SmartRail Speaks: Andrew Taylor, CEO of Nomad Digital.

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"When you're finished changing, you're finished" - Benjamin Franklin, a man no stranger to both innovation and revolution, famously once said. And few of us working in rail technology and having seen the changes of the past decade would disagree with the sentiment. Change, and all that comes with it was a key theme when SmartRail World Editor Luke Upton recently met with **Andrew Taylor, CEO** of **Nomad Digital**

– the international provider of passenger and fleet-management solutions to the rail industry.   Andrew joined as CEO in October 2013, having previously held senior positions at a number of telecommunications leaders including Digicel, Intec Telecom, Alcatel Lucent and BT. With a reputation for business transformation and growth, the effusive Scot offers a wide ranging view on their latest developments, in particular with UP Express and NS, the creation of Nomad Tech, some of the challenges they face, and what exactly makes a pioneering company....

(For this interview in French, click Discours d'Andrew Taylor, PDG de Nomad Digital).

To open our discussion, I ask Andrew how he's seen the business grow and change since joining; "I think that two years ago, we might have described Nomad as a Wi-Fi company working in the rail sector. Now, Nomad is a very different type of company, with a focus on enabling vehicle 'connectivity' to the transportation sector, coupled with delivering passenger and fleet based applications and solutions, including Passenger Wi-Fi, Passenger Information Systems (PIS), On-board Information Systems (OBIS) - including the delivery of Infotainment & Media, and Remote Condition Monitoring (RCM), which enables our customers to optimize their operational and financial performance."

"As the pioneer in the sector, I think we have really listened to our customers and spent time thinking about how both their needs and the needs of their passengers is reflected in our product offerings and strategy. Changes in technology and demand for improved passenger services and fleet reliability and efficiency are hot topics across the industry, and are being driven by the insight and vision of CIO's," Andrew added.

A major new development for the Nomad Passenger Wi-Fi solution has been the securing of a contract with **Union Pearson (UP) Express**, an air-rail link which will connect Canada's two busiest transportation hubs: Union Station in downtown Toronto and Toronto Pearson International Airport, and carry over 5,000 passengers a day. Each of the 18 cars will have its own internet server to give UP Express the freedom to organise and connect cars as they wish. Nomad's technology will offer Passenger Wi-Fi service, as well as a portal with multi-lingual and wide device support, platform to train roaming, and real-time customer support for passengers. Each of the eighteen cars will have its own internet service to provide UP Express the ability to organise and connect cars as they want, while maintaining a reliable connection.

A big factor in the planning of UP Express passenger Wi-Fi, is that it has moved in a short time from being an exciting addition to a standard feature on many journeys and customer expectations have risen as a result. I asked Andrew for his view on this changing role; "Wi-Fi is part of improving the passenger experience. Whether it is a business traveller using the Wi-Fi to work while they travel, or a family using a streamed film to keep the kids happy during a long trip, it improves the journey. This makes rail a more attractive and

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popular option. And this ultimately makes a bottom line contribution for transport operating companies."

However, Andrew does note some caution: "Building connectivity and Wi-Fi infrastructure doesn't guarantee a positive passenger experience. Operating companies need to carefully consider the type of broadband experience that they would like to deliver and the services that they plan to offer to their customers. To avoid negatively impacting customer service, a number of factors, including network availability, network speed, passenger demand, and cost must be fully evaluated. Passengers have increasingly high expectations and service has to match this. Nomad offers software solutions that enable our customers to manage bandwidth, customer experience and costs on a real-time basis."

I was interested to hear some more about this focus on improving the passenger experience, and asked for some more details; "There's a real growing focus on this area for rail, and we are seeing some great examples across our industry, where our customers have a strategy which revolves around the end-to-end passenger experience, which includes multiple modes of transportation". The Dutch rail operator, **Nederlandse Spoorwegen (NS)**, are particularly good in this area, and are considered pioneers. They are thinking about the holistic passenger journey, from the moment they wake up to when they reach their final destination. They really get it, and why it is important."

"In partnership with NS we retrofitted the entire fleet to install passenger information displays so they now offer a complete on-board passenger information solution integrated with the central NS scheduling system. Data is bounced between the train and the control centre so it's very much a real time view. It is also integrated into the Wi-Fi, so passengers can view real-time journey information on their smartphone or tablet."

The final area of the business I was interested to learn about was the recently formed **Nomad Tech**, which is a majority owned joint venture (J-V) with Portuguese rail maintenance company **EMEF**, which taps into a largely under-addressed part of the rail market, namely connecting up to systems in real time, extracting and analysing data, and then actually providing advice and intelligence back to the operator. There's clear overlap with the more passenger focussed work, and I asked Andrew why this is something that the train operating companies, often with very tight budgets would consider investing in?

"I think with this development, we've got something very disruptive and unique in the industry. It acts as a real enabler for our customers to improve operational performance and efficiencies. Rail vehicles have on-board systems that produce huge amounts of operational data, and what we are doing is enabling all that data to be captured and analysed in a way that allows our customers to manage their assets and make operational decisions in real-time. We can monitor what normal behaviour should look like and raise flags about an impending failure before it happens. With so much data we can zoom in on the crucial nugget of information. We can also tap into systems that aren't being recorded by the On-Train Monitoring Recorder (OTMR) such as doors, toilets and air-conditioning units, all of which are areas of significant failure over the life cycle of the train and cause a significant headache for operators. Predicting when these will fail, will help avoid in-service failures. By doing all this, we keep more trains on the tracks, see them spend less time in the yards, offer preventative maintenance and as a result help deliver lower costs and lessen levels of disruption for passengers."

One of the words in our wide-ranging discussion that kept cropping up is *pioneer*, both in terms of Nomad themselves and some of the technologies and operators they work with. Certainly Nomad have had this reputation, although not without some challenges and disappointments along the way a fact that Andrew does acknowledge. As our time comes to end, I ask Andrew how exactly a company keeps being a pioneer?

"Good question. We keep being a pioneer by getting closer to our customers, even closer than we are today. Working with clients and other stake-holders that we consider to be innovative in the marketplace. And ensuring that we have the people and the culture in the business to keep ahead of the game. It's been challenge for us particularly during the last 18 months since I joined. We are now a global business with more than 40 customers in 20 countries, and during this period, we have increased our revenues by over 50% to more than £40m. A continued focus on investing in our people and our business, will ensure that we continue to strengthen our company and that we are able to deliver against our customer commitments, while maintaining the strong entrepreneurial spirit that has existed in Nomad since the day the business began".

Nomad_Digital_Logo_SmartRailW

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For more on Nomad visit: www.nomad-digital.com and make sure to follow @NomadDigital and @nomadtechlda on Twitter.

See also: Fines to help fund roll-out of passenger Wi-Fi on UK trains from 2017, **and** Train or plane? How innovation is giving rail the edge in the battle for passenger spend.

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