Tessent Embedded Analytics
Benefits for the vehicles systems

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OTA
More than just an update!!
An Everyday Journey in a Connected Vehicle
Key-On Self Test
Electronic systems self test before becoming available.

Ready To-Go
Cell phone connected to Infotainment system for personal experience.

CAN bus Compromised
Compromised APP able to access CAN bus via infotainment unit.

Attempted Attack
Attempt to access memory for critical system via CAN and system bus.

Attack Detected
System Analytics Monitors detect illegal memory access.

Attack Mitigation
Reactive Bus Sentry monitors block illegal transactions.

Data Collection
Analytics data uploaded to the cloud for offline analysis.
Another Safe Happy Passenger
Development of automotive ICs

- **Testability** – Zero defect manufacturing test
- **Safety** – In System functional safety
- **Security** – Cyber security monitor and secure access
- **SLM** – In-Life data collection
Requirements for automotive ICs

Systematic Faults
- Does my product operate correctly?
- Incomplete Specs
- Bad RTL
- Verification gaps

Random Faults
- Does my product fail safely?
- EMI or electro-migration
- Permanent or transient

System Faults
- Does my system operate safely?
- Environmental
- External causes
- V2X

Malicious Faults
- Is my product secure from hacking?
- Encryption Vulnerabilities
- Denial of Service
- Untrusted IC

Safety - ISO 26262
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SOTIF – ISO 21448
Cyber Security - ISO 21434
Requirements for automotive systems

ISO/SAE 21434 Product Security

UNECE Vehicle type approval WP.29 155

Tier–3
Part/HW/SW supplier

Tier–2
Component supplier

Tier–1
System supplier

OEM

Approval Authority
Contact

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