



Architecture for Cooperative Systems

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Agenda

- Cooperative Systems – quo vadis?
- CVIS Architecture
- Architecture Standardisation





What is a Cooperative System?

A cooperative ITS is a subset of the overall ITS that

- communicates and
- shares information

between ITS Stations to

- give advice or
- take actions

with the objective of improving

- safety,
- sustainability,
- efficiency and
- comfort,

beyond the scope of stand-alone ITS



SATELLITE COMMUNICATIONS



TERRESTRIAL BROADCAST



ITS: The larger picture

MOBILE

Intermodal Communications

Navigation

MAN



Vehicle-to-Vehicle



Safety Systems



Traffic Signs



Passenger Information

Travel Assistance



WLAN



Trip Planning



Adaptive Cruise Control



Fleet Management



Toll Collection



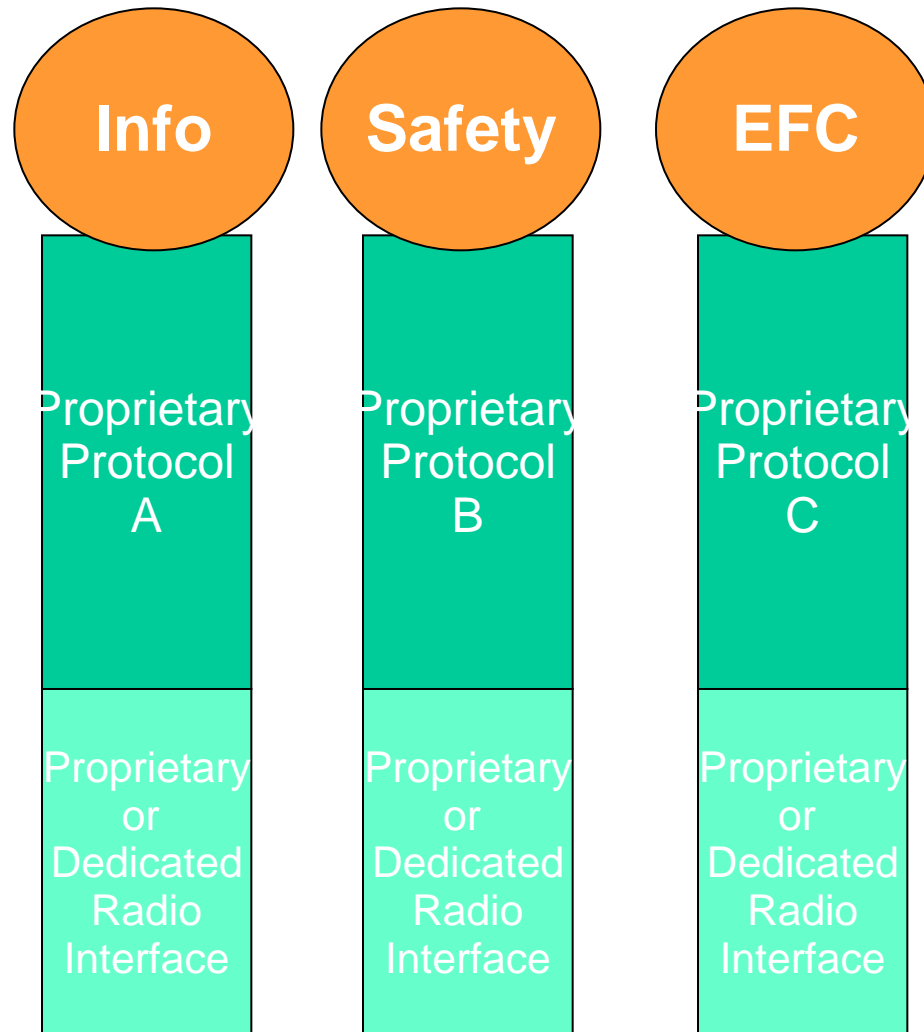
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Generic Communication Architecture based on the CALM concept



ITS – Phase 1

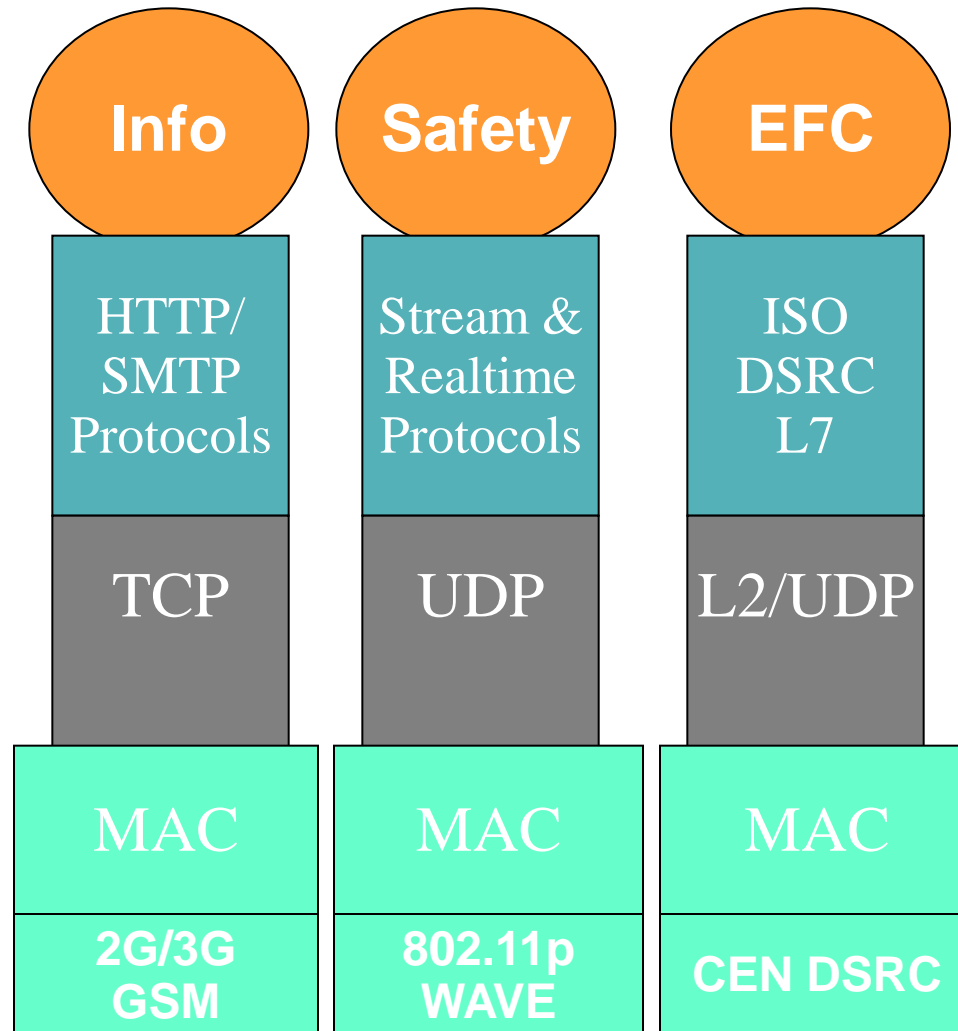
Where ITS started



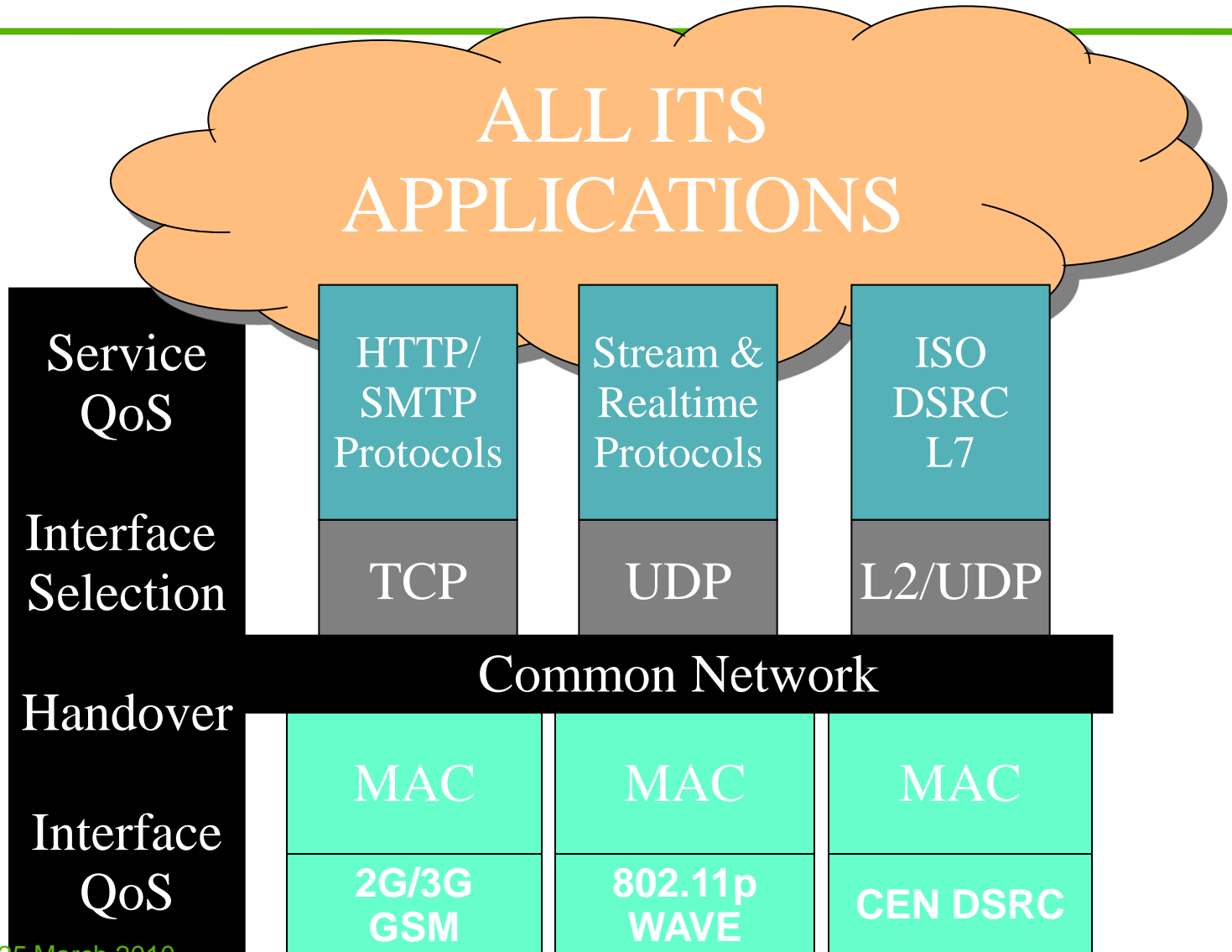


ITS – Phase 2

Current Stovepipe standards

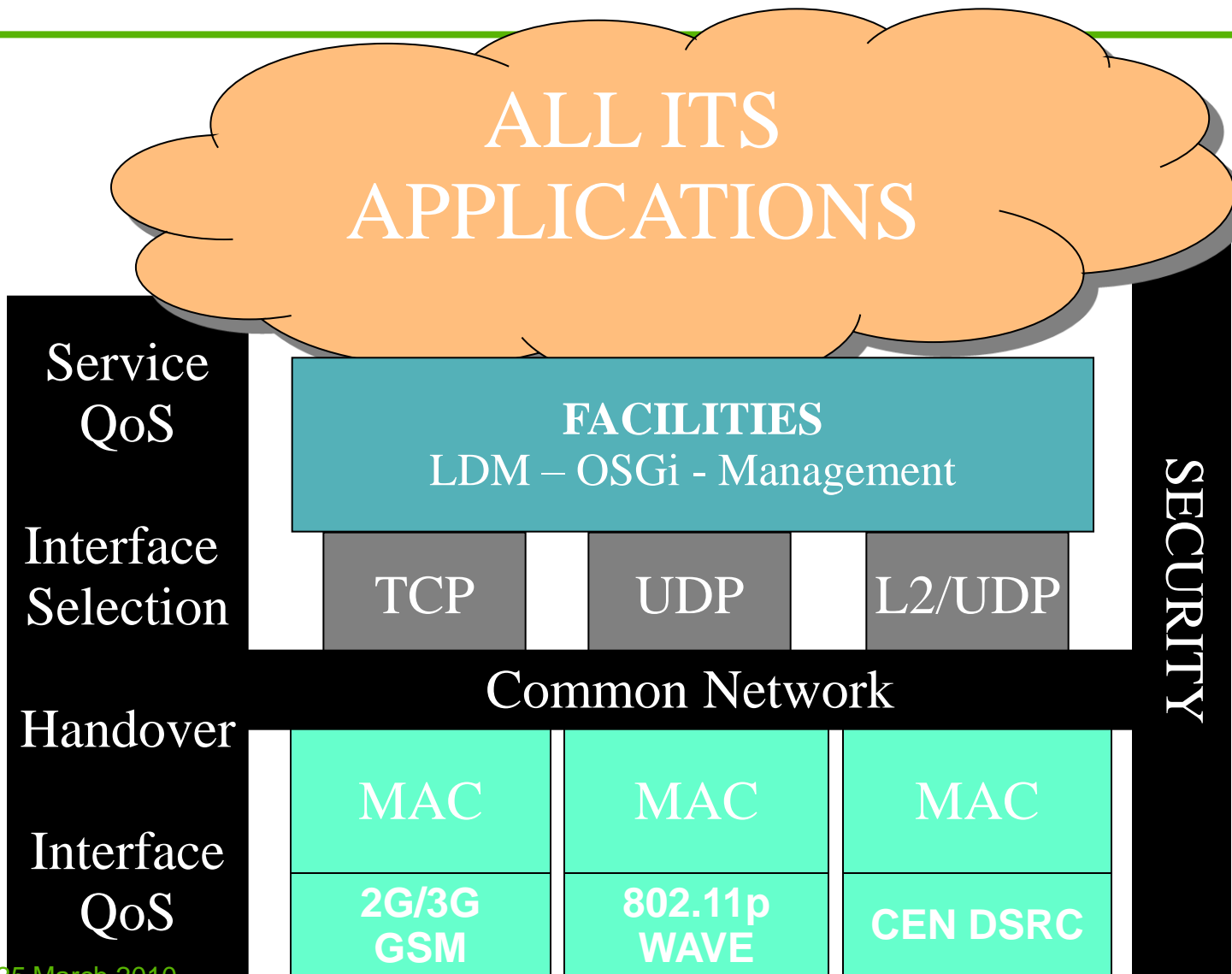


ITS – Phase 3 CALM standards



ITS – Phase 4

What we did in CVIS

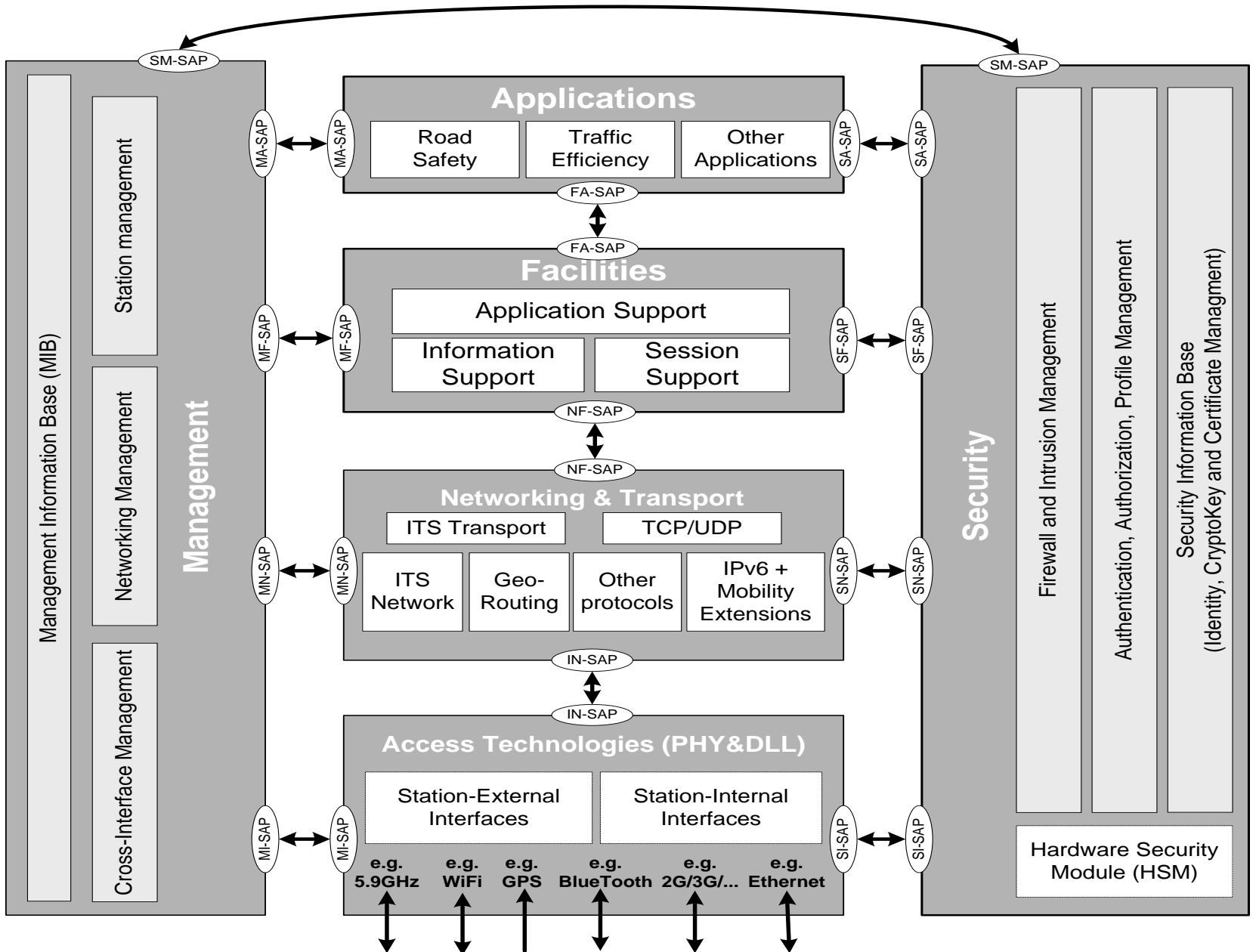


ITS – Phase 5

Next step

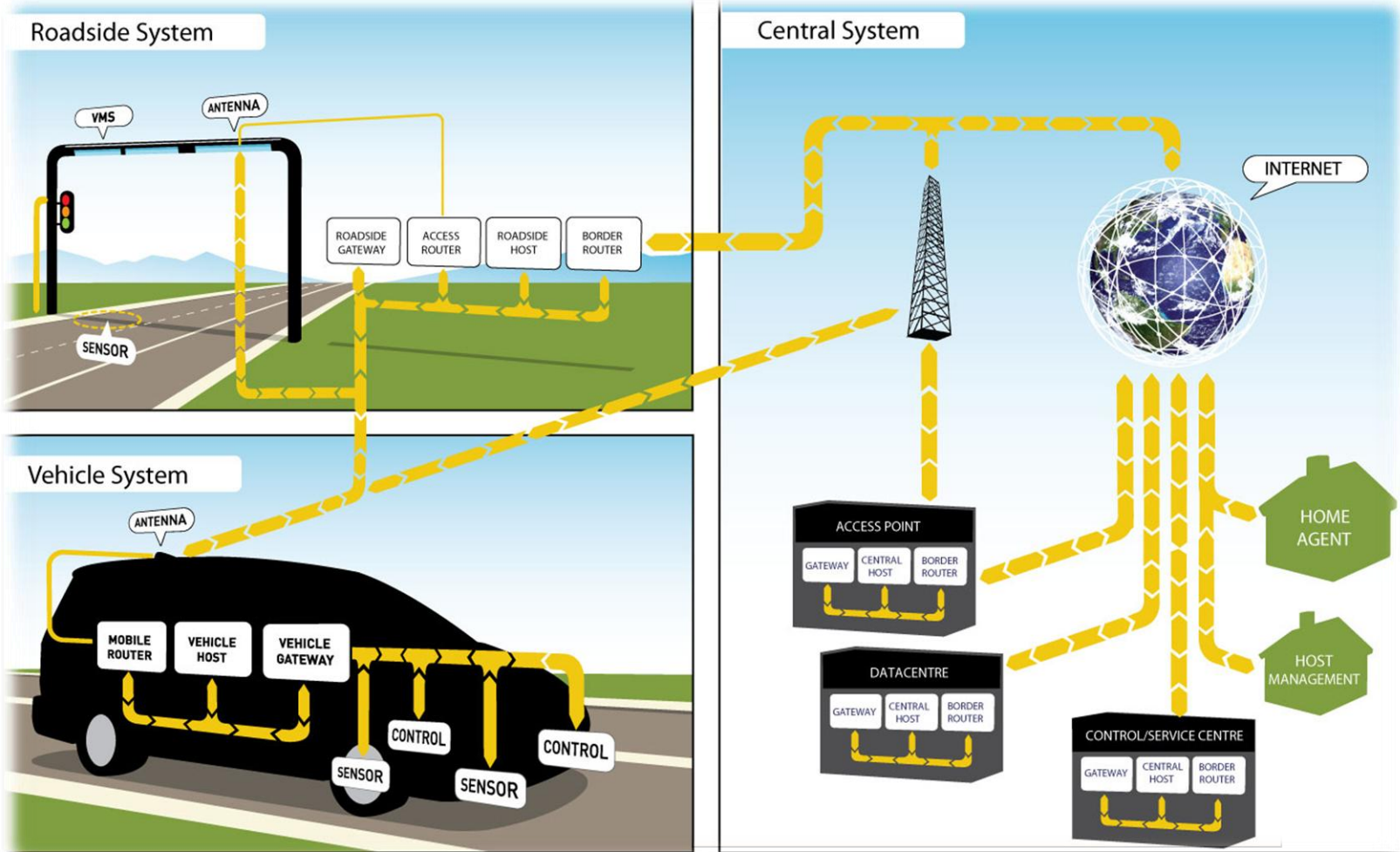


ITS Station Reference Architecture





CVIS platform architecture





Architecture Standardisation

- These standards started with CALM in ISO
- Validation implementation by CVIS
- Refined by COMeSafety and ETSI collaborative work
- ETSI EN 302 665 Enquiry + Formal Vote ends around end 2010
- ISO FDIS 21217 recently unanimously approved
- **Important message: These architectures are fully aligned**



Summary

- Cooperative Systems is the evolution of ITS
 - Stand-alone ITS applications will go the way of typewriter and dinosaurs. Eventually.
- Standardisation is well advanced
 - Global agreement on comms architecture
 - Other building blocks are well advanced
- CVIS/SafeSpot/Coopers use same architecture
 - A first step towards interoperability
 - And we have all that's needed for deployment!

Please contact us for more information



Thanks for your attention...

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