

CAR 2 CAR Communication Consortium

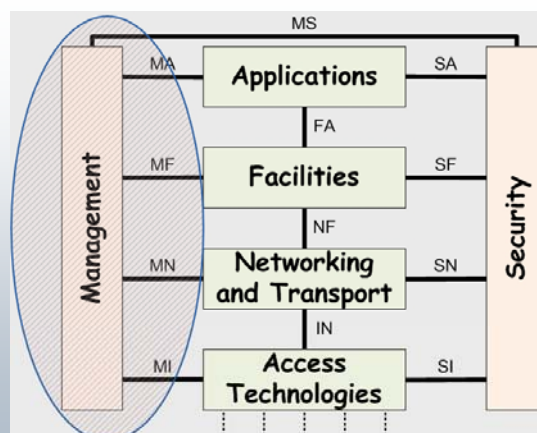
WG Workshop 3 - Wireless Aspects for deployment

Station Management -
Overview of other Management Functions

Presenter : Michelle WETTERWALD - EURECOM



Management Layer in ITS Station global architecture



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Functional View of the Management Layer

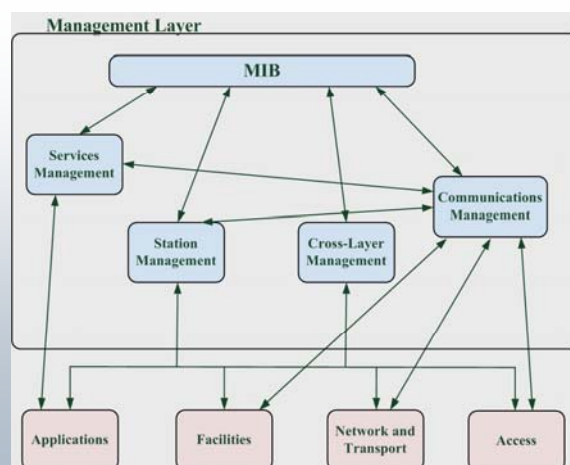
- The role of the Management layer is to
 - provide management functions
 - coordinate operations across the various layers
 - give access to cross-layer parameters through a MIB

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Functional View of the Management Layer (cont.)



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Functional View of the Management Layer

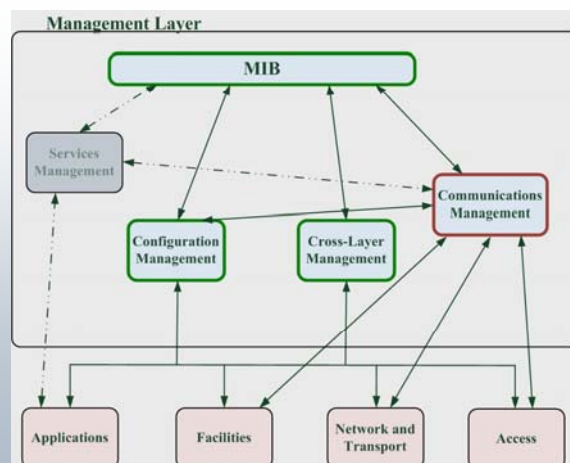
- The role of the Management layer is to
 - provide management functions
 - coordinate operations across the various layers
 - give access to cross-layer parameters through a MIB
- Most of these functions operate internally in an implicit manner when implemented
 - e.g. Station Management is responsible 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

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Functional View for Day-1



Station internal operations. No mandatory standards

Communications profile selection policies. Standards required for interoperability

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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...

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Operational components

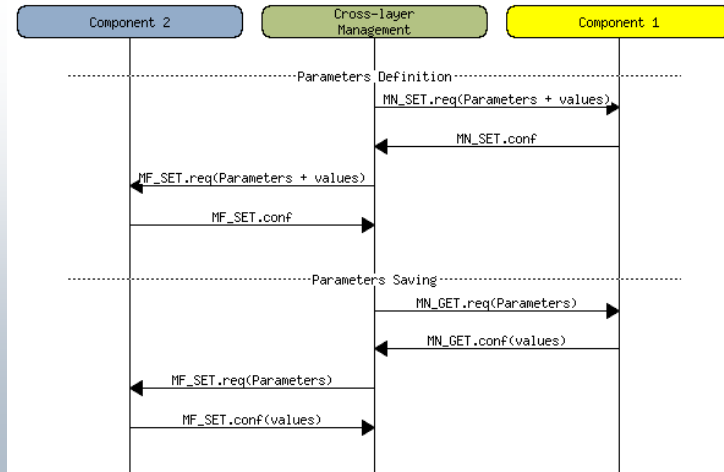
- Cross-layer Management
 - Managing and sharing common parameters for multiple layers (MIB)
 - Congestion Control Management : coordination between DCC mechanisms at Access, Network and Facility layers
- Communication Management
 - Selection of best communication profile according the application requirement (Transport, Network, Access)
 - Multi-channel Operation (previous presentation)
 - Routing tables Management, location table (georouting)

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Cross-layer common parameters sharing (MX interface)

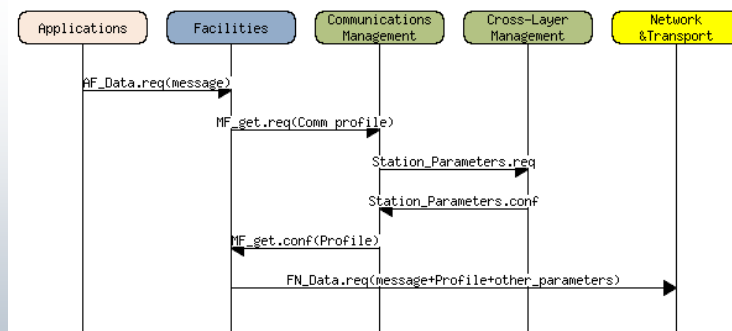


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Communications Management



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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]

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Thank you for your attention

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