March 16, 2011 (Session #OTH-1012)

Bill Curtis-Davidson (IBM Human Ability & Accessibility Center)
Eric Lipp (Open Doors Organization)
Aaron Steinfeld (RERC on Accessible Public Transportation - Carnegie Mellon)
Jim Tobias (Inclusive Technologies)
Tom Wlodkowski (AOL, Inc.)

Accessible Travel: Evolving the Practice of Providing Geo-Data Services to Improve Mobility
Panelist Introductions

**Bill Curtis-Davidson**
Accessible Transportation Solutions Leader
IBM Human Ability & Accessibility Center

**Eric Lipp**
President & Founder
Open Doors Organization

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Co-Director
RERC on Accessible Public Transportation
Carnegie Mellon University

**Jim Tobias**
Principal
Inclusive Technologies

**Tom Wlodkowski**
Director of Accessibility
AOL Inc.
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<th>Time</th>
<th>Topic</th>
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<td>03:10 – 03:15</td>
<td>Panel Goals &amp; User Needs</td>
<td>Tom Wlodkowski (AOL)</td>
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<td>03:15 – 03:20</td>
<td>“Data-Enabled Travel” Report from Geo-Access Challenge Team</td>
<td>Bill Curtis-Davidson (IBM)</td>
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<td>03:20 – 03:30</td>
<td>Accessible Cities</td>
<td>Eric Lipp (Open Doors Org)</td>
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<td>03:30 – 03:40</td>
<td>Example Accessible Transportation Applications</td>
<td>Aaron Steinfeld (RERC-APT/Carnegie Mellon)</td>
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<td>03:40 – 03:45</td>
<td>Policy Background &amp; Recommendations</td>
<td>Jim Tobias (Inclusive Technologies)</td>
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<td>03:45 – 04:05</td>
<td>Moderated Q&amp;A Session</td>
<td>Tom Wlodkowski (AOL)</td>
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<td>04:05 – 04:10</td>
<td>How You Can Get Involved</td>
<td>Tom Wlodkowski (AOL)</td>
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Panel Goals

Through this panel, we hope to help attendees:

- Understand the market context for accessible travel
- Understand how open data is being leveraged in accessible travel
- Understand some types of transformative applications being developed using open data for accessible travel
- Understand industry activities that you can engage in to support development of innovative technologies to support accessible travel
User Needs

- Studies have shown that adults with disabilities can encounter a variety of obstacles in the travel and restaurant industry.

- These obstacles include:
  - Physical obstacles
  - Service-related obstacles
  - Communication-related obstacles

- Even when obstacles do not exist, it can be difficult to get information about options that do exist:
  - Accessible public transit stations and stops
  - Accessible public transit vehicles
  - Real-time information relevant to successful use of transport system
  - Accessible private transportation options

*These obstacles often prevent persons with disabilities from utilizing all possible transportation options, thereby limiting their mobility in communities.*

* 2005 Open Doors Org/Harris Interactive market study, “Research Among Adults with Disabilities: Travel & Hospitality”
The “Data-Enabled Travel” Report: Background & Key Outcomes

❖ Background

❖ Background
❖ Began July 2010 @ White House / FCC / Dept of Commerce brainstorm during 20th Anniversary of ADA Celebration
❖ Brainstorm included ~24 technologists and disability advocates
❖ Led to formation of Geo-Access Challenge Team involving more parties

❖ Key Outcomes Thus Far

❖ “Data-Enabled Travel” Report:
❖ http://www.geoaccess.org/content/report-data-enabled-travel
❖ Proof-of-Concept / ideation activities
❖ Establishment of GeoAccess.org
❖ Planning for upcoming government aligned activities

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<td>• Public &amp; private transport options</td>
<td>• Attractions</td>
<td>• Collecting rich media evidence from end users for civic advocacy</td>
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<tr>
<td>• Filtering by disability type</td>
<td>• Disability Services Organizations</td>
<td>• Promoting dialog where users help design the services they use</td>
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<tr>
<td>• Static and real-time info/status (e.g. network, stations/stops, vehicles, elevators/escalators, lifts)</td>
<td>• Hotels &amp; Lodgings</td>
<td>• Additions, Editing, Ratings, Reviews for accessible transport, municipal infrastructure, and regional POIs</td>
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<tr>
<td>• Factoring in accessible municipal infrastructure info (e.g. crossing signals, curbs, tactile paving)</td>
<td>• Nightclubs</td>
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<td>• Accessible route sharing</td>
<td>• Recreation &amp; Tours</td>
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<td></td>
<td>• Restaurants &amp; Shopping</td>
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<td></td>
<td>• Accessible Municipal infrastructure (e.g. crossing signals, curbs, tactile paving)</td>
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<th>Public Paratransit</th>
<th>Private Transportation</th>
<th>POIs / Environment Information</th>
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<tbody>
<tr>
<td>• GTFS Feed</td>
<td>• GTFS Feed</td>
<td>• Agency info</td>
<td>• Community based transport</td>
<td></td>
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<tr>
<td>• Accessible Stations/Stops</td>
<td>• Accessible Stations/Stops</td>
<td>• Service areas</td>
<td>• Rideshares / carpools</td>
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<tr>
<td>• Accessible Vehicles</td>
<td>• Accessible Vehicles</td>
<td>• Fixed routes/stops (if applicable)</td>
<td>• Accessible taxis</td>
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<tr>
<td>• Contacts / help</td>
<td>• Contacts / help</td>
<td>• Fares/reservations</td>
<td>• Private air, rail, bus or ferry accessible stops/vehicles</td>
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<tr>
<td></td>
<td></td>
<td>• Community based transport</td>
<td>• Wheelchair rentals</td>
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<td></td>
<td></td>
<td>• Agency info</td>
<td>• Community based transport</td>
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<td>• Contacts / help</td>
<td>• Wheelchair rentals</td>
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<tr>
<th>Real-Time Data from Authorities</th>
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<th>Public Paratransit</th>
<th>Private Transportation</th>
<th>POIs / Environment Information</th>
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<tr>
<td>• Automatic Vehicle Location (AVL)</td>
<td>• Automatic Vehicle Location (AVL)</td>
<td>• Vehicle fullness</td>
<td>• Automatic Vehicle Location (AVL)</td>
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<tr>
<td>• Elevators/escalators</td>
<td>• Elevators/escalators</td>
<td>• Congestion/traffic</td>
<td>• Vehicle fullness</td>
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<tr>
<td>• Wheelchair lift status</td>
<td>• Wheelchair lift status</td>
<td>• Predicted arrival</td>
<td>• Congestion/traffic</td>
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<tr>
<td>• Vehicle fullness</td>
<td>• Vehicle fullness</td>
<td>• Service alerts</td>
<td>• Predicted arrival</td>
<td></td>
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<tr>
<td>• Congestion/traffic</td>
<td>• Congestion/traffic</td>
<td>• Reservation</td>
<td>• Service alerts</td>
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<tr>
<td>• Predicted arrival</td>
<td>• Predicted arrival</td>
<td></td>
<td>• Reservation</td>
<td></td>
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<tr>
<td>• Real-time info for Accessible Municipal infrastructure (e.g. closings)</td>
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<tr>
<th>Crowd Sourced Data</th>
<th>Mainstream Public Transit</th>
<th>Public Paratransit</th>
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<th>POIs / Environment Information</th>
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<tbody>
<tr>
<td>• Vehicle fullness</td>
<td>• Vehicle fullness</td>
<td>• Vehicle fullness</td>
<td>• Vehicle fullness</td>
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<td>• Vehicle issues</td>
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<tr>
<td>• Station/stop issues</td>
<td>• Station/stop issues</td>
<td>• Station/stop issues</td>
<td>• Station/stop issues</td>
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<tr>
<td>• Service issues</td>
<td>• Service issues</td>
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<tr>
<td>• Ratings / reviews</td>
<td>• Ratings / reviews</td>
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<tr>
<td>• New or edited POIs</td>
<td>• POI ratings/reviews</td>
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<td>• User generated tags for municipal infrastructure</td>
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The “Data-Enabled Travel” Report:
Geo-Access Challenge Team Contributors

- **Challenge Leader**
  - Thomas Wlodkowski, AOL Inc.

- **Challenge Report Authors**
  - Bill Curtis-Davidson (Editor), IBM
  - Jamal Mazrui, FCC
  - Aaron Steinfeld, RERC-Accessible Public Transportation
  - Jim Tobias, Inclusive Technologies
  - Mohammed Yousuf, FHWA, U.S. Dept of Transportation

- **Proof-of-Concept Development**
  - David M. Clark (Independent)
  - Chris Blouch (AOL) and Ted Drake (Yahoo!)
  - Eric Lipp & Laurel Van Horn (Open Doors Organization)
  - Jamal Mazrui (FCC) & Mika Pyyhkala (Neighborhood Health Plan)
Many regional efforts worldwide are expanding the awareness and dialogue about inclusive travel and tourism:

- **North America:** Canada, US Cities such as Chicago, New York, Northern California, San Diego, Washington D.C., etc.
- **Europe:** European Network for Accessible Tourism (ENAT)
- **Africa:** Kenya, South Africa, Tanzania
- **Asia/Pacific:** Australia & New Zealand, India
- **South America:** Brazil

Will be positively influenced over time by increasing government regulations / policies (e.g. UN Convention)

“Inclusion” vs. “Accessibility” – inclusion in society and livable communities and business/tourism connections
Accessible Cities Example: Easy Access Chicago Guides

Here ‘ACCESSIBLE ART’ means even if you don’t get it, you can still get to it.

CHICAGO, IL
Proud to be accessible to everyone
EASYACCESSCHICAGO.ORG • ILLINOIS. MILE AFTER MAGNIFICENT MILE.
Accessible Cities Example: Easy Access Chicago Website

Welcome to Easy Access Chicago
Your Guide to a Great, Accessible Destination

What You'll Find On This Site
- Information for Visitors and Residents with a Wide Range of Disabilities, as well as for Older Travelers
- Detailed Access Reports for Over 100 Attractions
- Access Information on Midway and O'Hare Airports
- Listings of Accessible Tours of All Types
- A Guide to Local Accessible Transportation, Public and Private
- Chicago Insider Tips to Help You Make the Most of Your Stay
- A Guide to Sports and Adapted Recreation
- Tips and Resources for Families
- A Database of Accessible Hotels and Restaurants Searchable by Specific Access Features, Location and Price
- Listings of Key Disability-Related Services and Resources
- General Tips for Hassle-Free Travel

Easy Access Chicago... the Print Guide
This abridged print version is convenient to carry and has hotel and restaurant listings in easy-to-read tables.

Download the pdf easy_access_chicago.pdf

Order a print copy from the Illinois Bureau of Tourism by visiting www.enjoyillinois.com/accommodations or by calling 800-2CONNECT (800-226-6832) or 800-408-6418 TTY.
All lodgings listed have the following features/policies (except where noted):

- Wheelchair accessible entrance, hallways, restrooms and public areas
- Wheelchair accessible rooms with roll-in showers
- Wheelchair accessible rooms that are non-smoking
- Lowered controls in elevators
- Garage/lot nearby with designated accessible spaces (if not onsite)
- Policy to block a specific adapted room for guests with disabilities
- Policy to reserve adaptive equipment in advance
- Written evacuation procedure for guests with disabilities
- Staff training on evacuating guests with disabilities
- Procedure to flag guests with disabilities in computer and generate printouts
- Orientation for guests who are blind/have low vision
- Policy to accept service animals with no fees/deposit
Example Applications: Tiramisu (RERC-APT)

- Application Type: Universal design transit app
- Description: Rider contributed transit information, screen reader friendly
- Data Types: GTFS, crowdsource real-time, citizen science
Example Applications: Wheelmap.Org

- **Application Type:** Regional POI Info Foraging App
- **Description:** Website and mobile app helps people find wheelchair accessible POIs
- **Data Types:** POI accessibility info from authorities and users, citizen science
Example Applications: IBM Accessible City Tag

- **Application Type:** Regional POI Info Foraging App
- **Description:** Pilot Android app deployed in Nettuno, Italy – helps people find accessibility info about city POIs, filtered by disability type
- **Data Types:** POI accessibility info from authorities, user ratings and reviews
Policy Background

- Accessible transportation is essential to inclusion
- ADA Regulations on Public Transit
  - Vehicle-based information display & announcement (including external)
  - Accessible stop requests
- Section 508
- Upcoming changes to ADA on ICT
  - Web
  - Equipment & furniture
Policy Recommendations

- For all federally funded transportation R&D and implementation projects:
  - Open, inclusive data in standard formats
  - Accessible points-of-interest (POIs)
  - Real-time status (e.g., elevator outages)
  - 508-compliant technologies & user interfaces, including crowdsourcing interfaces

- Research to improve understanding of user needs and preferences
Moderated Q&A Session

- Regulatory & User Needs
- Market Environment & Accessible Cities
- Data Sharing Infrastructure
- The Need for Applied Research
- Role of Transportation & City Authorities
How You Can Get Involved

- **Policymakers:** Address this issue in policy / key is ensuring open data, funding of projects, etc.
- **R&D:** Pursue projects in this area
- **Transportation Authorities & Other Data Owners:** Provide open data and encourage app development
- **Citizens:** Assist and support accessible cities efforts / data gathering and serve as citizen scientists, co-designers
- **ICT Developers:** Include accessibility information and accessible user interfaces in your products and services

- **We encourage all parties to:**
  - Review Data-Enabled Travel Report ([http://www.geoaccess.org/content/report-data-enabled-travel](http://www.geoaccess.org/content/report-data-enabled-travel))
  - Attend Kareem Dale’s address tomorrow for a special note about government activities in this area!