Colledit: A Real-Time Collaborative Text Editor

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Revisiting Complex Problems

- Recall Gerhard's Paper "Transcending the Individual Human Mind"

- Complex Problems require more knowledge than any single person possesses

- Systems such as the EDC are great for groups of people in the same location, often groups are not in the same location

Real-Time Collaboration

- Collaborative systems fall into two broad groups: asynchronous and synchronous

- Real-Time collaboration systems are synchronous

- Real-Time collaborative systems are a form of new media

- Facilitates distributed cognition

Real-Time Collaboration Applied to Extreme Programming

- One facet of Extreme Programming is pair programming

- A real-time collaborative editor would allow developers to work in this fashion despite their location

- The team would not be limited to one developer using the computer at a time

Colledit Overview

- Client/server model, user who starts the session is also the owner

- Service discovery via Zeroconf

- Users pick a color, any editing they perform will be shown in that color

- Chat component for communication within an editing session

Demonstration

Fundamental Limitations of Colledit

- Does not scale well

- Does not provide a programmer's text editor

- Each collaborative event requires code to drive the respective network event

- Does not provide a method of notification of what other users are doing

Towards the Future: Real-Time Collaborative GUI Toolkits

- Modern editors and GUI toolkits are not conducive to real-time collaboration

- Ideally, support for real-time collaboration would be in the GUI toolkit itself

- Beyond seeing changes in realtime, cursor location, mouse location, screen position, of all users would all be tracked and displayed by the toolkit

Questions?