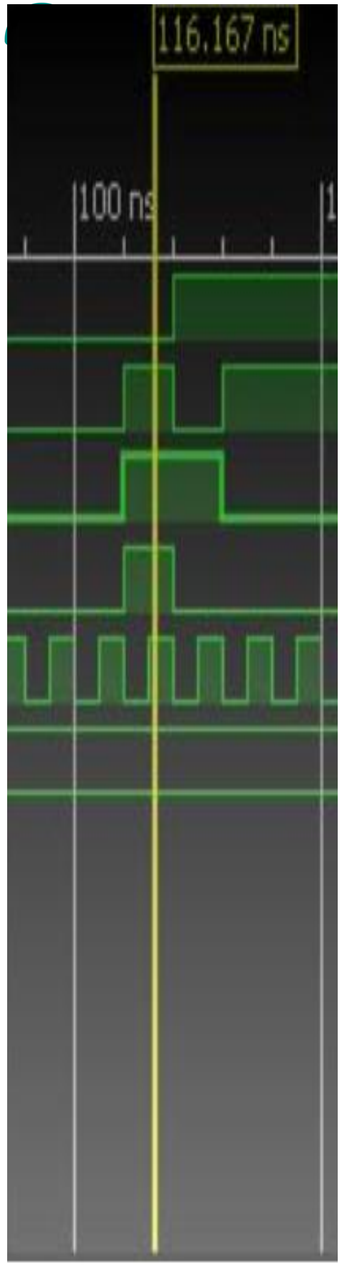
Design verification

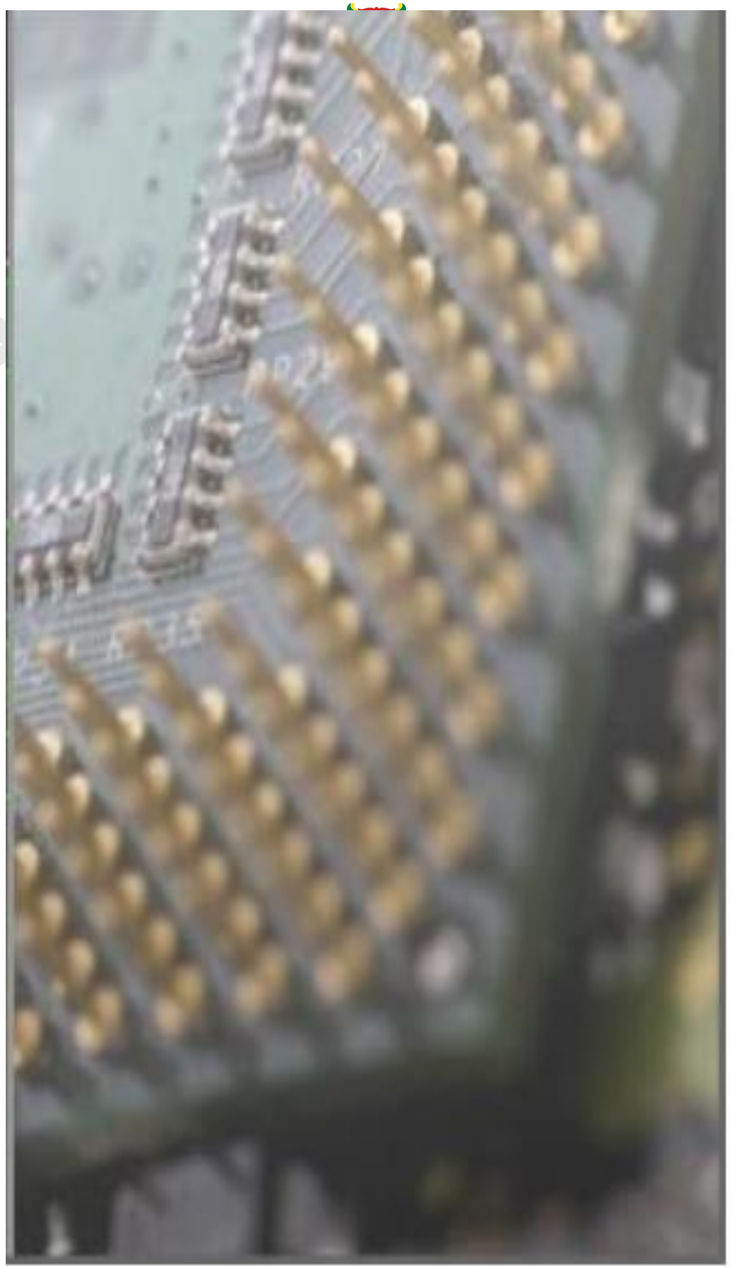
MC. Martin González Pérez

Agenda

- IC Design Flow
- Functional verification



IC Design flow



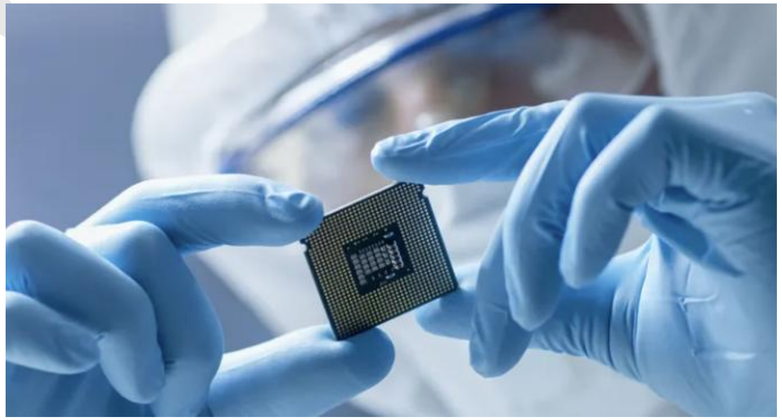
Electronic industry

Design

Chip manufacturing

Assembly

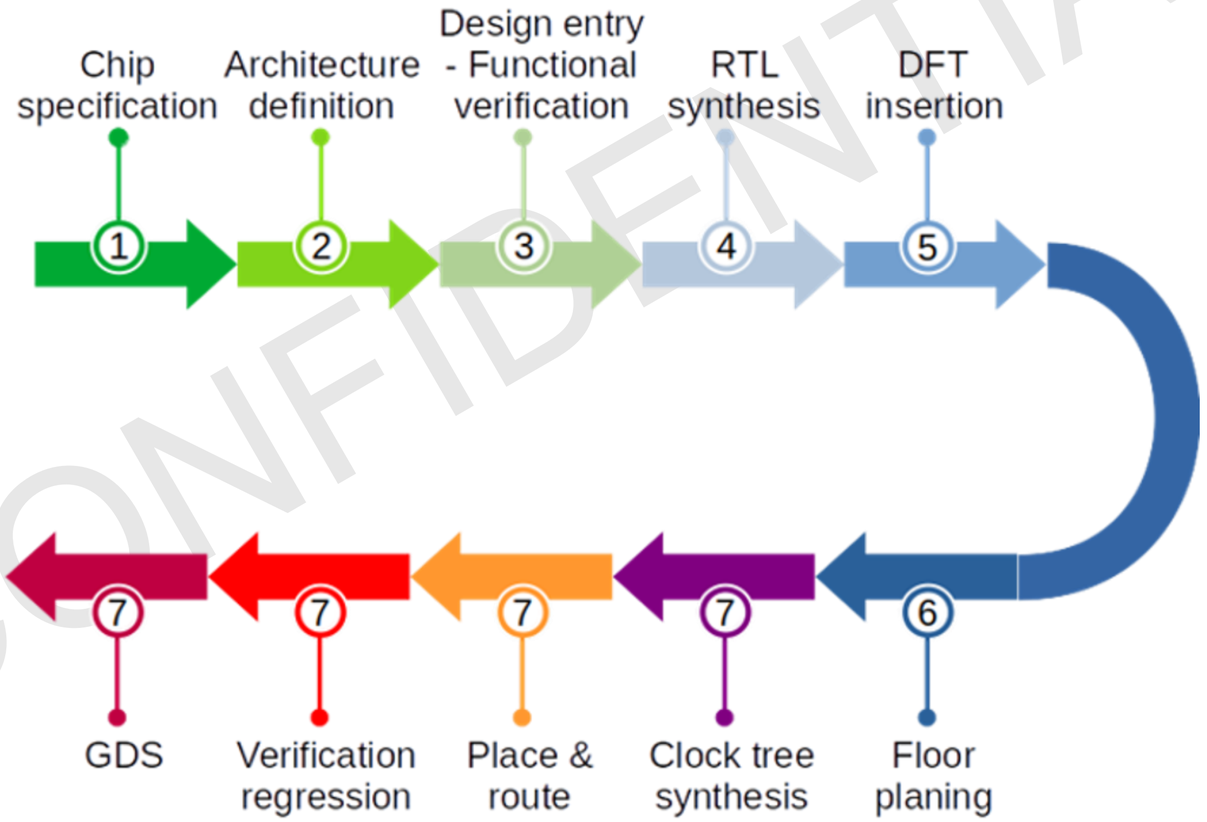
Our goal



Specifications

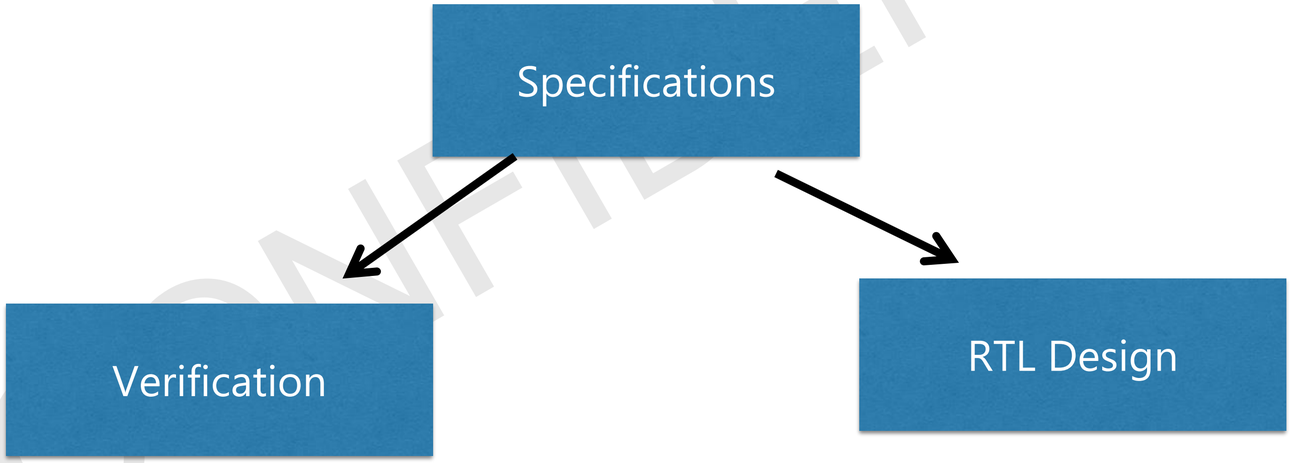
Functional IC

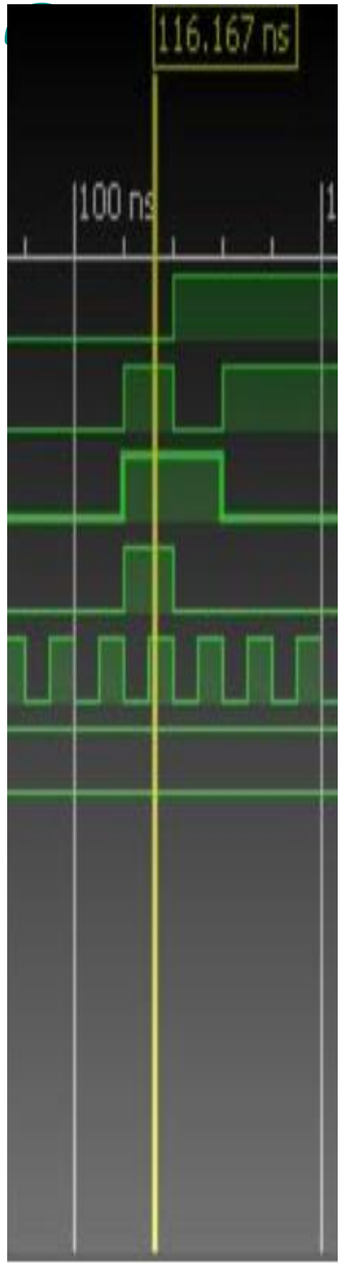
IC Design flow



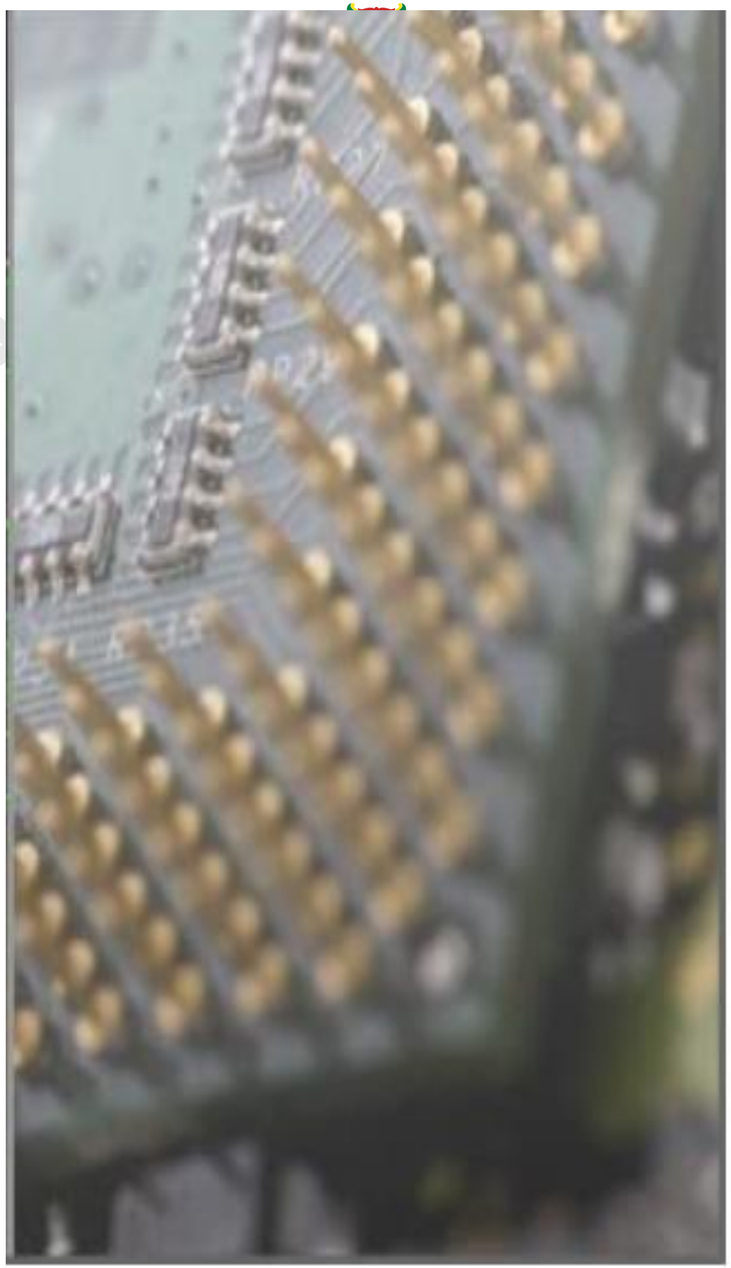
Design and verification

RTL verification and design are tasks that stem from the specifications and the definition of the architecture. Therefore, they can be carried out in parallel.





Functional verification

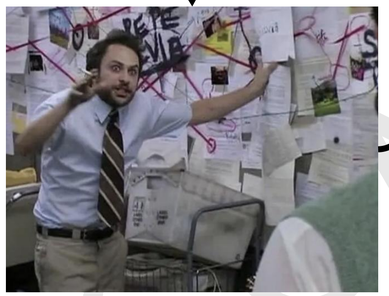


What is verification?

Verification of integrated circuits is the process of ensuring that the design meets its functional and performance specifications **before fabrication**.

Basic verification flow

Read specifications



Develop a verification plan

Create a test bench

Stimulus generation

Check results
Checks and coverage

Basic verification flow

Read Specifications: The purpose of reading the specifications is to understand how the circuit should operate in order to develop a verification plan.

Verification plan: The purpose of reading the specifications is to understand how the circuit should operate in order to develop a verification plan.

Test bench: It is the infrastructure necessary to be able to verify the design.

Stimulus generation: Create test cases that exercise the different functionalities of the circuit.

Check results: Check if there were any errors in the operation of the circuit and how much it was exercised.