Customizing Papyrus-RT for Model-Driven Development of Rover Software

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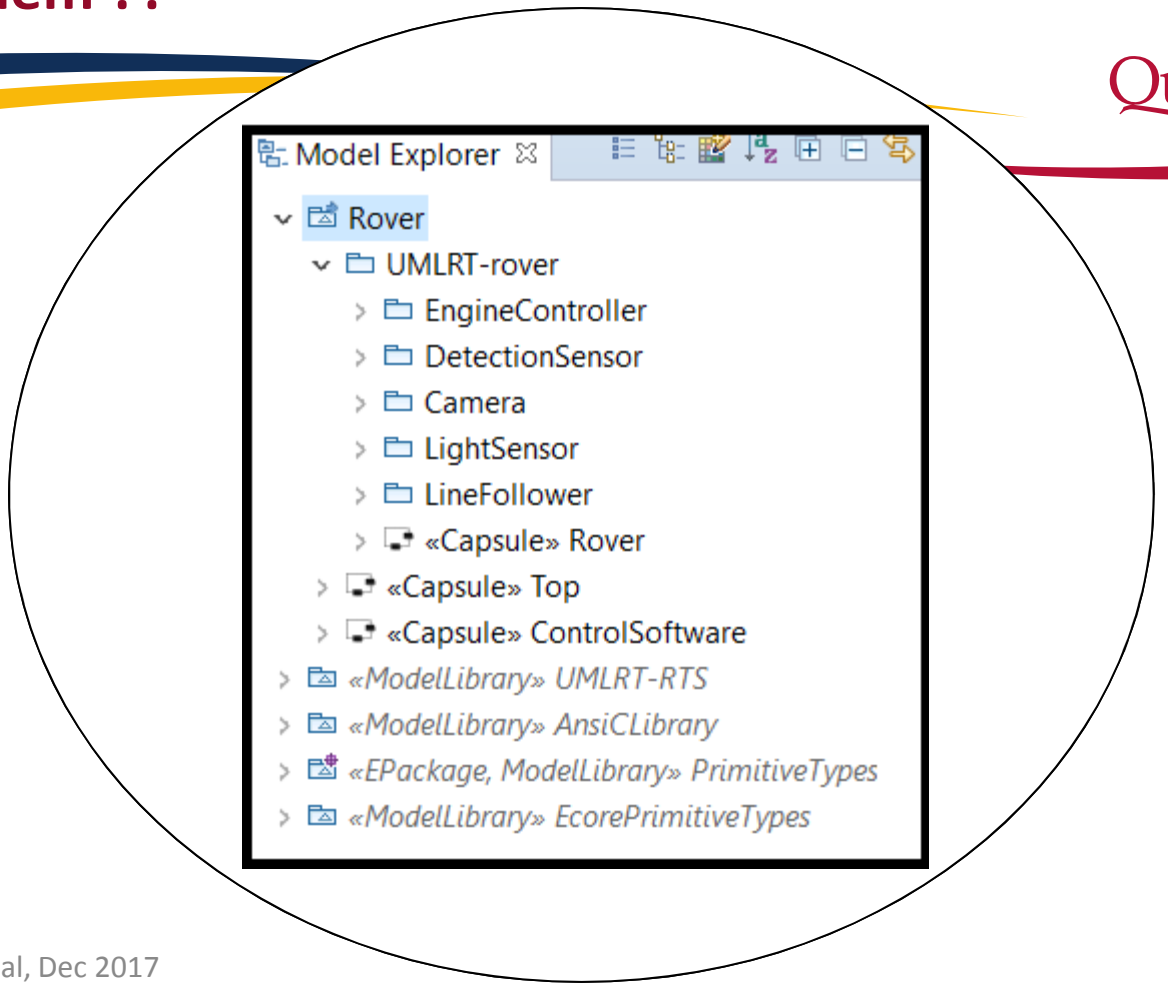
The Problem ??


Model Explorer
Rover
UMLRT-rover
EngineController
DetectionSensor
Camera
LightSensor
LineFollower
«Capsule» Rover
«Capsule» Top
«Capsule» ControlSoftware
«ModelLibrary» UMLRT-RTS
«ModelLibrary» AnsiCLibrary
«EPackage, ModelLibrary» PrimitiveTypes
«ModelLibrary» EcorePrimitiveTypes

Problem Statement

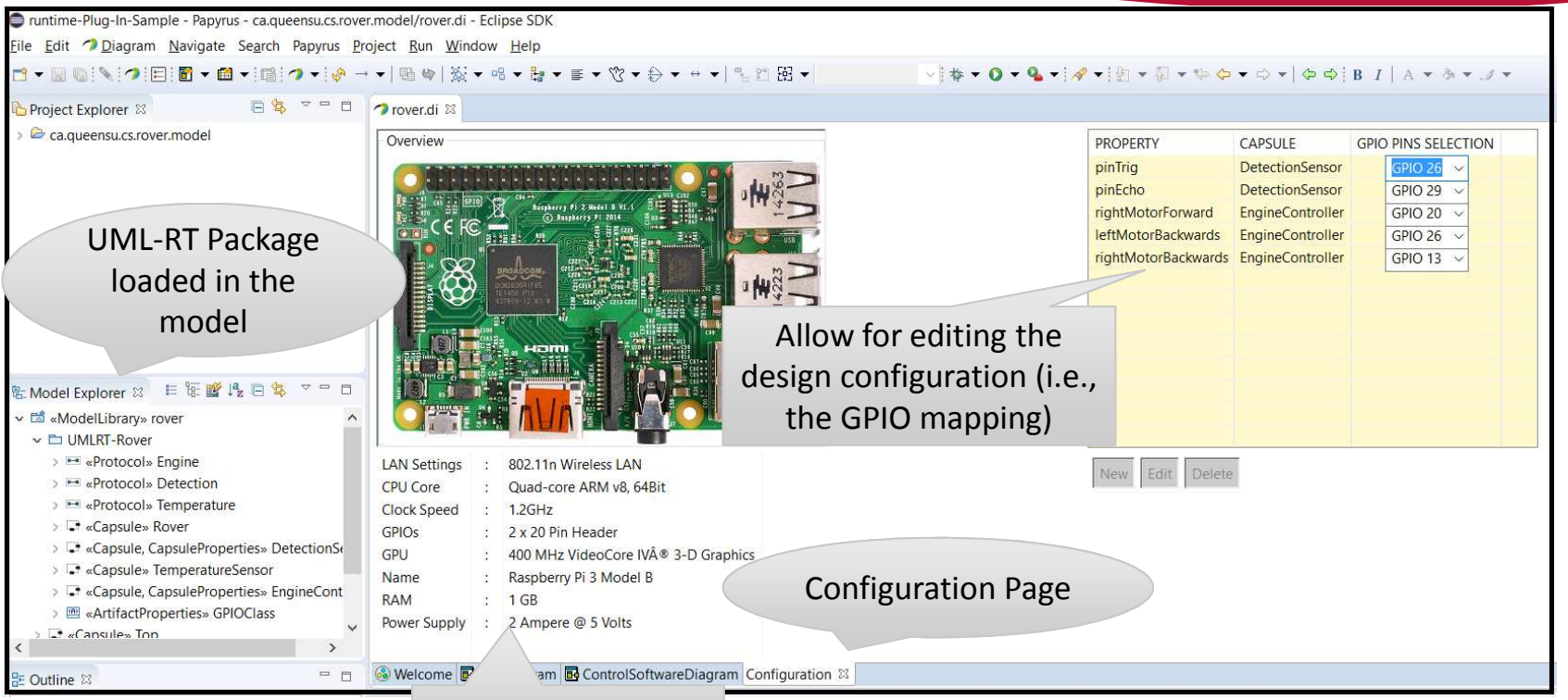
?

How to change or verify the design configurations with ease ?

Motivation ⟷ Solution

- Embedding a specific configuration page with the loaded library
- Providing an unique user experience when designing the Rover Model

Six Months Ago ..

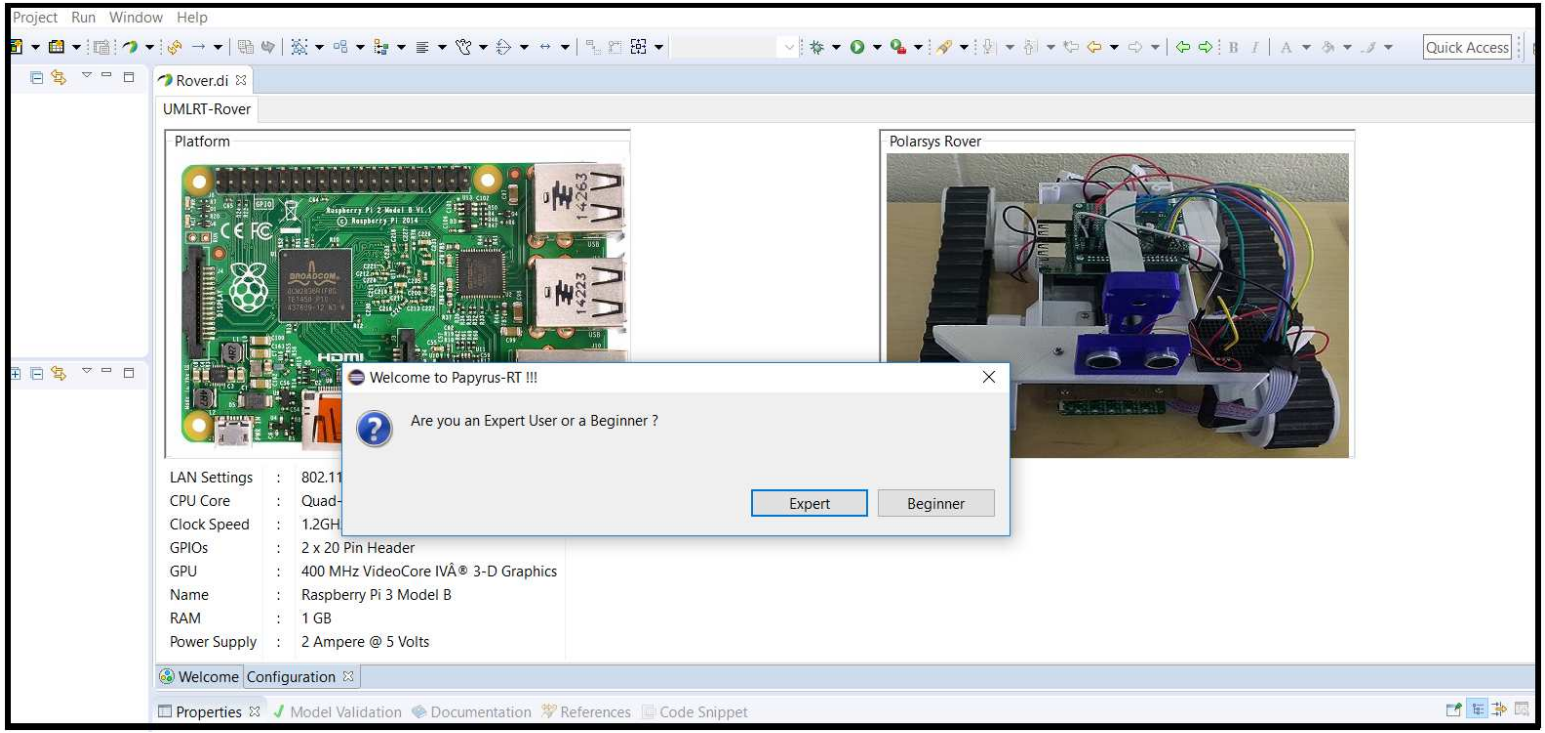


Since Then ..

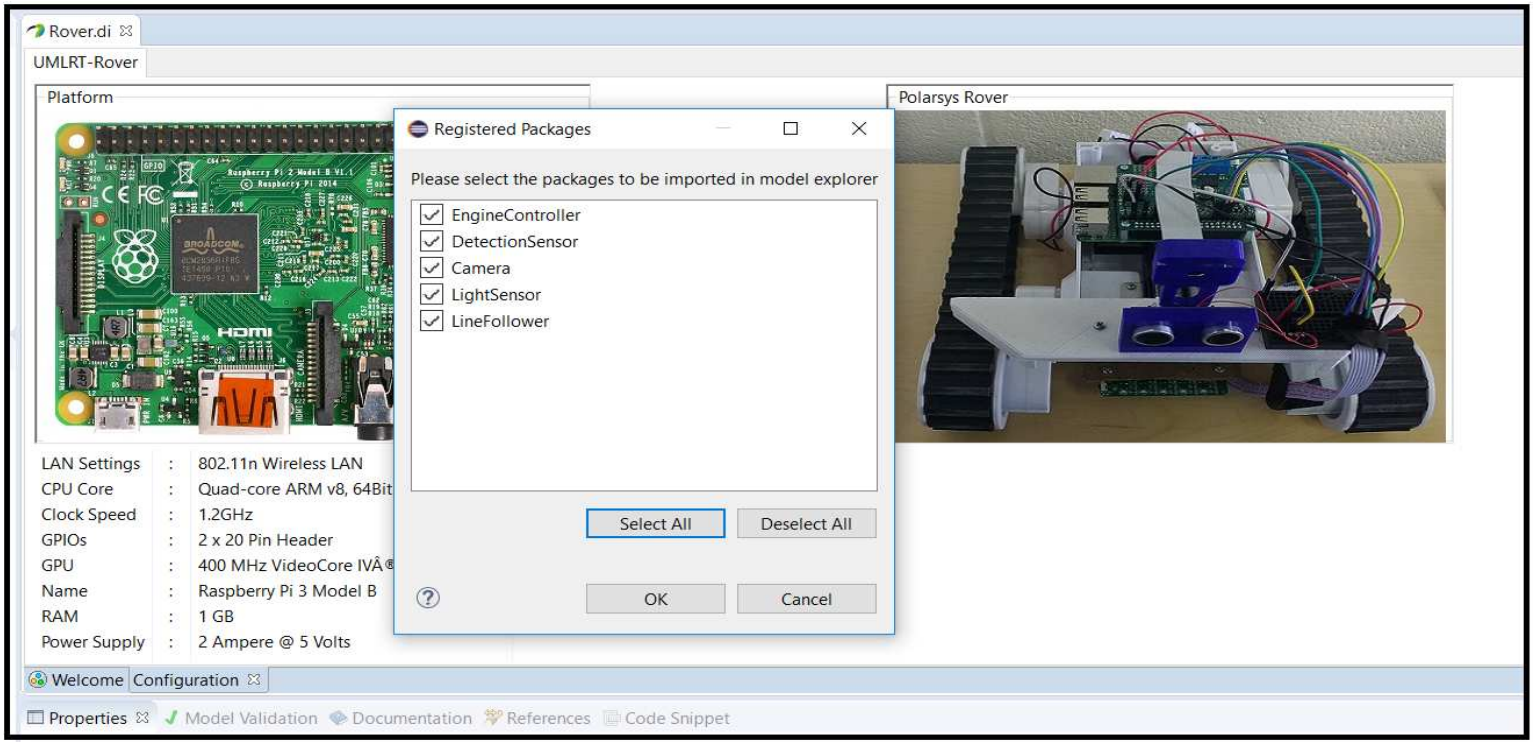
- Providing a base Rover template within Papyrus-RT
- Creating component specific configuration pages
- Dynamically creating & disposing new tabs within the configuration page depending on the loaded package

And Many More !!!

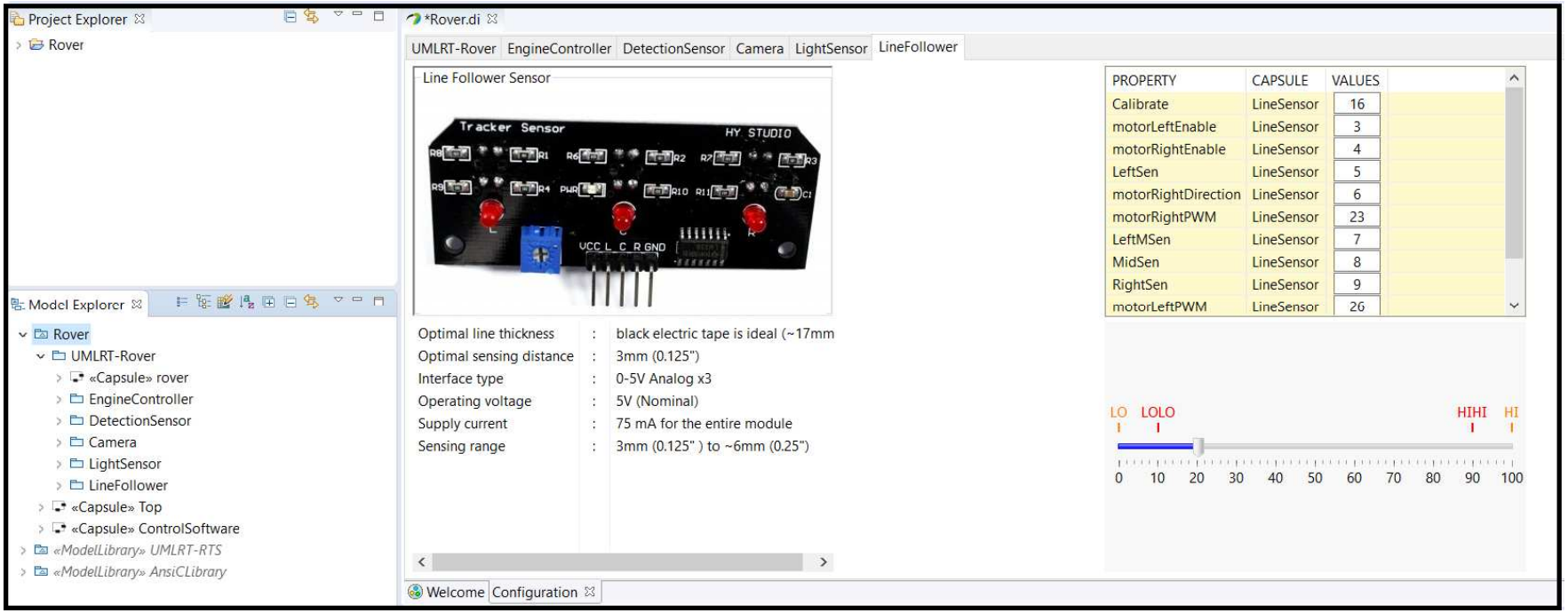
Current Implementation



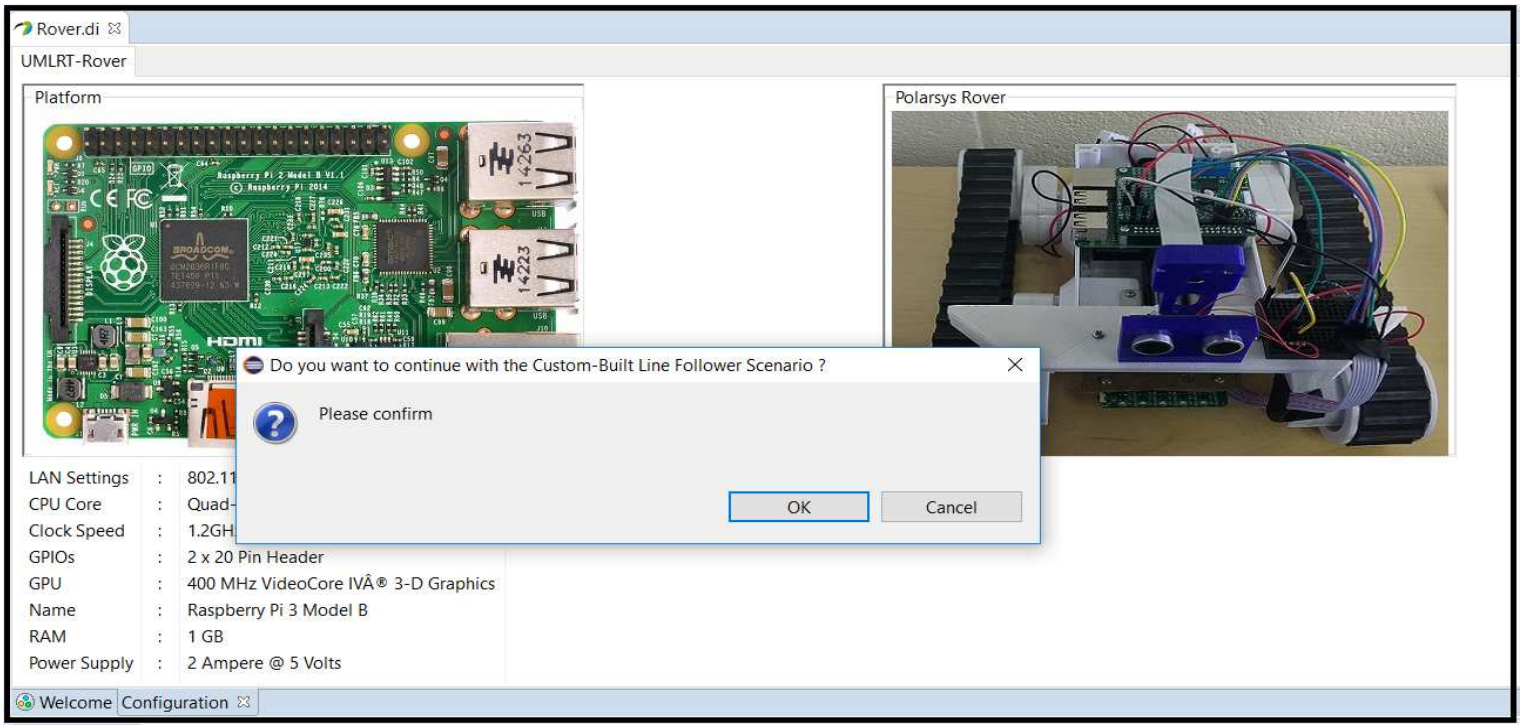
Current Implementation – Expert Mode



Current Implementation – Expert Mode



Current Implementation – Beginner Mode



Future Work

- Extending the concept of Configuration pages to more than run-time configurations, and to include some compile time customizations
- Detailed analysing of the Rover Case Study to define a feature models for the same

Thank You !!