RAYMOND H. LANIER
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NEK Community Broadband CUD **(2020 to Present)**

Member of Executive Committee & Technical Working Group; Town of Westmore 2nd Alternate Representative.

Westmore Association Inc, **(2010 to 2016)**

Board member and Treasurer. Managed the Invasive Species Greeter program.

RETIRED: 6-month Summer Resident of Westmore VT **(2007 to Present)**

Sold Concord Communications Associates Inc to Employees **(2007)**

CONCORD COMMUNICATIONS ASSOCIATES, INC. (CCAI) **(1983 TO 2007)**

As President and founder of CCAI, Mr. Lanier had responsibility for overall business management and development. As a manufacturer's representative for voice frequency digital and data communications products and services, he is engaged in the promotion and selling of these products within the six New England States and upstate New York. In addition, he provides consultant services within the telecommunications industry for Optical Fiber Networks including Fiber To The Home (FTTH), Voice Frequency, digital and data communications over terrestrial, and satellite networks. Mr. Lanier has had more than thirty years' experience in these and related areas. Major customers were Bell Labs, Western Electric (Lucent), Verizon, AT&T, Raytheon Technologies, Motorola, Independent Telephone providers and Power Utility providers

NORTHEAST ELECTRONICS DIVISION of NORTEL [Formally NORTHERN TELECOM, INC. (NTI)] (1981 TO 1983)

As Manager of the Systems Engineering Department within the Design Development Engineering Group, Mr. Lanier supervised all of the engineering group's project managers. The project managers were the focal point for project management and systems engineering within NED's engineering group's matrix organizational structure. The four defined product design groups under his direction were as follows: Analog Systems, T-Carrier Systems, Instruments, and Large-Scale Data Base Systems. Products developed under his control were the #3 Local Test Cabinet, T-Carrier Common Language Control Unit, ROTL Access Unit, Manual Responder Unit and the LRS-100 Mechanized Loop Test System.

CONCORD COMMUNICATIONS, INC. **(1979 TO 1981)**

As President and founder of CCI, Mr. Lanier had overall responsibility for corporate management and development. He was also active in the analysis and implementation of both terrestrial and satellite communication equipment and systems. Mr. Lanier's expertise includes telephony systems engineering, analog and digital equipment and systems design, voice and data transmission via terrestrial and satellite networks and communication systems engineering.

NORTEL [Formally NORTHERN TELECOM, INC. (NTI)] **(JANUARY, 1979 TO OCTOBER, 1979)**

As Product Manager of Marketing's Product Management for the voice frequency product line of Northern Telecom, Mr. Lanier helped establish new product opportunities, define product development, coordinate product definition between NT and Bell Northern Research (BNR) in Ottawa, Canada (Northern's Research and Development organization), establish technical definitions, and aid in new product introduction. Because of his position and background, he was involved in promoting development of advanced telecommunication products such as echo control and speech compression systems. His product responsibility was for United States, Canadian and international markets.

Mr. Lanier was originally employed as an Applications Engineer for the Voice Frequency Telecommunication product line as part of the U.S. marketing group. The key objective of this position was to enhance the growth of U.S. sales by presenting NTI's product line to customers in a favorable light.

Specific product areas that were Mr. Lanier's prime responsibility were voice frequency compandors used to increase satellite transponder capacity and improve the signal to noise ratio of carrier transmission facilities, echo suppressors, and compression amplifiers.

Mr. Lanier developed a compression amplifier for use by FAA Air Traffic Controllers. This unit was designed to accommodate the unique requirements of the FAA Controllers. He accomplished this task by working closely with the AT&T who provided the communication service to the FAA.
Other aspects of Mr. Lanier's position included writing of proposals, product presentation, new product specifications, and the gathering of marketing input information.

VIAVI [Formally TELECOMMUNICATIONS TECHNIQUES CORPORATION(TTC)] **(1974 TO 1978)**

Mr. Lanier was employed as Director of Engineering and a founding member. He had responsibility for the design and development of telecommunication equipment for both terrestrial and satellite communications applications. These products encompassed both analog circuit design and layout at voice frequencies, as well as digital processing circuit design for voice band frequencies and data transmission.Development conducted in the lab which he oversaw involved all phases of hardware development including circuit design, component selection, control of PCB artwork, schematics, packaging, development of test equipment, test procedures for final production equipment, and technical manual development.

Some of the equipment developed within the lab included a time shared digitally controlled echo suppressor, a digital data buffer system that provides an interface between satellite circuits and the Bell Systems' DDS network for NASA Atlantic down link sites, data network test and technical control equipment, and a single channel PCM Codec.

Other types of work performed on outside contracts included lab studies, technical surveys, telecommunication system test procedures, and equipment evaluation programs.

COMMUNICATIONS SATELLITE CORPORATION (COMSAT) **(1968 TO 1974)**

As a Technical Specialist in the Voice and Data Processing Branch of COMSAT Laboratories, Mr. Lanier was involved with the design and operation of various digital modulation techniques for data and voice processing for bandwidth reduction. He is familiar with different modulation techniques such as Delta-Modulation, PDM and PCM, as well as voice detection and switching in these digital systems. He has also designed and built computer interface systems for both data and analog processing to investigate various digital modulation techniques.

While employed at COMSAT, Mr. Lanier was involved in the design and construction of the Speech Predictive Encoding Communication system (SEC). This system was designed to reduce the transmitted digital bandwidth of multi-channel PCM/TDM telephone systems by half. He was also involved in the design and construction of the ranging system used by COMSAT General Corporation's Earth Stations located in Connecticut and California.

Since most of the systems he has been involved with interface with the telephone system, he is familiar with telephone terminal equipment such as echo suppressors and cancelers. He also worked on the Aerosat and Maritime Satellite programs while employed at COMSAT Laboratories.

MILITARY SERVICE **(1961 TO 1965)**

US Air Force; Rank E-4; Crypto maintenance technician. Maintained teletype inline electronic encrypting equipment and handled top-secret documents. Theater of service: Europe, Africa, Middle East and India

EDUCATION

Capitol Technology University (Formally Capitol Institute of Technology) - B.S. Cum Laude - Engineering Technology – 1970;

PATENTS

1. "Adaptable Zero Order Predictor for the Spec System"; Patent No. 4066844, January 3, 1978.

2. "Digital Voice Switch for Single or Multiple Channel Applications"; Patent No. 4008375, February 17, 1977.

3. “Telecommunications line test method”; Patent No. 6671312, December 30, 2003

PROFESSIONAL SOCIETY

Institute of Electrical and Electronics Engineers (IEEE): Life Member