



## Top trends in IT, UC, telecom, networking, NG9-1-1, and what it all means

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*Happy Canada Day and Happy Independence Day to our readers*

**Note to Readers:** We apologize in advance for the length of the Technology Dispatch this month! Who would have thought that June would be such a busy month!!!

We hope you enjoying reading this on the way to your cottage for a Canada Day weekend off with friends and family while someone else drives!

### **NENA 2016 - Annual Conference - What is new in the 9-1-1 area?**

Written by Bill Elliott, FOX 9-1-1 Practice Leader

#### **Who is NENA?**

NENA (National Emergency Number Association) is a professional non-profit organization solely focused on 9-1-1 policy, technology, operations and policy. In addition to being an advocacy organization, NENA provides key guidance for technology deployments and certifications for professionals.

I had the pleasure of attending the annual Conference and Expo which was held in Indianapolis earlier this month. As its name implies, there were conference workshops, presentations and an industry tradeshow featuring a variety of businesses involved with the deployment and management of 9-1-1 centers.

#### **Next Generation 9-1-1**

Next Generation 9-1-1 (NG9-1-1) is the next key technological and social evolution of emergency services over the upcoming years. In a nutshell, NG9-1-1 overlays the 9-1-1 services on Omni-channel contact center technology. This allows Public Safety Access Points (PSAP) to leverage IP technology for locating and communicating with the public during emergency situation and the ability to pass along critical information to emergency responders via voice, text or video.

At the present time, 70% of calls to 9-1-1 come from wireless phones with no street address attached to the number. In addition, VoIP is becoming a bigger issue now that low cost, good quality services are available that can use a phone number from anywhere in the world. NG9-1-1 is designed to use a variety of databases and geospatial applications to locate callers rather relying on the telephone number to provide location information.

#### **9-1-1 Jargon - E9-1-1, NG9-1-1 - what are the differences and why should we care?**

Just to be perfectly clear, this is not E9-1-1. E9-1-1 was good technology for 1984, but it is losing relevance in this millennium. Although improving E9-1-1 to provide triangulation or GPS locations for cellular services was a good interim measure, the IP world has completely changed the paradigm in which 9-1-1 services are provided

There has been a lot of hype about "Text to 911". This is a step in right direction but does not constitute NG9-1-1. Earlier this month, at the Orlando Avaya International Users Group, I described NG9-1-1 as a three legged stool with IP-enabled answering points and IP-enabled devices making the calls connected over IP-enabled carrier networks.

During the conference, I attended and focused my attention on workshops and presentations that dealt with the policies, processes and technologies associated with the deployment of NG9-1-1 in Canada and throughout North America.

I had the opportunity to meet NG9-1-1 project managers and directors as well as to review the status and designs for the planned migration NG9-1-1 projects in Northern Illinois, Indiana, Massachusetts and North Carolina.

Although these forward thinking administrations are making significant progress in NG9-1-1 deployments, none of them are fully deployed (as yet). In most cases, the missing link is the carrier IP connectivity and successful integration to internal GIS, RMS and CMS responder applications.

**What does this mean for Canada?**

The CRTC has begun hearings into NG9-1-1 ( <http://www.crtc.gc.ca/eng/archive/2016/2016-116.htm> ) to provide the regulatory framework for the deployment of NG9-1-1 in Canada.

The lessons I learned from attending interactive conferences like NENA 2016, can be leveraged to help Canadian telecom industry, CRTC and emergency responders move forward with the deployment of NG9-1-1.

Of interest, I met three members of the CRTC at the conference, often in the same information sessions as I attended. Having the CRTC in attendance is a clear indication that this conference will have some influence on the outcome of the upcoming Canadian CRTC activities.

**What are the next steps?**

As various communities begin to upgrade their PSAP's (Public Safety Answering Points) due to older technologies approaching end of support, the PSAP design and acquisition process should be included as a pathway to transition to NG9-1-1 over the next couple of years.

The NG9-1-1 deployment process should not just be a "long term plan". It should be in process, and on the agenda at all PSAP planning meetings with communities gaining support for the required investments.

**What will FOX professionals be doing in 9-1-1?**

FOX Leader, Roberta Fox is personally taking an advocacy role in the future of NG9-1-1 and is in the process of registering as an intervenor on behalf of deploying NG9-1-1. She will be working with municipal and public safety organizations to try to corral them to provide input and feedback from their unique customer/public perspectives.

As the FOX 9-1-1 Practice Leader, I will be providing Roberta with 9-1-1 expert technology support from a carrier and 9-1-1 operations view for her input in the CRTC hearings.

From a technology design/advisory perspective, with my ENP (Emergency Number Professional) examination and designation pending later in July, I look forward to assisting public safety communities of how to design and acquire appropriate technology solutions during the transition process to NG9-1-1.

Please feel free to reach out [me](#) to discuss further, or visit our new 9-1-1 website at [www.911techadvisors.com](http://www.911techadvisors.com)

**FOX GROUP Launches 9-1-1 Advisory Division focused on NG9-1-1**

**Tech Advisors** Over the past sixteen years, we have been involved in helping hundreds of organizations evolve to next generation IP-based communications solutions for the corporate, mobile and contact center requirements. Since 2009, we have helped dozens of enterprise and government organizations develop plans and procure next generation unified communications solutions. These solutions have enabled them to leverage voice, messaging, video and collaboration applications across time and distance to improve productivity and customer service.

**Delays in moving to IP-based communications**

We have been waiting and watching government first responders and public safety organization to see when they were going to move to next generation IP based voice and UC solutions for internal non-9-1-1 communications. While some have moved to IP telephony, many have not, primarily to lack of funding and support.

We were particularly waiting to see when, and how, they would be developing strategies and migration plans to move to their 9-1-1 communications solutions for their command centers and corporate communications away from legacy digital solutions to IP-based UC oriented environments integrated into their dispatch and command center 9-1-1 oriented applications.

Unfortunately, the majority of the US and Canadian 9-1-1 oriented organizations have lagged enterprise, education, non-profit and other sectors in moving away from legacy telecom.

**Telecom Sector investments in 9-1-1 lag contributions paid by subscribers**

As we delved into this area further, we were also dismayed to identify that the North American carriers and cablecos continue to NOT invest in next generation 9-1-1 solutions that would enable them to deliver the required information to the public safety/first responder organization, even if they did have the capabilities.

**What is needed to support NG9-1-1**

All of these factors made us realize that something had to be done, and someone was going to have to push everyone forward if we were ever going to be able to safely and reliably make and receive IP-based 9-1-1 calls across any device from any location.

**FOX GROUP responds to the NG9-1-1 call**

During one of our internal strategic planning meetings, we realized that we had already professionals on the team that had not only gone through the challenges on bringing telecom competition to Canadian business customers in the mid-1990s with the CRTC, (and also worked on the number portability saga).

We also had multiple folks that have helped build and support Bell Canada's carrier 9-1-1 infrastructure, as well as design, deploy and support communication dispatch centers for a variety of public safety/first responder organizations. We even discovered our customer projects related to design and vendor selection for 9-1-1 capabilities for large and medium enterprises, involving equipment signaling, selection of carrier services, policies and training to make sure employees could reach 9-1-1 from within corporate offices.

**What will be doing in NG9-1-1**

Our new division 9-1-1 Tech Advisors ([www.911techadvisors.com](http://www.911techadvisors.com)) will help organizations design and acquire next generation 9-1-1 voice, video and unified communications technology solutions that improve 9-1-1 response times that save lives!

We will help prepare your future 9-1-1 design and RFP technical specifications, analyze the vendor results and prepare total cost of ownership to help you select the appropriate vendors for your next generation 9-1-1 solutions.

Our clients include Police, Fire, Emergency Service and Public Safety organizations that require experienced experts to help them acquire and project manage the future next generation 9-1-1 solution(s) integrated into their GIS, RMS and CMS applications.

We will be customizing our eProcurement applications for the 9-1-1 unique business and technical capabilities in order for public safety organizations to gain support and funding to migrate to NG9-1-1 unified solutions.

This funding is critical for these organizations in order to enable them to integrate the various responder applications together with updated IP carrier information to take 9-1-1 contacts from the public, whether they are contacting them from a smart phone, a PC VoIP app, a video call, a text or email contact.

This is particularly important as the public continues to move away from analogue carrier land lines to mobile IP-based devices and use multi-mode communications more and more as their preferred communications method.

**Research, Advisory Services, Insight and Advice on NG9-1-1 Technologies**

We will also be expanding our information for 9-1-1 best practices, benchmarking, as well as vendor services and offers in order for us to help our clients successfully acquire and deploy NG9-1-1 technology solutions.

We are proud to be able to bring our past 9-1-1 experience, our current leading edge technology expertise and our regulatory reach and understanding to this important area that affects all of us.

We will be updating our new [web site](#) on a regular basis and encourage you to sign up on our web site to gain access to the latest 9-1-1 information.

**Changes with Technology Dispatch and NG9-1-1**

We will be migrating our Technology Dispatch ezine to a new technology platform associated with our FOX GROUP consulting offers in the near future. This means that you will have to subscribe to the new environment separately in order to receive the 9-1-1 information.

**Who to Contact at FOX**

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We hope that you will read our evolving 9-1-1 material as we continue to provide you with current, relevant content via evolving digital media, i.e. video, blogs, podcasts, etc.

As always, we appreciate your thoughts, comments and [feedback](#). We look forward to sharing updates and success stories in future posts.



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**INDUSTRY NEWS & COMMENTARY****Robots, AI and Jobs**

A new Ryerson University, Brookfield Institute for Innovation + Entrepreneurship [report](#) says that automation is transforming traditional occupations, changing the day-to-day tasks of Canadians, and potentially creating new jobs.

The report also indicates that nearly 42% of the Canadian labour force is at a high risk of being affected by automation.

The use of artificial intelligence and advanced robotics means that automation is now entering the realm of cognitive, non-routine tasks and occupations, such as driving and conducting job interviews.

*Editor-in-Chief: We encourage senior leaders of all sectors to take a read at this well researched and well written report. This is not to say that we think every job can be replaced by robots, but it certainly made me think about what roles we as humans SHOULD play in the future and what jobs are better left to robots.*

**Avaya Lands US Defence Health Deal**

The US Defense Health Agency (DHA), has signed an agreement with Avaya Government Solutions that will help modernize all points of the DHA's unified communications and contact center architecture.

Part of Avaya's mandate is to reduce OPEX spend by 30%+, eliminate CAPEX required to modernize, "Self Fund" investments in order to accelerate deployment of UC.

**Cisco Tetration Data Center Automation**

Cisco has a new product, called Tetration, available in July that optimizes data flows in data centers via real-time data analytics.

Tetration will apply machine learning to analyze, in real-time, all of the data flow of IP packets between switches and the dependencies between software components running in virtual services.

Tetration learns what the 'normal' traffic patterns are, and will trigger notifications and sometimes automated responses to correct a possible problem.

It also supplies continuous visibility into what's going on everywhere in your network, including rolling back the clock to view what happened, in detail, in the past.

The cost of this product starts at about U.S. \$3 million, and includes built-in data storage for analytics, a 32-RU appliance, loaded with Cisco UCS server, networking and analytics software. All pre-tested and ready to go on delivery.

*Publisher & Editor: This level of exceptional technology, with an obvious, and immediate business need, will follow the standard pattern of initially being marketed to the largest companies, then once the 'low-hanging fruit is harvested, move to be affordable to medium size businesses, and so on down to commoditized for the masses.*

*The fact that in order to accomplish real-time analytics at this scale the software needs to be chip-based, will slow down competition, but come it will. I'd expect to see similar offerings in Cloud-based*

*Editor-in-Chief: This seems to be the trend these days, to only go ahead if the updates/changes don't increase costs, and hopefully reduce overall running costs. Having been involved in numerous similar projects since early outsourcing days, the devil is in the details, and also has to include expertise and resources who can track and manage internal and vendor costs and service levels (unique skills for sure!)*

## ININ Interactions 2016 Conference

This year's Interactive Intelligence conference, (held in Indianapolis, Ind.), was again mostly about their latest Cloud-based product, PureCloud. It had a heavy helping of assurances that their customer premises Interaction Center (CIC) product is not only still in business, but growing as well.

While most of their development focus is on PureCloud, CIC is still developing fixes, updates and new features and will be for some time, particularly since it's a solid product that customer who depend on contact center technology around the world feel comfortable with.

ININ expects PureCloud features to meet, and begin to exceed, the customer presence based CIC product within a year.

*Publisher & Editor: Interactive Intelligence has invested the money, time and resources to build their cloud platform from the ground up to be Cloud optimized, easy to scale and enhance capabilities. They are certainly expanding customer seats and percentage of revenue of cloud versus CPE from the performance results they shared during consultant briefings.*

*The past year has proven they were on the right track, and their implementation teams are more confident than ever. The dealer community is continuing, to work hard to adapt to these necessary changes. It's a huge learning curve for everyone!*

*We expected that some customers will always prefer a product they can install on their own equipment for security, performance and customization purposes.*

*A standout feature of this year's conference was the increased level of openness and transparency. The company and people all seem to have a greater level of confidence which allows them to be honest and candid with each other, their channel partners, analysts and consultants... refreshing!*

*solutions within the next 3 to 5 years. This is too big a market (\$17 Billion) to ignore.*

## Mitel Partners with Zayo

Mitel has partnered with Zayo Group to deliver a hosted and fully-managed real-time communications, collaboration and conferencing solution in Canada.

Mitel's MiCloud solution is delivered over Zayo's Canadian communications infrastructure.

*Editor-in-Chief: This announcement is further indication of the move to cloud UCC services within the Canadian marketplace. It will be interesting to see how and what functions differ from Mitel-only solution and what percentage of clients take up what parts of the UCC environment.*

## Dell sells software arm to Silicon Valley investment firms

The software portfolio was best known for network solutions, and also included analytics, database management, data management, data protection, endpoint systems management, Microsoft platform management, identity and access management and performance management.

*Editor-in-Chief: Most of the comments said that this would allow Dell technology division to narrow its focus on hardware to be able to better integrate with EMC (which they acquired, but has not closed yet).*

*The point that we are concerned about with this move is that all of those applications that they built and tried to deploy are important to have in order to run and manage reliable computing and network environments.*

*We are finding that more and more clients are assuming that their cloud providers will provide those functions for them as part of their cloud offer.*

*When you drill down into the details of most of the VoIP, UC and computing cloud app offers, the vendors in fact DO NOT get into detailed management reporting and performance capabilities for clients.*

*Again, this is a case of 'the devil is in the details', and 'Let the buyer beware'!*

MISA Conference Highlights - Look to our [FOX blog](#) for our summary of the recent MISA conference highlights

ININ Pure Cloud Canadian Launch Highlights - Also look to our [FOX blog](#) for our summary of the recent ININ conference highlights



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