Position : Physical Design Tools and Flow Methodology lead.

Job Overview

Position Title: Physical Design Tools and Flow Methodology lead.

Location: Bangalore

Primary Skills: EDA Tool Expertise, Physical Design Flow Development & Automation.

Experience Level: 7–18 years.

Salary Package: Best in the Industry.

Job Type:

I**ndustry**: Semiconductors | AI | Networking | ASIC Design.

Job Description

Physical Design Tools & Flow Methodology (TFM – CAD Flow)

- Designed, developed, and maintained **automated, scalable RTL-to-GDSII physical design flows** covering synthesis, floorplanning, PnR, CTS, routing, and sign-off.
- Led **tool evaluation and benchmarking** (Synopsys Fusion Compiler/ICC2, Cadence Innovus/Genus, Mentor Calibre) to ensure best-in-class performance and PPA.
- Automated flow steps using **TCL, Python, and Perl**, improving turn-around time and reducing manual intervention.
- Enabled **advanced process nodes (7nm, 5nm, 3nm)** with foundry rule integration, constraint setup, and DRC/LVS/STA sign-off preparation.
- Collaborated with EDA vendors to resolve tool issues, drive feature enhancements, and influence roadmaps.
- Created detailed **methodology documentation** and conducted training to upskill global design teams.

  Expertise in tools like Fusion Compiler, Innovus, and Genus (Mid to Senior Level)

Key Responsibilities

- **Flow Development & Automation:** Design, develop, and maintain a robust, automated, and scalable physical design flow for synthesis, floorplanning, placement, clock tree synthesis (CTS), routing, and sign-off verification.
- **Tool Evaluation & Benchmarking:** Lead the evaluation, selection, and deployment of new EDA tools and technologies. Conduct rigorous benchmarking of tools from major vendors (Synopsys, Cadence, Mentor) to ensure our flow is best-in-class.
- **Methodology Enhancement:** Proactively identify bottlenecks and inefficiencies in the current flow. Develop and implement innovative methodologies to improve PPA, reduce turn-around time (TAT), and enhance design productivity.
- **Technical Leadership & Support:** Act as a subject matter expert (SME) for the physical design team. Provide expert-level support and guidance on tool usage, flow issues, and complex design closure challenges.
- **Vendor Collaboration:** Work closely with EDA vendors to resolve tool bugs, drive feature enhancements, and influence their product roadmaps to meet our project needs.
- **Documentation & Training:** Create and maintain comprehensive documentation for flows, tools, and methodologies. Conduct training sessions to enable design teams to effectively use the established flows.
- **Process Node Enablement:** Lead the enablement of the physical design flow for new and advanced technology nodes, including developing new rules, scripts, and methodologies required by the foundry.

Key Skills

- **Synthesis & Place and Route:** Deep expertise with industry-standard tools such as Synopsys Fusion Compiler/ICC2 or Cadence Innovus/Genus.
- **Sign-off:** Mastery of sign-off tools for timing (PrimeTime), physical verification (Calibre, ICV), power analysis (RedHawk, Voltus), and reliability (Totem).
- **Floorplanning & Power Grid:** Strong understanding of floorplanning principles and experience with power grid (PG) mesh creation and analysis.
- **Scripting Expertise:** High proficiency in scripting languages is essential. Must be an expert in TCL and have strong skills in Perl and/or Python for automation and flow development.

- Process Technology: Proven experience working on advanced process nodes (7nm/5nm and below) is highly desirable.
- Problem-Solving: Exceptional analytical and debugging skills with a demonstrated ability to solve complex technical problems independently.
- Communication: Excellent verbal and written communication skills, with the ability to collaborate effectively with cross-functional teams and mentor junior engineers.

Preferred Qualifications

Master's or PhD in Electrical Engineering, Computer Engineering, or related field.

www.keninfo.tech   Jobs@Keninfo.tech   +91 8884433033

#1121, 2nd Floor, 4th Cross, Ananthnagar Phase 2, E-City Phase 2, Bangalore, Karnataka – 560100
Head Office: KEN Infotech Ltd 40 Campbell Street, Glasgow, G20 OPD, Scotland, UK