Introduction to Ridesharing:
Overview of definitions and setting the stage

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Overview

• Problem/motivation
• Definitions
• Background
• Transportation Network Companies
Problem / Motivation

- Estimated effects of traffic congestion in the U.S. in 2011 (TTI, 2012):
  - Emissions: Additional 56 billion lbs CO2 emitted
  - Fossil fuel use: 2.9 billion gallons of fuel wasted
  - Efficiency: 5.5 billion hours of extra time
  - Cost of delay and fuel: $121 billion (in 2011 U.S. dollars)
**Shared-use mobility** is defined as mobility services that are shared among users including:

- Traditional public transportation services, such as buses and trains;

- Vanpools, carpools, shuttles, on-demand ride services/TNCs;

- Carsharing, bikesharing, scooter sharing in all its forms; and

- Flexible goods movement

Can be b2c and p2p
Background

- Ridesharing powerful strategy to address congestion, emissions, and fossil fuel dependency
- Simple concept: fill empty seats, use vehicle occupancy potential, reduce vehicles on roadway
- Second largest travel mode in U.S. at 10.2% (ACS, 2011)
- Distinction from taxis/limos and most TNCs
  - Driver’s motivation not-for-profit (i.e., partially cover driver's cost)
  - Passenger has common origin/destination to driver
Evolving system of services and operators

Ridesharing

Carpooling: Grouping of travelers into a privately owned vehicle, typically for commuting.

Vanpooling: Commuters traveling to/from a job center sharing a ride in a van.

Real-time ridesharing services: Match drivers and passengers, based on destination, through app before the trip starts.
History of North American Ridesharing

**Phase 1:** WWII Car-Sharing Clubs (1942 - 1945)

**Phase 2:** Major Responses to Energy Crises (late 1960s - 1980)

**Phase 3:** Early Organized Ridesharing Schemes (1980 - 1997)

**Phase 4:** Reliable Ridesharing Systems (1999 - 2004)

**Phase 5:** Technology-Enabled Ridematching (2004 - present)
Phase 1: WWII Car-Sharing Clubs  
1942 - 1945  

- 1942 U.S. Office of Civilian Defense regulation  
- Required ridesharing to workplaces when no other alt. transportation means available  
- Save on gasoline and rubber for the war effort
Phase 2: Major Responses to Energy Crises – Late 1960s - 1980

• Late 1960s: Employers hand-matched employees with neighbors, distributed personalized match lists
• 1973 - 1974 Arab Oil Embargo: energy conservation
• Various federal policies:
  • 1974 Emergency Highway Energy Conservation Act
  • 1975 FHWA ridesharing guidebooks
  • 1979 USDOT National Ride-Sharing Demonstration Program
• HOV lanes, casual carpooling (“slugging”), park-and-ride facilities, vanpooling
Phase 3: Early Organized Ridesharing Schemes
1980 - 1997

- Employer-Based Trip Reduction (EBTR) programs
  - Combat congestion in suburban office parks
  - Air quality districts followed
  - Unclear definition of problem and unrealistic targets
- Telephone-Based Ridematching
  - Pilot telephone-based studies
    - “Smart Travelers” of 1990s
  - High cost, low use
  - Internet & E-mail enhancements
    - Form basis of ridesharing programs today
Phase 4: “Reliable” Ridesharing Systems
1994 - 2004

- Commuters with “reliable” trip schedules
- Reliable = commuters with regular, recurring trip schedules
- Private software companies began developing ridematching “platforms”
- Initial Online Ridematching
  - Prearrangement needed
Phase 5: Technology-Enabled Ridematching
2004 - Present

• Automated ridematching on online websites
• 4 key developments:
  • Partnerships between ridematching software companies and regions/large employers
  • Financial incentives for “green trips”
  • Social networking
  • Real-time ridesharing and ridematching
Ridesharing In North America: A Snapshot (July 2011)

- 612 carpooling services
- 153 vanpooling services
- 127 services offer both carpooling & vanpooling
- Includes both online and off-line programs

Chan and Shaheen, 2011
Transportation Network Company: A service that allows passengers to connect with and pay drivers who use their personal vehicles for trips facilitated through a mobile application.
Recent Developments

CPUC cease-and-desist orders for Lyft, Sidecar, and Tickengo

CPUC begins Order Instituting Rulemaking (OIR) to better regulate new companies

Sidecar expands to Austin (acquires Heyride), Philly, LA

uberX launches in SF

Austin cease-and-desist for Sidecar; Philly impounds 3 Sidecar vehicles

SFO cease-and-desist for Lyft, Sidecar, Tickengo, InstantCab, Uber

Study suggests SF add 600-800 more taxis; SFMTA to add 120 in 2013, 200 in 2014

Lyft expands to Seattle

Lyft and Uber enter interim agreements with CPUC to continue operations during OIR process

Lyft expands to LA

Lyft acquires Cherry

Sidecar expands to Boston, Brooklyn, Chicago, and DC

Lyft expands to Seattle

Sidecar and uberX give free rides, and Lyft does publicity at SXSW in Austin

CPUC imposes $20,000 fine for Lyft, Sidecar, and Uber

Sidecar expands to Seattle
Recent Developments

Lyft expands to Chicago and Boston

Zimride becomes Lyft, focus on real-time ridematching

Sidecar suspends service in Brooklyn; enters interim agreement with CPUC to operate in CA; expands to DC

During BART strike, Avego signup rate increases 8825%, deploys fleet of buses and vans to accommodate commuters; Sidecar rides up 40%

Lyft expands to San Diego

Enterprise acquires Zimride segment of Lyft

Lyft expands to Phoenix, Denver, and Dallas

CPUC decision approves TNC operation in CA

Sidecar suspends service in Austin, awaiting city ruling

LADOT cease-and-desist for Lyft, Sidecar, Uber, uberX

Lyft expands to DC, Indianapolis, St. Paul, Atlanta

Google invests $250M into Uber

Lyft hits 1M rides

Lyft expands to Baltimore, Silicon Valley, OC

2013
CPUC Rulemaking Process

- **Dec 2012**: CPUC issues Order Instituting Rulemaking to create regulations for new online-enabled transportation services
- **Feb 2013**: Prehearing conference to determine all parties impacted and involved, discuss scope, and plan workshops
- **Apr 2013**: Participatory workshops to draft report for Administrative Law Judge’s review and decision
- **Sept 5, 2013**: All-Party Hearing to discuss final issues of insurance, safety, and accessibility
- **Sept 19, 2013**: Decision to allow TNCs to operate in CA under new framework of regulations
Reference

Transport Reviews
Publication details, including instructions for authors and subscription information:
http://www.tandfonline.com/loi/ttrv20

Ridesharing in North America: Past, Present, and Future
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