Goals: To review major technical subsystems, discuss related examples of mutual interest and explore opportunities for collaboration in advancing R&D.

1. Items of Mutual Interest and Opportunities for Collaboration
   - FNAL initiatives in Web based controls (FNAL)
   - FNAL Machine Protection progress of interest to NLC (Czarapata, Anderson, FNAL Controls)
   - Global Controls Modeling (Phinney)
   - FNAL Proposed Experimental Test Facility (ETF) – Opportunities for controls and instrumentation collaboration (Czarapata)

2. Technical system progress, status and issues
   - Timing system (Frisch)
     - Fiber optic compensation test results
     - Planned changes due to Tunnel Models
     - Fermilab fiber plant test results
     - Further R&D plans
     - Discuss basic Timing & LLRf issues (Frisch, Pasquinelli)
   - BPM systems (Smith)
     - ATF prototype system progress (proof of principle for NLC)
     - Cavity QBPM proposal
     - DRBPM HOM issues
     - High Speed Sampling chip progress
     - Tunnel models for BPMs
     - Block concept of advanced circuit with sampler and integral ADC
     - Plans to advance custom chip based circuit design, power & cost model
     - R&D plans to address key issues
     - Need for mechanical and physics support
   - Mover Electronics (Humphrey or Ringwall for MJB)
     - Quick summary of FFTB mover system and test results (from MJB)
     - Impact of mechanics change harmonic to screw drive w/ increased gear ratio
     - Non-contact eddy current position sensor R&D
     - Further R&D plans to advance circuit models through prototypes
     - Need for mechanics and physics support
   - Vacuum Electronics (Humphrey)
     - Outline model based on system AC supply and Xfmr-diode at pump
     - Issues: Rad hard diode, rad-hard jumper cables, packaging, readout
     - Plans for circuit modeling and prototyping
     - Support needs
   - Tunnel Electronics (Humphrey)
     - Present models for packaging major systems in tunnels
     - Radiation environment for COTS in various machine areas
     - Issues of power consumption and cooling approaches
     - Communications, timing & bandwidth
     - Plans for developing requirements, specs. & prototypes