



1990 Worldwide Developers Conference



Virtual User

A User Simulation Test Tool

Panel Members

- Tom Chavez Product Marketing
- Lew Rollins Mgr, Process Technology
- Jay Jessen Process Technology
- Nagarajan, P. Process Technology
- Jim Schneider Process Technology
- David Shayer Process Technology
- Paul Snively Macintosh DTS



Tom Chavez

Product Marketing
Virtual User Product Manager



Lew Rollins

Manager, Process Technology



Jay Jessen

Process Technology
Virtual User Lead

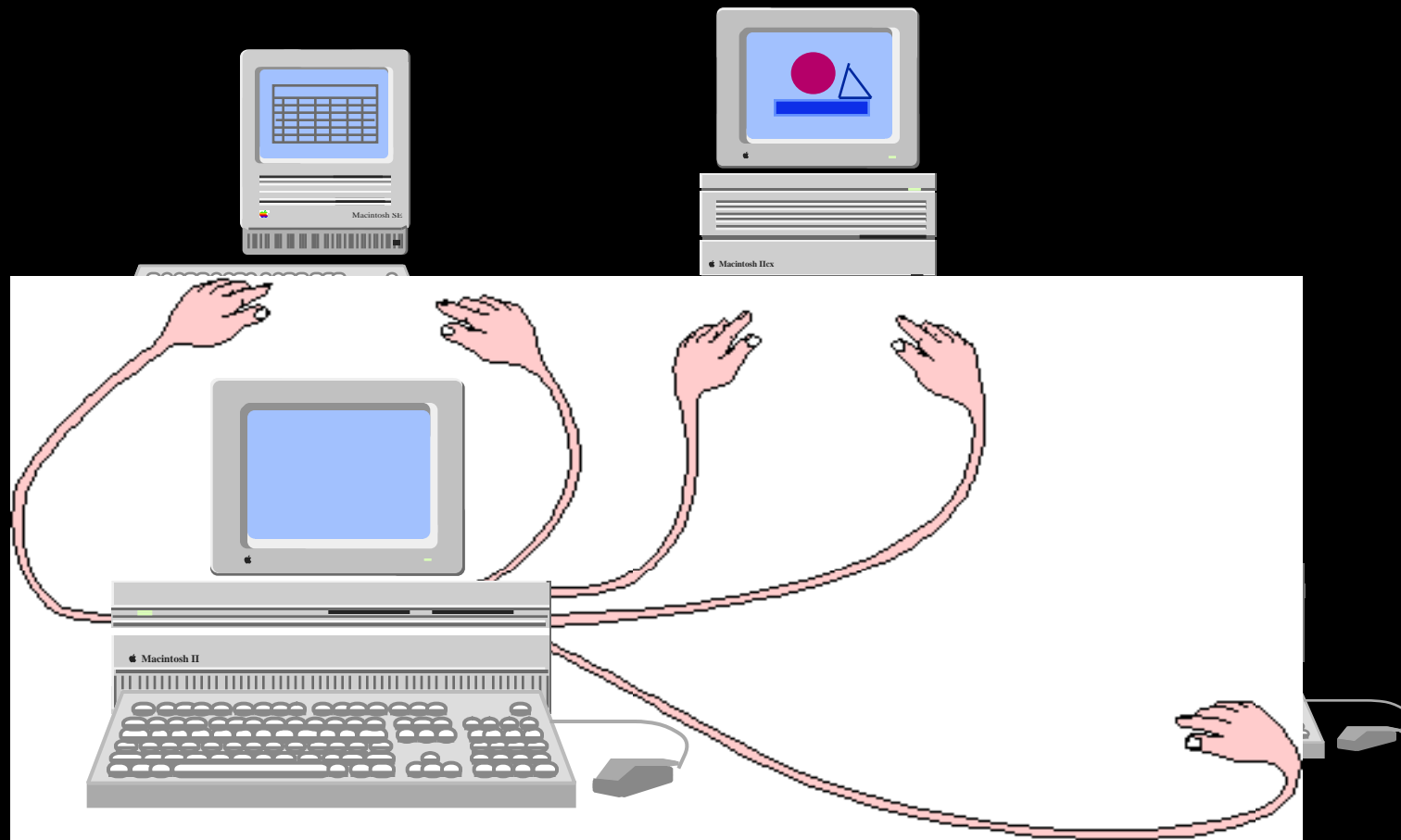
Virtual User Engineering

- Jay Jessen Virtual User
- Nagarajan, P. Virtual User
- Jim Schneider Virtual User
- David Shayer VU/MacApp Support

What is Virtual User?

- Virtual User is a remote user-simulation system for testing Macintosh[™] applications
 - Runs over Appletalk[™]
 - Script-driven

Macs Using Macs



Virtual User Scripting Language

- Supports primitives to do user actions
- Driven by fuzzy matching of intent against reality
- Supports higher level programming constructs

Scalability of Virtual User

- Virtual User can be used for large-scale as well as small-scale testing
- Scripting language is scalable to the expertise of the writer

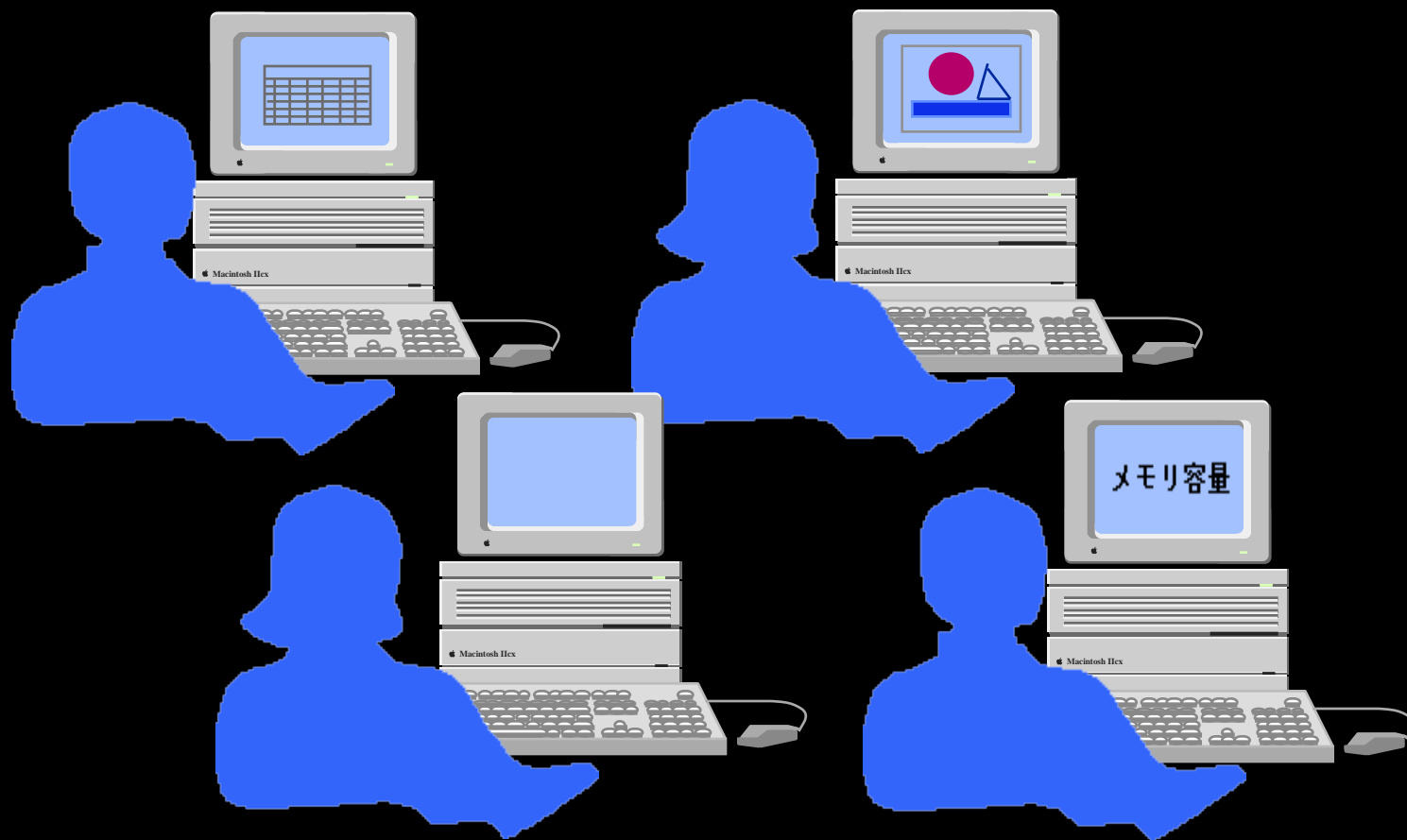
Single Script/Single Target



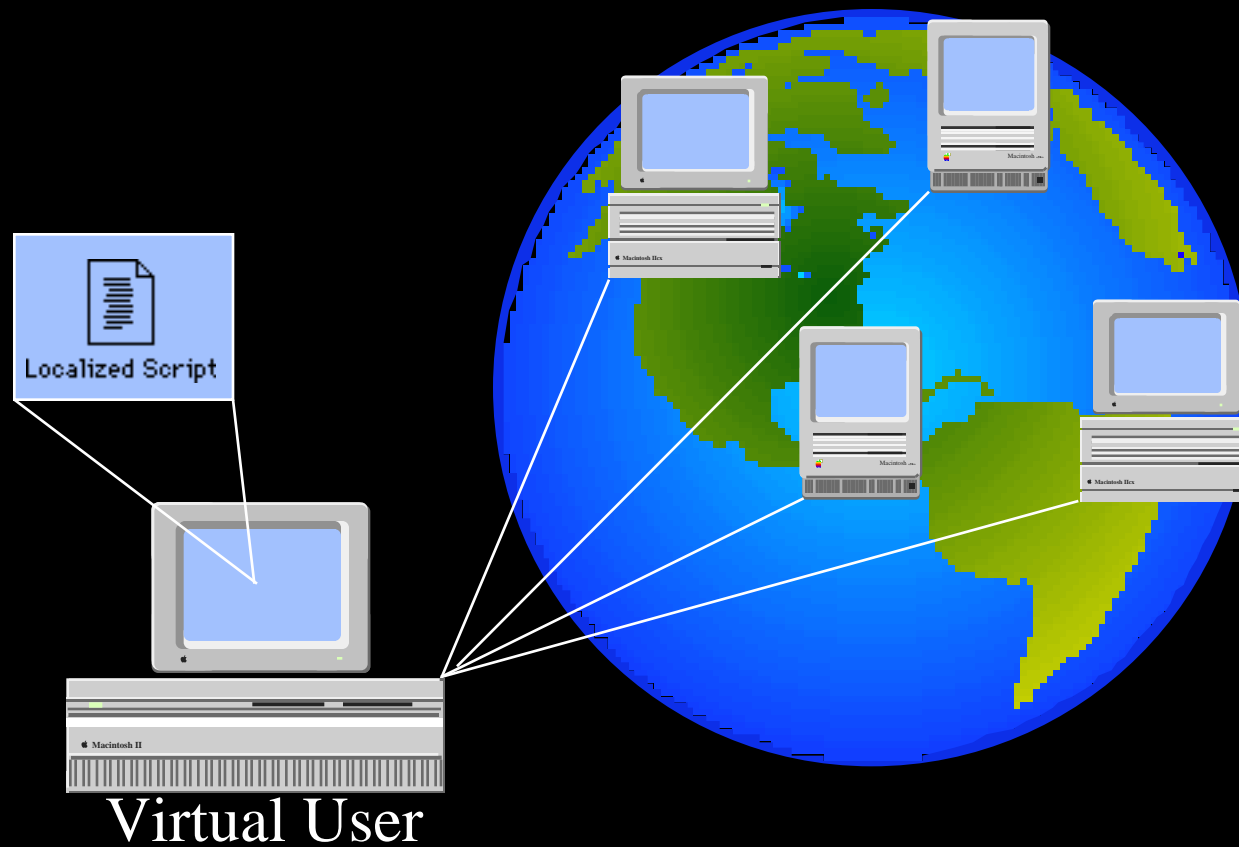
Single Script/Multiple Targets



Multiple Scripts/Multiple Targets



VU Scripts are Localizable



Reusable Test Scripts

- Early problem detection
- Bug regression
- Stress testing
- Generalized scripts



Idea



Application



Application



Application



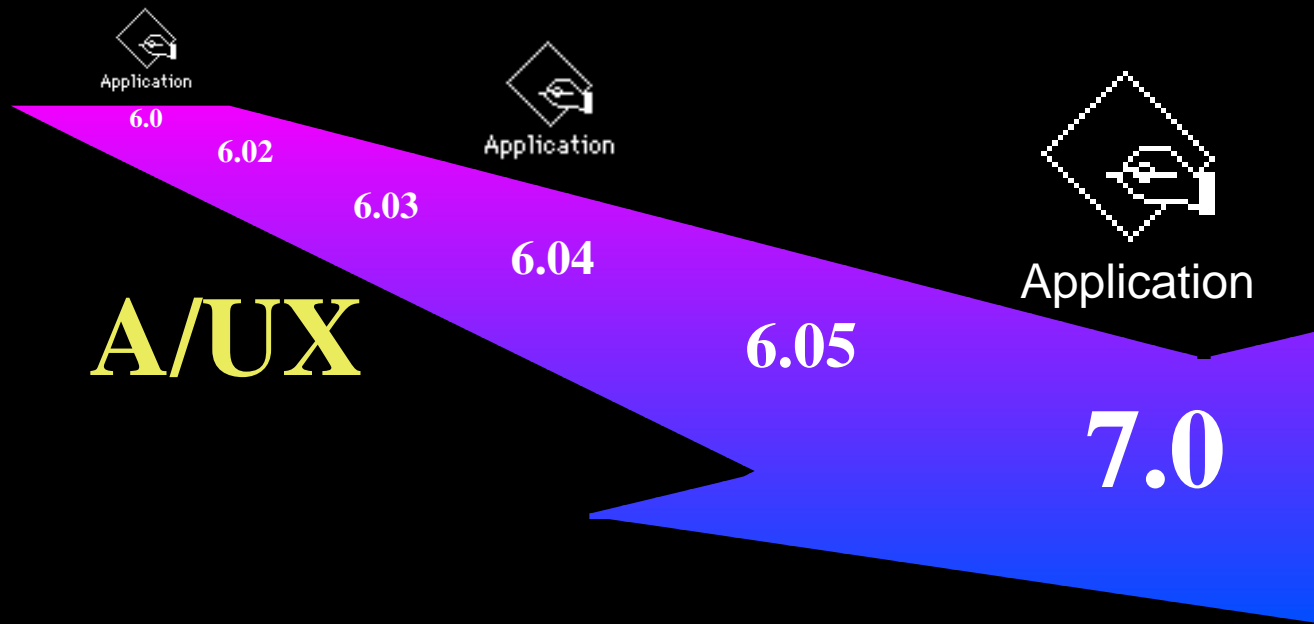
Application



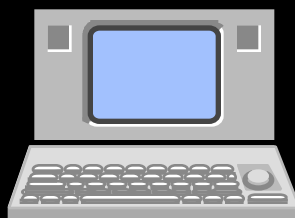
Application

Final Product

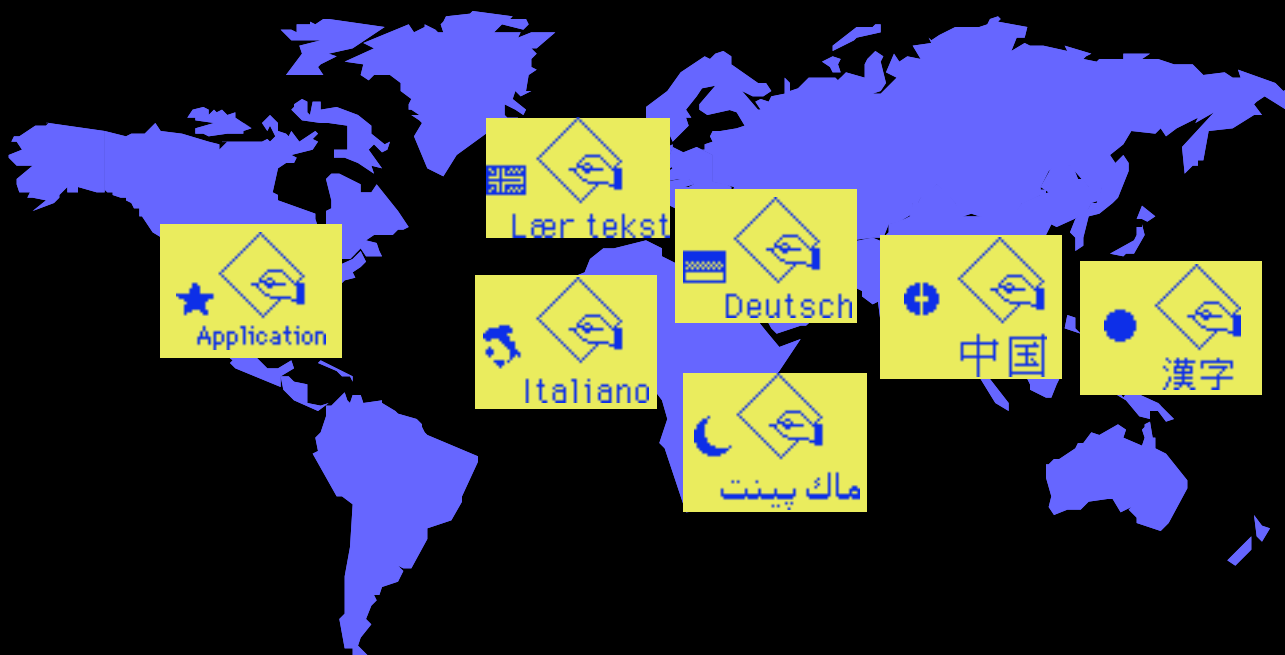
Obtain System Compatibility



Adapt to Varying Hardware Configurations



Market Product Globally



Why Use Virtual User?

- Improve Quality
- Reduce time to market
- Cut development costs
- Compete globally



Virtual User: Questions & Answers



The power to be your best