

## ndnrtc - Task #3572

### [ndnrtc-arc] Data transfer encounters failure in long-delay environment

03/29/2016 03:14 PM - Peter Gusev

<b>Status:</b>	Closed	<b>Start date:</b>	03/27/2016
<b>Priority:</b>	Normal	<b>Due date:</b>	
<b>Assignee:</b>	Peter Gusev	<b>% Done:</b>	30%
<b>Category:</b>	Bug	<b>Estimated time:</b>	0.00 hour
<b>Target version:</b>			
<b>Description</b>			
Problem description (per Yoneda-san):			
Consumer stops receiving data over long-delay links after some time.			
Problem investigation:			
Consumer slowly "drifts away" from producer in issuing challenge interests. In other words, there is accumulating error in frame numbers which are used by consumer for issuing interests for a higher bitrate thread, it manifests itself in producer receiving more "old" interests (i.e. interests for the data that has already been outdated).			
Here are some analysis findings:			
<ul style="list-style-type: none"><li>• Interest-Data exchange over time: data receipt declines (char 1.png attached)</li><li>• same exchange, but per thread: now we see that "mid" thread suffers (this is the thread used by ARC for challenging data) (chart 2.png attached)</li><li>• amount of new/old incoming interests on producer side (overall and per thread): one can see that mid thread received more old interests over time, while "low" thread didn't get at all (that's expected). In general, there should be no "old" interests at all (chart 3.png attached)</li></ul>			

#### History

##### #1 - 03/29/2016 03:15 PM - Peter Gusev

- Description updated

##### #2 - 03/29/2016 03:16 PM - Peter Gusev

- File consumer-yoneda-main\_camera-delay-test4.tar.gz added

Per Yoneda-san:

Dear Peter-san

This is log file in case of 400ms(RTT) environment.  
In this case, NDNRTC cannot shit fetching state, and then ARC is never called.

|P|+--L1--+|NDN Hub|+--L2--+|C|  
Each link (L1 , L2) is 100Mbps, 200ms(both way)

##### #3 - 10/31/2016 04:03 PM - Peter Gusev

- Status changed from New to Closed

#### Files

1.png	42.3 KB	03/29/2016	Peter Gusev
2.png	45.2 KB	03/29/2016	Peter Gusev
3.png	195 KB	03/29/2016	Peter Gusev
consumer-yoneda-main_camera-delay-test4.tar.gz	518 KB	03/29/2016	Peter Gusev