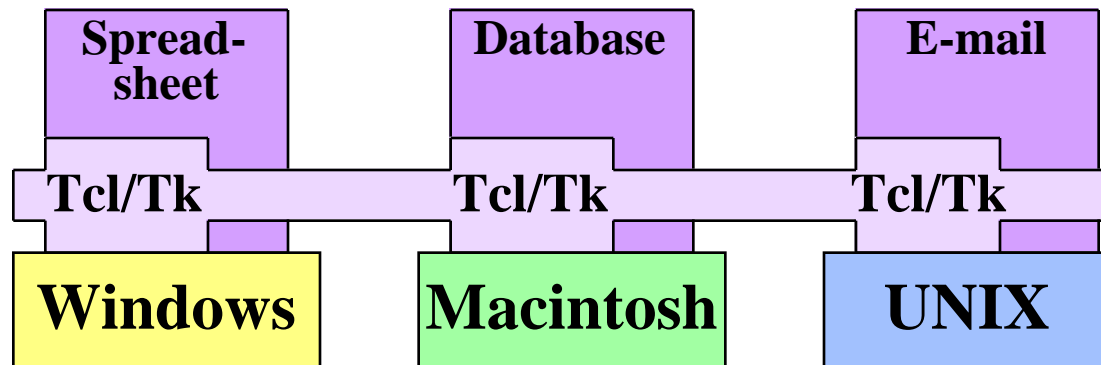# Ray Johnson

Sun Microsystems Laboratories
## The Tcl/Tk Project

Internet Scripting

- **Use scripts to Glue the world together.**
  - Interapplication communication, scripting desktop.
- **Mobile scripts for Agents or Executable Content.**
  - Active Email, Web Pages, etc.

Spread-sheet	Database	E-mail
Tcl/Tk	Tcl/Tk	Tcl/Tk
Windows	**Macintosh**	**UNIX**

Protecting The Environment In Tcl

- **Dual interpreters** (like kernel/user space).

- **Unrestricted interpreter (like kernel space) for user and receiving application.**

- **Incoming Tcl script executes in restricted interpreter (like user space): no dangerous commands.**

- **Safe calls from restricted interpreter back to unrestricted interpreter (like kernel calls).**

Unrestricted   Restricted

Safe
Calls
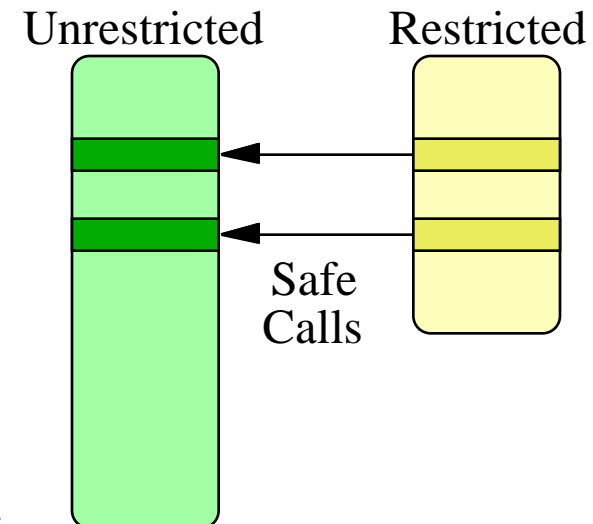
What's next?

- **Finishing the Plugin**
  - More flexible security policies
  - Authentication & Encryption
  - Powerful communication schemes
- **Tcl in bed with embedding.**
  - ActiveX components, OpenDoc parts.
- **Tcl as the container.**
  - ActiveX, OpenDoc.
  - Java Beans - the cross platform component system.

Software Agents Mailing List

- **Mailing list for the topic of agents.**
  - Discussions relating (however loosely) to agents.
  - First started in early 1994.
  - Membership has grown to over 1300.
- **How to subscribe.**
  - Send message to listserv@sunlabs.sun.com.
  - In the **body** of the message put:
    subscribe agents John Doe

    (replace John Doe with your real name)