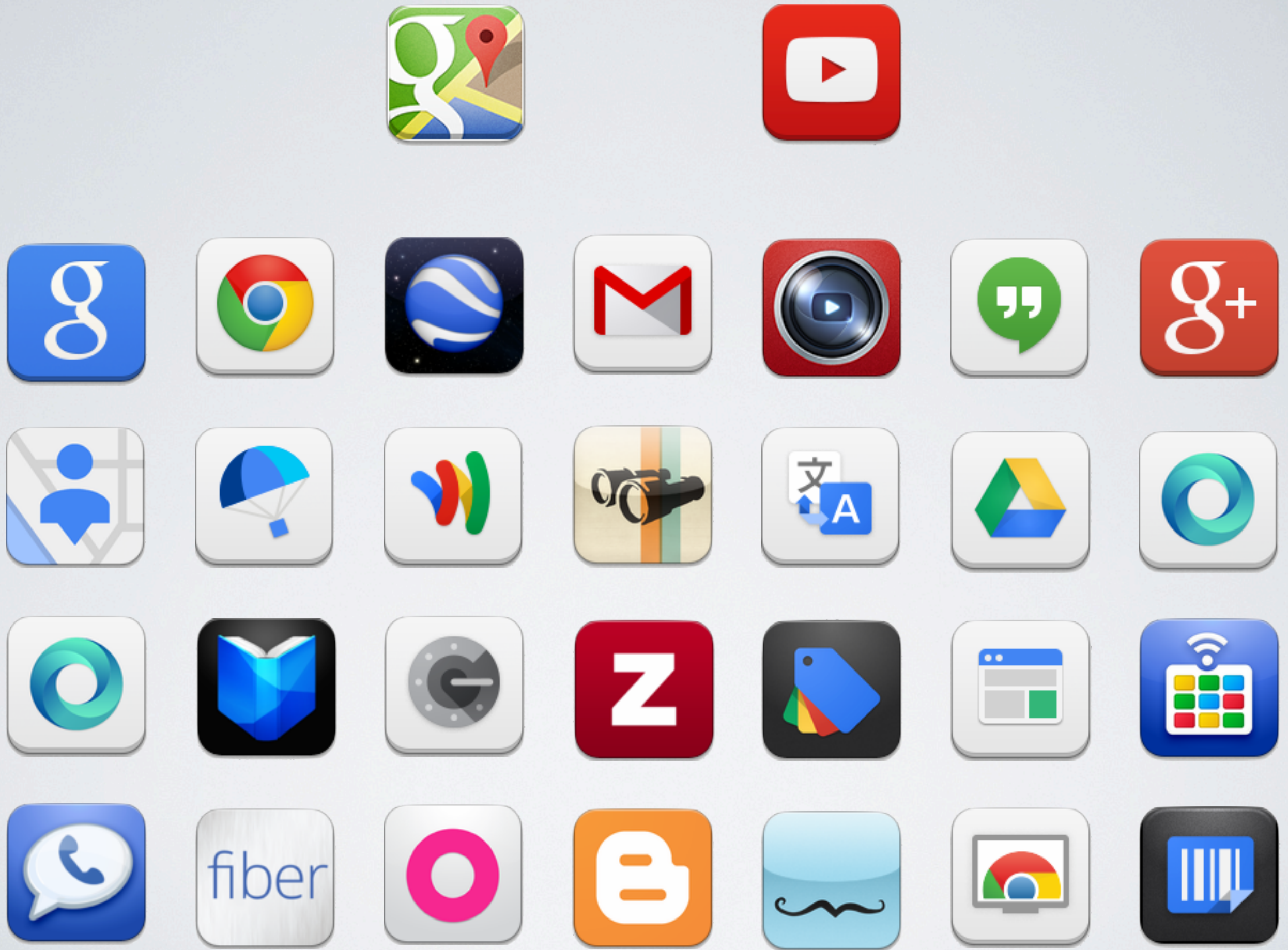


iOS Development at Google

How we make it work

Dave MacLachlan - Google Maps iOS

GOOGLE ==  ?



30+ Apps == A lot of Obj C

UNIT TESTS

- SenTest aka OCTest, XCTest
- OCMock, OCHamcrest, ...
- Google Toolbox For Mac
- CoverStory

WHAT ABOUT COVERAGE?

- How do you have any confidence in your tests if you don't know what they cover?
- Historical record of coverage

XCODE VS GCOV

- Xcode 3 worked fine
- Xcode 4 worked with gcc, but not llvm
- Xcode 4.2 settings broken and needed to link lib by hand
- Xcode 4.3 libprofile_rt.dylib not compiled for x86
- Xcode 4.6 working (with added code)
- Xcode 5 working (with added code)

DEMO

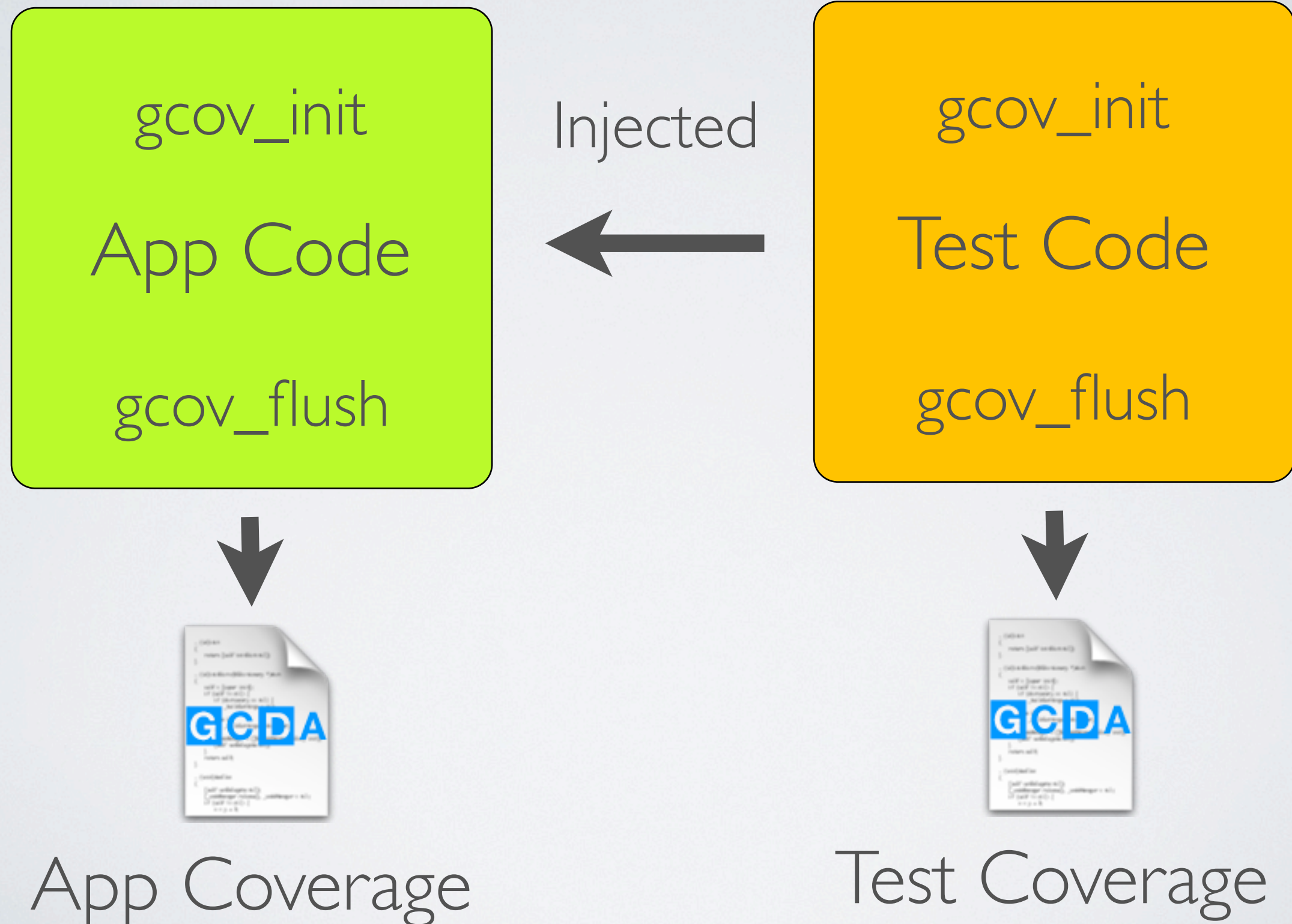
GCOV INTERNALS

- Generate Test Coverage Files (-ftest-coverage) adds instructions for counting the number of times individual lines are executed
- Instrument Program Flow (-fprofile-arcs) incorporates instrumentation code for each branch of the program. Branch instrumentation records how frequently different paths are taken through 'if' statements and other conditionals.

GCOV INTERNALS 2

- *.gcno (gcov note files) generated at compile time
- *.gcda (gcov data files) generated at run time
- gcov_init called for each library/executable to set up counters
- gcov_flush called for each library/executable to write out gcda

GCOV INTERNALS 3



DEMO



Testing Rocks!

GOOGLETEST (C++)

- C++ Testing Framework
- Used by Chromium, LLVM, Protocol Buffers
- Cross Platform
- <https://code.google.com/p/googletest/>

DEMO

NO TESTS WERE HARMED IN THE MAKING OF THIS TALK

15403945 - Document atexit on iOS as not working

15403976 - Add test notifications to XCTest

15404011 - Add code coverage analysis to Xcode IDE

15404052 - Attempting to use XCTestObserver is really painful

15404079 - Generate warning/error when
 __attribute__((destructor)) is used in iOS

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