



7th 4DIAC Users' Workshop

ETFA 2016, Berlin
September 6th

Welcome and Recent Activities of the 4DIAC Open Source Initiative

9:00

Agent-based local energy market control using 4DIAC

Smart Grid Automation with IEC IEC 61499

Human-Robot Collaborative Assembly: 4DIAC as base Technology in the SYMBIO-TIC project

Integrating FORTE with ROS

Architecture for services composition in OPC UA Servers using FORTE

Coffee break 10:30

Integration of OPC UA with 4DIAC

Cert-4FUN, Towards a Certified Compiler backend for IEC 61499

Towards using Formal Behavioral Specifications in IEC 61499 for Remote Software Health Monitoring

4DIAC in Teaching - Lessons from Lab Exercises and Student Projects

Open Discussion

Lunch Break 13:00

Programming Distributed Embedded Real-Time Control Systems with 4DIAC

The half day workshop will be accompanied by a half day hands on session where the 4DIAC team will be available for detailed discussions and explanation on using 4DIAC as well as on implementation details. The following topics can be covered:

- Short Introduction to IEC 61499 and 4DIAC
- Guided small control application example
- Implementing a control application for a simulated press
- Extending 4DIAC-IDE
- Overview on FORTE real-time execution and communication architecture

14:00

16:00

Coffee break

18:00



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What's New in 1.8.0



- 4diac-ide
 - Modernized icons
 - Updated Platform
 - Java 1.8
 - Eclipse Neon
 - Integrated Eclipse's automated error reporting
 - Rework of the ST algorithm parser
 - First version to generate communication function blocks automatically
 - First version to support monitoring of adapters
 - Improve monitoring
 - Reworked ECC editor
- Last non Eclipse release
- Many improvements and bug-fixes: 172 solved issues
- FORTE
 - Reduced memory requirements of device management by about 2/3rds
 - New Communication Layer: Raw
 - Platform support
 - Raspberry-SPS
 - CONMELON C1 PLC
 - Lego Mindstorms EV3
 - Analog IOs for Wago PFC 200
 - Odroid analog inputs

**The 4DIAC Team likes to say
thank you!**



**Many thanks to all
bug reporters,
feature requesters,
patch submitters,
*and discussions in the forum***

- Bug-list / feature-requests as starting point for involvement
- Source code provided in distributed version control system **Mercurial** and **GIT**
 - 4DIAC-IDE: <http://sourceforge.net/p/fordiac/fordiac-ide/>
 - FORTE:
<http://git.eclipse.org/c/4diac/org.eclipse.4diac.forte.git>
 - 4DIAC-LIB: <http://sourceforge.net/p/fordiac/fordiac-lib/>
 - 4DIAC-Systems: <http://sourceforge.net/p/fordiac/fordiac-systems/>
- Patches of collaborators will be reviewed and applied

Showing that you are using



Available at: https://www.eclipse.org/4diac/en_media.php

- 1.8 Long term support version
- Major 4diac-ide code clean-up announced and started
 - Greatly reduces maintaince effort
 - Finally usable subapplications
 - IEC 61499-2 XML file will be the new project storage format
 - Will be base for 4diac 1.90
- New control devices