

Automated Testing:

Basic Functional / Regression Test

By Jim Popp



Automated Testing

- Brief overview of Basic Functional test
- Brief overview of Automated testing
- Movie of Automated Basic Functional
- Q&A during movie
- Q&A after movie

Multi-part system environment:

- APS Custom code
- Miner & Miner ArcFM
- ESRI ArcGIS
- Six, Unix database / ArcSDE servers
- Nine, Citrix servers
- 44, Oracle databases



Basic Functional Test

- For each change made to:
 - Database
 - Software
 - Hardware



Basic Functional test is executed

- Simple regression test
- System health check



Basic Functional Test

- Two lot subdivision
 - Shape file
 - Legal polygons
 - System Favorite
 - Point features
 - Line features
 - Line splits
 - Related Objects added
 - ULS Duct associations
- Executed on Citrix client



Session 61667 - Editing (Untitled)

File Edit View Insert Selection Tools Window Help

1:480 1" = 40'

Editor Task: Create ArcFM Feature Target: Guy : One-Anchor Guy

Topology: Style: 10 ma

System Favorites

User Favorites (z04748_ttm)

Feature Classes

- ARCFM.Electric
 - Buswork
 - CabinetSwitch
 - CapacitorBank
 - CommunicationsCable
 - Electric_Net_Junctions
 - FaultIndicator
 - FeederCircuitBreaker
 - Fuse
 - Ground
 - Guy
 - InLineFeature
 - OCR
 - Pole
 - PrimaryOrTransmission
 - Riser
 - SecondaryOrService
 - ServiceEntryPoint
 - SpanGuy
 - StreetLight
 - Substation
 - Switch
 - SwitchingCabinet
 - SwitchingCabinet Zoomed
 - Tap
 - Transformer
 - UndergroundLinearStructure
 - UndergroundStructure
 - UndergroundStructure Zoomed
 - VoltageRegulator
- ARCFM.Landbase
- CogoReferencePoint

Tables

Display Source Selection Features

Drawing Arial 10 B I U 100%

882842.88 11706887.82 Feet



Basic Functional Test

- Manual test
 - High-level script
 - 50 line Excel document
 - Several hours to complete
 - Challenge to estimate completion time
 - Working other tasks
- Automated test
 - Thirty minutes to complete
 - Easy to estimate completion time
 - Working other tasks



Automated Testing

- Many products on market:
 - Mercury WinRunner
 - Segue Silk
 - Rational Robot
- Object recognition technology
 - Communicate directly with underlying application objects




Automated Testing

- Challenge:

- Non-standard controls
 - Objects
 - Buttons
 - Treeviews
- Citrix test environment

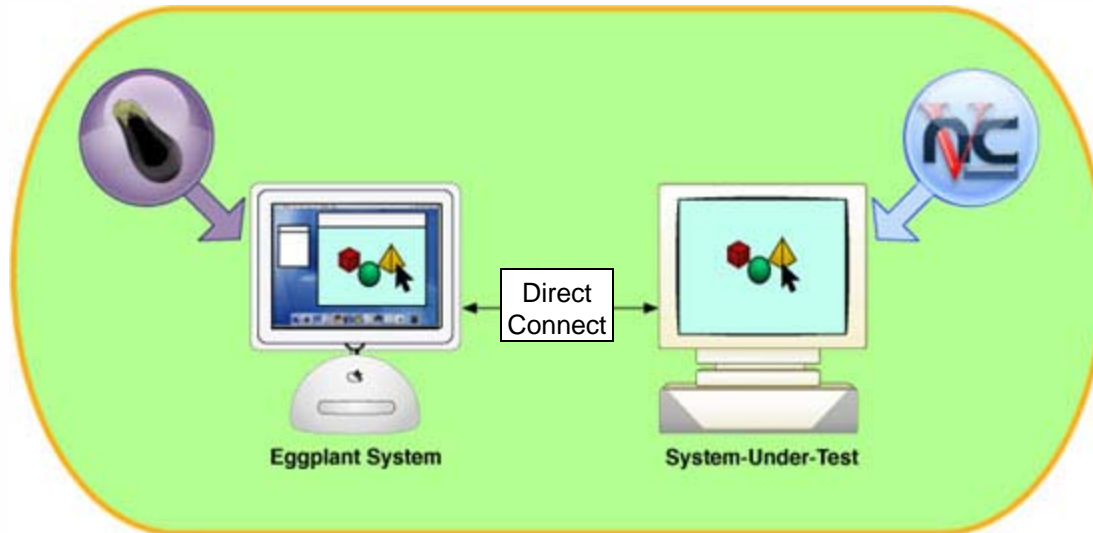
Automated Testing

- Solution:
 - **Redstone Eggplant** 
- Image recognition technology
 - Visual identification of application objects
 - TIFF images
 - Identify any application object
 - Test on any environment
 - Citrix
 - Desktop



Redstone Eggplant

- o Two Computer System





Redstone Eggplant

○ Challenges:

- Font and color
 - Application settings must not change
 - Selected / deselected / previously selected
- Environment inconsistency
 - Latency due to network, Citrix, etc.
 - Many “Wait for...” commands in script



Redstone Eggplant 🍆

- Movie time!
 - Anyone bring popcorn?



Questions?

- Basic Functional Test
- Automated Testing
- Redstone Eggplant