



Source Code Libraries

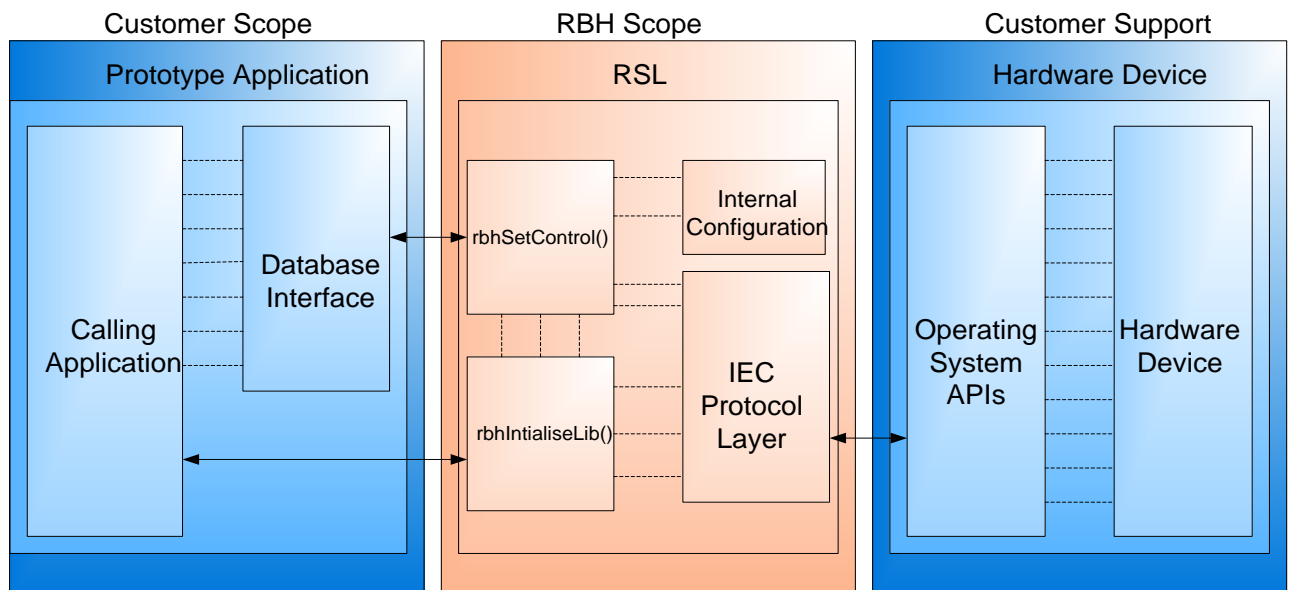
Solutions for SCADA communications and protocol translation

By ...

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RsL (RBH Source Code Libraries) or Protocol Stacks is flexible and most advanced solution for enabling your system / device “to exchange information / communicate” using various national and international standards. RsL designed to provide cost effective, reliable and quick integration eliminating the inconvenience typically encountered while bringing the full systems online and supporting various communication standards.

RsL: Sample Implementation (IEC 101 / 104)



How RSL Works?

RSL Implementation Basics

- ⇒ Write Application Program that will call the RSL library to be implemented as Client / Server.
- ⇒ Generate RSL Library
- ⇒ Load / Import RSL Library functions
- ⇒ Intercept calls from RSL, implement runtime RSL Calls

RSL Library Generation

- ⇒ RSL Compilation / Linker
 - Generate RSL .lib or .DLL file using Standard ANSI C compiler. We will be using Visual Studio.NET as compiler
- ⇒ RSL Loading
 - User must manually copy the generated .lib / .dll file to the location specified in the Calling Application
 - Must write Load / Import routines in the application.

Application Runtime Features

- ⇒ User must implement methods to intercept calls from RSL.
- ⇒ User must implement methods to call RSL Runtime functions

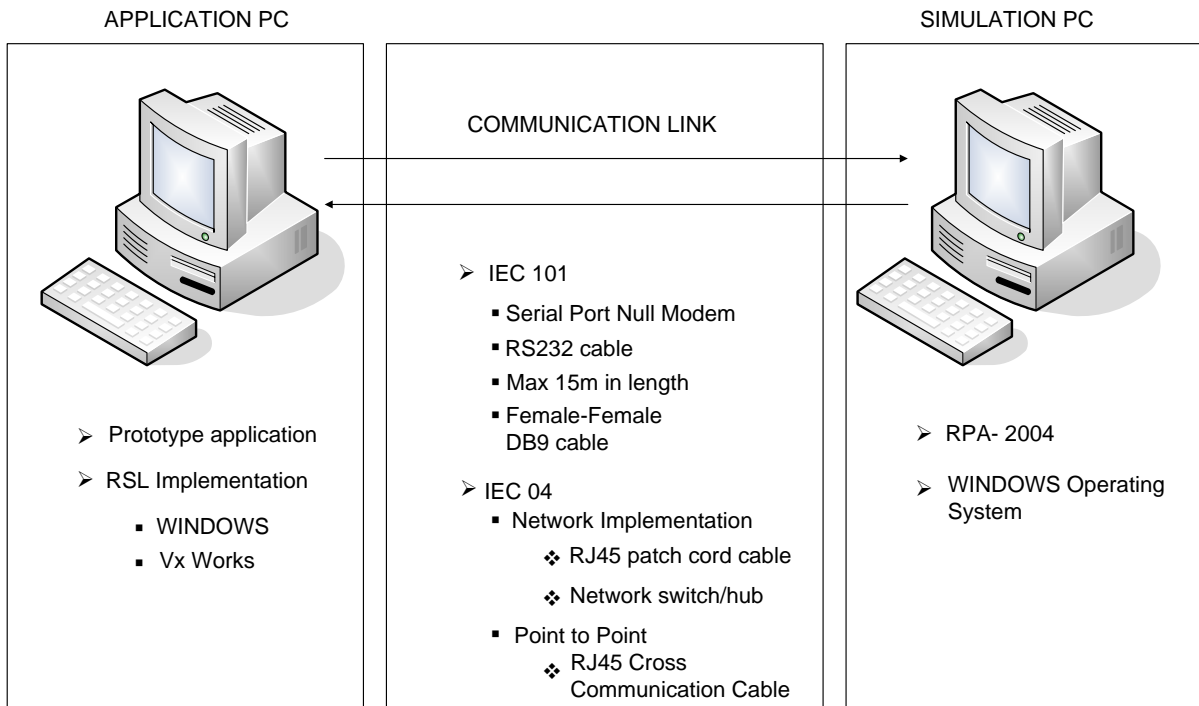
RsL Validation Model

Application PC

- ⇒ Modules
 - Prototype Application with samples of all the API Calls
 - Application database interface module
- ⇒ Database
 - Sample application database as reference for validation

Simulation PC

- ⇒ Modules
 - RPA 2004 Test Harness Software (or any 3rd Party Test Harness Tool)
- ⇒ Database
 - Sample application database as reference for validation



Protocol Support: (□ : Under Development, • : Supported)

Protocol	SCADA Mode	RTU Mode	Availability
IEC 60870 – 5 -101	•	•	Available
IEC 60870 – 5 -103	•	•	Available
IEC 60870 – 5 -104	•	•	Available
MODBUS RTU / ASCII / TCP	•	•	Available
IEC 61850	•	•	Available
SINAUT	•	-	Available
DNP 3	•	•	Available
ICCP	•	•	Available
HNZ	•	-	Available
Profibus DP	•	•	Available
Ethernet I/P (Allan Bradley)	•	•	Available
DLMS Serial	•	•	Available
DLMS TCP	•	•	Available

Key Features

- ✓ Complete Compatibility with Industry standard Protocols
- ✓ Written in ANSI C Source Code as per MISRA 2004
- ✓ Operating System (OS) Support
 - » Windows 2000 / XP/ XPE/ CE.NET
 - » Linux
 - » VxWorks
 - » UNIX
 - » Other OS can be supported, USER proved easy interface to define custom OS calls
- ✓ Licencing
 - » User can install on unlimited number of machines
 - » User can create unlimited number of Products using RSL (No runtime fees)
 - » RSL Licenence rights cannot be transferrred to another user.
- ✓ Fully working prototype application with sample of all API Calls is included
- ✓ RPA Pro: Protocol Anlysis and simulation tool is also provided as Testing Harness Apllication.