UNION COLLEGE

AND

THE IEEE SCHENECTADY SECTION

PRESENT THE

75th STEINMETZ MEMORIAL LECTURE

Lionel Barthold

President of iMod, Inc. and Founder of Power Technologies Inc. (PTI)

"ELECTRIC POWER DELIVERY SYSTEMS... WHERE FROM HERE?"

MONDAY, NOVEMBER 18, 2019
7 to 8:30 PM @ NOTT MEMORIAL
FREE AND OPEN TO THE PUBLIC

6:30 - 7:00 PM Coffee/Cookie mixer in Nott Memorial
7:00 - 8:30 PM Steinmetz Lecture
8:35 - 9:00 PM Mixer, informal Q&A
No RSVP required

On this 50th anniversary of the founding of PTI, through his talk 'Electric Power Delivery Systems... Where from here?' the founder Lionel Barthold shares experience from his power systems career and looks forward to where electric power delivery may go in the future.

Lionel O. Barthold's continued advancements to power transmission technologies have played a prominent role in the reliable and efficient operation of today's high-voltage transmission systems. His early work on transmission system design parameters ranged from circuit breaker reclosing times to insulation levels of both lines and high-voltage equipment. He was an early proponent of statistical methods in insulation coordination and developer of the digital method for transmission line radio noise prediction. As technical director of General Electric's "Project EHV," he redirected work to higher voltages, organized its transfer to the Electric Power Research Institute, and began work on a series of major extra-high-voltage line design reference books. He founded Power Technologies, Inc. (PTI) in 1969, which served as a technical consultant to utility companies around the world during a very rapid expansion of transmission systems at high voltages. Barthold provided the first source of advanced solution methods outside the purview of electrical equipment manufacturers and introduced the first interactive software for load-flow and dynamic analysis of large power systems (PSS/E), which remains the preeminent world resource for that purpose. PTI also established an advanced test center focusing on special challenges in transmission technology ranging from thermomechanical bending protection in underground pipe-type cables to limits to compaction of medium-voltage overhead lines and feasibility demonstrations of high capacity, high-phase-order AC power transmission. Barthold's recent work has centered on a capacitor-based DC-to-DC transformer, which functions within a DC grid the same way a magnetic transformer does within an AC grid. This transformer has been considered as a key requirement for development of high-voltage DC macrogrids proposed as overlays to AC transmission systems and an important enabler in the shift to renewable energy sources. Other achievements include converting one of four 380-kV AC circuits on a common line from northern to central Germany to high-voltage DC to give central Germany access to a large block of North Sea wind-farm energy.

For more information (map and parking), see
http://sites.ieee.org/schenectady/ and
https://www.union.edu/ecbe/steinmetz-memorial-lecture

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