



MDD PILOT WITH VERUMS ASD AT ERICSSON TELECOMMUNICATIONS

PRODUCING BETTER SOFTWARE FASTER

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MANAGER DEVELOPMENT

INTRODUCING



Theoretical physics (PhD)

Software engineering and telecommunications

It can always be done in a better way !



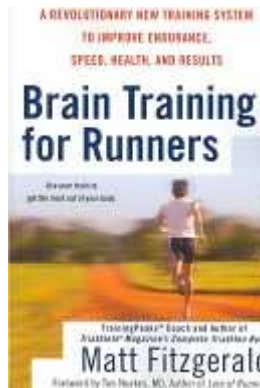
TODAY'S WIDER TOPIC



PRODUCTIVITY IN RUNNING

Continuous innovation still pushes boundaries

There are various “tools” to improve performance



PRODUCTIVITY IN SW DEVELOPMENT

Value for money

There are various “tools” to improve productivity



WHY LOOK AT MODELING ?



People are not connected by using 'the force',

The telecom network is a complex network, with many systems that run inter communicating processes

WHY LOOK AT MODELING ?



WHY LOOK AT MODELING?

Customer escalations due to hangings !

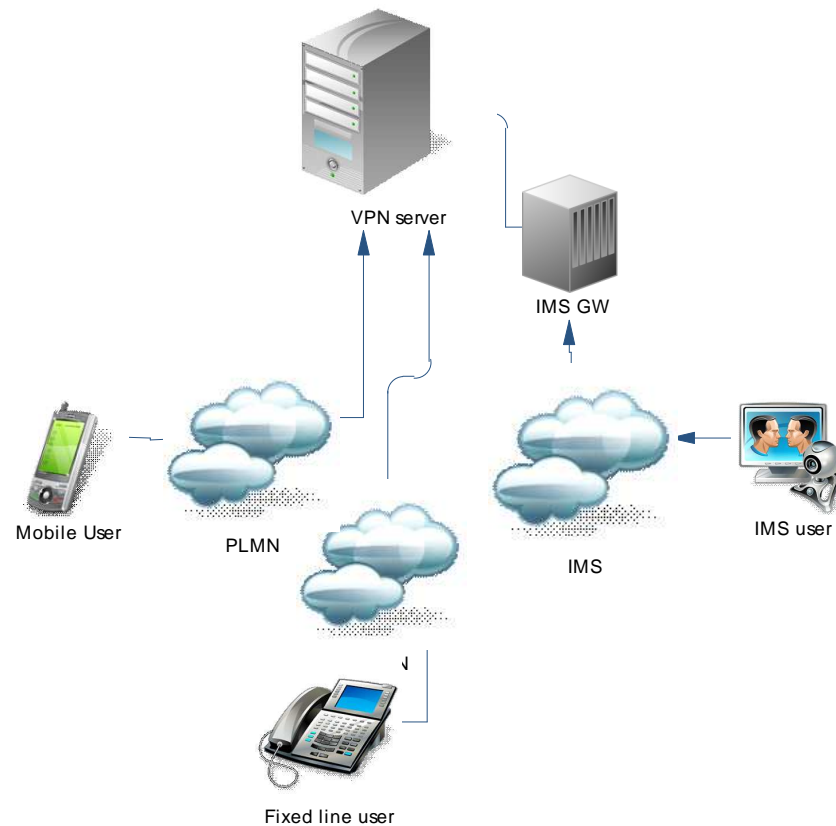
Model driven development as a solution

- ASD to verify correctness of design and prevent hangings

- ASD potentially offers a **20-50% cost saving**



ASD TARGET PROJECT



Real project, no pilot: VPN
IMS Gateway

Goal: break-even for
development

Own estimate: break-even,
ready end August

Verum estimate: 40%
saving, ready june

PROJECT SUCCESS CRITERIA

- Economics
- Productivity
- Ease of use

- System quality
- Maintainability
- Learning curve

- State of tooling
- Scalability
- Scope of method



THE CHALLENGE

Target platform: JEE

Synchronous programming model

Staff not experienced with IMS and JEE

Project delays



VPN IMS GW application
Application_1



Event & Session FW



JEE Based platform



PROJECT CONCLUSIONS

Business case:

Saved ~20% and ready end July

Productivity:

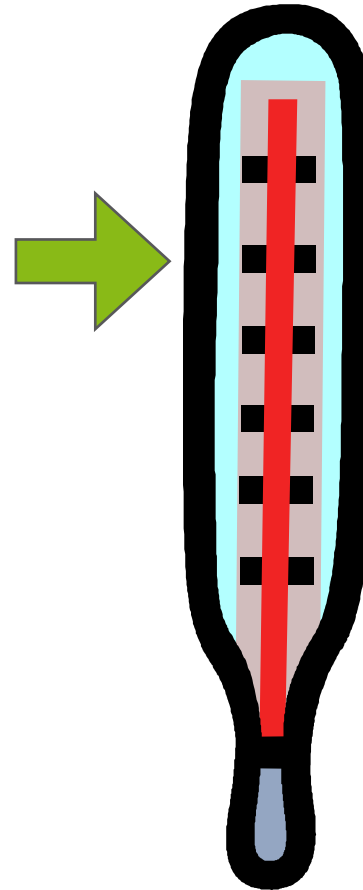
2-3x higher

Quality:

too early (but deadlock free!)

Other aspects:

substantial difference



Very Good: Big difference

Good: Substantial difference

Neutral, No difference

Bad: negative difference

Very Bad: Big negative difference

SUCCESS FACTORS AND FINDINGS

Commitment from Verum

Experienced ASD consultant(s)

Method forced early dialog with solution architect

Changes in component design can be made quickly

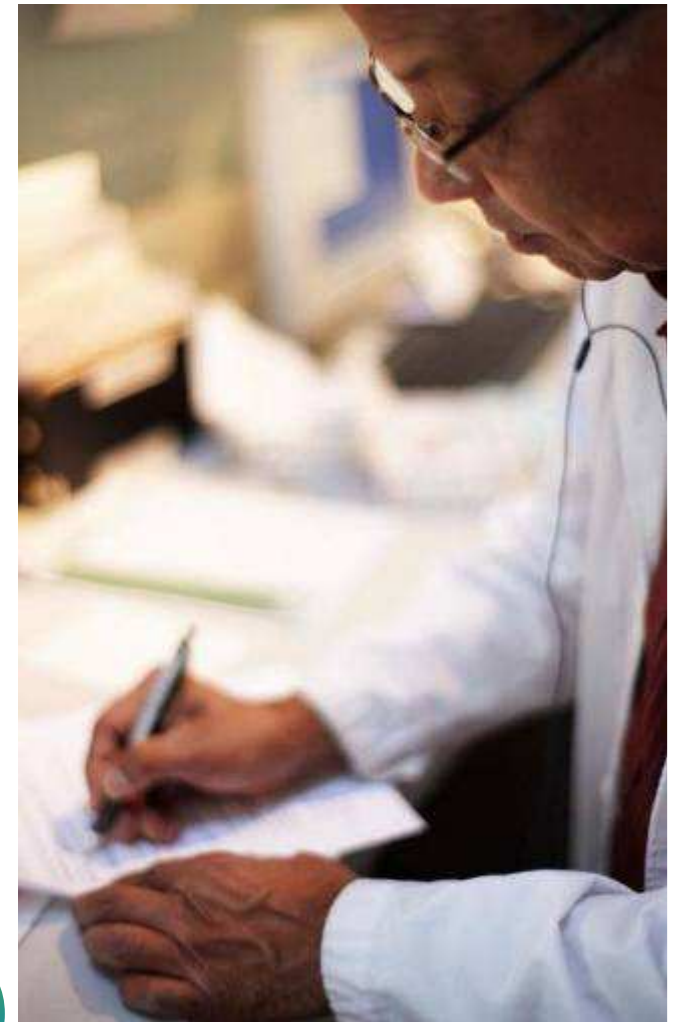


QUOTES FROM THE EVALUATION ON QUALITY AND PRODUCTIVITY



ASD enforces you to define behavior for all scenario's that can occur. The quality of event handling will be much better not to say flawless. This way of working will also result in better and more complete requirements.

ASD allows you to quickly update and change the models. The development cycle of creating FSMs is shortened to minutes i.s.o. hours



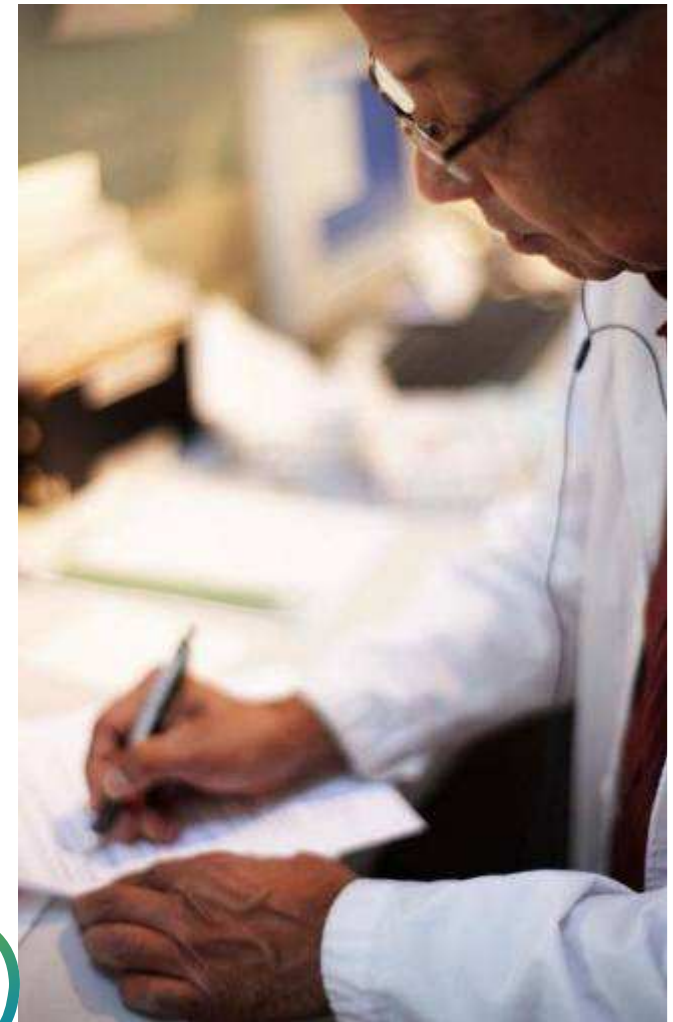
QUOTES FROM THE EVALUATION ON EASE OF USE



Models are easier to understand than plain java code

The models can be read without much introduction. The development cycle: assign responsibilities to components, create interfaces and design models, modelcheck and debug, is not always trivial. The results improve with experience.

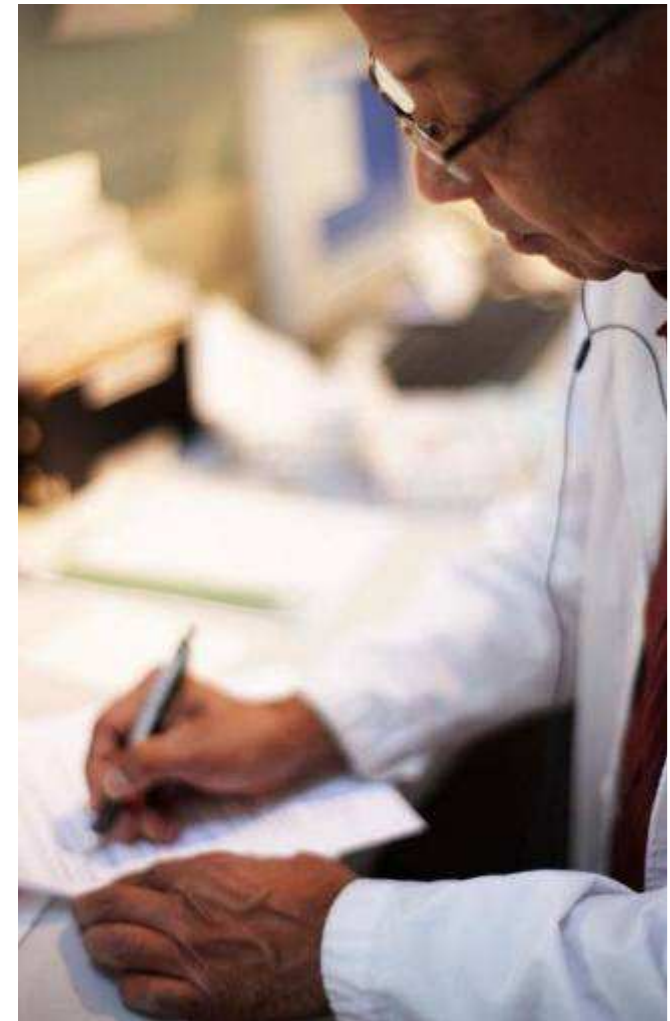
First results in days, productive in a month, expert half a year or more



QUOTES FROM THE EVALUATION ON APPLICABILITY



Where there are state machines and events play an important role, ASD is highly applicable. In our domain, there are many such cases



CONCLUSIONS

First ASD project a success

ASD belongs in the productivity toolbox

- For us same order as SW reuse

- hourly rate comparable or lower as low cost development partners





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