



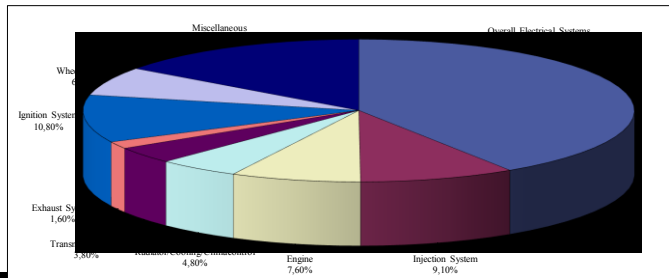
A Novel Diagnostic Approach for Automotive Systems Condition Monitoring

M. Selig, Z. Shi, A. Ball, and K. Schmidt

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Automotive Malfunctions 2009



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Structure

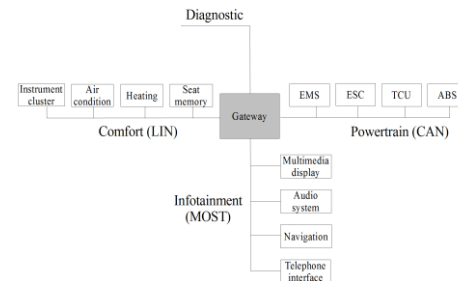


- Automotive Malfunctions 2009
- Automotive Cross Linking
- Disadvantages of the Current Diagnostic Approach
- Advantages of the Novel Diagnostic Approach
- Data Flow of the Diagnostic Tool
- Hardware Layout of the Diagnostic Tool
- Recording of the CAN Messages
- Experimental Setup
- Conclusion
- **Further Information**

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Automotive Cross Linking



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Disadvantages of the Current Diagnostic Approach



- Due to the network a single fault can affect several control units.
- Over the past years several different standards have been used.
- Only limited diagnostic services are available while the car operates in driving mode.

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Advantages of the Novel Diagnostic Approach

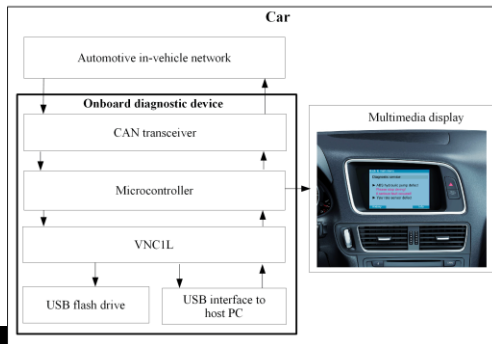


- More detailed fault information is provided:
 - The development of technically advanced vehicles is supported.
 - No parts of the car are replaced on suspicion in the garage.
- The fault information is available at any time.
- Offboard diagnostic tools are no longer necessary.

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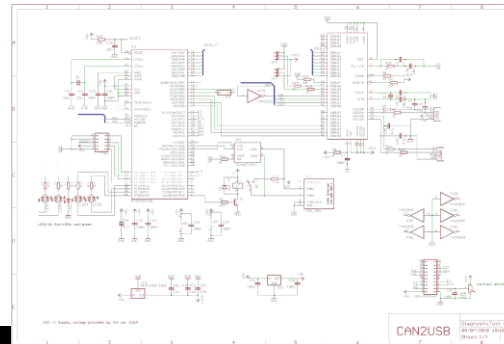
Data Flow of the Diagnostic Tool



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Hardware Layout of the Diagnostic Tool



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Recording of the CAN Messages



OBD interface
CAN circuit

Notebook USB
interface

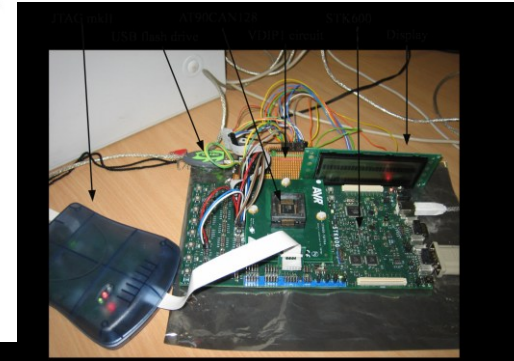
CANHACKER
software



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Experimental Setup



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Conclusion



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Further Information



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Thank you for your attention

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