## The Digital World Exemplified by Uber

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STS Roundtable, Sept. 7, 2016 San Francisco, USA Thanks for coming all the way to visit.

What is this Uber thing you are taking to the airport?

Are you sure it's safe?



#### A New, Digitally Enabled Service Process

- I requested an Uber ride to Miami Airport.
- The <u>Uber app</u> displayed an <u>approximate price</u>
   <u>based on current demand</u>.
- The <u>Uber app offered the assignment</u> to drivers in the area.
- Customer and driver used the app to accept.
- The <u>app showed the driver's location</u>, <u>estimated he would arrive in 5 minutes</u>, and <u>displayed his name</u>, photo, vehicle, and license plate.

#### The Plot Thickens

- The driver arrived in 4 minutes.
- His English was limited, and he had recently moved to Miami.
- He followed <u>GPS</u> carefully because he didn't know the route to the airport.
- He took the wrong exit and drove toward a frequently bumper-to-bumper highway.
- I wondered whether I would miss my flight.

### Saved by My Heroic Intervention

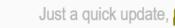
- I remembered some of the local geography and helped find the airport.
- Uber charged my credit card automatically based on total time and total distance.
- I <u>used the Uber app to provide feedback to</u>
   <u>Uber</u> about my semi-qualified driver and almost missing my flight.
- The driver may have used the Uber app to provide feedback about whether I was a worthy passenger.

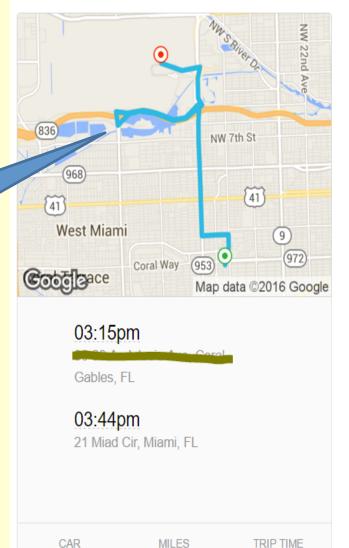
# Surprised by a refund from Uber

The detour

\$5.49 Refunded

uberX





8.81

00:28:28

#### WE MADE A FARE CORRECTION

"Sorry again to hear about the inefficient route on this trip. I've adjusted this fare to our estimate for what this trip should have been."



Previous Charge 14.44

Refunded Personal •••• 5.49

New Total \$8.95

## Systemic Work Design (??)

Customers	Product/Services	
<ul> <li>Passenger</li> <li>Uber's finance department</li> <li>Uber's business management</li> </ul>	<ul> <li>On-request transportation between locations</li> <li>Payment for the ride</li> <li>Detailed tracking record of the each trip</li> </ul>	
Major Processes and Activities		
<ul> <li>Passenger uses Uber app to request ride from current location to destination.</li> <li>Uber's computers offer the assignment to nearby drivers.</li> </ul>		

- Driver accepts assignment
- Passenger accepts approximate price
- Driver picks up passenger and drives to destination with help of GPS
- Uber's computers use GPS to record progress toward the destination.
- Driver drops off passenger at the destination.
- Uber's computers compute bill and send receipt to passenger.

Passenger and driver rate each other.

Participants	Informatio n	Technologies
Driver     Passenger(s)	<ul> <li>Location and availability of vehicles</li> <li>Starting point and destination of ride</li> <li>Passenger's contact and billing information</li> <li>Driver's contact information and availability</li> </ul>	<ul> <li>Uber smartphone app for passengers</li> <li>Uber smartphone app for drivers</li> <li>Uber vehicle tracking capabilities</li> </ul>
Environment	<ul> <li>Availability of many drivers willing to work for Uber on a non-employee basis</li> <li>Complaints from established taxi companies about Uber flouting regulations</li> </ul>	
Infrastructure	Internet     Cell phone     Street transportation network	
Strategies	<ul> <li>Uber's strategy of using digital innovation to differentiate itself</li> <li>Uber's strategy of using drivers who are not professional taxi drivers</li> <li>Uber's strategy of handling assignments and billing automatically.</li> </ul>	

# Confluence of Digital, Physical, and Social Worlds

- Car, driver, passenger, starting point, and destination are all physical, not digital.
- Social contact replaced/ mediated by ICT.
- Human intermediaries (phone agents) eliminated.
- Detailed, real time tracking of workers and work.
- Control at a distance through computers.
- Feedback about individual providers and customers.
- Automated billing and payment.
- Agent or computer determines and communicates refund.
- Bypassing long-established transportation firms, business practices, regulations, and worker expectations.