Simple Surveillance System

System Design:

- One Sony Omnidirectional Camera (RPU-C2512) ceiling-mounted, connected to PC through Matrox CronosPlus FrameGrabber and RS232
- http://www.visioncom.co.il/m4_Cameras_RPU-C2512.asp
- 1 Sony IP Pan-Tilt-Zoom Camera (SNC-RX550P) desk-mounted, connected through LAN, each with unique IP address.
- http://bssc.sel.sony.com/BroadcastandBusiness/DisplayModel?m=10001&p=20&sp=165&id=83241
- Cameras available but cannot be provided; hence source codes have to be completed and sent in individual module so that testing can be done.

Software Environment:

- Visual Studio 2003 C++ with OpenCV libraries
- Matrox ActiveMIL-Lite 8.0 libraries

System Description: (in terms of priority)

1. Omni Display Module *submit in day 3 if possible for testing(70USD)*

- Create a GUI to stream live video from omniview cam.
- View of omniview cam must be toggled to "ring" at default by passing VISCA serial command. (refer to manual)
- Refer to OpenCV yahoogroup for examples

exact image captured from the SONY omnicam

2 Detection Module *submit in day7 if possible for testing(80USD)*

- Use cvCamShiftTracker functions in OpenCV to *detect* a human.
- The moving object must be *highlighted* on the display.

frame up the object when its motion is detected

3 PTZ Display Module *submit in day 11 if possible for testing (60USD)*

- Establish connection to PTZ camera (example provided in SNK attached)
- Include controls to allow user to pan, tilt and zoom.
- Display their live images.

- *example of GUI displaying image from omnicam and PTZ cam when app is run.*
- *final GUI should include button to let user choose either to activate omnicam or PTZ cam.*