Bharamu S K

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| **EDUCATIONAL QUALIFICATION** | | | |
| **Year** | **Degree** | **Institution/ School** | **Performance** |
| 2018 | B.E (Electronics and Communication Eng.) | J.S.S Academy of Technical Education Bangalore | 67.5% |
| 2015 | Diploma(Electronics and Communication Eng.) | B.V.V.S Polytechnic Bagalkot | 77.44% |
| 2012 | Class X | S.S.S.B.V.V.S Hi-School Halingali | 82.72% |

**PROFESSIONAL TRAINING**

* **Advance VLSI Design and Verification training.** [ Jul’18 – May’19 ]

Maven Silicon Bangalore.

**PROFESSIONAL SKILLS**

UVM | SV | SVA | OOPS Concept | Verilog | STA | Digital Electronics | Perl | Embedded C.

**TOOLS**

Linux | GVIM | Cadence SimVision | Vmanger | SVN |Questasim | Modelsim | Quartus Prime | EDA Playground

**PROFESSIONAL EXPERIENCE**

**Design Verification Engineer**

**Maverick Semiconductor and Services Bangalore** [Jun’2019 – Present ]

**Profession Summary:**

* Experience in developing Verification plan, Implementation test plan documents.
* Experience in developing System Verilog, UVM-based Verification environments and testbench components including agents, drivers and scoreboard.
* Experience in writing Tests and Sequences with Constrained-Random stimulus.
* Good Knowledge on UART and I2C Protocol.
* Good Knowledge on Assertion.
* Worked Code coverage.
* Debugging.

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| **PROJECTS** |

## 1. Verification of Real-Time Clock:

A real-time clock (RTC) is an electronic device (most often in the form of an integrated circuit) that measures the passage of time.The term real-time clock is used to avoid confusion with ordinary hardware clocks which are only signals that govern digital electronics, and do not count time in human units.

* + RTC module is capable of retrive system from standby mode.
  + Wrote SV based testcases to verify RTC functionality.
  + Covered use cases scenario.
  + Created Verification Environment using UVM Methodology.
  + Toggle coverage closure.

## 2.Verification of DSPI:

SPI is a serial interfaced protocol used for communication in embedded systems. It’s a four-pin protocol. Device is supposed to communicate with external world for data transfer to-and-from.

* Data transfer between Master and Slave is ensured.
* Created Verification plan.
* Created testcase sequences to verify various key features.

## 3.UART IP Veriﬁcation SOC Level:

The UART IP core provides serial communication capabilities, which allows communication with modem or other external devices.

Implemented an Baudrate generation block.

## Veriﬁcation:

* + - Verified the design using UVM TB Architecture blocks i.e. Agents, Environment and Tests.
    - Verified the UART packet of 5,6,7,8bits. Prity and Different baudrate also verified using UVM TB.
    - Verified the RTL module using Verilog TB.

## 4.I2C IP Veriﬁcation SOC Level:

I2C is a popular serial communication protocol used to connect microcontrollers, sensors.Data transfer between Master and Slave is ensured.

* + Prepared the Verification Plan & implemented test cases for verification of IP.
  + Verified the the design using UVM TB Architecture.
  + Tested with Busy line of master by making an Repeated start and stop condition.
  + After each data-frame verified an ACK bit with assertion.

## 5.AHB2APB Bridge:

The AHB to APB bridge is an AHB slave, providing an interface between the high- speed. AHB and the low-power APB. Read and write transfers on the AHB are converted into equivalent transfers on the APB

* + Analysis of AHB2APB Bridge specifications
  + Created UVM based verification environment.
  + Wrote the test-cases for single transfer, burst transfer.
  + Worked on APB Controller logic.

## 6.APB VIP Verification :

APB is designed for low bandwidth control accesses, for example peripheral interfaces on system. This bus has an address and data phase but a much reduced, low complexity signal list. Furthermore, it is an interface designed for a low frequency system with a low bit width (32 bits)

* + AMBA-APB protocol specification.
  + Created Verification Plan.
  + Created Verification Environment using UVM Methodology
  + Worked on Write & Read Sequence, Driver, Monitor, Scoreboard
  + Performed read and write operations with and without wait states. Also, Slave Error Situation.

## 7.Host SRAM Verification Project:

* 4096x64 Dual Port Ram can read and write data simultaneously with unidirectional data ports.
* Implemented the design with write and read enable signals using Verilog HDL and synthesized the circuit using Quartus Prime.
* Perform write to any memory location, read from the same memory location, read data should be the same as written data
* Assert reset in between write/read operation and check for default values.
* Verified the design using functional coverage by defining covergroups and coverpoints.

## 8.FIFO buffer Verification for data processing unit:

Develop a comprehensive testbench environment to verify the functionality and performance of the FIFO design

* + Perform functional simulation, checking for proper data flow, synchronization, and handling of empty and full conditions.
  + Debug and resolve design or verification-related problems, ensuring the FIFO operates correctly according to the specifications
  + Verified the design using functional coverage by defining covergroups and coverpoints.
  + Created Verification Plan.
  + Created Verification Environment using SV Test Bench.
  + Worked on Testcase writing, Generator, Driver, Monitor.

# HOBBIES

Cricket **I** Kabaddi **I** Cooking

**LANGUAGES**

Kannada **I** English **I** Hindi **I** Telugu.

**DECLARATION**

I, hereby declare that the information furnished above is correct to the best of my knowledge.

Date:

Place: Bangalore [Bharamu S K]