

University of Turku

Department of Information Technology

BYMAN, JUHA      Model based testing and Windows Media Video 9 in mobile phones

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In this thesis model based testing method is applied to testing Windows Media Video 9 in mobile phones. Windows Media Video 9 is Microsoft's own media format. Model based testing is one form of software testing. The test designer writes an abstract model of the system under test, and then a set of test cases are created from that model. These tests are then executed and test results are then analyzed to find faults in the system. Software testing and model based testing principles are explained in addition to explaining the special characteristics of mobile phone testing.

Different modeling notations are explained and different test selection criteria are also covered.

This thesis focuses on using transition based notations and pre/post notations because they were beforehand considered to be the most commonly used notations. A model was created using a transition based notation and abstract test suite created but converting the abstract test suite to automated test environment was not possible due to complexity of the test system. Main benefits of using model based testing were found to be a deeper knowledge of the system under test and shortened time to create the test set. These benefits gained from using the model suggest that model based testing is a viable way to test Windows Media Video 9 in mobile phones.

Keywords: Model based testing, Windows Media Video 9, Software testing, Mobile phones, Statecharts, Test automation