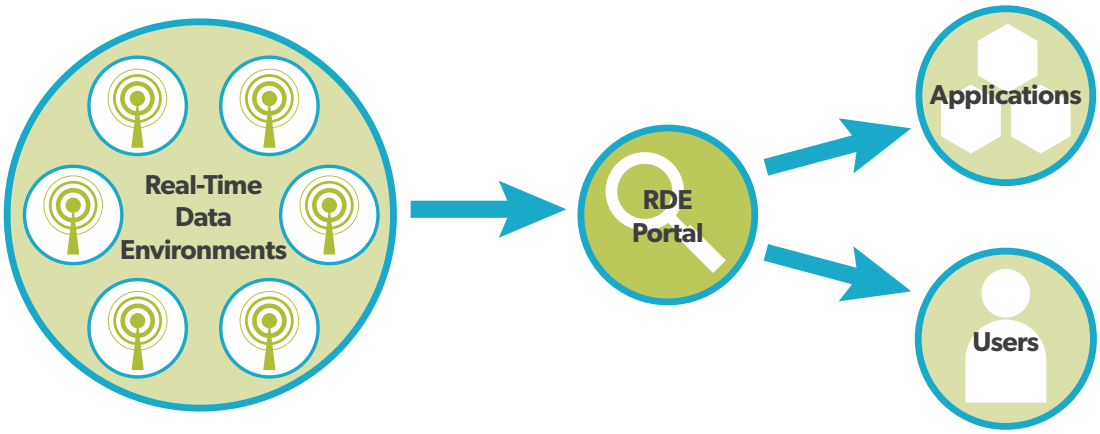
What is the Research Data Exchange?

The ITS Research Data Exchange (RDE) is being developed to host and provide access to research data in support of connected vehicle application development and testing. The RDE is being developed under the U.S. DOT ITS Data Capture and Management Program and the prototype RDE is being demonstrated at this conference. Subsequent versions of the RDE will be released to meet on the needs of the U.S. DOT connected vehicle research program.

The U.S. Department of Transportation (USDOT) Research and Innovative Technology Administration and Federal Highway Administration has released the first version of the Research Data Exchange (RDE), a transportation data-sharing system that promotes sharing of archived and real-time data from multiple sources and multiple modes. This new data-sharing capability will support the needs of intelligent transportation system (ITS) researchers and developers while reducing costs and encouraging innovation. Data accessible through the RDE is quality checked, well documented, and available to the public.

For any questions, please contact Gene McHale, FHWA R&D, RDE Manager, at Gene.McHale@dot.gov.

Data environments deliver real-time information to Users and Applications



There are nine data environments in the RDE, with more on the way. Each data environment has multiple data sets and standards-based metadata. The nine data environments include:

- Three sets of trials of connected vehicle technology (onboard equipment sending probe messages to roadside equipment) conducted from 2008 through 2010 at the USDOT's Connected Vehicle Michigan Test Bed, plus data from a detailed simulation of the test bed area.
- Two sets of data collected in Orlando, FL, and Leesburg, VA, from vehicle awareness devices that record vehicle position, heading, speed, and acceleration every 0.1 second in the format of a standard Basic Safety Message.
- One year of freeway volume, occupancy, and speed data from San Diego, CA, including incident reports, weather reports, and sample GPS vehicle location data vehicle tracks.
- Two months of freeway and arterial data from Portland, OR, including arterial travel times, signal timing plans, freeway incidents, weather reports, and transit stops.
- Six months of freeway and arterial data from Seattle, WA, including freeway and arterial travel times, incident and message sign data, signal timing plans, weather reports, and transit stops.
- Two months of detailed freeway and arterial data from Pasadena, CA, including simulated link volumes, capacities and delays; incident, work zone, and message sign data; signal timing plans; weather reports; and closed-circuit TV (CCTV) snapshots every minute.

Each of these data environments consists of multiple data sets and supporting metadata files. Additional data environments will be created as data become available from projects related to the connected vehicle program, whether or not they are funded by USDOT.

Users may browse through the data environments or use an advanced search capability to find data sets that contain specific types of information. Registered users may download data files, post comments about the files, and define projects to share information and collaborate with other users. The website also contains Frequently Asked Questions (FAQs) and links to related ITS websites.

The RDE can be found online at
https://www.its-rde.net.

U.S. Department of Transportation