

IDEs for embedded system and application development tools

The customer is a leading Japanese IDE toolmaker.

Objective

- Integrated Development Environment (IDE) for embedded systems and applications development.
 - Support for visual design
 - Based on standards such as UML and state transition matrices.
- Simulator for Real-time OS to facilitate system development on windows environment.
 - Due to the popularity of windows as a development workstation, an application development tool developed for an RTOS needs to simulate the RTOS in windows by giving wrappers to the window calls.
 - Moreover the application source code also needs to be interpreted to simulate the execution on the simulated RTOS.
- Integration of 3rd party solutions.
 - As most IDE developers have a plug-in Architecture supported in their products.

System Overview

The Integrated Development Environment includes:

- Simulators for OS and related ANSI C Interpreter running on Windows facilitating development on Windows environment.
- A generic Framework development for support of Keypads, LCD panels and other HMI
- Development Tools for GUIs enabling the conversion of visual design representations to ANSI source code consisting of proprietary GUI subsystem based on graphics library for the specific OS
- Development tools for debugging based on ICE
- The visualization of debugging data consists of representing the current states of the emulated target in the form of STMs (Extended Hierarchy State Transition Matrix) in the IDE, setting code access and data access breakpoints etc making use of (COFF) Common Object File Format