

## TransCanada Microwave System Milestone Dedication – London Section

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During the early-1950's, the operational feasibility of using inter-city microwave relays for telephone and television transmission was proven, first in Atlantic Canada and later in Central Canada. The effort soon shifted to overcoming the various financial and regulatory hurdles that made deployment of a coast-to-coast telephone and television network a truly daunting task.

On 8 March 1955, construction of the national system began. Just over three years later, on 18 June 1958, operation of the entire network was successfully demonstrated. The system was officially opened on 1 July 1958 via a live coast-to-coast television broadcast called "A Memo to Champlain" and celebrated by a commemorative booklet.

At the time of completion, the Trans Canada Microwave System was the longest microwave relay network in the world. The number of microwave relay towers (139) required to span the great distances involved meant that the deployment cost was at an order of magnitude higher than that of a regional network. Installing microwave towers in wilderness and mountainous areas far removed from roads and other infrastructure added to the difficulty and, ultimately, the cost.

It is not difficult to argue that no other single engineering achievement of the past century has had a greater impact on Canada, its society, and its economy, and, indeed, individual Canadians.

On 17 January 2022, the IEEE Board of Directors approved recognition of the completion of the Trans-Canada Microwave System in 1958, as Canada's 18<sup>th</sup> IEEE Milestone with the following citation:

*On 1 July 1958, the Trans-Canada Microwave System introduced both live network television and direct-dialled long distance telephone service to Canadians from coast to coast. Comprising 139 microwave relay towers spanning more than 6275 kilometres, it was, at time of completion, the longest such network in the world. Later extended and upgraded, the system had an immense impact on Canada's society and economy.*

The route followed by the system as shown in Fig. 1 (reprinted from J. W. Noyes, G. et al "Development of transcontinental communications in Canada," *Transactions of the American Institute of Electrical Engineers, Part I: Communication and Electronics*, vol. 75, no. 3, pp. 342-352, July 1956) went coast to coast touching many sections. It was agreed that Milestone plaques would be installed in 19 sections across Canada which were on the original route or subsequent extensions.

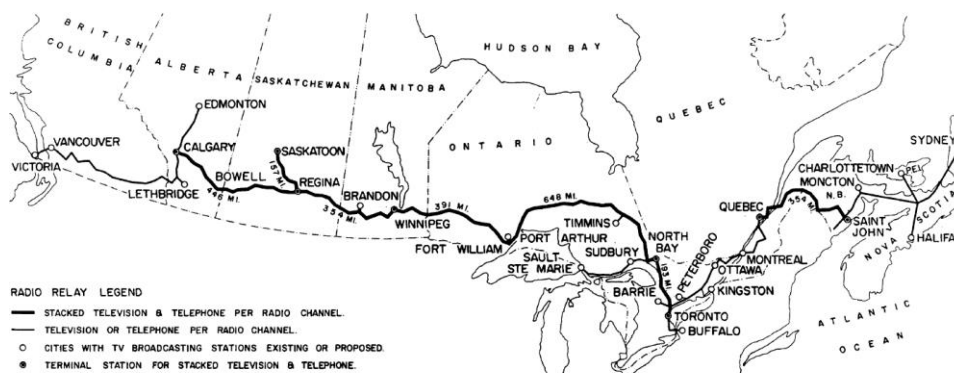


Fig. 1. Trans-Canada TD-2 radio system television and telephone network routes

One of those sections was London, which was part of an extension in 1960. In conjunction with Bell Canada, a local dedication ceremony was planned for the London Colborne CO, 725 Colborne St for 1:00 on Sept 12. A vTools event (<https://events.vtools.ieee.org/m/323127>) was set up for registration. We had 15 people attend, both IEEE members and retired or current Bell employees. After a short summary of the milestone background, several employees shared stories about the system or days at Bell. There was a cake that was consumed in celebration and then some photos take with the plaques and outside.



*TCMS Milestone plaques in London Section – 725 Colborne St. London*



*Photo of Bell staff from 1960*



*Stories from Bell retirees*



*Celebratory cake*



*London IEEE members with the plaques  
L-R Dennis Michaelson, Xianbin Wang (Section  
Chair), Jeff Regan (Bell Employee), Eric Auzin,  
Murray MacDonald (LM Chair)*



*Milestone dedication attendees at the front of  
725 Colborne St office*



*Tower at 725 Colborne St office where microwave  
antennas were mounted – decommissioned and  
removed in '90s*