

Virtual Traffic Management:

Distributing the Function,
Reaping the Benefit

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Introduction

- Stacy Unholz, Atkins
 - Senior ITS Project Manager
 - Los Angeles office
 - Traveler Information / 511
- Today's Topic: Virtual TMC
 - Relevance to Alaska?
 - ADOT has no central TMC
 - But, Alaska could benefit from the ideas we'll cover today



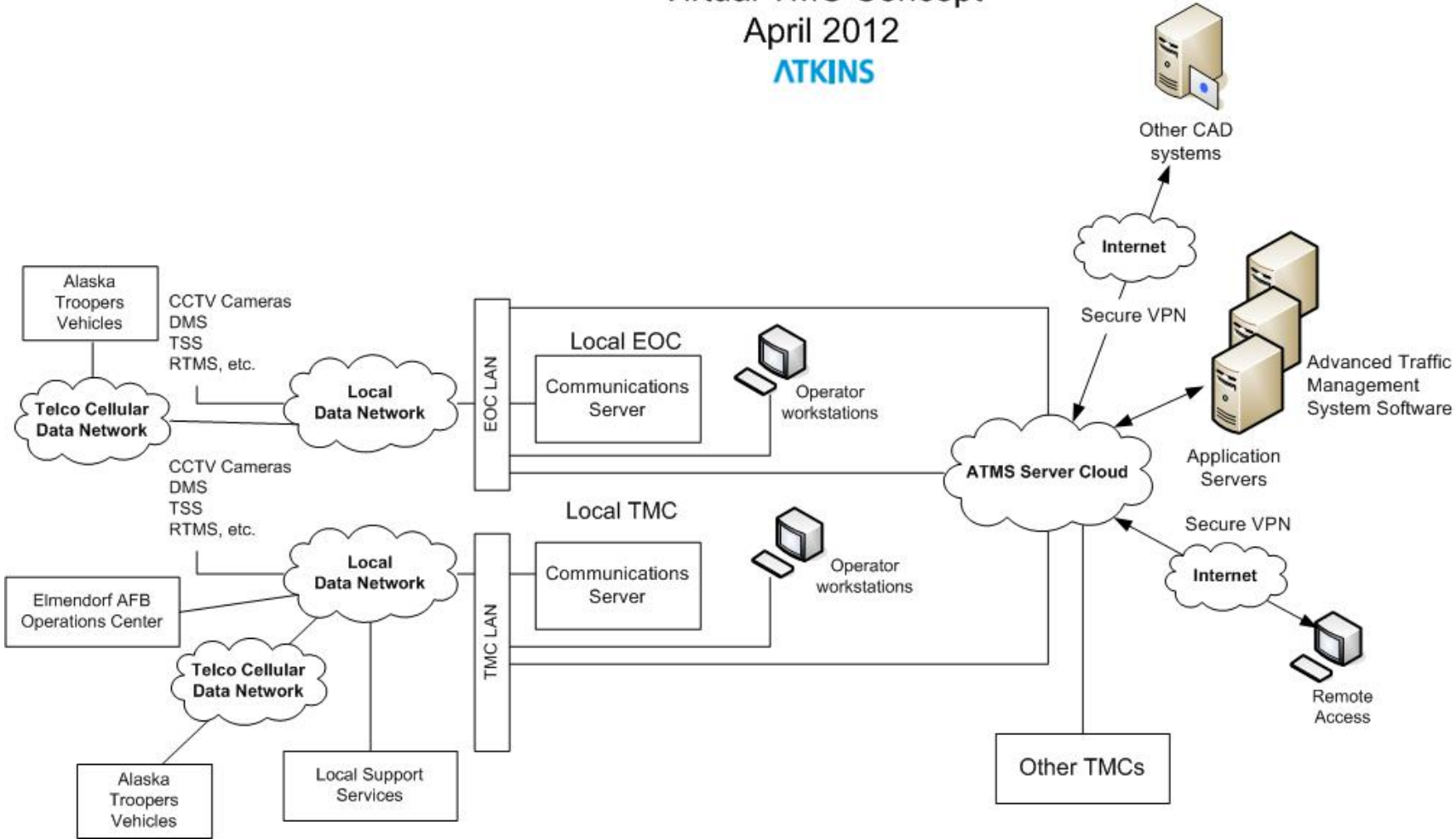
Background

- What defines a Traffic Management Center?
- TMC is not one consistent entity
 - A large urban TMC has particular characteristics
 - A small rural TMC has others
 - A TMC can be a server on one desk or a huge operations center with co-located partners



Background

Virtual TMC Concept
 April 2012
 ATKINS



Current Deployments

- **Three Instances to Deploy**

- Functionality added to existing TMC
- Functionality built into an existing TMC
- Virtual used instead of building a TMC
 - Worth exploring in Alaska?

- **Two Levels of Access**

- Agency to agency (or district to district)
 - Most common
 - District offices can take over for one another
- Agency to employee
 - Employees working from home or satellite offices

South Carolina Department of Transportation

- Ability to monitor/ operate all TMC devices from any SCDOT network connection
 - Including VPN access from personal residences
 - Not web-based; a client installation is necessary
 - Software runs off a virtual network server
 - State TMC takes over operation of four local TMC's at night, after regular hours.



Florida Department of Transportation

- FDOT operates a robust statewide ITS network with several TMCs
- Virtual capabilities have been designed into statewide system
- If a TMC has to shut down for some reason, any other TMC in the state can take over operations of that TMC.
 - Emergency situations such as hurricane



New Mexico Department of Transportation

- Remote accessing into NMDOT's private network
- Some modified web-based applications for functions that carry high bandwidth needs
 - Typically beyond what can be accessed via private networks though DSL or air cards.
- The DOT can remotely operate all ATIS systems (website, phones, DMSs, HARs), access data streams (RWIS), and view and operate cameras.



Relevance to Alaska

- Limited ITS deployment overall
 - Signals
 - DMS
 - Wavetronics sensors
 - RWIS
- No current TMC



East Tudor Road, Anchorage

Relevance to Alaska

- Alaska has unique needs and challenges
 - Environmental challenges to centralized control of ITS devices
 - Lack of statewide ITS network



Pros and Cons



- **Increased efficiency**
- **Reduced staffing cost**
- **Improved burst staffing capacity**



- **Security**
- **Challenge to established standard operating procedures**
- **Increased costs for setup/enabling technology**