

Cloud Tech for Transit

Featuring the KRT GTFS Project

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About Doug Hartley

Doug Hartley earned a BS in Business Administration majoring in marketing from West Virginia University, and in 1983 worked in the WVDOT Division of Public Transportation, moving to Operations Manager and Assistant to the General Manager at Tri State Transit Authority, Doug moved to KRT in 1987 to implement the Authority's ADA program and planning function. Since 2005, Doug has served as the Assistant Manager touching all aspects of KRT's operations.

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About Dr. Pete Dailey

Dr. Pete earned a BS in Engineering of Mines from WVU, an MS in Technology Management from Marshall, and a PhD in Transportation Engineering from WVU. Dr. Pete is a information technology project manager at the Rahall Transportation Institute.

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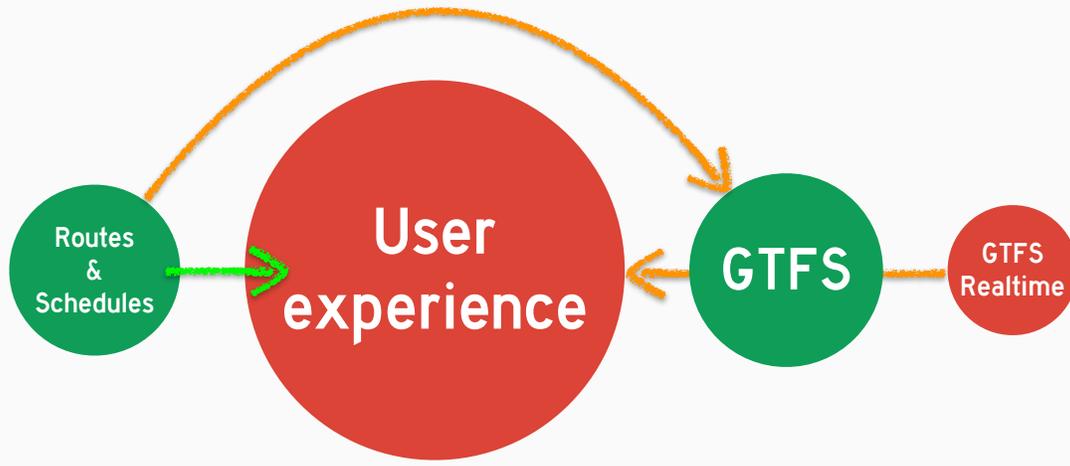
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Target for User Experience: Best-in-Class Cloud-Based Transit Routing Apps

- Google Maps
 - Desk/laptop
 - Mobile
- Bing Maps
- HERE (data supplier)
 - Amazon - maps & SDK
 - Garmin - Urban Guidance
 - Yahoo! - maps.yahoo.com
 - Amadeus - Trips Concierge
 - vSNCF - myTripSet



Transit Trip Planning



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WV Transit Agencies with GTFS Feeds

- Mountain Line
Monongalia County
- Kanawha Valley Regional Transit
- Fairmont Marion County Transit Authority
- Buckwheat Express
Preston County
- Here and There Transit
Barbour County (Philippi)
- TriRiver Transit
Boone, Cabell Counties

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Transit Route Planning Examples

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KRT Trip Planning Lap/desktop

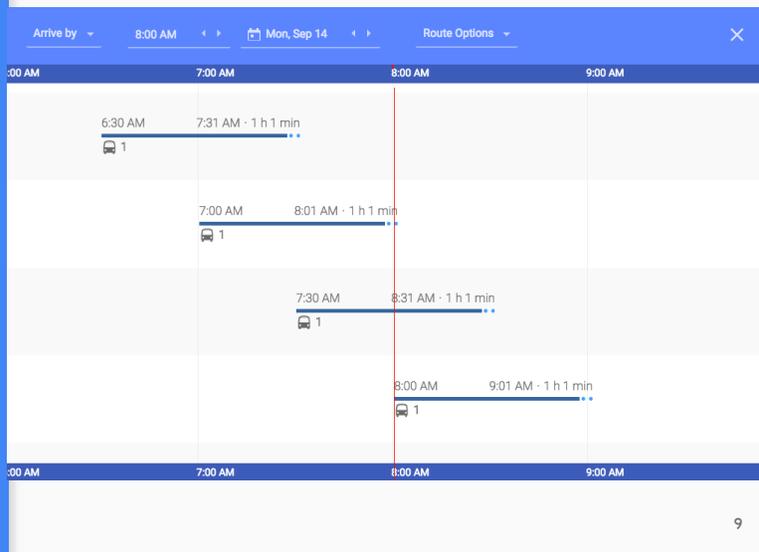
1. maps.google.com
2. Directions 
3. Start: St. Albans, WV
4. Destination: West Virginia
State Capitol, Charleston,
WV
5. Click Transit 



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KRT Trip Planning Result

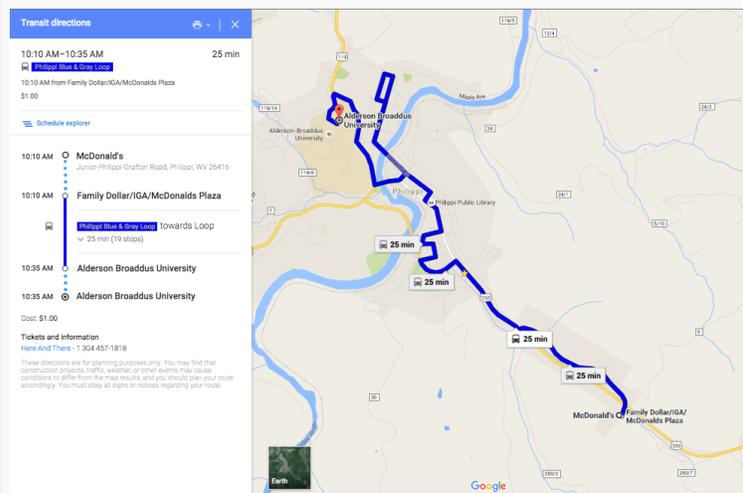
- 1. Trip Overview
- 2. Details
- 3. Schedule Explorer



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HAT - Philippi Trip Planning Example

- Other Google Maps Trip Details
- 1. Plan departure or arrival times



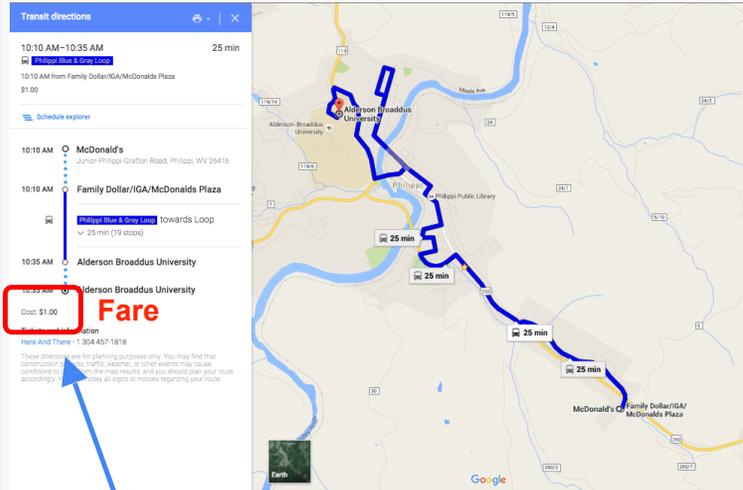
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HAT - Philippi Trip Planning Example

Other Google Maps Trip Details

1. Plan departure or arrival times
 2. Fare & Agency
- Web presence



HAT
Website link

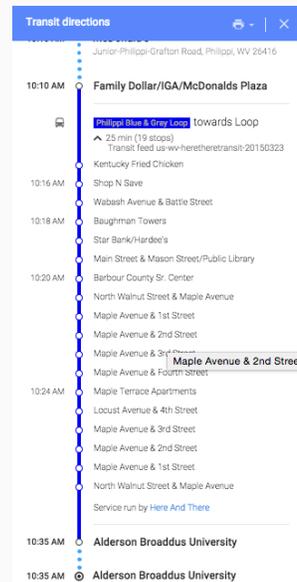
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HAT - Philippi Trip Planning Example

Other Google Maps Trip Details

1. Plan departure or arrival times
 2. Fare & Agency
 3. Time Stops
 4. Flag Stops
- Reduce apparent walking distance



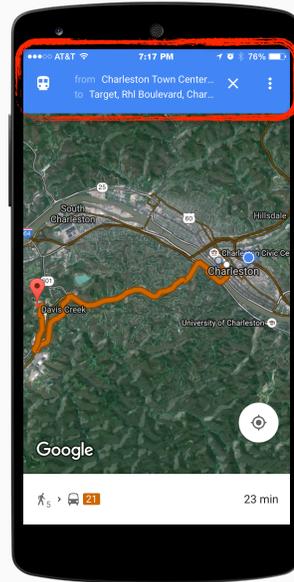
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Trip Planning Mobile Device

Google Maps app: iOS & Android

- 1) Directions
- 2) Originate from
- 3) Destination



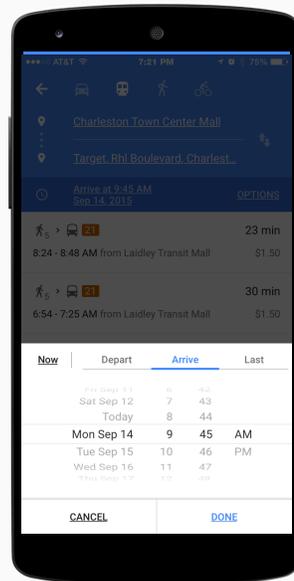
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11-2

Trip Planning Mobile Device

Google Maps app: iOS & Android

- 1) Directions
- 2) Originate from
- 3) Destination
- 4) Options
 - a) Choose Arrival or Departure time



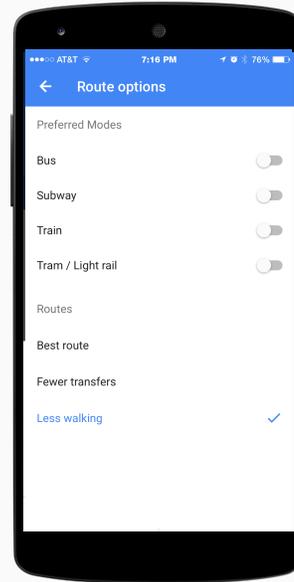
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Trip Planning Mobile Device

Google Maps app: iOS & Android

- 1) Directions
- 2) Originate from
- 3) Destination
- 4) Options
 - a) Choose Arrival or time
 - b) Routing options:
 - i) Less walking
 - ii) Best route
 - iii) Fewer Transfers



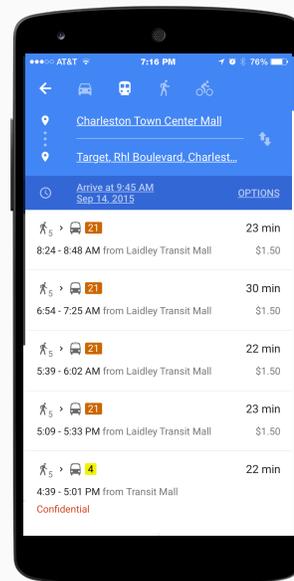
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Trip Planning Mobile Device

Google Maps app: iOS & Android

- 1) Directions
- 2) Originate from
- 3) Destination
- 4) Options
 - a) Choose Arrival or time
 - b) Routing options:
 - i) Less walking
 - ii) Best route
 - iii) Fewer Transfers
 - e) Alternate routes



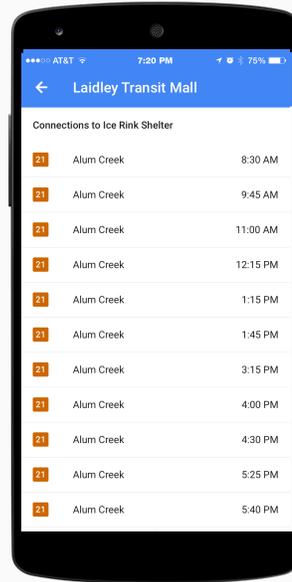
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Trip Planning Mobile Device

Google Maps app: iOS & Android

- 1) Directions
- 2) Originate from
- 3) Destination
- 4) Options
 - a) Choose Arrival or time
 - b) Routing options:
 - i) Less walking
 - ii) Best route
 - iii) Fewer Transfers
 - e) Alternate routes
 - f) Schedule**



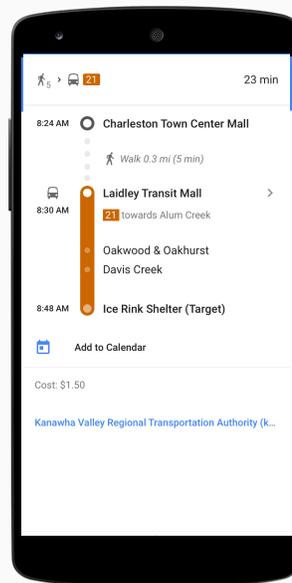
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Trip Planning Mobile Device

Google Maps app: iOS & Android

- 1) Directions
- 2) Originate from
- 3) Destination
- 4) Options
 - a) Choose Arrival or time
 - b) Routing options:
 - i) Less walking
 - ii) Best route
 - iii) Fewer Transfers
 - e) Alternate routes
 - f) Schedule
 - g) Stops**



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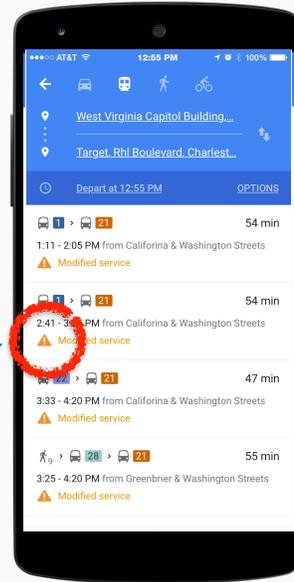
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Trip Planning Mobile Device

Google Maps app: iOS & Android

- 1) Directions
- 2) Originate from
- 3) Destination
- 4) Options
 - a) Choose Arrival or time
 - b) Routing options:
 - i) Less walking
 - ii) Best route
 - iii) Fewer Transfers
 - e) Alternate routes
 - f) Schedule
 - g) Stops
 - h) **Real-time alerts**

Real-time notices



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GTFS Data Availability

Cloud-based Git Repository

bitbucket.org

- BWX
- FMCTA
- HAT
- KRT
- TRT
- I-Ride-79

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Inter-Agency Trip Planning

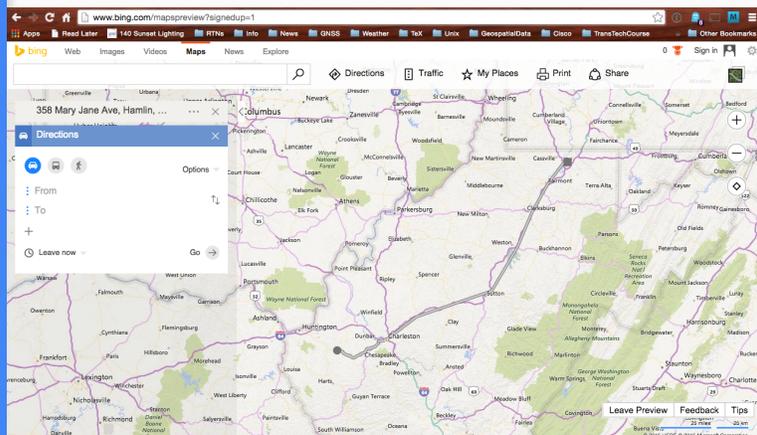
Complicated trip planning with Bing Maps

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Bing Inter-Agency Trip Planning

Trip Purpose: Send a student to WVU using public transportation.



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Bing Inter-Agency Trip Planning

Trip Purpose: Send a student to WVU using public transportation.

1. Depart 358 Mary Jane Ave, Hamlin, WV

A screenshot of the Bing Inter-Agency Trip Planning interface. At the top, there are icons for car, bus, and pedestrian, with an 'Options' dropdown arrow. Below this is a unit selector with 'Miles' selected and 'Kilometers' as an option. The origin is '358 Mary Jane Ave, Hamlin, WV 25523' and the destination is 'Boreman Hall, 600 N High St, Morgantown'. The departure time is 'Leave at 8:00 AM Monday, September 14, 2015' with a 'Go' button. A section titled 'Along the route:' contains icons for a camera, a route icon, a bus icon, a gas pump icon, and a shopping cart icon. A blue box displays the estimated time '8:21 AM - 1:41 PM' and '5 hr 20 min', with the route description 'Via Bus: 3, Bus: 21, Bus: N'.

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Bing Inter-Agency Trip Planning

Trip Purpose: Send a student to WVU using public transportation.

1. Depart 358 Mary Jane Ave, Hamlin, WV
2. Arrive Boreman Hall, WVU

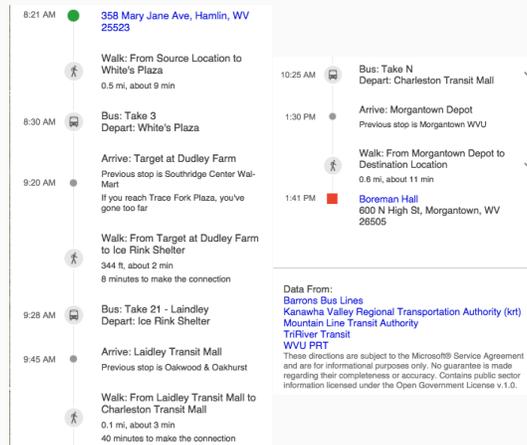
A screenshot of the Bing Inter-Agency Trip Planning interface, showing a map of the route. The interface elements are identical to the previous screenshot. The map displays a blue route starting from a green circle at the origin (Hamlin, WV) and ending at a red square at the destination (Morgantown, WV). The route passes through several towns including Fairmont, Clarksburg, Buckhannon, and Elkins. The map also shows various geographical features like the Monongahela National Forest and the Allegheny Mountains. The estimated time and route description are shown in a blue box at the bottom of the map area.

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Bing Inter-Agency Trip Planning

Trip Purpose: Send a student to WVU using public transportation.

1. Depart Mary Jane Ave, Hamlin, WV
2. Arrive Boreman Hall, WVU



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Next Steps GTFS Real-Time

Real-Time System, Route, and Bus Status Reports

- Announce route changes
- Announce construction & weather delays
- Announce route modification
- Provide bus tracking and estimated arrival time at stops

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Contact

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