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TRANSPORTATION
RESEARCH

Best Practices in Bus Dispatch

CUTR Webcast Online Series

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Project Objectives

- Catalogue the functions of dispatch
- Investigate interface of dispatch with other organizational functions
- Summarize standard operating policies, procedures and responsibilities of dispatch
- Identify best practices, including processes and technology
- Assess impacts of new technologies on dispatch efficiency and management
- Identify essential job skills and examine the future of the profession.

Tasks

- Literature Review
- Survey of Transit Agencies
- Case Studies
 - VOTRAN
 - PSTA
- Synthesis/Conclusions
- Standard Operating Procedure



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Survey of Florida Transit Agencies

- 28 questions
- SurveyMonkey™
- 48 responses from 9 agencies
- Results were cross-tabbed



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Transit Agency of Respondent

Transit Agency	Total
Bay Town Trolley	1 0.0%
HART	1 2.3%
LeeTran	8 18.2%
MCAT	3 6.8%
MDT	5 11.4%
PalmTran	9 20.5%
PSTA	9 20.5%
RTS	4 9.1%
Votran	4 9.1%



Current Position Held

Response	Number	Percent
Operations Manager	3	6.8
Supervisor Manager	6	13.6
Dispatcher	18	41.0
Transportation or Operations Supervisor	17	38.6
Total	44	100.0



Position Held Before Becoming a Dispatcher

Response	Number	Percent
A dispatcher at another transit agency	1	2.5%
A dispatcher in the private sector	1	2.5%
A road supervisor	7	17.5%
A bus operator	22	55.0%
Other	9	22.5%
Total	40	100.0%



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Physical Set-up of Dispatch Office

Response	Number	Percent
Window and radio dispatch are located together	16	45.7%
Window and radio dispatch are separate	17	48.6%
Other	2	5.7%
Total	35	100.0%



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Relationship Between Window, Radio and Road Supervision Functions

Response	Number	Percent
Dispatchers work window only and/or radio only	8	20.5%
Dispatchers work both on a rotating basis	5	12.8%
Dispatchers are considered supervisors and can work window, radio and road supervision on a rotating or as needed basis	23	58.9%
Other	3	7.7%
Total	39	100.0%



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Top Five Functions/Duties of Dispatchers

Function/Duty	Average Rating
Communicate and coordinate with other Supervisors and Bus Central Control regarding vehicle and manpower availability and other issues.	2.69
Maintain close coordination with Maintenance for exchange of defective coaches and for vehicle availability.	2.68
Double-check for correct work assignments before giving out work.	2.65
Ensure schedule adherence for Operators upon leaving and returning to the garage, on the lot, and in the dispatch office.	2.59
Check Operators reporting for duty on uniform appearance.	2.52



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Top Six Most Important Functions Regardless of Time Spent

Function/Duty	Average Rating
Ensure schedule adherence for Operators upon leaving and returning to the garage, on the lot, and in the dispatch office.	3.70
Maintain close coordination with Maintenance for exchange of defective coaches and for vehicle availability.	3.66
Double-check for correct work assignments before giving out work.	3.58
Communicate and coordinate with other Supervisors and Bus Central Control regarding vehicle and manpower availability and other issues.	3.48
Check Operators reporting for duty on uniform appearance.	3.43
Assure the availability of Operators and equipment for posting work assignments.	3.42



How Customer Complaints Are Handled

How customer complaints are handled	Number	Percent
Directly, as customer calls are routed to dispatch	9	20.45%
I am contacted by customer service to answer questions regarding bus locations	23	52.27%
I do not handle customer or information request calls	11	25.00%
Other	1	2.27%
Total	44	100.00%



How Incident Management is Handled

Response	Number	Percent
Dispatchers have the lead responsibility for road calls, accidents, and other incidents with support from road supervisors	12	26.67%
Dispatchers act in a support function to road supervisors who are the lead.	19	42.22%
Primary responsibility for incident management may at times be either a dispatcher or road supervisor.	12	26.67%
Other	2	4.44%
Total	45	100.00%



Extraboard and Overtime Management

Extraboard and Overtime Management	Number	Percent
Dispatchers have total management authority for extra-board and overtime assignments	22	55.00%
Dispatchers must coordinate with Operations Managers on overtime assignments	5	12.50%
Dispatchers have no management authority for overtime assignments	11	27.50%
Other	2	5.00%
Total	40	100.00%



Extraboard Size

Extraboard Size	Number	Percent
Too few extra board	22	53.66%
Just the right number of extra board	16	39.02%
Too many extra board	3	7.32%
Total	41	100.00%



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Maintenance Communication – Vehicle Availability

Maintenance Communication - Vehicle Availability	Number	Percent
Phone Call	18	37.50%
Email or messaging system	10	20.83%
Lot management or maintenance computer software	7	14.58%
Other	13	27.08%
Total	48	100.00%



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ITS Technologies Available to Dispatchers

ITS available to Dispatchers	Bay Town Trolley	HART	LeeTran	MCAT	MDT	PalmTran	PSTA	RTS	Votran
Radio or phone communication	✓	✓	✓	✓	✓	✓	✓	✓	✓
Lot Management			✓	✓	✓	✓	✓		
Scheduling Systems		✓	✓	✓	✓	✓	✓	✓	✓
Automatic Vehicle Location		✓	✓	✓	✓	✓	✓	✓	✓
Computer Aided Dispatch		✓	✓	✓	✓	✓	✓	✓	✓
Cameras	✓	✓	✓	✓		✓	✓	✓	✓
Real Time Arrivals			✓	✓	✓	✓	✓		✓
Trip Planning			✓	✓		✓	✓		
Covert Emergency Alarms		✓	✓	✓		✓	✓	✓	✓
Vehicle Alarms		✓		✓		✓	✓		✓

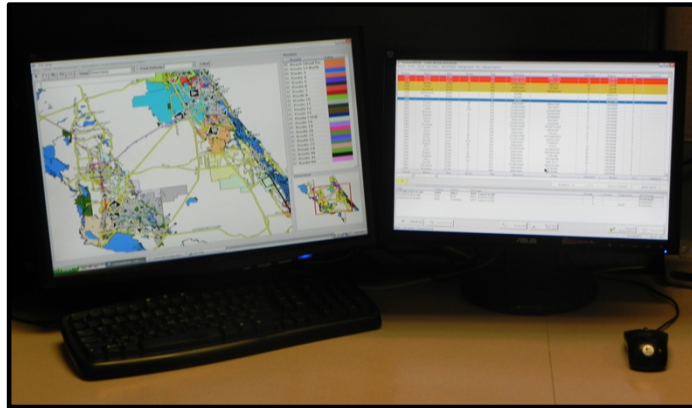


How Dispatchers Are Trained

Response	Number	Percent
On the job	32	71.11%
Agency provided separate training before dispatch duties began.	9	20.00%
Other	4	8.89%
Total	45	100.00%



VOTRAN – Avail Dispatch System



Observations Categories

Number	Observation Category
1	Radio/Communications Check
2	Passenger call for transit information
3	Equipment Incident Resolution
4	Equipment Incident
5	Service Incident
6	Equipment Incident Decision/Action
7	Passenger Incident
8	Service incident Resolution
9	Operator Incident Decision/Action
10	Service Incident Decision/Action
11	Operator Incident
12	Operator Incident Resolution
13	Dispatch letting XB know of next day assignment
14	Service Coverage Instructions (supervisors to operators)
15	Passenger Incident Decision/Action
16	Passenger Incident Resolution
17	P-N-R lot count

Observations Totals and Frequencies

Observation Category	Number	Frequency
Radio/Communications Check	32	21.77%
Passenger call for transit information	29	19.73%
Equipment Incident Resolution	12	8.16%
Equipment Incident	11	7.48%
Service Incident	11	7.48%
Equipment Incident Decision/Action	8	5.44%
Passenger Incident	6	4.08%
Service incident Resolution	6	4.08%
Operator Incident Decision/Action	5	3.40%
Service Incident Decision/Action	5	3.40%
Operator Incident	4	2.72%
Operator Incident Resolution	4	2.72%
Dispatch letting XB know of next day assignment	4	2.72%
Service Coverage Instructions (supervisors to operators)	3	2.04%
Passenger Incident Decision/Action	3	2.04%
Passenger Incident Resolution	3	2.04%
P-N-R lot count	1	0.68%
Total	147	100.00%



PSTA (Radio Control Room – South County Station)



Observation Categories

Code Number	Window Function Only
1	Operator Check-in and Coach Assignment
2	Absentee and Extraboard Management
Radio Control Room Only	
3	Radio/Communications Check
4	Equipment Incident
5	Service Coverage Instructions (supervisors to operators)
6	Passenger Incident
7	Service Incident
8	Equipment Incident Decision/Action
9	Service Incident Decision/Action
10	Equipment Incident Resolution
11	Paperwork/logging incidents
12	Yard Parking Incident
13	Accident/Collision
14	Miscellaneous



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Observations Totals and Frequencies

Radio Control Room Only	Number	Percent
Radio/Communications Check	16	24.6%
Equipment Incident	14	21.5%
Service Incident	9	13.8%
Passenger Incident	7	10.8%
Accident/Collision	6	9.2%
Equipment Incident Decision/Action	3	4.6%
Service Incident Decision/Action	3	4.6%
Equipment Incident Resolution	2	3.1%
Yard Parking Incident	2	3.1%
Service Coverage Instructions (supervisors to operators)	1	1.5%
Paperwork/logging incidents	1	1.5%
Miscellaneous	1	1.5%
Total	65	100%



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Functions of Dispatch

- Incident Management
- Labor management
- Equipment Management



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Best Practices

- Monitoring of on-time performance using AVL
- Managing transfers at main transfer center
- Targeted communications using MDTs
- RTT function enables radio operator to assess the situation before conferring with operator



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Most important findings

- Empowerment
 - Which function in charge of incidents?
- Generalized vs specialized job duties
 - Supervisors
 - Dispatchers
 - Both
- Training
- Equipment availability – Operations & Maintenance



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Most important findings

- Extraboard Management
- Pace and multi-tasking
- Customer service (real time)
- Most dispatchers were previously operators and were trained on the job



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