spectral analysis, vacuum work & measurement, and a high voltage shielded room. Also included are special rooms for furnace work, machining and modeling, and a library. The research staff consists of 7 PhDs; 3 Mech Engs; 1 MSc; 2 BSs; and 1 BEng.

Major equipment includes high vacuum evaporator, electron microscope, cryogenic, electrical and optical facilities, spectrophotometer, ellipsometer, diffusion furnace, vacuum furnace, optical microscopes, multiple beam interferometer, electrometers, oscilloscopes, and other associated instruments.

Experience: OEI's experience has for the most part been with the Canadian Government. Most products are exported. They have expressed interest in doing business with the USAF, and are currently negotiating fiber optic sensor work with NASA.

Keywords: 5 = Communications; 7 = Electronics; 10 = Image Processing & Optics; 11 = Lasers; Infrared Instrumentation = 7; Industrial Control Instrumentation = 7, 10; Fiber Optic Systems = 10; Optical Communications = 5, 7; Electro-Optics = 7, 10; Instrumentation = 7, 10; Fast Optical Sources = 7, 10; Fast Optical Detection = 7, 10; Detectors = 7, 10; High Voltage Pulse Techniques = 7; Solid State Systems = 7; Sensors = 7, 10; Transducers = 7; Photodetectors = 10; Laser Light Sources = 11; Laser Diode Sources = 11; Measurement Systems = 7,10; Data Links = 10; Infrared Diode Lasers = 11; Optical Switches = 10; IR Sources = 10; IR Detectors = 10; Liquid Sensors = 10.

Revised: Dec 83

OPTOTEK Ltd

Code: OPT

Address: 1283 Algoma Road
Ottawa, Ontario, Canada K1B 3W7

Contact: Dr David I Kennedy, President – (613) 746-3100
Mr. P Gunnar Wareberg, VP, Operations (613) 746-3100

History: Optotek Ltd is a high technology company with no other divisions in Canada or the US. Optotek was incorporated in Oct 77 as a spin-off from Bowmar Canada Ltd, a Canadian subsidiary of Bowmar Instrument Corp.

Capability: *Active* – (1) Development and manufacture of LED materials and devices based on Group III-V and II-VI compounds, (2) design and manufacture of custom LED arrays for military and industrial applications, (3) design and manufacture of display-related electronic subsystems and test equipment, (4) design and manufacture of Gallium Arsenide field-effect transistors, and (5) design and manufacture of infrared photodetectors (Cadmium Mercury Telluride).

Latent – (1) Alternate (non-LED) applications of III-V compound semiconductors, e.g., FETs, and (2) alternate display technologies, e.g., liquid crystals, electrochromic technology, etc.

Future R&D – Current LED displays, both monochromatic and multicolor, range in resolution from 25 to 1000 lines-per-inch. Future expansion will encompass gallium arsenide field effect transistor and high-speed integrated circuit technology, as well as infrared photodetector technology based on cadmium mercury telluride.

Average Work Force: PhDs – 2
Engineers – 8

Gross Sales: Approx $1.5M (Historical)
Approx $2.0M (Current)
1984 – $3.0M (Projected)
15% (to US Military)

Plant Size: 30,000 sq ft

Equipment: Optotek has a full complement of semiconductor processing equipment.

Experience: Optotek has experience with the USAF, USN and NASA. They are interested in continuing their business with the DOD and NASA. Past contracts have been in the LED materials, devices, and displays areas. Principal programs with the USAF have been the Multimode Matrix LED Display, the Video Flat-Panel LED Display, and the development of Multicolor LED Displays. The USN programs include manufacturing technology for advanced solid-state data annotation displays and a planned production program involving the RF-4 and P3 reconnaissance systems.

Keywords: 3 = Avionics; 7 = Electronics; 19 = Testing/Test Equipment; Cockpit Displays = 3; Infrared Instrumentation = 7; Integrated High Density LED Displays = 3, 7; Solid State Devices = 3, 7; LED Materials = 7; LED Arrays = 3, 7; Subsystems = 7; FETs = 7; Semiconductors = 7; Display Technologies = 7; Liquid Crystals = 7; Electrochromic Technology = 7; Flat Panel Displays = 3, 7; Multicolor LED Displays = 3, 7; Data Annotation displays = 3; Electronic Test Equipment = 19.

Revised: Dec 83

PACERLABS Ltd

Code: PAC

Address: 1496 Bedford Highway
Bedford Tower, Suite #200
Bedford, Nova Scotia, Canada B4A 1E5

Contact: Mr. Stephen E Rice, Technical Director – (902) 835-7033

History: Pacerlabs of Canada Ltd was originally a wholly owned subsidiary of Pacer Systems Inc operating in Ottawa through the System Sciences and Engineering Division of Fort Washington, Penn. During the 1970s, Pacerlabs completed several tasks for the Department of National Defense (DND) on the CH-124A Sea King Modernization Program, as well as a major effort involving software design, specification, and test and evaluation (T&E) for the Canadian Forces Data Interpretation and Analysis Center (DIAC), the land-based command, control and support element of the Aurora weapon system.

In May 1980, IMP Group Ltd conducted negotiations with Pacer in concert with DND and the Department of Industry, Trade and Commerce, acquiring a controlling interest. The company was renamed Pacerlabs Ltd and the corporate registry moved to Nova Scotia where operations began in October 1981.

Capability: Pacerlabs provides a wide range of professional services to support National Defense Headquarters and IMP Group Aerospace Division in Mission and Weapon Systems Evaluations, Operational Analyses, Software Systems Analyses, Project Management, and Report Development/ Production. Pacerlabs' principle activity includes the following military systems and software engineering:

- Software Design, Documentation and Quality Assurance
- Independent Verification and Validation
- Computer Program Performance, Design and Test Specifications
- Specialist Weapon System Software Support and Maintenance Analyses
- Operational Training System and Documentation Development
- Future Systems Studies