ITS Inventory

ITS Element	Description
AMTRAK Station Information	Information on train schedules.
Bowling Green State University Shuttle Fixed Route Dispatch	Fixed Route transit system on Bowling Green State University.
Bowling Green State University Shuttle Vehicles	Transit vehicles operated by Bowling Green State University Shuttle.
Bowling Green Transit Dispatch	Dispatched Taxi Service, and demand response service within Bowling Green City Limits.
Bowling Green Transit Vehicles	Transit vehicles used for Bowling Green Transit demand response service
City of Bowling Green Electric Division Dispatch	Dispatch of assets to provide maintenance of traffic control devices and other field equipment.
City of Bowling Green Emergency Vehicles	Emergency vehicles operated by the City of Bowling Green. Represents ITS equipment in the vehicles.
City of Bowling Green EOC	Emergency Operations Center for City of Bowling Green
City of Bowling Green Field Equipment	ITS field equipment owned and operated by City of Bowling Green
City of Bowling Green Maintenance Dispatch	Vehicles are dispatched from the city garage. Receive weather information from LEADS or the internet.
City of Bowling Green Maintenance Vehicles	Maintenance and other city vehicles. No GPS or AVL on vehicles at this time. Traffic signal equipment. City has 5 portable DMS units.
City of Bowling Green Public Safety Dispatch	Computer aided dispatch for emergency vehicles. The city is currently setting up the capability to transfer data.
City of Bowling Green Public Works Dispatch	Provides snow plowing and road treatment of the roadways in City of Bowling Green.
City of Bowling Green Traffic Signal System	23 signals, recently converted to LED, all coordinated, maintained by the City of Bowling Green Light Department. Signal within 200' of the Norfolk Southern tracks at the intersection of Manville Ave/Thurstin Street and Wooster Street.
City of Bowling Green Water and Sewer Dispatch	Dispatch of assets to provide maintenance of water and sewer systems.
City of Bowling Green Website	City of Bowling Green websitehttp://www.bgohio.org/
City of Oregon Train Notification System	http://www.ci.oregon.oh.us/ A blue light at a nearby signal lets travelers know that a train is blocking the tracks, so they can take a different route.
City of Toledo Emergency Vehicles	Police, Fire, and EMS. All new vehicles have MDTs.
City of Toledo Field Equipment	The City fleet is made up of 2400 pieces of equipment, which includes everything from compact cars to bull dozers, trailers and rolling stock. Traffic Signals, loop detectors, dynamic message signs, HAR (active account, not used often).
City of Toledo Maintenance Dispatch (CLIC)	Dispatch of maintenance vehicles for street cleaning, snow and ice removal, leaf collection, and pot hole repair. All major repairs done at Service Building #1, the Main Garage. Spillbush services light vehicles. Imlay only services fire vehicles. Weather info from AccuWeather and subscription to NOAA.
City of Toledo Maintenance Vehicles	Vehicles used for roadway maintenance and equipment maintenance. Includes snow plows and winter road treatment vehicles.
City of Toledo MLK Lift Bridge Operators Tower	Tower is the source of bridge state, and tower gets advance notice for operations from large commercial river traffic. River traffic generally has the right-of-way.
City of Toledo Public Safety Dispatch	The City of Toledo PSAP is co-located with the dispatch center in the Lucas County Department of emergency services. City personnel respond to all incidents within the City of Toledo, including freeway incidents. There are 12-15 fire houses that respond to incidents and HAZMAT spills.
City of Toledo Storage Facility	City materials and equipment storage facilities.

ITS Element	Description
City of Toledo Traffic Management System	~490 signals. UTCS pretimed system across 90% the city. EAGLE system communicating with 400 signals. This is running on serial communication which all the intersections would need to be upgraded to Ethernet to have video feedback. Centralized control, econolite controllers, more being added they are NTCIP compliant and expandable can be controlled from the traffic signal shop. 2 locations where signals are within 200' or RR crossings. Draw bridges @ MLK and I-280 could use preemption.
City of Toledo Website	http://www.ci.toledo.oh.us/ Major roadway closure information is posted here.
Commercial Vehicles	Commercial Vehicles with electronic tags.
Crash Records Database Users	Agencies and systems that access crash record databases
Financial Institutions	Financial companies that handle electronic transactions.
Fleet Management Systems	Dispatch function of Commercial Vehicle Fleets
Greater Toledo Convention and Visitors Bureau	Website and HAR.
Independent School District Buses	School Buses operated by area school districts.
Independent School District Dispatch	Dispatching systems for school districts buses.
Lake Erie Transit Bedford Dial A Ride	Fixed route and demand response transit in Monroe County.
Lucas County EM Website	Website maintained by Lucas County Emergency Management
Lucas County EMA App	Represents a mobile application provided by the Lucas County Emergency Management Agency. The app integrates traffic data and power outage information for Lucas County.
Lucas County Emergency Communications Center	Represents the primary PSAP in Lucas County. There are six total PSAPs in Lucas County, but the ECC functions as the primary PSAP for the county. The ECC is co- located with Lucas County Police and Fire and is responsible for an integrated CAD system for the county.
Lucas County Emergency Operations Center	The Lucas County Emergency Services Building houses City of Toledo 911 call takers and dispatchers, amateur radio emergency services (ARES), weapons of mass destruction group, Lucas County WMD/Terrorism Advisory Team
Lucas County EMS Dispatch	Lucas County Emergency Medical Services
Lucas County EMS Vehicles	Represents emergency medical service vehicles operated by Lucas County.
Lucas County Engineer Dispatch	Responsible for bridges over freeways and the turnpike. Use calcium chloride to pre- treat roadways prior to storms. Have contract with Media Logics to provide weather info. Also receive weather data from ODOT website, weather.com, other internet sites and from monitoring television stations.
Lucas County Field Equipment	DMS rented as needed.
Lucas County Fire Dispatch	Represents the dispatch center for Lucas County Fire
Lucas County Fire Vehicles	Represents emergency vehicles operated by the Lucas County Fire Department.
Lucas County Maintenance Vehicles	Vehicles used for roadway maintenance and equipment maintenance. Includes snow plows and winter road treatment vehicles. Approximately 90 vehicles
Lucas County Sanitary Engineer Dispatch	Dispatch of assets for maintenance of water and wastewater systems.
Lucas County Sheriff Dispatch	County sheriff dispatch
Lucas County Sheriff Vehicles	Represents Sheriff vehicles for Lucas County. Lucas County Sheriffs are equipped with Mmobile data terminals (MDT) and autmated vehicle location (AVL).
Lucas County Traffic Signal System	County has 28 signals. Most signals are more than a mile apart. Two signals are tied to an ODOT system at McCord & Spring Valley and McCord and North Mall. Also, three signals are interconnected by a shopping center.
MAASTO CV Parking System	Represents an inter-state commercial vehicle parking system operated by MAASTO.
MDOT Field Equipment	Represents ITS field equipment operated by Michigan DOT in Monroe County, such as CCTV, traffic sensors and DMS.
MDOT Statewide Center	Freeway Management Center for the Detroit Metro Area.

Toledo Regional ITS Architecture

ITS Element	Description
MDOT Website	Lane closure information located at: http://www.mdot.state.mi.us/laneclosure/
Monroe County EOC	Emergency Operations Center for Monroe County.
Monroe County Field Equipment	Roadside Equipment includes any and all equipment distributed on and along the roadway which monitors and controls traffic. This can include equipment for tolling.
Monroe County Maintenance Dispatch	Represents county maintenance activities. MDOT contracts with the Monroe County Road Commission to maintain the state highways located in Monroe County. The services the county provides include snowplowing, pothole filling, grass cutting, sweeping, guardrail repair and other services.
Monroe County Maintenance Vehicles	MDOT contracts with Monroe County to provide all routine highway maintenance.
Monroe County Road Commission Traffic Operations Center	Traffic signal systems for Monroe County.
Monroe County Sheriff Dispatch	Dispatch of sheriff in Monroe County. PSAP for county.
Monroe County Sheriff Vehicles	Represents the public safety vehicles operated by the Monroe County Sheriff Department
MSP Second District Regional Dispatch Center	911 cellular, process over 80,000 calls per month, located at the MITSC, access to ATMS/ATIS CCTVs
Multi-Agency Radio Communications System (MARCS)	The MARCS System is a statewide radio system that will give the agencies that subscribe to it, the ability to have contiguous communications throughout the state. It includes computer-aided dispatch, AVL, mobile data, mobile voice, geographic mapping, records management, LEADS/NCIC Access, Integrated Network Management. Wood and Lucas County OSHPs are going online in 2004. The idea is that all state and local agencies would use it, but it is cost preventative. Some of the current customers include: State Fire Marshal, Department of Public Safety, Emergency Management Agency, Highway Patrol, DOT, all 88 county sheriffs, all 88 county EMAs, state, county, township, municipalities, federal agencies.
Municipal and Township Public Safety Dispatch	This element represents the police, fire, and EMS emergency dispatch functions at the municipal level. This general element also represents each of the community public safety answering points in the Greater Toledo region.
Municipal Emergency Vehicles	Emergency vehicles, support signal preemption, include ITS equipment that provides the sensory, processing, storage, and communications
Municipal Field Equipment	This includes the signal controllers, cameras, signal preemption equipment for each municipality.
Municipal Maintenance Dispatch	This element represents the dispatch function for roadway and equipment maintenance at the municipal level for those area not explicitly broken out with separate elements.
Municipal Maintenance Vehicles	Represents the snow plows and other maintenance vehicles that are owned and operated by municipalities in the greater Toledo area. This includes the city of Toledo and surrounding cities.
Municipal Traffic Signal Systems	Traffic signal systems for municipalities beyond Toledo and Bowling Green (E.g.: Oregon, Sylvania, Maumee, Northwood, Perrysburg, Rossford).
National Weather Service	General weather information available from the National Weather Service
Northwest Ohio Regional Water and Sewer Dispatch	Dispatch of assets for water and sewer maintenance in the region.
ODOT 511 Information System	Traveler information by dialing 511 number; provided by ODOT and private partnership.
ODOT Craig Memorial Lift Bridge Tower	Tower is the source of bridge state, and tower gets advance notice for operations from large commercial river traffic. River traffic generally has the right-of-way.
ODOT District 2 Equipment Repair Facility	District facility for repair of vehicles and other ITS equipment.
ODOT District 2 ITS Field Equipment	Roadside Equipment includes any and all equipment distributed on and along the roadway which monitors and controls traffic. This includes DMS, weather sensors (monitors road for icing), automatic traffic recorders, signal preemption for emergency vehicles and buses.
ODOT District 2 Maintenance Garages	Dispatch function for ODOT maintenance, construction and snow and ice removal vehicles. ODOT District 2 maintains all freeways in their district. State routes within city limits are maintained by cities. Outside city limits ODOT maintains state routes.
ODOT District 2 Maintenance Vehicles	District maintenance vehicles, including snow plows.

Toledo Regional ITS Architecture

ITS Element	Description
ODOT District 2 Office	Primary traffic management location for ODOT managed roads in District 2.
ODOT District 2 Public Information Office	Office responsible for providing traffic/traveler information to the public.
ODOT District 2 Storage Facilities	District facilities that store materials and equipment.
ODOT Freeway Service Patrol Vehicles	The Freeway Service Patrol Vehicles would be dispatched from the planned Freeway Management Center.
ODOT Rest Area Traveler Information Centers	ODOT operated traveler information centers.
ODOT Statewide TMC	Represents the Statewide TMC for ODOT, which has primarily responsibility for the operation of ODOT District 2 Field Devices. This includes CCTV, traffic sensors, DMS and HAR.
OH.GO Website	OH.GO is the public information website for ODOT.
OHGO Mobile App	Represents the OH.GO mobile application the website ohgo.com.
Ohio DPS Crash Records Database	Statewide database of crash records
Ohio Statewide EOC	The statewide emergency operations center is located in Columbus
OSHP District 1 and 2 Vehicles	Highway patrol vehicles that patrol Lucas and Wood Counties and the other 10 counties in OSHP District 1.
OSHP District 10 Post Dispatch	Located in Berea, Ohio (near Cleveland). Dispatch center for all patrol vehicles on the Ohio Turnpike.
OSHP District 10 Vehicles	Highway patrol vehicles that patrol the Ohio Turnpike.
OSHP Districts 1 and 2 Posts Dispatch	Represents Posts at Toledo, Walbridge, and Defiance. Also includes District 2 Post at Fremont and Sandusky.
Other Counties Traffic and Maintenance	Represents traffic and maintenance operations for counties not called out individually in the architecture
Other County Public Safety Dispatch	Represents county level public safety dispatch for counties bordering the region.
Other Municipal Maintenance Dispatch	This element represents a second instance of a dispatch function for roadway and equipment maintenance at the municipal level. It is used to define the interface between peer municipal maintenance dispatch elements.
OTIC Central Dispatch	Dispatch maintenance and incident management (private tow/wreckers, local/municipal fire/EMS). (Collocated with Highway Patrol). Dispatch contractors for construction and sometimes maintenance. Located in Berea, Ohio.
Private Tow and Wrecker Dispatch	Dispatch function for privately owned tow or wrecker service.
Private Traveler Information Providers	Represents third-party privately owned traveler information providers.
Private Utilities Dispatch	E.g. Columbia Gas, First Energy and SBC, Buckeye Cable.
Private Weather Systems	Systems that provide customized transportation weather forecasts or road weather information.
Railroad Operations Center	Source of information for train crossing times/durations for coordination to reroute vehicles (passenger, commercial, transit, emergency) around RR tracks. CSX, and Norfolk Southern in the Toledo metro area.
Railroad Wayside Equipment	Active highway/rail interfaces (flashing gates when train is detected)
Regional Event Operations	Information systems for event operators throughout the region. Includes regional universities and colleges.
Regional Hospitals	Hospitals and trauma centers in the region
Regional Smart Card	Smart Card used for transit and possibly other services in the region
Southeast Michigan Traffic Operations Center	Represents traffic and maintenance operations of MDOT University Region. Note that ITS devices are primarily operated from the MDOT Statewide Center.
Special Police Dispatch	Dispatch functions for special police forces such as Metroparks and Park Districts, Universities/Colleges, Airports, and Railroads.
TARPS Dispatch	Computer aided dispatch of Paratransit vehicles
TARPS Maintenance Garage	Performs routine maintenance of TARPS vehicles.

Toledo Regional ITS Architecture

ITS Element	Description
TARPS Paratransit Vehicles	Toledo Area Regional Para-Transit Service. 42 vehicles. Operations subcontracted to Laidlaw. Equipped with AVL with schedule adherence.
TARTA Area Surveillance System	Surveillance equipment at stops, terminals, and in areas around TARTA facilities.
TARTA Central Garage	Maintenance of all vehicles: fixed route vehicles, transit vehicles, dump trucks, tow trucks, supervisor vehicles salt trucks, snow plows, and major maintenance of TARPS vehicles. Also, dispatch of fixed route vehicles performed here. Also houses administrative offices.
TARTA Dispatch	Fixed route TARTA transit dispatch. Fixed Route system covers Toledo and 8 outlying jurisdictions.
TARTA Fixed Route Vehicles	180 vehicles, 33 fixed routes, 300 employees, buses City of Toledo school children to and from school. AVL-equipped transit vehicles without schedule adherence (know where the buses are, but not if they are ahead or behind schedule). Stop announcements are pre-programmed. Stops are automatically called out based on location info provided by the GPS system. All new (53% of fleet) fixed route vehicles have 2-5 cameras per bus. Cameras record to a hard drive on the bus. Currently info is not sent back to the garage from the bus. There are panic buttons on each bus and each operator can connect to the Central Garage via radio.
TARTA Kiosks and Information Displays	Kiosks and bus information displays at terminals or bus stops.
TARTA Mobile App	Represents the mobile application provided by TARTA. The application provides real- time transit information to travelers.
TARTA Website	Website for TARTA information. http://www.tarta.com/
TMACOG Regional Data Archive	Archive of regional transportation information. Website access to traffic counts, traffic flow maps, TIP and other plans.
TMACOG Website	Website providing TMACOG information.
Toledo - Lucas County Port	Intermodal facility Mission is to assure that the Toledo area's water, air, rail, and surface transportation assets are developed and operated in a cohesive, coordinated, and safe manner in order to provide maximum efficiencies and benefits to shippers, receivers, and passengers, as well as to promote area job retention and growth.
Toledo Express Airport	Includes Toledo Metcalf Field and Toledo Suburban Airport.
Traveler Information Device	Traveler devices such as personal computers and PDAs.
TV and Radio Stations	Local TV, radio, and newspapers. Some media may be sources of monitoring for public TMC/TOCs
University of Toledo Transit Dispatch	Fixed route transit dispatch
USPS Toledo Dispatch Center	Dispatch center for USPS Toledo operations.
Vehicles	Represents privately owned and operate vehicles.
Wood County Communications	Wood County public safety dispatch. Computer aided dispatch for emergency vehicles, but the system's capabilities are not being used. Information is not transferred electronically. 911 land line calls go to the Bowling Green and Fostoria locations which dispatch police, but hand off fire and EMS to dispatchers. Calls also go to Northwood, Perrysbuerg, Perrysberg Township, Wood County and Lake Township PSAPs where call takers dispatch all emergency services agencies. 911 cell calls go to OSHP. Wood County will take over cell calls in 2004 when they are Phase II compliant. Ottawa County is the back-up 911 call center for Wood County and vice versa.
Wood County Emergency Vehicles	Fire, police, EMS vehicles. Plan for future MDTs.
Wood County EOC	Wood County Emergency Operations Center
Wood County Field Equipment	portable DMS
Wood County Maintenance Dispatch	Vehicles are dispatched from the County Garage. Not automated.
Wood County Maintenance Vehicles	Vehicles used for roadway maintenance and equipment maintenance. Includes snow plows and winter road treatment vehicles.
Wood County Website	http://www.co.wood.oh.us