

# Multi-rate control on PLECS with ACG SDK

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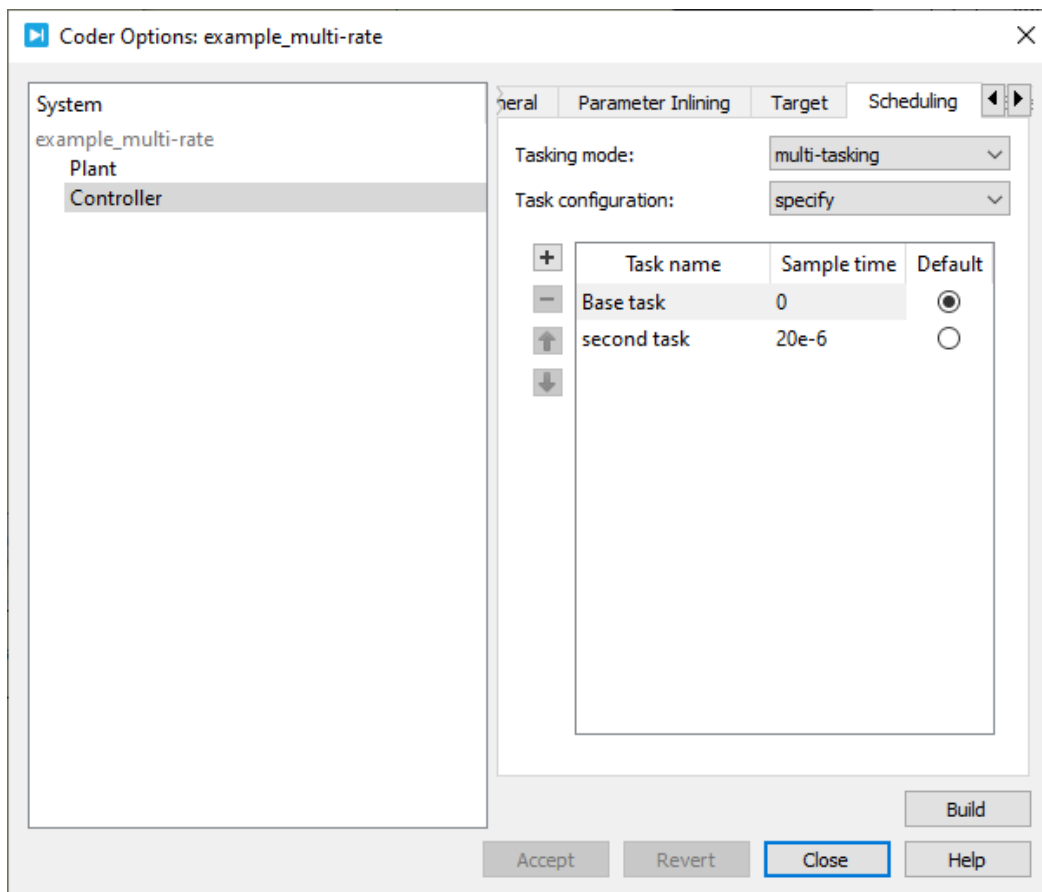
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This document provides instructions on how to implement Multi-rate control on PLECS with ACG SDK. It allows running part of the control at a slower rate, without impacting the real-time control, running at the base rate. This is typically useful for implementing a finite state machine or running a tracking algorithm.

An example of use is presented in [Maximum Power Point Tracking \(MPPT\) \(TN117\)](#). This feature has been integrated with **ACG SDK version 3.5.0.0**, which is available at <https://imperix.com/downloads>.

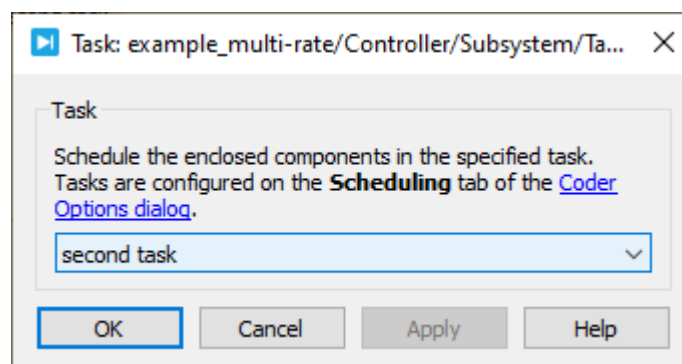
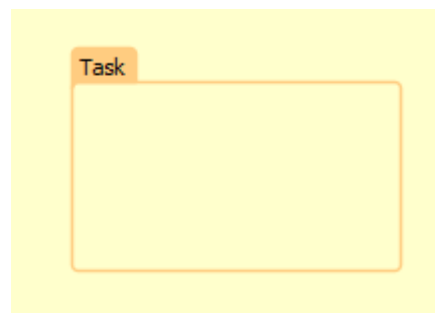
First of all, the task parameters must be defined:

- Go in the **Coder** -> **Coder Options...** (or use the shortcut Ctrl+Alt+B)
- Select **Controller** in the left panel
- In the tab **Scheduling**, set the tasking mode to **multi-tasking** and the task configuration to **specify**.
- Add a new task and select the sample time. It can be a variable defined in the simulation parameters.



Now that the task is defined in the Coder Options, it can be used in the model:

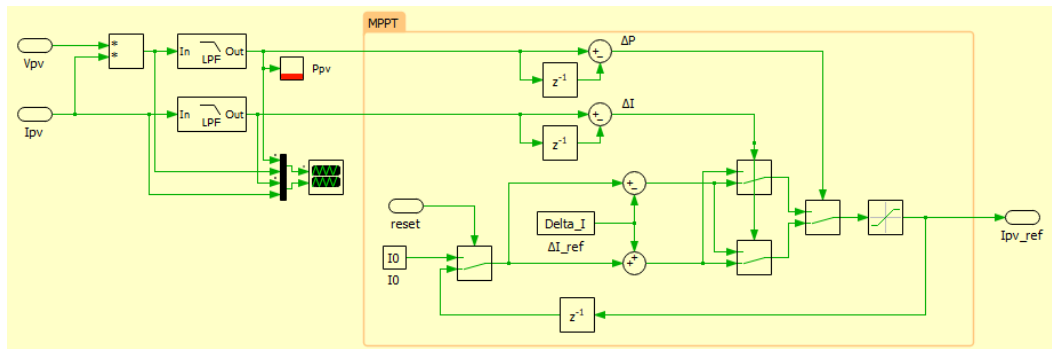
- Add the **Task** block from PLECS library.
- Double click on it, and select the previously defined task.



Everything that is placed in this task will now run at the defined period.

An example of use is presented in [Maximum Power Point Tracking \(MPPT\) \(TN117\)](#). It shows how one part of the control (in the MPPT task below) can be executed at a

slower rate than the main control code.



Multi-rate MPPT example on PLECS