Maintenance, or the 3rd Dimension of eXtreme Model-Driven Design

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Model Based Design

Model Based Design

Heterogenous Modeling Landscape

Roundtrip Engineering

Source Code

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Classical Round-Trip Engineering

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eXtreme Model-Driven Design (XMDD)
XMDD = MDD + SO + XP

model driven:

• models are first class citizens in XMDD
• system changes only happen on the model level
• model as the sole & central development artifact, which is successively refined („One-Thing Approach“ [OTA])

• “by-product”
• must not be changed
XMDD = MDD + SO + XP

service oriented:

• user-level models are successively refined up to a level containing only elementary services

• services can be e.g.:
  
  • legacy systems/COTS
  
  • external services (e.g. web services)
  
  • newly implemented
XMDD = MDD + SO + XP

**extreme:**

- XMDD has short cycles based on user feedback
- customers/application experts are continuously involved
- creation & refinement of user-level models in close collaboration with the users (ideally performed by themselves)
- „Test first!“: animation, rapid prototyping, „on-the-fly“ test cases
jABC Process Modeling

If Articles in Cart
- true → Check Logged In
  - false → Ask for Registration
    - no → Register
    - yes → Login
  - yes → Ask for Payment Confirmation
    - default → Show Thank You Message
    - yes → Show Login Dialog → Do Login
  - ok → Clear Cart
Evaluation

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XMDD

Model Library

Integration as Consistency/Compatibility

'One-Thing'

fully automatic Code Generation

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Synergies

XMDD

- Model Library

Integration as Consistency/Compatibility

Unified Modeling Language
- Use Cases
- Business Objects
- Interfaces
- ...

'One-Thing'

GeneSys

- Establish Links
- Generate SLG Code

Generate From UML

Source Code

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Thank you