

**STATE OF VERMONT
ENHANCED 9-1-1 BOARD
Special Meeting #2
30 August 2016
Capitol Plaza Hotel
100 State St, Montpelier, VT
Ethan Allen Room**

FINAL approved as written approval date: 10/20/16

10:01 AM – Call to Order

Chair Gary Taylor brought the meeting to order. The following were in attendance:

Board Members Present

Chief Gary Taylor, Chair
Sheriff Roger Marcoux, Vice-Chair
Chief Steven Locke
Captain Thomas Hango
Kate O'Connor (via conference bridge)
Kelly Kennedy (via conference bridge)

FairPoint Representatives

Beth Fastiggi, President, FairPoint Vermont
Karen Romano, VP, Gov. & Education Solutions
John Eon, Director, 9-1-1 Operations
Rich Murtha, VP, Field Operations
Angie Beaudry, Corporate Communications

Staff Members Present

Barbara Neal, Executive Director
Soni Johnson, Board Clerk

Others Present

Representative Kathleen Keenan
Corey Chase, Public Service Dept.
Stephen Whitaker, Member of Public
Randy Young, WEST Safety Services
Chris McGearry, WEST Safety Services

FairPoint Communications – Recent System Outage Discussion

FP President Beth Fastiggi introduced herself and the other FairPoint representatives present. She expressed FairPoint's concern about the recent system outages and stated that FairPoint is committed to the 9-1-1 system and to working with the Board & E9-1-1 Board staff.

FP VP Karen Romano – Also spoke of FairPoint's commitment to providing the best 9-1-1 system possible. VT's 9-1-1 system is cutting edge and is still evolving. She provided a brief overview of FairPoint's involvement in the creation of i3 standards and also provided a brief timeline of the creation of the current system (from RFP issuance to new system cut).

FP VP Rich Murtha – Spoke of his responsibilities as VP of field operations and of FairPoint's partnership with the Board and board staff. He spoke of system reliability expectations and of the importance of 9-1-1 to Vermont. Mr. Murtha touched on the two system outages and FairPoint's commitment to make sure it cannot happen again. His team takes a personal responsibility to the system.

FP Director John Eon – Provided details concerning the two system outages (leaving out any specific details that could impact system security).

1. 6/22/16 Outage

- FairPoint was implementing connectivity to a secondary TCC (text control center).
- During that process, a test text call was made. Some of the location information contained unexpected characters that the call handling software was not able to deal with causing call processing to cease.
- The outage lasted approximately 45 minutes.
- Resolution: The link being used to turn up the secondary TCC was disabled and all further implementation of the secondary TCC connectivity was suspended.

2. 8/1/16 Outage
 - No work on the secondary TCC implementation was scheduled.
 - A text entered the VT 9-1-1 system. All indications were that it was a valid text, the system processed it accordingly.
 - The system queried for location info, the response received contained unexpected characters that the call handling software was not able to deal with causing call processing to cease.
 - Outage lasted approximately 45 minutes.
 - Resolution:
 - FairPoint disabled the datalink and all connectivity to the secondary TCC was removed.
 - All text-to-9-1-1 was disabled for the State of VT until a software fix could be tested and implemented.
 - Testing of the software fix has been completed both in the vendor's lab and a FairPoint lab in VT. The fix is in place and text-to-9-1-1 in VT is now operational.
 - FairPoint is working with board staff to develop new procedures to further test & implement system connectivity with the secondary TCC in such a way as to avoid any reoccurrence of the events leading up to this outage.

Board Questions

1. Was the 2nd outage caused by a text from a person?
FairPoint Response: No. It was a test text sent from the secondary TCC. This text was not intended for VT, but should have gone to another state – TCC connectivity to the VT 9-1-1 system had not been turned off as originally thought. It isn't the text message typed that caused the issue; the issue is in the coding which runs in the background (this coding "tells" the system how to handle a call). That background coding contained the unexpected characters – a resident in the State of VT could not have generated this outage by sending a text to 9-1-1.
2. Could your outside vendor working tomorrow do the same thing again?
FairPoint Response: It wasn't a FairPoint vendor, though the vendor has implemented a software patch to keep it from happening. One of the TCCs was working on something and caused this.
3. Could one of the TCCs cause it again?
FairPoint Response: No. TCC connectivity to the system was shut off until the steps could be taken to connect them again. There's an industry format as to how a message is supposed to come through. FairPoint has taken steps to ensure that system can withstand any deviation from those standards going forward, and that will be part of the work done with secondary TCC going forward.
Clarification from Exec. Director Neal: The primary TCC is online (and has been since system cut) and the secondary is the one shut down.
4. Is TCC part of FairPoint?
FairPoint Response: No. It is a Text Control Center (a private company) which acts as a liaison with wireless carriers to bring traffic into the 9-1-1 network. There are two national TCCs. VT's 9-1-1 system has been connected to one TCC since system cut. All issues occurred while trying to connect the secondary TCC to the system.
5. How is the redundancy set up and how did this not get picked up?
FairPoint Response: VT's 9-1-1 system has been connected to one TCC since cut. There are multiple paths into that TCC that share no common elements between them.
6. What are the chances of the system being hacked (seeing as this was caused by software issues)?
FairPoint Response: There is constant monitoring of system (movement of info, attacks, etc).
7. Are attacks from foreign actors?
FairPoint Response: Some. They've been mitigated
8. Are attacks directly linked to the 9-1-1 system?
FairPoint Response: No. Attacks detailed are to the entire FairPoint network. As far as 9-1-1...the system is always monitored 24/7.
9. When this happened in June & August did you know immediately when it occurred?
FairPoint Response: No. FairPoint is working with vendor on improved notification. If it's a hardware failure or fiber cut FairPoint will know right away. Software issues are different; an issue

- can occur and the system not recognize there is a problem. Automatic failover can't work if the system doesn't recognize there is an issue
10. FairPoint response concerning TCC suggest or implies that FairPoint knows where the text came from.
Do you?
FairPoint Response: Yes
 11. Is that something that we can or should not discuss in this meeting?
FairPoint Response: This information has been shared Barb & board staff. TCC staff is aware as well, and have apologized. FairPoint is focusing more on making sure it can't happen again rather than punitive measures.
 12. June incident had a similar cause?
FairPoint Response: Trigger that caused event was slightly different. End result was the same.
 13. Do we know where that came from?
FairPoint Response: Same place.

Board members continued the discussion:

- The public must have confidence in the 9-1-1 system
- What other redundancies can be implemented?
- The 9-1-1 system must work as designed
- There have been issues in getting information from system provider on calls that were "missed" during an outage.
- Board is looking into the possibility of having an engineer available to answer any questions and review system information as needed.

Representative Keenan spoke:

- Length of time texting was down is a concern. Often in VT, a text can get through when a call cannot.
- Has an allowance in dollar value of the contract has been looked into for the length of the outage?
- Do we have, within the state 9-1-1 system, the technical piece that we need that we are missing...do we need an engineer?

Public Comment/Questions

Steven Whitaker – Spoke of his concerns about 9-1-1 system redundancy (or lack thereof), VT 9-1-1 being used as a "guinea pig" (cutting edge technology being tested here?), lack of technical expertise on the Board (does the Board rely on the vendor for technical analysis), and the need for an independent review of the network by a technical engineer. He also expressed concern about the redaction of information from FairPoint's RCAs (root cause analysis) about system outages.

New Business – none

Adjournment

There being no further business, Chair Taylor asked for a motion to adjourn.

Motion: Chief Locke made a motion to adjourn; 2nd by Captain Hango. There was no discussion and the motion passed unanimously by voice vote. The meeting adjourned at 10:58 AM.

Respectfully submitted:

Soni Johnson
Soni Johnson, Clerk

9/7/16
Date