HCLSoftware

HCL DevOps Code RealTime

Develop stateful real-time software for embedded and IoT applications in C++

HCL DevOps

With HCL DevOps Code RealTime you can develop your real-time applications in the Art language, at a higher abstraction level than what is possible with traditional C++ coding. In Art you can define state machines both textually and graphically, and automatically translate them into fast and readable C++ code which you can build for your target of choice. Several customizable validation rules check the correctness of your application so you can detect and fix problems early.

Features

01 A domain-specific language called Art, designed as an extension of modern C++, lets you build stateful real-time software in popular IDEs such as Visual Studio Code and Eclipse Theia

02 Art is a textual language, but also provides graphical diagrams such as state, structure, and class diagrams. Diagrams let you think and reason about your application at a higher abstraction level than what plain C++ offers

03 Detect problems at an early phase by automatic and customizable validation rules that check your application while you develop it

04 Art is translated to efficient C++ code automatically and incrementally as you type. Generated code saves you from tedious manual coding of state machine logic and makes thread safety a breeze

05 A portable and powerful run-time library, the TargetRTS, provides the run-time services needed by your application. With a long history of successful industrial use, this library is a battle-tested and rock-solid foundation for your application

06 A command-line tool for Art to C++ generation lets you integrate HCL Code RealTime into your build system and CD/CI pipeline

⟩ Benefits and value

Improve development speed and quality:
Save developers from tedious and error-prone coding of state machines and other boilerplate code. Use of automatic code generation ensures consistent quality code produced faster.

Flexible and powerful build system:
Transformation configurations provide high-level build settings and ensure consistent, fast builds for your platform of choice. Multiple variants of an application can be built from the same sources.

Collaborate with team members who are not proficient in C++ coding:
Graphical diagrams and high-level Art concepts are great tools for communication within and between cross-functional teams.

Synchronized textual and graphical notations:
Textual editing is more than 50% faster compared to diagram-centric editing, and a textual file format works best for tools such as Git or compare/merge utilities. Graphical diagrams, however, provide insight and visualization and help to manage the inherent complexity of software development.

Reuse legacy code without constraints:
Choose freely which parts of your application will benefit from the high-level concepts and diagrams of Art, versus those where traditional coding makes more sense. You can also keep using any existing libraries, both third-party and your own.

Visual Studio Code and Eclipse Theia:
Code RealTime is fully integrated into these modern IDEs for C++ development. Run it either as a desktop application or in a web browser.

About HCLSoftware

HCLSoftware is a division of HCLTech (HCL) that operates its primary software business. It develops, markets, sells, and supports over 30 product families in the areas of Digital Transformation, Data Analytics & Insights, AI and Automation, and Enterprise Security. HCLSoftware has offices and labs around the world to serve thousands of customers. Its mission is to drive ultimate customer success with their IT investments through relentless innovation of its products.

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