A FINITE STATE MACHINE-BASED DESCRIPTION IN PERFORMANCE TESTING

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Performance testing

TitanSim

- Used for performance testing of network elements within Ericsson
  - Simulate users, different nodes of the network and their interactions
    - ~100,000 users / 12-core server
    - Scales for massive users (plan: 8 Million)
    - ~1,000 parallel calls / 12-core server
  - Simulate complex behaviors
    - Alternative flows
    - Realistic traffic mix
- Based on TITAN
- Developed in Ericsson R&D Hungary

Alternatives for behavior description

<table>
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<tr>
<th>Description</th>
<th>Simplicity</th>
<th>Complex behavior</th>
<th>Description can evolve with SUT</th>
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EFSM-like description

- input → runs an action + change its states
- using building blocks → reusability

Simplicity

Complex behavior

Description can evolve with SUT

SUT (System Under Test)

Telecommunication network

Load Generator

traffic load

 Alternatives for behavior description

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EFSM-like description

- input: event
- action: test step
- state: status of simulator

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