

PROGRESS TO SUCCESS

CDT 4.2: Software Tools

Lead: **plexim**
electrical engineering software

Partners: **signify**

AIT
AUSTRIAN INSTITUTE OF TECHNOLOGY

infineon

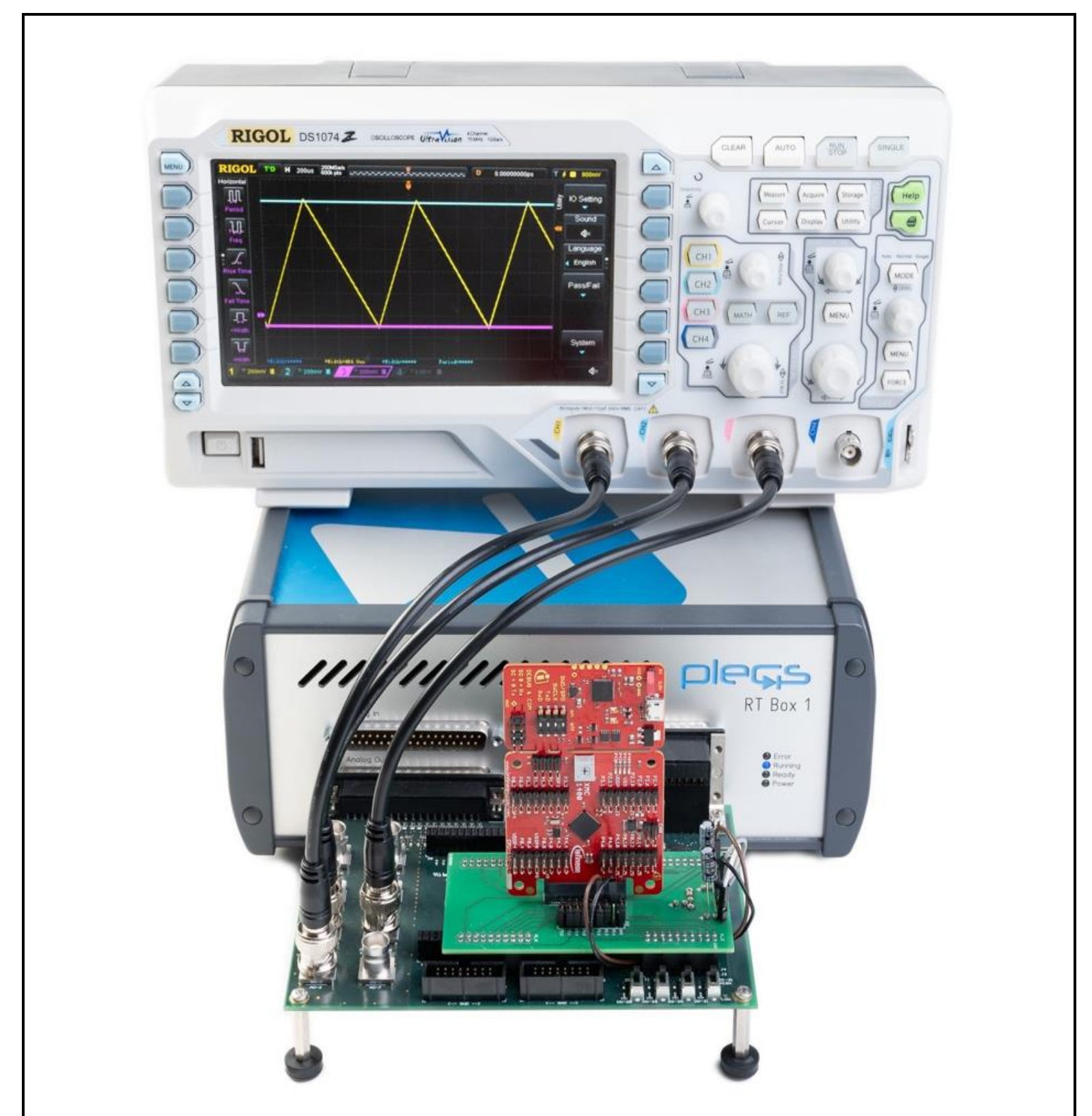
TSP for Infineon XMC microcontrollers

Goals

- Automated code generation for Infineon XMC microcontrollers using PLECS.
- Easy modeling and implementation of the control system. Reduction of the development time for a complete control and development cycle by 50 %.

Achievements

- Pre-releases sent to PowerizeD partners, **public release** planned for this year.
- Fixed-point arithmetic** added in the latest PLECS version.
- Various new blocks** such as Powerstage Protection, Quadrature Encoder, Pulse Capture and Edge Counter.
- Improved **ADC blocks** with a user-friendly interface.
- General **improvements** for code and user interface.



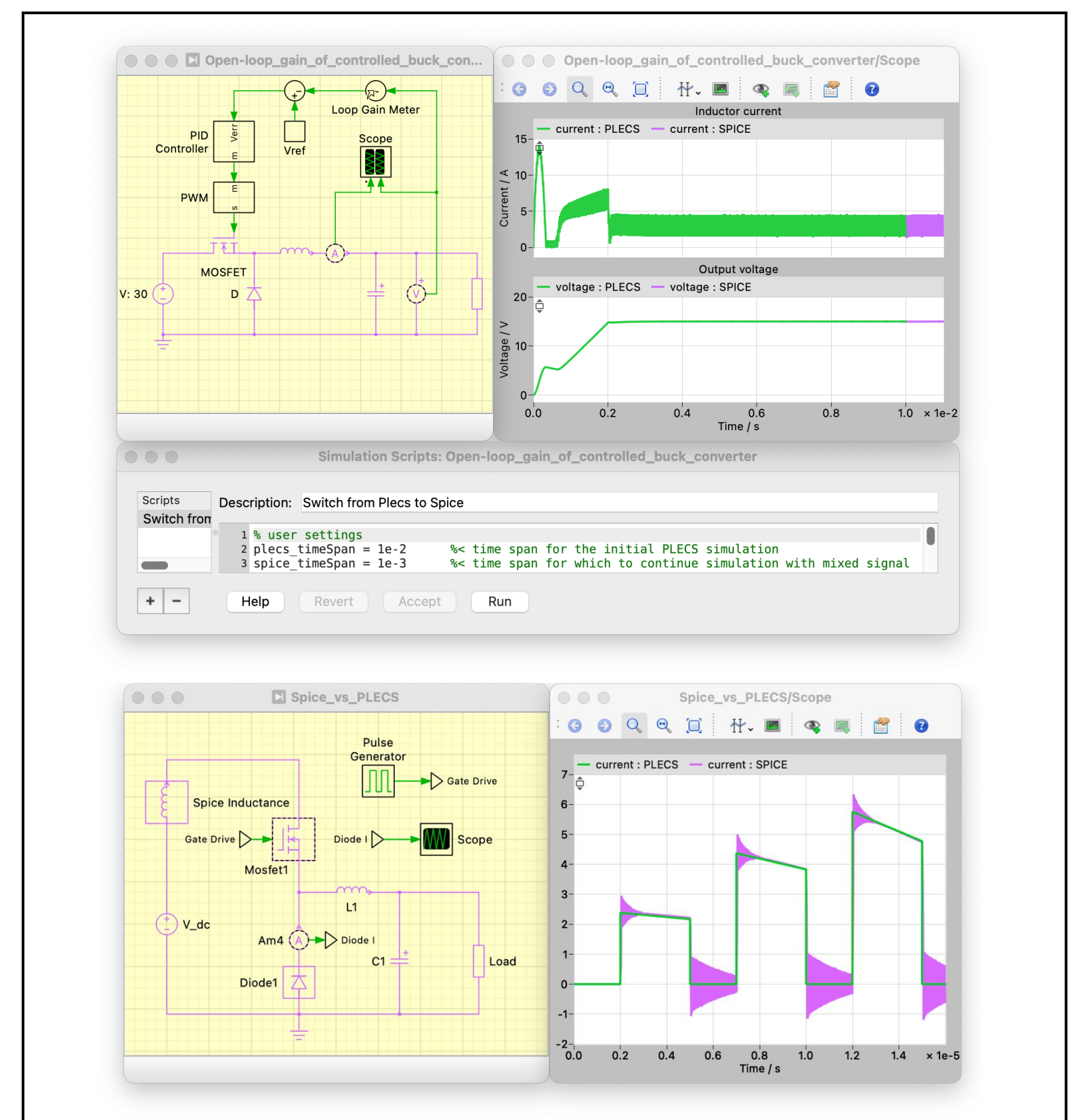
SPICE-like solver integration into PLECS

Goals

- Integration of device-level details into system-level simulations.
- Combine discrete-time control algorithms with detailed circuit models.

Achievements

- Import **SPICE models** from Netlists.
- First internal pre-release supports:
 - SPICE-only simulations**
 - Co-simulations:** Ideal (PLECS) & non-ideal (SPICE) parts of the system
 - Hybrid simulations:** Switch from ideal to non-ideal modeling at key points
- First applications** from PowerizeD partners are already being tested.



The project has been accepted for funding within the Key Digital Technologies Joint Undertaking (KDT JU), a public-private partnership in collaboration with the HORIZON Framework Programme and the national Authorities of Germany, Belgium, Spain, Sweden, Netherlands, Austria, Italy, Greece, Latvia, Finland, Hungary, Romania and Switzerland, under grant agreement number 101096387. Co-funded by European Union.

