- Group Information:
  - Group name: “Nap Time Media Systems”
  - Group members: names and SFU email ID's:
    - Benny Yan <bya1@sfu.ca>
    - Cal Woodruff <cwoodruf@sfu.ca>
    - Tom Betz <teb1@sfu.ca>

- Topic description (1-2 paragraphs):
  - What will the system do? And (at a high level) how?
    - We will create a distributed media player. This will allow for the interconnection of two or more embedded systems to share media files (initially sound files) and will allow end users to find and play back media files from any location in a home or business. We will implement an easy to use user interface similar to the classic iPod for the embedded nodes as well as a web interface for managing media on the network. We may add support for IR remotes and video streaming to an external monitor. Media files can be uploaded to the system via the usb interface. We also aim to support a Chinese version of the GUI.
  - Describing of connection to any external systems.
    - The system will be set up such that the embedded nodes can connect to “super nodes” such as home computers and remote servers to store and play media files. Nodes will be interconnected in a peer to peer network which can be managed by supernodes running a web-based management interface. Initially this will be relatively simple. Supernodes can search peers they know about as well as serve files and act as external storage for peers. We will also provide data logging capability to save and later analyze how media is used on the system.
  - Any required additional hardware (students must provide).
    - We may potentially need IR receivers for the embedded systems to support remotes. External monitors for display of graphical media.

- Criteria for how you will judge if you are successful (1 paragraph, ~3-5 sentences).
    - The initial phase of the project will be complete when we:
      1. Can play music files on the system
      2. Can find remote media on other peers
      3. Can upload media to a peer and transfer media files between peers
      4. Have a functional user interface for finding and playing media on the embedded devices using buttons a/o onscreen GUI touch input
      5. Can use super nodes to manage large collections of media files
      6. Can log system usage

- Time-line:
    - What are some of the high-level stages/tasks to be completed?
        - ■Stage one:
            1. Design data storage for media index - Cal
            2. Develop node storage architecture - Cal
            3. Play / display media - Benny
            4. Configure USB flash drive and/or NFS server - Benny
            5. Embedded UI (basic) - Tom
        - ■Stage two:
            1. Touch screen UI - Tom
            2. Logging - Tom/Cal
            3. Transfer (room to room) - Benny
            4. Upload and transfer between nodes - Tom/Cal
        - ■Stage three (optional tasks):
            1. Chinese version of GUI - Tom
            2. IR remote interface - Benny
            3. Video player - Benny

    - What will your group have done by the Milestone Meeting?
        - ■All stage one tasks should be complete
    - What are 2 or 3 bonus things you could add if you had more time.
        - ■Stage 3 are all optional tasks

Table 1. Working Schedule

Component	Benny	Cal	Tom	When
Website		x		nov. 6
P2P Architecture (middleware)	x	X	x	nov. 6
NFS/USB (filesystem)	x			nov. 14
GUI (button/touchscreen)			X	nov. 14
Play Sound (playlists)	X			nov. 6
Logging (analysis; upload to site)		x	x	nov. 14
P2P II (upload from unit; transfer/copy; query/search)		X	x	nov. 14
Backup To Web		x		nov. 21
Transfer (room to room)	x	x		nov. 21
Chinese Support			X	nov. 21
IR	x			nov. 28
Video	x			nov. 28