Agenda

• QA Summary
• Missing Parts & Proposed changes
• Summary
QA Summary
Current: Compile Time Testing

- Developers machine (One arch, make, hopefully make check and distcheck)
- Machines of other developers
- Jenkins covers different architectures, different compilers, different dependencies and versions
Current: Unit Testing

- Test cases collected in test suite and run with make check
- Should be run before committing
- Also run by Jenkins
- While unit testing is the main idea it also had caught segfaults due to basic run time testing of new code
Current: Miscellaneous

- Static Analysis
- Different EFL profiles
- Different configuration options (Wayland, XCB)
- Different make targets (all, check, distcheck, doc)
Missing Parts & Proposed Changes
Missing: Graphical Tests

• No usage of graphical test cases
• Tooling is there: Excatness
• Almost no developer uses it, regularly
• No automation
Steps Forward: Graphical Testing

- Identify and fix problems with exactness on Jenkins
  - Done ✔
- Run exactness during the nightlies
  - Screenshots and test cases have been updated by Kabeer ✔
  - Stopped working three months ago when Kabeer left ❌
- So far screenshots for elementary_tests and some edje examples
  - Build job for elementary_test and edje ✔/❌
Missing: Unit Testing

• Only 39.2% of our code base covered
• Newly added API's should be mandatory to come with unit tests
• My goal would be that we increase coverage 5-10% per release
• How to motivate unit test writing?
Steps Forward: Unit Testing

• Proposal: Make test cases for public API additions (EAPI) mandatory from today
  – We agreed on it to be mandatory ✔
  – Left hard to test parts out of this agreement (edje, gl, ...) ✗
  – From the 72 new API's in 1.15 (54) and 1.16 (18) only 35 had tests ✗

• Aim for 5% coverage increase in every upcoming release
  – Still at the same level as 6 months ago (39.2% vs. 39.6%) ✗

• Aim for 60 - 70% coverage at the end of 2015
  – Barely keeping up with new code, not increasing coverage ✗
Missing: Pre-push CI

- CI infrastructure only available after a push to master
- The various tooling only runs on code committed to the master branch of our repos
- Testing the code before this stage could be beneficial
- Testing developer branches on demand and hooking it up with Phab to run it on incoming submissions
Steps Forward: Pre-push CI

- Two entry points we should cover
- Developers: Allow dev branches to be run through Jenkins
  - Not tackled ❌
- Contributors: Run incoming Phab submissions through Jenkins
  - Phab plugin installed in Jenkins to handle parts of it ✔
  - No actual build job on Jenkins for it ❌
  - No feedback of success / failure to differential ❌
Code Path Complexity

- More valid combinations for test matrix
  - New jobs for xcb and wayland have been added
- What other configuration options should be officially supported?
  - Harfbuzz, systemd, web-p and xinput2.2 have been mentioned
  - Builds jobs with these options enabled are pending ✗
API's and Breaks

- Run ABI/API checker every night
  - Setup a Jenkins job to run the ABI/API checker on EFL ✔
  - Manually run right now ✗
- Catch breaks
- List with new additions for
  - summary mail to list to highlight additions and maybe raise discussion if needed. (Shortly after the addition and not weeks later) ✗
  - summary of new additions for release NEWS ✗
  - notifications for manual bindings to catchup ✗
  - check if new APIs have documentation ✗
Summary
Summary

- Slow progress on all fronts
- We had various problems with Jenkins which slowed down the addition of new jobs and Phab integration
- Coverage is not increasing at all
  - How to motivate this further?
- Exactness is stuck
  - Someone willing to take over?
Thank you.
Attributions

- Brunoschalch: https://www.flickr.com/photos/bsgphotos/7594903774/in/photostream/
- Katja Schulz: https://www.flickr.com/photos/treegrow/14404553548
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