

Integrated Dynamic Transit Operations Data, from Columbus, OH

Identification Information

Citation

Citation Information

Originator: Battelle

Publication Date: 20150127

Title: IDTO Columbus, OH Study Data

Edition: Version 1

Geospatial Data Presentation Form: Latitude and longitude

Publication Information

Publication Place: Columbus, OH

Publisher: Battelle Memorial Institute

Online Linkage: <https://www.its-rde.net/>

Description

Abstract: The data elements contained in this data environment were collected during the Integrated Dynamic Transit Operations (IDTO) pilot testing in Columbus, OH

Purpose: Develop and implement a prototype IDTO system in a real-world transit environment, developed and operated with significant stakeholder input (agency, travelers, and vendors). The project will generate data to observe the synergistic potential of the three applications that emphasize dynamic transit operations.

- T-CONNECT (aka Connection Protection) serves to improve the experience for a transit traveler by increasing the likelihood of making successful transfers, particularly when these transfers are multi-modal or multi-agency.
- T-DISP (Dynamic Transit Operations) provides benefits to both the traveler and the transportation provider. For the traveler, T-DISP provides an ability to access real-time information about available travel options, including costs and predicted time, in order to best manage their commute. For an agency, T-DISP extends demand / response services to support dynamic routing and scheduling, and even add/remove vehicles from service, based on traffic conditions, vehicle capacity, ridership and origin-destination, among other factors.
- D-RIDE takes the concept of traditional pre-planned ridesharing (i.e., carpooling) and brings it into the 21st century. It does this by leveraging the positioning, messaging, and computing capabilities of today's smartphones, and advancing an application that will let drivers and travelers, in near real-time, exchange information about needs or in case of a driver, available space.

Time Period of Content

Time Period Information

Range of Dates:

Beginning Date: 20140512

Ending Date: 20141219

Currentness Reference:

Ground condition (i.e., the previous dates refer to the time the information was collected)

Status

Progress: Complete

Maintenance and Update Frequency: None planned

Spatial Domain

Bounding Coordinates

West Bounding Coordinate: -83.15°

East Bounding Coordinate: -82.85°

North Bounding Coordinate: 40.12°

South Bounding Coordinate: 39.86°

Keywords

Theme

Theme Keyword: TConnect

Theme Keyword: Connection Protection

Theme Keyword: Transit

Theme Keyword: Mobility

Theme Keyword: Mobile Data Terminal

Place

Place Keyword: Columbus, OH

Temporal

Temporal Keyword: May 12, 2014

Access Constraints:

To access the data set, users must register through the USDOT Research Data Exchange (RDE) portal (<https://www.its-rde.net/>). The registration process will include a request for contact information and agreement to terms of use for the data. What information is optional versus mandatory for registration has not been finalized ; however in order to encourage broad access and use, mandatory information will be kept to a minimum and ease of use maximized. See the RDE Terms of Use and Data Privacy Policy on how registration information is kept secure and for uses only applicable to the RDE administration.

User Constraints:

Those who use data and data processing tools distributed by the Research Data Exchange have the following responsibilities:

1. Where the contributed materials have been utilized to any extent to enable, verify, supplement or validate performance measurement, analysis, research or software development, to fully

reference the Research Data Exchange Program and the contributions of the individuals in all subsequent and related publications or public events, specifically:

- a. In publications, reference the Research Data Exchange website and the date accessed, data and/or data processing tools (by name and version number), and the individual contributors identified on the reference template associated with each data and/or data processing tool.
 - b. In presentations or other oral communication, by noting the data and/or data processing tool by name and version number, and communicating the address of the Research Data Exchange website.
2. Users are encouraged to accurately post and update within the Research Data Exchange website a description of the project utilizing the data and/or the data processing tools, including:
 - a. A description of the project, including a brief statement of the project goals.
 - b. A summary of the hypotheses and findings (when available) of the project.
 - c. Individuals directing and/or substantively participating in the project.
 - d. The name and version number of the data and/or data processing tools downloaded and utilized in the project.
 - e. The current state of the project (upcoming, underway, completed).
 - f. References to published materials (if any).
3. Users are encouraged to report anomalies, errors or other questionable data elements using the Data Forum of the Research Data Exchange website, referencing the specific data or data processing tool by name and version number.
4. To refrain from duplication and dissemination of the data and data processing tools to third parties.

Publication of certain derived information such as location of residence, specific stores visited, purpose of trips, etc. must be cleared with the data set originator prior to publication.

Point of Contact

Contact Information

Contact Organization Primary

Contact Organization: Battelle

Contact Person: Bill Gibbs

Contact Electronic Mail Address: gibbsw@battelle.org

Contact Organization Secondary

Contact Organization: USDOT Federal Transit Administration (FTA)

Contact Person: Ronald Boenau

Contact Electronic Mail Address: ronald.boenau@dot.gov

Native Data Set Environment:

Documentation: The data collected during the IDTO pilot test was stored in two different locations. The SQL database contains the traveler's information including account information, search, and trip information. The location data sent by the Mobile Data Terminal (MDT) was stored in Azure Table Storage. The Azure Table Storage was archived off into a .csv file for easier viewing. The SQL database was archived off to a SQL database file. In providing data to the RDE, all data files that contained Personally Identifiable Information (PII), or could be used to uncover PII, were sanitized to protect participants' identity. In order to protect the privacy of the participant, the decimal digits in the geospatial data (latitudinal and longitudinal values) were randomized. However, to ensure that the data's trajectory integrity remained within reasonable bounds, the new geospatial points were plotted and compared to the original geospatial points. The comparison between the plots indicated that the new trajectory data maintained reasonable integrity.

Cross Reference:

None currently

Citation Information

Originator: USDOT
Publication Date: 20140420
Title: Safety Pilot Model Deployment
Online Linkage: <https://www.its-rde.net/>

Data Quality Information

Attribute Accuracy: No accuracy assessment has been performed for the data set.

Completeness Report: The USDOT does not make any claims regarding data completeness. There may be gaps in the data provided.

Lineage

Source Information

Source Citation

Citation Information

Originator: All IDTO data collected and published by Battelle for FHWA/USDOT.
Publication Date: 2014

Process Step

Process Description: The data collection storage was split between the Azure table storage for vehicle locations, and the Azure SQL database for all other data elements. The Azure SQL database was archived off to a local computer, then detached and stored. Each table within the Data Base has been converted into individual CSV files for easier access. The Azure table storage was scripted to store the data in comma separated value format. Data was scrubbed by simple scripts to remove test trip data created by IDTO staff.

Process Contact:

Contact Information

Contact Organization Primary

Contact Organization: Battelle
Contact Person: Bill Gibbs
Contact Electronic Mail Address: gibbsw@battelle.org

Entity and Attribute Information

Detailed Description for the Travelers Data Set

The Traveler Data Set includes data tables that relate to the travelers who collectively represent or generate the transportation demand. In this set, there are six distinct csv files covering various traveler related aspects of the IDTO bundle.

TravelerLocations Table

The TravelerLocations table (TravelerLocations.csv) stores each traveler's locations. This data is only stored if a traveler takes a trip with a TConnect opportunity, and the traveler has selected to share his or her location using the mobile application.

Attribute

Attribute Label: id (Column A)
Attribute Definition: Auto Generated Key.
Attribute Domain Values: Integer

Attribute

Attribute Label: TravelerId (Column B)
Attribute Definition: Auto Generated Key for the traveler.
Attribute Domain Values: Integer

Attribute

Attribute Label: PositionTimestamp (Column C)
Attribute Definition: The time that the GPS positioning was executed.
Attribute Domain Values: DateTime

Attribute

Attribute Label: Address (Column D)
Attribute Definition: The traveler's street address with street numbers omitted.
Attribute Domain Values: String

WebApiGetTripUsage Table

The WebApiGetTripUsage table (WebApiGetTripUsage.csv) stores all search information, anonymously, that the IDTO travelers used to find trips. The data includes where the travelers started their journeys, to where they planned to go, and search results information.

Attribute

Attribute Label: id (Column A)
Attribute Definition: Auto Generated Key.
Attribute Domain Values: Integer

Attribute

Attribute Label: FromPlace (Column B)
Attribute Definition: From location search string used by traveler. Street numbers are omitted from the address.
Attribute Domain Values: String

Attribute

Attribute Label: ToPlace (Column C)
Attribute Definition: To location search string used by traveler. Street numbers are omitted from the address.
Attribute Domain Values: String

Attribute

Attribute Label: SearchTime (Column D)
Attribute Definition: The date and time the traveler searched for a trip.
Attribute Domain Values: DateTime

Attribute

Attribute Label: Platform (Column E)
Attribute Definition: The device platform used to perform trip search. For this dataset, it could be iOS, Android, Web, etc.
Attribute Domain Values: String

Attribute

Attribute Label: NumberOfResults (Column F)
Attribute Definition: Number of trips returned.
Attribute Domain Values: Integer

Attribute

Attribute Label: ExecutionTimeSeconds (Column G)
Attribute Definition: Time in seconds that it took for the search to obtain results.
Attribute Domain Values: Integer

Attribute

Attribute Label: MaxWalkMeters (Column H)
Attribute Definition: Maximum walk distance between steps of the trip in meters.
Attribute Domain Values: Double

Attribute

Attribute Label: CreatedTime (Column I)
Attribute Definition: Date and time that the record was created in the database.
Attribute Domain Values: DateTime

Logins Table

The Logins table (Logins.csv) contains the traveler identity created from initial registration along with the times that each id was created, and updated. The createdAt id is the time of creation and updatedAt id is the time of updating. If createdAt and updatedAt attributes are equal then no update occurred.

Attribute

Attribute Label: id (Column A)
Attribute Definition: Auto Generated Key.
Attribute Domain Values: String

Attribute

Attribute Label: __createdAt (Column B)
Attribute Definition: Date and time the Login was created.
Attribute Domain Values: DateTime

Attribute

Attribute Label: __updatedAt (Column C)
Attribute Definition: Date and time the Login was updated.
Attribute Domain Values: DateTime

Travelers Table

The Travelers table (Travelers.csv) has traveler profile information and account record for each traveler. The data also show when each traveler id was created. This table describes the condition of each traveler status throughout their trip.

Attribute

Attribute Label: id (Column A)
Attribute Definition: Auto Generated Key.
Attribute Domain Values: Integer

Attribute

Attribute Label: CreatedDate (Column B)
Attribute Definition: GMT Date and time of account creation.
Attribute Domain Values: DateTime.

Attribute

Attribute Label: InformedConsent (Column C)

Attribute Definition: Indicates that the traveler has acknowledged the informed consent notice.
Attribute Domain Values: Boolean (1=yes, 0=no)

Attribute

Attribute Label: InformedConsentDate (Column D)
Attribute Definition: Date and time the traveler acknowledged the informed consent notice.
Attribute Domain Values: DateTime

Attribute

Attribute Label: DeactivatedDate (Column E)
Attribute Definition: GMT Date and time account was deactivated, or null if active.
Attribute Domain Values: DateTime

Attribute

Attribute Label: DefaultMobilityFlag (Column F)
Attribute Definition: Boolean value indicating whether the traveler prefers enhanced mobility services.
Attribute Domain Values: Boolean (1=yes, 0=no)

Attribute

Attribute Label: DefaultBicycleFlag (Column G)
Attribute Definition: Boolean value indicating whether the traveler prefers services that support transporting bicycles.
Attribute Domain Values: Boolean (1=yes, 0=no)

Attribute

Attribute Label: DefaultPriority (Column H)
Attribute Definition: Preferred mode of scheduling trips, one of: 1. "Destination": Use the trip time as the time of arrival at the trip's destination. 2. "Origination": Use the trip time as the time of departure from the trip's point of origin.
Attribute Domain Values: Integer

Attribute

Attribute Label: DefaultTimezone (Column I)
Attribute Definition: Traveler's default time zone, as in 'US/Eastern', 'US/Central', 'US/Mountain', 'US/Arizona', 'US/Pacific', etc.
Attribute Domain Values: String

Attribute

Attribute Label: ModifiedDate (Column J)
Attribute Definition: Date this data was last modified.
Attribute Domain Values: DateTime

Attribute

Attribute Label: ModifiedBy (Column K)
Attribute Definition: Last modifier of this data.
Attribute Domain Values: String

Attribute

Attribute Label: LoginId (Column L)
Attribute Definition: Foreign key into the Login table. Identifies the unique login associated with this traveler profile. (It relates the Traveler table back to the Login table only.)
Attribute Domain Values: String

Attribute

Attribute Label: LastContactedDate (Column M)
Attribute Definition: The last time a traveler is contacted. Null value means information is unavailable.
Attribute Domain Values: DateTime

Attribute

Attribute Label: PromoCode (Column N)

Attribute Definition: The valid promo codes used by the IDTO system. The promo codes were used to group participants to track trips taken by a particular group.

Attribute Domain Values: String

Trips Table

The Trips table (Trips.csv) stores data on the trip scheduled by a traveler, from a specified location to a specified destination, and a specific time, with parameters selected by the traveler

Attribute

Attribute Label: id (Column A)

Attribute Definition: Auto Generated Key.

Attribute Domain Values: Integer

Attribute

Attribute Label: TravelerId (Column B)

Attribute Definition: Foreign key into the Traveler table. Identifies which traveler scheduled this trip. (This key relates the Trips Table back to the Traveler table only.)

Attribute Domain Values: Integer

Attribute

Attribute Label: Origination (Column C)

Attribute Definition: The traveler-specified starting location of the trip. Street numbers are omitted from the address.

Attribute Domain Values: String

Attribute

Attribute Label: Destination (Column D)

Attribute Definition: The traveler-specified destination of the trip. Street numbers are omitted from the address.

Attribute Domain Values: String

Attribute

Attribute Label: TripStartTime (Column E)

Attribute Definition: The traveler specified trip time, may be an arrival or departure time, depending on the PriorityCode. UTC, local time zone.

Attribute Domain Values: Time

Attribute

Attribute Label: MobilityFlag (Column F)

Attribute Definition: Does this trip require mobility facilities?

Attribute Domain Values: Boolean (1=yes, 0=no)

Attribute

Attribute Label: BicycleFlag (Column G)

Attribute Definition: Does this trip require bicycle facilities?

Attribute Domain Values: Boolean (1=yes, 0=no)

Attribute

Attribute Label: PriorityCode (Column H)

Attribute Definition: The scheduling priority for this trip. (See supporting documentation for additional information regarding "priority")

Attribute Domain Values: Integer

Attribute

Attribute Label: CreatedDate (Column I)

Attribute Definition: Date trip was scheduled.

Attribute Domain Values: DateTime

Attribute

Attribute Label: ModifiedTime (Column J)
Attribute Definition: Time this data was last modified.
Attribute Domain Values: Time

Attribute

Attribute Label: ModifiedBy (Column K)
Attribute Definition: Last modifier of this data.
Attribute Domain Values: String

Attribute

Attribute Label: TripEndTime (Column L)
Attribute Definition: The time that the trip terminated.
Attribute Domain Values: Time

Attribute

Attribute Label: TripStartNotificationSent (Column M)
Attribute Definition: Indicates whether a trip start notification was sent.
Attribute Domain Values: Boolean (1=yes, 0=no)

Detailed Description for the Providers Data Set

The Providers Data Set includes data tables that relate to the providers who collectively represent or furnish the transportation supply to meet the transportation demand. In this set, there are six distinct csv files covering various provider/supply related aspects of the IDTO bundle.

Modes Table

The Modes (Modes.csv) table contains the modes of transportation used by the trip planning system. Valid modes are Walk, Bus, and Rail.

Attribute

Attribute Label: id (Column A)
Attribute Definition: Auto Generated id.
Attribute Domain Values: Integer

Attribute

Attribute Label: Name (Column B)
Attribute Definition: String representation of the mode of travel.
Attribute Domain Values: String

Dispatchers Table

The Dispatchers table (Dispatchers.csv) contains the dispatcher account information.

Attribute

Attribute Label: id (Column A)
Attribute Definition: Auto Generated id.
Attribute Domain Values: Integer

Attribute

Attribute Label: ProviderId (Column B)
Attribute Definition: id mapping to the Providers Table.
Attribute Domain Values: Int

Attribute

Attribute Label: CreatedDate (Column C)
Attribute Definition: Date entry was created.
Attribute Domain Values: DateTime

Attribute

Attribute Label: ModifiedDate (Column D)
Attribute Definition: Date entry was last modified.
Attribute Domain Values: DateTime

Providers Table

The Providers table (Providers.csv) contains the list of transit providers in the IDTO system. These providers can participate in TConnections as either an incoming provider, a TConnect provider offering connection protection, rideshare provider, or demand response provider.

Attribute

Attribute Label: id (Column A)
Attribute Definition: Auto Generated id.
Attribute Domain Values: Integer

Attribute

Attribute Label: ProviderType (Column B)
Attribute Definition: id of the provider type to join the ProviderTypes table.
Attribute Domain Values: Integer

ProviderTypes Table

The ProviderTypes table (ProviderTypes.csv) contains the list of provider types in the IDTO system. The provider types are incoming provider, a TConnect provider offering connection protection, rideshare provider, or demand response provider.

Attribute

Attribute Label: id (Column A)
Attribute Definition: Auto Generated id.
Attribute Domain Values: Integer

Attribute

Attribute Label: Name (Column B)
Attribute Definition: Provider type friendly name.
Attribute Domain Values: String

DispatcherLogins Table

The DispatcherLogins table (DispatcherLogins.csv) contains the dispatcher identity information. This table contains the users' encrypted login credentials.

Attribute

Attribute Label: id (Column A)
Attribute Definition: Auto Generated Key.
Attribute Domain Values: String

Attribute

Attribute Label: __createdAt (Column B)
Attribute Definition: Date and time the Login was created.
Attribute Domain Values: DateTime

Attribute

Attribute Label: __updatedAt (Column C)
Attribute Definition: Date and time the Login was updated.
Attribute Domain Values: DateTime

TConnectedVehicles Table

The TConnectedVehicles table (TConnectedVehicles.csv) contains the outbound vehicles for the TConnectRequests.

Attribute

Attribute Label: id (Column A)
Attribute Definition: Auto Generated id.
Attribute Domain Values: Integer

Attribute

Attribute Label: OriginallyScheduledDeparture (Column B)
Attribute Definition: Originally Scheduled Departure.
Attribute Domain Values: DateTime

Attribute

Attribute Label: CurrentAcceptedHoldMinutes (Column C)
Attribute Definition: -1 if request was rejected, 0 if unknown or timed out, 1 if accepted.
Attribute Domain Values: Integer

Attribute

Attribute Label: TConnectStopCode (Column D)
Attribute Definition: Code for location of stop. Stop Code (/ID).
Attribute Domain Values: Integer

Attribute

Attribute Label: ModifiedDate (Column E)
Attribute Definition: Date this data was last modified.
Attribute Domain Values: DateTime

Attribute

Attribute Label: ModifiedBy (Column F)
Attribute Definition: Last modifier of this data.
Attribute Domain Values: String

Attribute

Attribute Label: TConnectFromName (Column G)
Attribute Definition: Stop name where the TConnection took place.
Attribute Domain Values: String

Attribute

Attribute Label: TConnectBlockIdentifier (Column H)
Attribute Definition: Block identifier from GTFS file. Can be used as a foreign key into the Blocks table to get the Block Name.
Attribute Domain Values: Integer

Detailed Description for the TConnect Data Set

The TConnect Data Set includes data tables that relate to the TConnect ecosystem. In this set, there are eight distinct csv files which support various components of the TConnect application.

Blocks Table

The Blocks table (Blocks.csv) contains a mapping from the auto generated block id in the General Transit Feed Specification (GTFS) file to block name known by the dispatchers. The block name is what was displayed to the dispatchers at Central Ohio Transit Agency (COTA) in the TConnect requests.

Attribute

Attribute Label: id (Column A)
Attribute Definition: Auto Generated block id from GTFS file.
Attribute Domain Values: String

Attribute

Attribute Label: Agency (Column B)
Attribute Definition: Agency from the GTFS file for the mapping.
Attribute Domain Values: String

Attribute

Attribute Label: ServiceGroupId (Column C)
Attribute Definition: Days block name is in service.
Attribute Domain Values: String; WKD – for weekday, SAT – for Saturday only, SUN – for Sunday only

Attribute

Attribute Label: BlockName (Column D)
Attribute Definition: Block Name used by COTA dispatchers (Represented as integer).
Attribute Domain Values: Integer

PromoCodes Table

The PromoCodes table (PromoCodes.csv) contains the valid promo codes used by the IDTO system. The promo codes were used to group participants to track trips taken by a particular group.

Attribute

Attribute Label: id (Column A)
Attribute Definition: Auto Generated id.
Attribute Domain Values: Integer

Attribute

Attribute Label: Code (Column B)
Attribute Definition: Promo code.
Attribute Domain Values: String

TConnectStatus Table

The TConnectStatus table (TConnectStatus.csv) is a lookup table which contains the possible status values for a TConnect.

Attribute

Attribute Label: id (Column A)
Attribute Definition: Auto Generated Key.
Attribute Domain Values: Integer

Attribute

Attribute Label: Name (Column B)
Attribute Definition: TConnect Status friendly name.
Attribute Domain Values: String

TripEvents Table

The TripEvents table (TripEvents.csv) records notable events for diagnostic and historical purposes.

Attribute

Attribute Label: id (Column A)
Attribute Definition: Auto Generated Key.
Attribute Domain Values: Integer

Attribute

Attribute Label: TripId (Column B)
Attribute Definition: Foreign key into trip table. Identifies the trip associated with this log event.
Attribute Domain Values: Integer

Attribute

Attribute Label: EventDate (Column C)
Attribute Definition: Date and time stamp of event in UTC / Zulu time.
Attribute Domain Values: DateTime

Attribute

Attribute Label: Message (Column D)
Attribute Definition: The text of the log message.
Attribute Domain Values: String

TConnectOpportunities Table

The TConnectOpportunities table (TConnectOpportunities.csv) defines every potential sequence of locations that can potentially trigger a T-Connect request. Any active trip in which one of these sequences appears is monitored closely by the T-Connect Opportunity Manager. This table is pre-populated with all inbound checkpoint location / T-Connect departure location pairs. The provider type of the departure location must be a T-Connect provider, while the provider type at the inbound location must be an inbound provider

Attribute

Attribute Label: id (Column A)
Attribute Definition: Auto Generated Key.
Attribute Domain Values: Integer

Attribute

Attribute Label: CheckpointProviderId (Column B)
Attribute Definition: Foreign key into provider table.
Attribute Domain Values: Integer

Attribute

Attribute Label: CheckpointStopCode (Column C)
Attribute Definition: The Code that represents the unique check point location.
Attribute Domain Values: String

Attribute

Attribute Label: CheckpointRoute (Column D)
Attribute Definition: The location of the inbound destination vehicle.
Attribute Domain Values: String

Attribute

Attribute Label: TConnectProviderId (Column E)
Attribute Definition: Foreign key into the provider table. Indicates the provider associated with this TConnect opportunity.
Attribute Domain Values: Integer

Attribute

Attribute Label: TConnectStopCode (Column F)
Attribute Definition: The stop code associated with TConnect.
Attribute Domain Values: Integer

Attribute

Attribute Label: TConnectRoute (Column G)
Attribute Definition: Route of the outbound vehicle.
Attribute Domain Values: String

Attribute

Attribute Label: ModifiedDate (Column H)
Attribute Definition: Date this data was last modified.
Attribute Domain Values: DateTime

Attribute

Attribute Label: ModifiedBy (Column I)
Attribute Definition: Last modifier of this data.
Attribute Domain Values: String

TConnectRequests Table

The TConnectRequests table (TConnectRequests.csv) defines the connection protection requests which have been issued by the system. Records in this table will be used to track the status of the requests.

Attribute

Attribute Label: id (Column A)
Attribute Definition: Auto Generated Key.
Attribute Domain Values: Integer

Attribute

Attribute Label: TConnectStatusId (Column B)
Attribute Definition: Foreign key that connects to the TConnectStatus table (TConnectStatus.csv).
Attribute Domain Values: Integer

Attribute

Attribute Label: TConnectId (Column C)
Attribute Definition: Foreign key that connects to the TConnects table (TConnects.csv).
Attribute Domain Values: Integer

Attribute

Attribute Label: TConnectedVehicleId (Column D)
Attribute Definition: Foreign key that connects to the TConnectedVehicle table (TConnectedVehicle.csv).
Attribute Domain Values: Integer

Attribute

Attribute Label: EstimatedTimeArrival (Column E)
Attribute Definition: The scheduled time of arrival.
Attribute Domain Values: DateTime

Attribute

Attribute Label: RequestedHoldMinutes (Column F)
Attribute Definition: Requested delay in minutes.

Attribute Domain Values: Integer

Attribute

Attribute Label: ModifiedDate (Column G)

Attribute Definition: Date this data was last modified.

Attribute Domain Values: DateTime

Attribute

Attribute Label: ModifiedBy (Column H)

Attribute Definition: Last modifier of this data

Attribute Domain Values: String

Steps Table

The Steps table (Steps.csv) describe part of a scheduled trip. A series of steps connect a scheduled trip's origination to the trip's destination.

Attribute

Attribute Label: id (Column A)

Attribute Definition: Auto Generated id.

Attribute Domain Values: Integer

Attribute

Attribute Label: tripId (Column B)

Attribute Definition: Foreign key into trip table. Identifies which scheduled trip this step belongs to.

Attribute Domain Values: Integer

Attribute

Attribute Label: StepNumber (Column C)

Attribute Definition: The n^{th} step in a series within a scheduled trip.

Attribute Domain Values: Integer

Attribute

Attribute Label: ModeId (Column D)

Attribute Definition: Mode of transportation (represented by an integer).

Attribute Domain Values: Integer

Attribute

Attribute Label: StartDate (Column E)

Attribute Definition: Step start date and time.

Attribute Domain Values: DateTime

Attribute

Attribute Label: EndDate (Column F)

Attribute Definition: Step end date and time.

Attribute Domain Values: DateTime

Attribute

Attribute Label: FromName (Column G)

Attribute Definition: From Name given by the Route Provider. Street numbers have been omitted from address.

Attribute Domain Values: String

Attribute

Attribute Label: FromStopCode (Column H)

Attribute Definition: From Stop Code given by the Route Provider.

Attribute Domain Values: String

Attribute

Attribute Label: FromProviderId (Column I)
Attribute Definition: Foreign key into the Provider table. Indicates the provider for this step.
Attribute Domain Values: Integer

Attribute

Attribute Label: ToName (Column J)
Attribute Definition: To Name given by the Route Provider. Street numbers have been omitted from address.
Attribute Domain Values: String

Attribute

Attribute Label: ToStopCode (Column K)
Attribute Definition: To Stop Code given by the Route Provider.
Attribute Domain Values: String

Attribute

Attribute Label: ToProviderId (Column L)
Attribute Definition: Foreign key into the Provider table. This is the provider for the Stop Code.
Attribute Domain Values: Integer

Attribute

Attribute Label: Distance (Column M)
Attribute Definition: Distance for this step in meters.
Attribute Domain Values: Double

Attribute

Attribute Label: RouteNumber (Column N)
Attribute Definition: Route number for this step. Null value indicates that the route number is unavailable.
Attribute Domain Values: Integer

Attribute

Attribute Label: BlockIdentifier (Column O)
Attribute Definition: Foreign key into the Blocks table. The block identifying code represented by integer values.
Attribute Domain Values: Integer

TConnects Table

The TConnects table (TConnects.csv) is part of a scheduled trip. A series of steps connect a scheduled trip's origination to the trip's destination.

Attribute

Attribute Label: id (Column A)
Attribute Definition: Auto Generated Key.
Attribute Domain Values: Integer

Attribute

Attribute Label: TConnectStatusId (Column B)
Attribute Definition: Foreign key into the TConnectStatus table. The status of the request, one of "Pending", "Accepted" or "Rejected".
Attribute Domain Values: Integer

Attribute

Attribute Label: InboundStepId (Column C)
Attribute Definition: Foreign key into the step table.
Attribute Domain Values: Integer

Attribute

Attribute Label: OutboundStepId (Column D)
Attribute Definition: Foreign key into the step table.
Attribute Domain Values: Integer

Attribute

Attribute Label: InboundVehicle (Column E)
Attribute Definition: Vehicle identifier for the Inbound Vehicle.
Attribute Domain Values: String

Attribute

Attribute Label: StartWindow (Column F)
Attribute Definition: Start of ETA window where a t-Connect Request will be issued.
Attribute Domain Values: DateTime.

Attribute

Attribute Label: EndWindow (Column G)
Attribute Definition: End of ETA window where a t-Connect request will be issued.
Attribute Domain Values: DateTime

Attribute

Attribute Label: CreatedDate (Column H)
Attribute Definition: Date this data was created.
Attribute Domain Values: DateTime

Attribute

Attribute Label: ModifiedDate (Column I)
Attribute Definition: Date this data was last modified.
Attribute Domain Values: DateTime

Attribute

Attribute Label: ModifiedBy (Column J)
Attribute Definition: Last modifier of this data.
Attribute Domain Values: String

Attribute

Attribute Label: SurveyDate (Column K)
Attribute Definition: Date that the survey was provided. Null values mean that the date is unavailable.
Attribute Domain Values: String

Detailed Description for the Vehicles Data Set

The Vehicles Data Set includes data sets that relate to the Vehicles utilized during this observation. In this set, you will find two tables.

ProbeSnapshotEntry_final data set

The ProbeSnapshotEntry_final file contains data that is collected by the Mobile Data Terminal (MDT) which was deployed on the shuttle bus at Defense Supply Center Columbus (DSCC) in Columbus, OH. There are 11 files because there are about 11 million records and thus they are roughly split per million records. The MDT allowed the shuttle driver to create a connection to a COTA bus, which allowed for connection protection for the transit traveler.

Attribute

Attribute Label: PartitionKey (Column A)
Attribute Definition: Name of the MDT
Attribute Domain Values: String

Attribute

Attribute Label: RowKey (Column B)
Attribute Definition: Auto generated key by azure table storage
Attribute Domain Values: GUID

Attribute

Attribute Label: Timestamp (Column C)
Attribute Definition: Time in UTC format when the record was created in the azure table
Attribute Domain Values: DateTime

Attribute

Attribute Label: Latitude (Column D)
Attribute Definition: Latitude in decimal degrees
Attribute Domain Values: Double

Attribute

Attribute Label: Longitude (Column E)
Attribute Definition: Longitude in decimal degrees

Attribute

Attribute Label: Speed (Column F)
Attribute Definition: GPS Speed in meters per second
Attribute Domain Values: Double

Attribute

Attribute Label: Heading (Column G)
Attribute Definition: GPS heading from true north in degrees
Attribute Domain Values: Integer

Attribute

Attribute Label: PositionTimestamp (Column H)
Attribute Definition: GPS Time UTC
Attribute Domain Values: DateTime

Attribute

Attribute Label: Altitude (Column I)
Attribute Definition: GPS elevation in meters
Attribute Domain Values: Integer

Distribution Information

Distributor

Contact Information

Contact Organization Primary

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Metadata Reference Information

Metadata Date: 20150127
Metadata Review Date: 20150127
Metadata Future Review Date: not scheduled

Metadata Contact

Contact Information

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Contact Organization: Battelle

Contact Person: Bill Gibbs

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