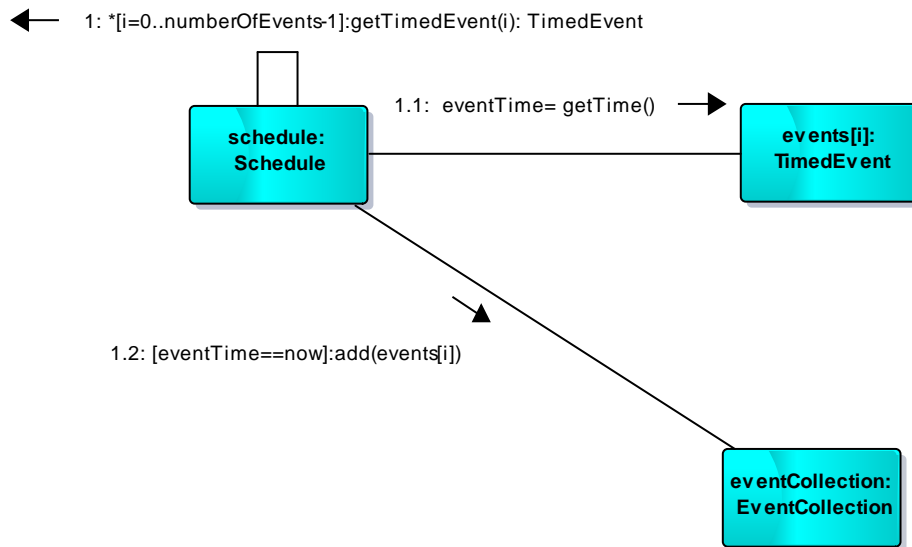# Learning UML

O'Reilly

Exercises – More on Communication Diagrams

If you have followed along, you should have a communication diagram called *Process Schedule CD* like this.

Now you are going to create an equivalent communication diagram to the sequence diagram *Find Timed Events*.

Create a new package in the Interaction View called *Find Timed Events CD*.

Add an Interaction of the same name. (You may have to change the Toolset drop-down in the Add Element dialogue in order to find Interaction.) Delete the sequence diagram that is created and create a communication diagram of the same name.

Add five lifelines to the diagram:

er:EventResponder

eventQueue

scheduleCollection

schedule[j]:Schedule

eventCollection:EventCollection

You can add the links between them as you need them for messages.

Add the following messages

er to *scheduleCollection* – *size*, assigning the result to *scSize*

er to *scheduleCollection* – *getSchedule*, with *j* as the argument and a loop condition of *j=0..scSize-1*

er to *schedule[j] – getEventNow*, with a return value assigned to *eventCollection*

er to *eventCollection – size*, assigning the result to *ecSize*

er to *er – addEvents*, with a guard of *ecSize > 0*

er to *eventCollection – getEvent*, with *k* as the argument, assigning the result to *event*, with a loop condition of *k=0..ecSize-1*

er to *eventQueue – addEvent*, with an argument of *event*.

Change the numbering level of the last two messages to show that they are dependent on 1.4 and at a deeper level of activation.

Your diagram should look something like this.