



BiSS Interface User Group defines BiSS-LINE the first Open Source Interface in One-Cable-Technology

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translated from SPS/IPC/Drives 2016

BiSS Line

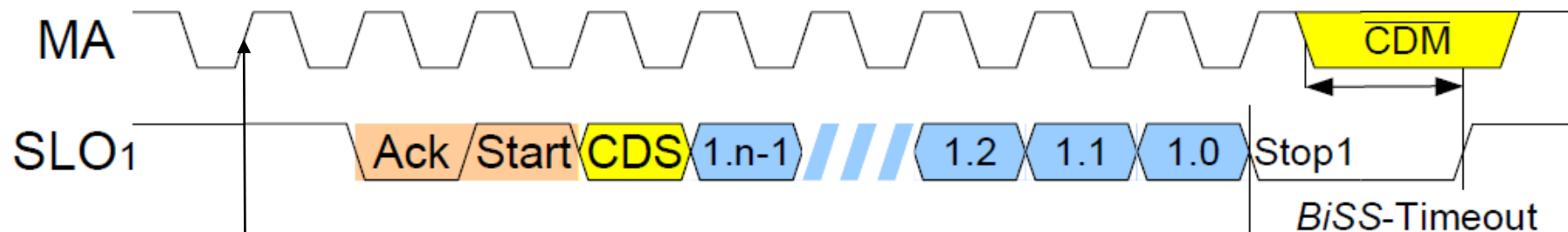
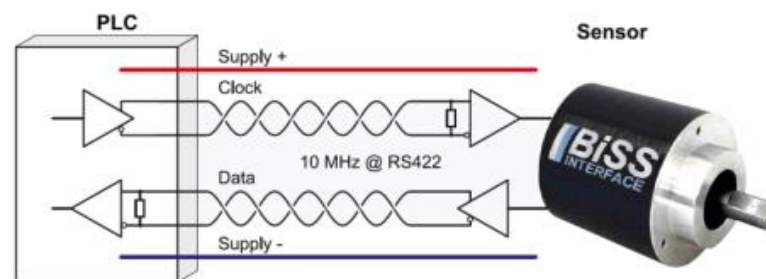
- Motivation
 - BiSS protocol
 - BiSS Line
 - Roadmap
-
- Conclusion

Hardware, sensors and protocol

- Proprietary One-Cable-Technologies on the market
- RS485 halbduplex
- Base band
- 2-wire with combined energy transmission
- 4-wire with separate energy transmission
- Available connection technology and cable
- Available hardware updated with firmware (iP)

BiSS C protocol

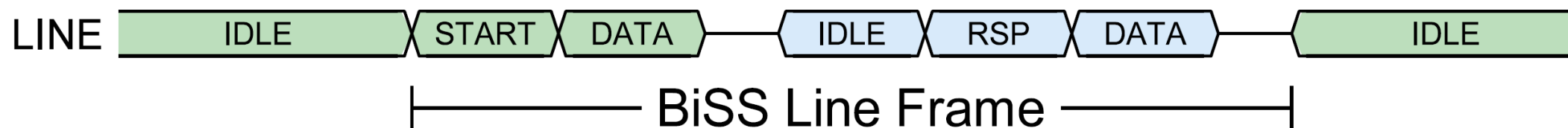
- Open standard
- 2 x RS422 unidirectional communication
- Permanent bidirectional
- Safety capable and certified



BiSS Line

basic data

- RS485 half duplex
- 12 MBaud
- 2- and 4-wire possible
- 8B10B clock recovery
- Forward Error Correction optional

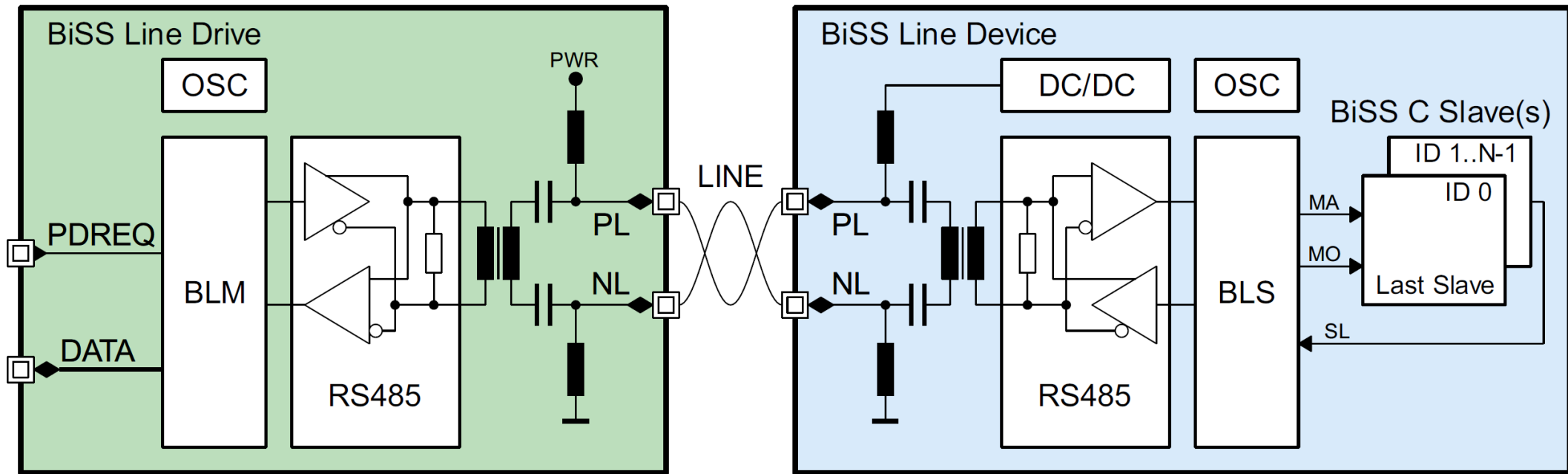


BiSS Line

with 2-wire



- RS485 half duplex with sensor supply

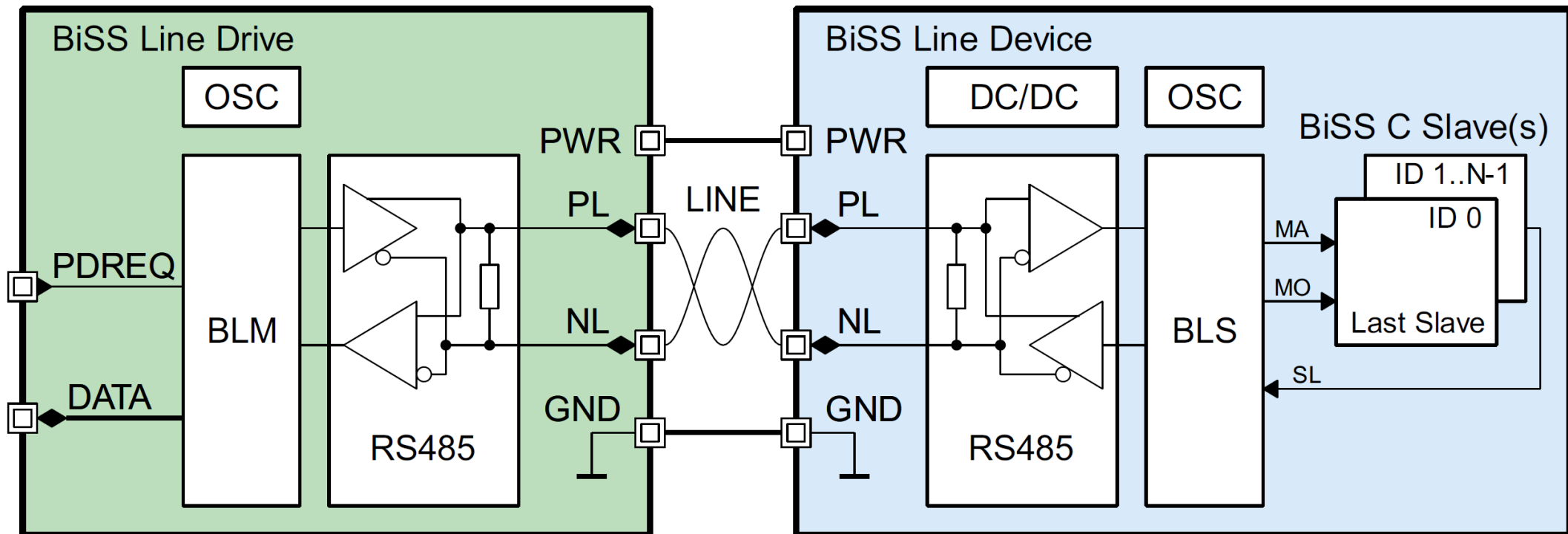


BiSS Line

with 4-wire



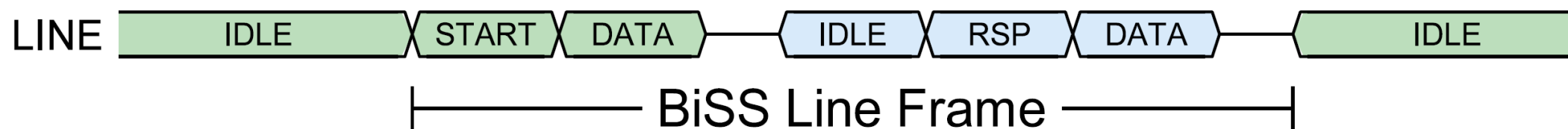
- RS485 half duplex and separate sensor supply



BiSS Line

communication

- Master – Slave based
- Pause signal
- Request
- Pause signal
- Reply

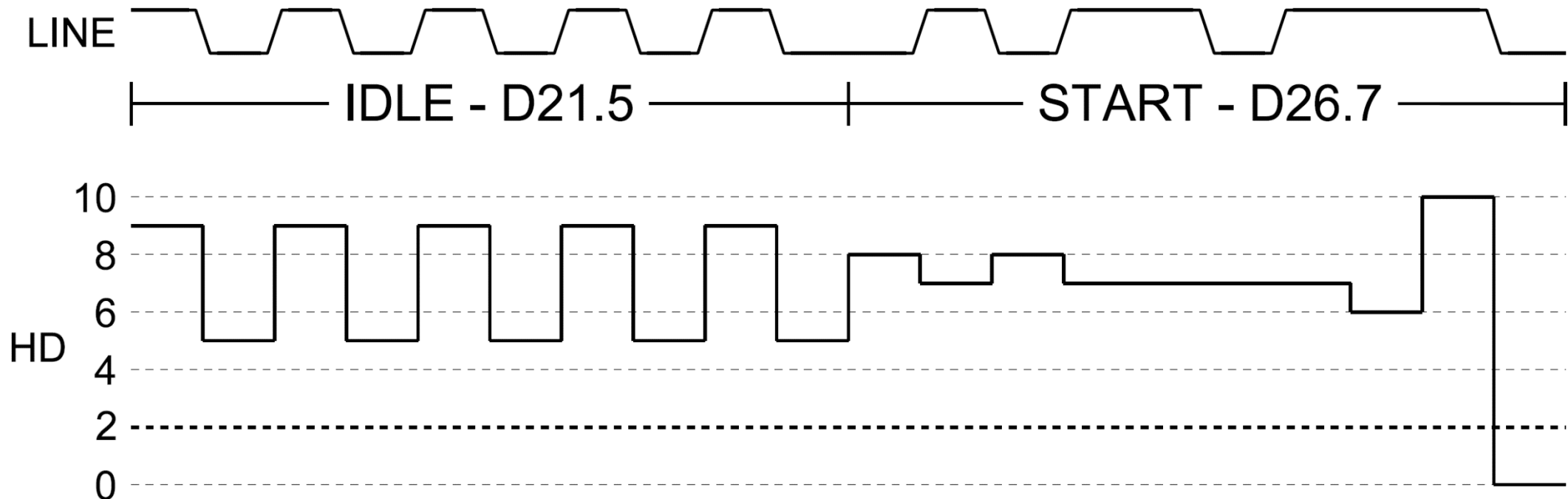


BiSS Line

robust symbols



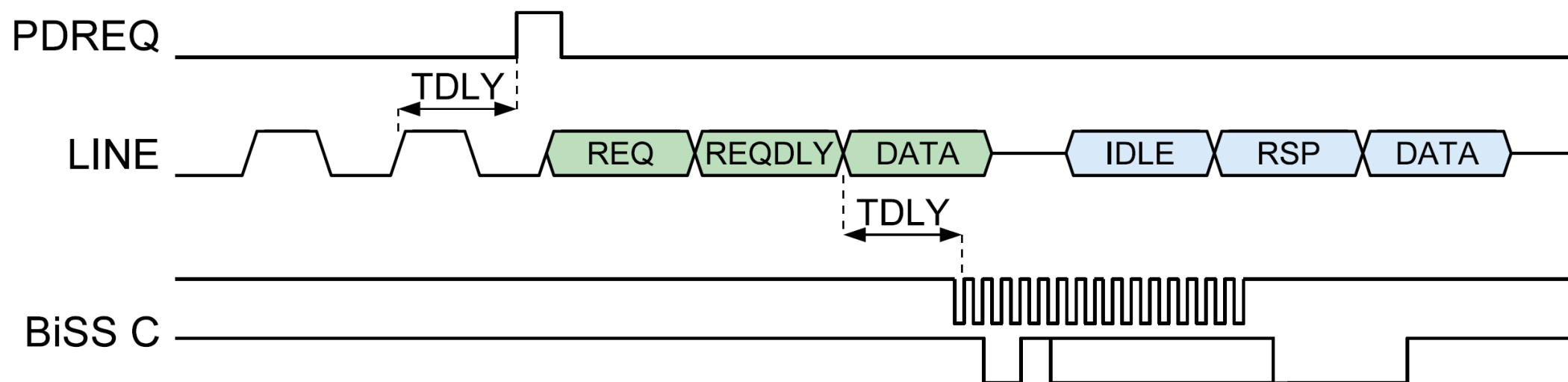
- Transition pause signal to request



BiSS Line

minimized jitter

- synchrone trigger for process data aquisition
- Transmitting the measured time difference



BiSS Line

roadmap



- Presentation at the show SPS IPC Drives November 2016
- Evaluation boards
- iP-BLM
- iC-BLS

BiSS Line

partner



- Fritz Kübler GmbH
SPS IPC Drives 2016, Halle 7A Stand 506
- Schneider Electric GmbH
SPS IPC Drives 2016, Halle 1 Stand 324
- FRABA GmbH
SPS IPC Drives 2016, Halle 7A Stand 146
- BiSS User (n.n.)



Life Is On

Schneider
Electric

POSITAL
FRABA

BiSS Line

conclusion



- Open standard
- 100 % BiSS C functionality and content
- Use of available hardware and sensors
- Robust transmission, FEC optional
- Minimized jitter for equidistant data acquisition

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