



IP Integration & Chip Assembly

weaver SOCRATES

IP reuse and efficient IP integration are essential for successful System-on-Chip (SoC) development. Socrates Weaver is a revolutionary tool for IP integration that is the fastest and most efficient way to build and maintain complex systems. The unique rules-based integration methodology employed by Weaver maximizes the potential for IP, subsystem and system reuse.

The Problem

Most automated IP integration flows are not truly automated. Only a small number of connections – typically well-defined bus interfaces – are automatically supported. The majority of interconnections must be made manually or via low-level scripted commands. This approach offers little or no productivity gains over purely manual flows and has very limited potential for reuse. Managing incremental changes as the system evolves is difficult and time-consuming.

Your Solution

Socrates Weaver has a unique rules-based integration methodology that offers an intuitive, highly automated, scalable solution for IP integration and system assembly. Weaver's rules are simple, high-level specifications of integration intent. Weaver synthesizes the rules to create the low-level connections. Because of the high level of abstraction, a single rule can result in hundreds, or even thousands, of individual correct-by-construction connections. Rules are simple to understand and review and can be easily shared and reused. Rules can be combined to create more complex structures and stored in libraries that can be used and reused across teams or companies. Weaver can also be used to build and dissolve design hierarchy without disrupting connectivity.

The screenshot displays the 'System Connectivity Status' window. It features a pie chart showing the connection status and a table with the following data:

Category	Value	Total	Percentage
Instances	10	13	0.0 %
Interface ports	916	288	0.0 %
Instance ports	0	1016	0.0 %
Total ports	916	1304	
Connected ports	0	1150	
%Connected	0.0 %	88.19 %	

Below the table, a 'Synthesize' button is visible. The background shows a code editor with rules for connecting NoC interfaces.

World-Class Support

Duolog's Socrates tools are complemented by Duolog's best-in-class support team that boasts a 99% customer satisfaction rating. Through our support and our design/verification services teams, Duolog is dedicated to helping our customers achieve their goals throughout the design cycle.

Benefits

Reduced development costs through automation of time-consuming, tedious and error-prone tasks

Eliminates bugs caused by human error and reduces risk of re-spin

Provides a fast and efficient path to a **standardized IP repository**

Ensures adherence to project & organisation **integration strategy**

Enables **large-scale reuse** of IP and subsystems and **accelerated derivative** development

Promotes **high quality designs** through **correct-by-construction methodology**

Features

- Full IP packaging capabilities including IP-XACT interface definitions
- User-defined properties to support customer-specific data and constructs
- Inheritance of interface definitions and properties for automated IP & subsystem packaging
- Supports both rules-based and manual connectivity
- High-performance connectivity engine with thousands of connections created in just seconds
- Real-time status bar illustrating connectivity progress
- Hierarchy manipulation via rules or GUI with no loss of connectivity
- Supports import & export of standard formats including IP-XACT, Excel, VHDL & Verilog
- Fully customizable suite of hardware, verification and software output generators
- Comprehensive suite of coherency checks with click-and-jump navigation to problem
- Effective visualization and data filtering to aid design navigation
- Eclipse-based product supporting a powerful and intuitive GUI and command-line operation; runs on Windows or Linux platforms

Socrates Platform

Weaver is underpinned by Duolog's renowned Socrates integration platform. The Socrates platform is the most complete solution in the industry for IP integration and system assembly, providing a correct-by-construction integration environment that can transform the quality and efficiency of your SoC designs.

About Duolog

Duolog Technologies is a leading developer of EDA tools that address the design challenges engineers face in complex IP integration. We enable our customers to deliver integrated systems more quickly and cost effectively than their competitors. Our innovative products and solutions allow for maximum productivity and control throughout the entire SoC lifecycle.



Contact Duolog

USA

Duolog Technologies Ltd
800 West El Camino Real
Suite 420, Mountain View
CA 94040
Tel: +1 408 531 6508

Europe

The Concourse Building
Beacon Court
Sandyford
Dublin 18
Ireland
Tel: +353 1 217 8400

Japan

INNOTECH Corporation
3-17-6, Shinyokohama
Kouhoku-ku
Yokohama-shi
Kanagawa 222-8580
Japan
Tel: +81 45 474 2293

China

Pinnacle Design Systems Ltd.
+86 21 2211 1539

Korea

SoAR Solutions Inc.
+82 31 717 3560

Taiwan

Maojet Technology Corp.
+886 2 2567 7643

Israel

Phoenix Technologies Ltd.
+972 9 764 4800