**Demo points of interest**

The aim of this demo is to bring attendees through the model-based-design workflow, with emphasis on Physical Modelling, Controller Design, Code Generation, Verification and Validation. The practical example used for that is the simple problem of the inverted pendulum.

**Demo duration**

This demo is meant to be presented in one hour and-a-half. It can be shortened to one hour if needed and also easily extended to three hours. Here is the list of discussed topics:

|  |  |  |  |
| --- | --- | --- | --- |
| Topics | Duration [mins] | Material to use | Optional |
| Problem formulation | 10 | Slides/Flip Chart | NO |
| Simulink Projects | 10 | Demo | YES |
| Simulink Data Dictionary | 10 | Demo | YES |
| Plant Modelling | 20 - 30 | Slides/Demo | NO |
| State Machine Modelling | 20 - 30 | Slides/Demo | NO |
| Graphical Model Comparison | 10 | Demo | YES |
| Coverage Analysis | 10 | Demo | YES |
| Automatic Test Case Generation | 10 | Demo | YES |
| C Code Generation (SFC/SIL/PIL) | 10 - 20 | Slides/Demo | NO |
| VHDL Code Generation | 10 | Demo | YES |
| PLC Code Generation | 10 | Demo | YES |
| Auto tuning of PID parameters | 10 | Demo | YES |
| System Identification | 10 | - | YES |

**How to drive this demo**

Follow the slide show “Demo.pptx”. Hide slides belonging to chapters you do not want to talk about.