



Testing Qt Model-View Implementations

Stephen Kelly – July 2010



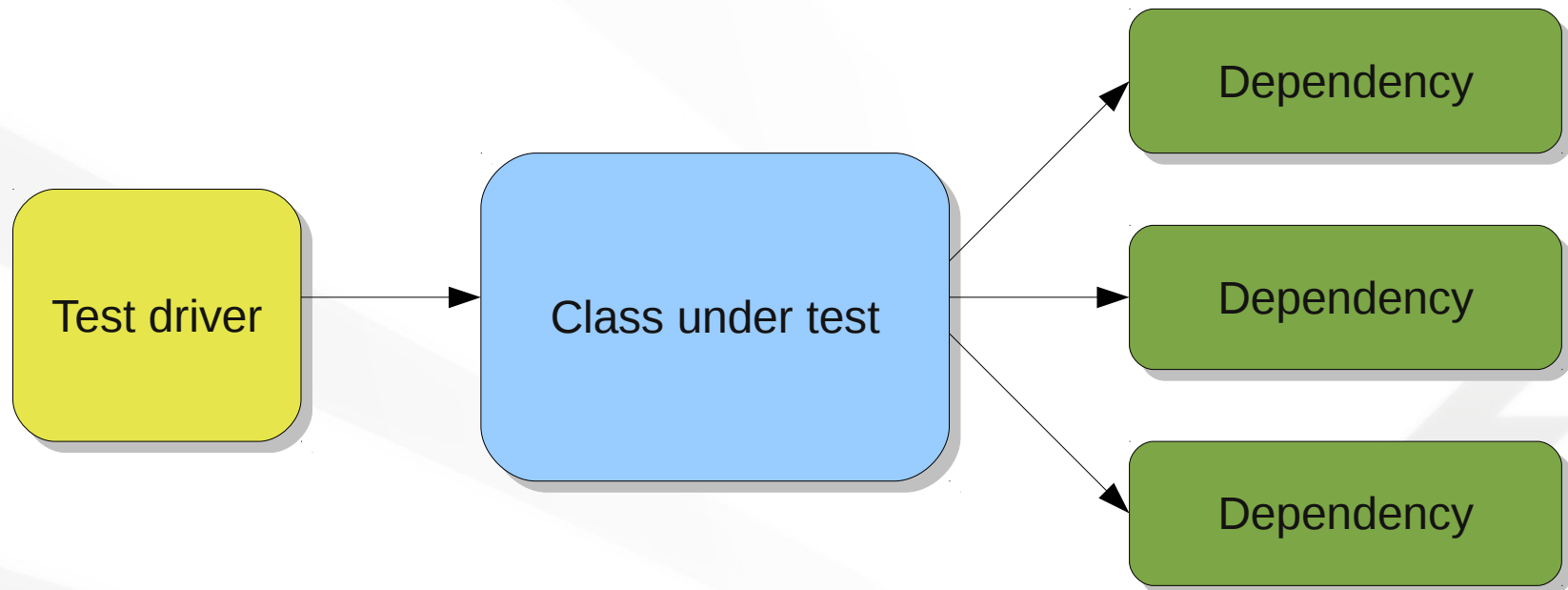
- Designing testable code
- High-level Model-View design
- Test-drivers and mock objects
- Unit test execution
- KDE ItemViews library



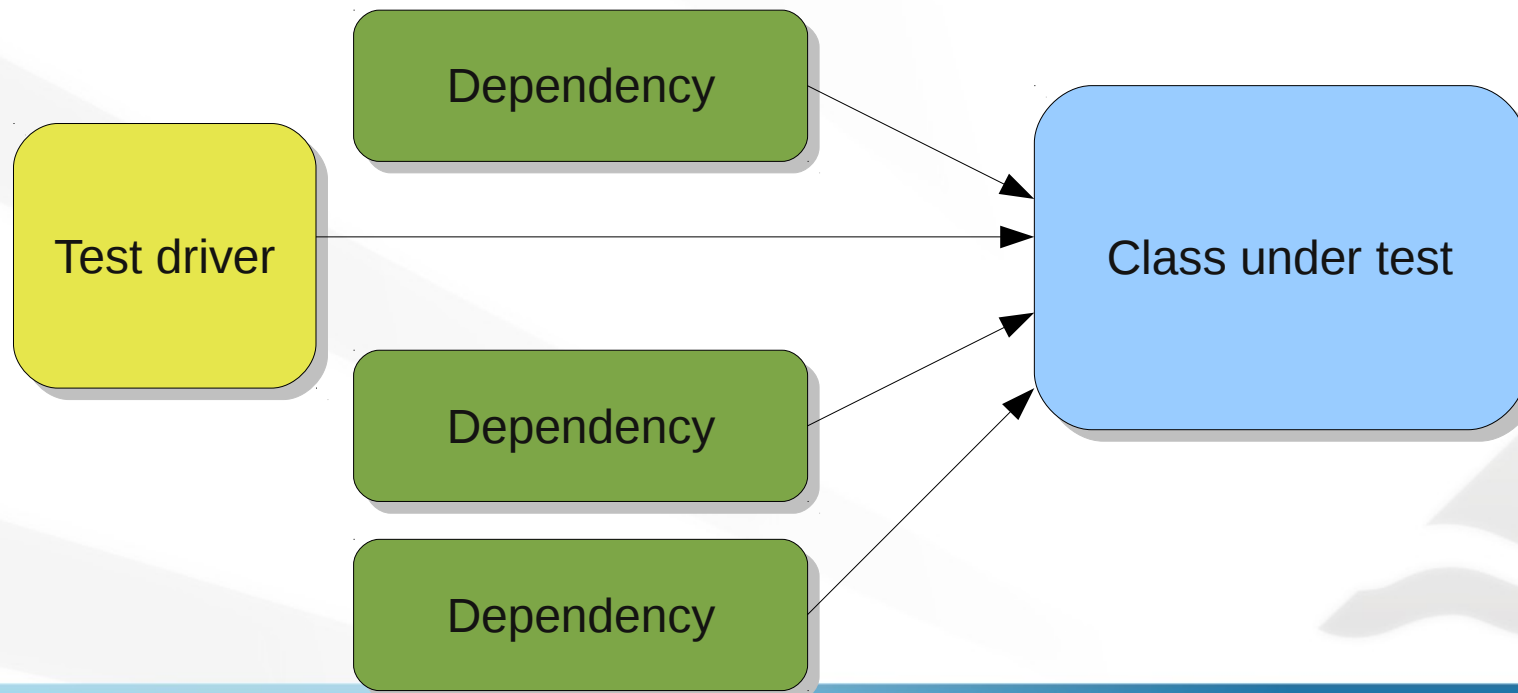
- Designing testable code
 - Motivation



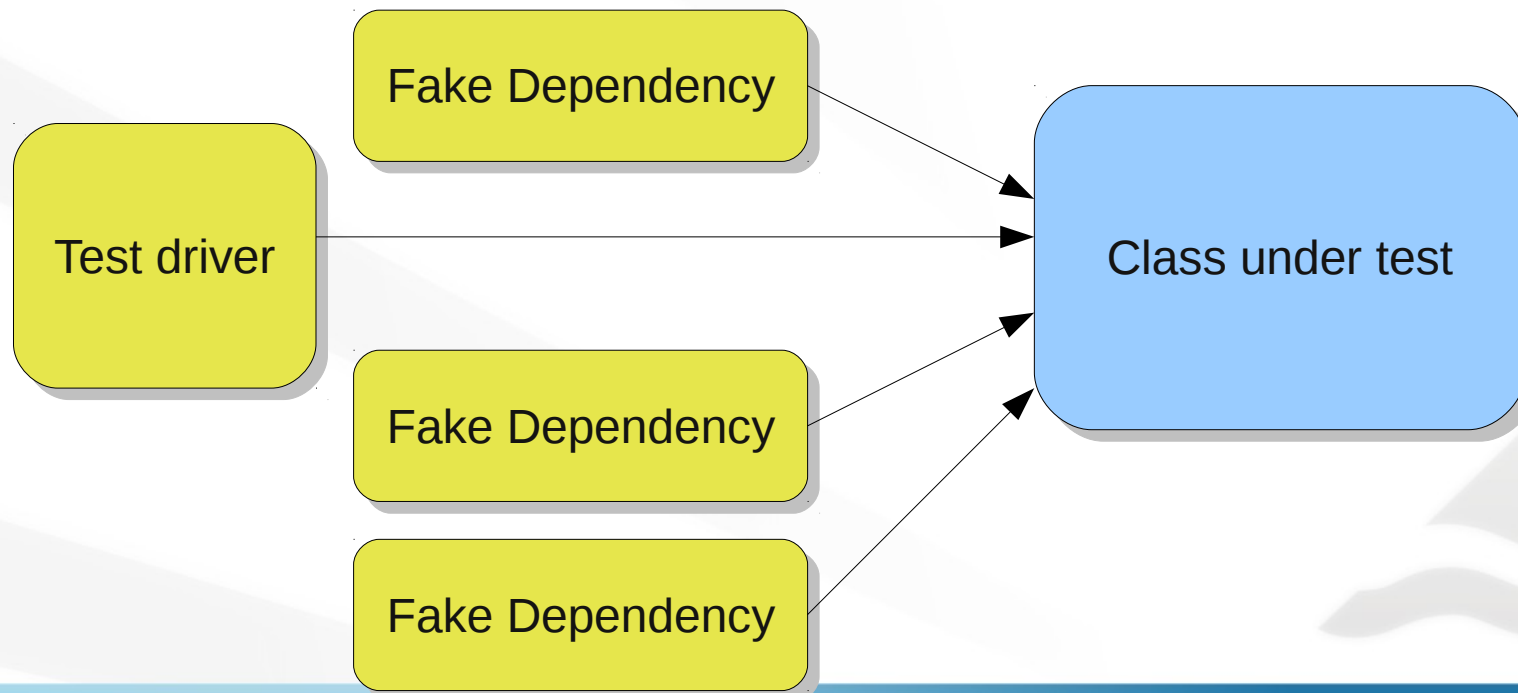
- Designing testable code
 - Motivation



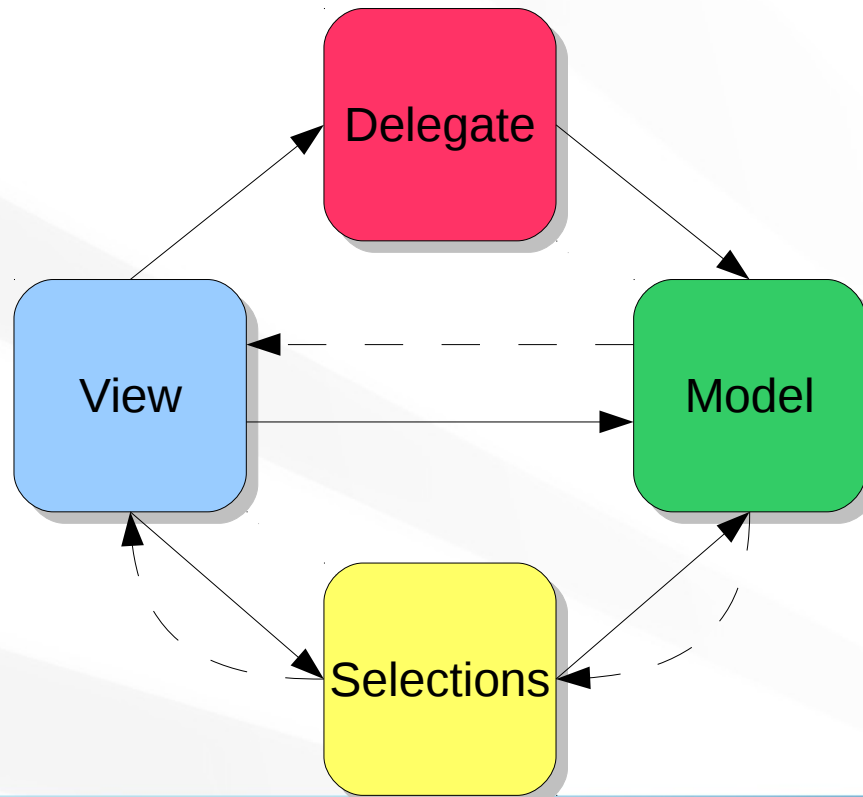
- Designing testable code
 - Motivation



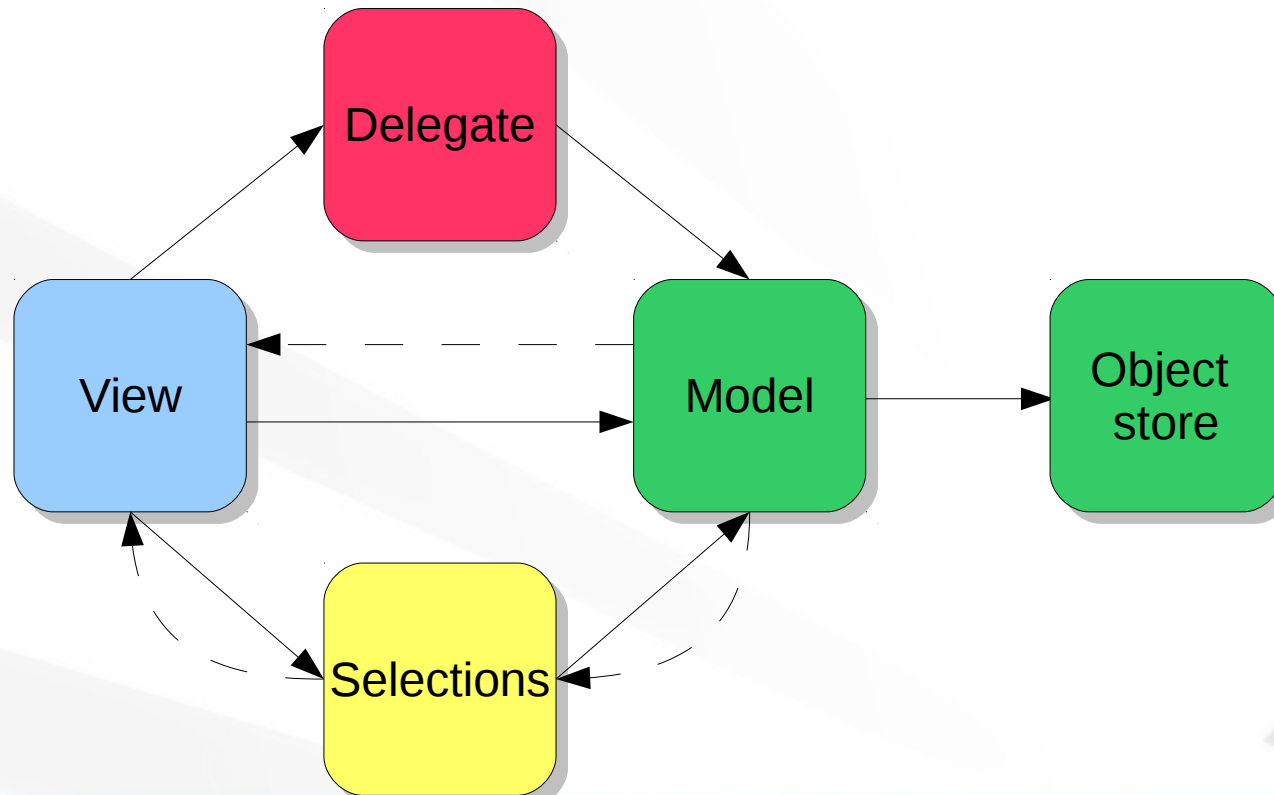
- Designing testable code
 - Motivation
 - Abstraction



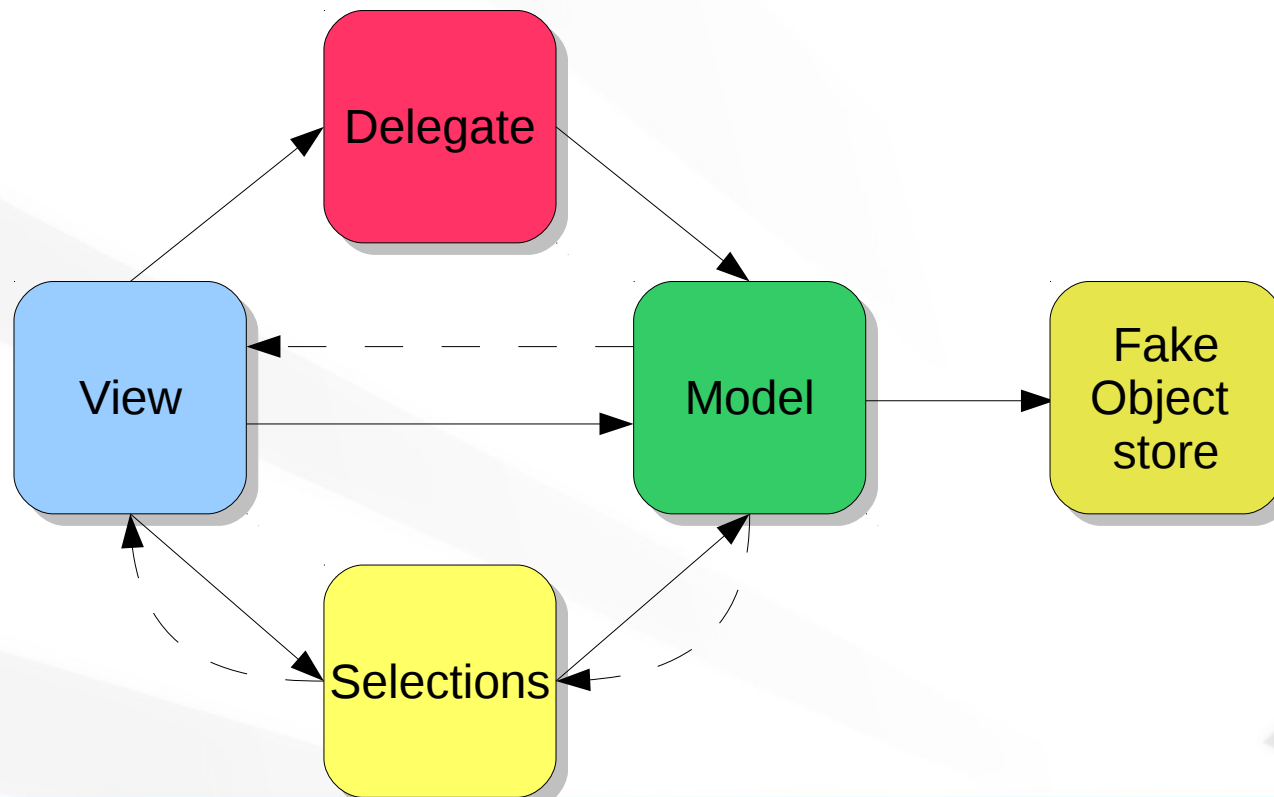
- High-level Model-View design
 - Separation of concerns



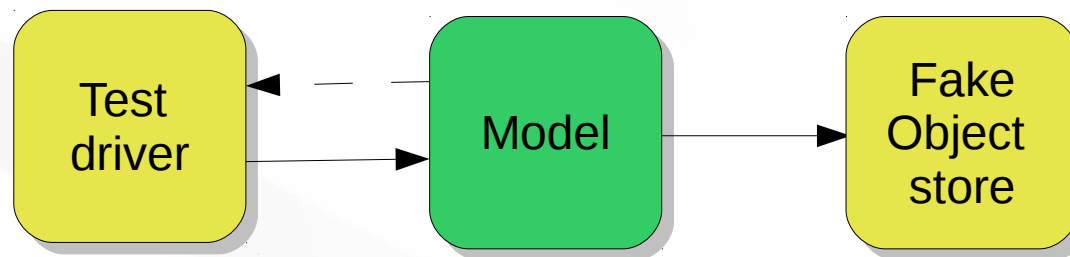
- High-level Model-View design
 - Separation of concerns



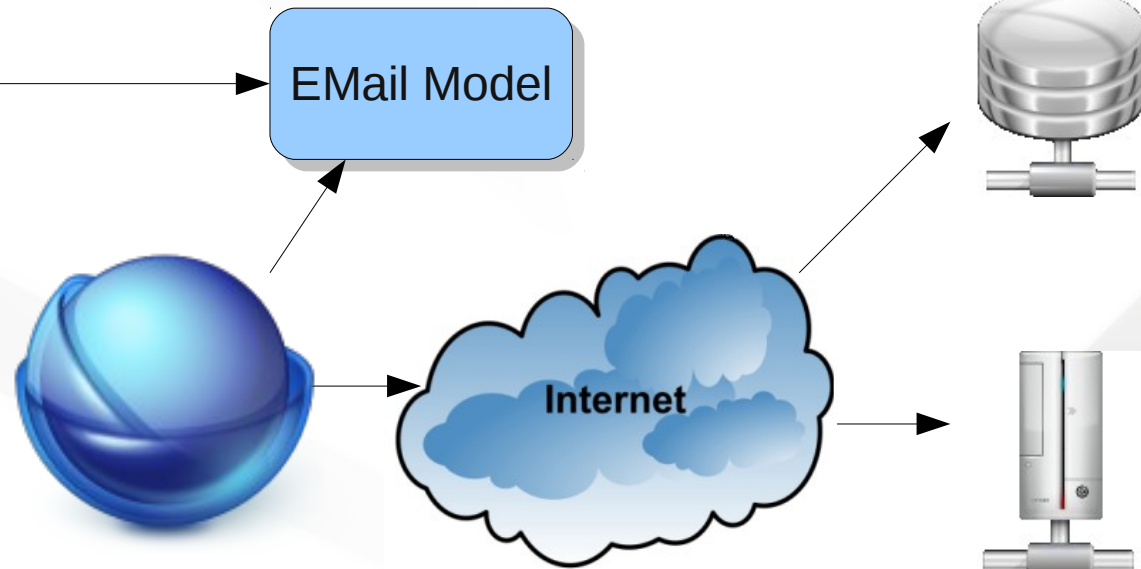
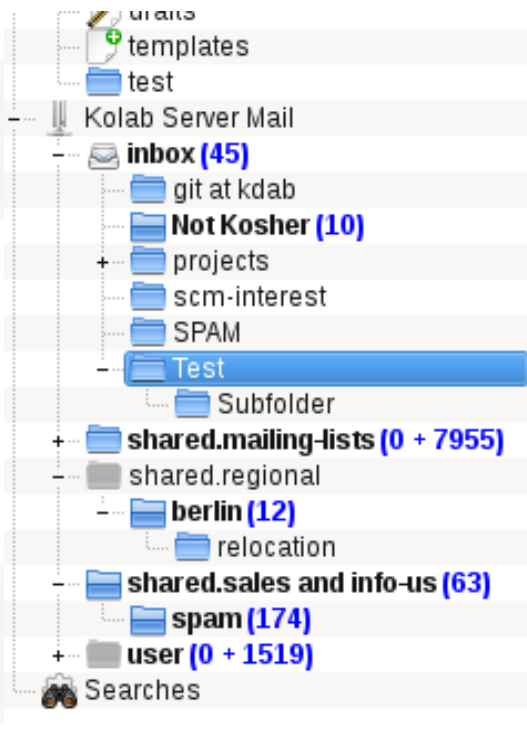
- High-level Model-View design
 - Separation of concerns



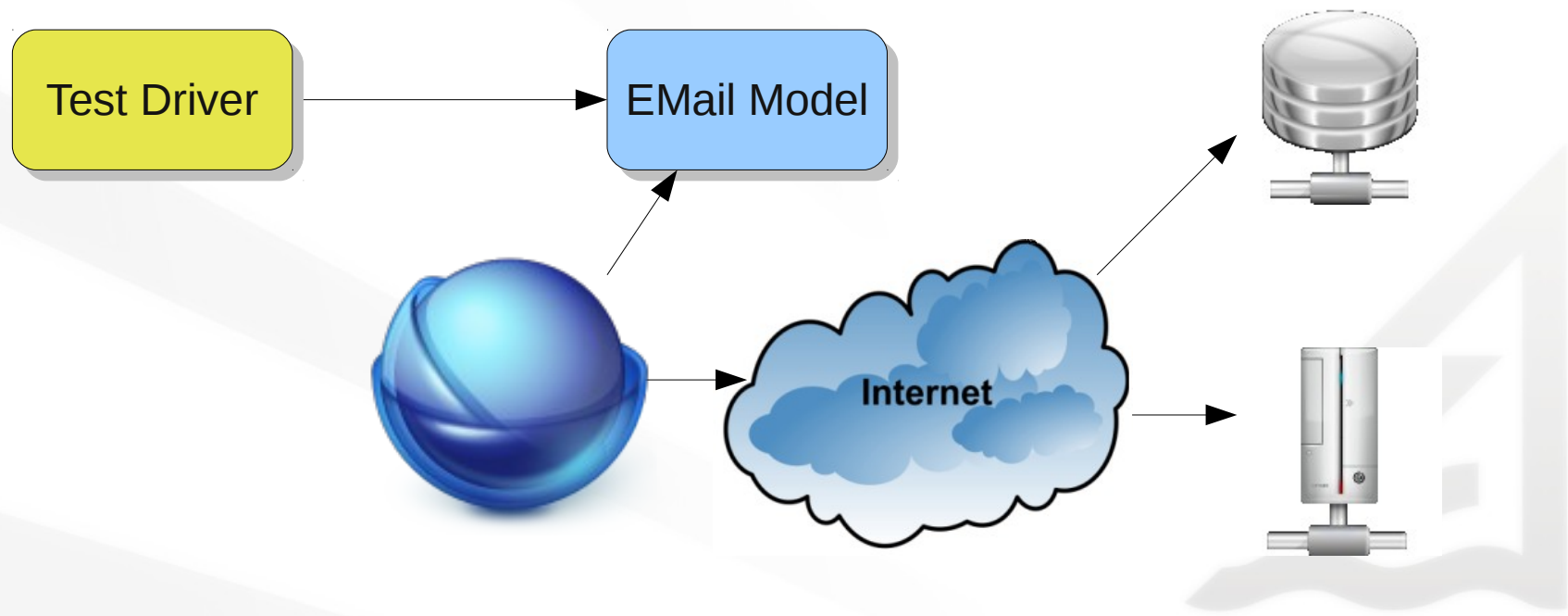
- High-level Model-View design
 - Separation of concerns



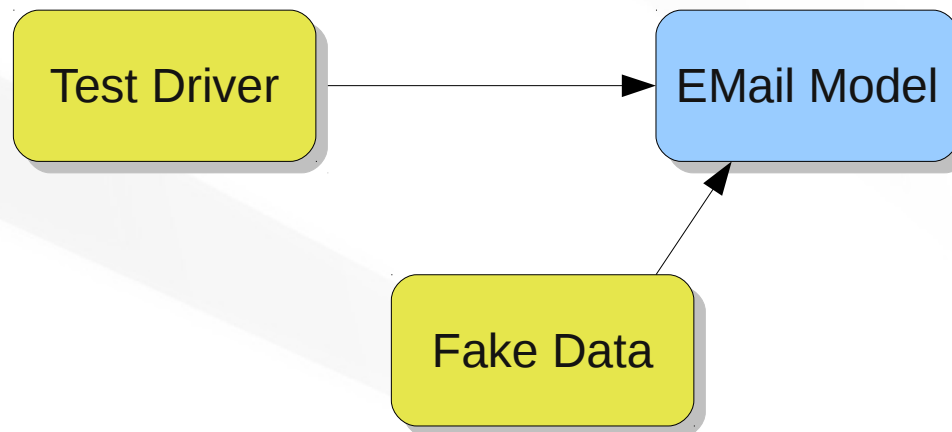
- Test drivers and mock objects
 - Real-world model view



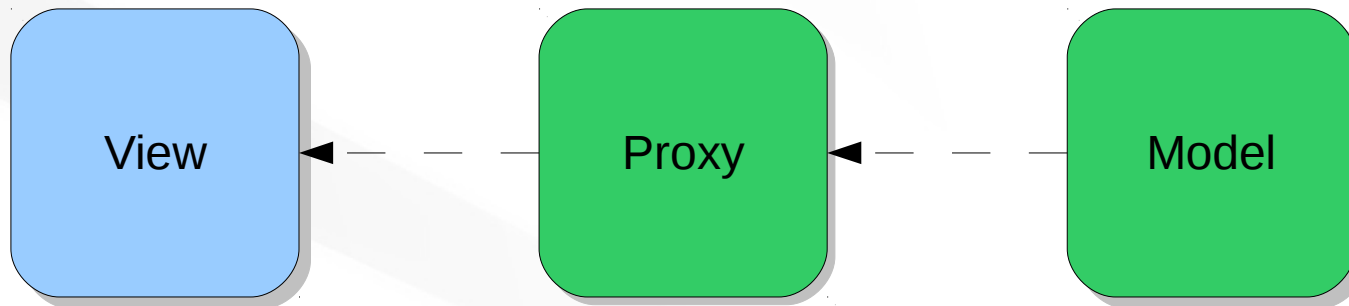
- Test drivers and mock objects
 - Real-world model view



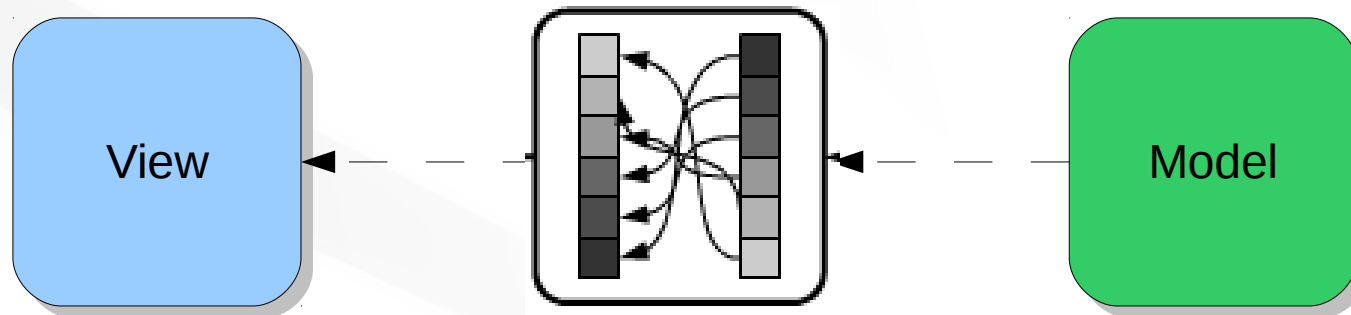
- Test drivers and mock objects
 - Real-world model view
 - Dependency injection



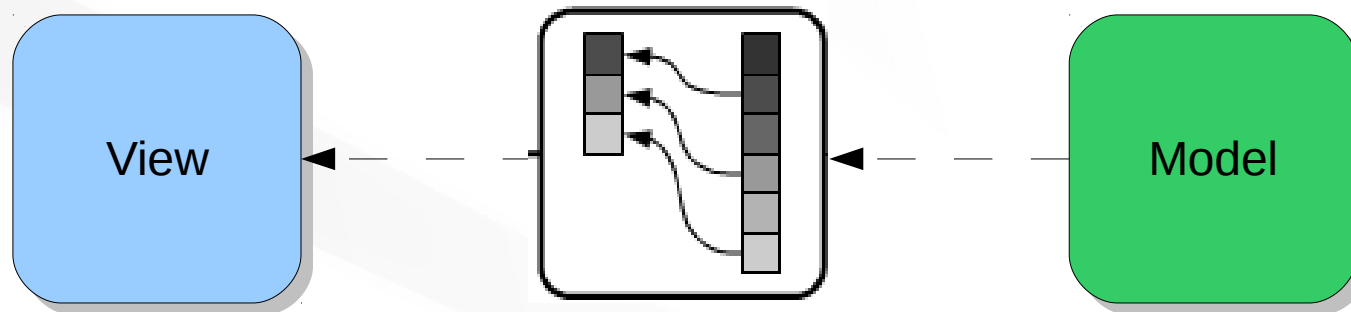
- High-level Model-View design
 - Separation of concerns
 - Abstraction



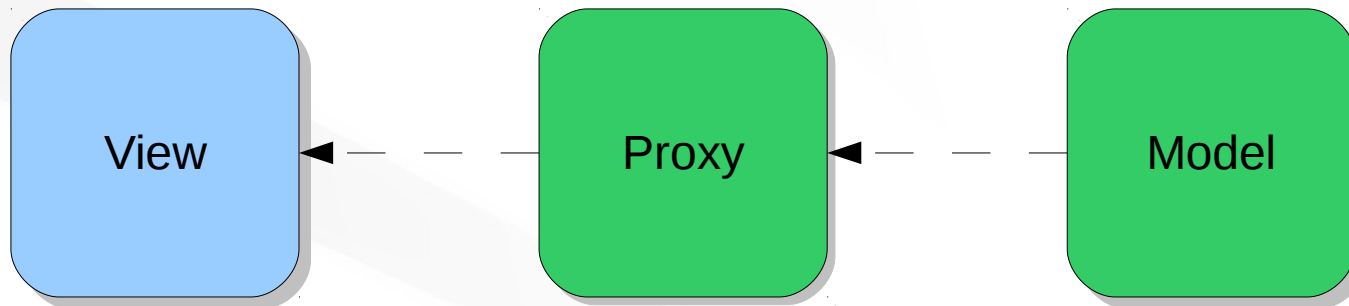
- High-level Model-View design
 - Separation of concerns
 - Abstraction



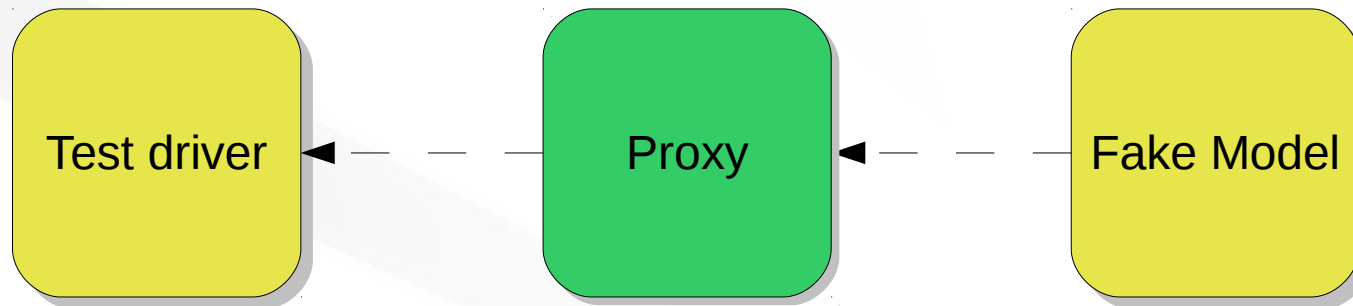
- High-level Model-View design
 - Separation of concerns
 - Abstraction



- Test drivers and mock objects
 - Real-world model view
 - Dependency injection



- Test drivers and mock objects
 - Real-world model view
 - Dependency injection
 - `setSourceModel(new FakeModel);`



- KDE ItemViews test suite
 - Fake source model (interpreter pattern)
 - Fake selection model
 - ProxyModelTest
 - ModelSpy



- KDE ItemViews test suite
 - Fake source model (interpreter pattern)
 - Fake selection model
 - ProxyModelTest
 - ModelSpy
- KDE ItemViews
 - KSelectionProxyModel
 - KDescendantsProxyModel
 - KReparentingProxyModel

- Unit test execution
 - Multiple executions
 - Configurable tests for configurable proxies
 - Individually executable
 - Re-usable



- Summary
 - Dependency injection
 - Simplify complex systems
 - 1,000's of tests
 - Re-usable
 - `kdelibs/kdeui/tests/proxymodeltestapp`



Questions
&
Answers

