, this is done via the proxy I-X Agent. As mentioned above, this decision was taken to simplify the application. In essence the proxy acts as an <I-N-C-A> interpreter. The I-X Agent interprets <I-N-C-A> messages and forwards the necessary content to the SL Greeter. The I-X Agent also forwards any messages sent back from the SL Greeter, as <I-N-C-A> Reports, to the I-X Process Panel.

Communication between the I-X Agent and I-X Process Panel is done via local communication channels, but can be, as with any I-X configuration, done in various ways. Currently, the I-X Process Panel is configured to run a local name server to which the SL I-X Agent connects to. The I-X Agent communicates with the SL

Greeter via the XML-RPC protocol – See <http://en.wikipedia.org/wiki/XML-RPC> . Due to current SL limitations XML-RPC calls cannot initiate from within the SL environment. So in order to allow the SL Greeter to send event notices to the I-X Process Panel, a system has been implemented whereby the I-X Agent polls the SL Greeter. This way the Greeter can piggyback a report on an XML-RPC reply message.

2 Running the Example Application

Remember that we assume that you have an SL Greeter object running in SL and you have noted its communication channel. You can get an example one from the AIAI2 Office in Second Life at from the AIAI2 Office in Second Life at <http://slurl.com/secondlife/Vue/185/251/22> .

The walk-through is described below in three phases. First, the two panels for the agents are started and initialised to reflect the knowledge they have about each other and about communication with SL. Second, the application scenario is shown, performing actions that affect objects in SL and updating state with information from SL.

2.1 Starting I-X Agents

Make sure that you have a note of the communication channel key from the SL Greeter. This is a long identifier and will look something like this: 51ff9974-ed27-ac39-63d6-cf32b2a5ccff.

Edit the I-X Greeter Agent's configuration file to hold this key (replace the one currently in the file).

```
edit <ix-base>/ apps/ldemo-sl/config/sl-greeter.props
```

Now start the I-X agents. The I-X Process Panel needs to be started first, because it is set up to run the name server. To start the two I-X agents under Windows,

```
run <ix-base>/ apps/ldemo-sl/scripts/win/process-panel.bat (double-click on the file)
```

```
run <ix-base>/apps/ldemo-sl/scripts/win/run-greeter-agent.bat (again, double-click on the file)
```

To start the agents under Unix/Linux, start a shell each and change to the application's directory (e.g. cd ~myhome/I-X/apps/ldemo-sl).

```
prompt1% ./scripts/unix/process-panel
```

```
prompt1%
```

```
prompt2% ./scripts/unix/run-greeter-agent
```

```
prompt2%
```

You should now have several windows (Windows or Unix), name server window, process panel, and Greeter Agent panel). You can close all windows except the I-X Process Panel (called "SL Controller") and the I-X Greeter Agent panel ("Messages for greeter-agent"). The latter should have a message in it saying "greeter-agent ready...".

2.2 Using the Application

Check whether the SL Greeter is switched on or off. If it is off, the text above it will read "I-X Greeter (off)". If it is on, switch it off (touch it in SL or use the Process Panel's Test menu – see below).

2.2.1 A Simple Scenario

Switch on the SL Greeter using the I-X Process Panel's Test menu.

```
in the SL Controller Panel, select "Send greeter-agent a start greeting activity" from the panel's Test menu.
```

An activity will appear in the panel's Activities area, indicating that the panel is awaiting a report back from SL when the SL Greeter is switched on. Note that the activity's Action part is green, indicating that the activity is ongoing. In the Messages panel, a line will appear saying "SENT: start greeting".

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After a while (if you got the setup right, the SL scripts are running, your channel id is correct, etc.), a line will appear in the I-X Message panel saying "SUCCESS: started greeting". In the SL Controller Panel, the activity's Action part will turn blue, indicating that the activity is completed successfully (done).

Next, get the SL Greeter to welcome your avatar.

in SL, move your avatar near the SL Greeter.

If your SL avatar is near the SL Greeter, it should welcome your avatar, saying something like "Hello, Jussi Aya, welcome!". This may take a little time, because the SL Greeter only checks for new avatars every 10 seconds. When the avatar has been greeted, a line will appear in the I-X Message panel saying "RECEIVED CONSTRAINT: has-visited 'Jussi Aya' = true". In the SL Controller Panel's State area, a constraint will appear that indicates that the avatar has visited.

You can end the demo here.

2.2.2 Continuing the Demonstration

If you want to continue the demonstration, you can work to

- Delegate activities to the Greeter Agent,
- Initiate a fire effect via an Effects Generator.

To see the fire-starter working, get a copy of the sample Effects Generator from the AIAI2 Office in Second Life at <http://slurl.com/secondlife/Vue/185/251/22> and place it within 10m of the Greeter (so chat commands from the greeter can be heard by the object).

in the SL Controller Panel, select "Send greeter-agent a start fire activity" from the panel's Test menu.

To put the fire out,

in the SL Controller Panel, select "Send greeter-agent a stop fire activity" from the panel's Test menu.

To delegate activities to the Greeter Agent,

in the SL Controller Panel, select "Send process-panel a stop greeting activity" from the panel's Test menu.

The activity will appear in the panel's Activities list with an orange Action part. In the Action menu of the activity, select "pass to greeter agent"

in the SL Controller Panel, select "pass to greeter agent" from the action menu of the "stop greeting" activity.

Watch the SL Greeter as it switches off.

This is the end of the demo.

2.3 Summary of Demo Steps

edit <ix-base>/ apps/ideo-si/config/sl-greeter.props

run <ix-base>/ apps/ideo-si/scripts/win/process-panel.bat (double-click on the file)

run <ix-base>/apps/ideo-si/scripts/win/run-greeter-agent.bat (again, double-click on the file)

in the SL Controller Panel, select "Send greeter-agent a start greeting activity" from the panel's Test menu.

in SL, move your avatar near the SL Greeter.

To go further,

in the SL Controller Panel, select "Send greeter-agent a start fire activity" from the panel's Test menu.

in the SL Controller Panel, select "Send greeter-agent a stop fire activity" from the panel's Test menu.

in the SL Controller Panel, select "Send process-panel a stop greeting activity" from the panel's Test menu.

in the SL Controller Panel, select "pass to greeter agent" from the action menu of the "stop greeting" activity.