

7. This exercise explores the implementation of an all-to-all [scatter/gather](#) in Ptolemy II. Specifically, construct a model that generates four arrays with values:

```
{ "a1", "a2", "a3", "a4" }  
{ "b1", "b2", "b3", "b4" }  
{ "c1", "c2", "c3", "c4" }  
{ "d1", "d2", "d3", "d4" }
```

and converts them into arrays with values

```
{ "a1", "b1", "c1", "d1" }  
{ "a2", "b2", "c2", "d2" }  
{ "a3", "b3", "c3", "d3" }  
{ "a4", "b4", "c4", "d4" }
```

Experiment with the use of [ArrayToElements](#) and [ElementsToArray](#), as well as [ArrayToSequence](#) and [SequenceToArray](#) (for the latter, you will also likely need [Commutator](#) and [Distributor](#)). Comment about the relative merits of your approaches.

Hint: You may have to explicitly set the [channel widths](#) of the connections to 1. Double click on the wires and set the value. You may also experiment with [MultinstanceComposite](#).