On-demand Transit

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Getting around cities is a challenge

Public transit
Inexpensive but inconvenient

Car
Expensive (ownership, gas, parking) and inefficient use of time

Taxi
Expensive, inconsistent availability

+ continued urbanization…
Rigid route solutions offer high capacity at affordable fares, but coverage is sparse
On-demand private transportation offers a convenient alternative

Limo

Taxi

Ridesharing

Logos of various transportation services:
- UBER
- HAIL O
- Get Taxi
- Lyft
- Sidecar
Can we combine on-demand convenience with shared affordability?
On-demand mass transit

Algorithm matches you with a vehicle headed your way so sharing your ride is seamless

Book a seat through a simple and intuitive app

Driver navigation system automatically updated
Via: transit headed your way

Dynamic mass transit that adapts to customer demand in real time.
Fundamentally, this is more efficient use of resources

- **airbnb**: Book and pay for a room *(within a residence)*
- **zipcar**: Book and pay for an hour *(within a day of car rental)*
- **VIA**: Book and pay for a seat *(within a car)*
Passenger—van matching and dynamic routing poses an algorithmic, computational, and data challenge.

Intelligent algorithm

- Match passengers with seats headed the “right” way
- Automatically update vehicle routes
- Optimize resources and system performance (vans, routing, service quality) to account for demand (current and predicted) and traffic
- A derivative of the “traveling salesman’ problem
Exceptionally efficient pickups

- Coordinate passenger and driver arrival at a precisely-defined location (in time and space)
- Requires a large amount of “local knowledge” – traffic, street, business data
Via has been operating in Manhattan since August 2013

- Rides are $5 anywhere within our zone.
- Pickup within minutes on your corner.