



Figure 1. IP Capture with coreBuilder.

coreBuilder

The coreBuilder tool is language-independent, which enables the packaging of IP blocks with a step-by-step process.

This ensures that all of the design requirements have been followed, allowing the easy enforcement of an IP quality flow. Additionally, the design intent is captured, bringing the detailed knowledge of the IP to the designers' desktop. IP packaged with coreBuilder can be easily configured and integrated in the SoC. Figure 1 shows the IP capture flow with coreBuilder. coreBuilder not only provides the environment to capture all of the files related to the IP block, but also allows the IP designer to capture the IP intent as well. IP packaged with coreBuilder is fully compliant with the IP-XACT specification.

coreAssembler

The coreAssembler tool has an intuitive graphic or command based interface that speeds the designer through the assembly, configuration, and implementation of an IP-based design. The coreAssembler tool also provides the infrastructure for building a complete SoC design and verification environment.

coreAssembler uses a knowledge-based design and verification flow that automates the tedious task of connecting, configuring and verifying all of the IP components in the SoC. This eliminates the risk of assembly and configuration errors by automatically generating the configured RTL and with the interface to the Galaxy™ platform implementation scripts are generated based on the designers intent helping to ensure highest QoR with significant reductions in design time. IP-XACT XML is also generated from coreAssembler.

Figure 2. Using coreAssembler with coreBuilder for packaging IP-based design platforms and IP integration.

In addition to integrating packaged IP into the design, coreAssembler allows the easy integration of new, unpackaged IP or IP compliant with the IP-XACT specification. With the open TCL interface, designers can easily include design flow customizations into the coreAssembler environment.

coreBuilder + coreAssembler

coreBuilder combines with coreAssembler to provide designers with an open and customizable environment for the creation of IP-based subsystems as well as product design platforms. IP that has been packaged with coreBuilder can easily be included with controlled configuration options targeted at specific market applications into design platforms assembled with coreAssembler.

In addition to the ability to include packaged IP, new design specific IP can be easily integrated into the design platform.

Figure 2 shows how coreAssembler integrates IP into a design platform.

coreConsultant

coreConsultant guides an IP integrator through the configuration, verification, and implementation of a single core packaged with coreBuilder into a coreKit and generates the IP-XACT XML. coreConsultant includes the graphic and command line options for use along with built-in interfaces to the Discovery and Galaxy platforms speeding the implementation and verification of an IP core.

