

# CSSE 373 - RDT Data Transfer Project

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## Project Plan

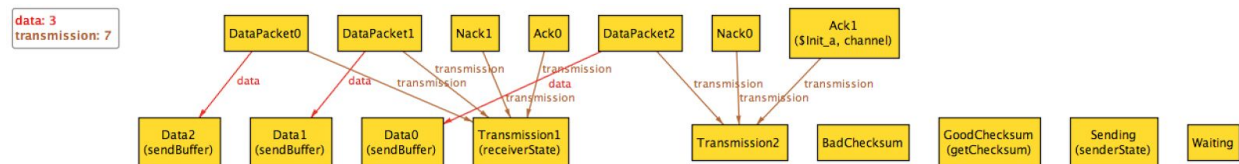
In this milestone, we will check the following three properties of the protocol we are modeling:

1. Using the given protocol, it is possible to transmit all of the data in the sender's buffer to the receiver's buffer. Here, you are asked to find one possible way to do so.
2. Using the given protocol, it is always possible to transmit all of the data in the sender's buffer to the receiver buffer. Here, you are asked to find one possible way in which the data cannot be transferred, thus, refuting the claim. You must ensure that the causes of flaws are due to the flaws in the protocol and not your model. Keep in mind that not all versions of RDT have flaws.
3. If the network guarantees that for every packet there can be no more than one send/receive error in the wire, is it always possible to send the entire data from the sender buffer to the receiver buffer using the protocol.

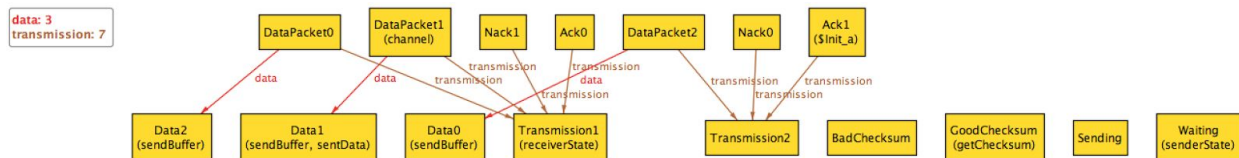
## Milestone 3

### Property 1

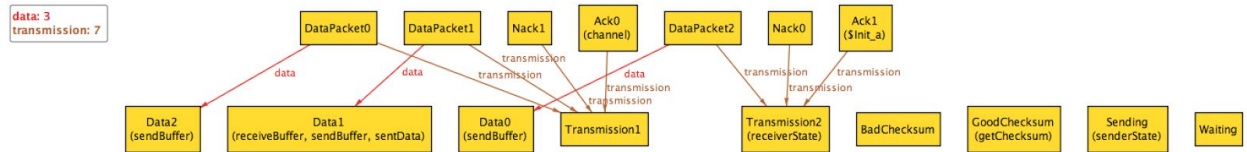
#### Step 1



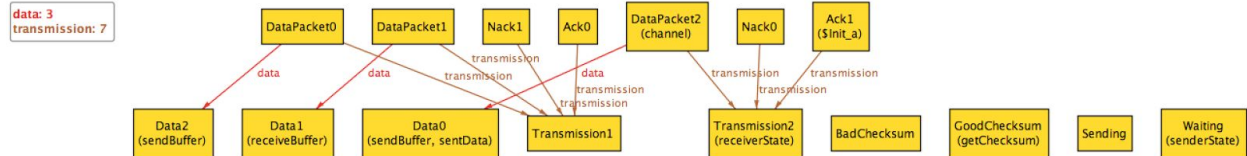
#### Step 2



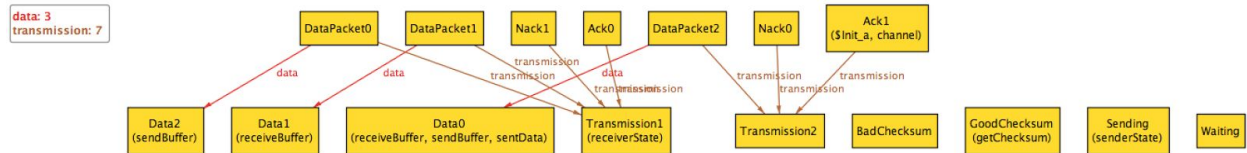
#### Step 3



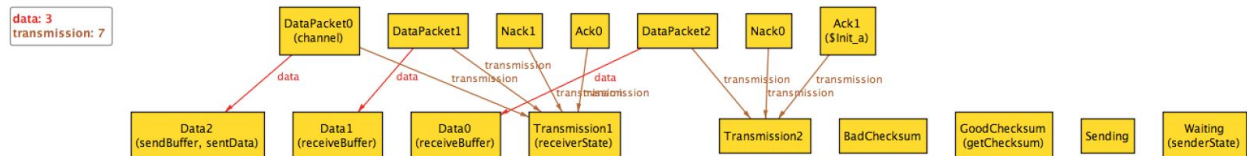
#### Step 4



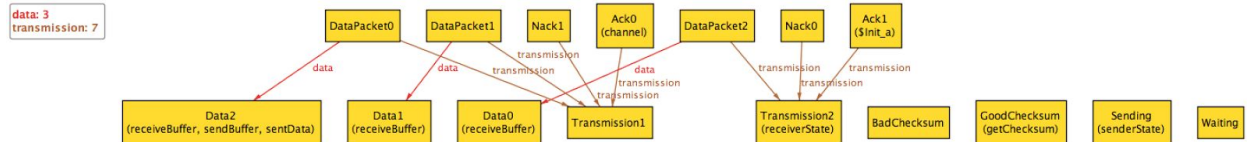
#### Step 5



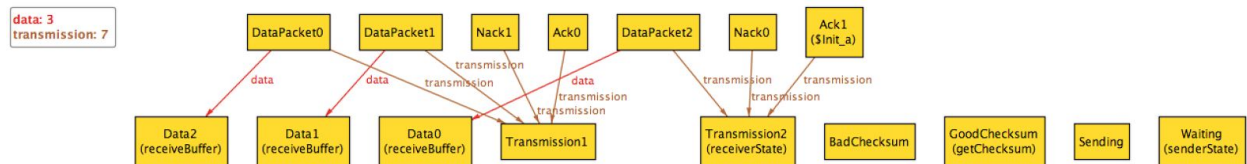
#### Step 6



#### Step 7



#### Step 8

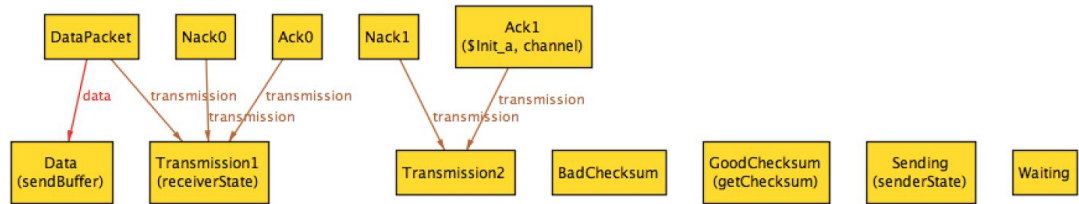


## Property 2

The flaw is when there are unlimited errors; the protocol will be unable to send the data. There is a bound on the number of errors it can handle at once.

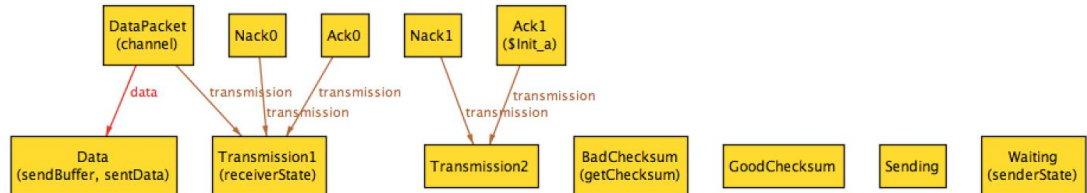
#### Step 1

data: 1  
transmission: 5



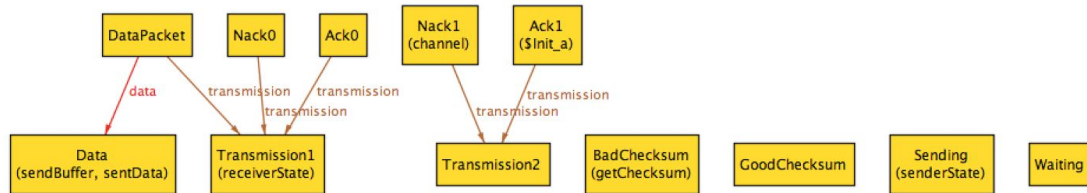
## Step 2

data: 1  
transmission: 5



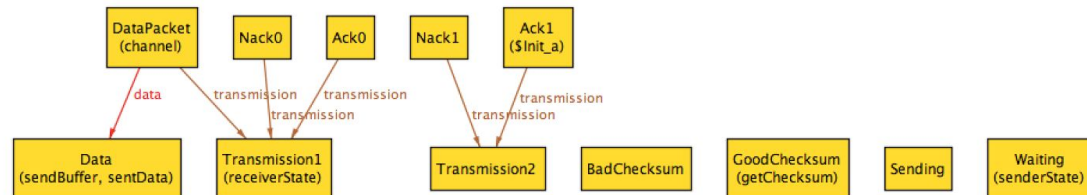
## Step 3

data: 1  
transmission: 5



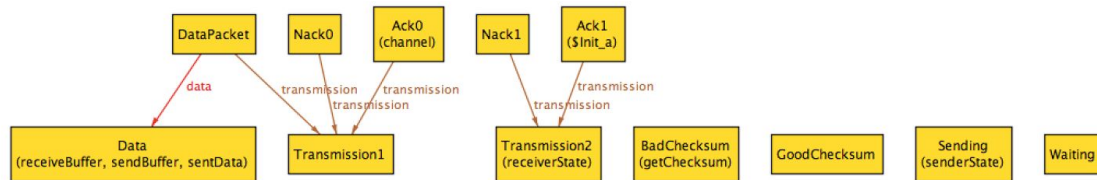
## Step 4

data: 1  
transmission: 5



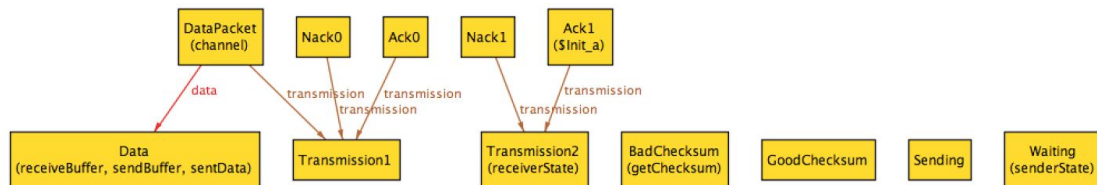
## Step 5

data: 1  
transmission: 5



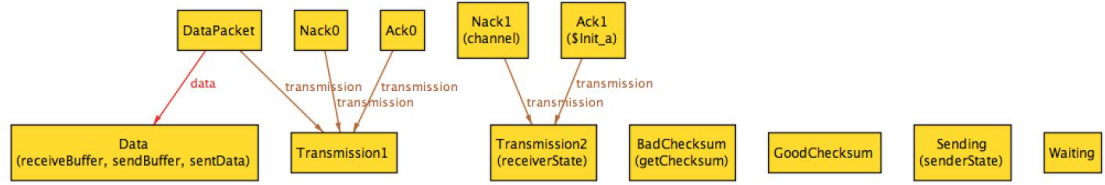
## Step 6

data: 1  
transmission: 5



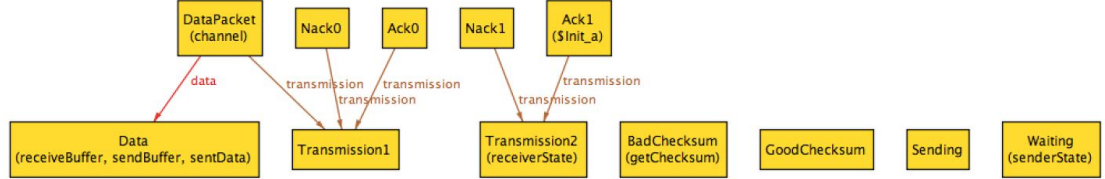
## Step 7

data: 1  
transmission: 5



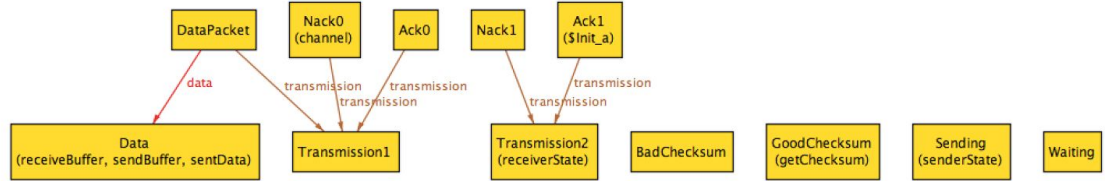
## Step 8

data: 1  
transmission: 5



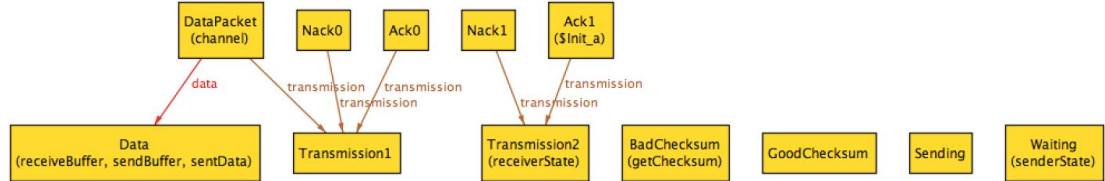
## Step 9

data: 1  
transmission: 5



## Step 10

data: 1  
transmission: 5



## Property 3

Executing "Check MustPassWith1Error for 14 but 3 DataPacket"  
 Solver=sat4j Bitwidth=0 MaxSeq=0 SkolemDepth=1 Symmetry=20  
 32408 vars. 1162 primary vars. 102485 clauses. 112ms.  
 No counterexample found. Assertion may be valid. 166ms.