



Paris
JUG

My own preferred testing techniques





OXiane

 **valtech**

NOVEDIA
VISION

 **zenika**
ARCHITECTURE INFORMATIQUE

**OBJET
DIRECT**

Fast **Connect**

IBM
ibm.com/developeworks

 **Xebia**

Sfeir
Groupe



My own preferred testing techniques



Plugins

Frameworks



More expressive tests
More robust
Faster

JU_{nit}•org

JUnit 4+

Personal taste only

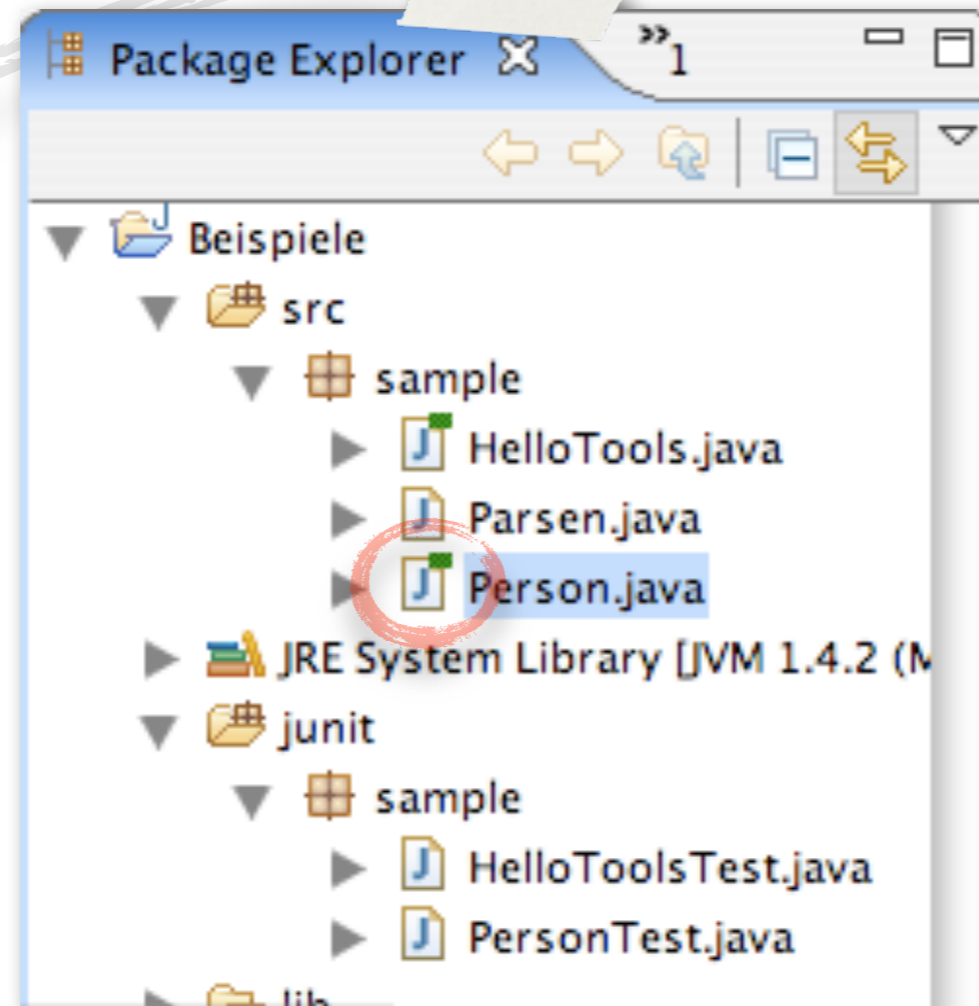


Plugins



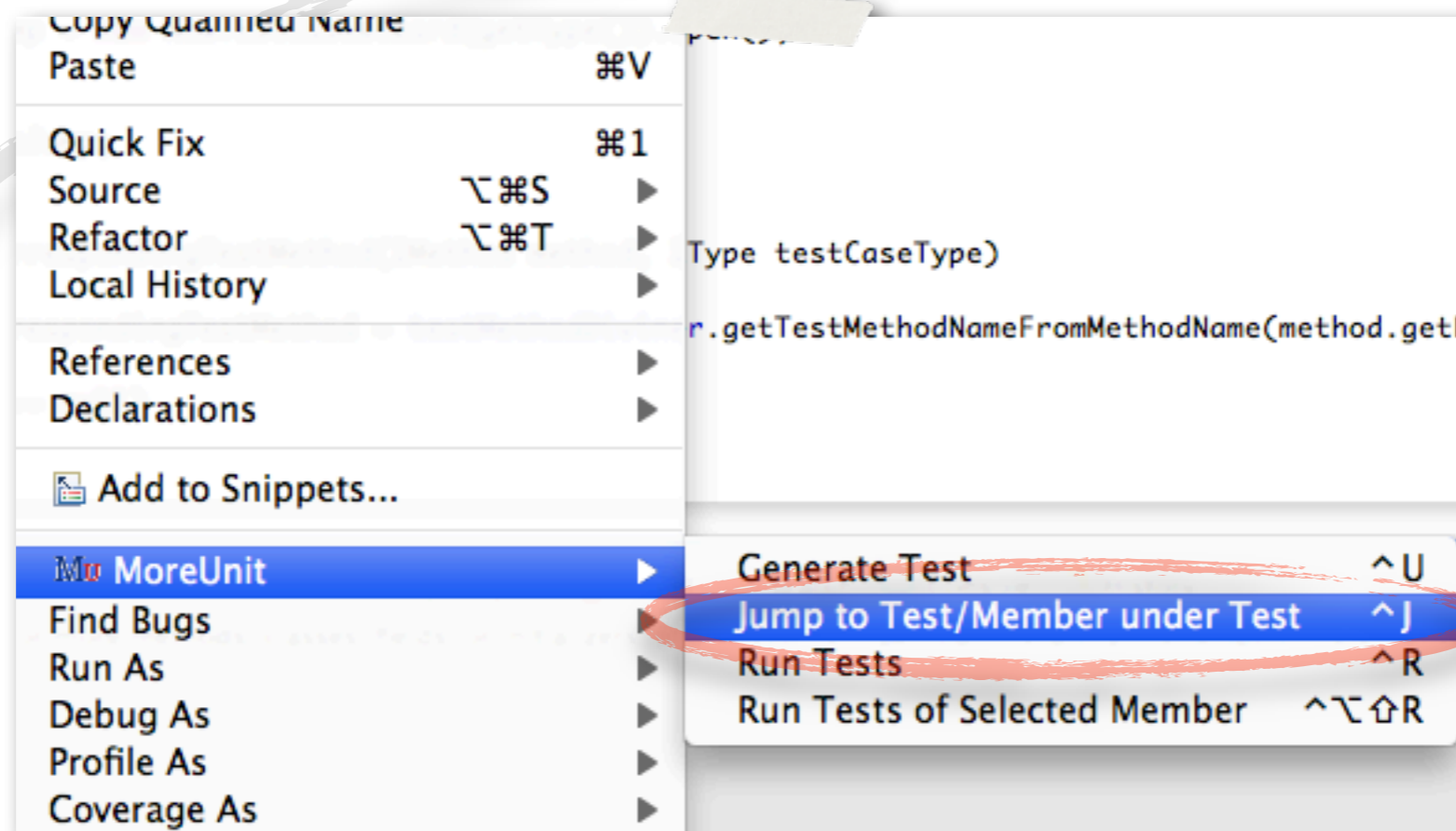
MoreUnit, a unit test friendly Eclipse

See what's tested



MoreUnit

Jump to Test



MoreUnit

Run current test

Refactoring friendly
(move, rename, delete)

<http://moreunit.sourceforge.net/>





Continuous testing

Runs all impacted tests after each code change

Eclipse and IntelliJ

OpenSource, Free

<http://infinittest.org>

infinittest

Problems JUnit Breakpoints Variables Call Hierarchy History

1 error, 0 warnings, 0 others

Description	Resource
Errors (1 item)	
AssertionError (actual value:<35> should be greater than or equal to:<65>) in PersonTest.canMakeInfinittestFail	PersonTest

```
@Test
public void canMakeInfinittestFail() {
    Person person = new Person("David", 35);

    assertThat(person.getName()).isSameAs("David");
    assertThat(person.getAge()).isGreaterThanOrEqualTo(65);
}
```



Demo

JUnit Max

Continuous testing

Runs all ~~impacted~~ tests after each code change

Try to run tests failing most often, first

~~Eclipse and IntelliJ~~

~~OpenSource, Free~~

Developed by Kent Beck

<http://www.junitmax.com/>

Frameworks



Hamcrest

More readable assertions

```
import static org.hamcrest.MatcherAssert.assertThat;
import static org.hamcrest.Matchers.*;

public void test() {
    Biscuit theBiscuit = new Biscuit("Ginger");
    Biscuit myBiscuit = new Biscuit("Ginger");

    assertThat(theBiscuit, equalTo(myBiscuit));
    assertThat(theBiscuit, is(equalTo(myBiscuit)));
    assertThat(theBiscuit, is(myBiscuit));
}
```

Hamcrest

More samples

```
assertThat("Hello World", is(equalTo(Greeter.greeting()));  
assertThat("Hello", is(allOf(notNullValue(), instanceOf(String.class))));  
assertThat("Hello", is(any(String.class)));  
assertThat("Hello", is(anything()));  
assertThat(object, is(sameInstance(sameObject)));
```

+ easy to write custom matchers

So



FEST-Assert

More readable assertions

```
int removed = employees.removeFired();  
assertThat(removed).isZero();
```

```
List<Employee> newEmployees = employees.hired(TODAY);  
assertThat(newEmployees).hasSize(6)  
    .contains(frodo, sam);
```

```
assertThat(yoda).assertInstanceOf(Jedi.class)  
    .isEqualTo(foundJedi)  
    .isNotEqualTo(foundSith);
```



Demo

FEST-Assert

More readable assertions

OpenSource

<http://fest.easytesting.org/>

JUnit 4.8.2



JUnit 4.8.2

Do you know/use all the features?

@Test

@Before, @After, @BeforeClass, @AfterClass

@RunWith

@Theory, @DataPoint(s)

@Rule

@SuiteClasses

@Category (beta)



JUnit 4.8.2

@Categories and @SuiteClasses

```
@Category(FastTests.class)
public class WebTest {
    @Test
    @Category(SlowTests.class)
    public void longTest() {
        ...
    }

    @Test
    public void shortTest1() {
        ...
    }

    @Test
    public void shortTest2() {
        ...
    }
}
```


JUnit 4.8.2

@Categories and @SuiteClasses

```
@RunWith(Categories.class)
@IncludeCategory(SlowTests.class)
@SuiteClasses( { WebTest.class, SomeTest.class, MoreTests.class } )
public class LongRunningTestSuite {}
```

```
@RunWith(Categories.class)
@ExcludeCategory(SlowTests.class)
@SuiteClasses( { WebTest.class, SomeTest.class, MoreTests.class } )
public class UnitTestSuite {}
```

JUnit 4.8.2

@Categories and @SuiteClasses

Cumbersome

Need not forget to add each
test manually in all suites

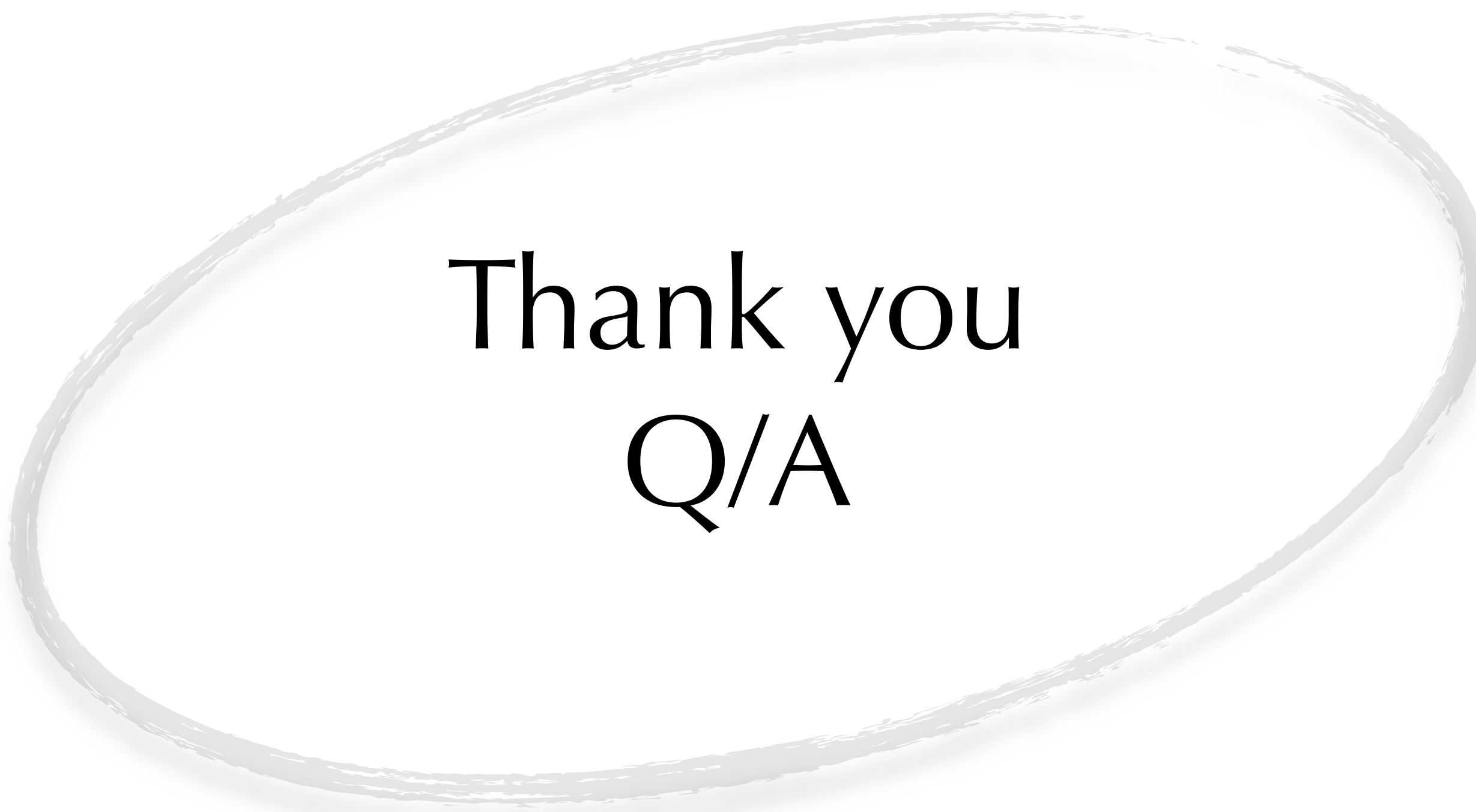
Who doesn't run all the tests
every build? :-)

JUnit 4.8.2

@Rule

Take a look at the code of `MethodRule`, `ExternalResource`, `TestWatchman`, `Verifier`...

Write your own rules if they make the tests easier to read.



Thank you
Q/A



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