MaxShambo Extension, version 1.0 Documentation
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10/30/2000

The MaxShambo extension is a simple Max object that allows TCP/IP messages to be sent and received from Max patches.

To use the extension, first make sure it is in the same folder as the Max patch that will be using it. Then, add a new object to your Max patch (see the Max documentation for information on ading and removing objects from a patch). Name the object "MaxShambo.ext" and enter the port number you want to listen to for messages, and the IP address of the machine the patch is running on.

The result should look something like:

MaxShambo.ext 2001 128.2.205.180

This will bind the MaxShambo extension to the specified port and IP address. This DOES NOT specify what port and IP address you are connecting to.

I. Max Messages

The MaxShambo extension takes the following messages in its inlet:

connectTo

Arguments: address:port (i.e. 128.2.0.1:2001 or dondy.etc.cmu.edu:1000)

disconnect

Arguments: None. Disconnects from the currently connected address.

setMessageType

Arguments: a number, either 0 or 1, specifying whether messages should be sent and received in RAW mode or FORMATTED mode. RAW messages are sent as pure data, with no message format, priority or length information. FORMATTED messages are sent as Messenger-style formatted messages with a message header including priority, length and error handling goodies. For use with the Alice messenger code, sending formatted messages is the best way to do things. It defaults to 1, FORMATTED mode.

setVerbose

Arguments: a number, either 0 or 1, specifying whether the MaxShambo extension gives a lot or a little debugging feedback. It defaults to 0, meaning no extra info is displayed.

sendMessage

Arguments: a string to send to the remote host, without quotes. (i.e. sendMessage hello there).

listenForMessage

Arguments: None. Will attempt to pull a message off the connection. The received message, if any, will come out the MaxShambo extension's outlet.

II. Using the Extension

Using the MaxShambo extension is pretty straightforward. Look at the MaxShambo patch to see most clearly how it is used. The basic concept is as follows:

1. Create an instance of the MaxShambo extension.

2. Send a connectTo message to connect to the remote host.
3. Use sendMessage to send data to the remote host.
4. Send a disconnect message to disconnect.

Pretty simple.

III. Known bugs/Missing features:

The MaxShambo extension sometimes does not connect on the first try. This has something to do with Alice and Max timing. Just keep trying to connect and it will, usually on the third or fourth try. If it doesn't connect after about eight tries, something else is probably wrong.

The MaxShambo extension cannot connect to multiple ports or hosts. This is unfortunate. The extension is currently a single connection entity. You can, however, create multiple instances of the MaxShambo extension in the same patch, and use them to connect to different hosts.

IV. The Source

The source code for the extension, along with all the documentation for writing Max extensions, are in the MaxShambo folder. The source is a CodeWarrior Pro 5 project. The source itself is marginally well documented and requires a knowledge of OpenTransport, Apple's network layer architecture.

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