

incorporating a Digital RF Memory (DRFM). The sub-system products include DRFM's, Digital Instantaneous Frequency Measurement Receivers (DIFM), Intra-pulse Analysis Receivers, and wideband microwave frequency dividers and prescalers. Presently Telemus is developing low-noise and frequency-agile synthesizers utilizing new quieter analog and digital direct synthesis techniques.

The capabilities in both digital and microwave areas also allow Telemus to respond to custom product requirements. Microwave frequency counters for both CW and pulsed signal measurements, microwave oscillators, and a DF System Test Set are some of the products that have been developed for clients.

**AVERAGE WORK FORCE:** Engineers - 15  
Others - 20

**GROSS SALES:** 1986 - \$1.8M  
1987 - \$2.5M

**PLANT SIZE:** 10,000 Sq Ft

**EQUIPMENT:** Equipment includes - MIC production lab, Tempest shielded room, DEC microvax II computer, Photo lithography lab, Micro soldering and micro bonding equipment, microwave computer aided design system (MICAD), Schematic Capture CAD, Microwave phase and amplitude network analyzer, Microwave scalar network analyzers, Sweepers and sources, Spectrum analyzers (20 GHz), Logic analyzers, Microprocessor development system, and Oscilloscopes, power meters, and counters.

**EXPERIENCE:** A Canadian Navy ECM System Upgrade using a DRFM will go to sea-trials in fall 88. Telemus is currently supplying its third generation family of digital RF memories (4 bit x 1.2 Gbps) to clients in the UK, Sweden, and the US. Successful field trials have been completed on our ELINT receiver designed to fingerprint radar signals by analyzing unintentional modulation parameters. The Canadian Government has also contracted Telemus to develop two new synthesizer designs and a Ultra High-Speed A/D and D/A sub-system. Telemus is supplying a 400 MHz - 8 GHz prescale for signal activity capture to a US Government agency. For further references contact Telemus.

**KEYWORDS:** Coherent Countermeasures Systems; Coherent RF Division; Custom Software; ECM; ESM Products; Electronic Warfare; Frequency "Halver"; Frequency Counters; Loopless Memories; MIC Design & Production; Microwave Prescalers; RF Memory (Digital); Radar Signature Analysis; Synthesizers.

**REVISED:** February 88

## THOMSON-CSF SYSTEMS CANADA Inc (TCSC)

**ADDRESS:** 350 Sparks St, Suite #406  
Ottawa, Ontario, Canada  
K1R 7S8

**CONTACT:** Mr Norman R A Smyth, President - (613) 594-8822

**HISTORY:** Thomson-CSF Systems Canada Inc is a Canadian company incorporated in 1984 with principal office in Ottawa, Ontario. Thomson Systems business is Systems Management. Thomson Systems has been established to meet the needs of the Canadian, North American and world markets for the management and delivery of sophisticated complex systems and their associated logistics support.

**CAPABILITY:** Thomson Systems has the resources, the multidisciplinary capabilities and the sophisticated business practices to respond to complex and functionally diverse requirements in aerospace, communications, command and control, marine and transportation for military, government, industrial, and commercial customers. With its Systems Engineering expertise, its software development capability, its logistics engineering tools, and its proven management know-how, Thomson Systems is able to develop and

deliver to its clients, systems which meet all performance, cost, schedule and logistics requirements. As a true Systems Management company, Thomson Systems is not an equipment manufacturer, and as such, it is free to integrate equipment from any subcontractor which best meets the customer's needs.

Thomson Systems is a subsidiary of Thomson-CSF, a member of the French based multinational corporation, Thomson-SA, that operates in over 80 countries.

Thomson Systems is staffed with a Canadian team of the highest caliber. The professional engineering staff are top level systems engineers with a successful track record in the management of major national and international programs. Thomson Systems currently operates out of a 6800 sq ft facility that has a secure area which is equipped with a TEMPEST facility for housing equipment assigned to classified projects. Computers and office equipment are both owned and leased. Sufficient resources, people and infrastructures are in place to handle medium sized projects (\$100 Million).

**AVERAGE WORK FORCE:** PhD - 2  
Engineers - 16  
Others - 10

**GROSS SALES:** 1986 - \$1.9M  
1987 - \$3.1M

**PLANT SIZE:** 6,800 Sq Ft

**EQUIPMENT:** Secure facilities, Tempest Room Apollo DN 550, IBM PC XTs, and 3 micro VAX (1 secure).

**EXPERIENCE:** Present customers include various departments in the Canadian Government and industries based in Canada, the US and Europe.

**KEYWORDS:** Computer Simulation; Effectiveness Evaluation; ILS; Life Cycle Costing; Logistics Engineering; Operational Analysis; Program Management; Systems Engineering; Systems Management; Systems Studies.

**REVISED:** January 88

## 3-L FILTERS Ltd

**ADDRESS:** 427 Elgin Street N  
P. O. Box 371 Cambridge, Ontario, Canada  
N1R 5V5

**CONTACT:** Mr Les Kadar, Mgr, Marketing - (519) 621-9949

**HISTORY:** 3-L Filters Ltd is a Canadian filtration system and cartridge manufacturing company founded in 1965 by the present owners, Mr. John Kadar and Mrs. Magdalene Kadar, president and vice president of the company. The company has a US plant located at 56 Harvester Ave, Batavia, NY.

**CAPABILITY:** 3-L Filters Ltd is primarily involved in the design and manufacture of aviation, marine, industrial and nuclear filtration systems, and filter cartridges. The aviation division products are micron filters, fuel water separators, fuel monitors, fuses, nozzles, and refueling hoses for airports (fixed or mobile).

All Canadian airports, and some US and world-wide airports, refuel aircraft with 3-L equipment. The function of the 3-L system is to filter out the solids from jet fuel and to separate water from fuel guaranteeing clean dry fuel for the aircraft. 3-L provides domestic and world-wide service, product assurance, including reliability and maintainability analysis, documentation, testing and free training.

**AVERAGE WORK FORCE:** PhD - 1  
Engineers - 6 Others - 76

**GROSS SALES:** 1986 - \$6.2M  
1987 - \$6.3M

**PLANT SIZE:** 55,300 Sq Ft