



Innovative R&D by NTT

Requirements Document Based Test Scenario Generation for Web Application Scenario Testing

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TAICPART 2015

Background



- **NTT Group**
 - Japan's largest telecommunications company
- **Huge cost on software development**
 - Over 5000 billion Yen annually
(4.1 billion US dollar / 3.8 billion Euro)
- **Develop cheaper and faster!**
 - Shift business from "infrastructures" to "IT services"
 - Web applications used as frontend of various systems
- **Related R&D in NTT laboratories**
 - Development Process Standards, Metrics
 - Application Framework, Support tools
 - etc.

Test design support tool: **TesMa**

What is the problem?



- **Situations at industry level projects**

- Waterfall process, piles of MS Word and Excel docs
- Labor-intensive, unequal skill levels
- effort-consuming and error-prone test design in integration testing and system testing
- Testing design techniques are known, but hard to be applied manually by low skill engineers

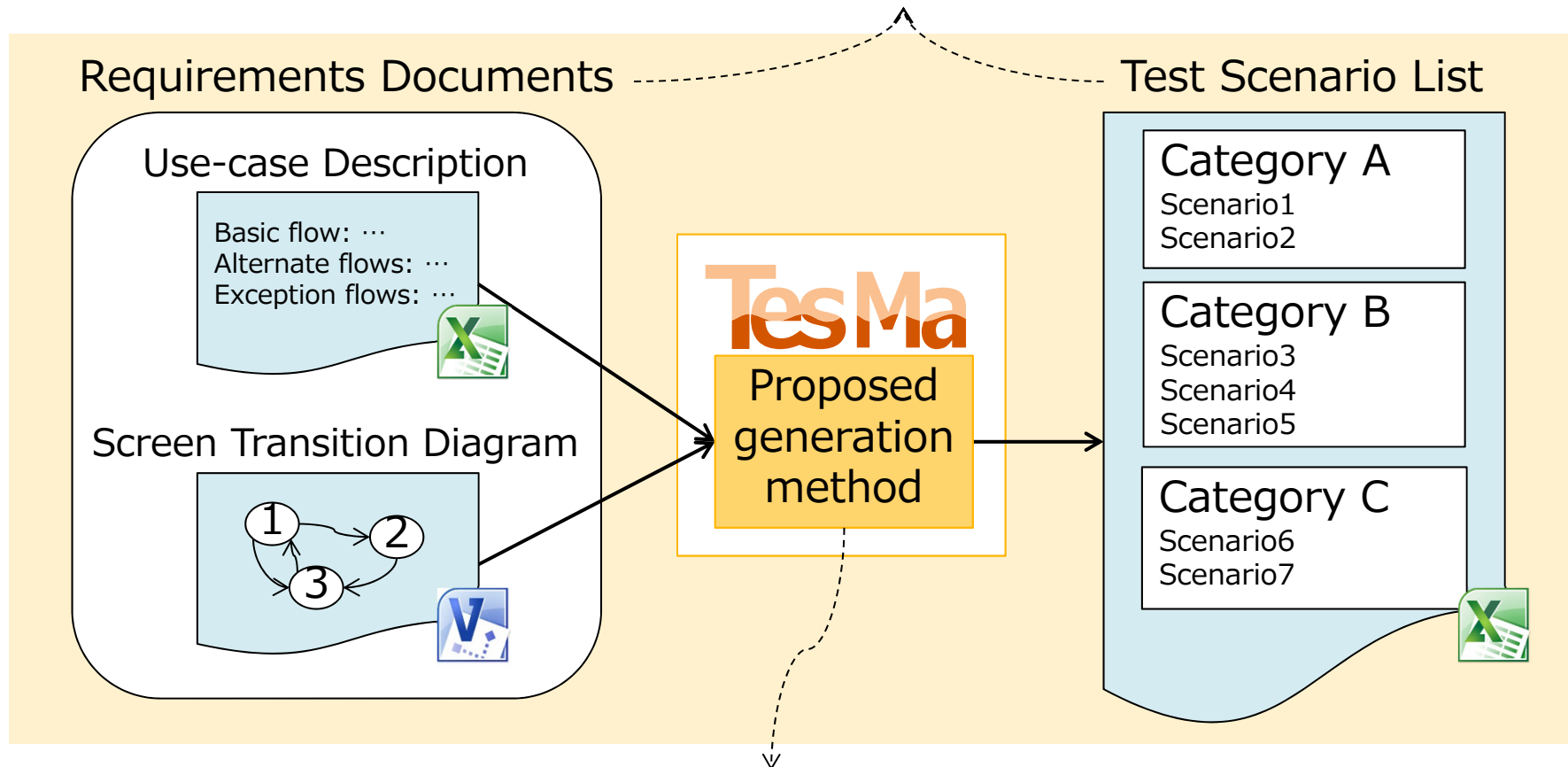
- **Why don't they use (MBT) tools?**

- Describing the input model of unfamiliar modeling tool, or complicated notations is difficult for ordinary engineers
- Besides traditional development activities, creating tool input and examining tool output increase overhead cost

Overview of proposed method



Low overhead cost
adopt existing artifacts defined in standard process



comprehensive generation
combine use-case testing and State transition testing techniques

How? Did it work?



Please come to my poster !

Thank you !