CAR 2 CAR Communication Consortium

WG Workshop 3 - Wireless Aspects for deployment

Station Management - Overview of other Management Functions
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Management Layer in ITS Station global architecture
Functional View of the Management Layer

- The role of the Management layer is to
  - provide management functions
  - coordinate operations across the various layers
  - give access to cross-layer parameters through a MIB

Functional View of the Management Layer (cont.)
Functional View of the Management Layer

- The role of the Management layer is to:
  - provide management functions
  - coordinate operations across the various layers
  - give access to cross-layer parameters through a MIB
- Most of these functions operate internally in an implicit manner when implemented
  - e.g. Station Management is responsible for the station initialization and configuration of the ITS station
- Only part of these functions are needed for Day 1 deployment (next slide)
- Only part of the respective SAPs are mandatory for Day 1 deployment: those that
  - ensure inter-operability of Day 1 applications
  - ensure upward compatibility / coexistence with further applications

Functional View for Day-1
Global Station Management

- Configuration Management
  - Initialization and internal configuration of the station
  - Record the station parameters in the MIB

- Identities Management
  - MAC, IP addresses, Station ID, Driver ID, …
  - Shared with Security Layer (protects the identities, notifying when it should be updated, etc…)

- MIB
  - Virtual database containing the parameters common to several layers of the ITS model
  - Global parameters: station type, status, current pseudonym used, …
  - Access parameters: MAC address, transmit power, channel busy time, data rate, delay, …
  - GN parameters: DCC-Net, GeoNet Address, …
  - Facilities parameters: ITS Station Id, position, time, speed…

Operational components

- Cross-layer Management
  - Managing and sharing common parameters for multiple layers (MIB)
  - Congestion Control Management: coordination between DCC mechanisms at Access, Network and Facility layers

- Communication Management
  - Selection of best communication profile according the application requirement (Transport, Network, Access)
  - Multi-channel Operation (previous presentation)
  - Routing tables Management, location table (georouting)
Summary

- Management Layer is responsible to coordinate operations in the ITS Station
- Most of the functions defined in a formal view do not mandate standardization
  - Internal operations and parameters handling
  - Easier development and testing
- Communications Management needs close attention to guarantee upward compatibility and future interoperability
  - Multi channel operation
  - Communication profile selection [Transport, Network, Access]

Thank you for your attention

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