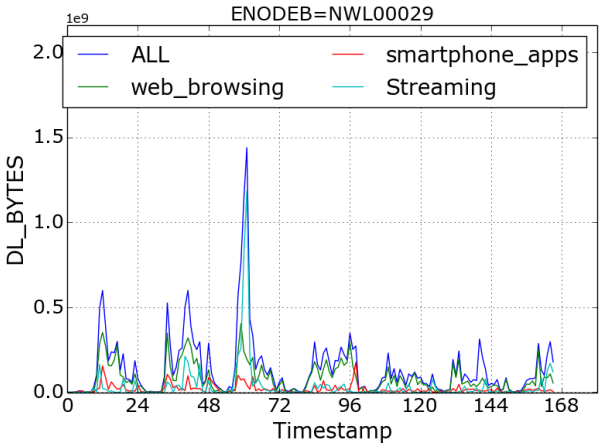
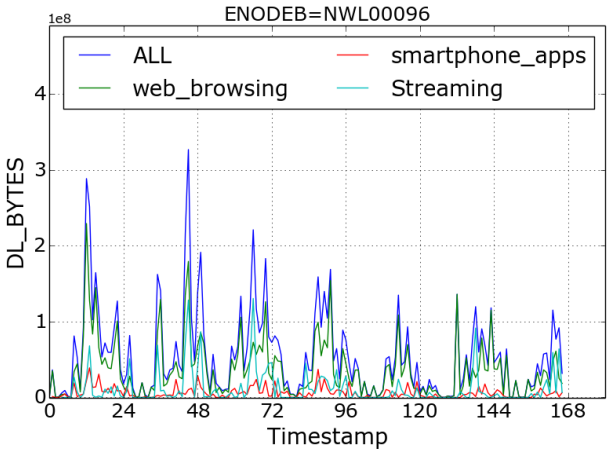
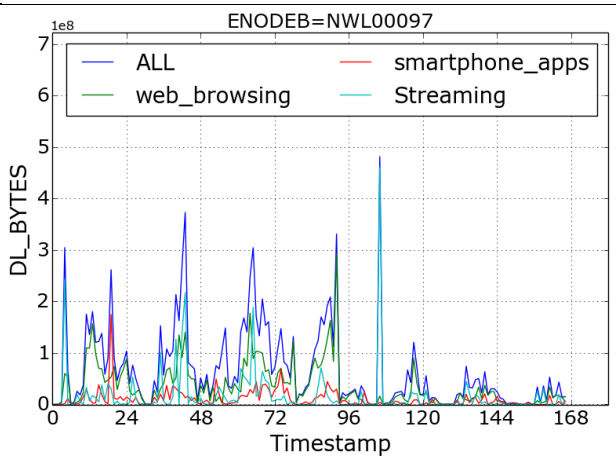
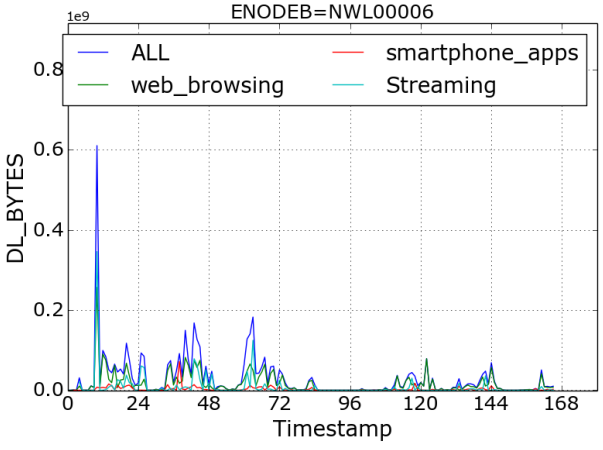
04/20 plots for individual enodeb

plots of individual enodebs

For below plots, we focus on enodebs of a submarket: NYCNJ/NYCW

Time: 11/24/2014-11/30/2014 **Field:** DL_BYTES **Enodeb:** NWL00029 **Takeaway:** we see time-of-day effect. Streaming is very bursty and hard to predict, see Wednesday peak.	
Time: 11/24/2014-11/30/2014 **Field:** DL_BYTES **Enodeb:** NWL00096 **Takeaway:** less traffic than above enodeb.	
Time: 11/24/2014-11/30/2014 **Field:** DL_BYTES **Enodeb:** NWL00097 **Takeaway:** make a guess that NWL00096 and NWL00097 are close (this plot and previous plot)?	
Time: 11/24/2014-11/30/2014 **Field:** DL_BYTES **Enodeb:** NWL00006 **Takeaway:** it is bursty.	

one day data of domain_id of streaming category

For one day data of streaming category, separate them by domain_id and calculate the portion of each domain_id:

Domain_id	Domain name	Portion (%)
0	All other domains	44.4443
3	Not in appendix C	28.59307
1	Apple.com	9.106398
8560	Not in appendix C	7.05265
193	Not in appendix C	2.200852
8946	Not in appendix C	2.099416
12	Youtube.com	1.812234
140	Xvideos.com	1.529882
341	Not in appendix C	0.616959
258	Nflximg.com	0.427699

Most of the domain_id are not shown in Appendix C, but the doc says "available in mobref.top_domain_list", I guess there are full mappings.

Discussion

1. to-do: need method to locate enodebs and then plot nearby enodebs to check correlation (Ajay, can you send me information for this?)
2. need some high-level knowledge input of radio network
   a) capacity model?
      i. in Magus, all connected devices get fair share, so enodeb is always fully loaded (unless there is 0 device connected)
   b) within same enodeb, different capacity/service for different user/traffic category?
      i. in Magus, all connected devices get fair share, and we assume all devices have infinite data to download (there is no "required capacity/enough capacity" for devices, enodeb can't satisfy devices)
   c) how does nearby enodeb help each other by taking traffics flexibly?
      i. in Magus, devices are always connecting to enodeb with best signal strength, so enodeb can't select devices, it's already determined by locations of devices.