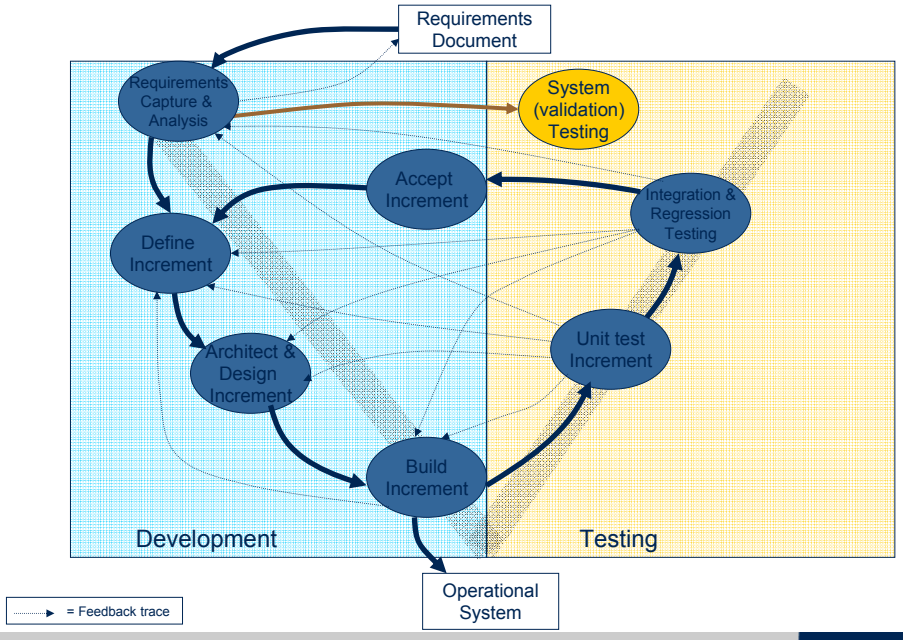
Quality Improvement by Users

- Major telecommunications handset maker:

*"Model Driven Development **reduced** the design errors in our application by **64%**. We **found 97%** of all errors during the Coding and Unit Test phase of our project."*

- Major telecommunications infrastructure provider:
  - 90% of coding errors removed
  - 30-50% of logical errors removed

The Vision: Agile MDD approach for Test Development

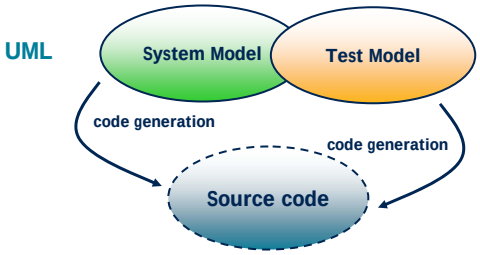


Modeling Driven Development

The Basics

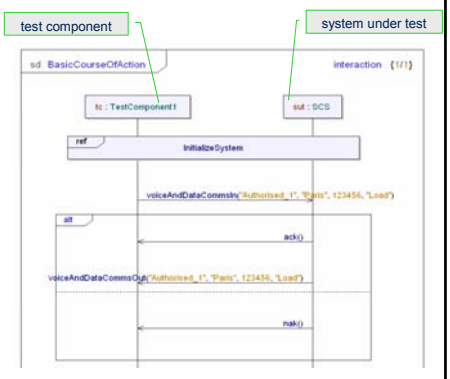
Model-based Testing

- Tests should be *modeled* together with the system architecture and functionality
  - systems and their tests tie in with the same system requirements
  - changes to requirements affect both system and tests
  - systems and tests are made consistent and coherent
- Automatically generate the information that is necessary to execute the tests



Existing MDDTesting Framework

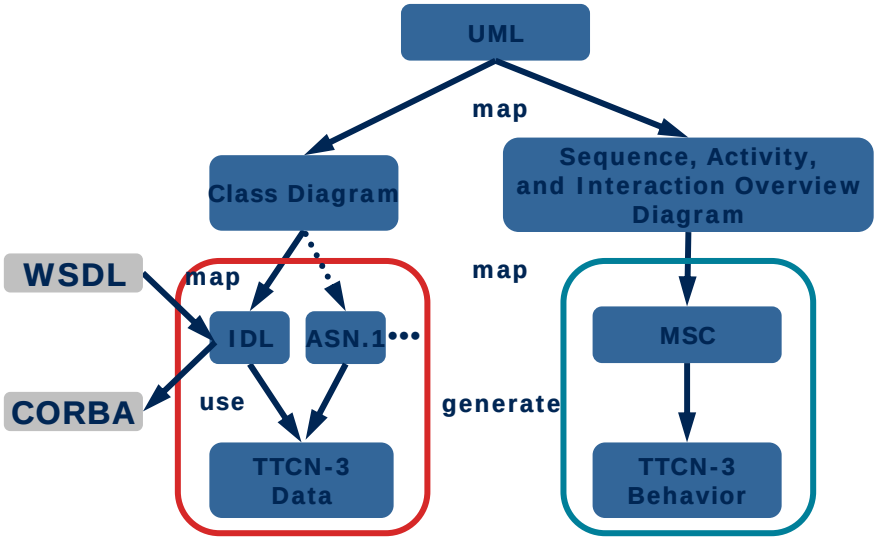
- When modeling - a standard approach to express tests, which:
  - works with models at different levels of abstraction
  - supports source code
  - can be mapped to existing testing frameworks
- Enter the **UML Testing Profile** (U2TP)
  - OMG standard
  - Implemented in UML tools like TAU and Rhapsody from Telelogic



Roadmap to Fully Model-Driven Testing

Telelogic

UML-Based Test Specification



From Institute for Informatics, University of Göttingen - Germany

Telelogic

Telelogic Tester 2.7

- Released May 30, 2007
- Support for TTCN-3 Version 3.2.1 spanning:
  - Core language
  - ASN.1 integration
  - TRI/TCI runtime interfaces
- Improved performance of the runtime system
  - Performance of vector operations (records, arrays, …)
- Reduced, user controllable, memory consumption of the runtime system
- Improved pattern matching
- Updated examples related to performance
- Improved built-in logging
  - High resolution timestamps
  - Ability to log template constraints of arbitrary structure
- Major UI enhancement to Solaris Test Editor

Tester Roadmap

- Tester 2.7 (May 2007)
- Tester 3.0 (December 2007)
  - UML Support
    - Tau<>Tester co-simulation
    - SDL<>Tester co-simulation
- Candidates for Tester 3.0 or beyond
  - TTCN-2 to TTCN-3 converter
  - Ability to communicate via SOAP to test any SOA service
  - Graphical editing system
  - DOORS Integration
  - Rhapsody Integration

Note: Content subject to change