



802.1Qau: Simulation Ad Hoc Report

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CN-SIM Ad-Hoc: Overview

- Meetings:
 - 4 meetings held : 2 with presentations, 2 with discussions
 - 2 meetings cancelled
- Participation:
 - 18+ members actively participated in the calls
 - Representing 10+ companies
- Goal:
 - Discuss convergence of multiple solutions
 - ECM, E2CM, FECN, QCN

Thank you all for great team work!

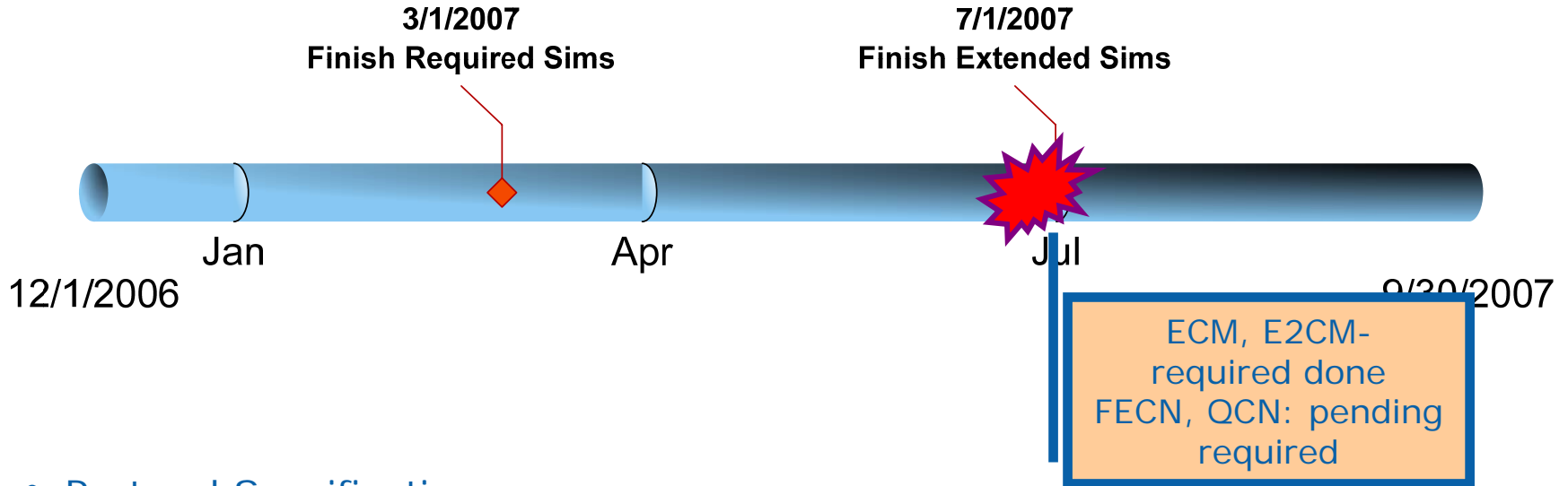
Status

- Simulations/Presentations:
 - Convergence Related discussion:
 - Manoj Wadekar:
http://www.ieee802.org/1/files/public/docs2007/au-wadekar-convergence-thoughts_v1.pdf
<http://www.ieee802.org/1/files/public/docs2007/au-wadekar-practical-limitations-RL-v1.pdf>
 - Mitch Gusat/Cyriel Minkenberg:
<http://www.ieee802.org/1/files/public/docs2007/au-ZRL-Grand-Canal-r1.00.pdf>
 - QCN (Prof. Prabhakar):
 - http://www.ieee802.org/1/files/public/docs2007/au_prabhakar_qcn_with_drift.pdf
 - <http://www.ieee802.org/1/files/public/docs2007/au-prabhakar-shared-rls.pdf>
- Additional Workload/Metric discussed and simulated:
 - None

General Takeaways

- CN mechanism needs to satisfy practical limitations
 - Finite Rate Limiters at Reaction Point
 - Multiple flows may get coalesced on single Rate Limiter
 - Multipathing can result in flows to same DA to follow different paths
- QCN Simulations:
 - Scenarios for Shared Rate Limiters (2 point vs. 3 point comparison)
 - Advantages of drift to provide failsafe operation and to reclaim rate limiters
- More work needed still on:
 - TCP workload
- Work on proposals:
 - Further fine tuning proposals for QCN (drift, DE bit clarified for 3-point)
 - No new material on ECM, E2CM, FECN

Where are we



- Protocol Specification:
 - ECM, E2CM, FECN and QCN Pseudo codes are released
 - Changes in proposals have been very small (if any)
- Benchmark data:
 - In general more data required for TCP workload
 - ECM and E2CM seem to have reasonable amount of data for defined "required benchmarks"
 - More work is required for FECN and QCN
 - (Or we can rely on knowledge gained so far instead of spending cycles on benchmark simulations)

Decision is required

- Judging from conference calls – proposals have smaller number of enhancements and relative gain from enhancements is getting smaller
- Time to pick up baseline framework
- We need to make decision on:
 - Algorithm for the CN project
 - Signaling mechanism(s) for the project
- This will allow us to focus on getting simulation effort narrowed to the selected mechanism

Proposed Next Steps

- Select CN mechanism for the Task Force
- Define TCP workload benchmark
- Finish “Required”, TCP benchmark for Selected Mechanism to feed into Draft 0.2
- Continue working on “Extended” benchmarks, TCP benchmark for Selected Mechanism