

## Class presentations – December 5

Azuma and Low

2:03-2:12

## VIEW interface

Our project is to develop a server/daemon that provides a high level interface for an application that wants to run programs on other machines across a network. It will enable an application to start programs on other machines, asynchronously receive messages and results from them, and abort them if desired. The interface hides most of the implementation details from the application, and although it has been written with the VIEW system in mind, it should be generic enough for other applications to use.

Luca and Rhoades

2:12-2:21

## Evening at the chess club

A system that uses networked Sun workstations to simulate an evening at the chess club. Any number of players can play, watch other games or kibitz over the net. A multiple client/central server model is used with datagrams to exchange messages.

Bajura

2:21-2:26

## Distributed Tree Evaluation

I have been working on a program which distributes the computation of a game-type tree among an arbitrary number of computers. The network game distribution is kept separate from the functions which evaluate each position in the tree, which is a function of itself and its direct children. A “primary” image accepts user input and starts working on solving the tree. Secondary images connect to the primary image and each other and poll for work to do when they don’t have any. Work is distributed throughout the network with specific return addresses and returned to its origin when completed. The primary image reports the tree evaluation to the user and asks for a new problem.

Cheung, Poirier, and Uichanco

2:26-2:38

## A Distributed Blackjack Game

This is a distributed version of the common casino game. It allows up to six players on different machines to play blackjack with a computer dealer. Each player is given a display showing the cards and bets on the imaginary card table. Each player starts with a set amount of money and the server keeps track of this amount between plays.

Menges, Singh, and Whitfield

2:38-2:50

## An SGMP implementation for the North Carolina Data Network

The objective of this project is to implement SGMP to address the network management concerns of Microelectronic Center of North Carolina which monitors the inter-network gateways in the North Carolina Data Network. Particularly, the internetwork gateways in the Triangle universities were considered.

The Simple Gateway Monitoring Protocol (SGMP) is an application-layer protocol that allows logically remote users to inspect or alter management information for a gateway (or a bridge).

The number of sites on the internet has escalated dramatically, and as it continues to grow more complex the issue of network management becomes more serious. A typical function of network management is network problem determination, which includes problem detection and diagnosis. This information can be used by the person responsible for network management to make performance assessment, and planning and design decisions about the network.

Our implementation consisted of three components:

- 1 A bridge server that communicates with bridges using XNS.
- 2 A proxy SGMP server that translates between SGMP and individual bridge command languages. The proxy server communicates with bridges via the bridge server.
- 3 A client program that monitors multiple bridges concurrently, via SGMP messages between the client and the proxy server.