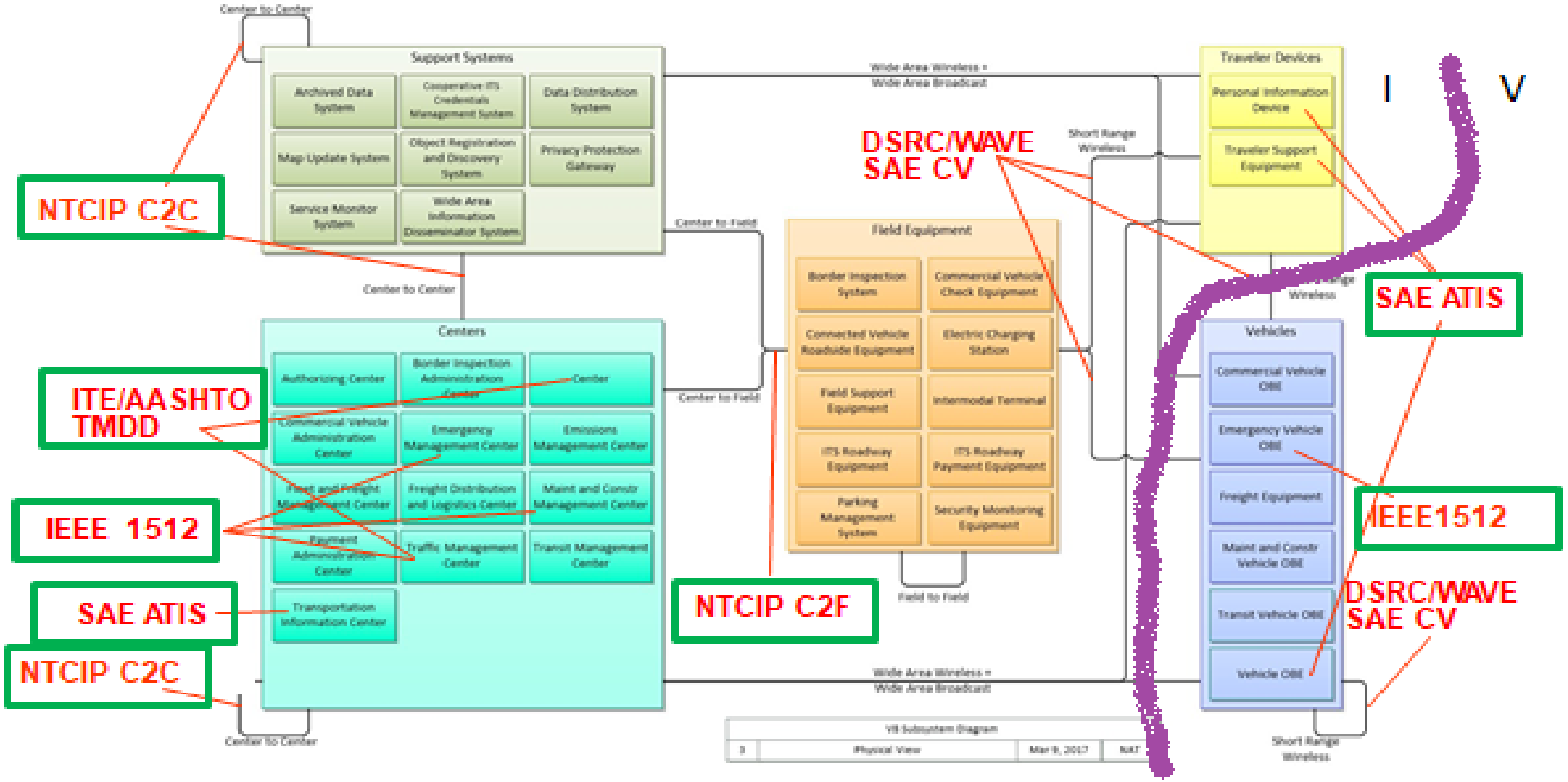
Breakout Session #23

Topic: Optimal integration into the transportation system …

Summary of Key Findings and Lessons Learned

- Connectivity beneficial for both vehicles and infrastructure owner-operator (IOO)
  - E.g., can smooth transition between ODDs, allow additional services
- Automation must be accommodated along with all other current system users
- IOOs and OEMs need to know what to expect from one-another
  - Early agreement on key information flows beneficial
- Broadly accepted stakeholder consensus can obviate need to regulate
  - Still achieve desirable nationwide/cross regional interoperability
- Life-cycle management requires careful planning
  - Vehicle, infrastructure and communication technology lifecycles very different

How the ITS System Fits Together …



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Research Needs

- Key information flows desired for vehicles
  - Package of regulatory information at jurisdictional boundary
    - Cooperate with EU effort?
  - Real time condition information
    - Roadway striping condition, work zones, snow cover, traffic congestion …
  - Regional and local differences in expected driver behavior to assist AV integration
- Key information flows desired for infrastructure
  - Vehicle position/speed/wipers/headlights etc.
    - Allows better understanding of network state, queue length, congestion
    - Eventually reduce infrastructure costs (e.g., video, loop detection)?
  - Automation capability of vehicles
    - Support e.g., managed lanes, appropriate warnings, MRC advice
- Stakeholder consensus on an interface architecture, specific standards
  - Many stakeholders beyond obvious groups … need to engage all
  - Common information standards, but allow for multiple communication media?