Automated Truck Mounted Attenuator (00-022)
Dataset available at: https://doi.org/10.15787/VTT1/AT0RHF

(This dataset supports report **Design and Development of an Automated Truck Mounted Attenuator**)

This U.S. Department of Transportation-funded dataset is preserved by Safety through Disruption (Safe-D) National University Transportation Center in the digital repository Virginia Tech Transportation Institute (https://dataverse.vtti.vt.edu/), and is available at https://doi.org/10.15787/VTT1/AT0RHF.

The related final report **Design and Development of an Automated Truck Mounted Attenuator**, is available from the National Transportation Library's Digital Repository at https://rosap.ntl.bts.gov/view/dot/56912.

Metadata from the Virginia Tech Transportation Institute Repository record:
Description:
Project Description:
Can an ATMA system and control concept be developed and demonstrated that makes it practical to remove the driver from the at-risk TMA vehicle in mobile and short duration work zone operations using a short following distance leader-follower control concept? Can an ATMA system be developed that allows a lead vehicle driver to perform their normal TMA operational tasks while monitoring and controlling the ATMA in the at risk TMA position in mobile work zone operations?

Data Scope:
The data contained within the files contain raw sensor data that is being aggregated to inform the autonomous system control. There are 4 runs that contain the information along the Smart Road Surface Street and Highway sections. Each run comprises a set of ROS topics that is in bag file form. Each bag file contains the following type of data: Lidar, IMU, GPS, and vehicle speed.

Data Specification:
types:
gps_common/GPSFix -- [3db3d0a7bc53054c67c528af84710b70]
sensor_msgs/Imu -- [6a62c6daae103f4ff57a132d6f95cec2]
sensor_msgs/PointCloud2 -- [1158d486dd51d683ce2f1be655c3c181]
std_msgs/Float64 -- [fdb28210bfa9d7c91146260178d9a584]
topics:
/dgps/fix_gated -- 10617 msgs -- : gps_common/GPSFix
/imu/imu_enu/data -- 26543 msgs -- : sensor_msgs/Imu
/velodyne_points -- 10616 msgs -- : sensor_msgs/PointCloud2
/vtti/speed_float -- 21235 msgs -- : std_msgs/Float64

Subject:
Engineering

Recommended citation:
Mollenhauer, Mike; White, Elizabeth, 2020, "Automated Truck Mounted Attenuator (00-022)", https://doi.org/10.15787/VTT1/AT0RHF, VTTI, V2

Dataset description:
This dataset contains 1 .zip file collection described below.

Standardized Performance Evaluation of Vehicles with Automated Capabilities.zip:
This collection contains 5 files and 2 files types, listed below.
- RUN_0_2020-09-18-09-51-21.bag
- RUN_0_2020-09-18-09-55-08.bag
- RUN_5_2020-09-18-10-43-15.bag
- RUN_6_2020-09-18-10-57-13.bag
- Dataset_Information.pdf

File Type Descriptions:
- The pdf file extension is first and foremost associated with Adobe Acrobat Portable Document Format (PDF) documents. Portable Document Format (PDF) is a file format proprietary to Adobe Systems for representing two-dimensional documents in a device independent and resolution independent fixed-layout document format. Each PDF file encapsulates a complete description of a 2D document (and, with the advent of Acrobat 3D, embedded 3D documents) that includes the text, fonts, images, and 2D vector graphics that compose the document. PDF files do not encode information that is specific to the application software, hardware, or operating system used to create or view the document. This feature ensures that a valid PDF will render exactly the same regardless of its origin or destination (but depending on font availability). PDF files are most appropriately used to encode the exact look of a document in a device-independent way. While the PDF format can describe very simple one page documents, it may also be used for many pages, complex documents that use a variety of different fonts, graphics, colors, and images. (for more information on .pdf files and software, please visit https://www.file-extensions.org/pdf-file-extension)
- The bag file extension is also used for a compressed archive format created by Jeff Connelly. The main goal of bag archives is to provide a simple and efficient way to combine many files into one. (for more information on .bag files and software, please visit https://www.file-extensions.org/bag-file-extension-bag-archive)

National Transportation Library (NTL) Curation Note: