

# ISE 435: Distributed Algorithms in Network Communication

## Recitation 10

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23 May 2011

### 1 Balanced Sliding Window

Look at the sample balanced sliding window example execution in the slides. The sample run is for two end points with 10 packets each to send. The  $p$  end point has set  $l_p = 3$ . The  $q$  end point has set  $l_q = 2$ . The following events occur during the run:

- $p$  sends packet 2 twice. Both copies arrive.
- The first time  $p$  sends packet 4, it drops.

### 2 What to do

To better understand how the balanced sliding window protocol works, perform the following hand example:

- 9 packets on each side
- $l_p = 3, l_q = 1$
- Packets 2 and 5 from  $p$  drop the first time they are sent
- Packets 5 and 6 from  $q$  drop the first time they are sent

As in the example in class, you may bunch together the arrival of packets to save time and space in your drawings. Check that all of the assertions in the invariant are true at each step.