MASS CASUALTY COMMISSION
COMMISSION DES PERTES MASSIVES

The Joint Federal/Provincial Commission into the April 2020 Nova Scotia Mass Casualty
MassCasualtyCommission.ca

Commission fédérale-provinciale sur les événements d'avril 2020 en Nouvelle-Écosse
CommissionDesPertesMassives.ca

Public Hearing

Audience publique

Commissioners / Commissaires

The Honourable / L'honorable J. Michael MacDonald,
Chair / Président

Leanne J. Fitch (Ret. Police Chief, M.O.M)

Dr. Kim Stanton

VOLUME 35

Held at :

Best Western Truro
150 Willow Street
Truro, Nova Scotia

Thursday, June 9, 2022

Tenue à:

Best Western de Truro
150, rue Willow
Truro, Nouvelle-Écosse

Jeudi, le 9 juin 2022

INTERNATIONAL REPORTING INC.
www.irri.net
(800)899-0006

Appearances / Comparutions

Mr. Roger Burrill	Commission Counsel / Conseiller de la commission
Ms. Jennifer Cox	Commission Counsel / Conseillère de la commission
Mr. Jamie VanWart	Commission Counsel / Conseiller de la commission
Ms. Alix Digout	Counsel / Conseillère
Mr. Stephen Topshee	Counsel / Conseiller
Ms. Natasha Schigas	Counsel / Conseillère
Mr. Brian Carter	Counsel / Conseiller
Mr. Thomas Macdonald	Counsel / Conseiller
Mr. Joshua Bryson	Counsel / Conseiller
Ms. Patricia MacPhee	Counsel / Conseillère

Table of Content / Table des matières

IV
Exhibit List / Liste des pièces

Halifax, Nova Scotia

--- Upon commencing on Thursday, June 9th, 2022, at 9:33 a.m.

REGISTRAR DARLENE SUTHERLAND: Good morning. The proceedings of the Mass Casualty Commission are now in session, with Commissioner Michael MacDonald, Commissioner Leanne Fitch, and Commissioner Kim Stanton presiding.

COMMISSIONER FITCH: Bonjour et bienvenue. Hello, and welcome. We join you from Mi'kma'ki, the ancestral and unceded territory of the Mi'kmaq. Each day of our proceedings, we being with a reflection of why we are here working together. We do this by first remembering those whose lives were taken, those who were harmed, their families, and all those affected by April 2020 mass casualty in Nova Scotia.

Each day of our proceedings, we learn and we share more. We encourage others to focus on the future in anticipation that our collective work will make meaningful differences for families, loved ones, and all those affected. We all have a part in creating a final report and recommendations designed to help keep people safer in the future.

Yesterday, we heard from the RCMP "H" Division Director of Strategic Communications and another RCMP staff sergeant regarding their respective roles during the mass casualty.

Today, Commission Counsel will share four new Foundational Documents related to different aspects of interoperability. First, we will hear from Senior Commission Counsel Roger Burrill on Foundational Documents regarding the topics of air support and Halifax Regional Police and Halifax RCMP District. We'll then hear from Senior Commission Counsel Jennifer Cox, who will summarise Foundational Documents about 9-1-1 call-taking, dispatch, and radio communications in Nova Scotia.

As we've all been hearing throughout the proceedings, radio plays

an important role, both within agencies and interagency collaboration and communications. To help us better understand the system, we will hear from a witness panel today, including Trevor MacLeod, Director Public Safety Radio and PTT Engineering and Operations with Bell Mobility; Matthew Boyle, Director of Public Safety and Field Communications with the Province of Nova Scotia; Todd Brown, Director of Strategic Initiatives, Public Safety and Field Communications, also with the Province of Nova Scotia; and Christian Gallant, Divisional IMIT Officer for "H" Division RCMP.

Following the panel, we will hear Participants' submissions on the most recently shared Foundational Documents.

We have a lot of important ground to cover again today, and we continue to thank you for being here and learning with us.

I will now ask Senior Commission Counsel Roger Burrill to begin.

Mr. Burrill.

--- FOUNDATIONAL DOCUMENTS: AIR SUPPORT

--- PRESENTATION BY MR. ROGER BURRILL:

MR. ROGER BURRILL: Okay. I'm going to be sharing your screen here this morning. There we go.

Commissioners, Participants, Nova Scotians, Canadians and all those impacted by the mass casualty events of April 2020, my role here is to introduce for you two new Foundational Documents. The first is the Air Support Foundational Document, and then we will introduce the Halifax Regional Police and Halifax District RCMP Operations Foundational Document.

I'll deal with them sequentially. I hope that I won't be too long in terms of what it is I'll be speaking about because there is much information and interesting information for you to come later this morning and this afternoon.

The Air Support Foundational Document, of all those we have presented, contains the most discrete, factual enquiry. That is, it seems clear the information obtained by the Mass Casualty Commission that there were from the

earliest stages of the incident response there were air support difficulties, and those difficulties were experienced by the Critical Incident Commanders in how they reacted to the situation.

The Foundational Document that is being presented today speaks about the efforts made to access air support, the details of the air support as it was deployed on April 19th, and some of the difficulties experienced within the actual exercise and support of the air support.

So Madam Registrar, I would move that the Foundational Document entitled Air Support be marked and tendered into the evidence in these proceedings.

REGISTRAR DARLENE SUTHERLAND: That's Exhibit 2042.

MR. ROGER BURRILL: Thank you.

--- EXHIBIT NO. 2042:

(COMM0058856) Air Support Foundational Document

MR. ROGER BURRILL: I would also request that all supporting documentation referred to therein be marked and tendered into evidence in these proceedings as well.

REGISTRAR DARLENE SUTHERLAND: So exhibited.

MR. ROGER BURRILL: Subject matter of the document is information currently available to the Mass Casualty Commission in relation to RCMP requests and use of air services on April 18th and 19th, 2020. The air support document summary is as follows:

The RCMP had air resource capability assigned to the Atlantic Region on or about April 18th and 19th, 2020. The Atlantic Region was defined for RCMP purposes as "J" Division in New Brunswick, "H" Division in Nova Scotia, "L" Division in PEI, and "B" Division in Newfoundland and Labrador.

The resources were located in Moncton, New Brunswick at the Romeo Leblanc International Airport. There was one helicopter, an Airbus H125, that

was normally assigned the Atlantic Region Air Support Division of the RCMP. This helicopter was equipped with night flight capabilities, and it also was equipped with surveillance tools, or what has been referred to in the materials as the "surveillance package".

However, between March 1st, 2020 and May 12th, 2020, this helicopter was ODS, and that was the words or the phrase used in the materials, ODS, off duty sick in this case meant that it was out for maintenance and inspection and was not available on April 18th and 19th.

The air support services also had a Pilatus fixed-wing aircraft in Moncton. On April 18th and 19th, 2020, it was also ODS.

Information available to the Mass Casualty Commission suggests that its annual maintenance inspection that it underwent, obviously, annually, was extended or prolonged due to COVID restrictions in the working situation in Moncton.

We also know that there was other air support services available outside of the Atlantic region, more specifically in C Division in Montreal, and O Division in Ontario.

When the RCMP Air Support Services were unavailable and that was determined relatively early in the incident response, authorities turned to alternate sources. And in particular, the most important alternate source for purposes of the document and these proceedings was the DNR resource, the Department of Lands and Forestry resource.

Now, the Department of Lands and Forestry had four H125 Airbus helicopters available to it. It had six available pilots, but there was one difference from the RCMP available tools that it would have had, and that is, that the helicopter for DNR was limited to visual flight rules, that is, it can only fly when you can see. That means you can only fly in the daytime, shortly before dawn and shortly after dusk.

Also, the limitations on the DNR helicopter were that there was no specialized surveillance tools or packages available like FLIR or the package that would

have been available in the RCMP helicopter.

This obviously limited the ability of that helicopter to provide assistance to the incident response. It was limited to aerial observations at the discretion of the pilot operating the helicopter.

And in the interview with the Mass Casualty Commission, the pilot engaged in this case, Pilot Ken Corkum, said that he had ultimate discretion under the circumstances as to whether the helicopter flew, how high it flew and where it flew.

There were other resources that were attempted to be reached throughout the incident response. The Joint Rescue Coordination Centre was attended to at different points of the night and in the early morning and midmorning of April 18th-19th. The Joint Rescue Centre, the information available to the Mass Casualty Commission suggests that it had helicopters available in Greenwood and in Gander.

It was coordinated through the Royal Canadian Air Force and the Canadian Coast Guard. It usually performed search and rescue functions. As we will see a little later, efforts were made to utilize this resource.

The Marine Security Operations Centre is also run by the Canadian Armed Forces. This is a service or a resource available for assessing maritime and marine security threats. The military, obviously, would have been the first point of contact for this particular service.

I'm going to move on to specifically what happened or what the Mass Casualty Commission has put together with respect to information about the sequence of events on April 18th and 19th. This slide is an effort to give you an overview of what took place at 11:10 p.m.

The risk manager, who we are all familiar with, Risk Manager Rehill, instructed dispatch supervisor Jen MacCallum to call the Atlantic Region Air Support in Moncton for purposes of procuring a helicopter, and this would have been done in the early stages of the incident response, obviously, in terms of accessing or making resources available.

Ms. MacCallum put the call through to J Division risk manager. She was checking into whether it was available at around 11:10. 11:16, the J Division risk manager called the H Division risk manager, Staff Sergeant Rehill, and said that the helicopter was unavailable. So relatively early on, that information became available to incident responders.

At 11:45, the OCC was directed and did call the JRCC looking for an alternate air support given the circumstances with the RCMP helicopter. The OCC was informed that active shooter events they did not respond to.

At 3:15 in the morning, the OCC went to a third option, DNR, discussed earlier, learned that a DNR helicopter was not available until daylight and that the callout policy is for the pilot to be contacted at 6:00 a.m. and then determine whether he or she will be operating the machinery in response to the request.

Information available to the Mass Casualty Commission suggests the Shubenacadie dispatcher who received the call originally facilitated the protocol for purposes of contacting Nova Scotia EMO, the Emergency Management Office, and at 5:49 a.m. there was approval to fly obtained from EMO, obviously at the discretion of the pilot.

At 6:00 a.m., Pilot Corkum got the call in the usual protocol response. He was on his way to Shubenacadie airfield relatively shortly thereafter. At 7:05, Pilot Ken Corkum was in touch with Staff Sergeant Halliday at the command post for purposes of receiving instructions after indicating that he would, indeed, fly given the circumstances.

He planned to arrive, in conjunction with the instructions of Staff Sergeant Halliday, at 8:30 a.m. at the Debert airfield. He actually arrived at the Debert airfield at 8:18 a.m. He landed his Airbus H125 helicopter and took on one passenger. That passenger was ERT member Kyle Josey. Kyle Josey was a member of the ERT team. He was put on as a spotter, that is, he was given the task of taking on the job of looking for that which was being searched for at that time.

So we have the pilot and we have the one spotter from ERT.

This slide that is being presented depicts the flight pattern of the helicopter relatively early in its time involved. At 8:47 to 9:45, you will see the helicopter's flight pattern. The slide is also in the Foundational Document. It's very difficult -- I call this the spaghetti slide. There's a lot of information contained within this graphic.

However, the point is that you will see during this time period between 8:47 and 9:45 the helicopter hovered around, moved around points of interest in the Portapique area. It was at that stage, you will recall, implementing or coordinating with the Critical Incident Command people for purposes of initiating the evacuation process from that area of Portapique.

9:45 you will recall from the information that we have heard is a significant time. This was the time in which the response to the Wentworth Lillian Campbell homicide was initiated. At 9:45, the helicopter redirects itself north towards the Wentworth area. And you can see from the graphic here where the helicopter went by proceeding north.

It got, actually, to the area of Londonderry when it was diverted to the second call in Glenholme.

This slide depicts the flight pattern from 9:55 a.m. to 10:07 a.m. This is the area of the helicopter around the residence at [redacted] Highway 4, the call that came in with respect to the potential for the perpetrator to be detained and/or taken into custody at that residence.

You will recall from Staff Sergeant Surette's testimony that he had communication with the pilot at that time, provided some degree of miscommunication in terms of his thoughts that the perpetrator was actually inside the residence.

The graphic doesn't show the height, but it shows the distance, perhaps, from the location of [redacted] in terms of hovering around.

Slide -- this slide gives you a sense of what took place thereafter.

And this is in response to the call in Plains Road, Debert. From 10:07 to 10:11, the helicopter left the Glenholme area, responded to the Plains Road, Debert call.

The helicopter orbited around the Debert area until about 10:37. At 10:37, the helicopter needed to refuel and between 10:40 and 11:02 a.m., the helicopter was on the ground at the Debert airfield refueling.

Now, of course, that's an important fact simply on the basis that the timing of 10:49 to 10:59 is significant with respect to what was taking place at the time with the perpetrator.

At 11:12 a.m., the helicopter recommenced its travelling and went towards Shubenacadie. You will recall the shootings of Constable Morrison, Stevenson and Joey Webber were before that, about 15 minutes before that. The shooting of Gina Goulet also was in that range of time, such that the helicopter, after refueling, was late getting to that scene.

At 11:28, the DNR helicopter was over the Enfield area, approximately two minutes after the "shots away" direction.

At 11:44, the DNR helicopter returned to the Shubenacadie airfield, given the conclusion of the events.

Now, I wanted to just speak about a third piece of information after we've talked about what resources were available and the flight pattern of the DNR helicopter. A third piece of information just speaks about some of the communication difficulties that were experienced between the pilot and the Critical Incident Command.

There were difficulties in terms of setting up an ability to speak comfortably to each other. And during the inflight, I was going to say proceedings, but during inflight, Cst Corkum and the IT Technician, Glenn Byrne, at the Command Post, were doing their very best to ensure good ways of communication.

What happened was Mr. Byrne was attempting to set up communications on the law enforcement channel. You will recall that law enforcement channels are encrypted, the helicopter usually operates on unencrypted mutual aid

channels, and there was an attempt to mesh those.

You will hear, in this short clip, a dialogue between the Command Post technician, Glenn Byrne, and the pilot, he's identified as Patrol 4, with respect to their struggling to get on the same channel, such that they can communicate with each other. The effort from the Command Post was to stay on the encrypted channel. The effort from the pilot was to get on the encrypted channel. Eventually they resolved to stay on the unencrypted channel. So this is a brief snippet of that conversation.

[AUDIO PLAYBACK]

So as you can see, there was communication difficulties actually setting up the ability to speak on the same channel back and forth. It took time, obviously, with respect to the communications from the pilot otherwise.

The initial concern from the pilot was that he didn't have access to the law enforcement channels, the encrypted channels. Pilot Corkum, in his interview with the Mass Casualty Commission, learned or said that he did have access to the encrypted radio and that he actually accessed it, but couldn't raise the Critical Incident Commanders, and that's why you heard the manner in which they were discussing what they were going to do.

Eventually, everybody just aborted the effort to get on to the encrypted channel and maintained their contact over the mutual aid radio, the unencrypted channel.

Finally, with respect to the Foundational Document, we're just going to make reference to a couple of additional efforts to obtain additional air support in the morning as the manhunt was ongoing.

At 11:14 a.m., there was approval obtained for an RCMP helicopter, O Division, to actually attend and come from Central Canada. at 11:15, the JRCC was advised that EMO had made requested to initiate air resource access to their helicopters. And then, of course, at 11:26, when the matter came to an end, those inquiries were unnecessary.

At 11:44, O Division air services had been stood up or stood down.

So that basically gives you a summary of what you will find within the Foundational Document entitled Air Support.

Commissioners, I will conclude my remarks with respect to this, and if I may, I'll move on to the second Foundational Document summary.

COMMISSIONER MacDONALD: Thank you so much, Mr. Burrill.

--- FOUNDATIONAL DOCUMENTS: HALIFAX REGIONAL POLICE AND HALIFAX DISTRICT RCMP:

--- PRESENTATION BY MR. ROGER BURRILL

MR. ROGER BURRILL: Second Foundational Document summary is a brief introduction to what we have identified as the Halifax Regional Police and Halifax District Operations Document. It is focusing on the engagement and involvement of Halifax Regional Police and Halifax District RCMP in the Mass Casualty at the tail end of the time frame.

This Foundation Document and materials cited therein, and -- references interoperability issues between the RCMP, HRP, and separate divisions. I will touch on some jurisdiction points and some narrative points with respect to this matter.

So, Madam Registrar, I move that the Foundational Document entitled "Halifax Regional Police and Halifax District RCMP Operations" be marked and tendered into evidence in these proceedings.

REGISTRAR DARLENE SUTHERLAND: It's Exhibit 2074.

--- EXHIBIT No. 2074:

Halifax Regional Police Services - Foundation Document

MR. ROGER BURRILL: And I similarly move that all source material and supporting documentation be marked and tendered into evidence in these proceedings.

REGISTRAR DARLENE SUTHERLAND: So exhibited.

MR. ROGER BURRILL: Subject matter of this brief introduction is a review of command decisions, communications, and actions of the Halifax Regional Police and the Halifax District RCMP relevant to the Critical Incident response on April 18th and 19th, 2020.

You'll all know I'm guilty of discussion of a lot of geography in some of these presentations, simply because it's important for Nova Scotians, indeed for Canadians and all of us to understand the dynamic and the geographical layout of what was going on.

We are familiar with the geography by now. A quick reminder here of the swath of the geography and the land mass that was covered in this mass casualty.

This slide identifies the localities and communities of significance with respect to the narrative and need not go over them.

However, I just wanted to add in here, for purposes, Dartmouth and Halifax. You can see them in relation to the other localities in the south of the province, in terms of mid/central/south, and how far they are away from the location where the perpetrator was neutralized.

You will recall the incident at the Big Stop. The Big Stop is near Enfield. Enfield is in Hants County. But the Big Stop is in HRM Halifax County. It's just over the line. So jurisdictionally, H Div -- or sorry, Halifax District RCMP would have been engaged and/or importantly involved in this. It is clear there is information in the materials that Halifax District RCMP and Halifax Regional Police were made aware of what was going on, but of course it implicated them significantly when it came over the border.

Dartmouth is the location of the H Division RCMP Headquarters. Dartmouth is also the location of the HRP East Division building. And also, it is the location of the residence of Maureen Banfield, which is obviously significant to the narrative under these circumstances.

Halifax, of course, contains the Halifax Regional Police Headquarters.

This slide attempts to outline jurisdictional delineations within HRM and the Halifax County. There are six policing zones in the Halifax District RCMP. The Tantallon RCMP zone, the Sackville zone, the North-Central zone with a detachment out of Middle Musquodoboit, the Sheet Harbour Zone, the Musquodoboit Harbour zone or District, and the Cole Harbour zone/District serviced by the detachments in Cole Harbour and Preston.

Those are the Halifax District areas of coverage. You can see it is a wide area and generally relatively rural or suburban.

The three policing areas for Halifax Regional Police are the East division on the east side of the Halifax Harbour, the West Division, west side of the Halifax Harbour going down the Herring Cove loop, and the Central Division, which obtains and/or deals with the Peninsula area, it is primarily urban and suburban.

The slide next introduces for you, as is discussed in the Foundational Document, some significant police personnel. There were, as we have gone through the materials and cited, we've tracked and/or dealt with the movement of about 64 members of Halifax Regional Police and/or Halifax District. There were undoubtedly more people involved that we weren't in the position to actually look at the materials or have materials or there was no recorded materials with respect to their movement. It is a significant amount of personnel and information that would have been provided. So I simply say to you that while we put the Foundational Document with significant members who made decisions, there was a great deal of response, obviously, at around 10:00, 10:30 into 11 o'clock in the morning of April 19th.

The five persons that have been listed here are listed on the basis of their command position. The Acting Watch Commander for the nightshift for Halifax Regional Police was Sergeant Chambers-Spriggs. She had the early contacting and tasking with respect to efforts to locate the perpetrator or the perpetrator's vehicle at

193 Portland Street in Dartmouth.

Second person we have listed is Staff Sergeant Jeff Clarke. His name will come up in the document. He was the replacing Watch Commander with respect to tasking and so on.

The third person named in the document is Sergeant Pierre Bourdages, and he would have been in the East Division. He's important because of his engagement with Maureen Banfield, David McGrath and the access to the photographs, the photographs that he obtained, he took photographs of, and then he sent them on to Command. You will recall, Staff Sergeant Addie MacCallum speaking of the information that he received from Pierre Bourdages. Sergeant Bourdages was important in terms of the information being distributed from the Banfield/McGrath family off to the Critical Incident Commanders.

I've also or we've also listed "H" District Watch Commander, Staff Sergeant Erica Pynn, who was at that stage learning early of the Portapique matter and engaged or tasked some members in a surveillance or observation role.

And then, of course, Sergeant Wayne Sutherland is important to the document -- to the materials as well because he too received the photographs, and he too sent the photographs off to Staff Sergeant Briers, who was at the OCC.

So you had two sources of information going to two sources of receiving the information, and these are the -- that's the personnel that was involved.

The document goes on to list the involvement of a number of people, including ERT commanders, Halifax Regional Police ERT commanders and what they did. Staff Sergeant, excuse me, Sergeant Barr, I just promoted him, Sergeant Barr was important to the proceedings because he was the actual member who responded initially to the 193 Portland Street.

So all of these names are dealt with in the document. As a introductory, I wanted to give you a sense of perhaps the important ones.

I will again go through some key indicators sequentially to give you

a sense of the Halifax Regional Police's and Halifax District's involvement. This is a broad overview of timing of significant events.

We know from the information that has been provided to us that as early as 10:30 p.m. on April 18th, Halifax District RCMP became involved in a response to the Portapique complaint because at least two members of the ERT team were taken from their regular watch, Constable Gallant and Constable Mahar. Constable Mahar's name you will recall because he was involved with the EMRT. They then left in response to the Portapique engagement and advised their superiors. In this case, Staff Sergeant Pynn would have been aware that they were moving on. Constable, or, Corporal Byard, also the TAV driver, informed "H" District of his involvement in this. So there would have become an awareness, at least relatively early, of something going on in Portapique.

At 11:55 p.m., the OCC Supervisor Jen MacCallum contacted the IES. The IES, of course, is the Integrated Emergency Services' primary service answering point in Halifax Regional Municipality, that is, the 9-1-1 call centre. She, in her location at the OCC in the province, contacted IES to give them a heads-up with respect to what was going on.

April 19th, in the early morning hours, at 12:08 a.m., the IES issued an internal BOLO. We all know what BOLOs are by now. It was responsive to the OCC information. It's interesting in terms of what it says because it doesn't get it right, but this is the early stages in the proceedings. From the RCMP telecoms, they have active shooter situation with possibly two shooters, and multiple fires, and possibly two or three fatalities in the Community of Portapique, which is on Highway 2 in Five Islands. This originally started at Orchard Beach Road, "that is all that I have for now."

So it's interesting the dynamic. It's very early in the proceedings. People in HRM or authorities in HRM are getting to know the information. The information is incorrect, but it is at least advising and providing some sense of what is going on in a different portion of the province.

At 12:45 a.m., Staff Sergeant MacCallum, whom we heard from yesterday was the assigned RCMP member to the HRP. He reached out to East Division Patrol Supervisor, Sergeant Chris Barr, regarding the -- regarding the 193 Portland Street information that he sought to obtain in order to identify whether there was a fully-marked RCMP replica vehicle or not.

At 1:21 and 1:48, the Halifax District mobilised some patrols to the Forest Hill Parkway and 102 Enfield as a matter of making observations. Information with respect to what those particular observers or patrols did is relatively limited. We have from the documents information that they were at least assigned to that location at this stage and time.

At 1:30 a.m., Sergeant Barr and Sergeant Carlisle of Halifax Regional Police actually attended at 193 Portland Street, and they saw at that time a snow-covered Taurus in the parking lot. At 1:55, Risk Manager, Staff Sergeant Rehill, was informed by Halifax Regional Police of the observations at 193 Portland Street.

We know from the information that has been provided or at least we're of the view that at 2:24:36, Sergeant Barr attended the home of Maureen Banfield in terms of trying to obtain information. The Banfield name, of course, came up in the information searches with respect to connections to the perpetrator. They did an exterior watch of the location, and then eventually made contact with Maureen Banfield at her Dartmouth residence, obtained some information. At 5:30 a.m., Staff Sergeant MacCallum was informed and updated the information that contact had been made with Maureen Banfield.

At around 6:30 in the morning, Lisa Banfield emerged from the woods and provided additional information, causing the Critical Incident Command team to be very concerned over the safety of Maureen Banfield and other members of the Banfield family. At 6:52 a.m., Maureen Banfield and David McGrath were escorted from their residence and taken to the East Division Station for safety. At that time, they were interviewed, discussions were ongoing, and this is where the information emerged with

respect to 28B11.

At 7:15 a.m., Sergeant Bourdages obtained those photos from David McGrath's phone of the fully-marked replica vehicle, and then the efforts were made to provide that to the Critical Incident Command.

7:17, 7:18, Bourdages immediately contacted Staff Sergeant MacCallum, and he broadcast over HRP channels that this was a 28B11. "Two-eight-bravo-eleven looks exactly like an RCMP vehicle."

At 7:22, Halifax IES dispatcher contacted the Risk Manager, Staff Sergeant Briers in terms of the information that was made available. You'll recall hearing from Staff Sergeant Briers that he got this call from IES, from a dispatcher, and wasn't sure what the sourcing was. So Staff Sergeant Briers then contacted or was in contact with Sergeant Sutherland of Halifax District and we had the information being disseminated that -- in that way.

At 7:40 a.m., Sergeant Bourdages emailed the photos of 28B11 to Staff Sergeant MacCallum. At 7:49, Sergeant Sutherland forwarded the photos to Risk Manager Briers. So we had two separate and independent silos providing information to two separate independent Critical Incident Commanders.

At 7:58, Staff Sergeant MacCallum informed Sergeant Bourdages that the replica RCMP vehicle that they were looking for in Portapique had not been accounted for by ERT, and that, obviously, was significant information.

8:40 a.m., Halifax Regional Police ERT prepared to conduct a search of 193 Portland Street and then by 9:42:30, the event of the Wentworth call emerged, the Lillian Campbell homicide.

At 9:45, Halifax Regional Police began to mobilize with an effort or a view to attending at the Enfield exit or the border exit of the 102. There was much information in the communications with respect to instructions and how to mobilize the HRP. That's all within the documentation.

The HRP ERT response is detailed as well within the Foundational

Document.

At 10:25 a.m., Sergeant Naugle, the team lead of the ERT team in HRP, issued instructions over the air to members to essentially abandon the location at 193 Portland Street that we were going to search and mobilize towards the airport.

From 10:50 forward, ERT mobilized and made arrangements to move their members towards the airport. They took up different positions. We were able to determine that eventually one team was at the Inn on the Lake at the 102 intersection and was required to move up the old Number 2 towards Enfield at the exit there. At the time or the pivotal time of after 11 o'clock, there was an HRP ERT team in the north parking lot of the Big Stop, there was an HRP member team at the Enfield overpass of the 102.

We, of course, know by now that at 11:26, the matter came to an end with the shooting of the perpetrator. At that time, there were members from Halifax Regional Police, Halifax District and more, I suppose, significantly, the HRP ERT team present. They assisted with respect to the removal and takedown of the perpetrator, and that concluded the events with respect to the actual involvement of the HRP and Halifax District folks.

The document goes into a great deal more detail as to what movements were taken by the parties therein. Commissioners, these are the introductions of the air support and Halifax District and HRP response.

That concludes the presentation at this time. I'm sorry for being a little longer than I thought I would be.

COMMISSIONER MacDONALD: Thank you very much, Mr. Burrill. We appreciate that, and we will continue on with the next two documents.

Commission Counsel Jenn Cox, please.

Good morning, Ms. Cox. Thank you.

--- FOUNDATIONAL DOCUMENTS: OVERVIEW OF 911 CALL-TAKING AND DISPATCH IN NOVA SCOTIA

--- PRESENTATION BY MS. JENNIFER COX:

MS. JENNIFER COX: Good morning. Good morning, Commissioners. Good morning, Participants and Participants' Counsel, members of the public.

My name is Jennifer Cox. And Madam Registrar, the first document that I'm going to speak to is COMM No. 0058853.

The title of the document is "911 Call-Taking and Dispatch", and I'm going to ask that that be exhibited.

REGISTRAR DARLENE SUTHERLAND: 2075.

--- EXHIBIT No. 2075:

(COMM0058853) Foundational Document 911 Call-Taking and Dispatch

MS. JENNIFER COX: So the Foundational Document titled "911 Call-Taking and Dispatch" is a supplementary document because we've already heard from Darryl MacDonald. Darryl MacDonald is the OCC Commander for the PEI H Division -- or sorry, PEI call centre.

And in addition to Mr. MacDonald's testimony, we needed information before the Commission with respect to some of the more particular policies and processes that take place.

As you can probably appreciate, the 9-1-1 system is quite complex and we are continuing, so this document is what we know as of June 7th, 2022. However, I'm anticipating that we will probably have more that we will need to add to it because it is such a complex system.

So generally speaking, the 9-1-1 system, as Mr. MacDonald indicated, is the responsibility of the Nova Scotia Emergency Management Office, or EMO, which is under the Department of Municipal Affairs. As we've already heard, there are four different public service answering points in Nova Scotia where the 9-1-1 calls are received. However, we also know now that there are back-up call-takers in

some of the folks in the IES, which is the Emergency Health Service -- Integrated Emergency Health Services in Bedford, which is the ambulance dispatch.

So that's something that we are adding to the information that is now before the Commissioners.

With respect to the Dartmouth public service answering point, it also acts as the operational communications centre for the RCMP, so it receives calls, but it also dispatches for the police in the province of Nova Scotia with the exception of the Halifax Regional Municipality.

It's important to understand that there are policies and procedures for 9-1-1 call-taking and we did hear a little bit about that, but some of those are now listed and discussed in this document.

Some of the policies, it's important to note, have either been implemented or amended since April 2020, so there have been some changes to the system post mass casualty.

The document speaks a lot to the training process for 9-1-1 operators and dispatching, is quite an intense process to become a dispatcher, an operator first and then a dispatcher. And the document also speaks to the number of call-takers and dispatchers working on April 18th and some of the work that some of those dispatchers tried to do to warn local residents.

And we have some evidence before the Commission already where some of the individuals that were working in the call centre were trying to reach out to local residents, particularly in the Portapique area, based on the data that is in the 9-1-1 system to try to reach people to warn them. However, you know, that was a difficult exercise because a lot of the information with respect to the telephones is -- especially with cell phones, some of the individuals that were being reached were in B.C., for example, because that was where the call actually -- the cell phone was actually located at the time.

So again, we talked a little bit about this with Darryl MacDonald, but

it's really, really important to understand that there is a call-taking role and a dispatching role. They're very different. You know, the call is answered, the information is obtained from the caller, and then the call-taker connects the call to the appropriate dispatch centre.

We heard from Mr. MacDonald that sometimes that's one and the same person, so a call may come in to the Dartmouth OCC and if the -- if it's a police matter outside of HRM, it'll stay in that same centre. If it comes in to the Valley and it's an RCMP, it'll go from Valley to the Dartmouth OCC for further dispatching.

The dispatching, they receive information from the call-taker or from the automated system that's in place. They make sure the service is sent out, so that can be anything from a tow truck to the police, and the dispatchers provide information received during the call. And they also might monitor the responder, so the first responder who's out in the field may be also communicating or being monitored by dispatch.

And we'll talk a little bit more about that later with the witness panel.

So the calls available to call-takers and dispatchers, again, we talked a lot about that with Mr. MacDonald. However, there are different tools in the toolbox here in Nova Scotia.

So the RCMP has the CAD system known as CIIDS, and it is an RCMP-owned and custom-built system which serves all of the RCMP OCCs and frontline officers in their police vehicles except for those RCMP who are in the Halifax Regional Municipality. I think it's important for everybody to understand that in Nova Scotia, the tools available for dispatchers are not universal. Some of the tools that are being used, particularly those in the Halifax Regional Municipality, are not the same as the tools being used by dispatchers outside of that area, and those two systems, unfortunately, do not speak to each other.

So there is a different set of tools, particularly the CAD, or the automated dispatching system. There are two different platforms that are being used

currently in the province of Nova Scotia.

The 9-1-1 mapping, we already also heard a little bit about this from Mr. MacDonald. The automatic number index and the automatic location indicator, which is the information that is populated in the automated system from the cell phone or the landline telephone as it comes in, it gives the caller's location and allows the call taker to get address and other information without asking the caller. But again, it sometimes is not necessarily helpful because it either isn't able to populate or the information is not up to date. But for the most part, this information is created by the Province of Nova Scotia, and we heard all about that from Mr. MacDonald.

The computer-aided software -- aided dispatch software utilized has mapping, and so we've heard a little bit about that, and we will hear more about some of that. And this helps the dispatchers return -- determine where the call is actually coming from. Sometimes they have to ask further questions because the pinpoint of the individual caller is not as -- it's not necessarily completely accurate, depending on how close they are perhaps to a tower or other things.

Reverse 9-1-1 calling is also something that is -- what was attempted by some of the -- and, I mean, that's kind of a colloquial term. The individuals who were working in the OCC Centre on the night of the 18th in particular were trying to get information from the system to call people, to warn them, but it's not easily accomplished, and we know that, because the individuals that were -- one of the individuals in particular that I can think of that was reached was in British Columbia or somewhere in western Canada because the address associated with the phone that had been called was in Portapique; however, the user was in B.C., I believe it was.

So that's the end of the presentation with respect to the 9-1-1 call-taking Foundational Document. And as I said, it's as of June 20 -- June 7, 2022, so I just think that we probably will have more information that we'll have to add as we learn more about what a complicated system it is.

COMMISSIONER MacDONALD: Thank you, Ms. Cox.

--- FOUNDATIONAL DOCUMENTS: RADIO COMMUNICATIONS IN NOVA SCOTIA

--- PRESENTATION BY MS. JENNIFER COX:

MS. JENNIFER COX: So, Commissioners, I'm going to move right into the next presentation. Madam Registrar, that is COMM0058854, TMR2 Radio Communication System in Nova Scotia. If we could have that marked as an exhibit?

REGISTRAR DARLENE SUTHERLAND: It's Exhibit 2076.

--- EXHIBIT NO. 2076:

(COMM0058854) Foundational Document - TMR2 Radio Communication System in Nova Scotia

MS. JENNIFER COX: So this document talks about the TMR2 radio system, communication system, so that's the radio system that the first responders in Nova Scotia use and that is the name of the system that they use.

We also will talk a little bit about the history and the development of the TMR2 system in the document. The focus of this particular document is the capabilities of the TMR2 system. It's quite complicated. I'm going to -- I'm not going to lie. It makes my head hurt some days, but it is a very important document to understand how complicated and how the system actually works here in the province.

We'll hear a lot more about this as we talk to the witnesses after the break with respect to the radio operations in the province, but there's a lot of acronyms, and those are talked about in this Foundational Document, and it would be really important for people to be able to understand what these acronyms are, because we will be talking a lot about different ones as we go through.

So Bell Mobility Inc. is BMI. Bell Mobility Radio is BMR. And Bell Mobility is a -- the provider of the service in the province of Nova Scotia, so they provide the radio infrastructure, for lack of a better way of describing it.

You've heard me also mention the TMR2 system, so that's the Trunked Mobile Radio system in -- 2 system, so this is the second generation of this particular Trunked Mobile Radio in the province of Nova Scotia.

RINSAC, which is the Radio Interoperability Nova Scotia Advisory Council, also important acronym because that will be something that the panel members will likely speak to.

PSFC, Public Safety Field Communications, so that is the provincial government organization responsible for radio communications in the province of Nova Scotia.

The Maritime Public Safety Network, so MPSN. That's the group of individuals who oversee the interoperability of the radio communications, not only in Nova Scotia, but in New Brunswick and Prince Edward Island.

We'll hear a lot about the acronym PTT, so Permission to Talk. That is the button you push to use your radio to ask to speak, or to seek permission to speak. Request to Talk, that's another button that you push, and that's the one that we'll hear about in terms of how you -- first responders can speak to dispatch. And then there's ERTT, which is Emergency Request to Talk, which is another button that individual first responders may wish to push.

So as you can see, there are a number of acronyms, and you probably will hear more about them, so it's kind of important to make sure that you kind of keep that little list beside you, so you understand what everybody's talking about.

So the TMR2 system itself is, as I indicated, provided by Bell Mobility, and it is the primary radio transmission service used here in Nova Scotia for first responders. It authorizes users to communicate with one another on an either encrypted platform or an unencrypted platform by utilizing what we call talk groups. So we'll hear a lot more about talk groups later on today. And this ability to communicate with various first responders, so whether it's ambulance, fire, police, tow trucks, whatever it might be that are part of this talk group is called interoperability. So this is why we talk about interoperability. These are the ability of all of these folks to talk to each other.

The system itself is used by RCMP and municipal police forces.

And as of 2021, all police forces are now encrypted and on this system. The firefighters in Nova Scotia also use the TMR2 system. The Emergency Medical Transport, Emergency and Disaster Management Services, and most Public Works and government services of the provincial government department. So, for example, the Department of Highway Snow Plows do also use a TMR2 radio, just not an encrypted one.

So as I indicated earlier, there is a history behind the development of the TMR system in Nova Scotia. The first generation of the TMR system began 2001, and Bell Mobility was selected through the procurement process that all governments have, to provide the service and develop the TMR2 system -- or TMR system, sorry, in Nova Scotia. The Halifax Regional Municipality negotiated their own separate agreement with Bell Mobility for the use of the TMR system at that time.

Then we move into the second generation, so the TMR2, which is a fairly recent system, began in 2015. And it went live in June of that year. All agencies in Nova Scotia that were previously using TMR1 are now using TMR2. And most of the other agencies who were not on TMR are all now on the TMR2, so we've had a lot of people come onto the system since 2015. We also now have New Brunswick and Prince Edward Island connected to -- through this Maritime Public Safety Network, we also have talk groups. So the province of Nova Scotia, the province of New Brunswick, and the province of -- or Prince Edward Island have talk groups specifically sort of law Maritime talk groups where they can speak to each other, if needed.

The Public Safety Field Communications coordinates the oversight of the TMR2 system, and it is within the office of the provincial department of Internal Services, so provincial government manages primarily the TMR2 system. They are doing policy, training and governance, and they also manage the assets, so the radios. They do a lot of the work with respect to -- and we'll hear a lot more about this, with respect to setting up the -- called the fleet maps and the talk groups. They own the key management facility, so the place where the encrypted keys are kept. And they do a lot

to help improve interoperability by meeting with the various users. They will offer training. They will -- and we'll hear more about this later on, they also work through providing the TMR2 radios, which are not cheap, to some of the volunteer organizations. So the province of Nova Scotia has had a fairly large role in the operation of the TMR2 system and the development of it.

So here we go. We talk about talk groups and fleet maps. So the talk groups are important for understanding the interoperability, so who is able to talk to each other, and why do they need to talk to each other, and where are they located are the kinds of things that are in those talk groups. And this is what the province what the Province of Nova Scotia helps set up.

The Fleet map is the -- the talk groups within the organisation. So it's important to sort of understand those two pieces of terminology. An example of a talk group is the Mutual Aid, Law enforcement, or the Maritime Common. So there's a Mutual Aid, a Law enforcement, and a Maritime Common network. So some of these are encrypted, some of them are not encrypted, so you'll hear the words "encrypted" and "non-encrypted". And we'll talk a little bit more about what does that mean, but essentially an encrypted conversation means that only people that are permitted to use the radio can hear the conversation, people who are not permitted to be on the system can't hear it.

The Key Management Facility, which is another term that we'll hear a lot more about this afternoon or this morning, is the place where the encrypted keys for the radios is kept. But of course, we talked a little bit already about interoperability is, but that's essentially how everybody talks to each other and how the system works, particularly with respect to radios.

We'll also hear a little bit about towers, channels, and talk pads, and that's also discussed in this document, but how is it that the actual physical system and what's there in the system. So it's a tower, and on that tower there is a channel, which has also been referred to sometimes as a Talkpad.

In the clear -- so that's a -- a word that we sometimes hear, and you'll hear it in some of the material with respect to whether we're talking on an encrypted or unencrypted, and in the clear means you're talking on an unencrypted platform.

And finally, you'll hear the word "patching". So that's the Dispatch ability to take different conversations and put them together. So the Dispatch folks do have the ability to do that, so they can put different conversations that are happening together, and that's what the word patching typically refers to.

As I indicated, the training is provided by PSFC, and we'll talk a lot more about this as we speak to the witness panel later. And there is also -- so there is initial training when the radio is provided, but there is also refresher training that's provided and it's also somewhat based on the user's needs.

There are -- there are also practice exercise and equipment testing things that take place from time to time, and these are not something that is the responsibility of PSFC, although they're happily able to do it if they -- if they're invited, but these are exercises that are usually arranged by the individual user or agency.

Some of the radio problems and their causes. So it's important, I think for us, and we'll hear a lot about "bonging" and "bonking". And we have heard a lot about bonging and bonking, so it's important for us to sort of stop and think about what do these things actually mean.

So the first thing that's the problem is the miscommunication or the inaudibility. So one of the things that happens is people are not using plain language, they're using acronyms, you know, "10-4". We all know what 10-4 actually is because, you know, it's just such a common 10-code, as they call it, but there's a lot of other things, that area shoptalk, as we would say, that people don't understand so it makes it difficult for it to be interoperable if you're not part of that shop. The other thing would be background noise and when there are sirens in the background. Also, people just not, you know, responding or acknowledging sometimes that the conversation has actually

been heard.

The bonging and bonking, and again, we will hear a lot about this, and people often confuse these two. They're based, I think, based on the sounds the radio makes, but it's basically whether the radio can connect to the tower. And again, we'll talk about all of that technology and you'll have a really good understanding by the time I'm done today. But it's issues connecting to the tower, so there's no signal going to the tower. If you're trying to speak over another you also may have bonging and -- sorry, bonking, and also, sometimes issues connecting to the tower. So there sometimes is a -- is a delay before the radio recognises it can't reach the tower so it also sounds like the same sound you'll get when you're trying to talk over another person. So the bonging and bonking is the radio signalling to you what's going on so you have an understanding as a user.

The other sound that people can hear is a busy, and that means all of the local channels or the Talkpads you've heard me talk about are busy. They're hosting a conversation. So it's a typical busy sound that most of us are familiar with us when you call a phone and it can't be answered. Although in this day and age, that is not as common as it once was when I was younger, you know, but it's that same busy sound.

The user practices can cause the TMR system to overload as well. So if people are on channels but they don't need to be, so they're just passively listening to a conversation, that's taking up space in the system and that can overload the system unnecessarily. So that's an example of a user practice that needs to be corrected.

User confusion with respect to the radio sounds or the location of the talk group. So sometimes people, when they're in a hurry, don't understand whether it's a bong, bonk, or busy, or what, so it's difficult for them to respond appropriately, you know, make sure their radio is pointed up towards the towers or get behind the hill or those kinds of things.

And the other thing would be not knowing where to find their talk

groups. There are several channels on these, or places to host these talk groups, and it's very complicated to find them if you don't know where they're at in a hurry. Sort of likened to a satellite radio channel where there's 200-plus channels, and if you don't know which satellite radio channel you're looking for you would spend a fair bit of time scrolling through that. And you can just imagine in an emergency situation trying to look through to try to find that is not necessarily that easy to do.

And then finally, the radio system tones, as I indicated already, are part of the -- of the document, and we'll talk a lot more about that as we hear from the witness panel.

So Commissioners, that is the conclusion of my presentation.

COMMISSIONER MacDONALD: Thank you very much, Ms. Cox, greatly appreciated.

Now, then, we'll break for, let's say 20-minutes. We'll come back at 11 o'clock and begin the witness panel. There will be some changes to the platform, et cetera. So thank you, we'll break until 11 o'clock.

REGISTRAR DARLENE SUTHERLAND: Thank you. The proceedings are now on break and will resume at 11 o'clock.

--- Upon recessing at 10:37 a.m.

--- Upon resuming at 11:06 a.m.

REGISTRAR DARLENE SUTHERLAND: Welcome back. The proceedings are again in session.

COMMISSIONER MacDONALD: Thank you, everyone.

Ms. Cox, we will have our witnesses come forward now, please.

MS. JENNIFER COX: Yes. So we have four witnesses coming forward, Trevor MacLeod, Todd Brown, Matt Boyle, and Christian Gallant. So we'll have them get -- gentlemen, if we could just have you stand behind your chair before we do the oath?

And I have a couple of housekeeping matters too that I want to

address before -- after the witnesses get seated, if that's okay?

COMMISSIONER MacDONALD: Certainly.

MS. JENNIFER COX: Madam Registrar?

--- TREVOR MacLEOD, Sworn:

--- TODD BROWN, Sworn:

--- MATTHEW BOYLE, Sworn:

--- CHRISTIAN GALLANT, Sworn:

--- EXAMINATION IN-CHIEF BY MS. JENNIFER COX:

MS. JENNIFER COX: and just for the purposes of the audience and the public, the panel -- Trevor MacLeod is on the very left. We have Matthew Boyle, who is next to Trevor McLeod. We have Todd Brown, who is next to Matt. And then on the very end, or on the right side of the table, is Christian Gallant. Just so everybody is familiar with who is who.

The housekeeping matters that I had to address, Commissioners, was I need to have the source material that was associated with the Foundational Documents that I had just asked to have tendered earlier also exhibited, marked as an exhibit. So if I could have that so marked?

REGISTRAR DARLENE SUTHERLAND: So exhibited.

MS. JENNIFER COX: And I also have a couple of documents that I'm going to utilize during this presentation, and I might as well just have them marked now.

So the first one is COMM0058859.

REGISTRAR DARLENE SUTHERLAND: That's 2096.

--- EXHIBIT No. 2096:

(COMM0058859)

MS. JENNIFER COX: And the second one is COMM000017.

REGISTRAR DARLENE SUTHERLAND: That's 2097.

--- EXHIBIT No. 2097:

(COMM000017) Network analysis of the 18th and 19th 2020, prepared by Bell

MS. JENNIFER COX: Okay. So, Mr. MacLeod, we're going to start with you. And I'm wondering if you could just tell the Commissioners and the public at large who you are and what it is you do?

MR. TREVOR MacLEOD: Yes, my name is Trevor MacLeod. I work for Bell Mobility and I'm the director of public safety, engineering, and operations.

MS. JENNIFER COX: And Mr. MacLeod, what kind of education background do you have?

MR. TREVOR MacLEOD: I have a bachelor's degree in electrical engineering from the Technical University in Nova Scotia.

MS. JENNIFER COX: Okay. And how long have you been working for Bell?

MR. TREVOR MacLEOD: Close to 25 years.

MS. JENNIFER COX: Okay. And how long of that have you been working in the radio area?

MR. TREVOR MacLEOD: Probably for radio, probably the last 10 years.

MS. JENNIFER COX: Okay. And you've been working here in Nova Scotia?

MR. TREVOR MacLEOD: Correct.

MS. JENNIFER COX: You're actually from Nova Scotia?

MR. TREVOR MacLEOD: I am from Nova Scotia and I work in Nova Scotia.

MS. JENNIFER COX: Okay. So, Madam Registrar, I'm going to go right into Exhibit 2096.

Mr. MacLeod, can you see the screen?

MR. TREVOR MacLEOD: Not quite. I can see the screen, but.

MS. JENNIFER COX: Not very well. Can you see it?

MR. TREVOR MacLEOD: I can see it. Yes.

MS. JENNIFER COX: Okay. So we're going to go to -- so just by way of background, this is a PowerPoint presentation that was prepared by yourself. Is that correct?

MR. TREVOR MacLEOD: That's correct.

MS. JENNIFER COX: So this is a document that you recognize?

MR. TREVOR MacLEOD: It is.

MS. JENNIFER COX: Okay. And the purpose of this document was just to help us understand some of the technology as we go through today's presentation; correct?

MR. TREVOR MacLEOD: Correct.

MS. JENNIFER COX: Okay. So we can go to Slide number 2. And just a reminder to our witnesses, because we're dealing with such a highly technical matter, that we speak as slowly and carefully as we possibly can so our translators can keep up with us.

So we see in front of us a picture of -- can we make the entire slide visible on the screen? Okay. So on the very left-hand side of this screen we see what looks like radios. Is that correct?

MR. TREVOR MacLEOD: That's correct.

MS. JENNIFER COX: And would I be fair -- would it be fair to say that it's -- that's a representation of both a portable radio and a mobile radio?

MR. TREVOR MacLEOD: Yes.

MS. JENNIFER COX: Okay. And which is which?

MR. TREVOR MacLEOD: So the portable radio would be on the top and the bottom with the extended antenna, and the mobile would be just the one in the middle.

MS. JENNIFER COX: Okay. And just so that we have an

understanding now that we're talking about it, what's the difference between the two?

MR. TREVOR MacLEOD: The difference -- main difference between the two is a portable radio is more meant for use in your hand, whereas a mobile radio would actually be installed in a vehicle in a fixed location.

MS. JENNIFER COX: Okay. And what's the difference in terms of how they operate?

MR. TREVOR MacLEOD: So the biggest difference in terms they operate would be mostly the output power of the device. So a portable radio would work at a bit lower output than would -- a mobile radio would.

MS. JENNIFER COX: Okay. And then we see a number of slides with what looks like radio tower site is on the top.

MR. TREVOR MacLEOD: Yes.

MS. JENNIFER COX: Can you explain to us, you know, what this now represents?

And then it goes into the connectivity and other things, so if we could walk through what this means.

MR. TREVOR MacLEOD: Sure, we can do that.

And what this is an attempt to do is kind of give a high-level overview of the network and some of the different major components, the first component being the radio tower site, which would be located, you know, throughout the area of Nova Scotia which would actually provide coverage and voice channels to communicate.

And the core site with regard to controllers -- and I apologize for the lingo. This is just really the brains of the whole network.

MS. JENNIFER COX: Okay. So in other words, the core site is the brains.

MR. TREVOR MacLEOD: The core site is the brains.

MS. JENNIFER COX: Okay.

MR. TREVOR MacLEOD: Yeah. And between the actual radio tower sites and, you know, the core site, they're all connected, so they're connected via some form of connectivity. It'd be a fibre network, it could be a microwave network that actually provides connectivity from the core location to each individual radio site.

MS. JENNIFER COX: Okay. And the type of connection between the radio and the tower, can we talk a little bit about what that looks like?

MR. TREVOR MacLEOD: Sure. The connectivity between the radio and the tower is just done over the air.

MS. JENNIFER COX: Okay. So it's not fibre optic or anything like that.

MR. TREVOR MacLEOD: No.

MS. JENNIFER COX: So ---

MR. TREVOR MacLEOD: It's over the air.

MS. JENNIFER COX: And where -- what point does the fibre optic piece come into it?

MR. TREVOR MacLEOD: Where the fibre optic or what other connectivity would be would come into play from the actual radio site itself, which would be the physical tower location and shelter beside the tower, from there connecting back to the core site.

MS. JENNIFER COX: Okay. And so in this demonstration, below on the very bottom we see "Key management facility" ---

MR. TREVOR MacLEOD: Yes.

MS. JENNIFER COX: --- in relation to connectivity in the middle.

Can you explain sort of why the key management facility sits by itself?

MR. TREVOR MacLEOD: The key management facility sits by itself because that's the actual -- I'll say the server that actually provides the encryption keys to actually, you know, rekey the radios to enable encryption.

MS. JENNIFER COX: Okay. And that's a whole separate function all by itself.

MR. TREVOR MacLEOD: It's a whole -- it's a whole separate function all by itself.

MS. JENNIFER COX: Okay. And with respect to the dispatch consoles which we see on the very right-hand side, what does that represent?

MR. TREVOR MacLEOD: So the dispatch consoles would -- you know, where there would be operators who'd be sitting in a physical location with a console in front of them to enable either communication from there out to a radio or to receive communication from a radio back to a dispatch centre.

MS. JENNIFER COX: Okay. So we're going from the radio to the tower to the connectivity, so it could be the brain, could be the key management facility, could be both, could be the dispatch, so that's the process?

MR. TREVOR MacLEOD: It's the process.

So for an actual, you know, call request to happen on a radio, that call request would go out, it would go to the tower site, from the site tower it would connect it back to the core site. Then from the core site, depending on the talk group it was on, it would get redistributed back to the actual, you know, appropriate towers where the other radios are and back to the comm centre where it could be heard as well.

MS. JENNIFER COX: Okay. If you'd go to slide number 2.

So this is a little bit more of a -- specific to the tower and some of the mechanics of the tower.

MR. TREVOR MacLEOD: Yes.

MS. JENNIFER COX: Is that fair?

MR. TREVOR MacLEOD: That's correct.

MS. JENNIFER COX: Okay. So on the very left-hand side of the screen, we see that -- the picture of the tower.

MR. TREVOR MacLEOD: Correct.

MS. JENNIFER COX: And then it goes to the radio site channel.

So I'm wondering if you could explain for the Commissioners and for the public at large what that represents, what that line represents.

MR. TREVOR MacLEOD: So what that line represents from the -- working from left to right from the tower, it would be, you know, the cable that actually connects to the antenna that's located normally at the top of a tower, you know, through some equipment, you know, to connect the antennas and then that would go into the actual radio site channels within the actual tower site.

MS. JENNIFER COX: Okay. And we've heard the word "talk pad" or you heard me talk about the word "talk pad" earlier. That would be the same. The channel's the talk pad?

MR. TREVOR MacLEOD: Once it's up and, you know, operational, it would be a talk pad from the end radio back into the network through a channel within the site.

MS. JENNIFER COX: Okay. And so we have on -- we have radio tower site controller 1, radio site tower controller 2. Can you explain what that is?

MR. TREVOR MacLEOD: Sure. The radio tower site controller 1 and 2 is just a redundant controller in the site. And basically what those two boxes' main function is is just to assign the channels within the site.

So when a request comes in, they will actually do the processing to enable a voice channel to be assigned to a user.

MS. JENNIFER COX: Okay. So they're assigning it to the talk group? Would that be ---

MR. TREVOR MacLEOD: Not to the talk group. They would be assigning the talk group coming in to a channel specifically in the site.

MS. JENNIFER COX: Oh, I see. Okay.

So they're helping with the hosting of the conversation. Would that

be a better way to explain it?

MR. TREVOR MacLEOD: Yes, you could -- you could say that. Yes.

MS. JENNIFER COX: Okay.

MR. TREVOR MacLEOD: And managing of it.

MS. JENNIFER COX: Okay. And then up in the very top we see "site gateway". What does that mean?

MR. TREVOR MacLEOD: So the site gateway is just another component within the actual radio site itself that will enable the connectivity, you know, to connect to the fibre optic back to the main core site.

MS. JENNIFER COX: Okay. So again, this is all the stuff that we see on a tower; right?

MR. TREVOR MacLEOD: Yes, all stuff you would see on the tower or in the shelter next to the tower.

MS. JENNIFER COX: Okay. And that's important.

So it says "core site with redundant zone controllers". What does that actually mean?

MR. TREVOR MacLEOD: So that's back to -- we mentioned on the first slide, that's the actual brains of the system.

MS. JENNIFER COX: Right.

MR. TREVOR MacLEOD: So it's just showing that the actual site is connected back and the core site is actually the overall central processing and the brains to be able to manage and facilitate communications throughout the network.

MS. JENNIFER COX: Okay. And each site has a backup; right? Each tower has a power backup?

MR. TREVOR MacLEOD: So each site would have power, which you would have your normal A/C power coming in. It would be converted to, you know, a D/C power which would enable you to have battery backups on the site. And then

besides battery backups, in most of our sites we'd also have a redundant generator as well.

So during an A/C failure event, the actual batteries would take over first and then eventually we could have a generator that would actually pick up and recharge those batteries to keep continuous service.

MS. JENNIFER COX: There's also -- yeah, the generators are powered by diesel; right?

MR. TREVOR MacLEOD: They would be, yes, or they could be by propane as well, depending. But the majority are diesel.

MS. JENNIFER COX: Okay. So is there anything more that we would need to know about the actual towers themselves?

MR. TREVOR MacLEOD: No, not from my perspective.

MS. JENNIFER COX: Okay. So if we could go to slide number 4.

So at the very top we see "PTT call level process", and we need to stop right there and say what is PTT?

MR. TREVOR MacLEOD: Push to Talk.

MS. JENNIFER COX: Okay. So push to talk is just -- you know, we need to sort of break this down or unpack it a little bit. Push to talk is the button on the radio; correct?

MR. TREVOR MacLEOD: It would be the button on the side of the radio that a user would push to begin the call process initiation.

MS. JENNIFER COX: Okay. So this is the process that explains how, once you push that button, what happens; right?

MR. TREVOR MacLEOD: Correct.

MS. JENNIFER COX: Okay. So let's look at number 1, and maybe you can just explain what number 1 is.

MR. TREVOR MacLEOD: Sure. So first off, when the end user, you know, has his radio and he pushes that button on the side of the radio and holds it

in, he would then actually, you know, in this example get a voice channel assigned to that radio tower site.

Once that voice channel is assigned, the user would then actually receive back a "talk permit" tone. So when the user receives that tone coming back, that means he's actually good to then communicate his message.

MS. JENNIFER COX: Okay. So you're pushing a button to initiate a conversation, but you also have to hear a tone back.

MR. TREVOR MacLEOD: You have to wait for the tone back, the "talk permit" tone. And once the "talk permit" tone comes back, then you can proceed with delivering your message.

MS. JENNIFER COX: Okay. And then the radio starts to transmit the voice; right?

MR. TREVOR MacLEOD: Then the radio would then transmit the voice signal to the site. So once you get that "talk permit", you know, the user speaks into the microphone on the radio. That would then take that voice communication and transmit it, you know, back to the radio tower site.

MS. JENNIFER COX: Okay. And it goes from the tower site to the brains, as we say, the TMR core controller?

MR. TREVOR MacLEOD: Correct. The actual radio tower site would then receive that voice signal and it would route that audio to the core controller.

MS. JENNIFER COX: Okay. And then it goes back out eventually to the tower where the other users perhaps are; correct?

MR. TREVOR MacLEOD: Correct. It would go back out, yes.

MS. JENNIFER COX: Okay. And through this whole process, this brains process, the system is picking up which talk group?

So you're on a particular talk group; right?

MR. TREVOR MacLEOD: Correct.

MS. JENNIFER COX: So we'll talk a little bit more about that as

we get into this panel, but it's assessing -- the brains are assessing how to process that call; right?

MR. TREVOR MacLEOD: The -- yes. So in a sense, what it does is it recognizes there's a talk -- or a call coming in on a specific talk group and then when it relays that message back, it knows which tower sites actually have a radio on it that is actually on that same talk group and it will deliver the message out.

So anybody who is on the same talk group will receive that message, and same with the dispatch.

MS. JENNIFER COX: And it doesn't matter where they are in the province, as long as they're on that talk group; correct?

MR. TREVOR MacLEOD: It does not matter.

MS. JENNIFER COX: Okay. And in fact, it doesn't matter if we're talking about some of the maritime talk groups, if they're on the maritime talk group and they're in, you know, Saint John, New Brunswick, they all can talk to each other; correct?

MR. TREVOR MacLEOD: That is correct.

MS. JENNIFER COX: Yeah. And with respect to the dispatch consoles, that's again the physical location of the dispatchers?

MR. TREVOR MacLEOD: Correct.

MS. JENNIFER COX: Okay.

MR. TREVOR MacLEOD: And the audio would be transmitted there as well. And you know, routed to the audio reporter as well to record the conversation.

MS. JENNIFER COX: Okay. And we'll get into a little bit about sort of the -- what the process looks like for the dispatchers because it does vary, and that's not sort of really -- but it does -- the system is capable of relaying the voice to the dispatch, ---

MR. TREVOR MacLEOD: Correct.

MS. JENNIFER COX: --- is really what we want to talk about here. Okay. Is there anything else on the slide that we shouldn't -- should talk about?

MR. TREVOR MacLEOD: No, I think that covers it well.

MS. JENNIFER COX: Okay. Go to number 5. So this is a diagram that sort of really explains, with the aid of the picture, how the trunk system actually works; right?

MR. TREVOR MacLEOD: Yes.

MS. JENNIFER COX: So I think we want to really take some time to walk through, you know, what it is we see on the screen first so that people are understanding when you're explaining this.

So on the screen, we see three different radios ---

MR. TREVOR MacLEOD: M'hm.

MS. JENNIFER COX: --- on both sides of the tower signal, and they're three different colours; right?

MR. TREVOR MacLEOD: Correct.

MS. JENNIFER COX: So perhaps you can sort of explain that and how that's connected to the Channel 1, 2, 3 and the box in-between?

MR. TREVOR MacLEOD: You know, the first place to probably start is an actual talk group. And what a talk group is, is when you have a group of users, it's how they can be logically organized, you know, by an end user in terms of, you know, like functions, like features. It basically gives you a map of who can communicate to who. I think that's an important piece, that the talk group sets the stage for who is able to communicate to who, and those specific talk groups get programmed into the individual radios of those users.

MS. JENNIFER COX: And when we talk about talk groups and the reason it's important, is because each talk group takes up a channel on each tower?

MR. TREVOR MacLEOD: Correct. So the next phase would be, in this example here, when you're looking at the blue radio, when it transmits through, it

would actually get a channel assigned to it, and they would assign one channel. Then anybody else, when a communication passes through, on the other side that would have a blue radio, which I'm showing one in this example, it could be many, and it could be located anywhere in the province. That blue radio would all receive the communication.

MS. JENNIFER COX: Okay. But that's only provided that there's a talk pad available to the other people that are also on the conversation; right?

MR. TREVOR MacLEOD: It's provided that there is the talk path available, one, and that the end user device is on that blue talk -- I'll call it the blue talk group in this example.

MS. JENNIFER COX: And when we use the word "end user", those are the other people that are part of the group?

MR. TREVOR MacLEOD: Yeah, when I refer to an end user, I refer to somebody who has a radio in their hand.

MS. JENNIFER COX: Okay. So the demonstration or the example that's here on the screen, we have basically a blue talk group, a black talk group, ---

MR. TREVOR MacLEOD: M'hm.

MS. JENNIFER COX: --- and a grey talk group? Would that be fair?

MR. TREVOR MacLEOD: That would be fair, yes.

MS. JENNIFER COX: Okay. And each one of them is taking up a channel?

MR. TREVOR MacLEOD: Each -- in this example here, each one of those would take up an example as they're communicating.

MS. JENNIFER COX: Okay.

MR. TREVOR MacLEOD: And on the other end, only those that are on the exact same talk group, the blue, the black, or the grey, would receive that communication.

MS. JENNIFER COX: So it has nothing to do with the radio, it's more just the talk group that's programmed into the radio? Is that fair?

MR. TREVOR MacLEOD: Well no. It also means that the talk group can be programmed into the radio, but the user has to ensure that they actually have the radio set on that specific talk group they need to communicate on.

MS. JENNIFER COX: To get access ---

MR. TREVOR MacLEOD: To actually get -- so the talk group is in the radio program, but the user has to then select that appropriate talk group for which they're using to actually relay the message, and we get it received on the other end.

The example would be is that if you had, you know, the blue talk group, and you were waiting to get communicating in the blue talk group but you were still on the grey talk group, you're not going to receive that communication. So your radio has to be on the appropriate talk group to receive.

MS. JENNIFER COX: Okay. But when we're initiating a conversation through those radios, whether the mobile or portable ones, the tower capacity is based on the talk group itself and not the number of radios trying to access it? Is that a fair way to describe it?

MR. TREVOR MacLEOD: The way I would describe it would be is that the actual radio capacity in the site is based on the number of voice channels in the site.

MS. JENNIFER COX: Right.

MR. TREVOR MacLEOD: And then it's how they're being used by the users being served by that site in terms of the talk groups that they're selecting to utilize. So whatever talk group the originating user was using on their radio is the talk group that will be communicated through.

MS. JENNIFER COX: Okay. So when we're talking about the voice channels being used, were you talking about those talk groups?

MR. TREVOR MacLEOD: Well you talk -- yes.

MS. JENNIFER COX: Yeah.

MR. TREVOR MacLEOD: The talk group flows -- the talk group flows through the voice channel.

MS. JENNIFER COX: Okay. And when it comes to the receiver, the end user, as long as you're on the right channel, they can be using -- they're on -- they're using a tower that's closest in proximity to them? Is that fair?

MR. TREVOR MacLEOD: Yeah, in most cases, yes.

MS. JENNIFER COX: Yeah.

MR. TREVOR MacLEOD: And they're on the correct talk group.

MS. JENNIFER COX: So it's all -- it's not all coming off one tower. It depends on where the person initiating the conversation is, versus where the person needing to hear the conversation is located; right?

MR. TREVOR MacLEOD: Yes.

MS. JENNIFER COX: Okay.

MR. TREVOR MacLEOD: Whoever is on the same talk group will actually receive the message, no matter where they're located through the province, on what radio site.

MS. JENNIFER COX: Okay. And just sort of for clarification, I mean, the talk group could be anybody from the RCMP to the EHS or the ambulance service to, you know, volunteer firefighters, depending on who is supposed to be part of that group; right?

MR. TREVOR MacLEOD: Correct.

MS. JENNIFER COX: Okay. Is there anything else on that slide that we maybe haven't talked about?

MR. TREVOR MacLEOD: No, I think we covered that.

MS. JENNIFER COX: That properly?

MR. TREVOR MacLEOD: Yes.

MS. JENNIFER COX: Okay. We'll go to the next one, which is

number 6.

So this is sort of the same as the slide, but we have a few more radios on the left-hand side of the screen. And of course they're a little bit different colour as well, so that we have the blue, the black, and the grey, and then we have a different colour blue and a black radio with a blue screen, just to represent that they are different.

MR. TREVOR MacLEOD: Yes.

MS. JENNIFER COX: What's the purpose of this graphic? What does it show us?

MR. TREVOR MacLEOD: So the purpose of this graph was to demonstrate that in this example where you have three voice channels within the radio site and those three channels are actually in use, I mean, they're carrying voice traffic already, if radio 1 or radio 2 tries to actually access the site on a push to talk, which is pushing the button on the side of the radio, they would return a busy tone.

MS. JENNIFER COX: Okay. So that's showing that if all three talk pads on that particular tower are busy, ---

MR. TREVOR MacLEOD: Yes.

MS. JENNIFER COX: --- are being used, that anybody else trying to access that tower that are not part of that talk group, --- so if ---

MR. TREVOR MacLEOD: Correct.

MS. JENNIFER COX: --- radio 1 and radio 2 were part of the same talk group, they'd be fine; right?

MR. TREVOR MacLEOD: There'd be no issues.

MS. JENNIFER COX: Yeah. But if they're part of a different talk group, then they get the busy signal? Is that fair?

MR. TREVOR MacLEOD: Correct.

MS. JENNIFER COX: Okay. And it varies in the province as to how many talk pads or channels there is on a tower? Is that fair?

MR. TREVOR MacLEOD: It is. Yes.

MS. JENNIFER COX: Okay. Anything else that we need to talk about there?

MR. TREVOR MacLEOD: I think there's one more thing that is important on the slide, is when radio 1 and radio 2 in this example would actually get a busy tone back, the network actually has the ability to actually prioritize those users into an actual busy queue, it's called. And as soon as a channel -- as soon as a talk path or voice channel becomes available in that site, the network will actually go back and give you a tone to let you know, "Hey, your channel is free now. You can now communicate."

So it is a busy, but the network will inform the end user that there is a talk path now available, and they can actually proceed to be able to communicate with their message.

And typically the busy queue is a matter of seconds.

MS. JENNIFER COX: Okay. And it also matters if the type of radio talk group that you belong to, so some are more -- given higher priority for emergency purposes. Is that fair?

MR. TREVOR MacLEOD: Yes. So there is a priority setting assignment within the, you know, the user community, that certain users, they get a higher priority than others. So those higher priority users would always get to the front of the queue. So as soon as soon as a channel becomes available, they'll be placed first to actually the network sends back and actual, you know, talk permit tone, that you can go ahead and communicate.

MS. JENNIFER COX: Okay. And just using this because I think it's a helpful way for us to explain the ERTT, the Emergency Request to Talk, if radio 1 pushed the Emergency Request to Talk, they would be able to get through on the tower; right?

MR. TREVOR MacLEOD: If the Emergency Request to Talk was

actually pushed, the actual alarm would go through immediately.

MS. JENNIFER COX: Okay.

MR. TREVOR MacLEOD: And on top of that, the way the network is actually programmed to work, is that, you know, as soon as you press the emergency, if it's programmed as well, you'll actually get the -- a mic open up on the radio so you can actually speak freely. That mic would be opened up immediately. And the way that works is the lowest priority user currently in the queue would actually be immediately bumped off so the emergency can proceed.

MS. JENNIFER COX: Okay. So this busy queue wouldn't apply if the ERTT button was pushed?

MR. TREVOR MacLEOD: Correct.

MS. JENNIFER COX: Okay. All right. We can go into number 7, please.

So I think we talked a little bit about this ---

MR. TREVOR MacLEOD: Yes.

MS. JENNIFER COX: --- already in terms of the busy queue process. Is there anything here that we maybe didn't go over?

MR. TREVOR MacLEOD: I think the one thing I will add on this one, in terms of the busy queue, is we talked about before where the user has the ability to push the PTT button. He gets a busy tone. There's then an option he can actually release the PTT button and he will actually get a tone back when the channel is free, which he can then re-engage his PTT and communicate.

The other option the end user has is he can continue to hold the PTT button. And once he gets the tone, then he can just communicate directly. So I think it's important that there's two options for end users: hold the button continuous until I get a talk permit tone and then communicate, or release it, get the tone back, and then they can press again and proceed to communicate.

MS. JENNIFER COX: Okay. And you say that it's important to

understand that there's two ways that this can happen, and why is that important to understand that there's two ways?

MR. TREVOR MacLEOD: It's just for clarity.

MS. JENNIFER COX: Okay. But there's more than one way to do the same thing?

MR. TREVOR MacLEOD: There's more than one way to do the same thing.

MS. JENNIFER COX: Okay. Okay. So those are all of the slides with respect to that. Is there anything else in terms of the system itself and how it operates, Trevor, that we should probably talk about?

MR. TREVOR MacLEOD: Not from my perspective, no.

MS. JENNIFER COX: Okay. And with respect to the TMR2 system here in Nova Scotia, is Bell involved in any of the training or any of that kind of work?

MR. TREVOR MacLEOD: Not -- no, not in user training, no.

MS. JENNIFER COX: Okay. So really, what your role is as a corporation is to take instructions from the province of Nova Scotia?

MR. TREVOR MacLEOD: It's to take -- it's to meet the service level we have with the province of Nova Scotia.

MS. JENNIFER COX: And it's by virtue of a contract?

MR. TREVOR MacLEOD: It's virtue of a contract, so we have certain criteria in the contract we have to deliver, and we deliver those.

MS. JENNIFER COX: Okay. And so that's just the system performance and the actual physical infrastructure; is that fair?

MR. TREVOR MacLEOD: That's fair.

MS. JENNIFER COX: Okay. And we'll come back to some other things later with you, but would it be fair to say that the folks that you're sitting with, the fellows that are sitting beside, you know quite well?

MR. TREVOR MacLEOD: I do know them, yes.

MS. JENNIFER COX: Yeah, because you work quite frequently together; right?

MR. TREVOR MacLEOD: Correct.

MS. JENNIFER COX: Okay.

Okay. Mr. Brown, I'm going to turn to you now, if that's okay. So, Mr. Brown, first off, let's talk about who you are and where you work.

MR. TODD BROWN: Sure. I am Director of Strategic Initiatives for the Public Safety and Field Communications Division, and we're with the Nova Scotia Department of Internal -- Service Nova Scotia and Internal Services.

MS. JENNIFER COX: Okay. And what's your educational background, Mr. Brown?

MR. TODD BROWN: I have a Bachelor of Arts in English Literature from Acadia University, and I also have a Bachelor of Education degree from Acadia University, and a Master's Certificate in Project Management.

MS. JENNIFER COX: Okay. And how long have you been working in the area of public safety?

MR. TODD BROWN: Twenty-nine (29) years.

MS. JENNIFER COX: Okay.

MR. TODD BROWN: Twenty-seven (27) of those as director of the shop.

MS. JENNIFER COX: Okay. And that's all here in Nova Scotia; right? And so when you say director of the shop, how much of that time has been involved in radios?

MR. TODD BROWN: Well, actually, all 29 years at various levels, yes.

MS. JENNIFER COX: Okay. And, you know, I think we need -- it's important for us to sort of in layman's terms distinguish you from Mr. Boyle, who's sitting

beside you, because you both work for the province in the same government department, but you both have different hats that you wear there; right?

MR. TODD BROWN: Yes. For many years, I was the director, and that would be the senior working level manager responsible for managing these kinds of systems. About three years ago, we had kind of a bulge in a lot of planning activity that we needed to undertake to prepare for negotiations with our service provider. There was a federal/provincial project, a rather large federal/provincial project that Nova Scotia needed to be represented on. So about two years ago, we split the responsibility in Public Safety and Field Communications between a planning role and an operations role.

MS. JENNIFER COX: Okay.

MR. TODD BROWN: So I'm in the planning role and Matt is in the operations, day-to-day operations role.

MS. JENNIFER COX: Okay. And that's the day-to-day operations of the TMR2 radio system when you're saying that; right?

MR. TODD BROWN: Well, yeah, TMR2, primarily. We do other things, but I'd say 70 to 80 percent of what we do is related to TMR.

MS. JENNIFER COX: Okay. So you've been around since the initial TMR1 or the initial system was in place, and then all through the evolution of it?

MR. TODD BROWN: Yes.

MS. JENNIFER COX: Okay. And as the -- sort of the director, what can you say to the Commissioners and to the public with respect to the status of the encryption of law enforcement in Nova Scotia?

MR. TODD BROWN: Well, we have encrypted radio for provincial enforcement agencies. The RCMP has encrypted radio. We made the development of a managed encryption system part of the negotiations of our most recent agreement, which went into effect in 2015. So currently, we have an encryption system that really works throughout Nova Scotia. It's also used throughout the Maritime provinces, so all

of the RCMP divisions within the Maritime provinces use the encryption system, all of the municipal police departments use it. It's actually unique in North America in that regard, in that everybody's using the same managed encryption service.

MS. JENNIFER COX: Okay. But everybody in the province is now encrypted; correct?

MR. TODD BROWN: No, we ---

MS. JENNIFER COX: For law.

MR. TODD BROWN: For law enforcement, yes.

MS. JENNIFER COX: Yeah, sorry.

MR. TODD BROWN: And also, Emergency Health Services now.

MS. JENNIFER COX: Okay. And when was that full encryption completed? Just recently; wasn't it?

MR. TODD BROWN: For municipal -- or I should say for police generally, that's been completed as of 2021. The RCMP has been encrypted much longer than that. They were actually partially encrypted during TMR1 and they moved at the end of TMR1. As we were evolving into TMR2, they moved to become fully encrypted.

MS. JENNIFER COX: Okay. And so that would be around 2015; right?

MR. TODD BROWN: Yes, sorry, 2014, 2015.

MS. JENNIFER COX: Okay. So let's talk a little bit about the role of Public Safety and Field Communications in Nova Scotia just because, you know, it's not obvious from the title what it is really that you as a government department do for the citizens of Nova Scotia.

MR. TODD BROWN: Sure. At the highest level, we plan, develop and administer wireless communication systems for use in the public sector and that's mostly mobile radio systems. So at the highest level, that's what we do. You can fit what we do kind of into seven business areas. So even -- maybe I'd just take a step

back. At the highest level, we have an administrative/business function, and we have kind of a field support function, so business and out in the field. Now if you break that down, there's probably seven business areas.

There's a contract administration function, so probably the biggest thing that we do there is the administration of the TMR2 agreement on behalf of provincial departments, the RCMP and the Volunteer Public Safety Community. And that's, for example, just making sure that Bell, as the service provider, is adhering to the specifications of the agreement for performance that we negotiated. So there's a lot of activity around that and contract management, just working with the vendor, working with the users to make sure that the system is performing.

We also have an emergency response support function, and that is what we call mobile communication support, and that's a number of trained staff and specialized vehicles that can be deployed during an emergency event or even a planned event, to help first responders or others with managing communications at a busy scene.

MS. JENNIFER COX: Okay.

MR. TODD BROWN: So we have a lot of tools and so forth.

A third box would be we are responsible for managing non-medical dispatch at the provincial level of government.

MS. JENNIFER COX: Okay. Can we give an example?

MR. TODD BROWN: Sure. We run the Shubenacadie Radio Communication Centre. So it's, you know, formally known in the business as the Shubie Radio. We call that SRCC. And so SRCC is responsible for providing dispatch mostly for provincial government enforcement agencies. For example, the Corrections Service, the Sheriff Service, a couple of others like that.

MS. JENNIFER COX: Okay. Natural Resources?

MR. TODD BROWN: Pardon me?

MS. JENNIFER COX: Natural Resources?

MR. TODD BROWN: Natural Resources, yeah. We provide dispatch services for their regional folks.

MS. JENNIFER COX: Okay.

MR. TODD BROWN: So that's non-medical dispatch. Another box would be strategic planning and project management. So when the time comes to plan the evolution of new networks, for example, we are responsible for doing the due diligence on that, the technical due diligence on that. And we get -- when we get to the point where we're procuring services from service providers, we manage those projects, those large projects. So that's a box.

Another box is user outreach and support. So we do a lot of work with our -- we have very wide user community at all levels of government. There are probably 80 organizations or sectors that use the system in Nova Scotia. And we reach out to users to make sure that their enjoyment of the system is good, that they make us aware if they're having problems, if they're experiencing difficulty with equipment and so forth. So there's a user outreach and support and education role that we do there.

We are -- also do training, so we have a dedicated trainer, and we have other folks in our office that are trained to do that training as well. And so we provide a lot of training to users, or we will work with organizations that do the training -- do the radio training themselves, such as the RCMP for example. We have worked with the RCMP closely over the years on that. So that is an -- that's an activity.

And I guess the final one would be something that I would describe as technical asset management. So these radios that are used on the system are software-driven radios. They have as many as 400 configurable functions on the radio. So there's a lot of asset management in terms of setting up which functions are particular to which users, and documenting, and mapping that, and keeping records on it, and managing changes in those things. So technical asset management would be another thing.

MS. JENNIFER COX: So the programming of ---

MR. TODD BROWN: Programming. Programming ---

MS. JENNIFER COX: Okay.

MR. TODD BROWN: --- of the radios, yeah.

Well, the service provide does the programming. We ---

MS. JENNIFER COX: Give instructions.

MR. TODD BROWN: --- develop the programming ---

MS. JENNIFER COX: Yeah.

MR. TODD BROWN: --- and give it to them to execute.

MS. JENNIFER COX: Right. Okay. But that's after having conversations with the users and different ---

MR. TODD BROWN: Yeah.

MS. JENNIFER COX: --- things like that, which takes a fair bit of time; right?

MR. TODD BROWN: Yeah, we do a lot of discussions with users to make sure that they're getting the right functions programmed into the radios, for example, to support their operations in the field.

MS. JENNIFER COX: Okay. And so one of the things you talked about was the contract management. That would be primarily the management of the contract with Bell; right?

MR. TODD BROWN: Yeah. We also do a lot of other contract management. We have a non-Bell system called the Nova Scotia Integrated Mobile Radio Service that is key infrastructure for, for example, fire department paging and rural broadband. So there's a number of contracts that we manage around that network that's not really related to TMR.

MS. JENNIFER COX: Yeah.

MR. TODD BROWN: More or less fire department paging, rural internet services, a couple of other things. So we do contract management for the infrastructure for that network, so that's basically the towers, the electronics, the

grounds, those kinds of things.

MS. JENNIFER COX: And when we talk about that system, that's the system that pre-dated the TMR system in Nova Scotia; right?

MR. TODD BROWN: It used to be the main radio system before TMR1 came into place in the year 2000.

MS. JENNIFER COX: Yeah. So that system still exists almost as a backup too; right?

MR. TODD BROWN: It does have a backup capability, a limited backup capability. So it doesn't function like TMR. TMR is a very fully functional network and it can do many things. The NSIMRS in its role as a backup to TMR is very limited. It would only provide single channel, no real extra functionality, basic communications. And currently, there are a limited number of radios. We have a cache of about a hundred radios that can work on that system.

We've talked to other users of the TMR system about using that system, that independent system, NSIMRS, as a backup. There would be required to be kind of additional investments for those agencies, like, EHS or others, to be able to use that as a fully -- as a backup. So that hasn't happened yet, but we do have a limited number of radios that we could distribute in an emergency ---

MS. JENNIFER COX: Okay.

MR. TODD BROWN: --- that would work.

MS. JENNIFER COX: And when we talk about the things that they would have to do to be able to use the system would be to have a radio that's capable of accessing it; right?

MR. TODD BROWN: That's right. They would need a radio. We would probably need to connect that network to their dispatch facility. Their dispatchers would have to be trained appropriately and standard operating procedures would have to be developed, so that it all worked together.

MS. JENNIFER COX: And I think just for the benefit of the record,

we want to make sure we get the acronym that you referred to. It's NS?

MR. TODD BROWN: Sorry, it's NSIMRS.

MS. JENNIFER COX: And that means?

MR. TODD BROWN: Nova Scotia Integrated Mobile Radio Service.

MS. JENNIFER COX: Okay. And the technology that goes with that, so the radio technology or the way the signal travels, is very different than the TMR2 as well; is that not ---

MR. TODD BROWN: Much simpler. You could kind of think of it as a single channel, so there's no real switching between channels like the TMR system does.

MS. JENNIFER COX: Okay.

MR. TODD BROWN: And it wouldn't have any of the kind of I guess you could say value-added functions that a TMR system might have.

MS. JENNIFER COX: Such as the talk groups or ---

MR. TODD BROWN: Talk groups and different functions, like, request to talk or emergency request to talk, none of those functions would be available at that basic ---

MS. JENNIFER COX: Okay.

MR. TODD BROWN: --- NSIMRS.

MS. JENNIFER COX: And so I'm just going to go back to the contract that you have with Bell. So just so we have a basic -- and I mean basic, understanding of how this works. There's, like, a master agreement between the Province of Nova Scotia and Bell Mobility; is that correct?

MR. TODD BROWN: That's correct. That's for every aspect of the service. So Bell is our general contractor. They are responsible for all aspects of the delivery of the service.

MS. JENNIFER COX: And in that contract, there's a, you know,

specifications with respect to performance and other things; right?

MR. TODD BROWN: Yeah, there are performance metrics that are reported on, on a monthly basis, and that we look at to make sure that Bell is adhering to the performance standards.

MS. JENNIFER COX: And then we talk about other agreements. So there are agreements that sort of fall under that master agreement; right?

MR. TODD BROWN: Well, they're related.

MS. JENNIFER COX: Okay.

MR. TODD BROWN: So we have a master agreement, and so that covers provincial government department users. It covers the RCMP, and it also covers the Volunteer Public Safety Community. And that consists of volunteer fire departments, ground search and rescue organizations, municipal emergency management organizations, the Canadian Red Cross.

MS. JENNIFER COX: Okay. And so you ---

MR. TODD BROWN: And I guess I should also say -- sorry for interrupting you. I should also say there are a series of other agreements as well that are connected to our master agreement, but we're not really signatories to those agreements. So those would be service level agreements between what we call additional authorized users and Bell as a service provider. So additional authorized users with their own separate service level agreements, they would be typically municipalities and federal government organizations, and also, some private sector organizations that have a public safety responsibility that they might -- they be a critical infrastructure provider like a pipeline, for ---

MS. JENNIFER COX: Okay.

MR. TODD BROWN: --- example. And so we have a group of users that are commercial or public sector corporations like airports, for example.

MS. JENNIFER COX: Okay. And so this really contributes, though to the interoperabilities. You know, you still -- even though you might not be a signatory

to that agreement, you're part of the process of trying to make sure these things get in place and that they serve everybody's purposes?

MR. TODD BROWN: Yeah, we negotiated our master agreement with Bell, and we knew that Bell would then subsequently turn around and negotiate agreements, service level agreements with municipalities and federal government organizations. So as part of our master agreement, we created a schedule called the stewardship schedule. And we put in that a requirement that if Bell kind of turned around and sold the service to municipalities and federal government organizations, they had to put terms in those agreements where they had to be understandings between the parties that municipalities and federal government organizations would be part of our user community, would accept training from us, and those kinds of things, and that was all for the purpose of trying to drive interoperability as far as we could.

MS. JENNIFER COX: Okay. And you also have a role, obviously, with the Province of New Brunswick and Prince Edward Island as well; right?

MR. TODD BROWN: Yeah. So TMR1, the first generation of this technology, was in Nova Scotia -- it was active in Nova Scotia between 2001 and 2015. And so Nova Scotia was essentially the only jurisdiction at that time in the region using the technology, but we have good and strong working relationships with New Brunswick and PEI. And they began to express an interest during the term of the TMR1 agreement for creating a regional system.

MS. JENNIFER COX: Okay.

MR. TODD BROWN: And so we actually took -- we made an effort to do that in -- between 2008 and 2012. We worked together on a common procurement project to create a single regional radio system. That ended up not succeeding in the end. We actually got to the point where we were evaluating requests for proposals. At the time, New Brunswick was experiencing some fairly significant financial stress, so they pulled out of that initiative in 2012. But during that process, we were able to work very closely with our colleagues in New Brunswick and PEI, and as

we were negotiating our own agreement with Bell after that, we kept them very appraised *[sic]* of what was going on. They liked what they heard just in terms of what the technology would support and the contract structure. So we kept them informed, and then they separately from us struck their own agreements, which were very similar in structure to ours; right? So now we have three separate provinces, three separate agreements. To a large extent, they're very integrated, the agreements are very similar, they do the same things. And we work together with the other provinces. There's a group of administrators, technical administrators that Matt and I are a part of. There are representatives in New Brunswick. There's a representative in PEI. And we work on things to make sure that the different provinces are interoperable when users are traversing borders, for example.

MS. JENNIFER COX: Okay. And that would be the Maritime Public Safety Network?

MR. TODD BROWN: Maritime -- yeah, Maritime Public Safety Network. And it looks as though it's going to expand to Newfoundland very shortly.

MS. JENNIFER COX: Okay. And basically, what you're talking about is, you know, you have personal relationships with the individuals because you interact with these people so much, you actually have really strong personal relationships. I mean, obviously, they're based on a professional basis, but you really know the people that are doing these jobs in the other provinces because you would talk to them so much; right?

MR. TODD BROWN: We -- it's almost as if we have as much to do with those folks in other provinces as we do with colleagues even in Nova Scotia. That's how closely we work together.

MS. JENNIFER COX: Okay. And so would it be fair to say that that's also a big piece of this interoperability is those relationships being built?

MR. TODD BROWN: Yeah, very much so. Relationships is how we do a lot of things.

MS. JENNIFER COX: Okay. So with respect to the TMR2 radio system itself, I mean, we've talked a little bit about what your real role is, but I think we really need to make sure it's clear what your role is versus what Bell Mobility's role is. So because you're working with all of these users, whether they're users working with the province of Nova Scotia or, you know, municipalities, what are the things that you actually do to assist the system to operate?

MR. TODD BROWN: Well, primarily, we work with our users to make sure that they are functionally getting what they need to operate. So oftentimes we're kind of facilitating interaction between Bell Mobility as the system provider and the service provider and the individual user groups. You know, we're trying to make sure that everybody understands what's required, what Bell's responsibilities are, just in terms of executing on what the individual organizations need in terms of communications in the field.

So we play a very large and a facilitation role between the actual users, such as the RCMP, and Bell as the service provider.

MS. JENNIFER COX: And so would it be fair to say that you're getting instructions about what the need might be, or try to figure it all out, and then helping support that information to Bell?

MR. TODD BROWN: Yes.

MS. JENNIFER COX: Okay. So things like fleet maps and stuff like that, you're pretty much involved in the development of a lot of that; right?

MR. TODD BROWN: We develop a lot of that. And this is kind of probably a little bit of an oversimplification, but we develop all that and then we instruct Bell on what to execute.

MS. JENNIFER COX: How to make it?

MR. TODD BROWN: Yeah.

MS. JENNIFER COX: Program it into the radios; right?

MR. TODD BROWN: Yeah.

MS. JENNIFER COX: Okay. So let's talk about the fleet maps a little bit in terms of, like, what does that mean? And how -- what's your role? What does your shop do to create those?

MR. TODD BROWN: Well perhaps I could ask my colleague, he's a little closer to that activity, to comment?

MS. JENNIFER COX: Okay.

MR. TODD BROWN: Matt, can you do that?

MR. MATTHEW BOYLE: Yeah.

MS. JENNIFER COX: Sure. Jumping around a bit.

MR. MATTHEW BOYLE: That's fine. So I guess going back to, as Trevor said earlier, so at the most basic level, really a talk group is a connection between users. It's not a physical circuit. It's sort of a virtual chatroom. So to speak. And we create different talk groups for different functions. So within a single organization, they may have talk groups by county or they may have talk groups by county, or they may have talk groups by organizational function. And they can really create an unlimited number of those to suit their operational needs for their day-to-day operations. And then the Province also has a series of talk groups that we have created that we ask users to adopt, and that's around what we talk about the mutual aid and the shared law talk groups, for example, where we ask all users to ensure that they have access to those for interoperability between agencies.

And so what results from this is sort of a complex structure where within a radio, a user can have hundreds and hundreds of talk groups or channels within their radio, distinct from the voice channels that we talk about on a tour site. But they can have hundreds of talk groups for, again, all of their internal functions, special operations, whatever it may be, plus the interoperability talk groups that the Province mandates them to have.

So what we turn all that into, so to speak, is what we call a fleet map. And the fleet map is really a chart that shows what talk groups are in the radio

and how and where they're programed in. So a fleet map is sort of like an organizational chart for what's in the radio. And Todd's got an example there of a rather complex one from RCMP. But essentially, it's that chart. And then what accompanies that chart is typically a set of programming instructions. So if we're moving that forward to Bell to do programming on a radio, then we would be providing a fleet map, and then also that we call a profile document that's going to describe what the buttons do and how they operate, and what the expected functionality is.

MS. JENNIFER COX: Okay. And I didn't get a chance to sort of do the introductory questions with you, Matthew, so I'm wondering, perhaps, if we could just stop here and ---

MR. MATTHEW BOYLE: Sure.

MS. JENNIFER COX: --- talk a little bit about who you are and what your -- who you work for?

MR. MATTHEW BOYLE: Sure. So I'm Matt Boyle with Public Safety and Field Communications with the Department of Service Nova Scotia and Internal Services. As Todd mentioned before, I'm really looking after the day-to-day operations. So I'm the Director of Public Safety and Field Communications that's focused on the daily operations of our existing radio system and contracts. And of course that includes staffing and budgeting as well. So I've been doing this with Public Safety and Field Communications for about 14 years now and I've held a number of different roles in the organization since I've started.

MS. JENNIFER COX: And your educational background?

MR. MATTHEW BOYLE: So I did a Bachelors of Commerce and an MBA at Dalhousie University, and then also had some experience working with, for a brief time, Public Safety Canada with the Federal Government. And so I've got some exposure at the federal level, and then more substantially at the provincial level as well.

MS. JENNIFER COX: And it's fair to say that the last 14 years have been primarily in the area of radio?

MR. MATTHEW BOYLE: Yeah, all in radio communications. Yeah. Different aspects within the shop. So initially I was focused on the tower infrastructure, for example, and then eventually moved more into the TMR2 contract management, and then over time, added responsibilities around human resources and budgeting and so on.

MS. JENNIFER COX: Okay. So with respect to the development of the fleet map, just so people have an understanding of what does that actually mean, what do you do to do that? Like, you go out and you talk to them, ---

MR. MATTHEW BOYLE: Yes.

MS. JENNIFER COX: --- you try to figure out who should they be talking to in this type of an emergency? Who should therefore be part of our talk group?

MR. MATTHEW BOYLE: Yeah.

MS. JENNIFER COX: Or their talk group? Is that what that really looks like?

MR. MATTHEW BOYLE: It really is. So if we had a new user, for example, that was coming on TMR2 that had never been a member of the system before, we would initiate some conversations with them to try to understand how they operate on their day-to-day business. So we talk to them about -- kind of two common ways would be either geographically that we would build their talk group structure, or by function. So in organizations that are province-wide, they may have west, east, and central, or they may have talk groups by particular county, for example. Some other organizations would be more focused on function, so they might operate over a smaller geographic area, and therefore it wouldn't make sense to divide them by geography. But they might have different types of users, or types of groups within their organization that would carry out specific functions.

So we would have the conversations with them to understand what their day-to-day operations look like, and essentially that question that Trevor referenced of who needs to talk to who and when. And then we try to build a talk group

structure that facilitates that conversation. And then on top of that is the interoperability talk group.

So every fleet map of every agency on this network, and really across the Maritimes is actually interrelated because there are talk groups within a fleet map that are shared by every agency, and then there are talk groups that are only shared amongst specific agencies based on they have a regular need to communicate directly with each other, and then each agency has their own internal talk groups.

And in some cases, as Todd mentioned, there's some organizations like critical infrastructure providers. They're really only on TMR2 for the purposes of communicating with public safety organizations. So they would have very, very small internal fleet map, very few, maybe only one talk group for their own use. And the majority of their fleet map would actually be focused around interoperability and communicating with others.

MS. JENNIFER COX: Okay. And again, the example that he provided was like pipeline companies?

MR. MATTHEW BOYLE: Yeah, exactly.

MS. JENNIFER COX: Okay.

MR. MATTHEW BOYLE: Yeah.

MS. JENNIFER COX: So with respect to your role in the TMR2 radio system, there was also a seated radio program? Is that not correct?

MR. MATTHEW BOYLE: Yeah, I can probably talk to that one.

MS. JENNIFER COX: Okay.

MR. MATTHEW BOYLE: We've actually had -- we've had two generations of TMR. It's called Land Mobile Radio Generic. We would call it TMR in Nova Scotia. So we've had two generations of the technology. TMR1, as I mentioned, between 2001 and 2015, and we're now using the TMR2 system, since 2015.

So the seated radio program was a recognition that volunteer fire departments play a very critical role in first response and it's not always acknowledged

in many jurisdictions across Canada. We're in the fairly rare position of making significant investments to make sure that, particularly volunteer fire departments in rural parts of Nova Scotia, rural and remote parts of Nova Scotia, are participants in the system, because they often work with other first responders on many common things and are often forgotten.

So in TMR1, we were able to set aside some budget to provide two radios to every volunteer fire department in Nova Scotia. And if they were a medical first response agency, we provided a third radio.

And they used those radios to -- as what I would call interoperability devices. So when they needed to work with organizations that were fully on TMR, they used the seated radios to do that.

MS. JENNIFER COX: Okay.

MR. MATTHEW BOYLE: Now, flash forward to TMR2, we implemented an enriched program in this regard, the second volunteer seated radio program provided as many as nine -- if we're using volunteer fire departments as an example, as many as nine volunteer -- nine radios per volunteer fire department. And there's a little over 300 volunteer fire departments in Nova Scotia. So that represented a fairly substantial investment.

We would also take responsibility for maintenance, we provide training, we provide user outreach and support. So we tried to make it as pain-free as possible for the volunteers' use.

And also part of that seated radio program, we also provided radios to municipal police departments, with the exception of Cape Breton and HRM. They supplied their own users with radios.

So we went with the enriched program this time around and we provided base stations to police dispatch points.

So a dispatch point is not a full dispatch facility. It's just basically a base radio, which they provide a very simple dispatch service to police services in the

region, so.

MS. JENNIFER COX: And I think it's important for us to talk about why providing radios is such a significant contribution to the municipal or volunteer -- so let's talk about what's the cost of these radios?

MR. MATTHEW BOYLE: Sure. You could -- the cost range, depending upon what kind of radio, its sophistication, you know, how it's hardened, all of those things, probably something like between $2,000 and $10,000.

MS. JENNIFER COX: And so it would be prohibitive or difficult for the volunteer organizations to get those radios; right?

MR. MATTHEW BOYLE: Yeah, many volunteer organizations have very limited funding. We work with some volunteer fire departments who have annual budgets of $1,000, which is not very much during a volunteer fire department. So you know, affording these radios for many smaller municipal and volunteer fire departments is just out of -- out of site.

MS. JENNIFER COX: Okay. And so the users of the TMR2 system in Nova Scotia, I think we've talked a lot about that. You know, we've gone through most of those folks.

Has there -- is there anybody that we haven't talked about?

MR. TODD BROWN: Looking at my list here, as you can see, it's quite extensive.

You can categorize it into four broad categories. There are municipalities, Government of Canada, so Government of Canada operations that are running field operations in Nova Scotia. There are provincial departments or agencies, and then there are others that we spoke about before, some of which are commercial organizations that have public safety functions.

So we pretty much cover A to Z on municipalities. Pretty much all of the municipalities have some radio and some of their services like police departments, for example, are now fully on TMR. By-law Enforcement Officers, for

example, some Public Works organizations at the municipal level, those are all on TMR.

Government of Canada would include things like Parks Canada, DFO, Public Safety Canada, the Canadian Border Services Agency, the Coast Guard, Environment Canada, Department of National Defence. They're all on the system in Nova Scotia and in the Maritimes as well.

And a couple of examples of those others that we talked about, some of which are public corporations or some of which are commercial entities, that would be things like Halifax Airport, Port Hawkesbury Paper, Heritage Gas, Michelin, Cobequid Pass, Maritimes & Northeast Pipeline, Halifax Port Authority, Halifax Harbour bridges, Yarmouth Waste, Sydney Airport. It's vast.

MS. JENNIFER COX: Okay. And I think there was a number. Didn't you have around 80?

MR. TODD BROWN: About 80 organizations or sectors.

MS. JENNIFER COX: That you oversee.

MR. TODD BROWN: Yeah.

MS. JENNIFER COX: Okay. And the interoperability is also accomplished -- there's a governance structure, so we've heard the word RINSAC.

MR. TODD BROWN: Yeah.

MS. JENNIFER COX: So maybe if you could talk a little bit about RINSAC.

MR. TODD BROWN: Sure. RINSAC is the Radio Advisory Nova Scotia -- Radio Interoperability Advisory Council of Nova Scotia. And so that is our -- we call it our governance organization. We use it just as much to communicate with users as well as to govern the system.

But generally, RINSAC is a large organization. It has about, as you mentioned, 80 members. So there are representatives from those 80 organizations or sectors that are part of RINSAC. And just as a general member, you really have two things that you have a responsibility around.

One, you're invited to an annual general meeting of RINSAC. We actually call it the Nova Scotia Interoperability Forum. And that's an opportunity for user reps to, you know, socialize, get to know one another, but also to receive presentations on how the system may be changing, new technologies, things to worry about in terms of managing your use of the system, those kinds of things. So it's kind of a general interest networking opportunity for those users. So that's one thing that a rep will do.

Another thing is, is that we have a user outreach part of our operation, as I mentioned, and we expect the representatives of the user organizations to meet with us at least once a year so we can talk about their use of the system, whether they're having any problems, they need to know any information about current equipment, new equipment, those kinds of things.

MS. JENNIFER COX: Okay. And there are subcommittees as well; right?

MR. TODD BROWN: Yeah. There are three subcommittees and -- I'm just going to my notes here to make sure I get this right.

There's a backup communications committee, and they do a little bit more -- well, first of all, I guess I should step back and say, so RINSAC is the large organization, with 80 members. We have an executive of that group, so that consists of nine members, including one person from our office that is the chairman of that committee.

And so we would have representatives that would represent the RCMP, Halifax Regional Municipality, Cape Breton Regional Municipality. Then there would be members of that executive who would be representing the perspective of different kinds of users, so there'd be a federal government representative who was representing the federal government perspective. There would be another member who represents the non-HRM, non-CBRM municipal governments, and so it's kind of designed like that.

MS. JENNIFER COX: And so how often would that executive

meet?

MR. TODD BROWN: It meets twice a year, sometimes three times a year, but most generally twice a year.

MS. JENNIFER COX: Okay. And so with respect to RINSAC, going back to the subcommittees, there's also the three subcommittees, you said?

MR. TODD BROWN: Yeah, the three subcommittees are backup communications. So that's a committee that advises us on how we might set up basically backup services to TMR, so they've been actively involved in looking at that Nova Scotia integrated mobile radio service potential backup to TMR and a couple of other kind of backup things that we -- that we do. So they work a little bit more intensively. They meet more frequently and they provide more, I guess, focused advice on some of these things.

So there's backup communications, there's a dispatch committee. And that's -- involves all of the dispatch facilities that are basically plugged into TMR.

And then there's an in-building coverage committee. Coverage is very good in the -- it's actually excellent mobile -- we have excellent mobile coverage in Nova Scotia. We have very good portable coverage. But in buildings it's a little bit more of a challenge.

In order to get appropriate levels of coverage in buildings, sometimes you have to take extra steps, for example, implementing in-building antennas so that the radio signalling is distributed more effectively throughout a building.

And so this committee has advised us on how we might priorize[sic] installing in-building antenna systems.

MS. JENNIFER COX: Okay. And those are a different antenna system than a cell signal.

MR. TODD BROWN: Yeah. I mean, cell systems have similar in-building antenna systems, but these radio in-building antenna systems are different.

MS. JENNIFER COX: Okay. And I do need to ask the question, but I'm not really sure who I should ask, of, you know, the difference between a radio signal and an NSL signal because there are distinct differences; correct?

MR. TODD BROWN: Well, maybe I'll ask Trevor to ---

MR. TREVOR MacLEOD: Yes, they're very distinct systems. They're two separate networks.

MS. JENNIFER COX: Okay. And if you have no cell coverage or you have no radio coverage, they're not the same; right? Like you're ---

MR. TREVOR MacLEOD: The coverage would -- the coverage is not the same on -- on the TMR2 network or on the cell coverage network.

MS. JENNIFER COX: Okay. And when we talk about coverage, Todd, we're talking about radio coverage only; right?

MR. TODD BROWN: Geographical coverage, yeah.

MS. JENNIFER COX: Of the radio equipment.

MR. TODD BROWN: The radio system.

And there is a big difference between cell coverage and radio coverage in that cellular coverage is a commercial service and the service provider expects a return on investment, so it typically, although this is changing slowly -- it typically has network presence or coverage in more urban areas, whereas the province has a responsibility to deliver services and communication services to support, say, first responders everywhere.

So for example, think of a forest fire, right. There's not a lot of economic incentive for there to be a cell site in the middle of nowhere, but we have to have radio coverage in rural and remote areas if firefighters are going to be able to fight forest fires.

MS. JENNIFER COX: And let's talk about the towers or the coverage and how that's changed in, say, the last 10 years or so. Are you the right person to ask that question?

MR. TODD BROWN: Well, either Matt or I. I've been talking a lot, so maybe I should ask Matt to.

MS. JENNIFER COX: Okay.

MR. MATTHEW BOYLE: Sure. So at the end of the TMR1 network, we had 70 radio sites, so going into the 2013-2014 as we moved into implementation of the new network, we were at 70 sites on the old network.

And as we worked to migrate into the new contract, we had worked for the user groups quite extensively to identify where they had coverage concerns. Some agencies had taken their own steps to put separate stand-alone radio systems in certain areas of poor coverage and then try to connect those back into TMR, which wasn't very clean and it only benefited a particular agency, and so we took the perspective that we would prioritize those places where agencies had already made their own separate investments to improve service as we moved into TMR and then we looked at what other areas we had received complaints about perhaps that no one had taken any action on yet but that we knew from the user community that there were concerns.

And so we were able to move initially from 70 to 85 tower sites as we moved into TMR2, plus we also obtained a mobile site that we could deploy to emergencies.

And since the move to TMR2, we've actually gone from 86 to 98 sites plus the mobile sites, so we've continued to improve coverage, and that's based on primarily user feedback, so we do have a prioritization and scoring system of how we look at coverage enhancement, which I can describe if you wish. But essentially, it's feedback from the agencies and then it's, of course, always the look at funding and, you know, is the province able to fund the site independently, are we able to get contributions from other agencies that are concerned about those areas and so on.

So it's been an ongoing process and largely, as Todd said, we would describe very good coverage in a vast majority of areas. There are still a few

hotspots that are of concern which we continue to work towards funding and mitigation options for, but at some point the holes become quite small. And so you end up with a very substantial cost to fix a very small problem, and that's when we look at, you know, potentially alternative solutions for those.

MS. JENNIFER COX: Right. And is it 98 or is it 99 towers? Because I think ---

MR. MATTHEW BOYLE: It's 99, including the mobile site.

MS. JENNIFER COX: Okay.

MR. MATTHEW BOYLE: Yeah.

MS. JENNIFER COX: And so ---

MR. MATTHEW BOYLE: So 98 fixed.

MS. JENNIFER COX: And so when we talk about the mobile site, that's literally a truck; right?

MR. MATTHEW BOYLE: A trailer. Yeah, it's a trailer, and it has 100-foot tower built on to the trailer, and effectively, there's a whole radio site mounted on the trailer. So we can take that anywhere, either to a remote location, and set it up to provide coverage where there might not be service from any other fixed tower, or it can also be used in a backup capacity. So if we lost a tower, and thankfully this happened, but if there was a major ice storm or something and we physically lost a tower structure, then the site on wheels could provide some coverage in light of that lost tower. It's, of course, not as high as most of the fixed towers are, but it would provide some backup service.

MS. JENNIFER COX: Okay. And in terms of the coverage, it's not just the tower, right, it's also the Talk Pads or channels that are available on the tower. Is that fair?

MR. MATTHEW BOYLE: Yeah. So two related concepts. The coverage really being the geographical areas in which the service works or doesn't work, that would what we would call coverage, and then the other would be capacity,

and that's about how many simultaneous conversations any given tower can handle at a different time. And they're related because they often -- the capacity of a system is related to the geography. So it's more likely that in urban areas or areas with major highways that we will see sites that will have more Talk Pads, because on a day-to-day basis there is more traffic demand on those sites, and then as we move further and further into rural and remote areas we tend to see less Talk Pads, but down to a minimum that we have established to say we will not go below three Talk Pads on any site because we feel that that's a minimum that's required to support a major public safety incident.

MS. JENNIFER COX: Okay. And I think I'll have one more question and then maybe perhaps, Commissioners, we'll have a quick break for lunch.

So Mr. Brown, I have one question with respect to the federal regulation of the radio frequency and how that plays into the number of Talk Pads or how you -- how you establish those?

MR. TODD BROWN: Yeah. That's -- radio frequencies are regulated by a federal regulator. Innovation, Science and Economic Development Canada, they do regulation of the radio spectrum. So for example, it's not as if -- it's not as if we could say we want to increase the capacity of a system and negotiate arrangements with Bell and add that capacity, there's a regulatory approval process. So capacity is, to a large extent, kind of out of our hands. The decision-making power is really with the Federal Government.

Now, the ways -- the way in which I said, is what we call it, Innovation, Science and Economic Development Canada, the big way in which they influence things in our world is around a system capacity. So they permit enough capacity channels, for example on a site, that will effectively meet a public safety performance specification. So the public safety performance specification for our network is what they call 5-percent busy queuing. And all that means is when you push a radio and you push to talk on a radio, it's not on right now, but just to demonstrate,

when you push to talk on a radio you should be able to get a channel within two seconds 19 times out of 20. So that's the system performance metric.

So that's something that we share with Industry Canada, and that metric spits out a specific kind of a design for the -- for the network. So that metric applied to Nova Scotia meant initially, when we did TMR1, of the 70 sites, I think 47 of those sites had two Talk Pads or two channels on them that were capable of carrying on a simultaneous conversation. So that's all based, that provisioning, you know, two Talk Pads have those 47 of 70 sites, that's all really based on the traffic model, how, you know, what the distribution of radios is around the network and how they hit -- how they hit the towers and whether they're in a rural location or an urban location. So that's all based on the traffic pattern of the network.

It's important to understand that radio frequency is not infinite, and systems such as ours, and all public safety systems, cannot be designed and engineered based on what might happen to traffic in an emergency event. Because traffic may spike hugely during an emergency event, and at that point you're not really relying on the performance metric anymore or the contracted metric.

Now, in this case, and I think as you'll -- as you'll see later during the presentation, the capacity on the network was fairly well-used, it was heavily used during the actual emergency event that we experienced here, but it performed as it was designed to.

MS. JENNIFER COX: And so when we talk about radio frequency not being infinite and not planning for an emergency or a catastrophe, really, really what you're saying, in layman's terms, would it be fair to say that the -- you wouldn't be able to get that much radio frequency to plan -- like if you were to build the system to, you know, anticipate that catastrophe that, you know, basically had all that frequency available every day, 24/7, when you really didn't need it, you really couldn't do that. Is that -- is that fair?

MR. TODD BROWN: Not possible.

MS. JENNIFER COX: And when -- maybe I think we need to unpack why is radio frequency not infinite?

MR. TODD BROWN: I'll have to ask my engineering colleague to come on that one.

MR. TREVOR MacLEOD: It's because there are specific bands set up for within public safety, you have stay within a frequency block, and within those blocks are so many channels, and they have to be coordinated across, not only the Province of Nova Scotia, but then also be coordination with the U.S. and other provinces as well.

MS. JENNIFER COX: Okay.

MR. TREVOR MacLEOD: So they assign a specific block just for this type of a network.

MS. JENNIFER COX: So there's a lot of bits and pieces in terms of the governance would it be fair say with respect to radio transmission? Okay.

MR. TODD BROWN: Well, if you're talking about how it's regulated, it's really the regulator that you have to satisfy. The regulator is the guardian of how all of that works.

MS. JENNIFER COX: Right.

MR. TODD BROWN: They have to approve everything or every. You know, every device that has radio frequencies in it is more or less approved ---

MS. JENNIFER COX: Okay.

MR. TODD BROWN: --- approved by Industry Canada.

MS. JENNIFER COX: So before you determine, you know, channel sites and all that sort of stuff, you've got to go through that process with the federal government first?

MR. TODD BROWN: Yeah.

MS. JENNIFER COX: And how long did it take for you to go from two Talk Pads to three Talk Pads in Nova Scotia?

MR. TODD BROWN: Well, that was something that came about as the result of a threat risk assessment that we had performed just after TMR1 went into service.

MS. JENNIFER COX: So 2000?

MR. TODD BROWN: 2001, I think is when the threat risk assessment was delivered. And so that threat risk assessment identified the risk of traffic congestion. If there was a major emergency event, for example a plane crash, for example, in say -- let's say the Cape Breton Highlands or something like that, there was a risk of traffic congestion which would affect the ability of first responding -- first responder agencies to effectively manage the site if such an accident happened at a what we then called a thinly provisioned site, which is a site that only had two Talk Pads.

MS. JENNIFER COX: So to answer the question, though, what -- you know, we had two Talk Pads around 2000. When did we start -- when did Industry Canada or the federal regulator say, "Okay, you can go to three"?

MR. TODD BROWN: Well, it was a bit of a slow process. So we had the threat risk assessment that identified the problem for us. We then approached Industry Canada and said we wanted to increase our capacity to a minimum of three Talk Pads per site. So that would affect all of the rural locations because the urban locations had more channels; right? So you have to go through a process to basically make your case to Industry Canada to go beyond the number of channels that you have that were originally assigned as a result of your performance metric that you have; right? So that probably took, I don't know, probably three or four years before the network was fully at a minimum of three Talk Pads per site.

MS. JENNIFER COX: Okay.

MR. TODD BROWN: And so that was as a result of us going to Industry Canada, and also, Bell adding a lot of other clients, and so both of those things contributed to there being three Talk Pads per site.

MS. JENNIFER COX: So it's not a fast process?

MR. TODD BROWN: No, not a fast -- everything associated with regulation of radio frequency is slow.

MS. JENNIFER COX: Okay.

MR. MATTHEW BOYLE: And if -- if I could just add something. You mentioned the governance piece before, and so when we talk about, you know, capacity, a big part of our role is to help users understand the impacts of what they do on capacity. And so both in advance, in our planning discussions, and in training, and in our field operations, as we might attend an emergency event or provide support, a big part of our role is helping people to understand how they can deliver a communications plan at an incident that will help them more effectively use that capacity. And so for example, that will be things like moving to common, you know, shared talk groups, rather than agencies all staying on separate talk groups, and we also have some other tools we can bring to bear in a -- in a field context.

MS. JENNIFER COX: So that's the training and -- and you know, that's quite a detailed conversation, so I think what we'll do is we'll get into that after we break ---

MR. MATTHEW BOYLE: Sure.

MS. JENNIFER COX: --- for lunch if that's okay.

But I think it's important for people to understand that, you know, there is ways to work with the system. And for example, the talk group is the invention of the technology to allow the system to bear a lot of users with, you know, not taking up a lot of channels, so would that be a fair -- that's the advancement?

MR. MATTHEW BOYLE: Yes. In the old days of conventional radio systems, sort of 1970s, '80s, '90s, each agency basically had a dedicated channel for a dedicated geographic area, so there wasn't this concept of being able to go anywhere within a system. It was, you know, if I'm in New Glasgow, and I am the ambulance service, then there is a dedicated channel that is just for the ambulance

service, just for the New Glasgow area. And if they're not using it, it sits unused. And so we moved into the world of trunking radio. It eliminates that, and it reduces the number of overall resources by allowing users to share a more finite set of resources, with the assumption that not every user needs to talk at exactly the same time. And that's where the management of capacity and incidents becomes key.

MS. JENNIFER COX: Okay. And when you're dealing with all of that, that's part of the information you're providing to Bell as a user; right? You're trying to work with the limits with respect to the frequency and then the towers and all those kinds of things and what the users are telling you, and you're feeding all that information to Bell and saying, okay, what can we do to address the service standard that we have set out in the contract; is that fair?

MR. MATTHEW BOYLE: Right.

MS. JENNIFER COX: Okay. And just to sort of tie a bow on the governance piece, you have regular meetings with lots of different people, and I'm wondering, you know, as high level, is there -- you meet with Bell, you meet with other folks, like, what's the meeting schedule look like for you, so people have an understanding of how much time you spend speaking to others?

MR. TODD BROWN: Oh, it's constant, like, all day long, constantly, for years.

MS. JENNIFER COX: Okay.

MR. TODD BROWN: We work with different users differently. We probably work with the RCMP most intensely of any user.

MS. JENNIFER COX: Okay.

MR. TODD BROWN: And they have some very sophisticated resources. They have the National Engineering Shop. They have very skilled people in the regions as well. So we do a lot of work with them.

MS. JENNIFER COX: Okay. And the meetings, for example, like, there's a monthly meeting with Bell. So the purpose of that meeting is -- I understand it

is to assess the performance of the system on a monthly basis; right? So it's a proactive process?

MR. TODD BROWN: Yeah, we review performance reports. We talk about troubleshooting different situations. We represent user's perspectives to the Bell team ---

MS. JENNIFER COX: Okay.

MR. TODD BROWN: --- that kind of thing.

MS. JENNIFER COX: And of these meetings that are, you know -- and you talked about a number of different government agencies and stuff. There's no legislation or nothing forcing people to be part of these committees or these processes; is there?

MR. MATTHEW BOYLE: No. Really -- you know, this has largely worked well for us, but we're a small province. And as you talked about, we get to know on a personal level not only our colleagues in the other provinces that are our counterparts, but really, our counterparts within a lot of the user agencies, and we have regular meetings with them, and that's really largely what we rely on. As Todd mentioned earlier, there are a few key references in our stewardship schedule in the Bell agreement that Bell is obligated to pass on to those third-party users. But largely what we accomplish is through relationships, and it's lucky that that has worked well in most cases, but we don't have a formal responsibility in contract, policy or legislation that sets out an ability for us to compel users to take certain actions. And that would be either within our own user community that we're directly responsible for, or those additional authorized users.

MS. JENNIFER COX: Okay.

MR. TODD BROWN: One of the big challenges there is, you know, we -- because this is a system that's used by all levels of government, we might be able to have that ability to compel organizations to do things at the provincial level, but we don't have that power at the federal level or the municipal level.

MS. JENNIFER COX: Right. But it works nonetheless?

MR. TODD BROWN: Yeah.

MS. JENNIFER COX: Okay.

MR. MATTHEW BOYLE: Largely, yes.

MR. TODD BROWN: Yeah.

MS. JENNIFER COX: So, Commissioners, I'm wondering if this might be a good place to break?

COMMISSIONER MacDONALD: Yeah, just wanted to -- it's very interesting and very helpful so far, so thank all of you.

Just wondering about some of the logistics, Ms. Cox. We have been, from time to time, relying upon the lunch break to caucus, and I ---

MS. JENNIFER COX: M'hm.

COMMISISONER MacDONALD: --- don't know how much more you have and whether or not it would be worthwhile to explore -- I presume the next portion you'll be getting into ---

MS. JENNIFER COX: I anticipate being probably another hour, hour-and-a-half.

COMMISSIONER MacDONALD: Okay. All right. Then that's what we'll do. We'll break for an hour then. Thank you all so much, and we'll come back in an hour. And I presume we'll be getting into the more practical day-to-day aspects of it, so thank you.

MS. JENNIFER COX: Thanks.

REGISTRAR DARLENE SUTHERLAND: Thank you. The proceedings are now on break and will resume in one hour.

--- Upon breaking at 12:26 p.m.

--- Upon resuming at 1:37 p.m.

REGISTRAR DARLENE SUTHERLAND: Welcome back. The proceedings are again in session.

COMMISSIONER MacDONALD: Thank you. Ms. Cox, we're ready for the witnesses again.

MS. JENNIFER COX: Yes, if we could just recall the witnesses?

TREVOR MacLEOD, Resumed:

TODD BROWN, Resumed:

MATTHEW BOYLE, Resumed:

CHRISTIAN GALLANT, Resumed:

COMMISSIONER MacDONALD: Thank you again, Witnesses, and Ms. Cox.

--- EXAMINATION IN-CHIEF BY MS. JENNIFER COX, (Continued):

MS. JENNIFER COX: So, Matthew, I'm going to start with you.

MR. MATTHEW BOYLE: Sure.

MS. JENNIFER COX: So now I think what we can do is we can go into the actual operation of the radio that we've been here talking about all morning, or a big part of the morning and afternoon. So in front of you, you have a couple of radios.

MR. MATTHEW BOYLE: Yes.

MS. JENNIFER COX: So perhaps we can start with description of the radio and talk a little bit about sort of the buttons that we may be able to see and just the basics of it.

MR. MATTHEW BOYLE: Sure. So the most important thing really to remember about these radios is that they're extremely programmable. So we talked this morning about talk groups and fleet maps, but also in terms of what every button does, how the radio will react to a short press of the button, a long press of the button, so really, highly customizable. And what that means is that I'll give you an overview of some of the most common functions that would be generally standard amongst agencies. But important to note that each agency does make their own choices on what's going to work most effectively for them. For example, some agencies would have an active emergency alarm, and some would not. Some would use RTT to signal

a dispatch centre and some would not, and so on.

But generally speaking, as far as the top of the radio goes, we would have a volume knob and a channel knob, and those would be probably the two most common things that a user would interact with, as well as on the side of the radio, the Push to Talk button, which is the large button that we spoke of this morning. Really, those are the things that are the most standard. And other than that, there's some other side buttons which can be programmed to do a multitude of different functions, and every agency would be different with those.

So the radios all have at least a front screen. Some also have a top screen for the user to view, and so they can see what talk group they're on and what zone they're in. Again, just to explain that concept, when we talked about fleet maps this morning, we talked about the channels and we showed the chart of the different talk groups that exist, and so we kind of divide them into buckets or zones. So on my channel knob on the top of the radio, I have 16 positions which signify 16 channels in a zone, but then I can move to another group of 16, and another group of 16, and another group, and so on. And so a user could have 150, 200 talk groups in their radios would not be uncommon when we consider all of their internal as well as the interoperability talk groups that they would have.

And so again, to navigate zones on this particular radio, we have some buttons on the front here and one of them would signify zone, and so we'd be able to hit the zone button and then use the up and down arrows to move between those groups of talk groups. I'd compare it sort of to a car stereo where you have, you know, multiple different -- on your FM dial, usually you have some pre-sets, and then you could hit FM again and go to another set of pre-sets, and hit FM again and go to maybe a third set of pre-sets. And so the talk groups are there in those kind of lists, except you could have 12, or 14, or 16 zones of them.

MS. JENNIFER COX: Okay. And we heard a little bit about the ERTT; is the ERTT a button that we can see on that?

MR. MATTHEW BOYLE: Yeah, so the ERTT button would be the nice, big, orange button, and that's always where that is. So not every user has the ERTT enabled, but if they do, then it will always be the big, orange button. It's a little bit recessed, so it's intended to be not so easy to hit by mistake. And again, users can program that in different ways. So they may wish to have it so that the very second they press that button, the emergency alarm would go off right away, or you can program it with a delay, to further reduce the accidental activations.

MS. JENNIFER COX: So -- and this sort of goes to the training, which we'll talk about in a minute ---

MR. MATTHEW BOYLE: Okay.

MS. JENNIFER COX: --- those radios are, you know, kind of standard in the way they look and feel perhaps a little bit, but it's the way they're programmed is what's different, not only between users, but across the country; right?

MR. MATTHEW BOYLE: Yeah, between jurisdictions, between agencies, and even within agencies, sometimes if a fleet's being migrated say from an older model to a new model, then the buttons and configurations of the radios can be a little bit different. So users could be, theoretically, interacting with an older radio model today. And then when they come in tomorrow, there might be a newer one sitting there that they would grab. So the training is really important in that respect.

MS. JENNIFER COX: Well, and it's specific to Nova Scotia ---

MR. MATTHEW BOYLE: Yes.

MS. JENNIFER COX: --- and the TMR2 system; right?

MR. MATTHEW BOYLE: Yes, that's right, yeah.

MS. JENNIFER COX: So if you had training and, you know, you'd worked with a radio for 20 years in Manitoba, that doesn't always help you use the TMR2 radios ---

MR. MATTHEW BOYLE: That's right, yeah. And the other piece of that is really around the procedures, so the -- there's the technical side of the radio,

but then also from a procedure perspective, the way that an agency operates in Nova Scotia might be different than another province, the way that they interact with their OCCs, or those kinds of things.

MS. JENNIFER COX: Okay.

MR. MATTHEW BOYLE: Yeah.

MS. JENNIFER COX: So we talked a little bit about the signals or the sounds the radios make.

MR. MATTHEW BOYLE: Right.

MS. JENNIFER COX: And that's to tell the user what's going on. So I'm wondering if we can maybe play some of those sounds, so that people can hear those?

MR. MATTHEW BOYLE: Sure, yeah. So the radio's quite intelligent in giving feedback to the user about whether or not they're getting through and what the system is feeding them back. So the most common sound that a user would experience would be what we call the Talk Permit tone. So if I was to push the Push to Talk button on this radio, then within a few hundred milliseconds, I should hear a tone that lets me know that I can talk. So I will key this radio up and we'll find out if there is an available Talk Path for me right now, and there is, so that would be the generic tone ---

MS. JENNIFER COX: Okay.

MR. MATTHEW BOYLE: --- that would let a user know that they can speak. The radio will also make a tone if you can't speak. So I'm not able to recreate a busy sort of on demand, it can only happen when the system is busy, but I have a recording of that sounds, so that we can experience what a busy condition would sound like. So instead of the user hearing that sound when they push the button, they would first hear this sound.

MS. JENNIFER COX: Hold it close.

MR. MATTHEW BOYLE: Did that come through okay?

MS. JENNIFER COX: Yeah.

MR. MATTHEW BOYLE: Okay. So, really, just kind of, like, a fast busy signal from a telephone. And then if -- when the system had a channel to give them, then they would get that typical go-ahead tone after that busy. So Trevor mentioned this morning you can either hold the button and keep listening to the busy signal until you get the Talk Permit tone, or you can let it go and the system will call you back, basically, to let you know that there's a channel available.

MS. JENNIFER COX: Okay. And then there's a couple more.

MR. MATTHEW BOYLE: Yeah, the other condition that happens quite a lot would be if a user is already speaking on a particular talk group. So this is not a busy signal from the system perspective, so the system may or may not have a channel to assign to a new conversation. But if I'm on talk group A and someone's already speaking on that talk group, and I don't hear them, or maybe they've stopped between sentences and I think they're done speaking, so I'll just, for the purposes of demonstration, I'll just -- I'll key up the first radio and I'll get the go ahead, and then I'll key up the second radio and you'll hear the talk denial tone. So it's just a really quick, just a short tone to let me know that someone's already talking. And then I would -- the radio would go right back to the audio that was happening on that talk group, so that I don't miss any of a transmission that might be in process.

MS. JENNIFER COX: And that also sometimes is because there's no connectivity to the tower; is that correct?

MR. MATTHEW BOYLE: Yeah, so if you were in a fringe coverage area where the coverage was really marginal, and so I guess that kind of brings me to the next tone. So I'll simulate by taking the antenna off this radio, but there is an out-of-range tone that lets you know if you've completely lost touch with the tower. So if I take the antenna off, after a few seconds, the radio will realize that it can't see the system anymore and it will start to exhibit a tone. It has to think about it for a minute.

[AUDIO TONE]

MS. JENNIFER COX: Okay. So it's a consistent ---

MR. MATTHEW BOYLE: Yeah. And it will continue to do that every seven seconds until it finds the system again.

MS. JENNIFER COX: Okay.

MR. MATTHEW BOYLE: And so what could happen is if in you're in a fringe area where it's just -- it's not bad enough that you've gone completely out of range, but maybe on a particular transmission, the radio doesn't get through to the system right away, then you could also get that short tone of denial.

MS. JENNIFER COX: Okay.

MR. MATTHEW BOYLE: So.

MS. JENNIFER COX: So we heard bonk bonk. What do those tones means?

MR. MATTHEW BOYLE: They mean different things to different people, and of course that's the challenge when we talk about it and when we review documents or talk to someone after a major incident.

So generally speaking, when we talk about a bonk, we would be talking about that really short talk denial tone.

MS. JENNIFER COX: The bonk?

MR. MATTHEW BOYLE: The bonk.

MS. JENNIFER COX: With a K?

MR. MATTHEW BOYLE: Yes, with a K. We would be talking about that short tone that's basically saying either someone is already talking on the talk group or the system just didn't have -- you just didn't have a really strong connection to the system and the radio didn't get through right away. Typically we would call that a bonk. The bong, with a g, would be the longer tone that's repeating that's telling you that you don't have any connection back to the system, also known as an out-of-range tone.

MS. JENNIFER COX: Okay. And we didn't talk about the range

issue in terms of, you know, how the -- what the coverage looks like from a tower.

So one of the things that would be important is for the Commissioner and the public to know how far a tower reaches.

MR. MATTHEW BOYLE: Sure. So again, it depends, as we talked this morning, a lot on the topography around the tower site. Generally speaking, we use a number of 35 kilometres, and when we do computer generated coverage predictions, 35 kilometres around the tower site is the range that we would normally look at. But if you've got a particular -- so the way that the radio signals work in the band that our public safety system is, it's based on line of sight. So the more obstructions that are in the way between the user's antenna and that antenna that's up on the tower, the harder it will be for that signal tog et through, because it doesn't have that line of site.

And so 35 kilometres is sort of a generic estimate, but within that 35 kilometres, you can certainly be subject to obstructions, like hills, like large buildings, that could interfere with the signal. And then it's entirely possible that you could get service in some areas beyond 35 kilometres if you had a particularly good line of sight.

MS. JENNIFER COX: Okay. So let's go into the training.

MR. MATTHEW BOYLE: Sure.

MS. JENNIFER COX: So we've heard that you guys are responsible for the training, you know, whether it's mandatory training that you're providing to Province of Nova Scotia employees, or whether it's voluntary training. What's the biggest reason that users need training?

MR. MATTHEW BOYLE: So a couple of reasons, but the first one that I would cite is because this is a shared radio system, the good and bad behaviours of one radio user can really impact the other users.

MS. JENNIFER COX: Okay.

MR. MATTHEW BOYLE: So I mentioned this morning that the way that a trunking system works is based on the assumption that there is a limited capacity

that's shared by all users, and during day-to-day operations, the system is sized to suit the volume of radio transmissions that are happening.

When we get into major incidents, it really becomes critical that user behaviour can influence the success or, you know, challenges of an incident. So because we're on a shared system, you know, if for example we had a fire department that was not using the radios effectively, not building a communications plan effectively, they could really be tying up a lot of capacity on the network that would then interfere with RCMP, or EHS, or other providers that were trying to use it.

So in the training, we talk a lot about how the system works to help a user understanding so that they get familiar with changing talk groups and what the different tones mean, and what the system is trying to tell them. But we also talk a lot about that piece of behaviour and why it's important, for example, that during a large incident, users switch to interoperability talk groups.

There's a lot of value in interoperability, in that multiple users can talk to each other, police, fire, ambulance, and so on all have the ability to speak. But it's also really a system traffic management function, where if they don't move to that shared talk group for a common incident and they're all talking on separate talk groups, that will overload the system.

So the shared behaviour is really one piece of why the training is important.

Of course, it would just be operational effectiveness, the more that somebody understands the tool that they're carrying, the more effectively that they'll be able to use it, even for their own day to day functions.

And then the third piece is really around procedure, which is always a component that we would train. So we're not just training a user to say that button A does this and button B does that. We actually customize -- so any training that our office delivers, which is not all of the training, but when we do deliver training or assist an agency in developing materials, we would work to build their operational procedures

into that. So how they communicate with their dispatch centre, how the emergency alarm functions, when they should press it, and those kinds of things. So it really becomes training as almost more of a strategic than just an operational piece, because it's really about how the organization operates. And the radio is just a tool to facilitate that.

MS. JENNIFER COX: Okay. And the training has changed since the mass casualty; correct?

MR. MATTHEW BOYLE: The training content?

MS. JENNIFER COX: Yeah.

MR. MATTHEW BOYLE: So different agencies deliver training in different ways. So as I mentioned, some our office delivers centrally, and other agencies deliver their own training. Sometimes with more or less input from us on the content. So the training that we deliver to the agencies that we support, the content of that has not changed a lot ---

MS. JENNIFER COX: Okay.

MR. MATTHEW BOYLE: --- since the incident, but I couldn't speak to what other agencies may have changed.

MS. JENNIFER COX: Sure. Okay. And in terms of the training, there's, you know, the understanding of how it works, but actually making sure you know how to use it; right?

MR. MATTHEW BOYLE: Yeah.

MS. JENNIFER COX: So what's that training like? What -- because that's different than just sitting there and listening to somebody talk.

MR. MATTHEW BOYLE: Right. So two pieces to that as well. So one would be, at the end of the training sessions that we deliver, we'll often do a practice component, where we actually, after we've done a slideshow and talked about some concepts, we'll actually put the radios in people's hands to try to help them get a chance to build the muscle memory that they need of where certain channels are and

what the procedures are to contact their own dispatch centre or other dispatch centres.

But then even separate from the training that we deliver, we do organize some exercises and we encourage agencies to organize their own exercises so that they can actually ensure that their members are practicing this.

Again, it all comes back to muscle memory. And, you know, going back to the car stereo example, if I'm in my car, I know what every button is for every radio station. If I get in my wife's car, I'm much less confident about how to find the station that I want. And so it's just like that with a radio. It's a muscle memory thing. Not to imply that different radios within an agency are programmed differently, but from the perspective that the more I do it, the more I exercise it, then the more likely I am to remember when I need it in an emergency. For example, if I have to find a shared law enforcement channel, if someone watches a presentation quite a few times, they still may not remember that all the law enforcement channels are in bank number 7, but if they're trying it once a week or once a month and actually going to that channel and having a conversation, perhaps with someone from another agency, they'll build that muscle memory and it'll be easier when they need it.

MS. JENNIFER COX: Right. So some of the challenges are not knowing how the buttons function; right?

MR. MATTHEW BOYLE: Yes.

MS. JENNIFER COX: So for example, the ERTT, one of the things that's a challenge with that is learning to hold it for a specific period of time? Is that not correct?

MR. MATTHEW BOYLE: That could be one, yeah.

MS. JENNIFER COX: Okay. And some of the other ones would be just not knowing how to find the talk group ---

MR. MATTHEW BOYLE: Yes.

MS. JENNIFER COX: --- on the function of the radio; right?

MR. MATTHEW BOYLE: That's right.

MS. JENNIFER COX: Okay.

MR. MATTHEW BOYLE: And so, you know, agencies have their own talk groups that they use every day and they'll be quite proficient normally in navigating those. It's those lesser used talk groups that maybe somebody hasn't had to find in six months, that it's hard to remember when I've got, you know, 26 zones of talk groups, which one of those 26, you know, groups or zones is the talk grouping that I need.

MS. JENNIFER COX: Right.

MR. MATTHEW BOYLE: Yeah.

MS. JENNIFER COX: And I think that's the bucket piece that we keep talking about, is the zones, those are some of the other ways. But there's, like, another 16 potential layers under each one of those buckets; right?

MR. MATTHEW BOYLE: That's right.

MS. JENNIFER COX: So there's 16 different channels below that bucket?

MR. MATTHEW BOYLE: That's right. Yeah.

MS. JENNIFER COX: So we're not talking about just 16, we're talking about 16 times however ---

MR. MATTHEW BOYLE: Right.

MS. JENNIFER COX: --- many have been programmed into these radios.

MR. MATTHEW BOYLE: Yes.

MS. JENNIFER COX: And ---

MR. MATTHEW BOYLE: And of course the challenge is, when we do this in a training environment, it's typically quite calm, whereas when agencies are in need of, for example, a multi-agency talk group during an incident, they're also trying to deal with whatever is unfolding during the incident. So someone could be driving to a scene and trying to navigate their mobile radio, or they could be at a Command Post

and they're trying to navigate their portable, but, you know, there's other things going on around them. There's activity and noise and distractions and so on. So that's where the muscle memory becomes really important.

MS. JENNIFER COX: And that would also tie into the whether you're using an encrypted or unencrypted platform; right? Because the talk group is either an encrypted platform or not; right?

MR. MATTHEW BOYLE: That's right.

MS. JENNIFER COX: Okay. So we didn't talk about encrypted versus unencrypted, so we should maybe have a little conversation about what is an unencrypted conversation.

MR. MATTHEW BOYLE: Sure. So most conversations that would have traditionally happened on the radio network, speaking broadly across all agencies, would be unencrypted. Most transmissions that are sent across the air are sent as voice that would be receivable by a third party with a listening device, which is a commercially available device for hobbyists and others who are interested in public safety radio.

And so when agencies have needs to secure their communication, either because they're sending sensitive information, law enforcement information, personal health information, those kinds of things, if they're sending that over the air then there is some legislation that says that they have to protect that data so that it's not being publicly released, and so the radio system supports this encryption, which is basically a scrambling of signals.

And so we talked earlier in Trevor's presentation about the Key Management Facility, and that facility is basically responsible for sending particular encryption keys out to particular users based on their authorisation, and then those encryption keys are used basically to, when I'm transmitting a signal this radio will scramble it before it sends it out over the air and the radio that's receiving it at the other end of the transmission has to have the same key to be able to unscramble the signal

on that end. And nowhere in between my radio and the other radio does that get unscrambled, so there's just no opportunity for anyone else to intercept that transmission and be able to listen to it or know what's happening.

MS. JENNIFER COX: And if a user doesn't know which is unencrypted versus an encrypted talk group, that can impede their ability to have the communication the way they want to; is that fair?

MR. MATTHEW BOYLE: Yeah, it can definitely -- so if a user thinks that they're using an encrypted talk group and they're not, then there could be a release of personal information or security information that otherwise shouldn't have gone over the air. Again, you can tell by looking at the radio. There are icons to let you know which talk groups are encrypted and not, but depending on the situation you're in, whether or not a user stops and looks like that or maybe going by memory, it would be hard to say.

MS. JENNIFER COX: And let's talk about the patching that takes place. So if you try to join an encrypted versus an unencrypted conversation, so if you -- if the dispatcher wishes to put the two of them together, what's the outcome of that?

MR. MATTHEW BOYLE: Basically, the conversation becomes unencrypted because the system has to send out that audio in a clear format for the user that doesn't have access to encryption keys.

MS. JENNIFER COX: Right.

MR. MATTHEW BOYLE: And so because it's being sent out in a clear format to support that lowest common denominator, so to speak, of the radio that support encryption, then it's sent out in a form that can be third party intercepted.

MS. JENNIFER COX: And that's why we hear "in the clear", meaning an unencrypted platform?

MR. MATTHEW BOYLE: That's right, yeah.

MS. JENNIFER COX: Okay. And let's talk about the shared -- the LAW talk groups.

MR. MATTHEW BOYLE: Okay.

MS. JENNIFER COX: So currently in Nova Scotia, there are six of them; correct?

MR. MATTHEW BOYLE: Yes.

MS. JENNIFER COX: Okay. And how many of them are encrypted?

MR. MATTHEW BOYLE: Three of the six.

MS. JENNIFER COX: Okay. And why is it only three were encrypted?

MR. MATTHEW BOYLE: So we touched a little bit earlier on the fact that when TMR2 was first introduced, not all of the municipal police agencies, and in fact some of our provincial police agencies, didn't have access to encrypted radio, so there was some seeded radios that had been provided out to municipalities and then also radios that they had bought on their own. And especially in the case of the smaller municipal police departments, they generally didn't have encrypted radios, we also had some provincial enforcement groups that didn't have encrypted radios, and so... And really, that comes back to a cost factor, so the cost of an encrypted has traditionally and is still more than a non-encrypted radio.

And so we wanted to create a suite of channels that allowed for law enforcement interoperability, but we had to understand the fact that some of that would happen on an unencrypted basis because there were users that couldn't support the encryption. So at the time when we looked at it, we determined that we would make a 50/50 split based on the proportion of users that might require that kind of interoperability. So it was a suite of talk groups that were created just for law enforcement users, but with a split of talk groups matching the split of those users that did and didn't have interoperability, or encryption, sorry.

MS. JENNIFER COX: And now that we know that everybody's encrypted, we don't need those unencrypted LAW ---

MR. MATTHEW BOYLE: That's right.

MS. JENNIFER COX: --- channels anymore; correct?

MR. MATTHEW BOYLE: That's right. In fact, they're seeing virtually no use and we see quite a bit of demand on the encrypted ones.

MS. JENNIFER COX: Right.

MR. MATTHEW BOYLE: Yeah.

MS. JENNIFER COX: So there -- they could be switched over to an encrypted. But perhaps it would be helpful for the Commissioners and the public at large to understand the process ---

MR. MATTHEW BOYLE: Yes. Now, this is a ---

MS. JENNIFER COX: --- of doing it.

MR. MATTHEW BOYLE: --- question we've had a few times recently. So in order to change a talk group from unencrypted to encrypted, we actually have to reprogram every radio that contains that talk group. And it would be, from a technical asset management perspective, important to us that we don't have a long period where... For example, two users might have the same talk group in their radio but one of them has it programmed as encrypted and one of them has it programmed as non-encrypted, that's a very risky situation because if the users happen to be assigned that talk group to use they actually wouldn't be able to communicate with each other. And so in order to change this over, we would need to, within a relatively short period of time, have all of the stakeholders on the system agree to reprogram their radios and then ultimately have Bell carry out that work. So that would involve all of the municipal police departments, all of the provincial enforcement agencies, and then federal users as well.

So it's just -- it's a large logistical operation. It would certainly come with a reasonably substantial cost, but from a technical perspective it can be done.

MS. JENNIFER COX: And so from the forward planning piece that you'd typically do, so we're coming up to the 10-year mark with Bell's ---

MR. MATTHEW BOYLE: Yeah.

MS. JENNIFER COX: --- contract, would that be something that you would look at the anniversary dates potentially as one of the things that you would be looking at as adding in?

MR. MATTHEW BOYLE: Yeah. So from a provincial perspective, we would be willing to look at that -- I think it would be a logical thing for us to look at that with our own users, but in order for it to be a successful transition, again, the municipalities and federal users would have to be taking those same steps with Bell.

MS. JENNIFER COX: Okay.

MR. MATTHEW BOYLE: Yeah. And the contract structures are a little bit different. So for a municipal or a federal user, they may not be going through the kind of substantial contract re-envisioning that we are based on this 10-year anniversary, so those smaller user groups tend to be more just a monthly subscription paid to Bell, and the thought is potentially that they may just continue on with their monthly subscriptions. And so they may not have the same opportunity for a big inflection point as what the provincial users will have.

MS. JENNIFER COX: Okay. And one of the last things I wanted to talk to you in particular, Matt, about was the GPS.

MR. MATTHEW BOYLE: Yes.

MS. JENNIFER COX: So the implementation of the GPS technology in a mobile or ---

MR. MATTHEW BOYLE: M'hm.

MS. JENNIFER COX: --- sorry... The radio in front of you, I'm losing track of mobile and portable, portable.

MR. MATTHEW BOYLE: Yes.

MS. JENNIFER COX: Because it's the portable radio and the GPS technology and that that's a little bit different than the mobile one; correct?

MR. MATTHEW BOYLE: Right. From the radio system

perspective, they would not be different, but from the user perspective, traditionally, public safety and public service agencies have existing GPS systems within their vehicles and pretty good tracking of vehicles. And so they -- the real added value for the GPS service is around the portable radios and being able to locate someone when they're away from that vehicle, yeah.

MS. JENNIFER COX: Okay. And so let's talk about what that would take.

MR. MATTHEW BOYLE: Sure. So the system that we have today, the TMR2 system, is really intended to be a voice system, that's the way that it was designed and that's really the technology platform. It's not that we've only done a partial implementation of a technology or something like that, but it's really designed largely and primarily to provide voice service. And the system manufacturer does offer certain added capabilities, one of which is the GPS, but it's not -- it's not just a matter of turning it on.

So the radios today, first of all, you have to have radios that are capable of knowing where they are. So older models of radios did not have an integrated GPS chip, the newer radios today have the GPS chip, the GPS antenna, so the radio knows where it is. But then the challenge becomes how does the system process that data? So how does it get from the radio to where it needs to go? Which, of course, leads to the question of where does it need to go?

In a system like ours, we have got a number of agencies, a number of different OCCs and dispatch points, a -- and they're using a number of different CAD and records management systems. And so in a multi-agency system like this, in order to implement GPS, I guess there's a couple of parts of it.

So one would be a network architecture. How do we build a system that will flow the right data from the right radio to the right endpoint? Assuming that not all users would want their GPS data shared with all users, so we have to make sure that, for example, RCMP data is only going to RCMP, and ambulance data is only

going to EHS, and so on, so there's an architecture perspective there.

There's a security perspective to make sure that that data is secure and that neither unauthorised users or outside third parties have an opportunity to intercept that GPS data. Because of course, if there was a way for a third-party to intercept that they would become privy to the location of enforcement officers and others, so that is certainly a challenge.

There's a software development challenge because, as I mentioned, agencies use a number of different CAD systems, and so it's actually a custom software build to modify the CAD system to interact with the radio system so that they have a way to talk together and send and receive the data.

And then finally, there's, of course, the security concerns about actually connecting the radio system out to all these other dispatch systems. So each agency would maintain their own dispatch software, and Bell in maintaining the radio system, and so when we start to interconnect these things we have to make sure that that that's being done in a secure way. So the process around GPS radio has been ongoing for a number of years, and we've been working through these different challenges and working with the CAD software vendors, working with IT security folks, and so on on the implementation.

And then of course what will happen, so it sounds like a really common feature. From the public perspective, people are used to all sorts of devices being able to track your location, but in the world of radio systems this is actually not a very common feature.

So we're largely at the leading edge of implementing this kind of technology over a radio system, so the other piece we have to do, then, is some performance monitoring and understanding how is the transmission of GPS data over the radio system going to impact the voice performance of the radio system. So we have to be careful to make sure that that one doesn't end up degrading the other, and that we'll get acceptable performance. And to that point, we often point out that the

GPS that's available through the radio system is not a tactical tool and it's not even necessarily a real-time tool, because the radio system should always prioritize the voice traffic. That's considered to be the most important piece.

And so the capability of these radios, without getting too technical, the radio system is only able to process a relatively small amount of data, which means we can't -- so on a commercial GPS tracking application like you might find in a vehicle, a snow plow or an ambulance, for example, that will go through the commercial cell network. And there's all sorts of data capacity in the cellular network. As we know, we can stream videos and access things from our phones, and there's really no issue with capacity there. And so you can ping the location of a vehicle every three seconds, every five seconds. You can get all sorts of sensor data from the vehicle about how fast it's going and all sorts of things. The radio network has a much lower capacity than that inherently through its design. And so it will not be practical to use GPS through radio to track multiple officers in a tactical situation or multiple public safety users. The deployment of GPS on the radio system is really about the ability for a user to press their ERTT button to declare an emergency, and for the coordinates of that one user to be sent to the dispatch centre, or for a dispatch centre to be able to ping one or a very small number of units at a point in time to determine their location. It's really more of, in a sense, a personnel safety application, but there just isn't capacity in the radio network for this radio GPS application to be providing consistent, real-time data for a large number of responders. So we've tried to be clear with users that it would not be applicable to a tactical situation.

MS. JENNIFER COX: Okay. So it's a on demand ---

MR. MATTHEW BOYLE: Very much an on demand, yes. Yeah.

MS. JENNIFER COX: So and primarily on demand by virtue of the dispatch asking for information?

MR. MATTHEW BOYLE: Either by a dispatch query or the ERTT.

MS. JENNIFER COX: Okay. And you mentioned the word CAD,

and I think we just have to make sure that it's the computer-aided dispatch software that we're talking about and how that interacts with the GPS technology that ---

MR. MATTHEW BOYLE: Yes.

MS. JENNIFER COX: Okay.

MR. MATTHEW BOYLE: Right.

MS. JENNIFER COX: And again, GPS technology on the radio as opposed to the cellular networks; right?

MR. MATTHEW BOYLE: Exactly. Yeah.

MS. JENNIFER BOYLE: And so the idea that, you know, you can track your child on your iPhone with, you know, the coordinates, the difference between that is the cellular signal versus the radio signal; correct?

MR. MATTHEW BOYLE: It really ties back to a number of those different pieces, so the capacity of the cellular network to do that, but then also, like, the security. So when we're tracking public safety officials, we need to know that we have a security that, you know, if I'm tracking some friends through an iPhone app or something like that, it wouldn't necessarily matter that a third party might see one of our locations. But when we're talking about tracking public safety personnel, the security piece is very important there too, so the capacity and the security both ---

MS. JENNIFER COX: The encryption.

MR. MATTHEW BOYLE: --- would be a consideration, yeah.

MS. JENNIFER COX: Would -- basically, an encrypted GPS.

MR. MATTHEW BOYLE: The encryption but also how that flows back through the network.

MS. JENNIFER COX: Yeah. Okay. All right.

So, Christian, you're now on the hot seat. Christian, I'm wondering if you can perhaps just tell the Commissioners a little bit about your title and your background.

MR. CHRISTIAN GALLANT: Sure. My name is Christian Gallant.

I'm a civilian member with the RCMP. I'm currently the divisional IMIT officer for H-Division. I've been with the RCMP for 14 years. During that time, I've been posted to National Headquarters in Ottawa. I spent nine years in L-Division, which is in Prince Edward Island. Transferred to H-Division in 2018. While in L-Division, I did serve as a Divisional Informatics officer for that division. And during that time, I led the implementation of the L-Division or PEI version of TMR2, which is known as PICS2, for the RCMP. Upon my transfer to H-Division, I did hold roles in the project coordination section as well as the team lead for the radio workshop. During the incident on April 18th of 2020, I was the team lead for the radio workshop, as well as the acting divisional IMIT officer.

I hold two diplomas in information technology. As well, I have a Bachelor of Integrated Studies from the University of PEI. And 20 -- I've been in the information technology sector for approximately 20 years.

MS. JENNIFER COX: So in the context of the information we've already heard, you're in charge of this Key Management Facility; correct?

MR. CHRISTIAN GALLANT: Correct, yeah.

MS. JENNIFER COX: And you have what they call -- is called the Radio Shop; right?

MR. CHRISTIAN GALLANT: Yes, the ---

MS. JENNIFER COX: Okay.

MR. CHRISTIAN GALLANT: --- Radio Workshop is one of the units that reports to me now as the divisional IMIT officer. And they're responsible for the management of the Key Management Facility on behalf of the Province of Nova Scotia for the three provinces currently on TMR2.

MS. JENNIFER COX: Okay. And so you have a number of staff, technicians working with you; right?

MR. CHRISTIAN GALLANT: Yes, that's correct.

MS. JENNIFER COX: And so these would be civilian members of

the RCMP as well?

MR. CHRISTIAN GALLANT: Yes, I have a combination civilian members and we also have some public service employees that are -- that work in that unit.

MS. JENNIFER COX: Okay. So we've heard a little bit about the Key Management Facility, but I think if you could quickly talk a little bit more about what it actually does?

MR. CHRISTIAN GALLANT: M'hm.

MS. JENNIFER COX: So we know that the Province of Nova Scotia owns it, but you, as the RCMP, manage it; correct?

MR. CHRISTIAN GALLANT: That's correct. So as Mr. Boyle alluded to, with the encryption of a radio, you have one radio that would encrypt the transmission, send it out. You'd have the other radio that would decrypt that transmission upon receipt. In order to do that, both of the radios have to have what's known as the same encryption key. So on the TMR2 network, there are encryption keys that are owned by different agencies. So the RCMP would own their encryption keys. The Province of Nova Scotia is -- also owns encryption keys. The RCMP manages those encryption keys in the system to ensure that all of the radios have the proper encryption keys to facilitate their communication. So that if we have two users that are working for the Department of Fisheries and Oceans, they're able to talk to each other. We may have users that are working in a situation of interoperability between agencies, making sure that those encryption keys are on the radio, so that they're able to communicate with each other as well on a shared law talk group or on any of the other, I guess, mutual aid talk groups.

MS. JENNIFER COX: And in terms of these keys, like, it's not a one-time thing, you put the key on and we're good to go. It's an ongoing thing; isn't it?

MR. CHRISTIAN GALLANT: Correct. The encryption keys are recycled every month, and that's part of the security posture for the system. So every

month, the team would go through a process to build and then to implement those encryption keys to all the radios on the network.

MS. JENNIFER COX: Okay. So it's quite an organized and arduous task; right?

MR. CHRISTIAN GALLANT: It is and it's something that has to be timed as well, because if you get into a situation where one radio has a key that's off from another radio, then obviously, they're not going to be able to communicate. Or if you have one of the dispatch consoles that is off key with the rest of the network, it's going to impact the communication of the agencies. So there is a timing issue there to make sure that there is time between the release of the encryption keys, such that all of the devices on the network are able to download those keys, and then there is the actual changeover of the encryption keys ---

MS. JENNIFER COX: So there's a fair bit of manpower that -- like, human resources required to make this happen; right?

MR. CHRISTIAN GALLANT: Yes, and IT resources. So when we talk about the Key Management Facility, it is a server-based infrastructure, and then there is a client. But there is a process that takes place, yes, on a monthly basis and it is time consuming for the individuals ---

MS JENNIFER COX: Right.

MR. CHRISTIAN GALLANT: --- that ---

MS. JENNIFER COX: So having the province delegating that to the RCMP because you have the manpower, it works; right?

MR. CHRISTIAN GALLANT: Yes, that's correct. We have a team of technicians that are able to manage that as part of their day-to-day. In addition to the monthly management of the keys, making sure that everything is up to date, my unit is also responsible for maintaining the devices on the Key Management Facility. So if we have an agency that acquires new radios, part of the process of getting those radios authorized on the network is in -- is implementing them on the KMF so that they have

the proper encryption keys. And then when a radio is decommissioned, making sure that that is removed and make sure the processes take place to remove the encryption keys from the radio.

MS. JENNIFER COX: Or even if they're going out for repair, you take them and you kind of wipe them; right?

MR. CHRISTIAN GALLANT: Correct. So there's two processes there. One involves my unit, one does not. If we're -- if a radio is going in for a short repair, say a mobile -- vehicle is going in to a mechanics to have the oil changed, security policy would state that the radio is inhibited. And what that does, is it deacs the -- deactivates, sorry, the radio, so that it will not turn on, so somebody's not able to listen to communications. However, if a radio is going out of the care and control of the agency for a long period of time, for example, if they're sending it to Bell or to Motorola for repair, the policy would be that that radio would be zeroized. And when a radio is zeroized, all of the encryption keys are removed from that radio so that it's basically inoperable. And if you think about -- another example of that would be a cell phone. When you wipe a cell phone, you basically remove all of the information from it so that it would not be usable or so that information cannot be recovered.

MS. JENNIFER COX: Okay. And so one of the other things your radio shop does is either troubleshoot radio operation or provide radios; right?

MR. CHRISTIAN GALLANT: That -- that's correct. So from a KMF perspective, we are responsible for troubleshooting encryption problems that may happen for any of the number of agencies that we support. So users would contact the radio workshop. There could be an issue where the radio was offkey, where the radio was zeroized, and the radio workshop would work with them and/or the vendor to correct that problem.

On top of that, the radio workshop does provide support for all of the users within "H" Division, sorry, RCMP "H" Division. So from that perspective, we're looking after the subscriber equipment, the portable radios, the mobile radios. We're

looking after the infrastructure internally that supports that, and that would include the loggers that are used to log that communication from the radios. We're providing support to our Critical Incident Command, as well as the OCC, and that support is available on-call 24-hours a day.

And then we also manage projects and initiatives related to radio for the RCMP, and that's really where we work closely with Mr. Boyle and Mr. Brown and their team to initiate projects. And examples of that would be that we -- the RCMP implemented three towers to augment radio coverage. Based on the specific requirements of our members, we work closely with those teams to make that happen.

We also interface, we made reference, with the National Radio Services, which is a team of engineers that we have in Ottawa working for our National Headquarters Division on radio related issues.

We also provide training to the members on TMR2, as well as inventory and lifecycle management for all of the devices, so maintenance, configuration. And when there was mention of the Fleet maps and the code plug or configuring of the radio, that is all done by the radio workshop as well.

Communication support for regular day-to-day operations as well as for major events as well as enhancements, if cover -- if tools are required to enhance or to extend radio communications for any of the teams, the radio workshop team would be available to participate in that as well.

MS. JENNIFER COX: And so what does participate mean? You have equipment that you can take out to assist in increasing capacity? Is that fair?

MR. CHRISTIAN GALLANT: Not so much maybe capacity, but however, a example for the -- for the Critical Incident Team support that we -- that we provide, we would have digital vehicular repeaters that we could use. If we were getting into an area of low coverage where we needed to extend that coverage to our portable devices we would use those -- we would use those tools to accomplish that.

There's a -- there's a series of tools, I guess, that we provide,

whether that be cellular extenders, but it's not to increase the capacity of the radio system it's more to enhance the service that we're receiving.

MS. JENNIFER COX: Okay. And for the benefit of those who don't know what a repeater is, that's part of the platform that allows the conversation to take place?

MR. CHRISTIAN GALLANT: Yeah. Sorry, I should have clarified. So when we think about the radio tower, sometimes we'll -- that'll be synonymous, we'll use the word "repeater" to indicate the tower. When I'm talking about the digital vehicular repeater, what that provides is an intermediary device between say the member and the tower, so it's -- it just repeats that signal to make it stronger so that it ---

MS. JENNIFER COX: Kind of like a boost.

MR. CHRISTIAN GALLANT: More like a booster, yeah, that's a good... When we think about cellular, that's the same thing, but in the radio network.

MS. JENNIFER COX: Okay. So you're responsible for the training that's being provided to the members?

MR. CHRISTIAN GALLANT: Yes, that's correct.

MS. JENNIFER COX: And would it be fair to say that the training has changed since the mass casualty?

MR. CHRISTIAN GALLANT: I would say that the content of the training has not. We've always trained -- the objectives of the training have always been on -- we train on the hardware, we train on the configuration of the radio, what the buttons do, similar to what to Mr. Boyle showed earlier. We talk a lot about the Fleet map and the interoperability. So as it was shown earlier, this is our general duty Fleet map that we use for the RCMP, and as you can see, it's 10 zones across and 16 talk groups in each zone. So there's 160 available talk groups for use.

So we spend a lot of time going over the Fleet map. We talk about Mutual Aid, we talk about the impact of not using Mutual Aid on the network. As alluded to earlier, the -- we go through practice with the members during that training, and then

we talk about procedures and whatnot around the system.

So the training since, well I came to the division in 2018, and the training, I would say, has not changed drastically after 2020. We -- we have always demonstrated the ERTT procedure as part of our training with a hotlink, so I wouldn't say that it's changed drastically.

MS. JENNIFER COX: Okay. But it -- maybe the subject matter of it has -- hasn't changed, but the actual way it's delivered?

MR. CHRISTIAN GALLANT: So -- sorry, yes, the way it's delivered. So prior to COVID, in 2020, our training was largely in-person based. We do have an Agora -- sorry. Agora is our online training system with the RCMP, and we do have a course that is available online through Agora for our members. Outside of that, we were doing largely in-person training. When COVID was announced in 2020, we moved more to -- we still had an in-person training, but it was moved to an online platform, so it was -- it was run over our MS Teams.

What that allowed us to do is it allowed us to be much more flexible in the delivery of the training because members were able to take it whether they were in the office, whether they were at home. As long as they could find a quiet place and had a radio to participate, they would -- they would be able to do -- they would be able to do so.

MS. JENNIFER COX: So we heard Todd, sorry, Matt, actually, talk a little about the muscle memory piece, which appears to be quite critical to the operation of the -- of the radio. So after the mass casualty, was it -- was it determined -- did you have any sort of information that came to you that would suggest to you that the muscle memory wasn't being as well developed as it needed to be?

MR. CHRISTIAN GALLANT: I think so. We -- you know, as alluded to earlier, one of the -- one of the is exercising, and you know, understanding how to change zones, how to change talk groups, developing that muscle memory. To sit down in a classroom for two-and-a-half hours and to go through this is one thing, but

to actually engage and do it on a regular basis builds that muscle memory.

So after the incident on April 18th, it became apparent that some of the functions of the radio weren't, I would say, widely understood or weren't being exercised. So we did engage with the OCC, and -- sorry, our Operational Communications Centre, and now we have weekly ERTT testing with our members so that they get to experience the push and the hold, that you spoke of earlier, the push and the hold, what happens, what that sounds like, the 20-seconds of hot mic, the interaction from our Operational Communications Centre after.

Since the mass casualty, we have also reviewed a lot of the standard operating procedures in regards to interoperability, and we've enhanced those, and we've enhanced the exercises as well around that. So the OCC is -- continues to regularly exercise interoperable situations with our members and with other agencies.

MS. JENNIFER COX: And then part of your role, too, and I think you've kind of alluded to this, but I want to make sure it's clear on the record, is that you're providing feedback to the Province or you're working with them with respect to coverage in particular. So if your members are experiencing issues with coverage, there's a dialogue or, you know, you guys are coming up with solutions to those when you can; right?

MR. CHRISTIAN GALLANT: That's correct. Yeah, so -- so as part of the training that we do deliver, radio coverage is a part of it. And we show the coverage map and, you know, we can clearly see on the map, is it green or good coverage? There are some areas in yellow that you may experience some issues.

And we go over some of the things that can affect coverage, the topology. At the top of the hill, you have great coverage. Down at the bottom, maybe not so much, inbuilding coverage and what not.

But during the training, we also encourage the members to, if we're aware of a lot of the coverage gaps and we work with or continue to work with Matt and his team to correct those, but if there are areas, to let us know so that we can continue

that dialogue and make sure that we're looking at solutions to those problems.

MS. JENNIFER COX: Okay. And finally -- well, actually, I have a couple more questions for you, but one of them was did you have anything more to add to the conversation that we had with Matt about the GPS technology and the capabilities of the radio?

MR. CHRISTIAN GALLANT: So Matt covered it pretty well. I would like to reiterate that yeah, it is complex. And we do have to ensure that that data is securely transmitted from the device, through the Bell network, and then to the various CAD solutions. We don't want to get into a situation where that information is intercepted, because then we're compromising the safety of the public safety employees.

And, you know, the project does require extensive coordination between Bell, Motorola, the RCMP, the provinces, CAD vendors.

And just to reiterate the expectations, the expectations for GPS on the radio network are for the ERTT operation. So currently the OCC would receive a lot of information from the radio system when the ERTT is activated. Going forward, when the ERTT is activated, they would receive, then, the GPS location of the radio or of the member, and that's meant for to enhance our officer safety.

And then the on-demand pull, which is, "My member is not responding, I'm a dispatcher, I'm going to get authorization and I'm going to pull the GPS location of that member. It's not meant to be a tactical tool. There are other tools designed for the tactical use of GPS. And as was alluded to, it's not a constant GSP pole. In our computer dispatch, we're able to, under normal operation of a vehicle, we're able to see updated GPS information every 30 seconds, or every 250 metres, and if we're tracking on a vehicle, it's every five seconds, or every 150 metres.

If we tried to do that with the portable radios, it would -- it's not feasible on the system.

So and you know when Todd talked about talk paths earlier, you

know, three talk paths on a repeater system, if we're tying up -- trying to tie up that for GPS, then obviously the voice traffic, it may impact the voice traffic as well.

MS. JENNIFER COX: Okay. So the last issue I wanted to talk to you about was Exhibit number 1080.

So, Madam Registrar, I'm wondering if you could pull up -- and this is a picture.

And this is an exhibit that's already been entered. It's sideways. But it's a picture of the perpetrator's vehicle with the radio in there, which you have seen a copy of this picture, have you not?

MR. CHRISTIAN GALLANT: Yes, I have.

MS. JENNIFER COX: Okay. And one of the questions that's been asked is what the capabilities of that radio might be. So do you have the ability to tell us whether that radio could do anything?

MR. CHRISTIAN GALLANT: I can say that that radio would not be able to function on the TMR2 network.

MS. JENNIFER COX: Okay.

MR. CHRISTIAN GALLANT: In looking at that radio and doing a comparison, that radio is a Motorola MCS2000 and in look at it, zoom in, you are able to see that from the picture. And then I compared it to a picture online of that particular radio. That radio would not function on the TMR2 network.

And further to that, in order to be able to function on the TMR2 network, the radio would have to be authorized on the TMR2 network and then registered with the KMF in order to receive encrypted communications.

So no, that radio would not work on the TMR2 network.

MS. JENNIFER COX: Okay. So it might work, but it just wouldn't work on the system that the members were using on the 18th or 19th?

MR. CHRISTIAN GALLANT: Correct.

MS. JENNIFER COX: Okay.

MR. CHRISTIAN GALLANT: It's an analog based radio. The TMR2 system is digital. So yes, it would not function on the TMR2. It could be -- it could have been programed on a different radio system, but not the one that was used on April 18th.

MS. JENNIFER COX: And so to make it super simple, if there was any conversations taking place, they were taking place by themselves? There was nobody else?

MR. CHRISTIAN GALLANT: That's correct. There would have been nobody else on that radio system.

MS. JENNIFER COX: Right.

MR. CHRISTIAN GALLANT: Yes.

MS. JENNIFER COX: So it wasn't able to access TMR2 ad any conversations that might have been taking place on it would have been all by themselves as well?

MR. CHRISTIAN GALLANT: That's correct. Yes.

MS. JENNIFER COX: Okay. Is there anything more that you would have to say about this particular picture or the radio?

MR. CHRISTIAN GALLANT: No, I don't believe so.

MS. JENNIFER COX: Okay. And the last area I have, we're going to go back to you, Mr. MacLeod. So I'm going to look for Exhibit 297 now, which is also COMM00017. And this is a network analysis of the 18th and 19th 2020 that was prepared by Bell.

And, Mr. MacLeod, you're familiar with this?

MR. TREVOR MacLEOD: I am, yes.

MS. JENNIFER COX: Yeah. So what I'm hoping to do is, this is something that was prepared by Bell shortly after the incident. And it is something that you regularly do as a course of -- like, after some sort of catastrophic event or unusual event, how's that, you prepare reports like this; right?

MR. TREVOR MacLEOD: Yes. Of a similar nature.

MS. JENNIFER COX: Okay. And what the purpose of bringing it forward today is so that you can explain it in a little bit more laymen's terms as to what this report actually talks about and how it should appear.

So we're going to go -- the first page is primarily redacted. And maybe we can talk a little bit -- so that means it's been blacked out.

Trevor, can you tell us why that would be?

MR. TREVOR MacLEOD: It was blacked out because it was actually showing in both of those graphic images, the locations of the actual TMR radio -- the TMR2 radio towers, and we don't disclose information of where our towers are for security reasons.

MS. JENNIFER COX: Yeah, for public safety reasons.

MR. TREVOR MacLEOD: Public safety reasons. Exactly.

MS. JENNIFER COX: So number 3 is the next page. So up in here, it looks like the focus site analysis that we have Londonderry, Wentworth, Nuttby, Hilden, Shubenacadie, Airport, and at the very end of this slide deck, there's a number of smaller -- it speaks just to the various locations. So there's one specific for Londonderry, there's one for Wentworth; right?

MR. TREVOR MacLEOD: Correct.

MS. JENNIFER COX: So the first few pages of this slide deck really are summaries of the more granular information that's at the very end of this; correct?

MR. TREVOR MacLEOD: That is correct.

MS. JENNIFER COX: Okay. So would it make sense to look at this, or would it make sense to look at the more granular information?

MR. TREVOR MacLEOD: I believe it makes sense to look at the summaries.

MS. JENNIFER COX: Okay. So let's look at the focus site. So

we're on page number 3.

MR. TREVOR MacLEOD: M'hm.

MS. JENNIFER COX: And obviously some of it has been moved or blacked out ---

MR. TREVOR MacLEOD: Yes.

MS. JENNIFER COX: --- as well because that would affect public safety? Is that fair?

MR. TREVOR MacLEOD: That is fair, yes.

MS. JENNIFER COX: Okay. But what we can see -- so we see, you know, the site, we see site availability, we see GOS, greater than five percent, and then we see the peak usage period.

Maybe if we can kind of go through that and you can explain to us, what does that mean?

MR. TREVOR MacLEOD: Sure. So first things first, that you have a greater service, and the greater service is showing less than five percent. What greater service really refers to is our measure of how a user will have access to the system. And through our, you know, service metrics, we actually target that, you know, less than five percent of, you know, call requests, you know, will not end up in busy going through the network.

So basically if you consider, you know, Londonderry site, for example, we're showing at 3.22. So in the most utilized peak period of the day, which was 11 a.m. and April 19th, which in fact actually represents 10:00 a.m. to 11:00 a.m., because our actual metrics show it the hour after it happens, the hour before. During that time, there would have been 3.22 percent of the actual call requests that would have went into the busy queue that I spoke about a little earlier this morning. And when they go into the busy queue, what that basically means is they go there until they get, you know, a talk permit tone back. So they're not -- they're actually a busy, then the system will actually acknowledge and actually come back and let the actual end user

know, "I now have an available voice channel talk path. Please proceed with your communications."

And during this event, I think Todd mentioned it earlier, these networks are designed, you know, for these types of emergencies, you know, calling request events, the network still performed within the specifications during the entire event on the 18th and the 19th.

MS. JENNIFER COX: Okay. So each one of the locations, and I mean, they pretty much speak for themselves, but at the end of the day, during the peak uses period, the highest grade of service was 3.22.

MR. TREVOR MacLEOD: It would have been 3.22, which would be equated to 19 busies on the network on Londonderry during that hour period.

MS. JENNIFER COX: Okay. And of course, that means the standards are the specifications for the contract.

MR. TREVOR MacLEOD: The specifications for the contract, correct.

MS. JENNIFER COX:

Okay. Is there anything more about that particular slide we should talk about?

MR. TREVOR MacLEOD: You know, the only thing I would add is the -- when I mentioned the 19 busies, that would have been out of, I think, 590 call requests on that site during the hour.

MS. JENNIFER COX: Okay. So let's look at the -- because page number 4 talks about the call requests, right.

MR. TREVOR MacLEOD: Yes.

MS. JENNIFER COX: So perhaps -- maybe look at the call requests first on the lefthand side.

MR. TREVOR MacLEOD: So the one thing we do -- we typically look at during these types of events is, you know, what happened during the day of or the time of and what also happened in the days preceding and the day after.

So we look at the day before and, you know, the day 17th would have been a Friday, which would have been our typical, you know, traffic we'd see on a network on these sites. And then if you actually look on the 19th in terms of the call requests during that busy hour timeframe, you can, you know, see really quickly looking at a couple sites like, you know, one would be the Londonderry site where traffic actually went from a little less than 200 call requests in a busy hour to almost close to 600. So the actual number of call requests would have tripled during the time of a typical day to actually during the event and so on with the other sites around.

So what we did see is that the network did actually experience a significant amount of additional call requests but, at the same time, the network was able to actually handle those call requests, you know, within the specifications of our service levels.

MS. JENNIFER COX: Okay. And again, where, you know, these graphs represent all of the communities that we talked about before, so Londonderry, Wentworth, and that would be ---

MR. TREVOR MacLEOD: Correct. So these sites -- and I -- I should have mentioned that. These sites would be, you know, around the -- would have provided coverage to the areas of the communities that would have been impacted.

MS. JENNIFER COX: Okay. Number 6 -- or 5, I guess it is.

MR. TREVOR MacLEOD: Sure. So number 5, again, you know, as we go through these, we're showing different graphs that kind of say the same story, so what I showed in the last graph was just the busy hour for these sites.

We're now showing a full, you know, 24-hour period of these sites for April 19th for the entire day. So you can kind of see where it starts at midnight to where it culminates at the 10:00 to 11:00 p.m. where the traffic significantly increased.

And that's really the point that this graph is just showing, is the actual traffic profile of the actual call requests coming in from, you know, end users during that point in time.

MS. JENNIFER COX: And I think one thing we should do to maybe stop here is that the radio system itself is capable because all of the interactions between the user and the tower are tracked. Is that fair?

MR. TREVOR MacLEOD: Correct.

MS. JENNIFER COX: So that brain we talked about much earlier --

MR. TREVOR MacLEOD: Correct.

MS. JENNIFER COX: --- actually keeps track of how many busies, how many call requests, all those; right?

MR. TREVOR MacLEOD: That's accurate. The actual brain is actually also -- you know, keeps track of every subscriber activity records in terms of their interaction with the network, so that's why we have this type of data.

MS. JENNIFER COX: Okay. The only thing you can't capture is when they can't reach the tower; right?

MR. TREVOR MacLEOD: When -- if it's out of range, correct.

MS. JENNIFER COX: Yeah. So if a user can't use their radio and they don't really know why and you have no record of them trying to access the tower, then you basically have to just do a deduction of the only possibility is they couldn't reach the tower; right?

MR. TREVOR MacLEOD: In that case, you would have to, you know, make -- I don't want to make assumptions on particular cases, but any time a radio interacts with the actual network and there's a communication going back, we actually have a record that we can actually look into.

MS. JENNIFER COX: Okay.

MR. TREVOR MacLEOD: If there is no record created of such interaction, then we have no way to know what happened on that end user device.

MS. JENNIFER COX: Okay. And to some degree, that data is important to use as a corporation; right? You keep track of that to ---

MR. TREVOR MacLEOD: Yes.

MS. JENNIFER COX: --- try to figure out sort of what could be done better?

MR. TREVOR MacLEOD: We keep track of it more for our monthly performance reports we talked about earlier, but we also keep track of it and we're very diligent because we do have the performance metrics of hitting that greatest service of five percent blocking, so we're always looking and at always, you know, making sure that we understand the capacity network where it's being driven such that if there is, you know, a typical day-to-day, I'll say, non-event increase, then we can take the appropriate steps working with the province to address it.

MS. JENNIFER COX: Okay. So we can go to the next slide.

MR. TREVOR MacLEOD: Yeah.

MS. JENNIFER COX: Busies during 30-minute period. So this is just a different type of representation of the same thing we just saw; right?

MR. TREVOR MacLEOD: It's the same thing we just saw.

So typically, when we do look at these events, we kind of look at the full scale of 24 hours, we look at the busy period and then we actually break it down in half-hour periods as well, so it's just showing, you know, the actual busies during those event peak 30-minute periods.

And again, when we mention busies, that's just going into a busy queue, which is then prioritized based on the level of priority assignment for that user and the network will inform them when the network is free so they can communicate. And that time between a busy and when the actual network will respond to you and call you back is, I think Matt said, is seconds.

MS. JENNIFER COX: And then the next slide, which would be number 7.

MR. TREVOR MacLEOD: It's just a graphical representation of slide 1 that's just showing the percentages of those sites, you know, for the day before,

17th, 18th, 18th and 20th and putting them in a graphical form.

MS. JENNIFER COX: And the next page, which is basically a summary.

MR. TREVOR MacLEOD: There's just a summary on this page. I think a couple of the key things is that, you know, in terms of the actual sites, they were 100 percent available during the entirety event and what that actually means is they were up, there was no incidents, there was no ongoing operational concerns. And the same for all the dispatch centres, so there was no ongoing issues or incidents going on with the dispatchers. They were 100 percent up, 100 percent available and, you know, working as expected.

And the other point I'll make, and it's kind of the last point, is we just looked at the talk group usage and approximately 70 percent of the talk group usage was law enforcement on the 19th and about 30 percent was kind of mostly EHS, which is the ambulatory service.

MS. JENNIFER COX: So I guess that also, you know, lets us know that one of the things you're also doing is who is it. Not only what's happening with the radio, but you actually know which radio it is and who's the user.

MR. TREVOR MacLEOD: Well, we would know the radio ID.

MS. JENNIFER COX: Right.

MR. TREVOR MacLEOD: We would not know who had the radio or what the radio was. We just have a number.

MS. JENNIFER COX: Yeah. Okay.

And beyond that, there's a few other slides, but those are really just information that we've already talked about, but in a smaller version.

MR. TREVOR MacLEOD: Exactly. It's just information looking at each site individually and the actual utilization of each site.

MS. JENNIFER COX: Okay. Is there anything that you wish to talk about, Trevor, that I haven't mentioned?

MR. TREVOR MacLEOD: Not from my perspective, no.

MS. JENNIFER COX: Matthew, I ask you the same question. Is there anything that you'd like to talk about that I haven't brought up?

MR. MATTHEW BOYLE: I think the one other thing I'd like to mention is just the role that we play in field support related to these incidents as a provincial entity, if that's okay.

MS. JENNIFER COX: Sure.

MR. MATTHEW BOYLE: So Christian mentioned earlier in his testimony that the radio workshop does have the ability to respond to field incidents and do things like coverage extension and so on and, of course, the work of the RCMP radio workshop would be focused on the RCMP users. And then for the provincial users and others, our office will support those, so -- and in fact, we will support municipalities and federal organizations, even RCMP as well, if there's something we can add to that puzzle where we can play a role there.

So we do have -- and Todd referenced this morning as well a number of specialized vehicles, trained staff and some tools, actually, that none of the other user groups have when it comes to monitoring the system and the performance of the system and so on.

And so if a user agency engages us during a major incident, we can do one of two things. We can either kind of sit back at a distance and help them by monitoring the radio system, perhaps managing other traffic, so if we have a major law enforcement event, we can work with other user groups to try to minimize their traffic to make sure we're not getting busies on the system or minimizing the ones that we might get, so there would be kind of a sitting back, helping to plan and oversee role.

MS. JENNIFER COX: Right.

MR. MATTHEW BOYLE: And then the other piece would be actually responding out to the scene with the vehicles and equipment to do the things like Christian mentioned around extension of coverage for cellular, extension of

coverage for radio, handing out additional radios, batteries, all those kinds of things.

MS. JENNIFER COX: And so, you know, again, to unpack that just a little bit, really, what you would be doing when we talk about the first suite of activities you just talked about, that would be sort of like calling people and telling them to get off their radios because there's an emergency and they don't need to be -- telling them to use some other mode of communication, perhaps?

MR. MATTHEW BOYLE: Yes, that's right.

MS. JENNIFER COX: Use your cell phone for the time being.

MR. MATTHEW BOYLE: Yeah. And even overseeing -- so definitely providing advice to other agencies, but then also for the agency that's leading the incident, for example, we'd be able to provide advice to them on communication plans so we might be able to say to them -- so we talked earlier before about how the radios take traffic wherever there's a radio turned on, so sometimes we'll find at an incident site there might be somebody's got a radio that's sitting in their back seat and they don't realize it's connected to a talk group from another part of the province, and so we can spot those kind of anomalies and call someone and say, you know, there's -- this incident's in New Glasgow, but somebody's got a radio that's on the Yarmouth channel and that's bringing a lot of traffic in.

So kind of helping to do that, troubleshooting, overseeing, feedback role.

MS. JENNIFER COX: Okay. And right now, you don't have that role.

MR. MATTHEW BOYLE: Right now, we don't have that role ---

MS. JENNIFER COX: Formally.

MR. MATTHEW BOYLE: We don't have a formal role in that sense, so if agencies call us and ask us to get engaged, then we will and we're happy to, but we don't self-dispatch ourselves in any way, so we would not choose to interject in an incident if an agency had not called us.

MS. JENNIFER COX: Okay.

MR. MATTHEW BOYLE: And I think that there is value that we could add there in some instances because of those unique tools that we have.

MS. JENNIFER COX: Well, you're the only one with the information of who's using; correct?

MR. MATTHEW BOYLE: Yeah, and of course ---

MS. JENNIFER COX: Well, in ---

MR. MATTHEW BOYLE: --- Bell can ---

MS. JENNIFER COX: Yes.

MR. MATTHEW BOYLE: --- see that same ---

MS. JENNIFER COX: Yes.

MR. MATTHEW BOYLE: --- data, but from an operational perspective, we're the ones that are actually engaged with the users to be able to contact dispatch centres and ---

MS. JENNIFER COX: Right.

MR. MATTHEW BOYLE: --- influence the behaviour of other users.

MS. JENNIFER COX: Right. Okay. And I think one of the other things that I recall during our conversations is your comment that, you know, the fact that this occurred on the weekend did make a difference in terms of potentially the system performance; correct?

MR. MATTHEW BOYLE: Yeah, it's hard to know how much of a difference that made, but we do know that the traffic of other agencies tends to be lower on the weekend than it would be, like, for regular provincial government departments and so on, there would tend to be more activity on a business day. So it's impossible to know whether it was a substantial difference or not, but I do think that it would have helped.

MS. JENNIFER COX: It made a difference.

MR. MATTHEW BOYLE: I don't know if Trevor wants to say?

MR. TREVOR MacLEOD: The only thing I can say is just have a look at the data itself, and I showed you the Friday and the Monday in the data, which showed the call attempts were, you know, three times what they were so.

MS. JENNIFER COX: Okay.

MR. TREVOR MacLEOD: I'll speak to the data. I don't know if I'd draw the same conclusion. I just -- based on interpreting the data, it showed the call attempts were distinctly increased.

MS. JENNIFER COX: Okay. Mr. Brown?

MR. TODD BROWN: I don't know if you want to talk about training standard?

MR. MATTHEW BOYLE: Sure, yeah.

MR. TODD BROWN: Okay. I guess one of the other things that we don't have that might be useful, training works fairly well. We have a very cooperative relationship with the RCMP, for example, on training. But there isn't a standard for training that applies to all users. So we don't really have a mandate to do that in our office, you know, make sure that the standard is applied evenly across the entire user community. So that might be something that might be helpful.

MS. JENNIFER COX: Okay. Christian?

MR. CHRISTIAN GALLANT: Yeah, just the one thing, and it goes -- it follows on Todd's comment there. In regards to training, when I was talking about the training, I neglected to mention the training policy that's been implemented by the RCMP, and it was implemented in 2018, that our members -- new members arriving in the division must complete -- I had mentioned the online training course, which is available on our GOR, which is our online training system, and then they're required to attend the next in-class and/or virtual training session. And members also must take training every four years on the radio network. So that's one of the -- that's key to ensuring that our members do have the training.

And just you had asked if there was changes that were made after the mass casualty. One of the things that we did go through in reviewing the SOPs, we tightened up some of the language in our policies in regards to using the shared Law channels, the mutual aid channels, that put a little bit more emphasis, I guess -- we use the word will, members will change to those talk groups when they're directed to do so by the OCC, and they will remain on those talk groups until the incident has resolved.

And further to that, the -- our Operational Communications Centre does have strict policy in relation to mutual aid and use of mutual aid. For example, if there's a -- say a collision on a corridor highway, that is an example of when our OCC would assign a mutual aid. And it is something that -- mutual aid talk groups are assigned, on average, 10 to 15 times a day, by our OCC throughout the province.

MS. JENNIFER COX: One thing that I didn't bring up with Matt or Todd was the aircraft. So there is some infrastructure in place with respect to the radio capability and the aircraft in the province of Nova Scotia, so I think we should probably quickly touch base on that.

MR. TODD BROWN: Okay. There's -- I guess uniquely in Nova Scotia as opposed to all other jurisdictions in Canada and most jurisdictions in the United States, we have an integrated air to ground communications system. So you go to most jurisdictions and air nautical communications, say when public safety responders are on the ground, that tends to go through another communications system. That doesn't go through the same system that the users on the ground are using.

MS. JENNIFER COX: Right.

MR. TODD BROWN: So uniquely in Nova Scotia, we've worked with the regulator, Innovation, Science and Economic Development Canada, and we applied for an interim license. And for the last I guess it's six, seven years, we've had a system that integrates communications for first responders on ground and two

departments in the provincial government in Nova Scotia that have aircraft. So that's the system that's used.

MS. JENNIFER COX: So there are aircraft that are part of the TMR2 system?

MR. TODD BROWN: Yeah, there are, I think five or six aircraft.

MR. MATTHEW BOYLE: Six, yeah.

MR. TODD BROWN: Six rotary wing helicopters that have TMR system radios in their aircraft.

MS. JENNIFER COX: And in addition to those, access to the TMR2, they also have access to the top -- the encrypted Law; right?

MR. TODD BROWN: Yes, the encrypted Law ---

MS. JENNIFER COX: --- talk group?

MR. TODD BROWN: Yeah, they do.

MS. JENNIFER COX: Those are my questions, Commissioners, so subject to -- obviously, we need a break to caucus.

COMMISSIONER MacDONALD: Well, thank you so much, Ms. Cox, and thank you all very much.

The process we'll follow, we'll take a break now until let's say 3:15, and some of the Counsel for the various Participants may have some questions for you, and we'll organize all that during the break. If you need more time, Ms. Cox, by all means, just let us know, but we'll ---

MS. JENNIFER COX: Sure.

COMMISSIONER MacDONALD: --- say 3:15 for now. So thank you again.

MS. JENNIFER COX: Thank you.

REGISTRAR DARLENE SUTHERLAND: Thank you. The proceedings are now on break and will resume at 3:15.

--- Upon breaking at 2:51 p.m.

--- Upon resuming at 3:21 p.m.

REGISTRAR DARLENE SUTHERLAND: Welcome back. The proceedings are again in session.

COMMISSIONER MacDONALD: Yeah, Ms. Cox?

MS. JENNIFER COX: Yes, Chief Commissioner, we had an opportunity to caucus with the Participants, and they've asked that I asked a few more questions of the witness panel.

COMMISSIONER MacDONALD: Okay.

MS. JENNIFER COX: So if we could recall the panel, just to have a few more questions?

COMMISSIONER MacDONALD: Thank you.

--- TREVOR MacLEOD, Resumed:

--- TODD BROWN, Resumed:

--- MATTHEW BOYLE, Resumed:

--- CHRISTIAN GALLANT, Resumed:

COMMISSIONER MacDONALD: Ms. Cox.

---- EXAMINATION IN-CHIEF BY MS. JENNIFER COX (Cont'd)

MS. JENNIFER COX: So this is a question that's directed to either Todd or Matthew with respect to the provincial air craft. So we talked a little bit about that.

The question that one of the Participants has asked is, who do those departments -- like, where do those air craft belong? Which government departments are responsible for those particular air crafts?

MR. TODD BROWN: Sure. That is the Department of Natural Resources and Recoverables ---

MS. JENNIFER COX: Okay.

MR. TODD BROWN: --- Air Services, and Emergency Health Services for the air ambulance here.

MS. JENNIFER COX: Okay. And the second part of that question was, does the RCMP have access -- do any of you know whether the RCMP has access to those?

MR. TODD BROWN: To those air craft?

MS. JENNIFER COX: Yes.

MR. TODD BROWN: I think they do. Upon request, I believe. Yeah.

MR. CHRISTIAN GALLANT: To the Natural Resources ---

MR. TODD BROWN: To Natural Resources.

MR. CHRISTIAN GALLANT: Yeah.

MS. JENNIFER COX: Okay. So Christian, you would confirm that the Natural Resources can lend their aircraft to the RCMP?

MR. CHRISTIAN GALLANT: We can request the services of Natural Resources, yes.

MS. JENNIFER COX: Okay. And the next question, and again, this is, you know, something I'll leave with all of you to potentially answer is we've heard a lot during this Commission about the problems of the difficulties of blue-on-blue potentially happening and some of the difficulties deploying folks on the night particularly of the 18th. And of course, we talked about the complexities of GPS.

So, you know, do -- although there's work underway, what are the plans, potentially, or what are the things that you would suggest would be something we would be looking at to sort of address that, particularly the problem that we think would be fixed by GPS technology, which would, you know, make sure that we know where everybody is so there isn't a blue-on-blue? What are the recommendations, potentially, that might come forward to address that?

MR. MATTHEW BOYLE: I think from a radio perspective, there wouldn't be anything that we would offer through our program, so it would have to be a technology that would be outside of the radio system, in order to have the capacity for

tactical level use.

MS. JENNIFER COX: Okay.

MR. MATTHEW BOYLE: So it's not something that we could -- we wouldn't be familiar with the technologies, between myself and Todd, that would support that kind of activity from a tactical level.

MR. TODD BROWN: And even if you looked at it long term, in terms of the way that technology was evolving, it's very unlikely to be something that's done through the voice radio system.

MS. JENNIFER COX: Okay. And again, that's just because of the drag or the pull on the radio system? It would just overload it? Is that fair?

MR. TODD BROWN: Yeah.

MS. JENNIFER COX: Okay.

MR. MATTHEW BOYLE: We are just starting to see some newer models of radios that actually integrate, like, a cellular NLTE service into the radio. And through those newer models of radios, there are some options to provide location services through the cellular side of the device, rather than through the radio. But those are substantially more expensive and more complex radios. So I don't foresee that they would be in wide adoption in the short term anyway.

MS. JENNIFER COX: Okay.

MR. MATTHEW BOYLE: But so there is some movement in that direction, but difficult to see wide adoption of that technology.

MS. JENNIFER COX: So just sort of to wrap that up, you know, it's really not a radio thing, except for if the individual dispatcher is looking to sort of speak to a member and needs the on-demand services that you talked about? But beyond that, it's just not -- the system is not capable of handling ---

MR. MATTHEW BOYLE: That's right.

MS. JENNIFER COX: Okay.

MR. MATTHEW BOYLE: And even in that circumstance where a

dispatcher is trying to query a particular user, as I mentioned before, the voice traffic will take priority on the radio network. So if there's active conversations happening and a dispatcher goes to make that ping to see where a user is, they're not going to get the data back in response to that request until the talk group becomes inactive. So if there's voice conversations happening for two or three minutes because it's busy and there's no break in activity, then it could be two or three minutes before a dispatcher gets a response to that ping. So that's why we refer to it as near real time, but not a real time ---

MS. JENNIFER COX: Okay.

MR. MATTHEW BOYLE: --- location.

MS. JENNIFER COX: So those are the -- oh, and I have one other question, and that's in relation to the conversation between Mr. Corkum and Mr. Byrne, and their inability to connect on an encrypted channel on the morning of the 19th. And I think, Matthew and Todd, you have some understanding because you heard that conversation; right?

MR. MATTHEW BOYLE: Yes.

MS. JENNIFER COX: So can you talk a little bit about what happened there?

MR. MATTHEW BOYLE: Sure. So initially when I became aware of that event this morning, I touched base with our on-call officer and he and I had some conversations about whether or not we had been engaged in the event. And at that point, we had received a heads-up from the Emergency Management Office, but not been formally engaged. Through our dispatch centre at Shubie Radio, we do receive notifications of mutual aid talk group assignments for major events. And so I had seen a talk group notification related to the air craft and had started to monitor the comms that were happening there and realized at some point that perhaps those should have been happening on an encrypted channel. So we did make that suggestion through a contact that we had informally at RCMP.

And my understanding of the reason they didn't connect was really just timing. We were able to demonstrate, through the system reporting after the fact, that they just hadn't ended up on the same channel at the same time. So they did both have access to the channel that they needed and they had both reached that channel at one point, but just not at the same point. So they each called out and didn't get a response from the other because they weren't there at the same time, and so eventually they reverted back to that unencrypted or clear mutual aid talk group.

MS. JENNIFER COX: Right. And they would have reverted back because that was the one where everybody was talking?

MR. MATTHEW BOYLE: They knew that that was working, ---

MS. JENNIFER COX: Yeah.

MR. MATTHEW BOYLE: --- so they would go back to, "Okay. I've been directed somewhere else. I haven't been able to reach the person. I'll go back to where I knew I could reach them before."

MS. JENNIFER COX: Okay.

MR. MATTHEW BOYLE: So. And it may not have been obvious to them why they hadn't reached each other, so it would be a reasonable conclusion to go back to where you knew you could make contact. And then after the fact, like I said, we were able to demonstrate why that had happened.

MS. JENNIFER COX: Right. Because the system records all that information, so you can see the call out, you can see that people did reach ---

MR. MATTHEW BOYLE: Right.

MS. JENNIFER COX: --- successfully, but then left?

MR. MATTHEW BOYLE: Yes, that's right.

MS. JENNIFER COX: Right.

MR. MATTHEW BOYLE: Yeah.

MS. JENNIFER COX: Okay.

MR. MATTHEW BOYLE: And so it became very difficult for us,

although we had intervened once, we were hesitant to intervene again because not being on the scene and not knowing who was involved in what, we hadn't been formally engaged in the incident, we were trying to be cautious about how aggressive we were on intervening to try to change that situation.

MS. JENNIFER COX: But this sort of goes to some of the evidence you gave just before the break was, you know, ability to be maybe more involved ---

MR. MATTHEW BOYLE: Yes.

MS. JENNIFER COX: --- and more deliberate action on somebody's part to bring you into the tent, ---

MR. MATTHEW BOYLE: Yes.

MS. JENNIFER COX: --- to have you sort of participating and helping everybody assess what's going on and how to best communicate; fair?

MR. MATTHEW BOYLE: That's right. Yes.

MS. JENNIFER COX: Okay. So, Commissioners, those are the extent of the Participants' questions or the clarifications that I received during the break. So I'm not sure if you would have any questions?

COMMISSIONER MacDONALD: Thank you so much, Ms. Cox. Much appreciated.

Commissioner Fitch?

COMMISSIONER FITCH: Thank you, Ms. Cox. I appreciate the work on this complicated set of Foundational Documents and the fine panel that you've put together. I do have two questions.

One is related to a question that you just recently asked with respect to the GPS locators on the radios, and it sounds like that's not a solution.

Has there been any consideration of using the GPS locator on phones to connect into, like, a master screen in OCC, if members were to be issued with RCMP phones?

MR. CHRISTIAN GALLANT: Yeah, I can take this one. So the RCMP has been working on a solution. It's called ATAK. And it's a tactical GPS solution that runs on cellular phones. The solution is currently in production for all of our critical incident teams. So I believe the number is 15 to 18 instances within H Division. As well, we have the -- what the, I guess, desktop version of ATAK is called WINTAK, is installed in our OCC. So if we get into a major incident where our ERT team is deployed, we are able to view their location data using that solution.

The solution was recently presented to our senior management team and fully supported for a national roll out. So that is something that's in the planning phases, more for general duty members, so that if they're in a major incident, they'll be able to -- we'll be able to get that information as well.

COMMISSIONER FITCH: Great. Thank you. And thank you for the reminder. We have heard of ATAK over the last several months and I'm glad to know that it is being pursued, potentially, for general duty members. So that's great.

The second question I have, did the RCMP, prior to moving to digital radio systems ever have in their vehicles the MCS2000 Motorola system?

MR. CHRISTIAN GALLANT: I can only answer to my time in -- since I arrived in the division. I know that previous to our current line of radios, we used the -- currently we're on the APX model of the Motorola radio. Prior to that was the XCS and the XTL.

I may defer just to Matt on a comment on the MCS2000 because I know that that was a radio that was used in TMR1, but I'm not certain if it was used within the RCMP.

MR. MATTHEW BOYLE: So the MCS2000 was, as was mentioned earlier, an analog version of a Motorola radio and the RCMP have been digital since the outset of TMR1, so I can't speak to pre-2000, 2001. But since those dates when they became a user of TMR1 and then TMR2, they've always been digital, so that radio would not have allowed an interface with RCMP.

We did have a number of user agencies on TMR1 that would have used that model of radio, so initially the ambulance service and a number of the provincial departments, but not in RCMP since that timeframe.

COMMISSIONER FITCH: Okay. And that's -- and thank you for answering that. That's the direction I was going.

With the analog radio system, if that model was ever in the -- in the cars, if they -- when they switched over to digital, what would have happened, potentially, to any of those radios?

The reason I'm asking this question is, is there a possibility -- and I know I'm just throwing out a hypothetical -- that the perpetrator would have been able to use that system that he had in his vehicle to listen or monitor analog radios that could still be in use out in the community? So even to -- even to be able to monitor community chatter with any other group that may be using the old analog system.

And the reason I'm asking that is you can glean a lot of information just from community chatter or from Public Works departments or -- and the like.

So it is a hypothetical, and I'm sorry to put that to you, but it's been nagging at me.

MR. MATTHEW BOYLE: I think we don't know what band that radio was programmed for, so an MCS2000 can be purchased for -- could be purchased at the time it was produced for multiple radio bands.

There are still users that use analog radio today, many fire departments, for example, and so it is possible that if that radio was not for the TMR band but for the band that those other users are using, he could have had, for example, a fire department's frequency on that radio. That would be technically possible.

Of course, I can't speculate as to whether or not that may have been the case, but from a technical perspective, it's possible that he could have been monitoring, for example, VHF communications from a fire department.

COMMISSIONER FITCH: And thank you for that.

And further to that question, did I understand that it wasn't until 2021 that all agencies switched over to digital encrypted where there's some analog users still out there and are there still some analog users out there, for example, volunteer fire departments?

MR. MATTHEW DOYLE: So in regards to law enforcement, the last of the law enforcement agencies switched to encryption as of 2021, and that happened through two tracks. There were some police departments that were able to find funding to purchase their own encrypted TMR radios and then there were a number of smaller departments that our office was actually able to facilitate the acquisition of some surplus assets and redistribute out to those municipalities to help them get over that financial barrier.

And so from a law enforcement perspective, it would have been 2021 when the last of those moved to digital encrypted.

Again, there are still agencies in the province today that would use analog conventional radio that are not users of TMR2. Chief among those would be fire departments, are still substantially using VHF. They often find that -- so first of all, fire departments still use VHF paging largely as a notification method, and so they would generally find that that would be most effective for their paging.

And then many fire departments haven't fully migrated to TMR, again because of the cost of doing so, so they continue to use large fleets of VHF analog radios.

There may be other -- in fact, I know of some examples of other Public Works groups in the province, municipal Public Works, for example, that would still use some VHF analog radios, so it is still out there, for sure. Yeah.

COMMISSIONER FITCH: Just while I have you here, you have so much knowledge to share, do you know if the port authorities or bridge authorities or tolls, would they be on analog systems still to this day?

MR. MATTHEW BOYLE: I believe that the Halifax Harbour bridges

are on a digital system but not -- it's not the TMR system. But they do have a TMR radio at their control centre, so we do have interoperability with them through TMR. But I believe their primary system is not TMR, but it is a digital system.

That's the only one that I'm particularly familiar with.

I know the port authority folks also have TMR, but I'm not sure if they're using that exclusively or if they have another system as well.

COMMISSIONER FITCH: Okay. Thank you very much.

MR. MATTHEW BOYLE: Okay.

COMMISSIONER MacDONALD: Thank you.

Commissioner Stanton?

COMMISSIONER STANTON: Thanks.

Mr. Gallant, is ATAK only going to be for use in critical incidents for general members? Did I hear you correctly?

MR. CHRISTIAN GALLANT: Currently, the ATAK platform is rolled out to our Critical Incident Command. The -- or sorry, our Critical Incident groups. The planning that's in place is to roll it out to the general duty members. However, there will need to be some guidelines put around the use of ATAK for general duty policing. It's not to say that it will not be used for general duty policing. However, we would need to understand how it would, I guess, interact with our current computer-aided dispatch systems and the way that we use to track members on duty.

COMMISSIONER STANTON: And just in rural areas or northern areas, for example, it would be dependent on cell coverage. Is that right?

MR. CHRISTIAN GALLANT: That's correct. The ATAK platform does run on a cellular device, so it would be -- it would require cellular service to be effective.

COMMISSIONER STANTON: Okay. Thank you.

COMMISSIONER MacDONALD: Thank you.

All of my questions have been answered, so it falls to me to thank

you, Mr. MacLeod and Mr. Brown and Mr. Boyle and Mr. Gallant.

You've taken some very complex concepts and many of them foreign, at least to me, and simplified them and made them understandable, and for that we're very grateful. Many, many Nova Scotians and beyond have helped us in our work, our important work, and you are among them as of today and we greatly appreciate it.

So thank you very much. You're free to go.

And thank you, Ms. Cox. As Commissioner Fitch has mentioned, thank you for organizing and presenting this panel for us. Greatly appreciate it.

MS. JENNIFER COX: Thank you.

COMMISSIONER MacDONALD: Mr. VanWart.

MR. JAMIE VanWART: Thank you, Commissioners.

We are now going to be hearing from Participants for submissions.

Before we move into submissions, however, I'd just like to take this moment to deal with some documents that need to be tendered as exhibits. There are five, Madam Registrar.

There's a document with the COMM number 0058532, which is the affidavit of Constable Vicki Colford sworn on the 25th of May, 2022.

REGISTRAR DARLENE SUTHERLAND: That's Exhibit 2173.

--- EXHIBIT No. 2173:

(COMM0058532) Affidavit of Cst Vicki Colford sworn May 25, 2022

MR. JAMIE VanWART: Next is a document with the COMM number 0058798. It's Glenn Byrne's written response to some additional questions from the Mass Casualty Commission, and it was signed on the 27th of May, 2022.

REGISTRAR DARLENE SUTHERLAND: Exhibit 2174.

--- EXHIBIT No. 2174:

(COMM0058798) Written response to Mass Casualty

Commission questions by Glenn Byrne signed May 27, 2022

MR. JAMIE VanWART: And the remaining three documents received some advance notification from Mr. Topshee that he expects to reference them in his submissions, so I will tender them now.

The first has a COMM number of 0053754. It is a transcript of the Mass Casualty Commission interview of Dave Gagnon on the 23rd of March, 2022.

REGISTRAR DARLENE SUTHERLAND: 2175.

--- EXHIBIT No. 2175:

(COMM0053754) Transcript of MCC interview of Dave Gagnon March 23, 2022

MR. JAMIE VanWART: The next has a COMM number of 0042463. It's the RCMP Guillaume Project Assessment Final Report.

REGISTRAR DARLENE SUTHERLAND: Two one seven six (2176).

--- EXHIBIT NO. 2176:

(COMM0042463) RCMP Guillaume Project Assessment Final Report

MR. JAMIE VanWART: Thank you.

And the final document is -- has a COMM number of 0058274, and it's the transcript of the Mass Casualty Commission interview of Mike MacDougall and Dale Cashin on the 22nd of April 2022.

REGISTRAR DARLENE SUTHERLAND: Two one seven seven (2177).

--- EXHIBIT NO. 2177:

(COMM0058274) Transcript of the Mass Casualty Commission interview of Mike MacDougall and Dale Cashin, April 22, 2022

MR. JAMIE VanWART: Thank you.

So the submissions this afternoon, Commissioners, are on -- are in relation to the Foundational Documents that were presented this week. There were six Foundational Documents: The Truro Police Service, RCMP Public Communications, Air Support, Halifax Regional Police and Halifax District RCMP, Overview of 9-1-1 call-taking and dispatch in Nova Scotia, and Radio Communications in Nova Scotia, as well as any further submissions on the general topic of emergency communications with the RCMP -- within the RCMP and among responding agencies and interoperability among these agencies.

At this point, I expect six and perhaps seven participants will be taking advantage of this moment to provide some oral submissions, begin with Ms. Digout. And I'll just invite counsel to introduce who they represent when they come up and begin their submissions.

COMMISSIONER MacDONALD: Thank you so much.

MS. ALIX DIGOUT: Good afternoon, Commissioners.

COMMISSIONER MacDONALD: Good afternoon, Ms. Digout.

--- SUBMISSIONS BY MS. ALIX DIGOUT:

MS. ALIX DIGOUT: As Mr. Van Wart indicated, my name is Alix Digout, and together with my colleague, Tara Miller, we represent a family member of Kristen Beaton.

I thank you for the opportunity to provide submissions this afternoon. I intend to address three things: Radio communications, RCMP processes and implementation, as well as possible recommendations for Phase 3.

Turning briefly to radio communications, we just had a very insightful witness panel, and with some time to digest, we'll likely provide further submissions at a later date. However, from the evidence presented previously, there are numerous references to disruptive radio traffic, channel capacity issues, user error, and the limitation of use in rural areas.

I certainly won't profess to understand the system, but as we move

forward in Phase 3, we ask that you consider the appropriateness of an overall, or changes to the radio communication system in Nova Scotia. A similar recommendation was made by your counterparts following the 9-1-1 Commission.

In that case, New York radio communications, rather, were being overwhelmed when they were needed most, and the recommendation was implemented immediately with all systems being updated to the P25 standard.

I turn now to the focus of my submissions. The Commission has obtained the report from Mr. Bjørn Kruke, titled, "Police and First Responder Decisions During Mass Casualty Events".

In his report, Mr. Kruke outlines potential barriers to moving forward following mass casualties, and states:

> "Crisis and disasters are often focusing events or agenda-setting events attracting attention from media, institutions, and stakeholders. However, learning following a crisis or disaster may be hindered by obstacles such as the political and organizational barriers to effective learning from disasters; blame; politics of investigations and the politics of crisis management, all of which may reduce accountability of and hinder the important learning processes in the post-crisis phase. There are, in other words, lessons we don't learn. Nevertheless, mass casualty events will happen in the future, and we must therefore take an advantage of any learning opportunities we can." (As read)

While I can't imagine the experience of first responders during April 18th and 19th, 2020, in addition to the bravery and sacrifice of frontline officers, there is a recurring theme within the evidence of the RCMP as an institution failing to take

meaningful accountability for their actions during the mass casualty.

There appears to be a reluctance to acknowledge mistakes, to be retrospective, and to create change. This is an organizational issue, which must be addressed and correct -- corrected, rather, before there's any hope of changes moving forward.

We've heard many times that a public inquiry is inquisitorial rather than adversarial, and that its purpose is not to place blame. However, to not be reflective, critical, or highlight unsuccessful actions taken by law enforcement leads to recommendations being made in a vacuum which could perpetuate public safety risks.

Paraphrasing Chief MacNeil's evidence from earlier this week, something catastrophic must have happened for the perpetrator to evade law enforcement for 13 hours.

Nobody shows up to work looking to do a bad job. Errors largely happen because of flawed processes, and this is particularly true of communications on April 19th, 2020. Evidence from this week demonstrates members can be paralyzed by red tape, processes, and the formalities of command structure on one hand, while lacking necessary policies on the other. There is a constant cycle of chasing, checking, and correcting, which leads to waste and error.

Ms. Scanlan confirmed communication needs to be as real time as possible; however, the most critical tweet on April 19th involved tasking, delegation, input, drafting and approval between seven people. There's also a 27-minute timeframe in which Cpl. Clarke waited for approval on an already approved tweet. This was because of an assumed rule of thumb requiring, "More approval for bigger events".

This process during a critical incident is unacceptable. Every second is precious to avoid the loss of life, and recommendations must be made to streamline this process. An individual from the Strategic Communications Unit should also be embedded within the Command Post to improve the flow of information.

Superintendent Rodier spoke at length about her concerns over the

use of public alerting during policing events due to the public's lack of knowledge related to the system, and the potential for inundating 9-1-1 call-takers. Despite this, she also confirmed the RCMP has not taken any steps to educate the public on the use of this critical public safety tool.

We submit a public campaign should be undertaken with the goal of bringing our Alert Ready system in line with the success of Australia's model.

On April 18th and 19th, 2020, there was a lack of training and/or access to technology by RCMP command; lack of appropriate mapping; issues accessing resources, lack of clear commend structure being followed; inefficient tasking and delegation; and, significantly, a failure to learn from the past by not proactively and meaningfully implementing recommendations from previous active shooter events.

When asked, Critical Incident Commanders West and Surette confirmed they read parts of the MacNeil Report on their own time and not as a result of training through the RCMP. In fact, they could not comment on whether MacNeil recommendations were implemented in Nova Scotia, or whose role it was to implement them.

Ms. Scanlan helped author the MacNeil Report, and despite this, a number of communication recommendations have not been put into place in her unit or H-Division OCC.

Supt. Rodier confirmed she's, "Been spending a lot of time thinking about what could be done." We're now two years post-tragedy and it's unclear whether any of her considerations have been put into action. The implementation of the MacNeil recommendations, or any well-intentioned idea for that matter, amounts to lip service if members are not fully informed, educated, or trained on the changes. This is a public safety issue which we hope you will address through this process.

Respectfully, there is candour amongst the witnesses this week when recognizing shortcomings and the impact of the tragedy on loved ones and the public. In our view, the RCMP can honour victims by following through on implementing

significant change within the organization. Without this, the recommendations stemming from this inquiry are in jeopardy of being worth little more than the paper they were written on, if change is not readily embraced.

And subject to any questions, those are my submissions.

COMMISSIONER MacDONALD: Thank you so much, Ms. Digout.

MS. ALIX DIGOUT: Thank you.

COMMISSIONER MacDONALD: Very helpful. Thank you.

(SHORT PAUSE)

--- SUBMISSIONS BY MR. STEPHEN TOPSHEE:

MR. STEPHEN TOPSHEE: Thank you, Mr. VanWart for entering those exhibits; I appreciate it.

There's one that I've forgotten, so Madam Registrar, if I may enter another exhibit, please, and it is -- I'm not sure what you need first, COMM0058846.

REGISTRAR DARLENE SUTHERLAND: It's Exhibit 2181.

--- EXHIBIT No. 2181:

(COMM0058846) Supplementary report

MR. STEPHEN TOPSHEE: Thank you. And what that exhibit is, is the supplementary report of the Mass Casualty Commission relating to Support Air Services in Atlantic Canada, Quebec and Ontario. I'll reference that a little bit because it's part of my submission. And there's two points I'm going to make really, in recommendations relating to the use of local knowledge, and second, in relation to air support.

So first of all, in relation to local knowledge, I've broken it down into two components, or there's two that we -- that I'll look at. One is geographical knowledge, that is topographical lay of the land, sort of thing, knowledge of local roads and of points of ingress and regress and that sort of thing. And second, I'll be looking at under local knowledge, persons of interest. So if we have persons of interest that should be I'm going to say flagged, or the local law enforcement people should be

aware of them. And a local, rural community like Colchester County, that's a very -- anywhere in Canada it is, but I think in particular, in this particular circumstance, it needs some -- we have to look at it a little bit.

So going to the geographical knowledge and the lay of the land aspect, I would first of all say that that has to be looked at. One wonders why -- on a go-forward basis, there was three local fire departments that were -- that they went to. They went to the Bass River Fire Department. One wonders why they didn't tap into that local knowledge in terms of roads and that sort of thing. And Chief Larry Kinsman would be a great source of knowledge in that regard. Then they spoke to -- at Great Village, and then, let's see, Bass River, Larry Kinsman is in Bass River, excuse me. In -- oh, I got it all mixed up. Hold on. Excuse me.

COMMISSIONER STANTON: Al Grue is at Great Village; is that who you're thinking of?

MR. STEPHEN TOPSHEE: Let's see, Bass River is Chief Grue, who would have given -- that's Bass River. Onslow Belmont, Chief Muise, and Deputy Chief Currie, they would have been a good source of information locally for the lay of the land and that sort of thing. And then as I said, in Great Village it was Larry Kinsman. So those are local civilians who would have some great insight into, you know, the lay of the land in rural Nova Scotia. They perhaps should have been looked at, and asked questions, and in the future, I think that's a good recommendation, because we have local fire departments all over the province of Nova Scotia and probably everywhere in Canada, in rural Canada. So I think that's something to look at.

Also, in relation to provincial Conservation officers, we have local provincial Conversation officers. In particular, the Commission took statements recently from Chris -- let's see the names, Dale Cashin and Mike McDougall, and that's at -- that's now Exhibit 2177. And those are very knowledgeable people. They are -- they know almost every back road in Colchester County, and they have assets that can be tapped into. They have a mapping system. They have what's called the -- they use, I

believe, something called Property Online, and every property lawyer in Nova Scotia knows Property Online, and it can access any civic address in the province, and the owner of that property, and they have that system. Superimposed in there, I understand, is something -- some type of a GPS system that can locate them while they -- at head office, I suspect, but that's another resource.

And the other reason that they are a valuable resource, as I said, is they know every road system, trail in Colchester County. And if we review their statements, these two gentlemen in particular have been at it for more than 15 years and they're available 24/7 is what they said, and they're willing to give their expertise and knowledge to the police services in Nova Scotia and in Colchester County, whoever that may be type of thing. So that has to be seriously looked at.

In conjunction with that, that's why I referred to the Gillam Report. And the Gillam Report is out of Manitoba, as you're probably aware, from the tragedy in 2019, where you had those two perpetrators that went from British Columbia through Alberta, Saskatchewan, finally tracked down in Manitoba type of thing. And one of the comments that resonates and one of the recommendations out of -- or one of -- accommodations, I would say, is a comment that I found in that particular report, which it indicates at page 2, and I quote,

> "Investigators and critical incident program members found the use of Conversation officers and other civilians to be an invaluable asset due to their geographic knowledge and access to additional resources." (As read)

So that's an RCMP-generated report, and I think that that has to be considered, I suspect. It rings true in Nova Scotia here in this particular incident. So I'll move on.

In relations to persons of interest, we suggest that these Conservation officers are again a good resource for the police services, whoever they

may be in this area. They have, as I said, local knowledge. They enforce the local firearms mandates under provincial legislation. They're also on the roads in hunting season around here, and they -- as I said, they probably have a pretty good understanding of people in the communities, the rural communities, in this case, in northern Nova Scotia, in this case, in Colchester County. So they would -- they have to be looked at in terms of a recommendation for usage.

I was thinking who else would fit that bill, and one thing that came to mind would be the Sheriff's Department in Nova Scotia. The sheriffs in Colchester County, they're serving documents throughout the county, warrants, and that sort of thing, and they're a provincial -- provincially run, of course, and they would be something else that should be tapped into.

There's also federal Conservation officers, and Fisheries, and all of that. I don't have an exhaustive list, but you get the point that they have to be used in order to help a situation like this from occurring in the future.

Now going to air support. In a nutshell, air support should be available 24/7, and there should be a recommendation for that. Whether the RCMP out of Moncton can facilitate and do that, I'm not sure, given the report. If they can, fine. If they can't, there should be memorandums of agreement with the military or any -- well, the military. In this particular case in Nova Scotia, we have Greenwood. We have Shearwater. In New Brunswick, there's Gagetown. There has to be a recommendation to tap into that resource.

So those are my submissions. If there's any questions, I'm pleased to take them. If not, thank you.

COMMISSIONER MacDONALD: Thank you, Mr. Topshee, very helpful. Thank you.

MR. STEPHEN TOPSHEE: Thank you.

REGISTRAR DARLENE SUTHERLAND: Excuse me, Commissioners.

COMMISSIONER MacDONALD: I didn't know who was talking. Sorry.

REGISTRAR DARLENE SUTHERLAND: That exhibit was already -- or that document was already exhibited as 2045.

COMMISSIONER MacDONALD: Okay. I thought that when -- I thought it rang a bell. That's fine. We can use the number you just assigned for the next exhibit.

REGISTRAR DARLENE SUTHERLAND: Thank you.

COMMISSIONER MacDONALD: Thank you.

Good afternoon.

--- SUBMISSIONS BY MS. NATASHA SCHIGAS:

MS. NATASHA SCHIGAS: Good afternoon, Commissioners. My name is Natasha Schigas. I'm an associate lawyer with Patterson Law. My colleagues and I represent the majority of families of deceased victims, as well as a number of surviving victims of the mass casualty.

This afternoon, you've asked Participants to speak on the Foundational Documents which have been made public this week, as well as overarching themes of emergency communications and law enforcement interoperability.

One of the key themes that we saw emerge this week was around the Alert Ready public alerting system. And we heard from Truro Police Chief MacNeil about Alert Ready, that his agency was aware of it, that they knew how to use it, and that they had that knowledge prior to the events of April 2020. We also heard from RCMP members, Cpl Jennifer Clarke, Supt Dustine Rodier, S/Sgt Addie MacCallum, and civilian employees Glenn Mason and Lia Scanlan.

Cpl Clarke and Supt Rodier told Commissioners yesterday that they had never heard of Alert Ready outside of Amber Alerts until the aftermath of April 18th and 19th.

So it's apparent that Alert Ready was something that the RCMP, at least at the key decision-making levels of S/Sgt and above, was not aware of in a meaningful way.

And we saw this lack of knowledge within the RCMP, despite municipal policing agencies, such as Truro Police, having a clear knowledge of the availability and capabilities of Alert Ready, as well as how to actually implement an alert from start to finish.

The evidence also shows that the RCMP was represented at numerous meetings discussing Alert Ready, including quarterly PSAP manager meetings, DPEO Executive meetings, Nova Scotia EMO Agency Representative Committee meetings, the minutes of which are exhibited before this Commission.

Alert Ready had been discussed at those meetings years prior to April 18th and 19th, 2020. Other agencies had absorbed the information provided by Nova Scotia EMO and become familiar with Alert Ready. The RCMP did not. And we submit that this should be an area of focus for Commissioners to determine how the RCMP managed to remain unaware of Alert Ready for years when that was not the case for their peers.

We further submit that focus by RCMP witnesses on the problems with the Alert Ready system are a red herring in this context. The fact is that in this mass casualty event, Alert Ready was not used. No decision was made to use or not to use it until the Nova Scotia EMO reached out to the RCMP to offer its use.

We heard from the witnesses that the RCMP does not have direct access to Alert Ready and would have had to request an alert through EMO with the implication that this poses some sort of barrier.

However, this issue does not apparently pose any barrier to Truro Police using Alert Ready.

Even after the mass casualty event, Truro Police has the same procedure in place to implement an Alert Ready alert via a request to EMO, which Chief

MacNeil has stated is because that system continues to work well.

And while the issue has been raised, the issue being having to go through EMO to request an alert via RCMP witnesses, such as Supt Rodier as something that had bearing on the mass casualty event, we reiterate that the RCMP never reached out to EMO to attempt to release an Alert Ready.

We also heard from Supt Rodier that she has a laundry list of issues with Alert Ready. And one of these issues is that public alerting, in her view, could cause an influx of nuisance 9-1-1 calls. However, the examples of calls which Supt Rodier identified in her live testimony, such as people calling to ask whether they could walk their dog, were also calls that she identified in her Mass Casualty Commission interview as having occurred during the mass casualty when no alert was issued.

Police Chief MacNeil, on the other hand, said that there are obvious work arounds to minimize potential flooding of 9-1-1 calls, one issuing a public alert, such as clearly directing the public what to do and not to do in the text of the alert itself, or directing them to call a non-emergency information line.

It makes sense that when people do not have complete information, which was the case during the mass casualty event, that they'll try to seek that information to fill in the gaps.

It follows then that an emergency alert is an opportunity to actually provide that information and give the public clear direction on what to do so that they have what they need to stay safe and don't do things like flooding 9-1-1 lines.

As we heard from Supt Rodier herself, she was not even aware of Alert Ready until after the mass casualty event and her criticisms of the Alert Ready system were identified after the events which we are discussing in this proceeding.

So those criticisms are being offered after the fact, we submit, to justify the RCMP's failure to use Alert Ready, when in reality, those criticisms, the issues identified in those criticisms, had no bearing on what actually played out. They

offer nothing in terms of understanding why the RCMP did not utilize the Alert Ready system on April 18th and 19th.

And we also know that the moment the RCMP did become aware of Alert Ready at that institutional decision-making level, they used it, five days after the mass casualty, on April 24th. They have used it multiple times since then and it has worked well.

So we submit that criticisms of Alert Ready put forward by RCMP witnesses should not be allowed to distract from the key issue which this Commission must investigate and understand, which we submit is why the RCMP remained unaware of Alert Ready at the decision-making level when that was not the case for other agencies in Nova Scotia.

To make impactful recommendations, you should be looking at the institutional and cultural factors within the RCMP that enabled them to remain ignorant of this lifesaving tool for so long in the face of it being repeatedly discussed with them.

And instead of just looking at how the RCMP can use Alert Ready going forward, we should be looking at how to make sure that the RCMP will understand and adopt the next key technological tool like Alert Ready, which tool we're not necessarily able to predict.

We further submit that Commissioners should not be persuaded by the repeated assertions from many of the RCMP witnesses that there was nothing that they could have done better.

We have heard it from witnesses before the Commission and we've heard it from the President of the NPF, Brian Sauvé in his media releases. And yesterday, in contrast, we heard from Lia Scanlan and S/Sgt MacCallum, that of course there were things that they wish they could have done differently.

To make mistakes is human. And it's so important that those mistakes are identified and examined to avoid them happening again.

It has been so valuable to hear the live testimony from witnesses

like Ms. Scanlan, S/Sgt MacCallum, and Chief MacNeil, which have given the Commission key information above and beyond what was contained in their interviews.

Hearing from Ms. Scanlan that at the time of her interview with the Mass Casualty Commission, she did not have even close to as clear a picture about what happened is important information in and of itself. Not only did we see a complete shift in her perception of the success of Strategic Communications during the mass casualty, but we also saw a glimpse of how information is managed within the RCMP and what she had to do to get that information.

Looking at the testimony of Cpl Clarke and Ms. Scanlan, we can see that there is a lack of clarity around standard operating procedures and levels of approval required to take certain actions within Strategic Communications and this lack of clarity led to a delay of 27 minutes to post a crucial Tweet. During that time, Kristen Beaton and Heather O'Brien were killed.

So we submit that it's so important that the RCMP take responsibility for the institutional and cultural factors within their organization that impacted their response to the mass casualty and we urge Commissioners to look on these factors with a keen and critical eye to be able to create recommendations that address them.

Subject to any questions, those are my submissions.

COMMISSIONER STANTON: Ms. Schigas, thank you. I wondered if you could talk to me a little bit about some of the things that we learned in the roundtables on emergency alerting. There were a number of aspects of what you've suggested in terms of recommendations that were discussed on May 12th, I believe it was. And I wondered if you could share with us the degree to which you feel like some of the contributions that day address the recommendations that you're suggesting?

MS. NATASHA SCHIGAS: Are you able to refresh my memory on who the panelists were that particular date?

COMMISSIONER STANTON: So I'm thinking in particular about

the input that we had with regard to the myth of public panic, for example. There was a fair bit of discussion about that. And so it sounds like you might agree with some of the recommendations that we heard that day about the importance of educating the public prior to use of the system. And I'm afraid the names of the panelists -- I can picture them. There was a woman from Cape Breton, where Indigenous communities there have implemented their own emergency alerting system and she talked about the groundwork that's laid for the public to understand that. And of course, Michael Hallowes, who had been the Commissioner in Australia before returning to Britain, had also talked to us about the steps that need to be taken in order to ensure the effective use of public alerts. So perhaps you could -- did you hear anything from the round table panel as that day that would assist with what you're suggesting?

MS. NATASHA SCHIGAS: Absolutely, and I think that the round tables as well as the written reports that the Commission has before it will certainly assist in determining what recommendations to make. But the key is really to tie that theoretical or academic knowledge into what happened on April 18th and 19th, and not lose focus of the facts that underly this proceeding. So ---

COMMISSIONER STANTON: How do you think that -- how do you see -- I'm actually trying to do that right now, so if you can assist me with that, just so -- with respect to the, for example -- hang on a second -- the governance question, which was discussed extensively that day, about Canada's Alert Ready system is unique in the world in that it's owned privately ---

MS. NATASHA SCHIGAS: M'hm.

COMMISSIONER STANTON: --- by Pelmorex. And I wondered if you had a submission with respect to the governance, for example, of the public alerting system?

MS. NATASHA SCHIGAS: Well, just to address your first point, Commissioner, I do think that perhaps we are on the same page here, that this information is valuable to informing the recommendations which we hope that you will

make. And my submissions here today are simply focussed on, I suppose, highlighting the importance of that institutional piece, institutional culture, as opposed to necessarily picking apart a system which actually wasn't used in April 18th and 19th. So absolutely, I would agree that there are things that we can do to make the use of Alert Ready more effective and safer. But at the end of the day, it also bears examining why, in this mass casualty event, we didn't even get to that step of really making a meaningful decision of whether or not to use Alert Ready until, you know, the 11th hour, moments before the perpetrator was killed.

COMMISSIONER STANTON: I see. So you're suggesting that it's actually the institutional cultural piece that needs to be addressed in recommendations as opposed to the operation of Alert Ready, which, from your perspective, is functional and appropriate?

MS. NATASHA SCHIGAS: Well, I would say that the information that this Commission has gathered regarding Alert Ready is -- there has been a lot of information gathered about Alert Ready and focus put on that. So what I'm suggesting is that there should also be focus on the institutional barriers that prevented us from getting to a point where Alert Ready was meaningfully considered in this mass casualty. So it's not to say that Alert Ready is perfect the way that it is. It's just to say that while that issue requires attentions, so does this other one.

COMMISSIONER STANTON: Okay. Great. Thank you so much.

MS. NATASHA SCHIGAS: Thank you.

COMMISSIONER MacDONALD: Thank you. Much appreciated.

--- SUBMISSIONS BY MR. BRIAN CARTER:

MR. BRIAN CARTER: Good afternoon, Commissioners. My name is Brian Carter. I represent the RCMP Veterans Association, Nova Scotia Division.

Today I'll focus on the interoperability and the relationship between Truro Police Service and the RCMP, while touching on some of the communication issues, with a bit of history of policing in Nova Scotia, and speak about the science

behind statements and testimony. I will use Chief MacNeil's statement and testimony to explain some of this.

We now have the facts and yet there's still different takeaways for everyone from those facts. An example of that is the media hears that Truro Police could not communicate directly with the RCMP at that time. They blame the RCMP for this problem, but the evidence is clear. Truro town police made a decision long before that not to buy a full encrypted TMR system due to budget issues.

So why are there so many different takeaways from the same information? It's based on known and unknown bias, goals, agendas, and perceptions of the world that we all have. We're all different. Last week, the experts around incident command structure and systems and critical incidents said that there will always be issues around communication and decision making in these incidents. Those will always be the case. They also said that, in the past, these cases had the same issues, and in the future, they'll have the same issues, no matter who the police force is.

The most recent example we can rely on or look at is Uvalde, Texas, where the police showed up at the elementary school with over 200 officers, several agencies, and they waited 77 minutes to engage the active shooter. It's totally against the policy or the training.

First, let's take a look at the history of policing in Nova Scotia and the politics involved. In 1981, there was 2 strikes. Halifax Police and Dartmouth Police went on strike. The RCMP were ordered in to police those two cities. Ever since then, there's been consistent push by the senior management of municipal agencies to push the RCMP out and create a provincial police force led by them. I refer you to COMM0000392. It's entitled "A Safer Nova Scotia." That document was created in the late 1990s by the Chiefs of Police in Nova Scotia and it was read to or submitted to the Department of Justice in 2008. And it pushes for a new provincial police force. And they presented it in 2008 because the contract with the RCMP was up in 2012 and gave them 4 years to possibly implement a new force. During that same time, in the late

1990s, Cape Breton Regional Municipality was formed, and they chose to remove the RCMP for their local police agency. Continue on to today, there are many, many police studies being conducted by counties and local police services in the province. They're all pushing for the same thing.

In 2004 and 2006, I was a policing consultant with the Department of Justice in Nova Scotia. I consulted for the Town of Truro Police, and I consulted for HRP. During this time, I was also tasked with rewriting policing standards. And at that time, the RCMP had offered to train all municipal police in Depot Regina. They even paid to send all the police commissioners from the Police Commission in Halifax to go visit Depot. This is still a standing offer today that they would offer. All of these offers have been refused consistently by municipal police agencies in this province.

Using Chief MacNeil's statement and testimony, I break down some of the issues in evidence that he provided. I will use only a few examples because of the time constraints here, but there were many.

Like all of us, Chief MacNeil has goals, ambitions, bias, et cetera. My comments are not meant at all to fault him in any way. They are to help understand the science behind statements and testimony, as well as ambitious goals and other things that interfere with it and, in his case, it would be to expand his police force. We must also look at the ambitions of local municipal governments and county governments.

Research shows that the statements and testimony are affected by time passing, so the length of time between when it's taken and when the incident occurred. Perception of the witness is also part of it. Logic, and logic in terms of if something happens in front of us that's not logical, our brain will automatically kick in and try and apply logic to it and change our perception of what we saw. Outside information, like, media, talking to others, having the knowledge from the Truro Town Police Foundational Document, all of those things will affect our information and our perception of an incident after a long period of time passes.

Chief MacNeil's statement was taken on August 3rd, 2021. That is a full year and four months after the event occurred. His testimony was two years and one month after the event. This means he's had a lot of time to put together information that was not available to him at the time. In other words, being human, you would change a lot of what you perceived and understand based on things such as the Foundational Document from Truro Police and many other documents and media releases and so on.

So is the information accurate? And the answer, based on science, is no. It's been altered by outside influences and time.

Is the -- is his statement and testimony -- in his statement and testimony, he was asked the relationship between the RCMP and municipal police, and he said, "Well, before it was good and now it's not so good". And that's probably true.

When asked about the police Chiefs voting the RCMP off of the Nova Scotia Chiefs of Police Association very recently, he didn't really have a viable answer to that, but I would suggest that history and politics of Nova Scotia policing demonstrates little evidence of the Nova Scotia Chiefs attempting to build on a relationship including the example above.

Catastrophic failures he mentioned in his testimony, and he was referring to the failure of the RCMP to contain the perpetrator in the Portapique area. This, again, goes back to the two years he's had to review many, many documents and have a different perspective of it.

The experts that we saw a week ago, they said that the experts had already stated that there is no agency in the world that would have gotten that right, not even Truro.

When asked about the request to lock down the town, he still does not know what that means. The RCMP officers that I've worked with and know and myself, I understand when you tell me lock down my village or town, I know exactly what you mean, but the problem is, and it's the same problem Truro would have,

because there's so many roads and streets in and out of the Town of Truro, it would be almost an impossible task. That would have been the appropriate answer.

MacNeil also stated he did not know the route of which the perpetrator was taking at the time. Well, no one did. It was only after months of investigation that that was figured out through very many avenues and resources being used to find that out.

His comment was based on knowing what the route is today, not anything from the actual incident.

In his statement, he said that he did -- he could not communicate direct with the RCMP only via the portable radio. Chief MacNeil had options, and I'll give you one example of options.

The RCMP telecom centre at the time was on Prince Street in Truro. Truro Town Police is on Prince Street in Truro.

Chief MacNeil could have sent one of his officers to the telecoms location or one of his telecoms operators to that location and he would have saw the problems that he's been complaining about about that communication simply by having someone there and giving him real-time information. He chose not to.

Chief MacNeil explained to us in his testimony the standards in Nova Scotia from Department of Justice are a very high level. As I stated earlier, I was involved in writing some of these standards. And since then, it's changed.

But the main part of the policies and standards are left to the agencies to write. As an example he gave, DOJ will send a standard out that says you must have a policy on impaired driving.

He's exactly correct in that. His response there is correct. That's exactly how our standards in Nova Scotia for policing are laid out, so they're not very extensive and they're left to the agencies to create.

MacNeil also went on to state that most of their policies that they have to write, they get most of them from Toronto, Edmonton and Calgary police, which

is puzzling because they will never, ever work with those agencies.

Quebec, as an example, under their legislation, the Quebec Provincial Police write the detailed standards and all agencies in Quebec must follow them. That makes sense.

In his statement, he was asked the difference between rural and urban policing. He demonstrated his lack of knowledge of this by stating that it just means that they have longer distances to go between calls and they don't have any community-based policing.

It also demonstrates that he's never read the RCMP Operations Manual, the administration manual or the post orders, so he really doesn't understand how the RCMP function. The reality of rural versus urban policing can be found on COMM0051958, the difference between urban and rural policing.

Seven minutes and two seconds into his testimony, he stated that he had not used the alert system before 2020. He later said that he did use for it for flooding incidents and weather events. If you go and check on the Alert Ready site online and look at the list of the things that it was used for, from 2019 and now, there's only two such incidents that were logged, a drinking water issue and an air quality issue. So if that is true, his information is false.

Also, he said that he would have used the Alert Ready system during that incident, yet the Chief of Halifax Regional Police has gone public and stated that back then, none of the agencies in this province were aware of it being used in this manner.

I hope that a few of these -- I hope these few of many examples in his testimony explained the problems of obtaining information long after an incident. Scientific research has proven this, that time, media reports, outside influences alter what we saw and know. The examples I've used here would actually back up that science.

I have two recommendations that would come from all the things

that we've been talking about and that people spoke before me today and those who will speak after me, and one of the recommendations is that Canada needs a national policing standard. This will create that seamless interagency capability.

It was raised before during the Homolka inquiry in the 1980s, but it never came to be. So it's up again, and it's time for it to be looked at again.

Nova Scotia Department of Justice is my second one, needs to take back control of public safety and policing in the province and not pass it on to the county governments. That experiment has fragmented our policing due to politics.

Countries like Finland, Australia, New Zealand, Singapore, et cetera all have national policing standards and they do not have these inter-agency compatibility issues.

Canada has a chance right now to create national standards in policing and fix problems identified or are about to be identified by this Commission. Does the RCMP need to change? Absolutely, they need to change. And it is this Commission's recommendations that will make those changes.

I look forward to those recommendations.

COMMISSIONER MacDONALD: Thank you.

COMMISSIONER FITCH: Mr. Carter, you had mentioned at one point that you were hired by Department of Justice of Nova Scotia for consulting.

MR. BRIAN CARTER: Yes.

COMMISSIONER FITCH: Can you remind me what year that was and for what purpose you were engaged for your consulting work?

MR. BRIAN CARTER: Yeah, 2004, 2005 and 2006. And then I went on to another branch of government after that. But I was hired -- I'd left the RCMP in 1999 and I'd gone with Bell Aliant in charge of their security when ---

COMMISSIONER FITCH: So I was just -- I was curious for what purpose you were hired for ---

MR. BRIAN CARTER: It was for policing. I was a policing

consultant.

COMMISSIONER FITCH: Policing consultant.

And what was the primary focus of that work that you were doing?

MR. BRIAN CARTER: It was to consult with Truro Town Police. My assignment was Truro Town Police and Halifax Regional, and my role was to consult with them on many, many issues. One of the main issues that I would deal with, I would be on their Police Boards, so I was at all their Police Commission meetings as a consultant.

And I was also there to help -- I would look at their training. Halifax ---

COMMISSIONER FITCH: I was curious what the actual purpose was for consulting with HRP and Truro Police during that policing study for Department of Justice of the province.

MR. BRIAN CARTER: That's -- well, that's how the Justice Department had it set up at that time. There was consultants for every agency in the province and there was different consultants assigned to other ---

COMMISSIONER FITCH: Yeah. I'm just wondering what the purpose was for meeting with HRP and Truro in your consultation work for the province.

MR. BRIAN CARTER: Yeah. It was -- it was to -- well, part of it was to help develop standards, so we were bringing them together so we had standards written and then they would -- we would have them talk to us about what -- will that work, will that not work and so on, so that was part of it.

Part of it was to look at their training. Part of it was to look at their -- we did audits. We did audits of the departments. The consultants were involved in many, many aspects of those agency's ---

COMMISSIONER FITCH: Okay.

MR. BRIAN CARTER: --- relationship.

COMMISSIONER FITCH: Thank you. And was that trying to align

RCMP standards and training with the municipal agency's standards and training?

MR. BRIAN CARTER: No, it was not.

MS. JENNIFER COX: Okay. Thank you very much.

MR. BRIAN CARTER: Yeah.

COMMISSIONER MacDONALD: Thank you.

MR. JAMIE VanWART: Thank you, Commissioners. Just to complete the record, and I'm going to wait until Mr. Carter can hear me, just to confirm that I have the right documents, but two documents referenced I think should be exhibited, as they were part of Mr. Carter's submissions. One was a paper called "Safer Nova Scotia" Prepared by the Municipal Chiefs of Police: Vision for Policing in Nova Scotia and Operational Perspective" presented by Chief Beazley in May 2008. It was COMM00392.

REGISTRAR DARLENE SUTHERLAND: Exhibit 2184.

--- EXHIBIT No. 2184:

(COMM00392) "Safer Nova Scotia" Prepared by the Municipal Chiefs of Police

MR. JAMIE VanWART: And the other was a paper prepared by the RCMP Veteran's Association entitled "Difference Between Rural and Urban Policing" dated May 2022, with the COMM number 0051958. I think that's correct.

REGISTRAR DARLENE SUTHERLAND: That's Exhibit 2185.

--- EXHIBIT No. 2185:

(COMM0051958) "Difference Between Rural and Urban Policing" dated May 2022

MR. JAMIE VanWART: Thank you.

COMMISSIONER MACDONALD: Thank you, Mr. VanWart.

MR. JAMIE VanWART: I heed the floor to Mr. Macdonald. Thank you.

--- SUBMISSIONS BY MR. THOMAS MACDONALD:

MR. THOMAS MACDONALD: Good afternoon, Commissioners. I'm Thomas MacDonald and I am counsel to Tara Long and Scott McLeod. I wanted to flag issues in two areas. RCMP Strategic Communications and Chief MacNeil's evidence.

In terms of the RCMP's Strategic Communications, I wanted to break that into two parts. One is the response -- Strategic Communication's response to the mass casualty. And the second is the policies, or lack thereof, in terms of Strategic Communications in rural areas when there is a critical incident.

I've been here now two months and what I see is a theme developing, and the theme builds on this too many cooks in the kitchen theme that we saw on the Command Post decisions. And those are our submissions. And others have said the same. So that at the Command Post in those early hours in Portapique, everybody wanted to be in command. We know the police was the Risk Manager was supposed to be, but well intended people wanted to also be in command. The command structure broke down.

What we saw on the public strategy communications issue is no one wanted to be in command. The command structure, such as it was, in terms of Strategic Communications was rigid and inflexible and it went up the chain with all the delays and the second guessing or lack of decision making that went with that, respectfully, relating to getting the Tweet out or whether to use Alert Ready.

So it was a systemic failure, in my view, and it's a theme now between what happened on the night of the 18th into the 19th, both stemming from the command decisions, and now into the strategic communications.

There has to be a better way to get a Tweet out directly related to public safety. There has to be a better way to trigger Alert Ready, such as its flaws may be, directly related to public safety. It has to be fixed. And if it can't be fixed, then talk to Australia, or let the political masters fix it for the institutions involved. In this case, it looks like it's the RCMP.

So if they can't fix it internally and bring people up to speed, a combination of training and education, the building on -- that was a risk management roundtable, not a Strategic Communications one, but we saw the people from Finland and Norway speaking of the importance, training Risk Managers, but it was a blend. It was a blend of training and it was a blend of education.

So there has to be a better way, because the public demands it and public safety demands it. It shouldn't be on a Tweet, and I know that I'm not trying to be unfair to some of the witnesses this week. The Commissioner of the RCMP shouldn't have to get out of bed in the middle of the night to authorize a Tweet that goes out in Nova Scotia when there's an active shooter in a critical incident. I mean, that can't be, and so there has to be a better way. And they need to fix it. And if they can't fix it, the politicians, as in Attorney General, need to fix it for them.

COMMISSIONER STANTON: Mr. MacDonald, would you agree with your colleague, Ms. Schigas, then that the question is an institutional and cultural one as opposed to the system itself?

MR. THOMAS MACDONALD: I would say largely it is, that the system isn't perfect, and the witnesses spoke eloquently about the system, in terms of what their perceptions were in terms of the flaws were not Australia and not other worries concerns with the system. But I think the overarching issue is systemic and it's within -- it's not the public alert system and not the technology. The technology can be blended.

So even if they took it incrementally and started with, "All right. It's very -- we're a big country." Well, Australia's not only a big country. It's a continent. And so the point that I'm making is, there has to be a way that they can start incrementally to say how do we deal with a critical incident relating to an active shooter in a rural area? Start with that so that at least if that, you know, was to happen again somewhere in this country, there's something in place where notices can get out quickly. And don't dumb down the public in the terms of, well, should we send a Tweet

or should we put out an alert? What will the public do? They'll start to shoot police officers. I'm not minimizing that concern, but give the public more credit. Give the public more credit.

In terms of the strategy for rural areas, I heard the witnesses and I examined the witnesses. I'm coming away with the idea that there is no strategy yet in terms of Strategic Communications in rural areas from the RCMP. They're working on it. I accept that they are. But we don't have the luxury of that time because what happens if there's another Portapique tonight or somewhere else, whether it's in Nova Scotia or another province where they police.

So we would submit one recommendation is they need to fix it, come up with the policy. If they can't do it, then the political people have to do it for them and this Commission should point that out and put in benchmarks and timelines to say do it and report about it. And it shouldn't have to take two years, or six months or two-years post-incident. And what's the policy? I don't -- you know, the policy is, okay, now the Tweets would, I guess, go out more quickly, which is good. I guess Alert Ready would be used. What was the wording that Supt Rodier used? "We'd absolutely consider it." She's well intended. I'm not saying she isn't. But that's unacceptable. I mean, it needs to be used, you know, flaws that it may have or not.

COMMISSIONER STANTON: Just so I'm clear, ---

MR. THOMAS MACDONALD: Yes.

COMMISSIONER STANTON: Sorry. So are you suggesting that a new set of standard operating policies or procedures are necessary?

MR. THOMAS MACDONALD: Commissioner Stanton, yes. But to begin with, some -- a very short list of standard operating procedures directly relating to active shooting incidents, critical incidents, ---

COMMISSIONER STANTON: In rural areas.

MR. THOMAS MACDONALD: --- in rural areas.

COMMISSIONER STANTON: Right.

MR. THOMAS MACDONALD: Yes, all the rest of the list is necessary, I think, as well. But that short list should be moved forward very, very quickly.

COMMISSIONER STANTON: And how do you propose that it is implemented? Because if there's -- if it's an institutional sort of systemic issue, is it sufficient to just, say, have a set of new standard operating procedures?

MR. THOMAS MACDONALD: So I think it starts this way. It starts with standout pop out from your report of the list in terms of a recommendation, and the recommendation then goes on to say that the RCMP needs to do this, and if it doesn't, then the politicians that they answer to in Ottawa, the Attorney General, or Solicitor General, or Minister of Public Safety, or all of them, need to tell them to do it in a very short timeline, on that short part of the list, rural areas, to do it, not consider whether Ready Alert should be used, for example, but do it, because the public, I think, demands it, and public safety certainly does. And we've heard various RCMP officers very sincerely say public safety is paramount.

No one's disputing that, but if it is paramount, don't consider whether Ready Alert should be used. Use it, in certain situations, critical situations, and could there be one more critical than Portapique.

COMMISSIONER STANTON: And, sorry, just ---

MR. THOMAS MACDONALD: Yes.

COMMISSIONER STANTON: --- a similar question to what I asked Ms. Schigas in terms of the recommendations that we heard on May 12th, there was a fair bit of groundwork that perhaps may need to be recommended as well for alerts to be well actioned and understood. And there was also a governance question with respect to private ownership of the Alert Ready system, and whether that is a good way to go as we move forward. Did you have any comment on those aspects?

MR. THOMAS MACDONALD: So I would say two things. I'll start with the governance and the private ownership. I'm sure that there would be many

entities, including the present one in the private sector, who would absolutely follow direction when they put that contract in place to temper their services to the requirements stated by the RCMP to do that in conjunction with all the stakeholders. And if they can't do it, then it should be public or government run. That's number one.

Number two, how hard would it be, and maybe it's been done, I don't know, but how hard would it be to send some officers to Australia and say, "What do you do on your continent in terms of Alert Ready?" Because I'm sure that Alert Ready triggered in downtown Sydney is different than it would be in the outback, maybe. We -- I don't know. But how hard is it to get a hold of the Australian Federal Police? Send someone over and get their advice because it seems to work for them, as we heard from the round tables.

So that's my submission in terms of the strategic policy in rural areas.

To Chief MacNeil, so I've heard the last speaker, and I heard the Chief, and I read the Chief's statement. The Chief was very strong in his comments, in his statement, and he was subjected to strong cross-examination from certain of the parties here, and he may have softened some of his statements a little bit, but he generally stood by them. And so, I mean, we heard the failings pointed out, if they are failings, but a different view, and we heard about the Police Chiefs drumming the RCMP down, for lack of a better word, to a lower -- not a seat -- full seat at the table. The point to all of this is who's right? Who's wrong? Is it somewhere in the middle? Here's my submission, it's dysfunctional, the relationship, and it needs to be fixed. And if those stakeholders can't fix it themselves, the Chiefs of Police, whether it's Truro Police Service, whether it's the RCMP in Nova Scotia, then it needs to be fixed for them, and that's the Attorneys General that need to come in to do it if it can't be fixed. But it should be capable of being fixed because the public demands it. You can't have the haggling, and the back and forth, and is it jealous, is it professional jealousy? What we didn't hear was, on the other side of the ledger is the value of the policing contract to the

RCMP in Nova Scotia, which I'm sure is a very valuable asset. So when they're saying -- and I'm not Chief MacNeil's lawyer, but the flaws in his argument, there are other issues I think at play here as well.

You, as Commissioners, heard the evidence. You heard the submissions. It's up to you, I believe, in your report, to point out are these issues that Chief MacNeil has at least flagged, are they real or are they perceived? And I think it's up to you to spell it out clearly in your view as Commissioners, are there issues? What are the issues? And are they real or are they perceived? And if they're perceived, they need to be fixed because it's clear that it is dysfunctional at the moment, the relationship, the overarching relationship.

Those really are all my submissions today, Commissioners, subject to any questions.

COMMISSIONER MacDONALD: Thank you so much.

MR. THOMAS MACDONALD: Thank you very much.

--- SUBMISSIONS BY MR. JOSHUA BRYSON:

MR. JOSHUA BRYSON: Thank you, Commissioners. I've really enjoyed this back and forth. I know have so many thoughts running through my mind. But just on the Ready Alert system, what struck me from that panel was Michael Trytten's comment that fear in using the Ready Alert system is borne out of a lack of preparation. And I think that's a lot of what we're seeing, respectfully, in the evidence, is a lack of preparation and there's fear from the higher ups in the organization. We see that with Superintendents that have testified, referring to completely baseless studies that have no probative value really, when you get down to it.

The April 24th experience where an alert was issued, that's 5 days after the worst mass casualty ever, it's using some of the same language that was used in the April 18th and 19th tweets. The April 18th mass casualty started with a firearms complaint at 11:32. That was the tweet. The emergency alert on April 24th said report of shots fired. And this is five days after the province is reeling. Of course, the province

is traumatized and is going to react. But even that, notwithstanding that, we still can't say that the 9-1-1 system was overrun. That evidence is simply not there. The 29 percent reference is -- the witness admitted that we don't know what makes up that 29 percent call volume that was dealt with in one way or another.

So that's my thoughts on the Ready Alert, that it reflects a lack of preparation, and we have to move forward with the Ready Alert system. You know, some of the issues are, are we moving towards an intrusive alert type system, or a non-intrusive alert? We heard lots of consideration, you know, you heard the classroom example. An intrusive alert is given and people are trying to hide. I don't know what the answer is on some of those very difficult questions. And perhaps flexibility in a system where you can generate both the SMS non-intrusive, but also have the intrusive, because most people, you're not -- if you're attached to your phone, you're certainly not looking at it non-stop; right? You need that intrusive alert at certain points. So perhaps there's a flexible system that can generate both SMS non-intrusive and also the intrusive, and the person issuing the alert is going to have consider the circumstances, what they know, and they're going to have to make their best guess, in terms of what's going to work for that particular scenario.

COMMISSIONER STANTON: Well, and also, the rural area aspect of it and the cell coverage that we've been hearing quite a bit about, whether an SMS system would be more effective. But then, of course, we also heard that for many people in rural Nova Scotia, if they're people without cell phones, then it's a bit irrelevant whether there's cell coverage or not. So trying to consider what kind of recommendations would really be meaningful in rural Nova Scotia or rural Canada is part of the challenge. So it's interesting to think about a flexible system.

MR. JOSHUA BRYSON: Yeah.

COMMISSIONER STANTON: So thank you for that.

MR. JOSHUA BRYSON: Yeah. And just in terms of the overall, I sort of see three different -- when you make recommendations, you know, my respectful

submission is that how are people going to implement these recommendations, and there's sort of three different ways. You have the voluntary uptake. And, you know, unfortunately, we've seen the track record on some previous reports of the update to date, so that's number one. Two, you encourage the legislators. So it's recommendations but it's also geared at the legislators to say -- to enact laws, or to tighten existing laws, the *Police Act* and so on. The third is that you raise, and you explicitly state what the expected duty of care is going to be going forward, and that's going to attract civil considerations going forward.

You're stating in a report this is what we -- and again, I understand it's not part of your mandate to find civil liabilities, so I'm not suggesting you go near that, but I'm -- what I'm suggesting is that that third branch, that third prong, that you're telling the institutions, this is what we expect the duty of care to be, and if there's a subsequent incident, you can be sure that others are going to be looking at this report and saying did you follow items 5 to 18, or whatever the case may be. So ---

COMMISSIONER STANTON: I don't know if you've had an opportunity yet to read the commissioned report from Professor Ben Gould from UBC? He talks about the duty to warn anyway.

MR. JOSHUA BRYSON: Yeah.

COMMISSIONER STANTON: And it's quite an interesting report that I think might dovetail a bit with what you're saying.

MR. JOSHUA BRYSON: Yes, exactly. You have the duty to warn. Exactly. Yeah.

So that's what I -- sort of the comments I had just from our discussion. Just a couple of other -- I'll try to really be expeditious here. Just to highlight a few things. So I mean, we heard about, you know, the emergency communications within the RCMP and among responding agencies. You know, it is unfortunate that we had -- when you look at the call logs, we had the 4 transmissions up to 10:42 about Andrew MacDonald. And you can actually see them. They're not all

referring to him as Andrew MacDonald, but you can see, you know, I'm dealing with a victim here. There's four of them. And then you also have the initial 9-1-1 call. So these are five opportunities for the command structure to be advised of Andrew MacDonald, and how that's completely slipping through the cracks. And you have a -- our very own critical incident commander not learning about it until 3:30. So that's very unfortunate. That's a problem that should be easily identified by individuals testifying that there's gaps and issues that definitely have to be addressed.

So just on that front, so it's not being reduced to writing in a manner that's accessible to the decision makers, you know. And if we look at the existing CAD files, I'm still a bit hazy on the CAD files because I look at some and they're 2 pages, I look at others and they're 60 pages. So if the CAD files are running notes of the incident, by the time you get to an hour into the incident, you're going to be 15, 20 pages into the CAD file. Who's reading 15 or 20 pages to get up to date? So one quick suggestion, social media platforms do it, they're able to pin important information to the homepage of the devices. You pin it there, so that it's the first thing you see, and then you have to go past the important information to start reading the detailed narrative. There must be a way to emphasize the most important information in an application and pin it, in CAD or some other program.

COMMISSIONER MacDONALD: Or as they do in Toronto, if I understood one of the panelists, you have someone feeding the commander organized information with a liaison with the -- and that same person could probably feed the Communications folks.

MR. JOSHUA BRYSON: Exactly, yes. Yeah.

And the other -- that also begs the question about the decision here to execute the Critical Incident Package. Because initially, when I got into this file, I assumed that the critical incident was enacted because of the Andrew MacDonald interaction at roughly 10:28. It's not clear to me now, and it's not clear from the evidence of West and Surette what it actually -- what actually triggered the critical

incident response. So my point there is that we do need clear -- not just guidelines, but a clear understanding of why the CIC was initiated by the decision makers, so that we can then later assess it, to make it better. So that's my comments there.

But right now, it's very difficult for you to assess if -- when the 10:42 call came to enact the critical incident, if that was too late, if it should have been enacted based on the 10:15, we don't have a clear understanding of exactly why they enacted the critical incident. And perhaps it should have been enacted at 10:15, 20 minutes or so earlier. But that's something on a go-forward basis that the CIC should -- it should be very clear, so that it can be later assessed.

Organizational debriefs, I just want to jump to that. So there's different types of debriefs. We heard the benefits of having, like -- from the ERT members that testified, about having -- you can be more forthright and candid when it's your own team doing a debrief, but there's also benefit in having organizational debrief. So, for example, we heard from -- I'm going to take you back to, you know, Staff Sergeant Briers' testimony, how he was just completely distraught over the fact that he felt that he missed the push bar on the cop car, and that if he would have saw it, he would have been able to get that out to other people. Well, unbeknownst to him and everyone else, Corporal Clarke knew that the -- knew and actually made the decision not to advertise. So here's this officer beating himself up for two years over something that he didn't miss because someone else had caught it and actually made the decision not to publicize it. So these after-action organizational debriefs -- so that decision has never been analyzed at an institutional level in terms of deciding what to send out in that particular tweet. But my overall point is that you have to have all the actors or representatives from all the actors in a briefing, because there's moving parts here that no one knows what the other is doing. I mean, I was shocked that -- with the Corporal's evidence that this decision was made and shocked that no one else knew that it was made by this particular officer.

COMMISSIONER MacDONALD: All right. I'm not following that

reference.

MR. JOSHUA BRYSON: Okay. Yeah. So when -- in Staff Briers' testimony, he talked about not noticing the push bar.

COMMISSIONER MacDONALD: Oh, I'm sorry, yes, I caught that. Okay.

MR. JOSHUA BRYSON: Okay.

COMMISSIONER MacDONALD: I thought that was -- when you said the Corporal, it's the same corporal.

MR. JOSHUA BRYSON: Oh, I meant Corporal Clarke, when Corporal Clarke had decided ---

COMMISSIONER MacDONALD: I see.

MR. JOSHUA BRYSON: --- to issue the tweet, yeah.

COMMISSIONER MacDONALD: Okay. I understand. Thank you.

MR. JOSHUA BRYSON: And Corporal Clarke had noticed a push bar and ---

COMMISSIONER MacDONALD: Right.

MR. JOSHUA BRYSON: --- that surprised us all, and that wasn't apparent from the disclosure.

COMMISSIONER MacDONALD: Okay. I thought you were introducing a new ---

MR. JOSHUA BRYSON: Okay. Yeah.

COMMISSIONER MacDONALD: --- topic. Thank you.

MR. JOSHUA BRYSON: Yeah. And then last point, it's just on Strategic Communications. So we have heard -- you know, we've all looked at the MacNeil Report recommendations, and 5842 and 5843, the 64 recommendations are outlined on page 75. They're nice and concise. We heard from our friends at the Federal Government that 60 of these recommendations have been enacted. That came across in questioning from the Feds, I believe it was in regards to Chief MacNeil, and

that the four are underway.

But again, as Ms. Digout aptly pointed out, the witnesses are largely unaware of the recommendations and their implementation and gave the example of Strategic Communications. And, you know, one point in particular, if we look at that recommendation, for example, 8.5 dealt with technology. It said it's recommended that up-to-date functional portable devices be provided to Communication personnel to enable them to effectively use social media and effectively do their job. Well, the Corporal didn't have the effective communication, because we heard her evidence that she couldn't -- the work/personal device she was using couldn't actually process the picture. She had to send it to a computer. She couldn't upload it, so there's a delay. And so she did not have the tools to effectively manage that piece of social media. That's a problem. That's 8.5 right in the MacNeil Report.

The other issue is just in terms of -- it struck me as -- there's work to do there with Strategic Communications. The medium is the message, and we have a Strategic Communications Unit that's stacked with people that don't understand the medium. They're not users. They don't use it. That struck me as very, very peculiar, and I think we -- there should be improvements. You have to understand the medium that becomes your message, as McLuhan said. And it's a complex ---

COMMISSIONER STANTON: I wasn't expecting Marshall McLuhan to ---

MR. JOSHUA BRYSON: I know.

COMMISSIONER STANTON: --- make an appearance today.

MR. JOSHUA BRYSON: I wasn't either.

COMMISSIONER MacDONALD: I thought it was Bertram Russell actually but ---

MR. JOSHUA BRYSON: Oh, it might have been. Sorry. See, that's going from the hip there. Yeah. But so just on that point, I mean, it's a complex area, Twitter. You know, you have your tweets, you have your threads underneath that

should be monitored. You could have a post, you could have 300 people commenting on the post, what level of monitoring is going on with that post. You could have theories that are starting to take root in that Twitter thread. So it needs people that are very hands-on and understand the platform fully and I think that's an area to look at.

So thank you very much for your time.

COMMISSIONER MacDONALD: Thank you so much.

MR. JOSHUA BRYSON: Yeah.

--- SUBMISSIONS BY MS. PATRICIA MacPHEE:

MS. PATRICIA MacPHEE: Good afternoon. It's Patricia MacPhee from the Attorney ---

COMMISSIONER MacDONALD: Yes.

MS. PATRICIA MacPHEE: --- General Canada.

COMMISSIONER MacDONALD: Afternoon, Ms. MacPhee.

MS. PATRICIA MacPHEE: I wasn't actually planning on making submissions today, but I do feel the need to respond to a few of the comments we've heard this afternoon. It's really hard, frankly, not to respond.

The first thing I want to talk about is the -- my friend's comment at the start of these submissions, and she mentioned a reoccurring theme of failing to take meaningful accountability following the mass casualty on the part of the RCMP. And that really resonated with me. And I find it extremely disheartening, actually, to hear that after we have had over 20 RCMP members come in here and appear before these -- you, Commissioners, these Participants, to be televised, and to speak and to relive the events of those two days in great detail, to relive really difficult moments for them, to be candid, to be transparent, to acknowledge where things went wrong, where improvements could be made. And to hear that what's been taken away from that is a reoccurring theme of failing to take accountability, those are harsh words, given what we have heard and what we've experienced over these last few months and I don't think it's fair to these witnesses. I think these witnesses have come here and really tried to

assist you Commissioners as you move through the process. They've tried to address gaps, to address omissions. They've tried to provide the context that you have requested of them. And ---

COMMISSIONER STANTON: Just a moment, Ms. MacPhee, I believe what Ms. Digout was saying though was she was distinguishing, I think, between the individual witnesses from which we've heard -- or from whom we've heard, and the -- and institutional responsibilities. So I just -- in fairness to her, I think that was her submission, rather than particular afront to the witnesses who, as you rightly say, have come and provided testimony which has been very difficult for them to do.

MS. PATRICIA MacPHEE: And in fairness, those witnesses are members of the RCMP. They speak for the RCMP. The RCMP has been, at all times, trying to facilitate the work of this Commission. Not only these members have come and testified before you, there are countless others who have provided interviews. There are other members within the RCMP who have tried to assist and answer questions and provide documents and explanations.

So it does impact not only these members who speak for the RCMP, but I don't think it's fair to say the RCMP, as an institution, has not been failing to take meaningful accountability. Their participation here and their attempts to facilitate your work I think is evidence that in fact they are trying to help. There is a desire to try and learn from these horrible events. That's what this whole process is about, after all. Not just for the RCMP though. And we have to remember that as well. For all policing agencies. Not solely in Nova Scotia, but in Canada.

The RCMP happened -- this incident happened to happen within RCMP jurisdiction. But to suggest that anywhere else in Canada would have been at the ready and would have been able to respond perfectly in this unimaginable situation that had never occurred in Canada of this -- a situation of this magnitude is unfair.

Yes, it is the RCMP and they're not shying away from that. They have been present. They have been trying to work with the Commission. They have

been trying to work with the public. They've been trying to answer questions, to provide documents, and to try to help all of us in Nova Scotia and in Canada learn from these events, to be better, so that if something like this happens in the future, we can do better. So we can take something away from a tragic event that has changed the lives of numerous families, obviously, of all Nova Scotians, and of Canadians.

So it's not a fair comment. And so I do take umbrage at the comment because it's not a representation of our participation before this Commission.

Another thing that we've heard talk about, has become a bit of an issue here, is the MacNeil Recommendations. And my friends have commented throughout the witness evidence of some of the testimony and some of the cross-examinations with respect to the implementation of the recommendations. And my friend, my colleagues, Ms. Ward spoke to them in her cross-examination, I believe, of Chief MacNeil on Monday. And in fairness to the Commissioners and to the Participants, this is something that's kind of an emerging issue. How have we done with the implementation of these recommendations in a previous inquiry? And we haven't dictated the way in which the Commission is hearing evidence or calling witnesses, so we haven't had the opportunity to put that out there, and it's becoming an issue. And we're happy to address it.

We do have some senior officers who will be testifying at the end of July and they can better speak to the implementation than asking certain questions about, you know, particular recommendations to witnesses who aren't well positioned to address the implementations of recommendations from that inquiry or for them -- sorry, that review.

But we are going -- and we're not shying away from that. If it's something the Commissioners want to hear about, we're happy to answer. We're happy to help you understand what's been done.

Again, we are trying to be transparent. We are trying to be helpful. And we're here to answer those questions and we will work with the Commissioners

and provide the information you're looking for with respect to the implementation of those recommendations from MacNeil.

We haven't had a full opportunity to do so yet.

COMMISSIONER STANTON: But presumably to a response to our request for written evidence, that will be part of what you supply? Is that correct?

MS. PATRICIA MacPHEE: I personally haven't read that particular subpoena, there have been many, but I can tell you that we have been looking at those and we have been looking through our documentation to find the most accurate and recent and complete account of how those various recommendations have been implemented. So yes, we are working towards that.

COMMISSIONER STANTON: I was intrigued to hear that 60 of the 64 recommendations have been implemented, so I do look forward to understanding better how you measure the implementation of a recommendation.

MS. PATRICIA MacPHEE: And we're willing to work with you and hopefully address those and answer those questions for you.

Skipping ahead to another issue that one of my friends raised, and it's a breakdown of a command structure, that's what it's been called, what happened during the events in question, that the command structure broke down.

And again, it's a bit troubling if that's what my friends have taken from the evidence of those were there, the staff sergeants, the risk managers who were there during the events in question.

Again, I don't think it's fair to suggest there was a breakdown. I think that everyone who is there testified about the role that they had about their involvement, about their understanding about who ultimately was in command. And I take issue with the suggestion that there was confusion amongst those members. They had roles and they talked about them. They talked about their understanding. So again, it is troubling that after hearing them all speak and testify candidly about their movements and actions that night, that that is the takeaway. I don't think it's a fair

representation of their evidence.

I'm flipping around a bit, as I was making notes while everyone was speaking, but I want to talk a bit about Alert Ready. And again, the suggestion somehow, after the evidence that we've heard that the RCMP is trying to discount the importance of Alert Ready or doesn't recognize its importance or its potential uses, I don't know where that's coming from after hearing the evidence, even of Supt Rodier.

Yes, it's true, Supt Rodier and the RCMP will tell you, and as all the witnesses who have appeared here have said, in their time with the RCMP, up until these events, they had never heard of public alerting being used in a policing situation. That's their evidence. Since that time, you've heard Supt Rodier talk about the work they did to find out more about this Alert Ready, to look through their own holdings. "Did we miss something? Was there lots of work being done on this and were we just not tuned in? Did we somehow miss it?" And to find out that, in fact, there was very little.

And the materials that have been produced and have been exhibited so far speak, in fact, in very general terms about the use of Alert Ready in policing situations. It's a bit of the pie in the sky idea, in fact.

We have seen that PowerPoint presentation that was provided by the Department of Justice several times. It was really, in its inception, it was just considering that this is a possibility, this is what Alert Ready might have in the future.

What we didn't see is any kind of concrete work done, and this is not in anyway passing judgement on anyone involved, on how it might actually work. We know that the opportunity was given to the RCMP, and I believe to the HRP, and maybe to the Cape Breton Regional Police, to take over the use of the system several years ago and they declined.

So if Alert Ready, in the policing context, were such a well-known thing, if it was so well known, where are the standard operating procedures? Where are the policies? Where are the practices? Presumably, if this was well known by

everybody but the RCMP, there's got to be some documents out there. There's got to be some correspondence from the Province, the EMO, with these various policing agencies setting out how it's going to work. We haven't seen that. We've seen some very, very, very general documentation that suggests that this is a potential, this is something that we, you know, might be able to tap into.

And for whatever reason, it wasn't. And that was changed. The lesson was learned.

Following these events and the great public outcry with respect to the failure to use Alert Ready, the RCMP took immediate action. They looked at their own records, they looked at their own practices, and they got to work. They got to work, they created a working group, they liaised with the Province, with their policing partners, and said, "How can we do this? How can we make this work?"

So to suggest that they're shying away from it or there's no changes is frankly just not true. In fact, the opposite is true. They took control of the system and were given direct access in April of 2021, I believe. They've developed regional H Division policy, there's a national policy, there's a working group. There's constant efforts to learn more about Alert Ready and how they can tap into it.

There's talk about the RCMP have, you know, again, trying to discount the importance of Alert Ready.

In fact, the RCMP have been using Alert Ready since the incident. In fact, the RCMP used it 11 times in Nova Scotia since April 18th. The RCMP have used it 23 times in Canada since the incident.

The RCMP has developed or obtained an expert -- obtained the KPMG report, which was entered into evidence earlier this week, and it's not -- that KPMG report is not an effort to say that the Alert Ready is not a good thing. In fact, it's the opposite. It's to learn more about Alert Ready. Let's find out what the potential problems are and let's try and mitigate the risks.

COMMISSIONER STANTON: A similar question for you then that

I've been asking your friends with respect to some of the recommendations that we were hearing from the people with specific expertise on May 12th, whose names, I'm very sorry, I can't call to mind because I am hopeless with names, but there were a number of considerations that have been raised, certainly by Insp Rodier, which were in fact addressed wholly by people, I think, on the roundtable panels with respect to myths around public panic and the need for groundwork to be done in advance of alerting systems being implemented, questions around governance, and so on. And in fact, Insp Rodier noted that governance point.

Do you have submissions with respect to those recommendations?

MS. PATRICIA MacPHEE: I don't personally. I actually wasn't here for the roundtable on May 12th. But I can say that the fact that Insp -- or Supt Rodier was alive to the early concerns, again, is, to me, just a demonstration of the fact that the RCMP as an organization is looking at this seriously. That's not to -- the RCMP is certainly is not buying into a myth that we can't use Alert Ready because of public panic. Was it a concern? Not solely raised by the RCMP, but certainly around the world when Alert Ready was being rolled out.

But the RCMP has been using it. Let's look at the actual facts. The fact that they also are considering the potential risks is just good business. But they are using it. They developed strong policies. They've been working with the Province to make sure that they have a good set of policies and practices so that they are using it appropriately and responsibly.

And to suggest somehow that because we have Alert Ready and everyone knows about it, now that it should be used in every situation is not fair. And that is simply what Supt Rodier was commenting on when she said it's certainly something that would have been considered. Because to suggest that you would use an Alert Ready in every situation is not fair and it's not possible. We'd leave that to the police to determine based on the risk analysis of a particular situation. That is what they do.

We've heard, with respect to Alert Ready, testimony from Chief Dave MacNeil earlier in the week, that the Truro Police Service was well aware of Alert Ready for policing applications.

And I'd submit that that is an area that we should be looking at further. What's -- how did that happen? How is it the Truro Police Service had full knowledge of Alert Ready and its application for policing purposes and the RCMP did not? There is definitely discrepancy in the evidence on that front. And I think it's worthy to look back and say, "Well, what are the documentation?" Let's see some evidence of how the Truro Police Service was prepared to use Alert Ready in policing situations. Presumably there is some. It's a pretty significant tool. Presumably there's lots of paperwork, there's lots of policies or SOPs to tell us about how that was being used or implemented with the Truro Police Service and whether it was being used similarly with other policing agencies in Nova Scotia. It's significant and we should be looking at that, but not focusing all our attention on that point, because again, we are forward looking. We are trying to improve things. But there's definitely a discrepancy in the evidence in those two police agencies on that point.

The only other thing I wanted to say today was we heard also from Chief MacNeil earlier in the week, and him describe the events of the 18th and 19th. He said there had to be a long list of catastrophic failures on the part of the RCMP for the perpetrator to have made it to the point that he was heading to Truro.

Does there really? I mean, after all the evidence that you've seen, the documents, the information you have about the perpetrator, the fact that he had a fully marked -- mocked up police car in his possession for some period of months before this event, that he had numerous firearms in his possession, that he was intelligent and financially sound, that he was able to carry on this frankly unbelievable crime? To suggest that it all falls at the heels of the RCMP, is that fair?

That doesn't mean there aren't lessons to be learned here. There are lessons to be learned for everybody from this incident and we're trying our best, the

Attorney General of Canada and the RCMP as an organization, to do our part to be transparent, and to put the facts out there and to help you understand what happened and what we can do better. So please know that the RCMP has been working since this event occurred to try and identify shortfalls and things that can be improved and trying to make those changes.

We talked a lot about Strategic Communications today. For example, as you heard, Supt Rodier speak to, there is going to be a person, or is now a person for Strategic Comms who will be embedded in the CIC package. That's to streamline that process. That's just one example. She spoke to many.

And there is a subpoena in which we will set forth, for the Participants, for Nova Scotians, for the Commissioners, the changes that have been instituted on the part of the organization to date.

Thank you.

COMMISSIONER MacDONALD: Thank you, Ms. MacPhee.

COMMISSIONER STANTON: Mr. VanWart?

MR. JAMIE VANWART: Just simply to say that concludes the submissions, Commissioners.

COMMISSIONER STANTON: Thanks very much. Another full week here at the Commission, or at least this one was a very full one. I appreciate your patience with the scheduling challenges that we have, trying to ensure that we do hear what we need to.

As you can tell from the witness panel today, technical witnesses who, similar to some of the folks that we've heard from on the roundtables, have deep knowledge of very particular subject areas that are all pieces of the mandate that we need to address, and each one of them requires careful consideration because you think you've heard from a number of people that one thing is the right thing to do, and then you have people tell you, but make sure you consider all of these other factors, in order to make a meaningful recommendation. And so that's very helpful to continue to

hear from the folks that hold that kind of expertise.

And we're certainly grateful for them, and of course for the submissions of counsel today, which I know we all very much appreciate, and we'll give careful consideration to.

I see that we've got our slide up with respect to the Foundational Documents. The Phase 1 Foundational Documents are almost all tabled now, and there's an immense amount of work that goes into sorting through all of the disclosure and the information we glean from interviews, and the arguments that we hear in order to really get an understanding of what happened; and, of course, we're also moving forward to try to understand how and why it happened. And so it's extremely helpful to have the roundtable conversations, as well as hearing from witnesses as we go forward.

We had the air support, HRP, 9-1-1 and radio communications Foundational Documents tabled today, and so we're almost at the end of the Phase 1 Foundational Documents. Although, of course as we've said all along, the Foundational Documents are the information we have as of that date and we -- as we hear corrections to them and as we gather more information, we are building up the additions to that information; and, of course, the final report is where we will share our conclusions.

The progress that we're making with respect to understanding how and why it happened is assisted by those commissioned reports. We've had 13 of them so far, and each one contains quite a rich basis of information that is assisting us; and, of course, seven roundtables so far with the experts that we've been learning from.

We'll continue to focus on more of the how and why questions as we're moving through the next few weeks, and next week we're going to be holding some small group sessions to better understand the causes, context, and circumstances of the mass casualty as is required of us in the mandate.

The small group sessions on Monday and Tuesday we'll be hearing from some first responders and service providers and others who worked during and in

the aftermath of the mass casualty, which will be of assistance to us.

We depend on your engagement, that of Participants, their counsel, the Commission team, and all the people who make these proceedings possible, the media, the many organizations and community groups engaging in our work. We do remain grateful for al of your contributions and thank you for the ways that you're engaging, whether you're reading the documents and materials on the website, watching and listening to the proceedings, or sharing information that can advance our investigation, and submissions that can help to shape our recommendations, we do appreciate it.

Just a reminder that next week, the public proceedings will be moving to the Hilton in Dartmouth, which is a venue we've been in a few weeks ago. So we'll be going back towards Halifax next week, but I believe we'll be back in Truro a little bit later in the summer. And in the meantime, I hope everyone gets some rest after this very full week, and we look forward to seeing you on Monday.

Thank you.

REGISTRAR DARLENE SUTHERLAND: Thank you.

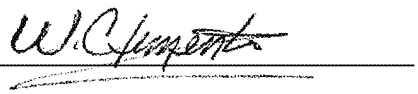
The proceedings are adjourned until Monday, June 13th, 2022, at 9:30 a.m.

--- Upon adjourning at 5:25 p.m.

CERTIFICATION

I, Wendy Clements, a certified court reporter, hereby certify the foregoing pages to be an accurate transcription of my notes/records to the best of my skill and ability, and I so swear.

Je, Wendy Clements, une sténographe officiel, certifie que les pages ci-hautes sont une transcription conforme de mes notes/enregistrements au meilleur de mes capacités, et je le jure.



Wendy Clements