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AMBA- ADVANCED HIGH PERFORMANCE BUS MASTER BASED VERIFYING INTELLECTUAL PROPERTY USING OPEN VERIFICATION METHODOLOGY

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ABSTRACT

The Advanced Microcontroller Bus Architecture (AMBA) specification defines an on-chip communications standard mainly used for the purpose of designing high-performance embedded M Microcontrollers. AMBA was introduced by ARM Ltd in 1996, and nowadays, it is widely used as the on-chip bus in SOC designs. In this paper, a verification environment to verify an ARM-based SOC (System-on-Chip) by using open verification methodology (OVM) is presented. The paper also introduced how to verify the AMBA (Advanced Microprocessors Bus Architecture) by open verification methodology, include AHB (Advanced High Performance Bus) Master where AHB is a part of the AMBA protocol. Verification technology is designed to enable creation of robust, interoperable verification IP and test-bench components to verify any AMBA protocol based SoC it improves quality and reduces schedule time it is the standard framework to build the verification environment waveforms, code coverage is also discussed in the paper.

KEYWORDS: SOC (System on Chip), AHB (Advance High Performance Bus), AMBA (Advanced Microcontroller Bus Architecture), OVM (Open Verification Methodology)