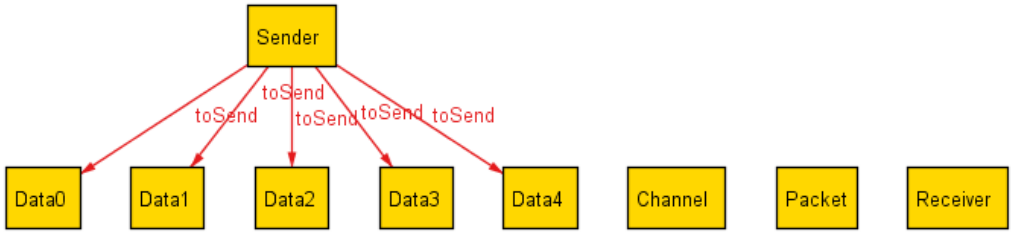
Project Sprint 1

Property 1

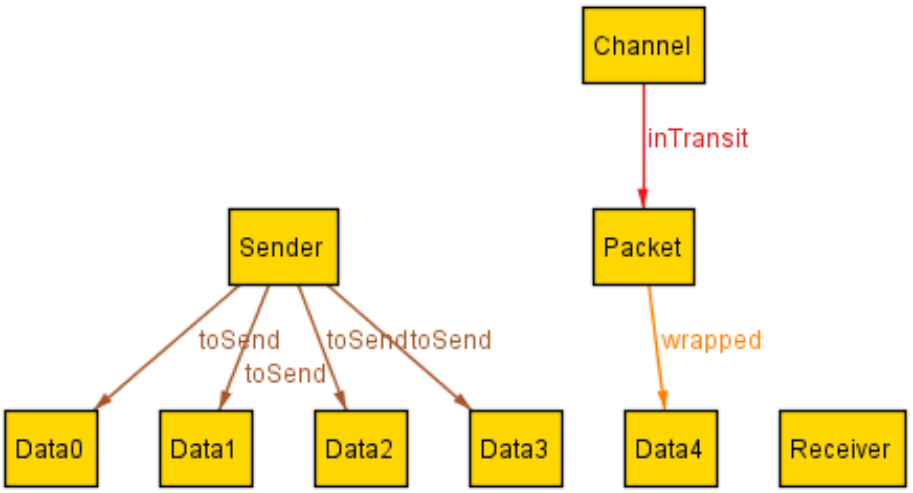
Property 1 holds. It is possible to transmit all of the data in the sender's buffer to the receiver's buffer. A trace of a successful instance is detailed below.

State 0



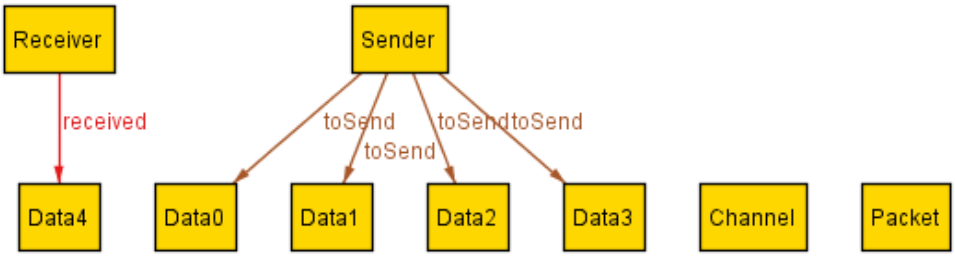
Our model contains a Sender which contains all of the data to be sent, a Receiver which contains all of the data that has been received, and a Channel which contains all of the data that is being transmitted. During transmission, Data is wrapped in a Packet. In the initial state, all of the data is held by the Sender. No data has been received and no data is being transmitted.

State 1



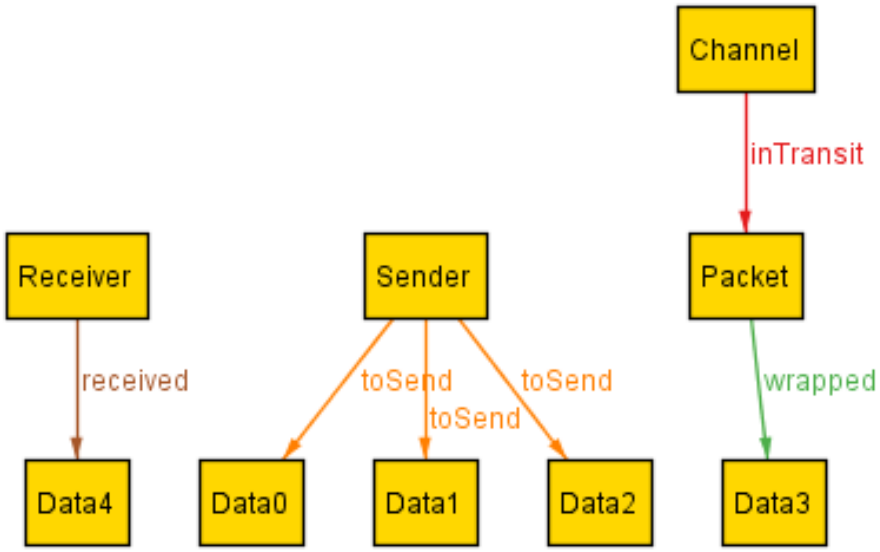
In this state, Data4 is being transmitted. The Data is wrapped in a Packet, which is being transmitted through the Channel. Data4 is no longer in Sender's list of data to be sent.

State 2



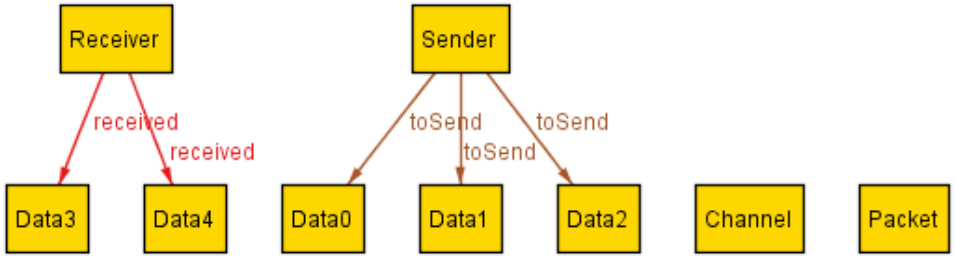
In this state, Data4 has been received. Data4 is no longer wrapped in a Packet or in a Channel.

State 3



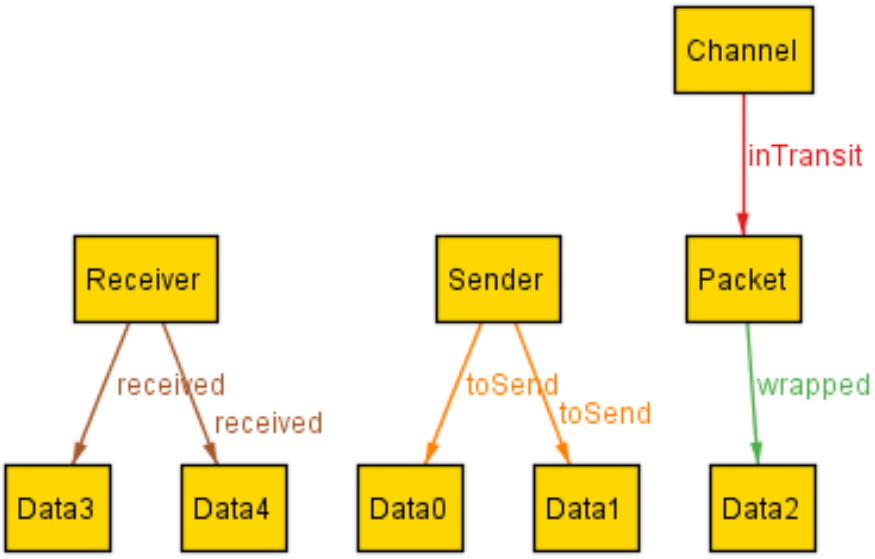
The sending process repeats itself. This time Data3 is being sent.

State 4



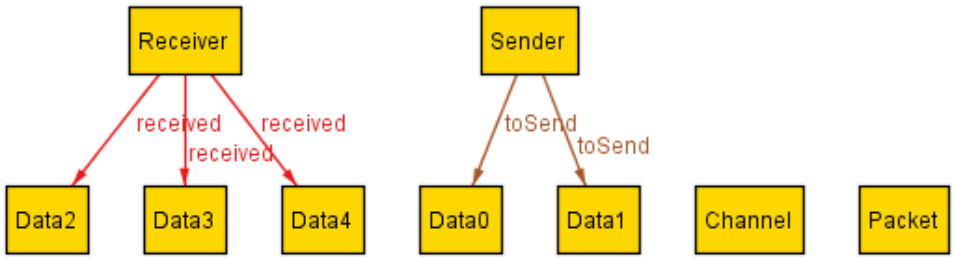
The receiving process repeats itself. Data3 has been received.

State 5



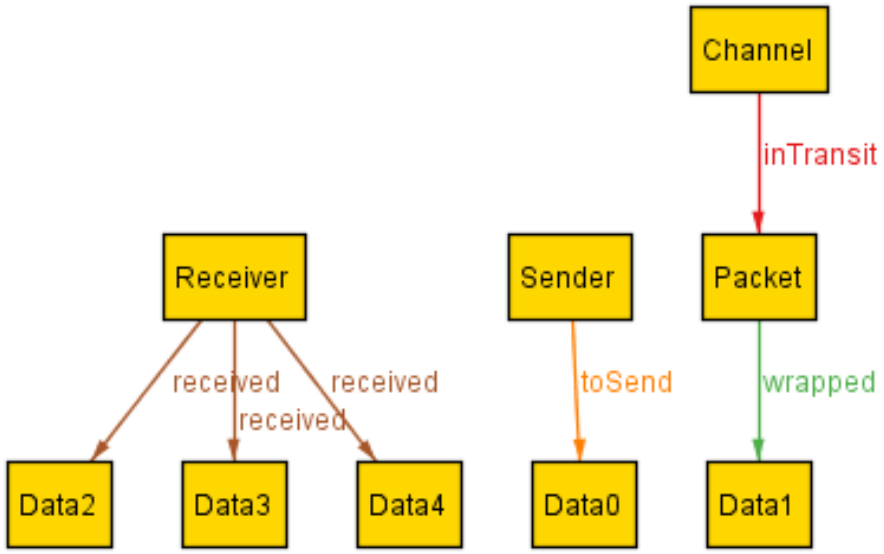
Data2 is being sent.

State 6



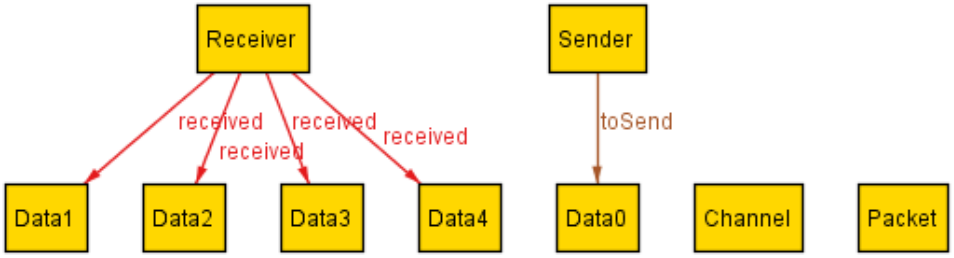
Data2 is received.

State 7



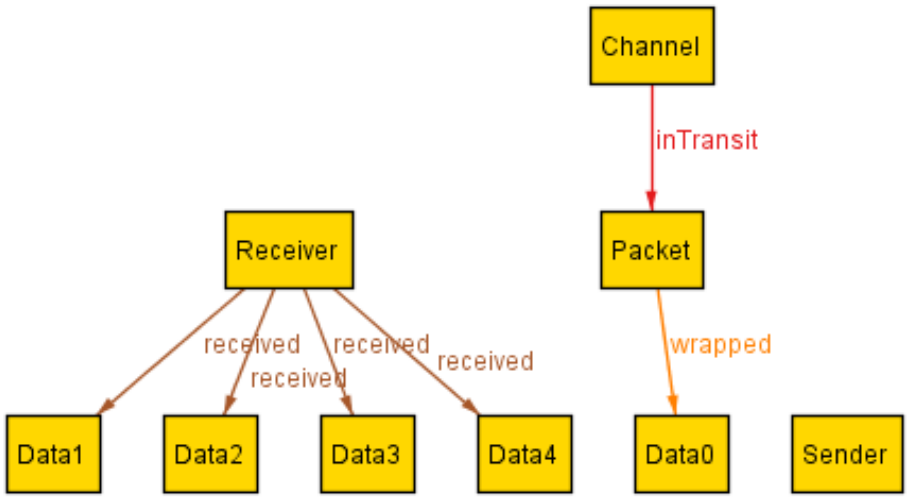
Data1 is being sent.

State 8



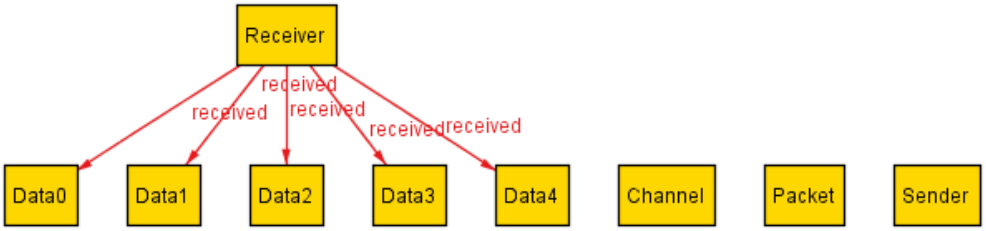
Data1 is received.

State 9



Data0 is being sent. All of the data has now been sent, so Sender's list of Data to be sent is now empty.

State 10



Data0 is received. All of the Data has now been received.

Property 2

No instance of a failing case was found. Thus the second property holds: it is always possible to transmit all of the data in the sender's buffer to the receiver's buffer.

```
Executing "Run traceTwoStepFail for 11"
  Solver=minisat(jni) Bitwidth=0 MaxSeq=0 SkolemDepth=1 Symmetry=20
  7362 vars. 389 primary vars. 20858 clauses. 62ms.
  No instance found. Predicate may be inconsistent. 6ms.
```