
Automated Image Verification

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Terminology

- Golden image: The correct image; a cropping down of a correct test image to just the part that is being tested
 - Golden constant: Constant used in the test scripts to refer to a Golden image
 - Dev image: Development image. The image that is gathered from a passing test, and is then cropped down to create a Golden image.
 - Verify_Image(): Automated verification function that captures the image on the display; compares to Golden image if already there
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Initial Process

- Create “backbone” functions/scripts for automation
 - Verify_Image()
 - Press_Bezel()
 - Change_Format()
 - Golden Image Capture Tool (modification)
 - Kickoff scripts
 - Automated testing script
 - Golden image script
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Modifying manual test files

- Add Verify_Image() for every Verify/Prompt_User
 - Replace manual button presses with automated change formats
 - Add Golden constants
 - Based on original verify, make constants for how correct image should look
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Final Preparation

- Gather Dev Images
 - Run test scripts on the lab computers to get screenshots of the display
 - Create Golden Images
 - Crop dev images down to the area being tested
 - Procedure checks
 - Run script to make sure the test files have goldens created, defined, etc.
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Continuous Integration

Any changes made that reuse other Golden images can just rerun the test. Tests can be running constantly, so whenever changes are to tests or constants, then the errors can be spotted and fixed quickly.

Advantages

- Allows you to run many tests without having to verify each step yourself
 - Reuse of golden constants can limit need to check a test
 - Don't have to run back and forth between lab and desk
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Disadvantages

- Puts most of the testing work at the beginning of the project instead of spread throughout
 - Takes time to make all of the golden images and constants
 - Initial setup is lengthy and complicated
 - Changes to tests could result in having to make new golden constants and images
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Schedule

1. About 200 hours of setup to get an image off of the MFD (initial process).
 2. Roughly 800 hours of updating tests, gathering images, etc.
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