

COMPONENTS OF THE ST. LOUIS REGIONAL ITS ARCHITECTURE ONLINE

Nine primary topics are accessible from the left margin of the architecture website.

Scope:

Overview of architecture

Planning:

Goals and objectives, with relevant ITS service packages identified.

Stakeholders:

Defines the ITS architecture participants. In the interest of streamlining and standardizing the architecture process, many local agencies are grouped by county. By clicking on a stakeholder name, you find more information related to the stakeholder groups (if any) the stakeholder is involved in, as well as the individual "inventory elements" the stakeholder owns (for example, traffic signals, transit vehicles, data archiving system, etc.)

Inventory:

Identifies of physical system components or "elements", either existing or future. They are listed in alphabetical order. Clicking on an element brings up a detailed page describing the element, its owner, the operational functions (for example, "incident management"), and the other elements with which the element interfaces as part of the ITS Architecture. You can also click on the individual interfaces and retrieve information which is described further below.

The inventory elements are also categorized as follows.

- **By Entity:** Entities refer to the type of equipment the element represents, for example, roadside equipment, a vehicle, or some kind of management system. All the elements (existing and future) pertaining to the entity are listed. Clicking on the elements provides a similar detail to that described above.
- **By Stakeholder:** Each stakeholder is shown with the elements owned by that stakeholder grouped next to it. Clicking on the elements provides a similar detail to that described above.

Services:

ITS service packages are the building blocks of the ITS architecture. Multiple packages are defined depending on how many stakeholders deploy the services. Click on the service, and you will see (a) whether it is an existing or future service, (b) its description, (c) the related ITS inventory elements, which you can click on to generate the above descriptions and interfaces associated with that element in the Regional Architecture.

Ops Concept:

Nine areas of transportation activities are reflected in the operational roles and responsibilities shown here for the various stakeholders. Clicking on the stakeholders provides similar information to what is provided for the stakeholder topic above.

Requirements:

This is one of the more detailed parts of the architecture. In this, particular subsystems of the architecture (including roadside, central, and vehicle-related subsystems) are described by particular functionalities (17 in total as reflected in the “sausage diagram” contained on the project website). Clicking on these functionalities brings a description of several high-level functional requirements along with the element(s) within the St. Louis Regional ITS Architecture that are pertinent to these functional requirements.

Interfaces:

Another detailed part of the architecture is the definition of interfaces. The interfaces represent communications of data between different elements, for example, transmission of video images from a CCTV camera to a traffic management center, a central dispatch system receiving a set of current GPS location coordinates from a bus, or transmitting signal timing parameters from a traffic management center to a traffic signal. The interfaces describe the two elements which are interfaced. Clicking on the left side element brings up a context diagram illustrating all the interfaces connecting to this left side element. Clicking on the right side element brings up a specific interface diagram showing the single connection between two system elements, along with descriptions of each data flow contained within the interface. Solid blue lines refer to current data flows (or information) being provided by ITS while dashed red lines refer to future data flows to be implemented as part of expansion or enhancement of ITS in the region.

Standards:

All communications interfaces require pertinence to ITS industry standards. These standards are defined and described in this topic as follows: (a) description of the standards development organization (SDO), the standard number, and a description of the standard, and (b) by clicking on the name of the standard, a list of all the interfaces within the architecture for which this standard is pertinent.

Agreements

Current as well as recommended agreements or memoranda of understanding are typically needed to implement particular data sharing or data use activities, so to assure there aren't multiple, incompatible standards for video communications or dynamic message sign communications in the US.

Projects

Project definitions are based on the Strategic Deployment Plan project elements, which incorporate specific ITS Service Packages as well as particular stakeholders.