CORDIC Algorithm

Verilog Implement, Verification and Related Tasks

After the floating and fixed point simulation, the details, as order and bit-width, have been obtained. At the same time, the structure was understood well. It is the high time to start the system structure design, Verilog coding and verification.

# System Structure Design

There are at least to structures to be selected, the pipeline and the serial one. There are several CORDIC elements in the first one, while only one element in the last one to implement the CORDIC algorithms.

The system input data stream speed should be highly considered for the selection.

The pipeline architecture will be choice in the example.

# Verilog Coding and Verification

In fixed point operations, the test vectors for verification should be obtained for element verification for a certain input value, and in the whole input value domain.

Verilog codes can be presented following the code law for GEM and verification should be completed.

Task 3

## Design the pipeline structure at the asked requirements.

## Verilog coding and verification jobs to implement the CORDIC with three mode(sin/cos, atan and sqrt).