RABC NEWSLETTER

Special Edition for Spectrum 20/20 2000

Welcome says RABC President

RABC President Ron Coles

It is a great pleasure for me to welcome you to Ottawa and to Spectrum 20/20 2000. Our Programme Committee, chaired by Dr. Sabah Towaij of Industry

Canada has done an excellent job of bringing together a fine group of speakers who will inform and provoke us over the two days of the symposium.

We, in the Radio Advisory Board of Canada, began the Spectrum 20/20 series back in the '80s. The very first one was little more than a chance for the (then) very new minister to show herself to one of her constituencies. Spectrum 20/20 then was recast into a forum in which we, in the industry, could pass some of our views to government and in which government could explain some of its views to us. Most recently Spectrum

20/20 has evolved into a more general symposium dealing with business, technical, policy and regulatory matters from both government and industry perspectives.

It is with some regret that I must announce that this is the last Spectrum 20/20 conference – last in this form, at least.

The fact is that the niche which the Spectrum 20/20 series filled for a few years is getting crowded. Many of the associations which sponsor the RABC have major annual conventions and trade shows, many of those

Special points of interest:

- Spectrum 20/20 2000 is the last in the series
- The RABC will continue to partner with Industry Canada by helping to organize and manage two CITEL conferences (PCC-I and PCC-III) in Ottawa in 2001

Richard Stursberg is Keynote Speaker

Richard Stursberg, recently retired CEO of CANCOM will be the keynote speaker at Spectrum 20/20 2000 on 29 November 2000.

Mr. Stursberg has a distinguished record of service in both the public and private

sectors and is known for his thoughtful and thought provoking views on what we are doing and what we really should be doing.

Keynote Speaker: Richard Stursberg

President's Remarks (continued)

have accompanying technical symposia. It is to be hoped that the Board's sponsors, individually or together, can provide a mix of trade shows and technical sessions which will meet the needs of our community in an effective, especially cost effective, manner. It is our intention to leave the symposium business to our sponsors and to encourage Board members, from the industry and

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from government, to work with our sponsor member associations to ensure that the annual conferences and shows do, indeed, meet our needs.

The Board will continue to work in partnership with the Government of Canada to organize conferences and symposia when there is a need. As always, we remain open to suggestions from members. The aim of

Spectrum 20/20 was to provide a service to members, for a while the Board was alone in this field, now the field is fairly crowded and it is appropriate for the Board to look for new ways to provide services to its members. We welcome your suggestions.

On behalf of Dr. Robert McCaughern of Industry Canada I want to thank the many people who have worked to plan and organize these conferences over so many, many years and to invite one and all to enjoy the last and best of the series.

Fixed Wireless Committee Makes Contribution to IEEE 802.16 Broadband Access Work

The Fixed Wireless Communications Committee undertook, by correspondence and one or two conference calls, a detailed review of the IEEE's proposed practices for the coexistence of Broadband Wireless Access Systems.

The committee was working in support of **Andy McGregor** of the ***Electro-Federation/Nortel Networks*** who has been the Chair of 802.16.2.

The Board's comments are available on the web site at www.rabc.ottawa.on.ca in the advice/reports section. The Board noted with satisfaction that IEEE 802.16.2 had picked up on work done by the Board and the Department and,

subsequently, published in the series of SRSPs developed for the 20-40 Ghz range. This was a major part of the FWC Committee's work in 1998/99 and members are pleased to see that their efforts are accepted in other fora.
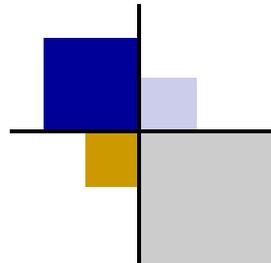
A copy of the letter from Roger Marks—the IEEE Chair of the groups responsible is also on the Board's web site.

FWC Committee members, including **Remi Chayer**, *EFC/Harris*, **Vito Scaringi**, *EFC/Alcatel*, **Rebecca Chan**, *Industry* Canada and **Andy McGregor**, *EFC/ Nortel Networks* have made significant contributions to the work and leadership of IEEE 802.16.2.

This is another illustration of the continuing, indeed growing importance of the 'routine' work done in the RABC's technical committees.

RABC to Assist with CITEL Conferences in 2001

At the request of the Department, the Board has agreed to take on the tasks of organizing and managing two major CITEL Conferences in 2001:
- CITEL PCC-III on Radiocommunications in the week 11-15 June 2001, in Ottawa; and
- CITEL-PCC-I on Telecommunications in the week 10-14 September 2001, also in Ottawa.

The resources necessary to organize and manage international conferences are no longer available within the Department. As members will know there are not even enough people in DGSE to tackle the existing work load. This is another opportunity for the Board and the Department to work together to achieve a common, national goal. These CITEL conferences offer companies a unique and valuable marketing and promotional opportunity. Several

companies are already on board as sponsors; those interested in sponsorship opportunities should contact the Board's General Manager, Ted Campbell, at (613) 230-3261 or by E-mail at: **r.a.b.c@on.aibn.com**
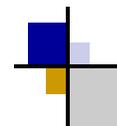
Meet Bill Taylor
Chair, Fixed Wireless Committee

Bill Taylor
Bell Telecom Group

William J. (Bill) Taylor has been active in the work of the Radio Advisory Board of Canada since 1983. Bill has chaired Sub-Committee D in the Fixed Wireless Communications Committee (FWCC) for a number of years, leading the preparation of draft SRSPs for fixed wireless access (FWA) systems at 3.4 GHz and point-to-point microwave systems in the 4, 6 and 8 GHz bands. Bill also led Sub-Committee D efforts in the development of digital interference objectives and coordination criteria at 4/6 GHz between the fixed-satellite service and the fixed service. In 1999 Bill was elected chairman of the FWCC. Bill also represents the Bell Telecom Group in the RABC.

On the international scene, Bill has been actively involved in the work of the ITU-R since the early 1980s, becoming chairman of National Study Group 9 (fixed service) in 1985. SG9 has experienced significant evolution over this time period, particularly in the areas inter-service sharing and FWA networks; NSG9, with Bill as its leader, has been a major contributor and influence in this evolution. Bill has also participated as part of Canadian delegations in a number of World Radiocommunication Conferences, beginning with WARC-92 in Málaga-Torremolinos, Spain.

Bill began his career with Collins Radio in Toronto designing commercial and military HF transceivers. In 1974 Bill joined Bell Canada and has held a variety of positions with the company including wireless technology research and development, facilities planning, transmission standards and spectrum management. During the periods 1980-1984 and 1993-1998 Bill worked in Telecom Canada and the Stentor Alliance, respectively. Currently Bill's responsibility in Bell Canada is strategic planning in the field of wireless networks, providing direction to the company in this area.

Bill graduated from the University of Waterloo in 1970 with a Bachelor of Applied Science degree in Electrical Engineering and in 1972 with a Master of Applied Science degree in Systems Design Engineering. He is a member of the Professional Engineers of Ontario and the IEEE. More recently, Bill joined the amazing world of amateur radio, becoming a member of the Radio Amateurs of Canada and receiving his radio amateur's licence in July 2000.

Bill and his family live in Ottawa. Besides performing parenting duties for his son and two daughters, his other interests include amateur astronomy, baseball, swimming and gardening.

> *Currently Bill's responsibility in Bell Canada is strategic planning in the field of wireless networks, providing direction to the company in this area.*

Dave Garforth Speaks at Spectrum 20/20

David Garforth, Executive Director of Digital Radio Roll-Out (DDRI), former RABC President and CBC Engineering executive has agreed to speak to Spectrum 20/20 2000 (as a last minute replacement for Duff Roman of the CHUM Group and President of DDRI) in the session on Regulations—Industry's Viewpoint on Thursday morning.

Mr. Garforth was a Vice President and then President of the RABC in the '80s and '90s — he presided over a period in which the Board expanded both its membership base and its scope of operations, including co-sponsoring the early Spectrum 20/20 conferences with the then Department of Communications.

Digital Radio Research (DRRI) Inc. was created in 1992 as a joint private/public broadcaster partnership non profit organisation to carry out the required research to assist in the introduction of digital radio in Canada. In the early years matching funding of close to $1 million were received from the then Department of Communications.

With the spectrum allocated, the policies and regulations established and the DAB services launched in four cities in Canada DRRI was renamed Digital Radio Roll-Out (DRRI) Inc in 1999, refinanced and given the mandate to manage the marketing of digital radio as "DAB" in Canada.

Due to a conflict in schedules - Mr. Roman has to attend a CRTC hearing in Vancouver this week - David Garforth will be making the presentation on his behalf.

David Garforth has been the Executive Director of DRRI since its creation in 1992, initially while working for the CBC and for the last four years as a consultant providing broadcast, project, and management consulting services.

David held a number of engineering and management positions with the CBC during a 32 year career, starting as a transmission project engineer in Montreal, Assistant Regional Engineer in Halifax, Standards Engineer, Manager, Systems Engineering, Assistant Director and Director of Transmission Systems Department, Director of Strategic Engineering, and Director Broadcast Delivery and Distribution.

In this last position he was responsible for the transmission and delivery of all of the CBC Television and Radio services from the studio to the consumer.

THE LAST WORD
ABOUT NATIONAL DEFENCE

The 1st (1903) badge of the Canadian Signal Corps

Regular readers will know that we usually do a feature about a RABC sponsor member—this time it is DND—and November is an appropriate month to consider our military. The history of radio in Canada and military radio development are inextricably linked. Readers will understand, however, that the defence story is huge and they will forgive me for using a rather personal lens to tell a tiny part of it.

2000 began, for many in the military family, with a glittering formal ball at the historic Chateau Laurier in Ottawa—hundreds of men in scarlet jackets and evening dress and ladies in ball gowns celebrated the 100th anniversary of the victory, by the **Royal Canadian Regiment**, over the Boers at Paardeberg Drift—the first of many, many, often costly, overseas victories for Canada. Part of the Canadian military mythology has a young Canadian cavalry officer (Bruce Carruthers) pondering a remark by a war correspondent (Winston Churchill, no less) to the effect that the military would be

Major Bruce Carruthers

better off if 'those fellows with the flags were properly organized.' Carruthers came home and organized the **Canadian Signal Corps** in 1903.

Later in 2000 we buried an unknown soldier at the national cenotaph in Ottawa. He was killed sometime in World War I. That war marked the first radio revolution in the military. Despite the image of static trench warfare, mobility came into its own in 1914-1918 with the development of the combat aircraft and the tank—radio was an essential tool for command and control of these new forces. Some of the earliest military radios were designed to be used by artillery spotters flying in small aircraft or suspended above the battlefield in balloons.

In the inter-war years the **Canadian Signal Corps** undertook some uniquely Canadian work—opening the North. The North West Territories and Yukon Radio System was established in the early '20s to provide essentially commercial radio-

telegraph services to the mining towns which were springing up across the Arctic. The system was finally handed over to civil agencies in the '60s. The operators who served in these remote stations made the Canadians the envy of other allied signal

HMCS Louisburg, one of the 'little ships that saved the day' (Churchill, again)—sunk by enemy aircraft in February 1943, most of the crew was killed, including the Captain, Lieutenant Commander Frank Campbell of Saskatoon

services because of the high quality of the operators and technicians. It wasn't just the army who served Canada in the '20s and '30s—much exploration and emergency relief was done by the newly formed **Royal Canadian Air Force**.

Radio grew rapidly in World War II—new types of radio were developed and new frequency bands were made usable as technology advanced at a very rapid rate. Radar is, of course, the most familiar example. Radar technology passed through several generations in six years of war. Canadian soldiers, members of the **Royal Canadian Regiment** and the **Royal Canadian Corps of Signals** used Canadian made radios—designed and built by companies like **Northern Electric** as they seized their objectives in Italy, North-West Europe and Asia.

By the time the **Royal Canadian Regiment** went to Korea in 1950 they were using the newest, smallest VHF radio in the world, designed and built in Canada by **Rogers Majestic**.

The cap badge of the Royal Canadian Regiment

After Korea military radio design and manufacture became more specialized, spurred by the desire of allied nations to standardize weapons and systems—including radio frequency bands, modulation schemes and channeling plans. Canadians continued to lead the way: in the mid '60s **Canadian Marconi**, of Montreal, built a world-beating broadband point-to-point radio working in the 225-400 MHz band which is so good that it was adopted by many allies, including the USA, and is still in service in many countries today.

Today, soldiers of the **Royal Canadian Regiment** and members of the **Communications and Electronics Branch** serve in operational theatres in the Balkans, Africa, Asia and wherever Canadians decide they are needed to keep the peace, bring relief to victims of disasters or protect Canada's vital interests. They are using top quality new radio systems built in Calgary by **Computing**

First line CF-18 fighters saw active service in the Gulf and the Balkans

Devices of Canada. The same is true for Canadian ships and aircraft—all are served by young men and women who are fitting successors to their fathers and grandfathers who served before and those young people are using modern, Canadian radio technology in every aspect of their duties. Much of the communications infrastructure used by the Canadian Forces, at home and overseas, is leased from Canadian companies and RABC members like the **Bell Telecom Group**.

Many Canadians, and even some Board members, are unaware of the long, fruitful partnership which exists between the military and the telecommunications industry. Today the Canadian Forces is experimenting with new ways to exploit commercial products—including radio and radar systems—to enhance combat effectiveness without breaking the budget.

HMCS Saskatoon—one of the most modern Canadian 'little ships,' about the same size as Louisburg, sailing out of Esquimalt with a crew including her navigator, Lieutenant Frank Campbell of Ottawa, grandson of Louisburg's Captain.

The Canadian Forces Communications & Electronics Branch 2000

Mercury, in classical mythology, is the messenger of the gods and serves as a symbol for communicators in many coun-