• Suburb of Kansas City
• 175,000 Residents
• 74 square miles
• Incorporated 1960
Agency Factoids (System/Comm.)

- 264 Signalized Signals
  - 234 connected by fiber
  - 4 connected by radio
  - 5 connected by cellular
  - 21 not connected to communication

- 2 – engineers/ 2 - technicians in operations
- 4 – signal technicians in maintenance
Agency Factoids (System/Comm.)

• ASC3 Firmware
  • 2070s - 1B
  • 2070s - 1C
  • Rackmount
  • Cobalt

• TransSuite Central System

• 137 signals collecting high resolution data

• 2 - Years of experience with high resolution data
Agency Factoids (Detection)

• Detection Method
  • Primarily Video Detection
  • Transitioning to Radar – Stop Bar & Advance

• Length of stop bar detectors
  • vary based on configuration

• Dilemma zone detection
  • on higher speed arterials – 45 mph
Agency Factoids (Detection)

• 332 & Hybrid Cabinets
  • Utilize SDLC connections for detection
• Detection typical setup - grouped by phase
• Maintenance – try to keep up with detection issues
  • Complaints
  • System Reports - TransSuite
• How many signals with Pre Emption - Too many
• No Signals with RR Preemption
• Pedestrian Crossing – Large Arterials
Overland Park History

• Installed TransSuite
  • As part of regional single project Operation Green Light
  • Once per Second Polling

• Installed additional ITS elements
  • Traffic Operations Center
  • Fiber Optics (Ethernet)
  • CCTV Cameras
  • DMS
  • Installing Traffic Adaptive

• Next Step Automated Performance Metrics
City Objectives

• Clear Queues
  • “Motorists should not have to wait through more than one light”

• Traffic Flow on Main Arterials
  • “On major streets, motorist should be able to drive without having to stop at a stop light”

• Delay
  • “Motorist should not have to wait on side streets when no there is no traffic on the main streets”

• Stopping for Nothing
  • “Motorists on the main streets should see minimal stops”
Use of SPMs

• Verification of intermittent detection issues
Use of SPMs
Issues

• Additional Advanced Detection Needed
  • Normally budget for stop bar detection

• Database Management
  • Separate Hardware
  • SQL server costs
  • Database size
Desires

• What was the signal really doing
  • What was the controller seeing
  • What was the controller doing

• Are the timing changes we just made helping?

• Is traffic better or worse than
  • A typical Tuesday
  • A typical weekday
  • Is traffic just demand getting heavier or lighter
Conclusion

• Proponent of high resolution data
  • Stored on controller vs polling
• City is working on adding/repairing detectors
• Data is good
  • DISPLAYING DATA IN A USEFUL FORMAT BETTER