

Video on the “Move”

UMMS Collaboration Cart

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University of Mich
Medical School

Motivation for a “Go-Cart”

- AUDIENCE - Physicians, basic scientists, etc. in the medical school community
 - Time matters! (must work, must be simple!)
 - Money matters! (must be affordable, available)
 - Quality matters! (video, audio, latency matter)
- TECHNOLOGY - UMMS is Windows centric
 - Familiar user interface desired
 - Need for a “Node” operator must be avoided
 - Support for collaboration tool of choice
 - “click-n-go” operation desired
- MOBILITY - easily moved & used by Audience



Target Collaboration Tools

- Bandwidth Matters!
 - LAN (100 mb) Wireless (45 mb) Home (.5-1 mb)
 - Video quality related to bandwidth
- Windows Matters!
 - DVTS
 - Adobe Connect (Breeze)
 - Marratech
 - ConferenceXP
 - Access Grid PIG
- Simplicity Matters!



Collaboration Cart “Go-Cart”



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Collaboration Cart



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Collaboration Components

- Better than H.323 video desired, latency a problem with low-bandwidth HD, so Sony HandyCam used for Video Capture
- Good audio without "echo" was desired. ClearOne Chat 50 was chosen because it is affordable & extendable
- 22" computer monitor is used to capitalize on the ability to present an HD (high definition) perspective (16x9).
- Mac mini chosen as host machine because it is capable, **quiet**, and inexpensive



Camera: Firewire & external audio

- Any video camera that supports IEEE 1394 (Firewire) and an external microphone may be used.
- Cost for cameras used ~ \$700 - \$1100
- Needed additional driver for ConferenceXP (Orangeware)



Audio: Chat50 or Chat150

- Echo cancellation device is used as both microphone & speaker
- Microphone cable plugged into the camera (white plug in the HandyCam picture) from the back of the Chat 50
- A speaker cable is plugged into the speaker port on the computer from the back of the Chat 50.



Wireless Keyboard & Mouse

Wireless keyboard can easily be removed from the cart and used anywhere in the vicinity. (like on your desk, lap, etc.)



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Computer: Mac mini/Windows

This computer was chosen because of the **price**, the small physical footprint, and because it is a very **quiet** machine.

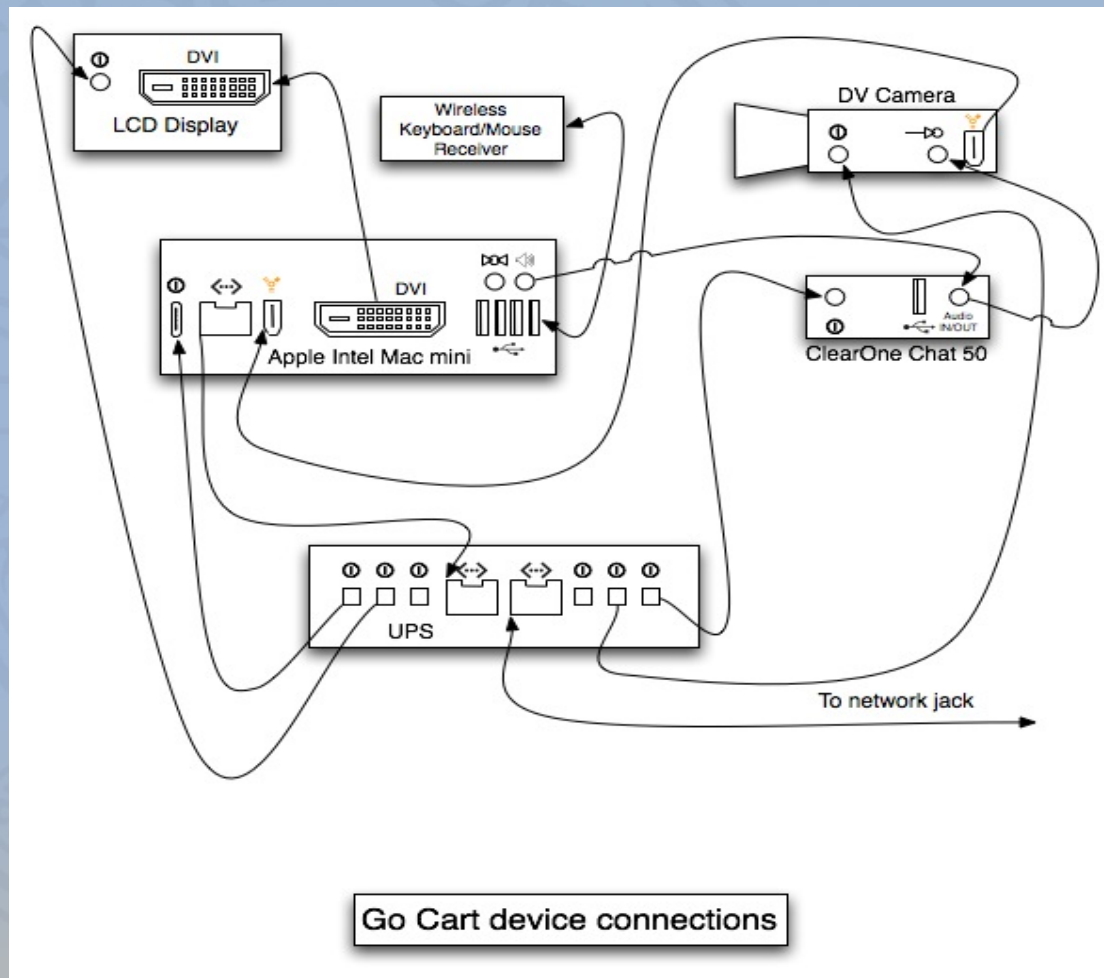


Power blips - defend yourself

- Installed UPS so Cart is immune to local power failures during a video conference.
- Allows machine to be moved without shutting everything down
- Current estimate is UPS will power the Cart equipment for 60 minutes.



Wiring Diagram



Where does this leave us?

- <http://www.umich.edu/~bdr/et/gocart/index.html>
- <http://www.umich.edu/~bdr/et/> (multicast help)
- Center for Computational Medicine and Biology at UM preparing to build/deploy units
- Questions?



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