



# Model-Based GUI testing of Smartphone Applications

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# History of MBT research at TUT

Earlier MBT research headed by Prof. Antti Valmari:

RATE project (1998-2001), part of the Tekes ETX technology program

SASOKE project funded by Tekes, Nokia Research Center and Conformiq Software Oy Ltd (and ABB)

TeAmS project (MBT + Symbian): Jul 2004 – Jan 2005

TEMA project: Aug 2005 – Jul 2008, funded by Tekes, Nokia, Conformiq, Plenware, F-Secure

MBT-MOSE: Aug 2008 – Nov 2010, funded by Tekes, Nokia, Ixonos, Symbio, Cybercom Plenware, F-Secure, Qentinel, Prove Expertise

AMOEBAs: Jan 2008 – Dec 2010, funded by Academy of Finland grant #121012



# People

Henri Heiskanen

Antti Jääskeläinen

Lotta Liikkanen

Mika Maunumaa

Mika Mäenpää

Antti Nieminen

Tommi Takala

Heikki Virtanen

Alumni: Antti Kervinen, Merja Leppänen, Jukka Mikkonen, Tuomas Pajunen, Mikko Satama, ...



# Tools

TEMA tool web site: [tema.cs.tut.fi](http://tema.cs.tut.fi)

Tools available under the MIT open source license



# Why MBT

Benefits over manual testing

Benefits over conventional test automation

Online vs. off-line testing

Comparison with other techniques is difficult in practice

Future? legislation



# Analogy: A bread maker

Needs input – the ingredients  
Better and cheaper – if I follow  
the instructions carefully  
Has many modes – I only  
use one  
Reduced – not removed – the  
need to buy bread



# Current Challenges

The modeling skills are hard to find

Not all test models are good test models

The metrics produced by online testing vs.  
traditional test metrics

Integration with agile development

Should developers do the modeling?

Integration with the test management tools?

