802.1au: Simulation Ad Hoc Report

March 13, 2007

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CN-SIM Ad-Hoc: Overview

- Meetings:
  - 6 Weekly (2 hour) meetings held since Nov 2006 IEEE 802.1 Plenary meeting
- Participation:
  - 13+ members actively participated in the calls
  - Representing 10+ companies
- Goal:
  - Create benchmark scenarios and workloads
  - Validate various proposals for “Required Benchmarks”

Thank you all for great team work!

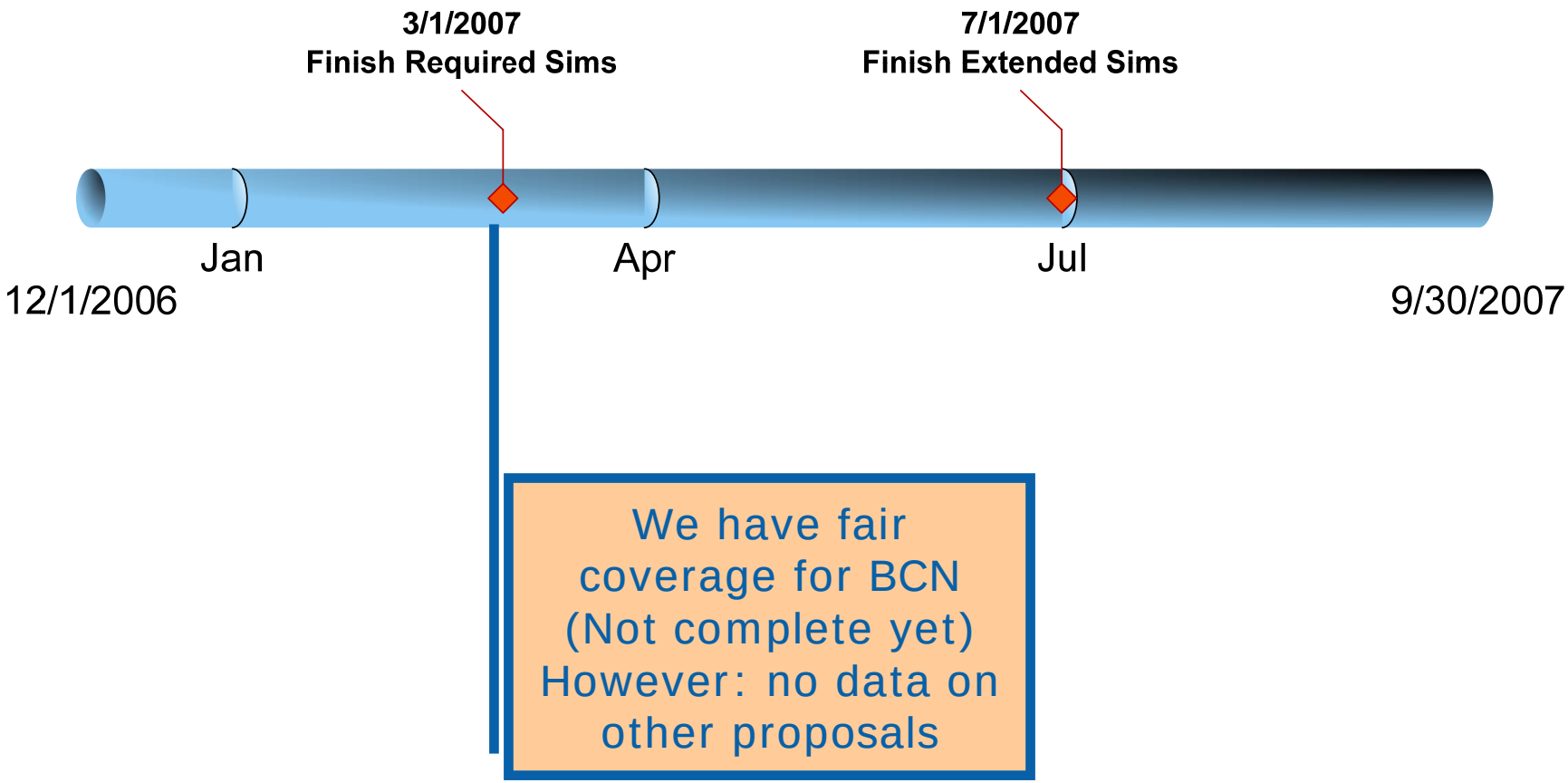
Status

- Benchmark topologies and workloads were discussed
  - http://www.ieee802.org/1/files/public/docs2007/au-sim-wadekar-reqd-extended-sim-list020807.pdf
- No simulations/results were discussed for new proposal/s
- BCN (Renamed as ECM: Ethernet Congestion Management) protocol description discussed: Davide Bergamasco
  - http://www.ieee802.org/1/files/public/docs2007/au-bergamasco-ecm-v0.1.pdf
- Delay analysis of BCN: Bruce Kwan, Jin Ding (Broadcom)
  - http://www.ieee802.org/1/files/public/docs2007/au-kwan-ding-bcn-effects-of-delay-02152007.pdf
- BCN-MAX and Dynamic Range Factor (DRF) Analysis: Cyriel Minkenberg and Mitch Gusat
  - http://www.ieee802.org/1/files/public/docs2007/au-sim-ZRL-OG-BCNmax-and-dyn-range-r10.pdf

Where are we?

- We have good enough coverage and understanding of BCN, but not complete yet
  - Still need data for TCP flows, large topologies
- Need data for other proposals
  - Protocol specifications
  - Required benchmark data
- Need discussion about metric
  - CM mechanisms should behave well in normal scenario, Good in congestion scenario, and not melt down in extreme scenarios (or at least – should recover gracefully)
  - Is this acceptable?
  - Are we focusing too much on fairness and utilization metrics?

Timeline


3/1/2007
Finish Required Sims
7/1/2007
Finish Extended Sims
Jan
Apr
Jul
12/1/2006
9/30/2007
We have fair coverage for BCN (Not complete yet) However: no data on other proposals

Next Steps

- Finish “Required” and “Extended” benchmarks, TCP benchmark for BCN
- Start working on “Required” benchmarks for new proposals, if any
  - Proponents should own timely simulations for these new proposals
  - CN-SIM Ad-hoc should analyze and discuss
- Compare any other proposals for performance, stability, overhead and complexity