HISTORY: Aviation Planning Services Ltd (APS) was formed in 1967 as a Canadian branch of R Dixon Speas Associates of New York. In 1971, it was incorporated under the authority of the Canadian Corporation Act. Since its inception, the company has performed approximately 360 projects for over 100 clients both domestic and in 28 countries outside of Canada.

CAPABILITY: APS was formed to provide professional consulting services to all sectors of the aviation industry. Major activities are directed toward commercial air transportation, airport planning, general aviation, product analysis for aerospace manufacturers, maintenance base planning, equipment procurement, and aviation system planning and development programs for industry and government.

The multi-disciplinary staff consists of specialists in engineering, flight operations, airline economics, aircraft maintenance, aircraft noise impact, and aviation products marketing. APS project supervisors average more than 25 years of aviation experience, both in industry and consulting services. The firm is dedicated to keeping pace with the latest developments in all facets of the industry and maintains an up-to-date library of research reports and aviation statistics.

APS developed a technique for the use of aircraft flight simulators equipped with computer generated imagery for the evaluation of prospective airports. The firm is currently working on behalf of Canadair in the market assessment of a stretched CL-601 Regional Jet (48 seat derivative of the corporate aircraft). As consultants to the airline industry, the firm has also developed a number of procedures in the sizing of new maintenance and overhaul facilities which have been utilized on both domestic and overseas projects. The clientele of APS consist of international airlines, business aircraft operators, foreign, federal, provincial and local governments, financial and industrial organizations, and aircraft manufacturers. The high ratio of repeat business is an indication of the company.

AVERAGE WORK FORCE: Professionals – 9 Outside Consultants – 5 – 20 Support Staff – 5

GROSS SALES: 1986 - \$400K 1987 - \$900K

PLANT SIZE: 3,400 Sq Ft

EQUIPMENT: One PC/AT computer, 3 PC/XT computers, and two word processors.

EXPERIENCE: The firm has provided professional consulting services to organizations including: major air carriers, international agencies, overseas government agencies, Canadian government agencies, aerospace manufacturing and sales organizations, and financial & business organizations.

KEYWORDS: Consulting; Master Planning; Traffic Forecast; Economic Analysis; Site Selection; Equipment Procurement; Route Analysis; Maintenance & Overhaul Facility Planning; Market Surveys; Aircraft Performance Analysis; Equipment Selection; Business Plan Preparation; Navigational Aids; New Product Development; Operational Studies; ATC Analysis.

REVISED: February 88

AVTECH ELECTROSYSTEMS Ltd

ADDRESS: (Mailing) P. O. Box 5120, Station F

Ottawa, Ontario, Canada K2C 3H4

(Location) 15 Grenfell Crescent, Suite #205 Nepean, Ontario, Canada K2G 0G3

CONTACT: Dr W J Chudobiak, President - (613) 226-5772

HISTORY: Avtech Electrosystems Ltd is a small, private Canadian, high-technology company incorporated in 1975. There are no other branches or affiliates in Canada or the US. The company is represented in France, W. Germany, Japan, Austria, the UK, and Italy.

CAPABILITY: Avtech was established for the purpose of designing and marketing nanosecond waveform instrumentation. Since its start, it has become recognized as a leading supplier of nanosecond waveform generators and accessories with over 150 models. Their product line includes pulse generators, impulse generators, monocycle generators, pulse amplifiers, samplers, transformers, power splitters, bias insertion units, and scope probes.

The all solid-state waveform generators are available as stand-alone lab instruments, or as miniature DC powered modules. The amplitude and the voltage rate of rise for some of their units are at least an order of magnitude higher than those provided by standard tunnel diode pulse generators. The combination of some aspects of microwave integrated circuit technology with ultra-fast semiconductor device switching technology (including SRD, hot carrier diodes, avalanche, VMOS and bipolar switches), has yielded 100 psec rise and fall times, PRF beyond 250 MHz, amplitude to 350 volts, peak currents to 100 amperes, and single cycles of RF to 1500 MHz. They can design, develop and build to customer requirements.

Avtech's inverting and impedance transformers are designed to be used with general purpose laboratory pulse generators, with subnanosecond risetime pulse generators and circuits, and other units. They provide inverted output pulse with a magnitude equal to the input signal magnitude, and can match to other impedance levels or can obtain higher output currents.

Avtech's power splitters provide two outputs which are either both in phase (non-inverted) with the input signal, or with one output noninverted and with one inverted. They are designed for use with nanosecond speed laboratory pulse generators, with CW signals, or with other units to frequencies as high as 1.0 GHz. Their bias insertion unit is designed for both CW and subnanosecond risetime baseband pulse applications. The scope probe was designed to be used with a 50 ohm sampling oscilloscope, to allow probing of test points in microstrip structures and in discrete RF circuits and subnanosecond pulse circuits, operating at frequencies as high as 5 GHz and with risetimes as low as 100 psec.

AVERAGE WORK FORCE: Total - 7

GROSS SALES: 1986 - \$1.1M 1987 - \$1.1M

PLANT SIZE: 3,500 Sq Ft

EXPERIENCE: Approximately 98% of Avtech's sales are export. Their products have been supplied worldwide to companies, universities and government agencies, e.g., USAF, Sandia National Labs, Los Alamos Scientific Laboratories, Hewlett Packard, Honeywell, Hughes Aircraft, Lawrence Livermore Laboratories, Martin Marietta, Bell Northern Research, etc.

KEYWORDS: Bias Insertion Units; DC Powered Modules; High Speed Pulsers; Impedance Transformers; Impulse Generators; Inverting Transformers; Linear Pulse Amplifiers; Monocycle Generators; Nanosecond Devices; Power Splitters; Pulse Amplifiers; Pulse Generators; Scope Probes; Solid State Devices; Transformers; Waveform Generators; Waveform Instrumentation.

REVISED: January 88

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