# ASAM iLinkRT 3.0

## High-Speed Automation Access Protocol for MC-Server

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October 8/9, 2020
Technical Seminar

ASAM
Association for Standardization of Automation and Measuring Systems

# ASAM iLinkRT 3.0

Agenda


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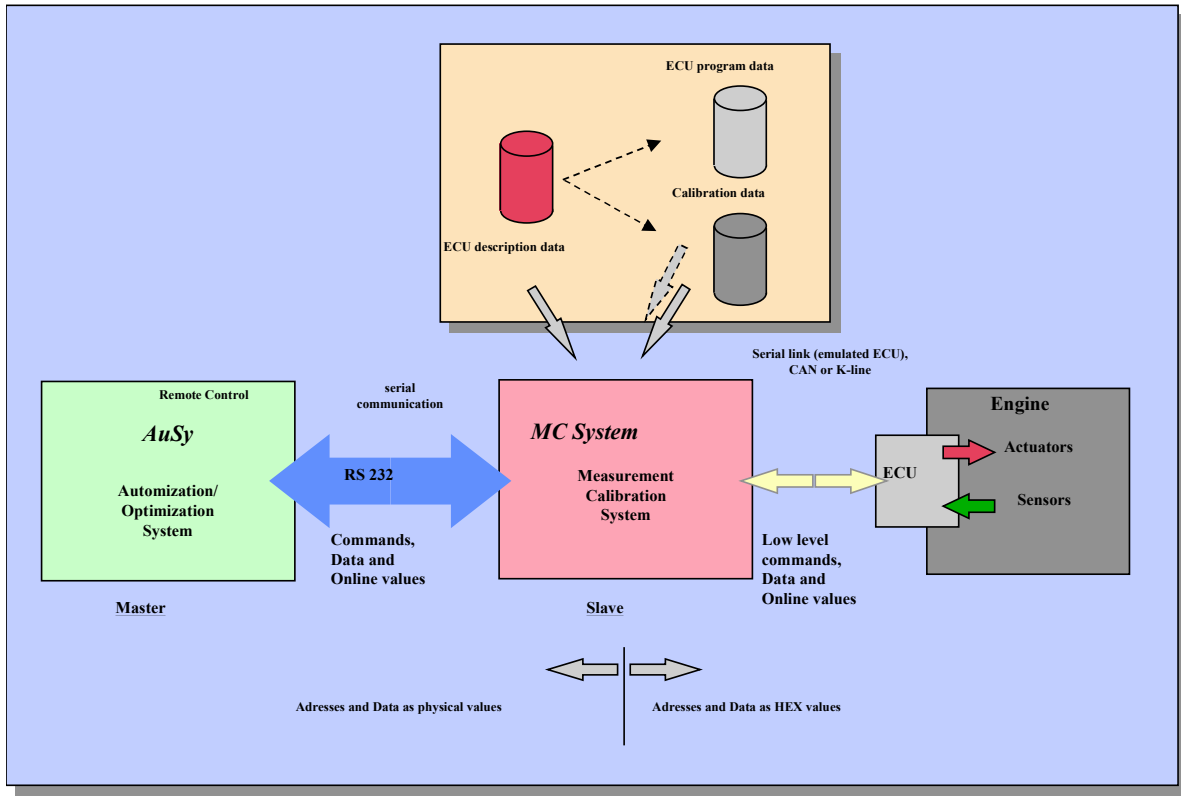
# ASAM iLinkRT 3.0

## Introduction - History

ASAP3 V2.1.1 1999-12-16

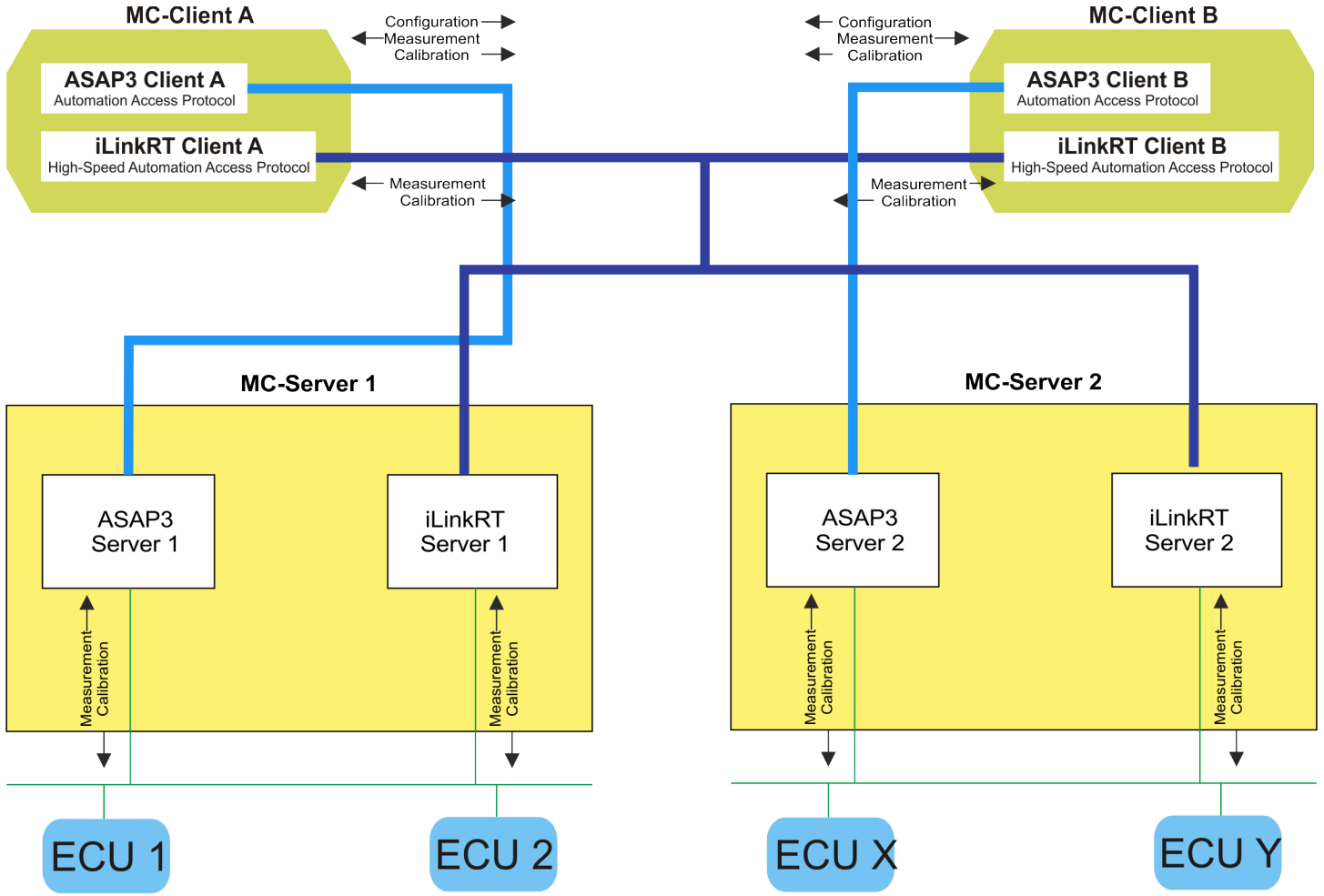


# ASAM iLinkRT 3.0

## Introduction - History

iLinkRT V2.0.0
ASAP3
2019-01-20

Successor: **ASAM iLinkRT V3.0.0**



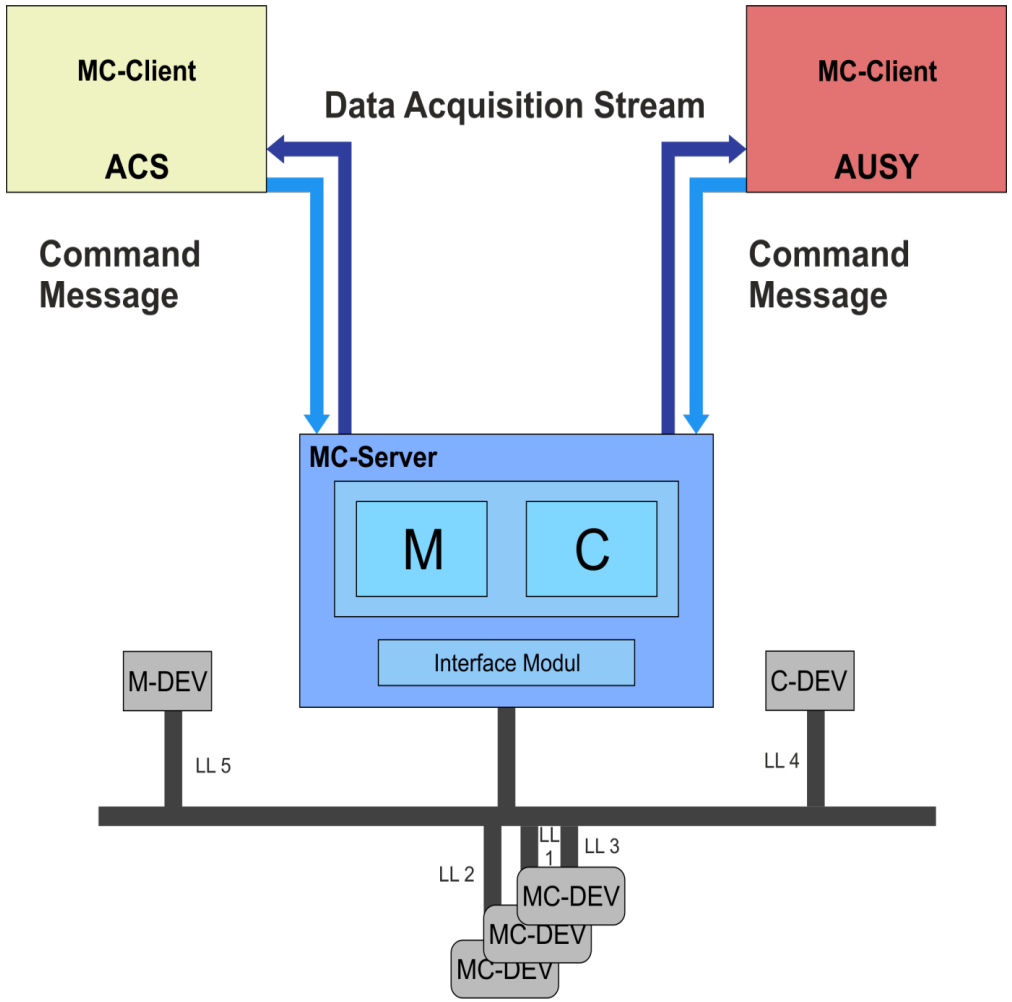
# ASAM iLinkRT 3.0

## Motivation

- Be independent of ASAP3.
- Reuse the advantages of ASAP3 like simple protocol, implementation independency, easy to understand.
- Reuse the performance aspect of the high speed iLinkRT standard like event driven measurement, calibration parallel to measurement.
- Provide multiple MC-Client / MC-Server communication to support use cases with simultaneous use of multiple tools.
- Support local and wide area networks with IPV4 and IPV6 architecture.
- Be open for collaboration with other standards like e.g. XIL.
- Easy to use recorder concept.
- Easy extendable protocol for future demands.

# ASAM iLinkRT 3.0

## Motivation – Solution



# ASAM iLinkRT 3.0

ASAM Project / ASAM Workgroup

## ASAM Project

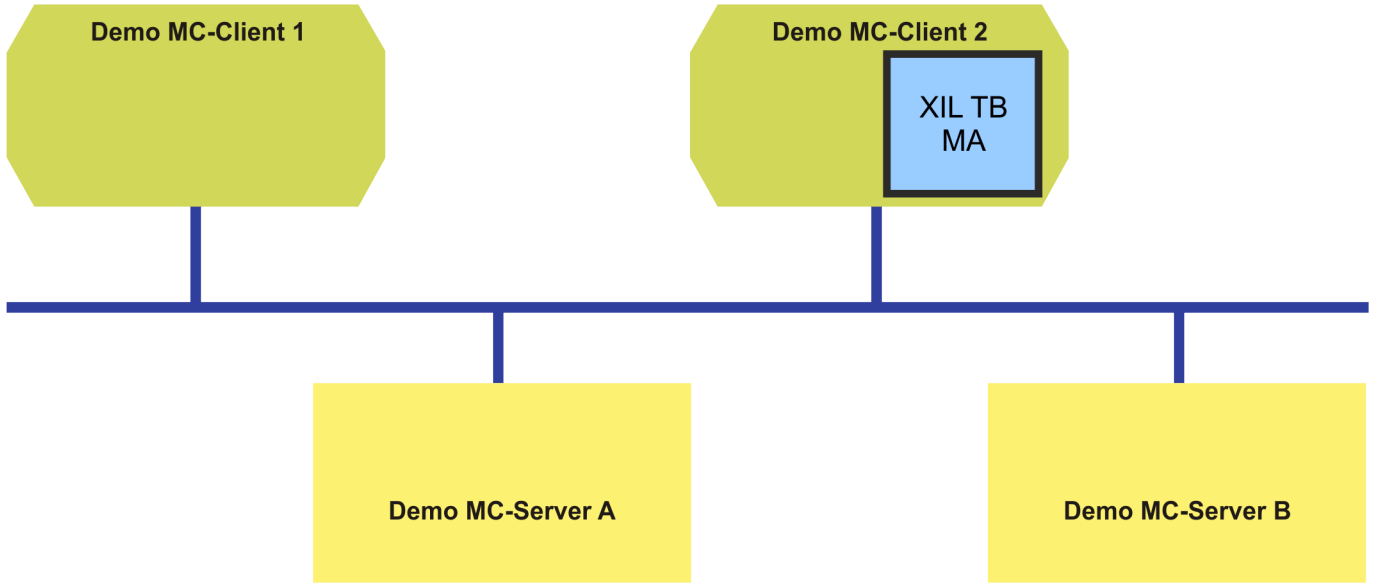
- *Project:* ASAM P2017-07 MC-3 iLink Real Time Protocol.
- *Project duration:* March 2019 to September 2020.
- Some prototype implementations with related cross tests already done.
- Workgroup contributes much more than 300 PDs!

## ASAM Workgroup

- ASAM e.V.
- AVL Graz
- BMW
- Daimler
- dSPACE
- ETAS
- iASYS
- KPIT
- KS Graz
- RA Consulting
- Vector
- We4Data

# ASAM iLinkRT 3.0

ASAM Project / ASAM Workgroup – Cross Tests already done




## Involved Companies

| | |
|---|---|
| • dSPACE | Client and Server |
| • ETAS | Client and Server |
| • Vector | Server |
| • We4Data | Client |

## Cross test

- ✔ MC-Server identification
- ✔ MC-Server configuration
- ✔ Measuring
  - ➢ Preconfigured
  - ➢ Single-Client
  - ➢ Multi-Client
  - ➢ Reconfiguration
- ✔ Recording
- ✔ Adjustment

**Summary:**

**Basic functionality worked well!**

# ASAM iLinkRT 3.0

ASAM iLinkRT High Speed Automation Access Protocol for MC-Server

## Editorial Work

- Bernd Wenzel, ASAM.
- Inputs from the requirement sheets for iLinkRT/XIL.
- A lot of contributions from the work group members.

## Key Features of iLinkRT 3.0

- iLinkRT allows multi MC-Client / multi MC-Server topology.
- iLinkRT protocol is based on two Ethernet UDP/IP communication channels.
- One channel is used for commands and the other one for data aquisition and event handling.
- Both, data and events are sent from the MC-Server to all MC-Clients as multicasts to reach a higher performance.
- Contains all relevant functionalities of ASAP3 V3.0 and of iLinkRT 2.0.
- **iLinkRT 3.0 is a highspeed-protocol to cover future demands between MC-Clients and MC-Servers.**

## Let me give you some insight into the ASAM iLinkRT 3.0 Standard

# ASAM iLinkRT 3.0

## Acknowledgements

**Many thanks to ASAM:**

- For providing the organizational frame to create this standard.
- For the nice iLinkRT logo!

**Many thanks to Bernd Wenzel, ASAM:**

- For his expertise in 3MC and creating standards and lots of editorial work!
- Also for his uncomplaining patience in some long, sometimes repeating discussions in the work group meetings!

**Many thanks to the work group members and their companies:**

- To the companies for participation of their employees in the workgroup and for hosting the work group meetings!
- To all work group members for their sustained efforts, contributions and many motivating discussions!

# Thank you for your attention!

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