An interface test model for hardware-dependent software and embedded OS

API of the embedded system

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Abstract

An embedded system has a hierarchical structure including hardware-dependent software layer, operating system layer, and applications layer. Since the system has interfaces between the different layers that are tightly coupled and inter-dependent to each other, these interfaces are the focal area to be tested.

This paper proposes an *Embedded System's Interface Test Model (EmITM)* to test hardware interfaces and OS interfaces. The *EmITM* provides a set of test items based on the interfaces when testing embedded software. We apply our model to embedded software test and analyze the test results.

**Keywords:** Embedded software; Interface test; Test model