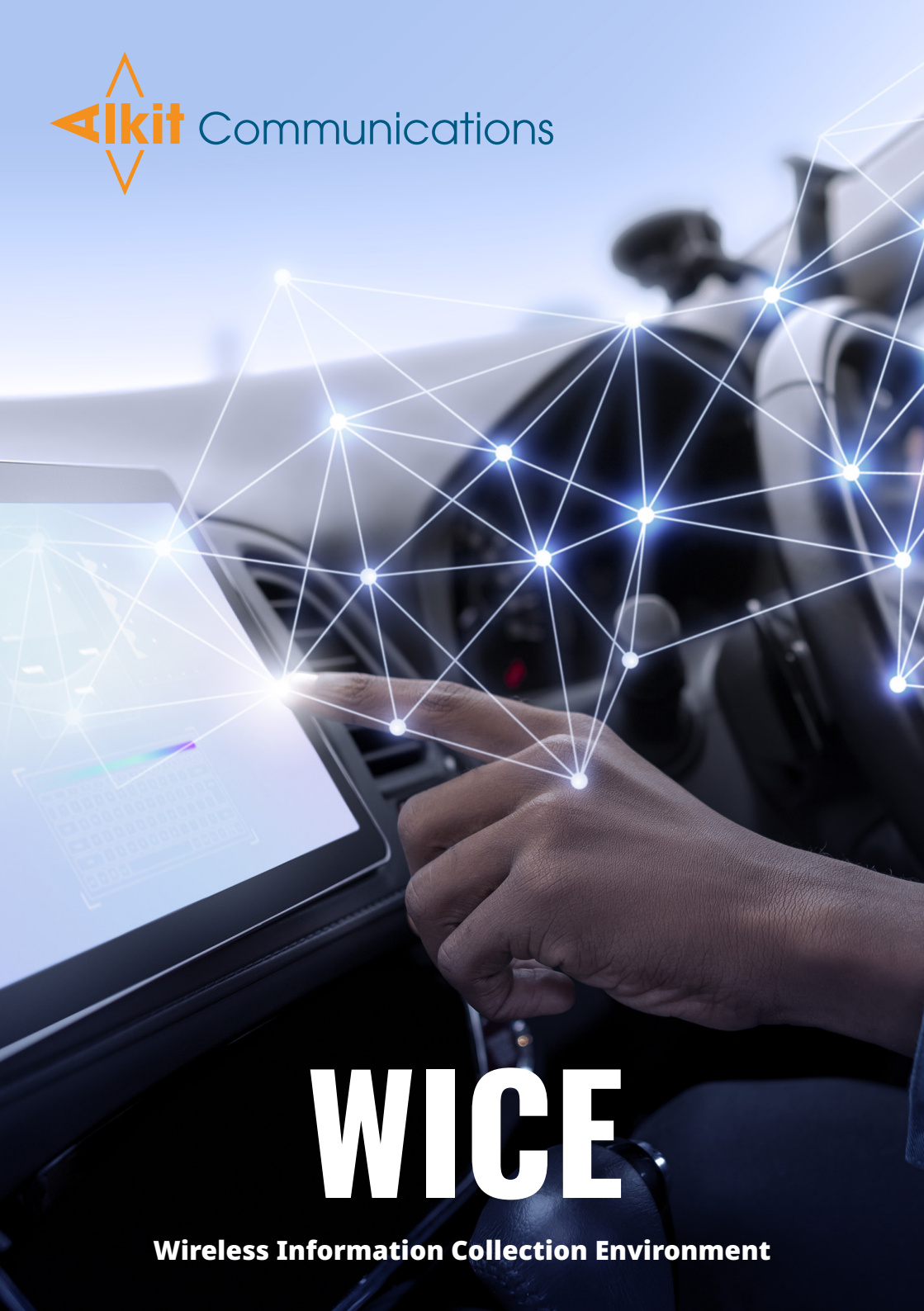
Alkit Communications



WICE

Wireless Information Collection Environment

WICE

WICE is a Data Collection System for connected vehicles. It consists of an in-vehicle unit where data is captured, and a back-end system where data is stored and processed.
Data collection tasks are created and managed using a web-based user interface (the WICE Portal). In addition to the web GUI, collected data and system services can be accessed through a Machine-to-Machine Application Programming Interface. WICE also provides Fleet Management services, including positioning and vehicle State-of-Health, and optionally a Rapid Prototyping service and a Remote Software Download service.

WICE Benefits

- Support data-driven product development
- Shorten development cycles by providing ubiquitous access to reliable data from connected vehicles
- Improve product quality by finding faults earlier
- Increase availability of test objects through fleet management and State-of-Health services
- Support proof-of-concept testing of new products and services through Rapid Prototyping service
- Promote data driven innovation

Data Capture

- Time series signals and frame logging on CAN/FlexRay/LIN/Ethernet interfaces
  - Trigger conditions for recording and control
  - MDF3 / MDF4 support
- Diagnostics and State of Health
  - Diagnostic Trouble Codes (UDS, J1939)
  - Snapshots, extended data
  - DoIP (Ethernet) and CAN
  - Diagnostic Log and Trace (DLT) files
- CCP and XCP
  - ECU-internal signals (DAQ lists and polling)
  - Memory segment read-outs
- External digital and analog i/o (including trigger button)
- WICE-internal signals (CPU load, memory usage, etc)
- Video and audio

Fleet Management

- Positioning
- Vehicle State-of-Health (ECU software versions, Mileage, Uptime, DTCs)
- Connectivity status

Cybersecurity and Privacy

- Role-based access to resources and data
- Supports anonymization and pseudonymization of specific sensitive data (e.g. VIN, GPS)
- Supports retention time of data
- PKI-based secure telematics through strong encryption (TLS 1.3) and certificates (X.509)
- ISO/SAE 21434 Cybersecurity Engineering

Back-end Data Processing and Integration

- Data analytics through Grafana
- User administration, single sign-on integration
- Message queue integration
- Service Oriented Architecture, designed for scalability

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