

Coordinated Transportation

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Agenda

- **Transportation Coordination Technology Issues**
- **Coordinated Transportation Models**
- **Transportation Brokerages**
- **Open Discussion/Questions**



Transportation Coordination defined:

A process where human service agencies, transportation providers, consumer groups, and public officials work together to develop and improve services for transportation disadvantaged individuals, by ensuring that transportation resources funded by different programs are coordinated.

Coordination demands communication, trust, flexibility, and the willingness to focus on client needs.

It will:

- Develop and improve transportation options
- Improve access
- Minimize service duplication, and
- Facilitate appropriate, cost-effective transportation with available resources



Questions & Goals

- How do we manage transportation services that promote efficient use of resources for:
 - Increasing ridership
 - Decreasing cost to deliver service
 - Expanding service options
- What role can technology play?
 - What do I have to work with?
 - What do my customers want?
 - How do I manage multiple funding / reporting requirements?
 - How can I improve my service?
 - How can I better understand and manage my transportation system?



Kansas Position

Currently, KDOT contracts with almost 100 5311 providers (the most of any state). We are currently moving to a regional transit approach which will reduce the amount of providers and allow for individuals in the rural areas of Kansas to travel over longer distances, which is so necessary as many services are moving out of small towns.

In order for our regional transit approach to work, we must have one call dispatching. Currently, we have two locations operating on NOVUS with an additional four locations by early 2010. We are hoping that, in the next 3-4 years, the entire rural area of Kansas will be covered by NOVUS dispatching software at regional one call dispatching centers.

Lisa Koch, AICP

Public Transit Manager

Kansas Department of Transportation

Coordinated Transportation

- Support multiple providers/operations on central system
- Configurable system & scheduling parameters by provider
- Manage contracts for each service provider
- Managing Providers

NOVUS My Tasks Client Scheduling Dispatch Reports Admin System GIS April-23-09 2:28:12 PM Exit

Trip Booking Casual MRS. DAWN DUDLEY April 23, 2009

Select Client: /95 Start Over Find

Modifying Casual Booking: MRS. DAWN DUDLEY [95] Another Booking Unregistered Booking

Change Data Schedule Done

Passenger Scheduling Comment

Solutions

Solution	From Time	To Time	Run	Violations
1	14:34	14:42	XW2-2	SE4-1
2	14:45	14:53	XP1-2	
3	14:40	14:48	JC7-5	
4	14:45	14:53	JC7-3	

Parameters

Reset Scheduled Times to Requested:

Search Time Window: [k] - 0 + 0 >

Parameters Set: Default

Violations Set: Default

Transport Modes: DAR

Max Transfer:

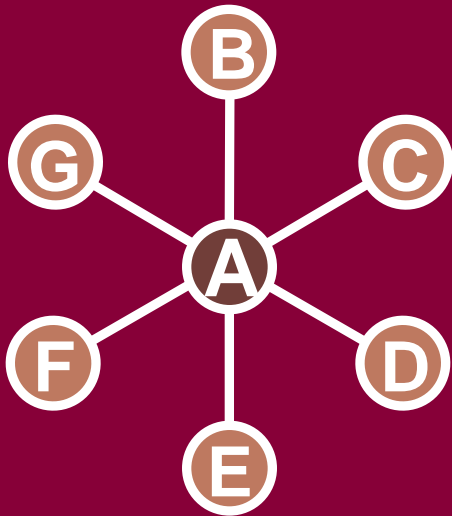
EstBegin	Act.	Address	Client	Status	Mod. Aids	Violations	Pass On/Off	Pass OB	Space On/Off	Space OB	Phone
13:44	✓	9 Eagle St San Francisco CA 94114	MRS. GENEVA HUFF	NS	Braces		+Client:1		+AM:1		1-905-555-7028
13:49	✓	CHINA HOUSE, 2328 SANTA CLARA AVE SAN FRANCISCO CA	MR. CLAYTON PETERSEN	P	Animal	SE:41	+Client:1	Client:1	+AM:1	AM:1	1-905-555-0671
14:27	⚠			P				Client:1		AM:1	
14:34	✓	BOULEVARD RESTAURANT, 1 MISSION ST SAN FRANCISCO CA	MRS. DAWN DUDLEY	S	Crutch		+Client:1	Client:2	+AM:1	AM:2	1-905-555-8441
14:41	✗	23 Samoset St San Francisco CA 94110	MRS. DAWN DUDLEY	S	Crutch		-Client:1	Client:1	-AM:1	AM:1	1-905-555-2575
14:49	✗	598 Ellington Ave San Francisco CA 94112	MR. CLAYTON PETERSEN	S	Animal		-Client:1		-AM:1		1-905-555-3166
14:50	⚠			S							
16:30	✓	CITIBANK, 451 MONTGOMERY ST SAN FRANCISCO CA	MRS. SARA ALVAREZ	S	Braces		+Client:1	Client:1	+AM:1	AM:1	1-905-555-7000
16:45	✗	3070 Deakin St Berkeley CA 94705	MRS. SARA ALVAREZ	S	Braces		-Client:1		-AM:1		1-905-555-1567
17:15	✓	OLIVIA, 1453 DWIGHT WAY SAN FRANCISCO CA	MRS. EVA SANCHEZ	S	WCane		+Client:1	Client:1	+AM:1	AM:1	1-905-555-2144
17:43	✗	65 Arana Cir Sausalito CA 94965	MRS. EVA SANCHEZ	S	WCane		-Client:1		-AM:1		1-905-555-3723
17:44	✗			S							

Search Accept Reject Details Info Map

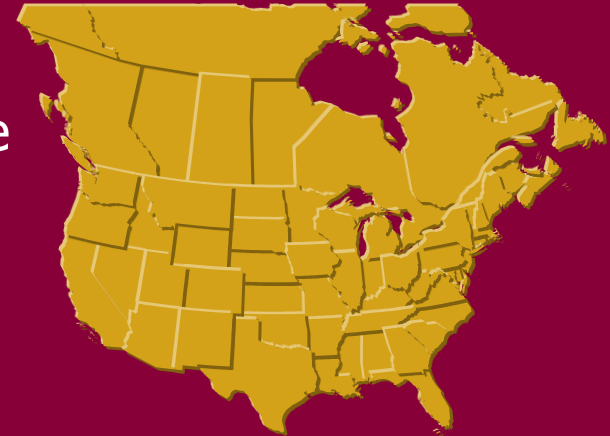
Trip Dispatch Schedule Editor Trip Booking Context Properties

Done Trusted sites | Protected Mode: Off 100%

Accommodate Unique Business Models



- State wide
- Rural
- Urban



Coordination Technology Issues

- What are the goals of the agencies?
- State, Regional, or local coordination?
- Things to think about when agencies want to coordinate service:
- Different models of coordination
 - Developing questionnaires for you to survey your clients or potential client to identify which model will fit



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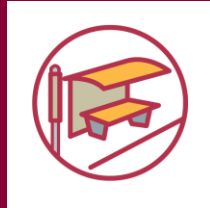
- Open Discussion/Questions



Intermodal Coordination



Demand
Response



Fixed Route



Rail



Rideshare

*All modes of transportation
at an agency are coordinated
through a single database*



Intermodal Coordination

- Only local/Interdepartment coordination
- Typically needed for ADA or Feeder service.
- Single Integrated Database

Multi-Agency Single Database

Server Cluster - Controlled by Lead Agency

All agency data is kept on a central server controlled by the lead agency



Routers

← Internet

Agency 1

Agency 2

Agency 3



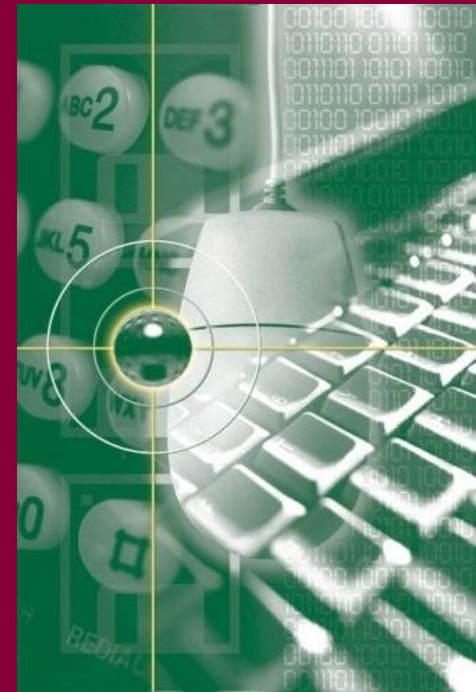
Workstations

Multi-Agency with Single Database

- How to deal with technology issues for this model
 - GIS Engine – All agencies share same map data on single database.
 - What data sources are being used
 - How often will the maps be updated? At the same time?
 - Who is going to merge new map data with old?
 - Who will be allowed to make map data changes?
 - Who determines and controls polygons?
 - Data Exchange – Occurs using a single database
 - What interfaces are needed?
 - Rider eligibility systems?

Multi-Agency with Single Database

- How to deal with technology issues for this model
 - Data Control
 - Security – Who do you want to see the data?
 - Internet Connectivity – Need fast internet to connect to database housed by lead agency
 - Contingency Plans



Multi-Agency with Single Database

- How to deal with technology issues for this model
 - Politics
 - Different operational requirements
 - Data control issues
 - Data Liabilities
 - Operational Liabilities (i.e. accidents, missed transfers, driver training)
 - Revenue/cost sharing
 - Faring Differences
 - IOA
 - Unions
 - Reporting Needs
 - How do they differ?
 - Billing Needs
 - Statistic Calculation

Multi-Agency with Single Database

Pros and Cons of this model

– Pros

- Improved operational efficiencies
- Improved Mobility for riders
- Shared software costs
- Shared Hardware Costs
- Shared IT Cost
- Single Database
- Fairly easy to do real-time coordination

– Cons

- Give up some control
- Compromise
- Hard to customize
- Increased operational costs?
- Less security
- Single database
- GIS data coordination

Multi-Agency with Multiple Databases in Real-time



Communications Server System at each agency



Central Server Facility (Host Agency)



Transportation Software Server **AVL Server**



Agency Site Dispatch



Transportation Software

AVL

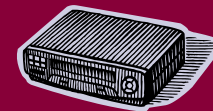


One system in each vehicle

Mobile Unit System



Vehicle Tracking Device



800 MHz Radio



MDC

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Transportation Brokerages

- Created to reduce overall costs and provide clients with most efficient and appropriate mode of transportation
- Call centers are established for a point of contact for clients
- Better control of the data, billing, reporting
- Provides a “responsible” party for the state/contracting agency, less fraud
- Offload provider contracting, processing, and policing from agency





Discussion
Questions?