

Overcoming Challenges in Defining Unstructured Transit with Structured Data

- A Bangladesh
Perspective

Informal transit - how it operates

- * Parallel public and private sector operated services; private buses are often leased to staff for a daily fixed rental fee
- * Services are offered in flavors such as local, express, seating-only, etc.
- * Routes and stops are defined by the government, but not strictly enforced
- * Buses and Minibuses (almost non-existent rail) run frequently, yet overcrowded
- * Conductor/helper shouts out his travel path to waiting passengers at each stop
- * Drivers may decide en-route to deviate from the defined path due to situations on the roadway
- * Helper has full control of stopping and going - may signal the driver to stop at any location on the travel path
- * Drivers and conductors are incentivized to make as many trips as possible in a day
- * Fares are often raised en-route to ensure healthy profit margin

Informal transit - how it is used

- * “Missed my bus” is not in the public transit vocabulary
- * Regular passengers generally know the lay of the land and transit system:
 - * type of service and route to take
 - * origin and destination stops to use
 - * transfers or make
 - * fares to pay
- * Fellow passengers/conductors are more than willing to help
- * Passengers are not surprised by unfair fare variations
- * Passengers may flag a bus to stop at unauthorized locations

What is (un)important to passengers

- * A general orientation is helpful (e.g., Bus Map of Dhaka)
- * Frequent enough service renders schedule timetable unimportant
- * Ad-hoc unenforceable departures and severely poor traffic conditions make timetable meaningless
- * Passengers need more predictable and comfortable ride through:
 - * Larger buses with comfortable interior and air-conditioning
 - * More frequent service to further reduce wait time and less crowding
 - * Improved amenities at bus stops and transit hubs
 - * Enforcement of fare schedule by better governance of private operation
- * Advance information on bus locations on the route and crowding
- * Advance knowledge of traffic situation up ahead and potential delays

Stakeholders' perspectives

Passengers (the public):

- * More frequent service and improved amenities
- * Answers to 'where is my bus', 'is there space for me', and 'how is my trip ahead' questions

Service providers (owners and operators):

- * No motivation to change the status quo unless there is business case
- * Publishing timetables is nothing more than a cost
- * Need predictable operating environment

Policymakers (the government):

- * Need lot more data to analyze and plan better service and amenities

Interest groups (like myself):

- * Need decentralized system planning and management
- * Less competitive and predictable operating environment
- * Efficient, smart policymaking

How can we help

What information would be useful?

- * More detail planning data for planners - passenger boarding and alighting, route deviations, stops (designated or not), fare deviations, etc.
- * Live bus locations on a more accurate map and crowding situation
- * Real-time traffic and incident situation throughout the city

How to deliver such info?

- * An abridged GTFS (lite?) can help configure routes on a OSM like map
- * GTFS Lite can be enhanced to capture crowd-sourced planning data through mobile apps
- * Mobile app has the potential for passengers to share bus location, space availability, and traffic and incident info