



The Case for Batch Merge of Models – Issues and Challenges

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Models and Evolution Workshop

Oslo, Norway,

October 3, 2010

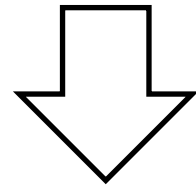




Textual merge process



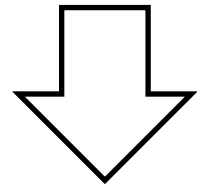
3 files



Merge production

MERGE

Verification&Validation



Conflict resolution++

RESULT

Verification&Validations





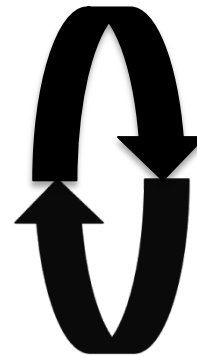
Model merge process



RESULT



Model merge process

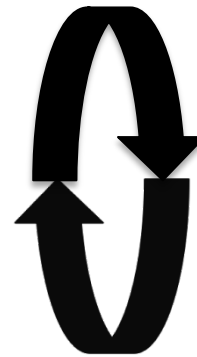
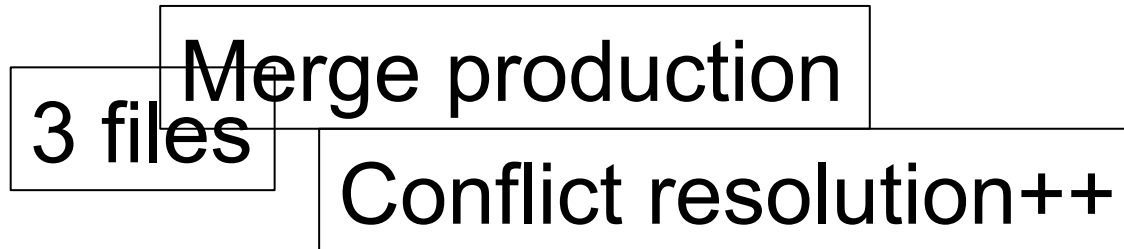


RESULT





Model merge process



???????

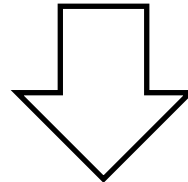
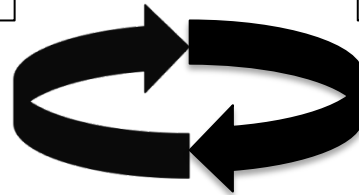




Model merge process



3 files



RESULT





Motivation



Arguments *for* batch:

- we are used to that
- gives more flexibility

Arguments *against* interactive:

- big mental cost to initiate a merge
- straight-jacketed conflict resolution
- either/or alternative selection
- cannot regret choices
- it is continuous/uninterruptable

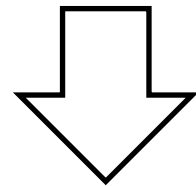




Batch model merge

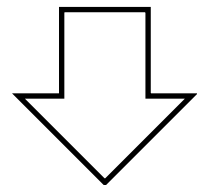


3 files



Merge production

MERGE Verification&Validation



Conflict resolution++

RESULT Verification&Validations





Merge production



Different approaches:

- operation based
- state based

Challenges:

- collecting information
- saving result
- handle “non-standard” input





Result representation



What is it we need to represent:

- conflict mark-ups
- alternatives (and suggestions)
- changes mark-up
- violations – soft and hard





Result representation



What is it we need to represent:

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- alternatives (and suggestions)
- changes mark-up
- violations – soft and hard

Do not lose any information





Conflict management



Things that we need in the process:

- visualization and editing
- easy and quick model V&V
- connected conflicts discovery
- rich alternative proposal
- lots of artificial intelligence ;-)





Conflict management



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 - easy and quick model V&V
 - connected conflicts discovery
 - rich alternative proposal
 - lots of artificial intelligence ;-)
-
- or does it suffice with human intelligence?





Conclusions



What do we gain:

- separation of concerns
- tool independence
- not just conflicts, but also changes
- virtual merges

What do we lose:

- tool integration
- verification and validation





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Representation is the real killer

