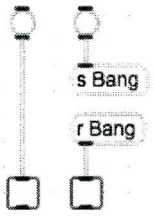
Composition: Electronic Media II
Spring 2014
Max 6: Remote Messaging

1. Remote messaging allows Max objects to connect to other objects without the use of a patch cord.

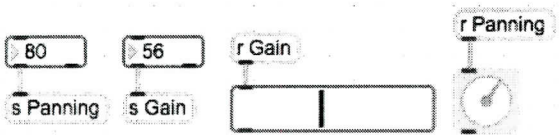
2. The most basic way to send a remote message is through the send and receive objects.



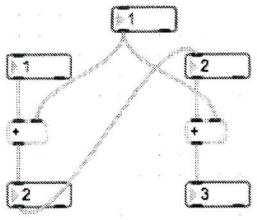
3. The example above shows two buttons connected to two toggles. One pair of buttons and toggles are connected by a patch cord, and the other by send and receive objects.
   a. The "s" is shorthand for send, and the "r" is shorthand for receive.
   b. In the example above, when one clicks on the button located on the right side, the "s Bang" object sends the bang to the "r Bang" object.
   c. For information to pass from a send to a receive object, they must share the same name.
      a. The name can be anything you want, and there must be one space between the "s" or "r" and the name. The name used in the above example is Bang.
      b. The name does not support spaces between characters. Example: "s JohnSmith" vs. "s John Smith". In the first example, the send object will only send messages to receive objects with the name JohnSmith (no space). However, in the second example, the send object will send to any receive object that has the name John. The Smith, in the second example, is ignored.

4. Always consider the send and receive objects as pairs. The send object will send messages to any receive object anywhere in the patcher, or even in a different patcher, as long as they share the same argument.

5. Naming send and receive objects thoughtfully and appropriately will help with understanding the type or function of the message.

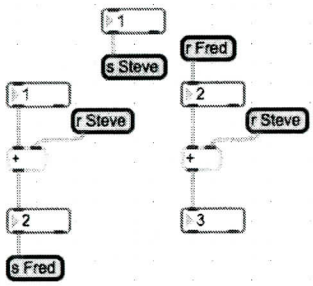


5. The use of remote messaging can also clean up the presentation of a patch. Consider the following example:



   a. The patch has a few patch cords crossing each other and one cord must pass behind an object.
   b. At a glance, it can be unclear what information is being passed to which object.

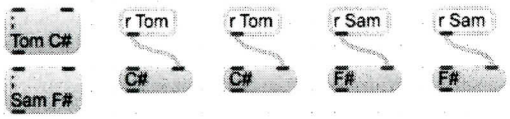
6. The patcher below accomplishes the same task as the one above:



   a. The patch has no cords crossing each other or behind any objects.
   b. The names of the send and receive objects, as well as the use of coloring the objects themselves, allows one to see clearly where messages are being sent.

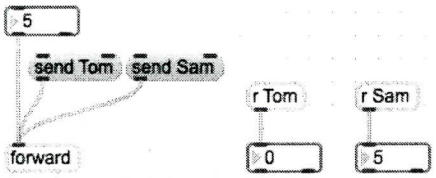
7. The patcher examples presented so far are rather simple and small, but consider a situation in which one would have a much larger and more complex patcher. Sending messages from one side to the other would require a very long patch cord that would cross over many objects and cords. The use of the send and receive objects eliminates the need for that messy patch cord.

8. Another way to send a remote message is through the ";" argument in a message box.



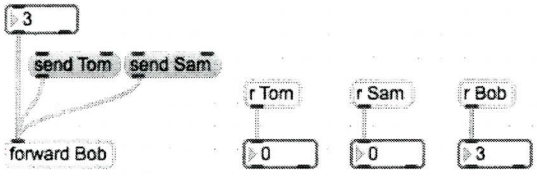
   a. The message "; Tom C#" will send C# to any receive object named Tom. The message "; Sam F#" will send F# to any receive object named Sam.
   b. Notice how the message boxes automatically format to where the ";" is alone at the top of the message. This is a good visual reminder of what will happen when you click or bang on the message objects.

9. Another way to send a remote message is through the forward object. The forward object will send messages to any specified receive object.



   a. Clicking on the "send Sam" message object instructs the forward object to send messages to all receive objects named Sam. After the "send Sam" message object has been clicked, one can change the integer in the integer object that is connected to the forward object and the messages will be sent immediately.
   b. Clicking on the "send Tom" message object will instruct the forward object to send messages to all receive objects named Tom.

10. It is also possible to name forward objects, thus connecting them to a specific receive object. But, this is no different than just using send and receive objects. What is convenient about the forward object, is that the destination of the messages can be changed.



   a. At the creation of the forward object named Bob, it will only send messages to receive objects named Bob.
   b. If one would like to change the destination of the messages, one only has to send the forward object a message indicating the change.