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PROJECT FACT SHEET

Project Name: Dissertation – Poker House

Date: March 2006

Project Ref: 2006DPH1

Elapse Time / Completion: 3 Months

Reporting: Professor Paul Gough
Professor of Space Science

Developer: Jonathan Hawkins

Main Objectives:

Java Client / Server

The main objective of this project was to build a stable client server environment utilising a complex multi user application. This application needed to work over a network with the ultimate goal of working across the internet.

This was the author's Dissertation at university. In summary it was a website that allows users to play Texas Holdem Poker online free against others or AI agents. The game itself was developed in java using a client server approach. The website allowed users to chat on a forum and log into the applet which in turn would connect to the server.

Technical Environment:

Java, Java applet, HTML, MySQL, PHP, CSS, PHPBB (forum used)
Eclipse, DreamWeaver, PHPMYADMIN
Windows XP Pro + 2000, Linux Server(Ubuntu)
FireFox + IE6 + IE Beta

Project Approach - Design / Development / Test:

This project had a number of different sections, the main being the server which controlled all actions related to the poker environment. A user could log in using the applet and the server would create a connection handler to control all actions of that user. It would allow the user to create, enter and leave rooms, to chat to anyone in the current room and to play the game it self.

The structure of the server took a long time to develop and test due to complexities of the game of poker being very complex. There are numerous nuances that had to be taken into account. Poker is a rule based game so naturally the server took the same approach. It was decided to use a state checkpoint process, so each play in the game would be represented by a state. This could then be validated to ensure the game was working correctly, to deal with any errors that may occur and to tell who should make the next move.

The final project was tested across a local network and worked well. The author was very happy with the outcome of the project and feels he developed a sound working system in the time and support that was available. One of the largest issues to deal with was synchronization, there would be many users playing many games at once. They all need to interact with everything else correctly prohibiting multiple users changing the same information simultaneously.