Association of Professional Engineers and Geoscientists

of the

Province of Manitoba

Certificate of Engineering Achievement

presented to

INFOMAGNETICS TECHNOLOGIES CORPORATION

for the

BRIEFCASE, DEPLOYABLE ANTENNA FOR EHF SATELLITE COMMUNICATIONS (PICO-TERMINAL ANTENNA)

This award honours InfoMagnetics Technologies Corporation (IMT) for the concept, design and development of the Briefcase, Deployable Antenna for EHF Satellite Communications (Pico-terminal Antenna). The Pico-terminal Antenna is the first of its kind in the world for satellite applications in the Ka-band. Presently the satellites that operate at Ka-band are experimental satellites. However, the strategy by leaders in satellite communications is to focus on new media communications. The next generation of satellites, scheduled for 2001, provides additional transponder capacity in the Ka-band for expanded broadcast services that permits two-way asymmetric, high-speed transmission of multimedia content.

IMT entered into a contract with the European Space Agency, for the design and development of the Pico-terminal antenna for satellite communications in the Ka-band. The antenna specifications presented major challenges, including: very high efficiency; high gain for a maximum diameter of 35 cm; low side lobe; all antenna assembly; transceiver, and base-band equipment should fit in a briefcase measuring 35 x 25 x 50 cm; and weight of the antenna assembly should not exceed 5 kg. The IMT antenna performance met, or exceeded, all specifications. According to Dr. Barakat, the firm's success on the antenna project is due to the excellent collaboration and contribution by Professor L. Shafai, P.Eng., Electrical & Computer Engineering Department, University of Manitoba, and Mr. G. S. Pizey, P.Eng. Design Engineer, Industrial Technology Centre, Winnipeg.

As a direct result of the research and development work on the Briefcase, Deployable Antenna for EHF Satellite Communications (Pico-terminal Antenna), InfoMagnetics Technologies Corporation is a recognized world leader in Ka-band antenna technology for Ka-band RF satellite communications terminals. IMT is currently working on several contracts involving Ka-band antennas and expects that the demands for their services will increase dramatically as the 2001 schedule date for multimedia satellites approaches.

InfoMagnetics Technologies Corporation was established as a Winnipeg-based company in 1991 by its current CEO Moe Barakat, Ph.D., P.Eng., with a staff of five electrical and computer engineers and computer scientists, offering services primarily in Information Systems, Antenna Technology and Applied Electromagnetics Solutions. Presently IMT operates from a 10,000 square foot facility, which includes: RF development laboratories; Information Systems computer facilities; and Wireless Multimedia product development facilities. IMT technical staff has increased to 40, including the staff of its new company SpectraWorks, which specializes in high-speed satellite and wireless communications networks.

The Association of Professional Engineers and Geoscientists of the Province of Manitoba recognizes the achievement of InfoMagnetics Technologies Corporation in the development of the world's first Briefcase Ka-band antenna, and its contribution to multimedia satellite communications for the future.

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