

Kansas Rural Transit ITS Systems

Summary of Issues Reported by Users

Final Report

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August 29, 2008

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| Summary of Problems Recorded with Kansas Transit ITS Systems | |

1. Background

During 2007, the ENTERPRISE Program funded an evaluation of the Kansas Rural Transit Intelligent Transportation Systems (ITS) currently being operated in Hays and Hutchinson, Kansas. The intent of the evaluation was to document the users perceptions and experiences with the system in order to help the Kansas Department of Transportation (KDOT) determine if and when to expand the ITS technologies to other locations throughout the state.

The technologies operated by the Kansas rural ITS project include Automated Vehicle Location (AVL) on transit vehicles, Mobile Data Terminals (MDT) in the transit vehicles and data communications between the dispatch center and vehicles, and Computer Aided Dispatch (CAD) systems.

The findings of the 2007 evaluation activities confirmed that the ITS technologies provided benefits to dispatchers, supervisors, drivers, and riders in both Hays and Hutchinson. However, nearly every individual commented that the systems had many instances of failures in either the equipment or the communications systems. In order to better understand these system failures, a second evaluation effort was performed to document what systems are having problems, and ideally to help lead to resolving the problems.

2. Introduction

Dispatchers in Hays and Hutchinson, Kansas have kept a log of issues/outages with the transit ITS technology systems operational at each site. Dispatchers in Hays have recorded issues since March 7, 2008; and dispatchers in Hutchinson have recorded issues since April 28, 2008. Both sites discontinued the official tracking of issues on June 12, 2008. As of June 12, 2008, Hutchinson dispatchers reported 32 issues, and Hay dispatchers reported 43 issues.

The intent of this Final Report is to summarize the types of issues encountered, in order to present the nature of the current issues with representatives from KDOT and the technology vendors involved in the project, and finally to present recommendations for next steps.

3. Critical Issues or Challenges

After analyzing the 75 issues logged by the operators and meeting with representatives from Hays, Hutchinson, and the KDOT Central Office Internet hosting group, two critical issues are believed to describe the vast majority of problems encountered by users of the system. These issues are summarized as follows:

1. **Connectivity with the KDOT Central Office servers.** The current architecture of the system includes central servers operating the CAD and MDT systems hosted within the KDOT Central Office. The dispatchers in Hays and Hutchinson access the systems using remote access and/or terminal services from local computers to essentially run the application on the server remotely. Because the majority of applications run centrally on the KDOT servers, if there is a connection loss, the dispatchers lose all access to the system and cannot access any data.

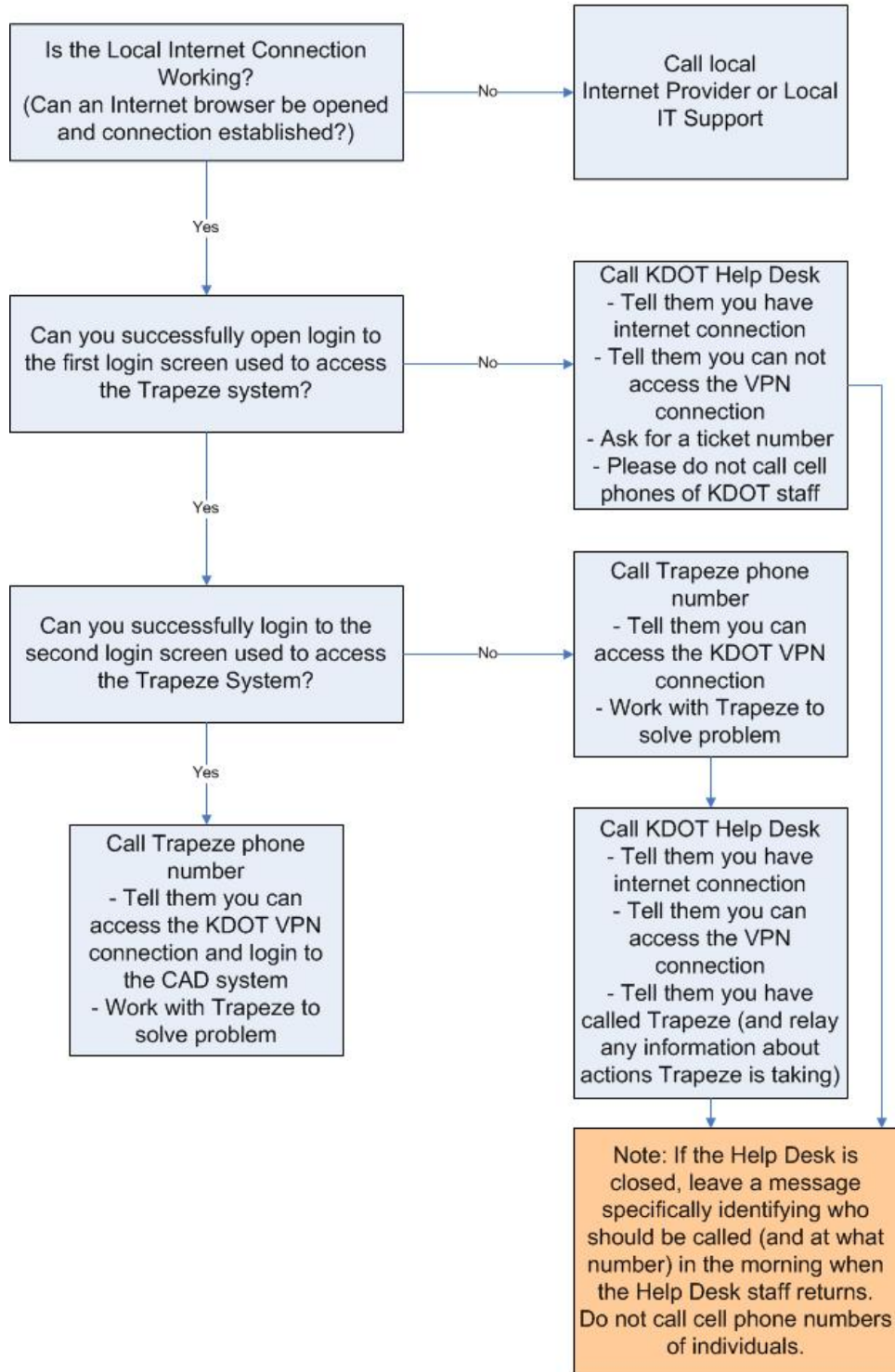
The issue logs have recorded many situations when connectivity to the KDOT central office is lost. The connectivity losses has been noted to be the result of:

- Firewall issues at the KDOT Central Office hosting center;
 - Internet connection issues locally in Hays or Hutchinson; or
 - Connectivity issues between the two locations.
2. **Hosting Center Operational Hours.** The connectivity problems with the KDOT Central Office are compounded by the difference in operating hours. Currently, both Hays and Hutchinson dispatchers' hours vary but often begin at 4:00am and extend to 11:00pm in the evenings. Also, dispatching occurs on the weekends. The KDOT Central Office Hosting Center does not have operational staff working all the hours that the dispatchers work. The KDOT Central Office staff have taken calls on cellular phones after hours and reset the system, however there is currently a disconnect in the hours of operation between the hosting center and the dispatchers and operators.
 3. **MDT data transfers and communications from the MDT server to the in-field device.** A number of issues were noted with the communications to the mobile data terminals in the buses. The issues regarding the communications with the buses were not as frequent, nor were they as disruptive as losing the connection to the system. However, through discussions with dispatchers and supervisors, there are believed to be communication 'dead zones' where buses encounter challenges receiving or transmitting data. These issues should be considered in future expansions of the system.

The Appendix includes details for the feedback received from each of the 75 logged issues.

Based on the feedback from the dispatchers, the following flowchart was developed (Figure 1) to identify a process to follow when reporting an issue to the KDOT Central Office. This process is intended to assist dispatchers in troubleshooting transit outages.

Figure 1: Flowchart for Troubleshooting Transit Outages



4. Secondary Issues or Challenges

In addition to the two critical issues presented in the previous section, the logs of issues identified a number of smaller issues. The infrequency of these issues and the feedback from dispatchers and supervisors implies that these issues are much less critical than the issues described above, however they are described briefly here.

- ***Mobile Data Terminal communication issues.*** There were several reports of the drivers experiencing mobile data terminals that displayed rides that were previously performed. Through discussions, it is believed that these might be the result of the central CAD system losing connectivity and resending rides, driver error in not properly closing out rides, or may result from the bus losing connection while a ride is being cleared.
- ***Isolated Mobile Data Terminal issues.*** In addition to connectivity issues with the mobile data terminals, maintenance personnel noted that periodically one mobile data terminal in a bus will not work. The next day, the same terminal may work fine, however another terminal does not work. These issues are believed to be related to the delicate equipment in the terminals, and would most likely be resolved through later versions of the terminals or more reliable equipment.

5. Recommendations and Conclusions

Based on the information gathered, the following conclusions and suggestions are presented:

- The concept of a centrally hosted CAD/MDT server represents a visionary approach to avoid the pitfalls that many states have encountered when deploying ITS systems at several locations throughout the state. While there have been some challenges with the initial rollout, the concept of a central server still appears to be valid and is recommended to continue;
- Because of the challenges posed by the combination of the KDOT Hosting Center firewall, the terminal services/remote desktop connection, and the difference in operational hours between the transit agencies and the KDOT Hosting Center, it is recommended that the transit ITS systems' central servers be located off-site from the KDOT Hosting Center;
- The CAD/MDT servers running at the KDOT Hosting Center are not Internet based systems. Rather, they are systems running on a server being accessed by a remote desktop/terminal services connection. Because of this, the systems do not support redundancies as would an Internet based system. In other words, it appears that the

systems were not originally intended to be accessed remotely, and while there may always be Internet connectivity problems, a system designed for the Internet will be more functional when this connection is lost. There is at least one Internet based transit CAD/MDT system in operation that was researched as part of this project (the Trapeze Novus system). It is recommended that an Internet based CAD system be explored as an option to continue the centrally hosted CAD/MDT architecture, but to resolve some of the challenges that have been identified with the current architecture.

- In regards to the hosting of the system, it is recommended that the central CAD/MDT server be hosted with an agency (outside hosting provider or KDOT) with on-site operational support 24 hours a day, 7 days a week, in order to ensure that dispatchers and supervisors can always reach someone to reset the system if it should go down.

Appendix

The following pages contain logs of comments submitted by the dispatch and management staff at both sites when reporting system outages.

Summary of Problems Recorded with Kansas Transit ITS Systems (Hays / Hutchinson)

(Note: some text written on forms could not be read, _____ is inserted when this occurs until it can be verified with operators)

Table contains all events reported as of 6/12/08

Hays started entering events on 3-7-08

Hutchinson started entering events on 4-28-08

| ID | Date | Time Detected | Time Resolved | What is in-vehicle Device doing | What is Dispatch Terminal doing | Actions to resolve problems |
|--------|---------|---------------|---------------|---|--|---|
| HAYS 1 | 3-7-08 | 10:00am | 11:53 am | | Not transmitting rides | <ul style="list-style-type: none"> - Called Trapeze - Trapeze called RSI at 11:25am - Trapeze called & everything starts up & running at 11:53am |
| HAYS 2 | 3-13-08 | 8:10am | | | <ul style="list-style-type: none"> - Doesn't transmit rides due to fact we are totally without the Trapeze - Keeps kicking dispatchers out of system | <ul style="list-style-type: none"> - Called Trapeze, were told to call KDOT - Called KDOT at 8:47 (talked with Tim who said there were disk problems) - System was up and going at 10:00 |
| HAYS 3 | 3-13-08 | 10:00 | 11:45 | Not receiving or transmitting unsent messages | Not receiving or transmitting | <ul style="list-style-type: none"> - Called Trapeze - Trapeze not able to log in to KDOT server - Tried Ph # at KDOT, no answer - 10:50 called KDOT, Karen Gilbertson said problem was resolved and rebooted server - Jim at KDOT called to see if anything else needs to be done at their end. - Trapeze (Brad) called at 11:00am. Did a ___ up - Said application was running _____ else. - Finally got it running at 11:45 |
| HAYS 4 | 3-13-08 | 12:36 | | Quit transmitting | No rides in queues | <ul style="list-style-type: none"> - Called Trapeze - Operators were told to log off and log back on (all MDT's) - RSI & Trapeze restarted |
| HAYS 5 | 3-16-08 | 7:00pm | | | Not transmitting rides | 'used unsent' |

| ID | Date | Time Detected | Time Resolved | What is in-vehicle Device doing | What is Dispatch Terminal doing | Actions to resolve problems |
|---------|---------|---------------|---------------|---|---|--|
| HAYS 6 | 3-18-08 | 1:00pm | | Not transmitting trips | | <ul style="list-style-type: none"> - Called Trapeze - Jennifer worked on it right away - Had them log off then back on |
| HAYS 7 | 3-29-08 | 6:45pm | | Will not let me log in | Will not connect to Trapeze | <ul style="list-style-type: none"> - Called Trapeze and RSI - Were told they would call back - Nothing was done, used another computer / logged off |
| HAYS 8 | 4-3-08 | 5:40am | 6:55am | No Manifests | No trips in queue | <ul style="list-style-type: none"> - Called Trapeze at 5:40am - Trapeze called back at 5:45am - Trapeze said to restart the server - Up and running again at 6:55am |
| HAYS 9 | 4-3-08 | 7:20am | | No trips | No rides in queue | <ul style="list-style-type: none"> - Called Trapeze - Angela is dialing in again (? Perhaps a Trapeze rep. dialing in to access the system) @7:35 - Trapeze did follow up call at 7:45 |
| HAYS 10 | 4-3-08 | 10:13 | 10:21 | Not transmitting | No rides in queue | <ul style="list-style-type: none"> - Called Trapeze @10:13 - Talked with Brad - Log errors, Server down again - Up and running by 10:21 - Log went down at 9:50, can't find any reason it went down - Doesn't know why application failed - Network 150Mgb free - Virus server 100 mg of memory - Wondering if virus scan is shutting the server down |
| HAYS 11 | 4-3-08 | 11:22am | 11:28am | All Stopped transmitting | New rides not sending or queued. Stopped transmitting | <ul style="list-style-type: none"> - Called Trapeze – spoke with Brad @11:22 - Brad reset, running by 11:28 - Application closed again. Log also closed - Asked if KDOT has access to this - If system is running should not close logs - Brad checking to see history of who else is connecting to machine |
| HAYS 12 | 4-3-08 | 2:15pm | | Edited a trip and it brought rides from 3 hours prior | Looked normal | <ul style="list-style-type: none"> - Ride was performed, user unperformed it - He had to acknowledge all the previous trips before he could receive the edited trip |

| ID | Date | Time Detected | Time Resolved | What is in-vehicle Device doing | What is Dispatch Terminal doing | Actions to resolve problems |
|-----------|-------------|----------------------|----------------------|---|--|--|
| HAYS 13 | 4-3-08 | 8:45pm | | MDT #8 Only delivering half the rides and not cancelling out rides | Dispatch terminal looks normal | - Tried to unsend the ride and F5 the screen and Ride |
| HAYS 14 | 4-6-08 | 6:00pm | 10:00pm | Not transmitting rides | Giving wrong time for rides. It doesn't transmit | - Used unsend rides |
| HAYS 15 | 4-7-08 | 7:58 am | | MDT #4 & #6 Unsent messages | Looks normal | - Began to send unsend messages about 5 minutes later |
| HAYS 16 | 4-11-08 | 12:20pm | | MDT #11 No trips after 13:15 | Delivered info @12:25 – took 1 min and 20 seconds to transmit drop off | - Called no one - Log off and On unsend messages to retransmit |
| HAYS 17 | 4-11-08 | 1:25pm | | MDT #9 Quit transmitting | No transmitting | - Asked driver to log off and on again - Resent messages - Took 1 min 15 seconds to deliver ½ trips. |
| HAYS 18 | 4-18-08 | 6:18am | | One unsend message, driver can't login | | - Still waiting for message to clear so he can log on, driver started his shift at 5:45am |
| HAYS 19 | 4-18-08 | 2:45pm | | | Trapeze CAD system down | - Waiting to boot back up (assumed rebooted machine & application) |
| HAYS 20 | 4-18-08 | 2:50pm | | Not receiving / displaying rides | | - Called Trapeze - Was told to call Hutchinson / Did not get a response - Was told to call KDOT / did not get response - Trapeze fixed it at 6:30pm |
| HAYS 21 | 4-25-08 | 1:00pm | | Not receiving displaying rides | | - Had driver log off then back on - Unsend messages and resent - Driver began to receive rides again - This happens frequently with this MDT |
| HAYS 22 | 4-27-08 | 12:48 | | Not receiving rides | Not transmitting rides | - Logged out of in-vehicle receiver and turned off vehicle for 10 minutes - When vehicle was restarted system started sending and receiving rides again. |
| HUT 1 | 4-28-08 | 5:41am | | MDT #10 not showing logon or receiving assignments | Showing that the assignments are trying to go out. | - Dispatcher manually logged on #10 and his MDT was working within 4 minutes |

| ID | Date | Time Detected | Time Resolved | What is in-vehicle Device doing | What is Dispatch Terminal doing | Actions to resolve problems |
|-----------|-------------|----------------------|----------------------|--|--|--|
| HUT 2 | 4-28-08 | 6:00am | | MDT #12 driver could not log on or off; MDT showed 23 unsent messages | Not showing a login time | - Called radio maintenance, they will check the MDT tomorrow (29 th) |
| HUT 3 | 4-28-08 | 11:00am | | MDT #2: Did not receive a log in for bus #2. Therefore passenger pickups would not transmit to MDT | After login at dispatch, calls try to send but will not go to MDT. | - Did log in on computer to try to send to MDT. - Started receiving NAKS from bus. - Calls never did send to bus |
| HUT 4 | 4-28-08 | 2:30pm | | MDT #5: Logged on but didn't receive calls on MDT | Not showing log on and calls are not going to MDT. | - Logged on with computer - Calls finally transmitted at 2:58 - When MDT did start working the arrive and perform times came in about 25 minutes behind when they were actually performed. |
| HAYS 23 | 4-29-08 | 2:15pm | | | Dispatcher can not log in | - Called Trapeze - Referred them to someone else - At 5:35pm were still waiting for a reply or someone to do something |
| HUT 5 | 4-29-08 | 2:20pm | | Cannot communicate with an MDT device | System disconnected at 2:20, no terminal screen to work off and no communication with MDTs | - Called KDOT help desk at 2:50 system was still down -Called again at 5:10. Help desk said Jim had left for the day. Down all evening - Jim (KDOT) called at 3:30 had restarted server but system still down. |
| HAYS 24 | 4-29-08 | 9:45pm | | | Dispatcher can not log in to the KDOT system | - Called several times but system still not working - End of the night and system still not working |

| ID | Date | Time Detected | Time Resolved | What is in-vehicle Device doing | What is Dispatch Terminal doing | Actions to resolve problems |
|-----------|-------------|----------------------|----------------------|---|---|--|
| HUT 6 | 4-30-08 | 5:15am | | All MDT down no communication with dispatch | System completely down at 5:45am | <ul style="list-style-type: none"> - Everything is down at 8:00 - Called Jim Hall and left a message (Ron Straight (Hays) also called as well to say they were down - It started to slowly come up at 10:00, Jim Hall called to say he thought it was fixed and were still working on the problem. Dispatcher asked him what happened and why they were not advised, he did not reply. - At 10:30, Brian Moore (RSI) called to see if the map was back up. He also wasn't sure what happened. As of 1:00 everything was up on the computer, however our assignments were not going out on the drivers' MDTs. |
| HAYS 25 | 4-30-08 | 12:50 pm | | | No rides in queue | <ul style="list-style-type: none"> - Called Trapeze - They replied that it appeared the MDT server is down - Dispatcher had to leave at 1:48 system still not working |
| HAYS 26 | 4-30-08 | 1:50pm | | <ul style="list-style-type: none"> - In-vehicle device not receiving/displaying rides - In-vehicle device not transmitting rides - No manifest | -Dispatch terminal not transmitting rides | <ul style="list-style-type: none"> - Called Trapeze - Jeff (Trapeze) called to say he could not access the MDT server and the dispatchers need to call KDOT |
| HAYS 27 | 5-1-08 | 5:40am | | | - No rides in queue | <ul style="list-style-type: none"> - Called Trapeze - Talked with Jeff, he had to wait until 8:00 to call KDOT and access MDT server - Jeff called back around 9:00 (exact time not know) to say all was working again. |

| ID | Date | Time Detected | Time Resolved | What is in-vehicle Device doing | What is Dispatch Terminal doing | Actions to resolve problems |
|---------|---------|---------------|---------------|--|--|--|
| HUT 7 | 5-1-08 | 5:45am | | MDT # 10,16,12,13,14,15 not communicating again | Bus #10 not showing up on map Bus #12 @7:30 stops showing up on map Bus #10 @7:30 starts showing up on map | - Called Jim Hall at 5:45 and left message |
| 28 | 5-01-08 | 11:40am | | - MDT #2 has previously performed rides suddenly mixed in with the current unperformed rides | | - Driver had to acknowledge the rides again in order to access the un-performed rides |
| HAYS 28 | 5-1-08 | 11:53 am | | | Dispatcher could not log in - Could log in to KDOT server but not Trapeze system | - Called Trapeze who thought it was a local problem - Greg (Tech in Hays) said the driver or Network connection that the shortcut 'Trapeze Reports link' refers to was unavailable. We talked to Jeff with KDOT who rebooted something and everything was fine. |
| HAYS 29 | 5-1-08 | 12:45 | | | MDT #2 has performed rides mixed in with unperformed rides again - This causes a lot of searching as only 5 rides can be loaded at a time | - did not call anyone - Did something else |
| HAYS 30 | 5-1-08 | 12:51 | | - System hanging running slow | | - Called KDOT Central office - Called back with 15 minutes |
| HUT 8 | 5-1-08 | 2:30 pm | | MDT # 5 slow to display assignments until 3:00 then from 4:00 on would not take times from driver (arrive or depart) | | |

| ID | Date | Time Detected | Time Resolved | What is in-vehicle Device doing | What is Dispatch Terminal doing | Actions to resolve problems |
|--------|---------|---------------|---------------|--|--|---|
| HUT 9 | 5-2-08 | 3:30pm | | MDT #5 arrival and departure time is coming in about 20 minutes after call is complete. Bus jumps around on the map with an O around it, never completely able to track the bus. | | |
| HUT 10 | 5-5-08 | 4:45pm | | #5 about 30 minutes slow in receiving calls and returning performance times. Lasted rest of night | | |
| HUT 11 | 5-5-08 | 5:40pm | | | Kicked off Trapeze – could immediately log back on. 6:15 kicked off again – logged back on and printed manifests | |
| HUT 12 | 5-6-08 | 5:45pm | | MDT #10 not showing up on map 5:52 started showing up | | - #19 showing 1999, reset to 2008 – reset #10 |
| HUT 13 | 5-6-08 | 3:04pm | | Driver logged in at 2:24, MDT did not show received calls until 3:00 | Shows calls trying to go through but they didn't show DM till 3:00 | |
| HUT 14 | 5-7-08 | 2:25pm | | | Kicked off connection for map & booking computer for Trapeze. Off almost 8 minutes before able to reconnect | - Kicked off at 3:13 - Logged in at 3:16 |
| HUT 15 | 5-12-08 | 12:00pm | 1:10pm | | Dispatch computer for Trapeze and RSI went down without warning and were down for about an hour | |

| ID | Date | Time Detected | Time Resolved | What is in-vehicle Device doing | What is Dispatch Terminal doing | Actions to resolve problems |
|--------|---------|---------------|---------------|--|--|---|
| HUT 16 | 5-12-08 | 1:00pm | | MDT #7 does not receive assignments after coming back from lunch | Would not take times from drivers – attempted to put it on calls already in MDT | - Driver logged back off for 15 minutes and MDT corrected itself - Dispatcher advised driver to log off the MDT when going to lunch and back on when they return |
| HUT 17 | 5-12-08 | 2:30 | 7:00pm | | MDT # 5 still approximated 30 minutes slow in coming up and slow in displaying assignments | |
| HUT 18 | 5-13-08 | 11:00am | 12:15pm | | | - KDOT called to say we would be down. - All communications with MDTs stopped - Dispatch terminal was still available to track calls while we voiced to buses until work was done and MDTs came up |
| HUT 19 | 5-13-08 | 2:30pm | | MDT #5 did not start receiving calls until 3:00. Should have been receiving at 2:30. Went down again at 3:22. Did not let dispatch send any additional calls through evening | | |
| HUT 20 | 5-14-08 | 5:45am | | MDT #10 not receiving any calls or sending calls back | | - At 6:39 came back up & able to locate para bus Trapeze and RSI completely down could not get on until 5:45. Powered own computer downs Came back up at 5:45, receiving not communicating. MDT Centre did not show a log time at 1:30pm - Trip times came in slow or not at all - Driver advised that his trip times jumped at different spaces when he tried to put in arrive and depart – Nothing was resolved. |
| HUT 21 | 5-15-08 | 10:56am | | MDT #7 Taking 10min to communicate Voice is heard | | |

| ID | Date | Time Detected | Time Resolved | What is in-vehicle Device doing | What is Dispatch Terminal doing | Actions to resolve problems |
|---------|---------|---------------|---------------|---|--|--|
| HUT 22 | 5-15-08 | 2:30pm | 7:00pm | MDT #5 is slow to bring up assignments approximately 30 minutes after logging in. Then works fine until around 3:30 or 3:45. The bus shows a double circle around it and will not show the drivers' arrive or depart times per assignment and at times will not send a new assignment to his MDT. | | |
| HAYS 31 | 5-17-08 | 6:48 pm | | | <ul style="list-style-type: none"> - Dispatchers are being kicked out of system - Dispatcher cannot log in - Driver cannot log-in - No Manifest | <ul style="list-style-type: none"> - Called Trapeze - Referred to someone else |
| HAYS 32 | 5-18-08 | 6:30pm | | | <ul style="list-style-type: none"> - Dispatch terminal not transmitting rides - In-vehicle device not receiving/displaying rides - In-vehicle device not transmitting rides | <ul style="list-style-type: none"> - Called no one / did something else |
| HUT 23 | 5-19-08 | 5:30am | | | <ul style="list-style-type: none"> - All vehicles show double circles - At 5:30 both computers went down totally. | <ul style="list-style-type: none"> - Within a few minutes, RSI & in-house data came back up - Trapeze did not come back up - Bus 10 advised his MDT was working fine and his bus was on the map without circles - They contacted their computer systems and the problem was within our (local) network |

| ID | Date | Time Detected | Time Resolved | What is in-vehicle Device doing | What is Dispatch Terminal doing | Actions to resolve problems |
|------------|-------------|----------------------|----------------------|--|--|---|
| HAYS 33 | 5-19-08 | 7:17am | | - Drivers have no signals | | - Called Trapeze left message - TRAPEZE NEVER CALLED BACK. CALLED KDOT @7:13. TALKED TO TRAVIS COMBS. - TRAVIS LATER RETUNED MY CALL. SAID ALL APPLICATIONS SEEM TO BE RUNNING. RADIO'S ARE CONNECTING AT LEAST AT RENO'S SITE. COMMUNICATIONS LOOK GOOD. ASKED ME TO CALL TRAPEZE AGAIN. |

| ID | Date | Time Detected | Time Resolved | What is in-vehicle Device doing | What is Dispatch Terminal doing | Actions to resolve problems |
|------------|---------|---------------|---------------|---------------------------------|---------------------------------|---|
| HAYS 34 | 5-19-08 | 8:05 am | | - Drivers have no signals | | <p>TALKED TO SOMEONE AT TRAPEZE, SAID HE DID NOT KNOW MUCH ABOUT MDT'S BUT IN ABOUT ONE HOUR SOMEONE SHOULD SHOW UP WHO DOES. IN THE MEANTIME CALL RSI.</p> <p>- At 8:19am TALKED TO BRIAN BURDA WITH RSI. HE SAID ALL SOFTWARE IS UP AND RUNNING. SOMETHING IS WRONG IN THE RADIO SYSTEM. NO DATA TO THE RNC (RADIO NETWORK CONTROL) SAID HE LEFT MESSAGE WITH DAVE FISHER.</p> <p>- at 9:27 am DAVE FISHER WITH SALINA CALLED TO SEE IF WE WERE RUNNING. CHECKED TO SEE IF HE COULD SEE TRAFFIC FROM A COUPLE OF THE VEHICLE RADIO'S THAT ARE CURRENTLY OUT RUNNING. SAID HE SAW NO TRAFFIC. WOULD CALL HIS MAN TO GO AND CHECK OUT THE TOWER I BELIEVE IN ELLIS, KS. BUT MAY NOT GET IT DONE YET TODAY SINCE HE DID NOT KNOW WHAT HIS PERSONS SCHEDULE WAS. I BEGGED TO SEE IF WE COULD GET THIS DONE ASAP SINCE WE HAVE BEEN DOWN FOR THE FOURTH DAY NOW.</p> <p>At 10:49am SYSTEM LOCKED UP AND KICKED ALL DISPATCHERS OUT. REBOOTED ITSELF A COUPLE OF MIN. LATER</p> <p>DAVE FISHER CALLED @11:44. FOUND THE PROBLEM TO BE AN EQUIPMENT FAILURE AT THE TOWER SITE SOUTH OF ELLIS,KS.</p> |

| ID | Date | Time Detected | Time Resolved | What is in-vehicle Device doing | What is Dispatch Terminal doing | Actions to resolve problems |
|--------------|---------|---------------|---------------|---------------------------------|--|---|
| HUT 24 | 5-19-08 | 10:45 am | | | <ul style="list-style-type: none"> - Lost connection at 10:45 - Could not get in to booking screen - Came back at 11:10 but very sluggish | <ul style="list-style-type: none"> - Kept trying to reconnect every few minutes - When problem finally cleared, it finally let me back in |
| HUT 25 | 5-20-08 | 2:15 | | | <ul style="list-style-type: none"> - KDOT called to say the system would be down about 15 minutes. | <ul style="list-style-type: none"> - Dispatch terminal was still visible but not communicating with MDTs. Lasted about 15 min and then came back on. |
| HUT 26 @9:30 | 5-21-08 | 8:14 am | | | <ul style="list-style-type: none"> - Not communicating with para buses and route buses | <ul style="list-style-type: none"> - RSI showing circles on all para & route buses - Called Jim Hall, left message - Jim Hall called about 10:30 when things came back up to say Trapeze and RSI had been shut down and he wasn't sure how or why. |
| HAYS 35 | 5-21-08 | 8:24am | | | <ul style="list-style-type: none"> - Lost signal | <ul style="list-style-type: none"> - Dave Fisher said it was a repeater problem and the part had been sent to Motorola for repair, it is to be overnigheted, he will install it when it arrives - JIM WITH KDOT CALLED WITH UPDATE ON OUR PROBLEM. HE TALKED TO DOUG (NORTON?) AND SAID MOTOROLA SAID THE PART WOULD BE SHIPPED TODAY OR TOMORROW. MORE THAN LIKELY IT WILL BE TOMORROW 05-22-08 BEFORE THEY GET THE PROBLEM FIXED. THIS WILL BE ALMOST A WEEK WITHOUT THE SYSTEM PROVIDED THEY DO GET IT FIXED TOMORROW. |
| HUT 27 | 5-22-08 | 10:00am | | | <ul style="list-style-type: none"> - RSI Trapeze completely down without notice @ 10:00am | <ul style="list-style-type: none"> - Called Jim Hall @ 10:05am - Came back up at 11:00 - Back down at 11:49 |

| ID | Date | Time Detected | Time Resolved | What is in-vehicle Device doing | What is Dispatch Terminal doing | Actions to resolve problems |
|---------|---------|---------------|---------------|--|---------------------------------|--|
| HAYS 36 | 5-22-08 | 11:30am | | - Debug alert can not connect to server | | <p>Dave Fisher (Salina) called to say the repeater was fixed. The drivers verified they had signals. I tried to get them running but got a De-Bug Alert and could do nothing in Trapeze. Called Jim (KDOT) @ 10:35, he said Hutch was having issues not being able to see TRapeze or RSI and tried to reboot. Called Trapeze @ 10:44 Cannot connect to server. "MDT Srv."Communication to Sch. Server Broken." Ron called RSI @ 11:00 and left a message with Brian Burda and also the Emerengy Help Desk. I called Jim (KDOT) @ 11:00, he said the Sequel,File and Communication servers were all up and running. Call if there is anything else he needed to do. I called Trapeze back, said the MDT server need to be reset. Called Jim again to have him do this. He returned my call @ 11:12 and had reset the MDT server. Tried again to get the vehicle MDT's going but still got the De_Bug Alert.</p> <p>- Brad with Trapeze called @ 12:00 and did a Web-Ex. Had me book a ride and move it which I was able to do. He himself could not connect from his desktop,which he is normally able to do, therefore thinking it was something internal. I gave him Jim's# so he could talk to him to make sure the application was running. Called Back @ 12:17 and had David(KDOT) on the phone also. David thought maybe an address was dropped from the DNS. Could not figure it out and called Travis Combs (KDOT). Brad left a message with him. I now finally have control of my computer again. It is now 1:30 and I still have not heard from anyone, so I again try to get the drivers up and running. By 13:45 I have all vehicle operators back in buisness. 2:00 Brad called to see how things were going. I don't know about you but I feel I have done all the footwork in this whole situation with really no substantial help from anyone. By the way it is now 2:30 and still no call from RSI. I will now quote Ron Straight per his request "We are ready to throw this whole computerized system out the window." I will follow by saying when the system works it is great however more often than not we seem to have problems.</p> |
| HUT 28 | 5-27-08 | 6:03am | | Bus #10 (MDT #12) showing Fridays manifest | | <ul style="list-style-type: none"> - Told him to log off for 15 min. - Came back after 15 min. - Showed today's manifest |
| HUT 29 | 5-28-08 | 6:00am | | DT 12 (10) still not responding | | <ul style="list-style-type: none"> - Bus #10 MDT not working - Not showing on map for 2 days in row - Told him to log off for 15 min - Came back up with circle around bus |

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| HUT 30 | 5-28-08 | 2:00 | | - Not receiving calls came back at 4:00 | - No calls going to any bus - Map shows circles around all buses | - Called Jim Hall at 3:45 when system did not correct itself - Jim Hall checked servers. - Talked to radio service and they had reported problems at 2:00 – worked on problem. |
| HAYS 37 | 6-1-08 | 6:48pm | | | - Dispatcher cannot log in | |
| HAYS 38 | 6-4-08 | 5:04 pm | | | - Dispatchers are being kicked out of system - Dispatcher cannot log in | |
| HAYS 39 | 6-4-08 | 5:40 pm | | | - Dispatcher cannot log in | |
| HAYS 40 | 6-5-08 | 6:15am | | | - Dispatcher can not log in | LAST NIGHT I WAS CALLED BY 2 DIFFERENT DISPATCHERS REGARDING THE SYSTEM BEING DOWN. NEITHER ONE COULD LOG INTO KDOT. I ASKED THAT THEY CALL TRAPEZE, RSI, AND KDOT AND LEAVE MESSAGES AT THE HELP DESK TO SEE IF ANYONE COULD TRACK DOWN THE AREA OF THE PROBLEM (I KNEW IT HAD TO BE KDOT) WHEN I CAME INTO WORK AT 5:00 THIS MORNING I STILL COULD NOT LOG IN. I HAD A MESSAGE FORM THE LATE NIGHT DISPATCHER THAT IT DEFINITELY WAS KDOT. AS LUCK WOULD HAVE IT (WE HAD NO WAY OF PRINTING PAPER MANIFESTS) THE MDT'S IN THE VEHICLES ARE WORKING AND AS LONG AS WE DO NOT ENCOUNTER VEHICLE ISSUES AND THE DRIVERS ARE ALL IN THEIR ASSIGNED BUSES HOPEFULLY THE MDT'S WILL BE THEIR ONLY SOURCE OF KNOWING WHO TO PICK UP. ON THE OTHER HAND DISPATCHERS HAVE NO IDEA WHAT THEY HAVE AND WE CAN'T BOOK RIDES. |

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| HAYS 41 | 6-5-08 | 11:30 am | | | - Dispatcher cannot log in | OUR TECH RESET THE FIREWALL BUT THE VPN WAS STILL DOWN. THE PROBLEM IS THAT SOMETHING, SOMEWHERE BETWEEN HAYS AND TOPEKA IS BROKE AND THEY WERE SEARCHING TO LOCATE THE PROBLEM. THIS WAS AS OF 10:00 AM THIS MORNING. I WAS TOLD BY OUR TECH THAT IT WOULD BE AN UNDETERMINED AMOUNT OF TIME BEFORE THE ISSUE IS RESOLVED. APPARENTLY THEY ALSO HAVE OUR INTERNET PROVIDER LOOKING INTO IT ALSO. THE SAD PART IS THAT IT COULD BE DAYS BEFORE IT IS RESOLVED. ALL WE CAN HOPE FOR IS FOR THE MDT'S TO CONTINUE WORKING. WE AS DISPATCHERS CAN'T EVEN BEGIN TO BOOK RIDES FOR INDIVIDUALS INTO THE FUTURE NOR EVEN CURRENT AS WE CAN'T SEE WHAT IS GOING ON AND THE DRIVERS ARE ONLY ABLE TO SEE 3 HOURS OR 13 TRIPS INTO THE FUTURE. IN TURN WE ARE GETTING VERY NEGATIVE RESPONSES FROM THE PUBLIC. WITH ALL THE RECENT FAILURES THIS IS REALLY NOT GIVING OUR SEVICE A GOOD NAME. |
| HUT 31 | 6-5-08 | 12:49pm | | MDT #16 (bus 6?) - driver report MDT comes up last day of manifest ? | - | - Told her to log off for 20 min - Dispatcher was receiving calls and showing up on map |

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| HAYS 42 | 6-5-08 | 1:15pm | | | - Dispatcher cannot log in | IN A LAST DITCH EFFORT TO HELP US OUT, I CALLED TRAPEZE TO SEE IF THERE WERE ANY WAY TO RUN US A PAPER MANIFEST FOR A FEW DAYS IN ADVANCE TO HELP US OUT WITH SCHEDULING FOR DOCTOR APPOINTMENTS AND WORK. THEY SUGGESTED KDOT (TRAVIS COMBS) CALL RICK TENNIST WITH TRAPEZE TO SEE IF THEY COULD WORK BETWEEN THEMSELVES TO SOMEHOW GET US SOME DATA TO WORK WITH. |
| HUT 32 | 6-6-08 | 1:30pm | | | - The screen showed writing that dispatch had not put in - Trapeze sys. would not let Gloria log in - program extremely slow in responding | - computer finally corrected itself by 2:30pm |
| HAYS 43 | 6-12-08 | 5:20am | | | - Dispatcher cannot log in | - Called KDOT central office could not leave a message as phone system said staff do not arrive until 6:45 - Called KDOT again at 7:12 - Called Travis on cell phone - Ron Straight called at 8:00, Travis did not know the system was down, but had several messages he had not listened to yet and said he'd look in to it. |