

Experts in agile software engineering

# Contracts for Java C4J 4.0 Beta

Darmstadt, 5. September 2012

Referenten:

Ben Romberg

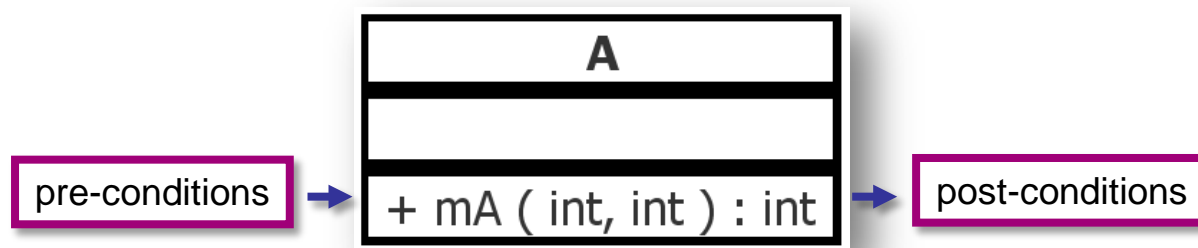
Stefan Schürle

## What is a contract?



Customer and supplier close a contract

## Pre- and postconditions



## Assertions in Java

```
public double inverse(double x)
{
    assert x != 0 : "x_not_0";

    return 1.0 / x;
}
```

Assertions in Java can not be applied on an abstract level  
and can not be inherited to a subclass!

## Drawbacks and opportunities

- No experience in productive systems
- Performance
- Code must be executed to trigger contracts
  
- Universal contracts possible (hashCode, equals)
- Contracts for 3rd party code possible
- Contract inheritance
- Contracts are refactoring safe
- Executable specification/documentation for interfaces and classes
- Helps detecting bugs during runtime

## More information

- <https://github.com/C4J-Team/C4J>
- Eclipse Public License Version 1.0
- Eclipse Plugin available soon