Cooperating Applications through

Tcl/Tk and DCE

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Introduction

• Mechanism for cooperation and communication
• Based on OSF’s Distributed Computing Environment (DCE)

Inter-application communication

• Go beyond Tk’s single display restriction
• Allow un-modified applications to participate
• Simplify application cooperation

A Session Manager

• Facilitates communication through proxies
• Simplifies cooperation through user profile
Some DCE Background

- Services:
  Threads, RPC, Local & Global Directory, Time, Files
- Names such as:
  
  /.../umich.edu/fs/home/normanb

Tk - Session Manager

- A Tk application with DCE extensions
- Manages well known location in DCE name space
  
  /.../umich.edu/users/normanb

Tk - SM (cont.)

- Creates proxies for communication
- Uses DCE RPC for security

Proxies

Registry: SM, mxedit, hq

Registry: SM, wish, ppres
Proxies (cont.)

- A user profile for common requests
  
  ```
  send SM EDIT foo.c line 96
  send SM DEBUG foo.c break-pt 96
  ```

- Interaction with ToolTalk, SoftBench, COSE, etc.
**Implementation**

- Automate Tcl wrappers for RPC stubs
- Take advantage of DCE services
- Current prototype based on TclDP