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## **Keynote: Broadcast Engineering & IT Conference (BEITC)** **April 23, 2022**

Isn't this grand. We are all together in Vegas for the first time since April of 2019. I want to thank and acknowledge the NAB's hard work and tenacity in bringing us together, after many frustrating attempts, and also keeping us connected during a very long pandemic. You have done and continue to do terrific work in supporting our industry. On a personal note, one of the joys of my job is working with the wonderful professional staff of the NAB, they are true partners who have become friends over the years.

I also want to take a moment to reflect upon the tragedy and continuing horrors in Ukraine. The pain inflicted upon the citizens of Ukraine is unimaginable in its scope and devastation. The work of our journalists, news crews and support people in all media documenting this war in real time with depth and empathy has been compelling. Our world is better for their storytelling and the understanding that it gives us.

One can only hope that the lesson learned is that surely in the 21st century we ought to be able to resolve disputes in ways that respects human rights and values human life.

Now back to the task at hand. I was both surprised and delighted to be invited to address you today. Surprised because I am not an engineer nor a technologist. And delighted because I'm a content person who has always believed that technology allows us to provide better quality and more efficient collection, production, and distribution of our content.

I believe the choices we make about technology should be made with the understanding and in consultation with those in our industry who make our programs and distribute them. When technology decisions are made without truly understanding editorial requirements, the results often don't support the goals.

This is an important consideration, along with the speed of technological change in our industry and the impact it has now and in the future. But first I'd like to walk you through a short tour of my world and what we do at NABA (the North American Broadcasters Association) to give you some context for my passion in finding common interests and identifying challenges for our industry. And how through examination, discussion, debate and on occasion good old-fashioned negotiation we often reach a consensus on contentious issues and find a way forward.

My role as Director-General of NABA gives me the opportunity to look at a range of issues in the context of North America, and how these play out in the global community. We are not a national association like the NAB in the U.S., the CAB in Canada, or the CIRT in Mexico, and we rarely intervene in national issues. Our remit is regional to North America, and we will act if an issue has a potential impact in all three North American countries and as needed in global forums.

Here are three examples: the first is a decision by our Radio Committee to voluntarily adopt HD Radio as the North American standard for Digital Radio. We sent all three Administrations an informational letter to that effect, to which they all responded positively.

The second is when the FCC decided to make some of the C-Band spectrum available for 5G, and the Canadian and Mexican regulators quickly followed suit. This had a huge impact for national and cross-border collection and distribution for broadcasters. NABA made interventions with all three North American Administrations.

While we couldn't stop the loss of spectrum, we believe we preserved what should be sufficient given new satellite technology to efficiently transport all our broadcast product. This was a pretty good outcome given the spectrum loss and the potential disaster it could have caused.

The third example is something that I'm very proud to be part of. Almost ten years ago, the ATSC was about to embark on the development of the 3.0 suite of standards. The NABA Board formed a sub-committee of Board members who worked with our Technical Committee for more than half a year defining what the broadcaster requirements of a new version of ATSC should be.

In the fall of 2012, I went to a meeting of the ATSC at the invitation of then President, Mark Richer. The heart of my presentation focused on eight core requirements for the Next-Generation Standard and another six requirements which our Board felt would be very useful. I think it is fair to say that some ATSC members didn't care for my presentation and thought it presumptuous of NABA to suggest what the standard should contain. Others were thoughtful and, in the end, most of those requirements informed the ATSC suite of standards being implemented today.

Our relationship with ATSC remains strong, with a partnership devoted to monitoring the evolution of the 3.0 suite of standards, potential impacts for implementation in North America and around the world, and opportunities these improvements may provide to our industry.

NABA deals with all technical and engineering issues through its Technical Committee (TC) and various sub-committees and working groups. While we are not a standards-setting body, we deal with the operating realities of spectrum, cybersecurity, production, workflow, and distribution technologies. As these technologies evolve, NABA discusses best operating practices in order to get the best quality, efficiency, and effectiveness they can yield.

Broadcasting is one of the most competitive industries in the world, but when regarding many of our technology and operating issues, an organization dedicated to a collaborative conversation and reaching a consensus agreement on collective action makes our industry stronger and all of our members more individually competitive.

NABA also has a Legal Committee (LC) which focuses on rights, piracy, regulation, and policy. We are on the cusp of a potential new Broadcaster Treaty to protect our signals, including over the internet. These negotiations take place at the World Intellectual Property Organization (WIPO) in Geneva, and we work in collaboration with broadcasters around the world in our efforts. It is important work given the international reach of the services that our member companies distribute from which they derive substantial revenue from subscribers.

Our NABA Resilience and Risk Committee (RRC) focuses on emergency, health, and safety issues both in our facilities and in remote production. This committee did, and continues to do, a terrific job of sharing best practices during the pandemic as we are all learning from one another.

We also have a News Committee (NC) that discusses freedom of speech, safety of our journalists and crews, journalistic practices, and standards. This group is also focused on tackling the increasingly hostile social media abuse aimed at our journalists and other threats to journalism, including fake news.

Our Radio Committee (RC) looks at the big-picture radio issues like HD Radio transition, Hybrid Radio, the In-Car User Experience, Metadata, and their future trends.

Finally, we hope to set up a Digital Services Committee (DSC) that will deal with streaming services, the growing IT workforce and managing the cultural change. When you think about it, it's quite an impressive reach across our business.

We take all this output from NABA and, as approved by our Board, share it globally with other regional Broadcast consortiums within an organization called the World Broadcasting Unions (WBU). NABA provides the Secretariat of this group, and I am the Head of Secretariat. NABA chairs the WBU Technical Committee (TC), and the Legal Committee, and the European Broadcasting Union (EBU) chairs a group focused on collection and distribution of content on any platform from anywhere to anywhere. It's called the International Media Connectivity Group (IMCG).

NABA is an NGO member of the International Telecommunication Union (ITU), the World Intellectual Property Organization (WIPO) and UNESCO. The WBU collectively is also a member of each of these groups.

The core of NABA's membership are national broadcasters from Mexico, the U.S. and Canada, along with station groups, speciality services, manufacturers, and service providers to the broadcast industry. The NAB is a valued member who have been a terrific contributor to our work both in North America and internationally.

If there is one thought from my remarks today which I hope you take away, it is that whether you work for a network in New York or a station in the mid-west, there are broadcast colleagues collaborating on our many challenges and opportunities within NABA; probably on many of the same issues you are facing in your daily operations. They then find a consensus and act on these issues in support of our common interests on a regional and a global basis. That is the core mission for NABA and its membership.

Like many of you, I first caught the "broadcasting bug" while I was still in university and had spent my free time at the campus radio station. I was told I could probably earn some money as a part-time on-air DJ. So off I went and twisted the arm of a station program director who was dubious but, since I was cheap and probably wouldn't last long, said I could start as the weekend all night Host/DJ/News person and oh, by the way, have the coffee ready for the Morning Host by 5:30 A.M.

When I showed up for my orientation, I was greeted by the station's Chief Engineer who, not surprisingly, was the station's only engineer. He was ancient in age to my eyes, but probably younger than I am now and at best was a curmudgeon.

After he determined that I knew how to run a board, turntable, cart machines, et al., he ran me through the patch rack, and I wondered how it all worked just by sticking patches in the rack. He said not to wonder about it, just do what he told me to do.

Obviously, I did do what I was told, but it ignited an early interest in understanding how all of this worked. It's a curiosity that has guided me on technology for all my broadcast career: how can technology improve what we do, how we do it, the quality of our content, and how listeners, viewers, markets, and advertisers benefit. I don't necessarily need to know how the nuts and bolts fit but I do need to understand the benefits which may be realized.

All to say not only did I catch the "broadcast bug", but I finished off my studies at university, turned down an offer to do a PhD in Political Science and pursued a broadcast career, joining the Canadian Broadcasting Corporation (CBC/Radio-Canada) as a Producer/Director in the News and Current Affairs department.

Electronic News Gathering (ENG) was my first eyeopener to the power of real technology change. It's hard for people to understand today that television news in the early seventies was a slow, cumbersome, and frustrating process. It truly was often "the story at 6 and film at 11." CBS's Joe Flaherty and his collaborators gave the industry a huge gift with the debut of ENG technology in the mid-seventies and as it evolved through the late seventies and eighties, ENG changed television's relationship with the viewer

and a journalist's ability to tell a story. And yes, it saved money on process which in many cases was redirected to increased editorial output.

Of course, it also changed remote production in ways that we take for granted today, but forty plus years ago it was revolutionary and it's still changing at an incredible pace.

Joe then went on to HDTV, and I think we all know that turned out pretty well. It's not just an honorific that he is called the Father of HDTV in North America. What struck me was how he stressed the benefits to the viewer and the producer and ultimately made the business case for television.

In 1990, I was EVP in charge of all media at the CBC/Radio-Canada and we were building a new broadcast facility in Toronto. As the project progressed, I was visited by the VP of Engineering who presented a proposal to put digital pipes into the building's infrastructure. I stared at him with a blank look, I had no idea what he was talking about. He explained that there was every indication that these digital connections would be very important in future years for production, workflow, and distribution and while we didn't need them then, we probably would need them soon. I asked whether other broadcasters had these pipes and he said no, we would likely be the first to put them in a major broadcast facility.

At this time I was also NABA's President, and I consulted with other broadcast members in NABA and with the EBU who told me yes, it probably was the right thing to do. I found the extra three million dollars and we did it. We made the right decision and avoided a refit that would have cost about \$30 million dollars in what would still have been a brand-new building. A wide network of people who you know and respect can always help you make a better decision.

With my background increasingly focussed on new technology for better quality, it prompted the Canadian Minister of Communications to ask that I co-chair a Report on Digital Radio in 1992. We opted for the DAB standard and even when the U.S. turned from supporting the standard in the mid-nineties, Canada persisted with DAB. By 2005 it was clear the Canadian market could not sustain a transition without the U.S. and Mexico. Both in transmission and reception, the market was regional not just national. Another lesson learned; the market needs to agree that the technology is right for all the players.

In 1995 I was asked by the government to chair a Task Force on the transition to Digital High-Definition Television in Canada. We spent two years talking and herding all the stakeholders towards a decision. ATSC was certainly agreed to quickly, given the market situation and cross-border programming.

But the timetable for implementation was another challenge. The Canadian Digital Television group was proposed to manage the transition on behalf of all the stakeholders and be the interface with government and the regulators. And transition timing eventually turned on a fast follow strategy to the U.S. transition by about two years. To be frank, Canadian broadcasters don't enjoy the same proportionality in revenue that U.S. broadcasters do, so there is a tendency to wait until the last possible moment before committing. It's understandable, but this lag can sometimes hurt the competition for eyeballs.

I left CBC/Radio-Canada in 1998 and became President of Canadian Digital Television until we closed the organization at the end of 2006 when its work was completed. I also served as President of the World DAB Forum for four years beginning in 1998. I had formed relationships with the European Broadcasting Union going back to the early eighties by participating in program committees for both radio and TV. When I joined NABA as Director-General in 2001 to 2005 and then again since 2012, those relationships grew to include other broadcasting associations and the WBU along with increasing activity at the ITU and the WIPO.

The point I'm trying to make is that better and more informed decisions are made by widening your network of informed people both at home and from away that you can call on for their thoughts and

advice. The famous Canadian communications philosopher, Marshall McLuhan, was right when he talked about “the Global Village” and “the Medium is the Message” and while many attribute McLuhan for the thought “Think Globally, Act Locally” which he agreed with, it was actually said by a social activist Scots town planner by the name of Patrick Geddes in 1915. For media, I believe this perspective is critical and is becoming more critical as we move beyond the years of the early 21<sup>st</sup> century.

These networks of relationships don’t happen overnight but they’re important. If you’re in the creative business, and I believe understanding technology and technological change is every bit as creative as content creation and story telling, then technology is a critical tool in content creation and story telling. You need to use that tool to inspire and challenge your creativity and output.

Joe Flaherty understood this along with other tech change leaders like ABC’s Julie Barnathan, who developed technology that gave sports coverage a whole new viewer experience in the eighties and nineties, Ed Turner, who established and guided CNN’s newsgathering facilities, and many others today like Richard Friedel, who guided NABA for many years and has brought leadership to ATSC.

When you look back over the last thirty years of our business it’s hard to recognize the industry we work in today. In 1990, the major national networks dominated North American media. Pay and speciality services were getting a toehold, but it wasn’t until digital became mainstream and the subsequent improvements in compression technology that our industry expanded exponentially. The turn-around time between implementing ATSC 1.0 and now implementing ATSC 3.0 happened in less time than it took to fully implement color TV.

The rise of social media (sometimes a bittersweet invention) and its unverified news sources has changed the way we get and use information and has caused huge changes in how traditional news services inform their audiences on multiple platforms. Social media has become the news source of choice for many younger audiences and since much has not been through any rigorous, fact-checking editorial processes, alarm bells should ring about what these younger audiences are consuming and how this informs their world view.

There are some who would argue that older audiences are even less prepared to separate fact from fiction and conspiracy than younger audiences since they are a product of a traditional news background. Whatever the generational response to social media there is absolutely no question as to its impact and it remains both a blessing and a challenge for our journalism.

The rise of Google, Apple, Amazon, Facebook, and the early pioneer Netflix with their streaming entertainment services have transformed how we consume content. It’s obvious to all, especially as a by-product of the COVID pandemic, that streaming OTT services have caused yet another dramatic disruption in the broadcast ecosystem. The penetration of smart TVs into the home simply confirms the fact. And more IP services are coming.

Broadcasters have joined the streaming world providing multiple opportunities for viewers and listeners. Revenue from these services is starting to become a major contributor to the bottom line and some projects will overtake linear revenue in the future. Building these services has led to a huge shift to hiring IT/IP specialists that in turn is challenging historical broadcast culture and skill sets. Media leaders will need to pay attention to managing this historic shift in the broadcast workforce. We need both the broadcast engineer/operator and the IT/IP specialist today and in the future.

I believe major network programming over all platforms is still the engine which drives television and will be in the near and midterm future. Beyond that I expect surprises, given the changes we’ve seen since the beginning of this century. 5G promises to be a step-function increase in user experience over

previous generations of mobile technology. 6G, coming later this decade, promises to provide “a sixth sense experience for humans and machines” where “biology meets AI”. Welcome to the Matrix!

It may not be Moore’s Law as defined exactly, but the impact on our industry of the pace of technology advancement leading to an explosion of services and content over-the-air, cable, satellite, mobile and the Internet is truly our version of Moore’s Law for media.

Thank you,  
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