

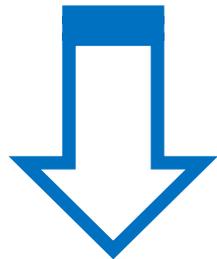
Vision

Southeast Michigan Connected Vehicle Test Bed 2014
Project Information Meeting
October 29, 2013

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Systems Engineering and Test Bed Manager
U.S. DOT, ITS-JPO

Related Activities – Getting ready for what's next

- Tuesday Interoperability calls
- PlugFests
- Southeast Michigan 2014 project
- Affiliated Test Beds



- Multi-site interoperability
- ITS World Congress 2014
- 2015, 2016 ITS JPO projects

U.S. Department
of Transportation



Connected Vehicle
PlugFest



U.S. Department of Transportation
Research and Innovative Technology Administration
ITS Joint Program Office

#1

A Design **Tool**,
not a Design.



Other Engineering Disciplines have Graphical Tools

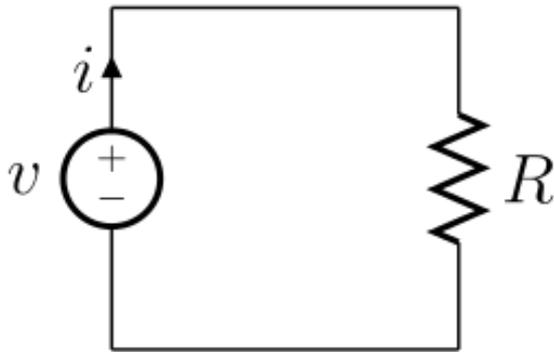


Image Source: Wikipedia

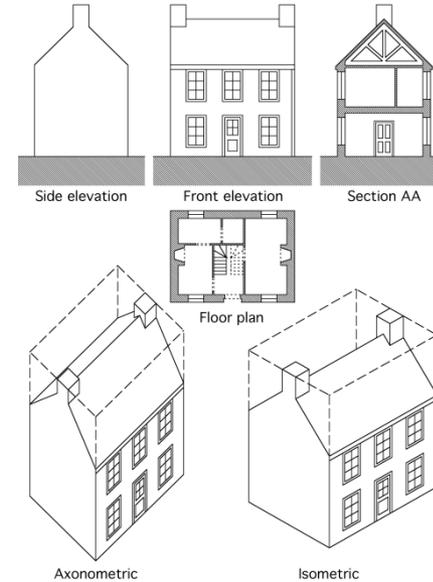


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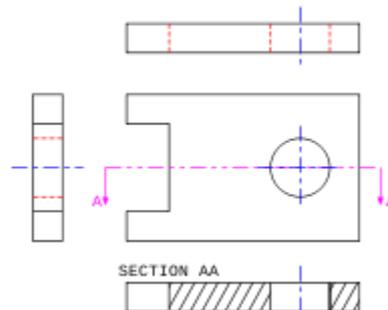
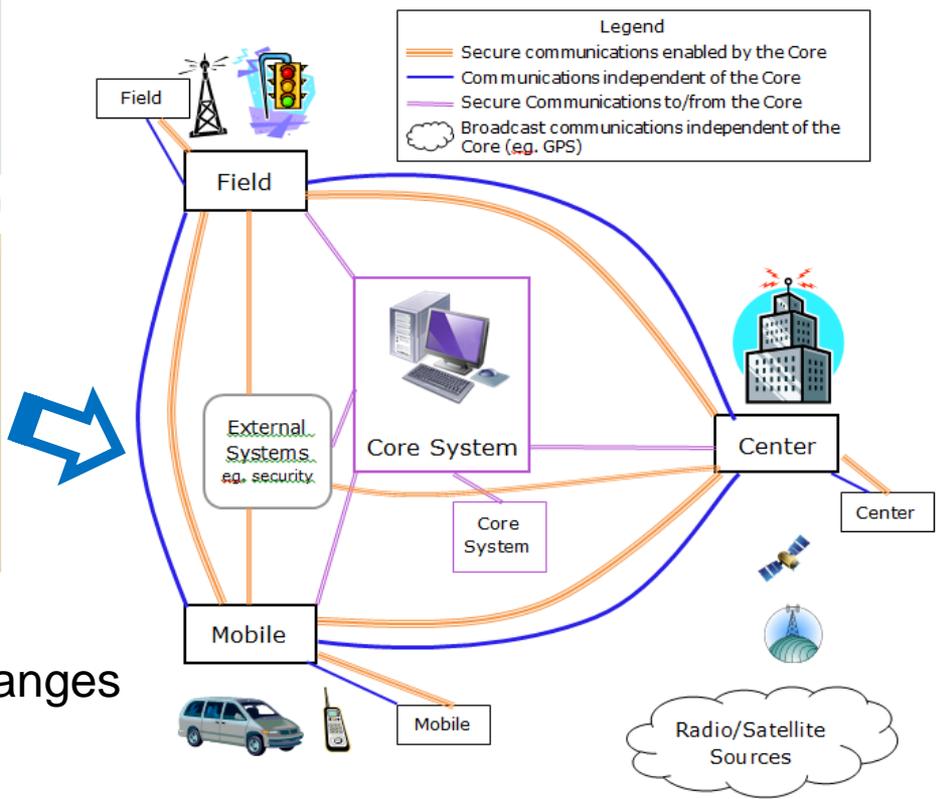
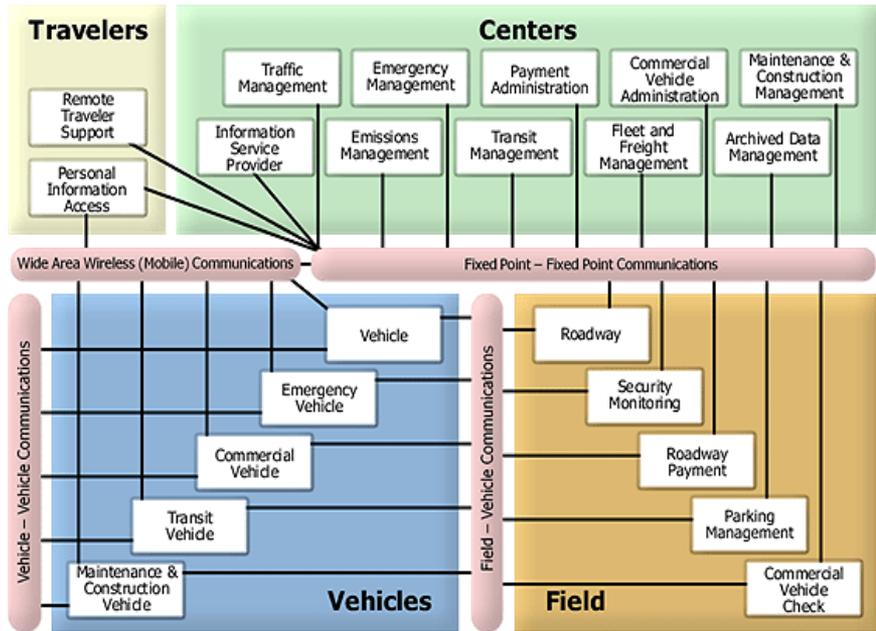


Image Source: Wikipedia



ITS National Architecture

- <http://www.its.dot.gov/arch/index.htm>



- Broadcast and Peer-to-Peer data exchanges
- Enable Big Data
- Multiple wireless communication media

Southeast Michigan Connected Vehicle Test Bed 2014

Project Architecture

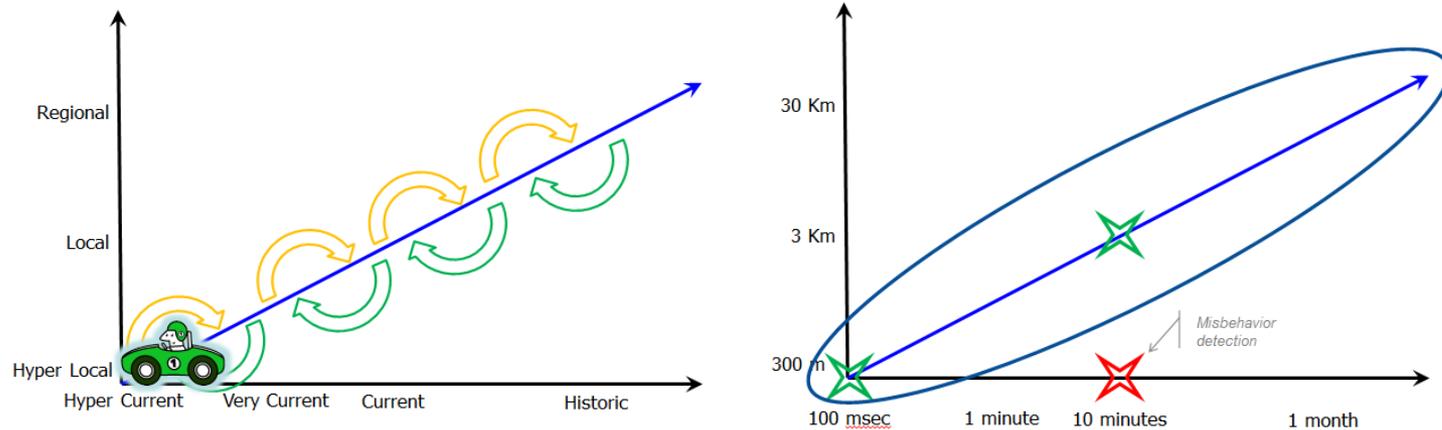
Complete Architecture shown in a set of views

- Physical view(s) [**THINGS**] – overviews and specifics of objects for each application
- Enterprise views [**PEOPLE**] – includes installation, operations, maintenance and certification diagrams for each physical diagram
- Communication views [**INFORMATION**] – one for each information flow (interface)



Fundamentals

- Situation Data
 - The state of a key element of the system at a specific time
 - Defining the data flow and evolution
- Time and Place Context to Data and Information



- Separation of Information Distribution and Presentation
- Common Cryptographic Processes to assure Trust and Protect Ownership

#2

An Implementation, not **THE** Implementation



Needed Experiences

- Consistent security process
- Consistent message exchange process
- Data flow and evolution
- DSRC operating on all 7 channels



Place and Time Context

- Place: Southeast Michigan



- Time: Now till the end of 2014
 - Design now
 - First operation: spring, 2014
 - Full operation: summer, 2014

Physical View – Southeast Michigan 2014 Layer 0

