DFT Flow at Intel

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Introduction

Transition from hybrid to DFT integration flow

- Reduce high cost of ownership
- Simplify onboarding with reduced learning curve
- Ensure interoperability with industry tools / software

Goals of the new DFT solution

- Seamless integration of proprietary and vendor DFT logic

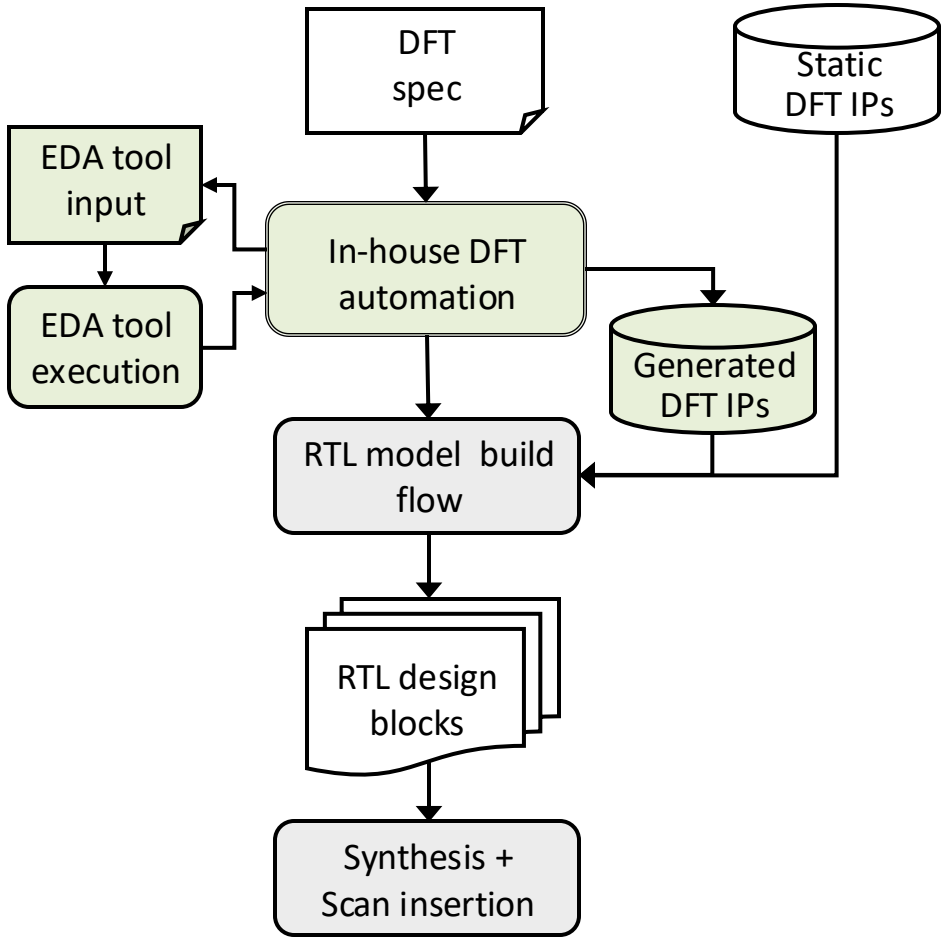
Why in-house solution?

Cutting-edge SoC Needs; Short Schedules

- Innovations for unique challenges
- Adapt quickly to changes; less dependent on vendor roadmap and timelines

Customization, Flexibility, Security

- Tailored to project requirements; integrates proprietary IP
- Control functionality; protects sensitive information



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Challenges with in-house solution

High Cost of Ownership

- Significant resources for development and maintenance
- Frequent updates to stay compatible with evolving tools

Steep Learning Curve

- Difficult for engineers familiar only with vendor tools

Integration and User Input Issues

- Problems with third-party DFT solutions
- Significant user input required; no design introspection

Key DFT solution and features

Customizability & Modularization of Vendor Solution

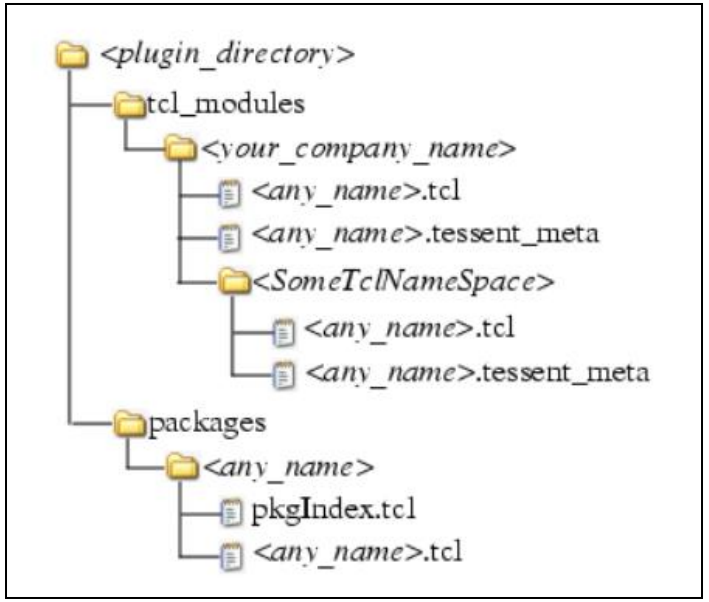
- Plugin and metadata framework
- Customizable Tcl packages and commands
- User input processing/validation

Enhanced Design Introspection and Editing

- Comprehensive design analysis capabilities
- Integration of proprietary and vendor DFT IP

Full IEEE 1687 ICL/PDL Support

- Introspection, extraction, validation, and content generation



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Benefits of industry solution

80% Less Code Volume & 65% Fewer Bugs

- Reduced maintenance, fewer software issues

Integrated DFT IP & Reduced Runtime

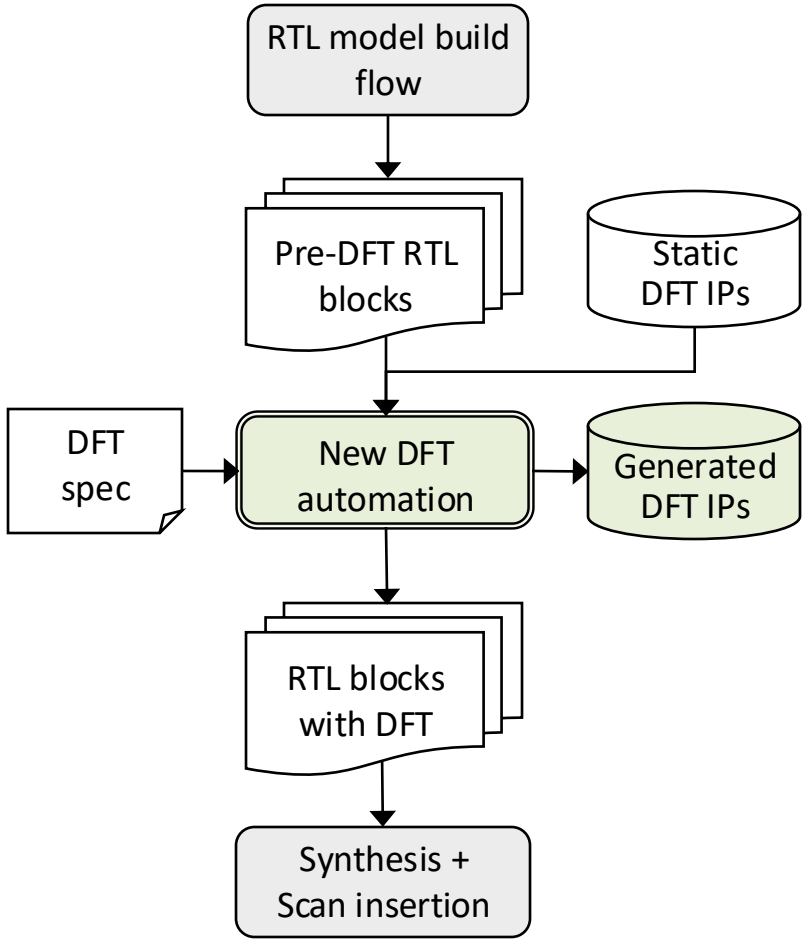
- Combines proprietary/vendor solutions
- Streamlined processes

Improved Onboarding

- Easier learning curve for new users

Enhanced Quality

- Better product reliability and performance



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Conclusion

Positive results and customer feedback

- Adopted Siemens' Tessent Platform for better integration
- Reduced code size, maintenance costs, and bugs
- Plugin framework allows project-specific enhancements
- Improved accuracy with semi-automated ICL/PDL based testing
- User-friendly, quick adoption with minimal training

Future Focus

- Addressing ICL extraction challenges/learning curve