Pairwise and Multiple Base Choice Coverage Approach for DVB-T2 Receiver RF Testing

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Abstract

This project focuses on testing software and hardware of demodulator part of TV and Set-Top-Box devices in term of decoding the DVB-T2 RF signals. There are large number of test cases regarding DVB-T2 signal test factors. We use the Pairwise-Testing tool and Multiple Base Choise Coverage (MBCC) method in order to reduce the number of resulting test cases and time to require performing mentioned test. Without using any software testing method brings huge amount of time and labor consuming. Pairwise and MBCC has different benefits for DVB-T2 testing; MBCC guarantee that most essential test factors are covered furthermore pairwise testing brings all paired combinations of base choises covered. As a results combination of these two test methods provides optimal test coverage, despite the small size of tests cases and the test duration, the test coverage is highly acceptaple. Because the test cases covers all important factors and these factors create a combination with other factor pairs. The results show that mentioned method ensures at least 70% efficiency about test duration and testing ability.