Michael Baker
INTERNATIONAL

We Make a Difference

Shared Transportation Options

Peer Exchange Workshop

July 20, 2017 9:30 AM – 2:30 PM

Morning Session: National Experience

Denise Markow, I-95 Corridor Coalition

- Systems operations is more than freight and vehicles
    - Address the multimodal system and not just the passengers on the roadway
- Traveler Information Services (TIS) committee

John Redman, The Redmon Group, Transit Displays Presentation

- In business 27 years. Out of Alexandria, VA.
- Products and Services:
    - Digital Signage
    - Mobile
    - Websites
    - Online Learning
- They Provide:
    - Transit Displays with real-time arrival and multimodal options
    - Cloud-based content management system
    - ADA Compliance
    - Custom Designs
    - Solutions for any location
- Projects:
    - GoRaleigh Transit Station (Completed last May)
    - Silver Spring Transit System
    - Jacksonville, FL (56 systems throughout the city)
    - WMATA Metro Station
    - Springfield, VA
    - Columbia Pike
    - NYC Ferry for Hornblower (system displays at 16 piers in the city)
    - King Street Trolley Alexandria, VA
    - Tysons Corner Area VA Shopping Center
- Content Management System (CMS)
- Adept in software and hardware deployment

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- If internet goes down, they default to schedule information instead of real-time information
- Software ingests RSS information, GTFS data, and content from different providers can be structured into RSS or GTFS
- Rapsberry Pi Technology can be implemented into shuttles to obtain tracking information

Scott Altman, ConSysTec, NYSDOT (Ridesharing)

- Contractor to NYSDOT on Transit Service Information & Technical Support Services Project
- Working with 120 agencies to build a statewide GTFS data repository of transit information
- Feeds 511NY Transit Trip Planner
- Other Overlapping Mobility Projects:
    - 511NY (IBI Group)
        - Statewide traveler information system
        - Current conditions and alerts
        - Central location for highway, transit, and rideshare info
    - Active and Transportation Demand Management / Travel Demand Management (ICF)
        - Importing Mobility
        - Rideshare Program
        - Park & Ride Info
- NYSDOT can provide the software/systems to create and maintain GTFS data
- Developed data models and feed specifications used in real time transit systems

Ross MacDonald (Vermont AOT)

- "OTP – flex"
    - OTP = Open Trip Planner
- VTrans and Trillium submitted a "Mobility on Demand" grant application
- Create the GTFS-Flex data (deviated Flex, demand response, shuttles, carpools, vans, etc.)
- Feed information is maintained through one contractor
- Adapt OTP to read GTFS-Flex
- Host and deploy a state-wide trip planner integrating all transit modes
- Cambridge Systematics, developer of 1-Click, will provide programming talent to adapt OTP
- Beta to launch in Oct. 2017. Up and running in Jan. 2018
- Coordinate with TriMet, RTD, and other OTP projects to ensure work is efficient and integrated into master branch
- Concern is building a tool that the market may not utilize. Need to determine how many people will use the tool and for what purposes.

Ritesh Warade (CT/IBI Group)

- Focus on GTFS and GTFS Real-Time
- GTFS is the fundamental building block of everything they do. It is essential to get the information to the public.
- Equally important steps are to maintain quality of data and adapt the data to provide real-time alerts

- GTFS can be used for planning, analysis, and performance measurement
- Application for Boston – They are using real-time data for performance metrics
- Connecticut DOT Project
    - Sub-consultant to Michael Baker
    - Helped build common portal for all transportation information across the state
    - Single portal provides traffic, incident, and transit information
- Data quality is critical to having usable data!!

Rebecca Askey (Michael Baker International - Virginia)

- They work with 14 MPOs from Washington DC all the way to SW Virginia
- GTFS has helped with the funding process

Scott Sprengel (Coach USA)

- Founded in 1996 and purchased by Stagecoach in 1999
- Focus on East Coast
- 700 scheduled daily trips daily out of Manhattan
- 2,400 buses in North America – 550 Megabus Double Deckers
- 146 Million Miles Operated Annually in North America
- Comprised of 25 different companies in North America. They are a snapshot of the different private companies.
- Open to sharing data since it will benefit everyone

Moderated Discussion

Question 1 Responses:

Scott Altman (ConSysTec)

- Manually create data for smaller agencies, larger agencies can usually provide GTFS formatted data
- Maintain calendar to know when to contact agencies for data updates

Ritesh Warade (CT/IBI Group)

- GTFS data can be extracted from the scheduling system directly
- If no scheduling system exists, can use GTFS Editor
    - Another option is Trillium which has a GTFS Manager
- Denver had areas where parts of their services were fixed routes, some were non-fixed
- GTFS.org has a best practices guide
    - http://gtfs.org/best-practices/
- GTFS is only for fixed routes, defined systems
    - Does not perform well with deviating services – use new GTFS Flex for that
    - Only 1 GTFS Flex system currently in existence

Rebecca Askey (Michael Baker International - Virginia)

- Maintenance of the feeds is a large lift but is necessary to provide accurate data for public use and for funding
- Important to have open communication with NJ Transit Agencies
- Implementing changes are not hard, what is difficult is getting the information from the agency to implement
- May get data updates on quarterly basis
- VA gets updates once a year, and the customers have an incentive to update so they can get funding

What are examples of addressing the cost associated with updating the datasets?

Ross MacDonald (Vermont AOT)

- $600,000 project
- $400,000 from federal funds

Scott Sprengel (Coach USA)

- New expense for COACH
- Need to show return on investment to get funding

What are the problems with the GTFS Flex standard?

- The standard is an add-on to the standardized GTFS
- Challenge is that current scheduling systems, like Google, do not currently support Flex datasets

What measures were used with the GTFS feed; what sort of procedures do you use with sensitive data?

Rebecca Askey (Michael Baker - VA)

- Measures accessibility as how far someone can travel in 30 minutes in a half mile radius
- Capture weekday routes
- VDOT includes everyone in the transportation systems, not just the automobiles
- Provide GTFS feed back to the agency if they do not already have it

Are there studies that speak to increased ridership due to GTFS, and what is the determining business case to use GTFS?

- Scott Sprengel "converted" from the MegaBus model
    - He started implementing his linework into the MegaBus model
- Increased ridership due to data shared on trip planning services
- You can quantify the use and payoff from the GTFS data by interest in it, for example by number of clicks on a website
- Huge increase in interests during times of crises such as snow, natural disaster and so on because riders know that the data is there and available

Additional Notes:

- Extra bus services implemented to facilitate riders with the Amtrak rail work currently going on, but users cannot find out the bus travel times or locations. Therefore, we need to find the best outlet for this information to reach the customer base. – Scott Sprengel
- NJ Transit publishes GTFS separately for bus, rail, and light rail
- Real-time GTFS allows you to report on suspended service, construction, delays, etc. Service alerts can include a link of where to find more information. This can be coordinated with the service providers. – Ritesh
- Need collaboration and coordination to plan for trips
    - Look at what the market and trips demand
    - Peak-hour trips and business trips
    - The more information we can get to the consumer before the trip, the better – Calvin
- Google vs. 511. Google is more trafficked than 511 – Scott Altman
- Many agency websites provide information on the agency but do not provide much information on the transit or transportation services available – Ritesh
- Google and outside developers will never have the latest updates from NJ Transit
    - For example, the soccer game this weekend, concert, etc.
    - MTA will have updated alerts because they pull directly from NJ Transit servers – NJ Transit
- Does NJTPA plan on doing the data maintenance? – they plan to ask for updates on a quarterly basis and imagine they will most likely need to expand the maintenance needs
- The most important part of GTFS is having high quality data

Afternoon Session: NJ Transportation Services

- Challenge is making the business case for customer service enhancements when there is no revenue from it.
- Look at the demand on the system currently, but also demand in the future, so that we can create a data model to accommodate future demands

Alan Maiman (NJ Transit)

- 3 light rail lines – Hudson, Newark, and River Line
- Key Priority = Intermodal Connectivity
- Connect between NJ TRANSIT, PATH & PATCO, ANY Waterway Ferries, Airlines at Newark Liberty, Private Bus Lines, etc.
- Smart Buses – Automatic Passenger Counter (APC) Information
    - Itinerary Planning – Website
    - Destination Signs – Front of Bus
    - Automatic Bus Stop Annunciation
    - Real Time Stop Arrival Information
- Customers want accurate real-time information

- Every NJ Transit bus has a unique 5-digit ID number
    - MyBus sign has the unique 5-digit number of the bus and the user can text to find out when the next bus is coming
- MyBus Now – Can access through the full NJ Transit Website.
    - NJT's real-time bus information and tracking system
    - Map shows current bus locations
- DepartureVision (Rail) – Displays train departure boards on computers or mobile devices
- MyTix Mobile Ticketing
- MyTransit is their email alert system. Will provide information on delays, schedule changes, station advisories, etc.
- NJT started working on GTFS in early 2008
    - They do 2 GTFS exports: Rail/Light Rail and Bus
    - For bus they put out 12 updates a year
    - NJT GTFS feed = www.njtransit.com/developers
    - Info not in GTFS = fares, gate/lane, transfer points, other transit provider info. Not in Google, but you can find this information on their website.
    - They do not do GTFS exports for every pick change, i.e. holidays, special events.
    - On the bus side, there are 39 different fares depending on how far you go and different fare types (adult, child, senior, etc.), so the fare information does not currently work in Google
    - Gate/Lane assignments are not in Google because the gates/lanes may change frequently throughout the day to accommodate different situations.

Krishna Murthy (Meadowlink TMA)

- Unsure how GTFS makes sense for a small business with limited resources
- You need to show smaller private carriers the benefit in providing GTFS data
- EZ Ride Shuttles – Transports ~2,000 people
- Half of shuttles operate on-demand at night – schedule and routes constantly change. May be something for GTFS Flex.
- Shuttles are almost 100% funded by private sector – why should the private funders help to get GTFS published?
- Vanpool program – fixed route, fixed schedule; may be a resource that could be opened up.
- Most of these shuttles serve specific companies, i.e. Merck, PSEG – Why put this in GTFS if the vanpool is targeted for a specific company?

Jack Molenaar (Rutgers Bikeshare)

- Rutgers bus system is largest university bus system in the country
- Bus system is overloaded. To reduce the load on the buses, they are in the RFP process for "Knight Cycle"
- Regional, open and public bike share system
    - 350 smart bicycles
    - 35 GPS-defined hubs
    - GPS on every bike

    - Calculates trip distance
    - Identifies user's chosen routes
- GPS data will allow Rutgers to know where to put more bicycle hubs
- Rutgers does not share bus schedule information because they want less people to take the buses and there's also security issues.
    - However, if you know the schedule, you can take the New Brunswick bus as someone from the public, but for Newark campus you need a college ID.

Moderated Discussion

Where do we start with Partnerships? What is the most important thing to get local buy-in?

NJ Transit

- Communication and collaboration
- County or municipality needs to be aware that their own residents can benefit from providing ride data
- James Gilligan: There is a "private carrier" tab on NJ Transit's website that provides a list of private companies

Coach

- If agency does not participate, they will be left out and will not benefit
- May require a policy shift which requires organizations to provide data to be able to take part in something else

How far do we go to integrate the 511 and NJ Van Share?

- **Mercer TMA:** Including Van pools is a good idea to provide public awareness of the services
- **Hunterdon County:** Just created a system to organize the "power transit" services
- **NJ Transit:** Calls this service a "Micro-Transit"

What can be done to capture rural transit data?

- Make connections with local transit advisors to find out what rural transit shares exist and their schedules
- Finding one rural agency to be a champion which may bring other rural transit agencies to the table – network
- NYSDOT: Many of the agencies partner together to solve regional solutions. Often willing to host regional workshops.
- NJTransit: With the 5310 and 5311, there is a catalog of who received vehicles and funding.
- Find out about rural Transit through Cross County Connection, Hunterdon County, etc.
- Need to look at GTFS as a shared service because it will be hard to get 100% participation when small agencies do not have the resources

How is the 511 data integrated into real-time GTFS data?

- There are two types – GTFS and GTFS real-time
- The system for the backend of the 511 data is a Transcom feed, that just started to accept NJ Transit GTFS feed
- NJ Transit: MyBus will show the data with estimated time or arrival for buses if there is a delay

Where do we draw the line on the types of information that we can include in the feed?

- NJTPA: Are alerts too much at this first phase?
- Ritesh: Structure the project in phases. Get schedule information, then get real-time information. Define an achievable target.