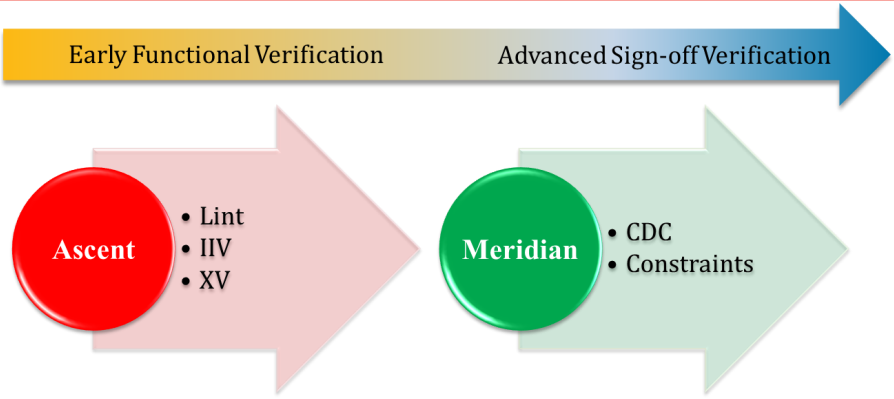
Real Intent™
Delivering Verification Confidence

# Ascent™ XV

Ascent X-Verification System (XV) detects and isolates Verilog X-propagation issues early, at the Register Transfer Level (RTL ). RTL sign-off of X issues enables debugging on familiar high level code where simulations are relatively fast. Differences between RTL and gate-level interpretation are reduced significantly, reducing monotonous time consuming iterations that often delay sign-off and sometimes allow elusive bugs to slip through.

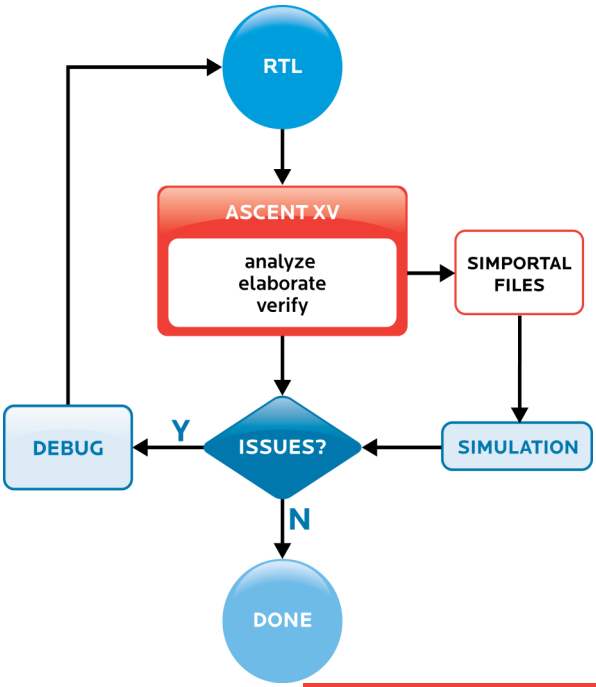



## BENEFITS

- Minimize design susceptibility to X- issues that mask functional bugs at RTL and cause unnecessary X's in gate simulations
- Identify all X-sources in the design and determine whether X-sensitive constructs cause issues.
- Easy to use, fast, and X-accurate results

## FEATURES

- Comprehensive *Design Audit Report* provides:
  - Identification and classification of X-Sources
  - Comprehensive reporting of all X-Optimistic and X-Pessimistic constructs in the path of an X-Source
- *SimPortal Verification Feature* automatically generates:
  - An *x-accurate model* for simulation free of unnecessary X issues.
  - *Assertion-based monitors* that identify when and where Optimism occurs and which input caused it.
  - *Smart checkers* that ensure assumptions made in the analysis hold during simulation.
- A *Graphical Debugger* built around SpringSoft's Verdi™ Automated Debug System, shows the path from the sensitive construct to an X-Source, facilitates waivers of X-Sources and X-sensitive nets, and provides links for source code navigation.
- Easily integrates with Real Intent's tools and plugs straight into standard EDA flows.




Please visit www.realintent.com for more information.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**X-propagation Verification System**

## ADVANTAGES

### X-propagation Verification System

Why wait for the design to be synthesized and verified at the netlist level? The masking of functional bugs (X-optimism) and having unnecessary X's (X-pessimism) can be eliminated at the RTL, prior to synthesis. Waiting until after synthesis, and debugging differences between RTL and gate-level simulation results will leave you in a debug nightmare, both because simulation is much slower and because the code is not what the designer wrote. Ascent XV analysis can catch issues before RTL sign-off, driving cost down, and avoiding the monotonous, error-prone debug at the netlist level.

### Comprehensive X-analysis Design Audit Report

A comprehensive report allows for determining how susceptible a design is to the masking of functional bugs and to unnecessary X's. A comprehensive report is generated that lists all X-sources in the design and X-sensitive nets that are in the path of an X-source. X-sources are automatically identified and classified. X-sensitive constructs provide a list of the inputs and outputs of the X-sensitive construct, along with debug information with links to the source code and a trace from each net to an X-source in the design.

### SimPortal Feature for Detecting and Debugging X-optimism Issues

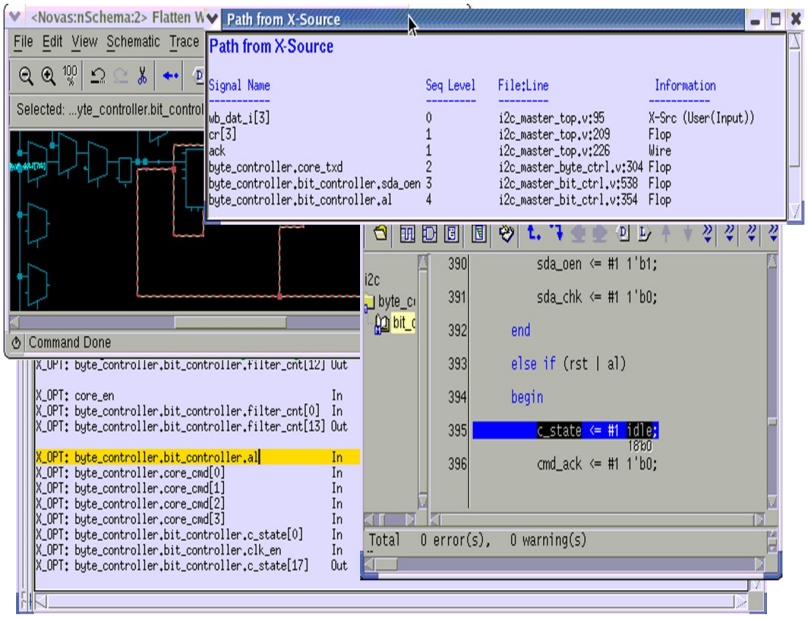
SimPortal feature provides for the generation of an X-accurate model that can be used to detect and debug functional issues and to eliminate unnecessary X's in a simulation environment. Assertion-based monitors on inputs and/or outputs of X-sensitive constructs facilitate debugging the root cause of an error. Smart checkers exist that verify the assumptions made in the analysis. Also, coverage monitors exist to verify that all X-sensitive constructs have been exercised. A flexible testbench is provided that instantiates all of the SimPortal files so there is no need to touch the design testbench.

### Powerful Debugging Graphical Interface

Ascent XV comes with a powerful integrated graphical interface. A simple mouse click directs users to the RTL-sensitive construct in the source code. The graphical debugger shows a schematic or list view of the path from the input of the X-sensitive construct back to an X-Source.

The debugger also facilitates adding or removing X-sources and waiving inputs and outputs that are not of interest.

Ascent XV builds on Springsoft's Verdi™ Automated Debug System. OEM versions are available direct from Real Intent.

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