Project Title: Portable Video Viewer
Project ID: AO3-02
Supervisor: Associate Professor Oscar AU
Authors: LEUNG Kam Chiu (00159411)
         KWONG Wing Ki (00255772)
         LAM Ka Lung (00270760)
Date of report: 22 July 2003
Overview

Wireless Local Area Network (LAN) is a core technology which supports the network applications in the future. In the project, the aim is to build a portable video viewer for the Window CE environment in Pocket PCs. The goals we accomplished include the following:

- developed the video decoder from a Windows based MPEG-4 decoder
- developed the network part for the transmission of videos through a wireless LAN
- constructed a GUI for the video player

Wireless LAN Transmission
To view a video from the internet, the Pocket PC will first request the video from the server. Then the server will send the data of the video to the Pocket PC. While receiving the data, the Pocket PC divides the received data into video bitstream and audio bitstream. The video bitstream and the audio bitstream will be decoded by the video decoder and audio decoder respectively. After that, the decoded video and the decoded audio are stored in their corresponding buffers, and then passed to the video player and audio player respectively. Finally, those two players are synchronized and the video will be displayed.
Result

(A). The sequence number of the frame in the video

(B). The video output

(C). fps setting

(D). “Stop” key to stop the player and pause the transmission

(E). “Play” key to start the player and the transmission of the video

(F). Reset the transmission to the 1st frame

(G). Menu bar

Performance

Decoding speed of Stef_cif.cmp (512 x 288)

- P4 1GHz with MMX
- K6-2 450MHz with MMX
- K6-2 450MHz without MMX
- Pocket PC 400MHz

frame per second (fps)