



# **Bosch's CAN bus**

## **Investigation of the standard**

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July 16, 2016

# INTRODUCTION AND BASIC CONCEPTS

- ▶ Bosch documentation [1]

# MESSAGE TRANSFER AND VALIDATION

# CODING AND ERROR HANDLING – 1

## Overview:

- ▶ Bit stuffing → control mechanism
- ▶ Distortions etc. → error handling to achieve error tolerance
- ▶ 5 different error types (Bit, Stuff, CRC, Form, ACK)

## CODING AND ERROR HANDLING – 2

- ▶ Message passing mechanism, no additional structure needed
- ▶ Errors broadcasted when detected
- ▶ Semantics important for correct transmission
- ▶ Drivers: reliability, error limitation
- ▶ Problem: new error types?

# FAULT CONFINEMENT

# BIT TIMING REQUIREMENTS

# CAN OSCILLATOR TOLERANCE



# CONCLUSION

# REFERENCES



Robert Bosch GmbH.  
CAN Specification.

[http://www.bosch-semiconductors.de/media/ubk\\_semiconductors/pdf\\_1/canliteratur/can2spec.pdf](http://www.bosch-semiconductors.de/media/ubk_semiconductors/pdf_1/canliteratur/can2spec.pdf).

Last accessed: July 16, 2016.