

INTEGRATED ENGINEERING SOFTWARE

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Keywords: CAE; Computer-Aided Engineering Software; Electromagnetic field analysis software; Boundary Element Method (BEM) analysis; simulation software; software development; software services (engineering); consulting services (engineering). IEF software has specific applicability to aerospace and defence related industries.

History: IES was incorporated in 1984 and is a Canadian research and development company specializing in the development and marketing of computer-aided engineering software for electromagnetic field analysis. IES has an exclusive distributor in Japan and a limited distributor arrangement in Switzerland. A number of cooperative hardware/software supply arrangements are in place between IES and various workstation hardware manufacturers. Corporate R&D and Sales and Marketing headquarters are located in Winnipeg.

Capability/Products: IES software is used for the design and analysis of electromagnetic field analysis problems, which shortens the product design cycle and eliminates the need for costly prototype development. Each program combines the Boundary Element Method (BEM), advanced technical capability, ease of use, and comprehensive customer support. BEM is recognized as the most powerful solution algorithm available.

Electrostatic field solving programs ELECTRO (2D) and COULOMB (3D) are used in the design and analysis of electrical and electronic equipment, including insulators, bushings, grounding electrodes, transmission lines, telecommunication cables, microstrips and integrate circuits. Magnetostatic field solving programs MAGNETO (2D) and AMOERES (3D) are used in the design and analysis of magnetic devices and components such as magnetizing fixtures, motors, cyclotrons, solenoids and transformers, recording heads, magnetic shielding and permanent magnet assemblies. The time-harmonic field solving program OERSTED (2D) is used for magnetic design applications which require eddy current analysis. This allows for calculation of losses in devices such as electric (AC/DC) motors, solenoids and transformers, crack or fault detection and bus bars. IES Programs are flexible and adaptable and provide smooth, accurate results and cater efficiently and effectively to open region problems.

No finite element mesh is required.

IES also provides engineering consulting services for EM design applications.

Current Market Activity: At IES, our main emphasis is on developing and enhancing quality products while providing excellent customer service and technical support. We believe that available CAE software design packages, should be scrutinized thoroughly before a purchase decision is made. This examination should include the technical basis of the software as well as its potential as a design tool.

Rank Export Countries: U.S.A., Europe, Scandinavia.

Market Strategy: IES offers a 30 days no-charge evaluation of full version software to allow the customer to test program capability with no obligation to purchase. We are confident that our engineers have developed programs which, on an international level, operate at the forefront of technology. Our geographic priority is the United States, followed by continual expansion into the European market.

Experience: Present customers include a wide range of national and international corporations, government agencies, national laboratories, educational and research institutions in Canada, the USA, Europe and the Pacific.

Users include: Present customers include Xerox Corporation, 3M, Asea Brown Boveri, Philips Industrial Electronics, Rockwell International, IBM Corporation, MIT Lincoln Laboratory, Mitsubishi, Tektronix, British Aerospace, Lawrence-Berkeley Labs, Pacific Scientific, Siemens Corporation, Toshiba.

Average Work Force: R&D Engineers - 8, Others - 9.

Gross Sales: 1990 - \$0.5 Million, 1991 - \$0.8 Million, 1992 - \$1.2 Million.

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