Mobile Remote Desktop Device (WKT5-10)

Student members
Yip Kam Wai, Leung Wing Kit, Wong Siu Wai

Supervisor:
Prof. Kam Tim Woo

Aims and Objectives
The project aims to introduce a new form of mobile computing: Mobile Remote Desktop Device (MRDD). It is essentially a thin client designed to fit into the user’s pocket or hand. The user can connect to any server, either locally or remotely, and access any application from any device.

Methodology
The project involved the development of a mobile remote desktop device, which serves as a thin client for connecting to a server. The device is designed to be lightweight and portable, allowing users to access their applications and data from anywhere.

Simplified Overview
The core components of the MRDD are the controller, monitor, touch screen, and wireless module. The controller communicates with the server, managing the connection and data transfer. The touch screen is used for basic input.

Software Flow
The software flow diagram illustrates the process of data transmission and reception between the device and the server. The controller receives data, processes it, and transmits it to the monitor or touch screen.

Hardware Block Diagram
The hardware block diagram shows the various components of the MRDD. It includes the controller, monitor, touch screen, and wireless module. The diagram also highlights the communication paths between these components.

Result
The testing results and conditions include:
- 900MHz microprocessor with 128MB RAM
- 2.4GHz server
- 1.6GB computer as reference
- Playing a game, video, and file on YouTube

The performance was measured in terms of frame per second and bandwidth. The results indicate that the MRDD performs well, with a frame rate of 25fps and a bandwidth of 10Mbps.

Conclusion
The project has successfully introduced a new form of mobile computing. The MRDD is a lightweight and portable device that enables users to access their applications and data from anywhere. The testing results confirmed the feasibility of the concept, and the performance metrics demonstrated its effectiveness.

The performance of the client device is crucial for practical applications, and further improvements are necessary to enhance the user experience. Despite this, the project has provided valuable insights into the potential of mobile remote desktop devices.