

DIRECTORY
—OF—
AMERICAN
RESEARCH
—AND—
TECHNOLOGY tm
1998

ORGANIZATIONS ACTIVE IN
PRODUCT DEVELOPMENT FOR BUSINESS

32nd Edition

R.R.BOWKER

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PREFACE

This 32nd edition of the *Directory of American Research and Technology: Organizations Active in Product Development for Business* continues a distinguished series of publications printed since the 1920s profiling research and product development capabilities of public and private enterprises in the United States. Issued in its first eleven editions by the National Academy of Sciences / National Research Council, the directory has been published by R.R. Bowker since 1965. Prior to the 20th edition, it has been published under the title *Industrial Research Laboratories of the United States* and has been updated annually since 1984 to reflect the increasing rate of change in organizational research and development functions resulting from mergers and acquisitions and the emergence of new technologies.

As in previous editions, the listings in the 1998 volume include all known non-government facilities currently active in any commercially-applicable basic and applied research, including development of products and processes. Most of the entities included in this edition are owned and operated by corporations, but some university, foundation and cooperative organizations that do research for industry are also listed. All areas of research and development that have commercial applications can be found in the directory, as evidenced by the presence in the Classification Index of subjects ranging from acoustics to zinc products. Also included is a subject guide to R&D activities to facilitate easy-referencing on specific topics. Research programs used exclusively by universities and/or the government, as well as activities devoted entirely to quality control and testing, are excluded from the directory.

A total of 13,152 organizations are listed in this 32nd edition; 623 of the entries describe companies and facilities never before listed in the directory. A breakout of the total 13,152 entries reveals that 8,131 of the listings are "parent" organizations, which, by our definition, are either corporate headquarters, holding companies, university administrative offices or the main offices of a not-for-profit association. The other 5,021 listings appear as "facilities" in our directory under those "parents," even though these "facilities" may operate legally as divisions, departments, laboratories or

branch offices of the "parent." In only a few cases are known facilities *not* listed under their parent firms; these exceptions result from specific requests to list facilities as separate companies, from the editors' decisions not to include information on foreign parents or from the occasional reluctance of firms to clarify their corporate structure.

Information for the 32nd edition of the *Directory of American Research and Technology* was acquired by mailing questionnaires to all current entrants. We are grateful to the thousands of research directors, corporate communications officers and other administrative personnel from the facilities listed herein who took the time to provide detailed updated information to us on their facilities. Organizations which did not return revised questionnaires were updated over the telephone if two years had passed without contact or if substantive organizational or personnel changes were known to the editors to have occurred in the company in the past year. For those companies not reached by phone for this edition, information was obtained from secondary sources, and these listings display an asterisk to the right of the organization's name.

The editors express appreciation to Donna Brinkmann and Carol Carr of Reed Technology & Information Services for their effort in helping to produce this edition.

For information regarding online availability of the *Directory of American Research and Technology*, please call R.R. Bowker at (888) 269-5372.

Mailing lists of the directory's entries can be requested from the Mailing List Department, Reed Elsevier Business Information, 249 West 17th Street, New York, NY 10011, telephone (212) 337-7164.

Comments and suggestions, as well as news of changes as they occur, are welcomed and should be directed to Editorial Department, *Directory of American Research and Technology*, R.R. Bowker, 121 Chanlon Road, New Providence, NJ 07974.

Beverley McDonough
Managing Editor

ARRANGEMENT OF THE DIRECTORY

The Main Section: Companies and Their Facilities

The main section of this directory presents an alphabetical listing of parent organizations and the reporting structure for their facilities that do research. The parent organization is included even if it does not perform research or development. Information on the parent is followed by a central research and development center, if any, and then an alphabetical listing of all divisions and facilities. Foreign R&D facilities are listed last within the corporate group unless otherwise directed by the owning company. Subdivisions are alphabetized under the division or facility to which they report. Entries for divisions and facilities reporting to the parent company are preceded with one dash; entries for subdivisions and/or laboratories by two or more dashes to convey reportage.

An asterisk appearing after the name of an entry indicates that updating information did not come from the facility itself but was obtained from secondary sources.

For a detailed listing of the contents of the entries, see the sample on the following page.

The Indexes: Geographic, Personnel and Classification

The main, alphabetically-arranged section of the directory is followed by three indexes. In the Geographic Index, all facilities, including parent companies and all their listed divisions, are indexed by location. The index is arranged alphabetically by state, then within state by city, and within city alphabetically by company name. The Personnel Index contains an alphabetical listing of all individuals included in the entries. The Classification Index is an important key to the general R&D activities at each installation. It consists of 34 broad subject headings, each of which is subdivided into more specific subheadings corresponding to research identified by each facility listed in the main section. Also included is a subject guide to R&D activities.

The references appearing in each of the three indexes are code numbers, not page numbers. The code number consists of an alphabetical character that corresponds to the letter of the alphabet where the referenced information can be found in the main section of the directory. This alphabetical character is followed by a one-to-three digit number corresponding to the entry's location within the alphabetical letter of the main section. A decimal number indicates that the reference is to a specific facility within a company, since the facilities listed under a parent company are identified separately with these decimals.

SAMPLE ENTRY

- ¹**C351** ²**COMMUNICATIONS SYSTEMS CORPORATION,**
³107 L'Enfant Plaza SW, Washington, DC 20023.
⁴Tel: 202-864-5000; WATS: 800-303-7030; Fax 202-864-5252
⁵*Chmn & Chief Exec Officer* Jerry Goldin; *Pres & Chief Operating Officer*
Laurence Lawson
^{6.1} ⁷⁻⁸**CSC Laboratories**, 2000 Brooks Dr, Forestville, MD 20747. ⁹(pi)
Tel: 305-427-4000; Telex: 77-9667; Fax 305-427-1020. Elec Mail:
62932507COMMSYSCOR
VPres & Dir of Lab Dr John James
¹⁰**Professional Staff:** 408 (Doctorates: 56) - ¹¹Computer
science, electrical engineering, mathematics, physics.
¹²**Technicians & Auxiliaries:** 174
¹³**R&D Expen:** \$10,000
¹⁴**Fields of R&D:** Research in satellite communications,
spacecraft technology and network technology
2 --**Environmental Division**, 696 N Wayne St, Arlington, (pg)
VA 22201. Tel: 703-369-8910; Fax 703-369-4237
Dir Vernon Sampson
Fields of R&D: Air quality modeling research for basic and
applied technology

1. This code consists of the letter under which the company is alphabetized and a number indicating its position within the letter grouping. This identifying code is used in the Geographic, Personnel and Classification Indexes to refer the user to the appropriate text entry in the main section.
2. Name of the parent organization.
3. Address.
4. Telecommunications numbers.
5. Personnel. Personnel listed for the parent company consist of officers of the company, while divisional listings include major research personnel.
6. Decimal number identifying each individual facility's sequential location in the company's listing. The decimal number is used in the three indexes following the parent company's code to refer to specific facility listings in the main section.
7. Reportage. Each dash indicates what division of the parent company the facility reports to. One dash indicates reportage to the parent company. A facility preceded by two dashes reports to the division with one dash found above it in the entry, etc.
8. Name of the division, laboratory, or subdivision.
9. R&D activity codes. These letter codes appear in each R&D facility's entry to indicate for whom research work is performed. The following codes are used:
 (p) for parent (own) organization
 (g) on contract for government
 (i) on contract for industry
 (c) consultation for others
10. Number of professional staff. Included in parentheses is the number of staff possessing doctoral degrees.
11. Scientific disciplines represented by doctorates.
12. Number of laboratory and technical support staff working at the facility.
13. Annual R&D Expenditure
14. Statement of chief R&D activity. Detailed information does not appear in every entry since all organizations are not structured identically and some have policies which restrict publication of certain research activities.

RESEARCH ACTIVITY CODES USED IN THE TEXT

p—R&D for parent organization
g—On contract for government

i—On contract for industry
c—Consultation for others

ABBREVIATIONS USED IN THE TEXT

Admin—Administration,
Administrative
Asst—Assistant
Assoc—Associate
Ave—Avenue
Blvd—Boulevard
Bldg—Building
Chmn—Chairman
Dept—Department,
Departmental
Dir—Director
Dr—Doctor, Drive
E—East
Exec—Executive
Expen—Expenditure
Gen—General
Hwy—Highway
Jr—Junior
Lab(s)—Laboratories,
Laboratory

Mgr—Manager
N—North
Pl—Place
Pres—President
R&D—Research and
Development
Rd—Road
Res—Research
Rte—Route
Secy—Secretary
Sr—Senior
S—South
St(s)—Street(s)
Supt—Superintendent
Supvr—Supervisor
Tel—Telephone
Treas—Treasurer
VChmn—Vice Chairman
VPres—Vice President
W—West

- D316 DURALITE, INC.**,* 15 School St, Riverton, CT 06065. Tel: 860-379-3113; Fax 860-379-5879. (i)
Chmn Elliot E Jensen; *Chief Exec Officer, Pres & Chief Researcher* Mark E Jensen
Professional Staff: 1. Technicians & Auxiliaries: 1
Fields of R&D: Electrical and electronic research
- D317 DURAMAX, INC.**, 16025 Johnson St, PO Box 67, Middlefield, OH 44062. Tel: 216-632-1611; Fax 216-632-1969. (p)
Pres Paul C Miller Jr
- .1 -Johnson Rubber Company**, 16025 Johnson St, PO Box 67, Middlefield, OH 44062. Tel: 216-632-1611; Fax 216-632-1281. (p)
Chmn Paul C Miller; *Pres* Brad Stone; *Technical Dir* J Ray Podesta
Professional Staff: 6 (Doctorates: 2)—Polymer science
Fields of R&D: Rubber compound chemistry
- .2 -Norbalt Rubber Corporation**, 587 W Broadway, PO Box 187, North Baltimore, OH 45872. Tel: 419-257-3451; Fax 419-257-3600. (p)
Pres Paul C Miller Jr; *Plant Engineer* Gordon Kroh; *Maintenance Mgr* Kent Utendorf
Professional Staff: Technicians & Auxiliaries: 2
Fields of R&D: Molded and extruded rubber products
- D318 DURAMED PHARMACEUTICALS, INC.**, 5040 Duramed Dr, Cincinnati, OH 45213. Tel: 513-731-9900; Fax 513-731-5270. (p)
Pres E Thomas Arington
Fields of R&D: Applied research and development in pharmaceutical preparations
- D319 DURAND COMMUNICATIONS, INC.**, Suite 200, 147 Castilian Dr, Santa Barbara, CA 93117. Tel: 805-961-8700; Fax 805-961-8701. (pi)
Chief Exec Officer & Pres Andre Durand; *Software Development Mgr* Albert Gallego
Fields of R&D: Applied and product-oriented research and development of internet and intranet technology and services which enable the building of online communities and community-based electronic commerce using industry standard tools and protocols
- D320 DURA PHARMACEUTICALS INC.**, 7474 Lusk Blvd, San Diego, CA 92121. Tel: 619-457-2553; Fax 619-457-2555. (pi)
VPres Science & Technology Clyde Witham; *VPres Product Development* Robert Schultz
Fields of R&D: Product-oriented research in pharmaceutical marketing and pulmonary drug delivery focusing on the high growth United States respirator market
- D321 DURELL LABORATORIES, INC.**,* 52 Candlewood Dr N, Barrington, IL 60010. Tel: 847-304-4778; Fax 847-304-4778. (i)
Pres William Durell
Professional Staff: 1
Fields of R&D: Laser to optical fiber launching equipment and applied engineering/applications in holography, interferometry and optical fiber research
- DURIRON CO, INC**
 Now Flow Serve
- D322 DUTTON-LAINSON COMPANY**, Second & Saint Joseph, PO Box 729, Hastings, NE 68902. Tel: 402-462-4141; Fax 402-460-4613. (p)
Chief Exec Officer & Chmn Hal Lainson; *Plant Mgr* Ron Haase; *Dir Engineering* Cameron Stewart
Professional Staff: 8. Technicians & Auxiliaries: 4
Fields of R&D: Product-oriented research in product enhancement of winches, jacks and other marine accessories and products for light industry and agriculture
- D323 D W I CORP.**, 23351 Madero, Mission Viejo, CA 92691. Tel: 714-859-3533; Fax 714-859-3947. (gic)
Chief Exec Officer & Pres Arthur W Ellsworth; *Dir* Robert K Fujioka
Fields of R&D: Product-oriented research in enhancement of industrial products design and model fabrication
- D324 DWYER INSTRUMENTS, INC.**, 102 Ind 212, Michigan City, IN 46360. Tel: 219-879-8868; Fax 219-872-9057. (p)
Chmn Edwin J Clark; *Pres* Steve Clark; *VPres Industrial Relations* Gregg P Miller; *Chief Engineer* Don Dewitt
Fields of R&D: Product-oriented research in enhancement of combustion testing instruments
- D325 BEN DYER ASSOCIATES, INC.**, 8100 Professional Pl, Landover, MD 20785. Tel: 301-459-9200; Fax 301-459-4361. (c)
Pres David F Murray
Professional Staff: 20. Technicians & Auxiliaries: 50
Fields of R&D: Planning, land surveying and engineering for land development of residential, commercial and industrial areas; engineering, feasibility studies, detailed engineering plans
- D326 DYLOM INDUSTRIES, INC.**, 7700 Clinton Rd, Cleveland, OH 44144. Tel: 216-651-1300; WATS: 800-237-8246; Fax 216-651-1777; Elec Mail: dylon@postoffice.worldnet.att.net. (pic)
Pres W H Manrodt; *Technology Mgr* Dr R A Reuter
Professional Staff: 10 (Doctorates: 3)—Physical chemistry, polymer science, surface chemistry. Technicians & Auxiliaries: 5
Fields of R&D: Product-oriented research in tribology; polymer chemistry; emulsion technology; ceramics; chemistry of glasses; high temperature chemistry
- DYNACORP**
 See American Auto-Guard
- D327 DYNA EAST CORPORATION**, 3620 Horizon Dr, King of Prussia, PA 19406. Tel: 610-270-9900; Fax 610-386-1522. (pgi)
Pres Dr Pei Chi Chou; *VPres Engineering* Robert Ciccarelli; *Dir Research* Dr William Flis
Professional Staff: 14 (Doctorates: 3)—Ballistics, mechanical engineering, physics, systems analysis. Technicians & Auxiliaries: 10
Fields of R&D: Warhead design; metal and explosive interaction calculation and study; terminal ballistics; penetration mechanics; rotary forging; explosives and propellants; insensitive munitions
- D328 DYNAGEN, INC.**, 99 Erie St, Cambridge, MA 02139. Tel: 617-491-2527; Fax 617-354-3902. (p)
Chief Exec Officer & Pres Indu A Muni; *Dir R&D* F Howard Schneider PhD
Fields of R&D: Product-oriented research and development of smoking cessation and nicotine withdrawal therapeutics
- D329 DYNALEC CORPORATION**,* 87 W Main St, Sodas, NY 14551. Tel: 315-483-6923; Fax 315-483-6656. (pg)
VPres Marketing Eugene Van Deusen
Fields of R&D: Interior communication automatic dial telephone systems, public address systems, alarm switchboards; shipboard interior communication system
- D330 DYNALYSIS OF PRINCETON**, 219 Wall St, Princeton, NJ 08540-1512. Tel: 609-924-3911. (pgic)
Pres & Chief Operating Officer Dr H James Herring; *Dir Research* Dr F Sisto PhD; *Librn* Barbara Beardsley; *Science Dir* Dr G L Mellor
Professional Staff: 4 (Doctorates: 3)—Aeroelasticity, fluid mechanics, heat transfer, numerical analysis, turbulence modeling. Technicians & Auxiliaries: 1
Fields of R&D: Basic research in turbulence modeling, numerical methods, boundary layers, oceanographic and atmospheric modeling; applied research in turbine blade cooling, discrete jets, compressor performance, aeroelasticity and flutter
- D331 DYNAMET, INC.**,* 195 Museum Rd, Washington, PA 15301. (pi)
 Tel: 412-228-1000; Fax 412-228-2087.
Chief Exec Officer Peter C Rossin
Professional Staff: 5. Technicians & Auxiliaries: 11
Fields of R&D: Product-oriented research in the enhancement of titanium and nickel-based alloys
- D332 DYNAMETRIC, INC.**,* 717 S Myrtle Ave, Monrovia, CA 91016. Tel: 818-358-2559; Fax 818-359-5701. (p)
Pres W C McFadden; *Mgr Personnel* Joyce Schmidt
Professional Staff: 3. Technicians & Auxiliaries: 2
Fields of R&D: Communications recording for telephone security
- D333 DYNAMIC CONTROLS, INC.**, 7060 Cliffwood Pl, Dayton, OH 45424. Tel: 937-254-2529. (gic)
Pres Gavin D Jenney PhD; *Principal Engineer* Bruce Raymond; *Project Engineer* John A Anderson; *Test Engineer* Bill Talley; *Electrical Engineer* Rick Rockwell; *Electrical Engineer* Xung Bui
Professional Staff: 5 (Doctorates: 1)—Aircraft flight controls, control system analysis, hydraulic systems. Technicians & Auxiliaries: 2
Fields of R&D: Aeronautics; electronic, electrical, mechanical, industrial and civil engineering; military science; rocket, missile and space technology
- D334 DYNAMIC ENGINEERING, INCORPORATED**, 703 Middle Ground Blvd, Newport News, VA 23606. Tel: 757-873-1344; Fax 757-873-2183. (pgi)
Chief Exec Officer & Pres David H Mullins; *VPres Engineering* James R Brunes; *VPres Fabrication* Joe Jame
Professional Staff: 40 (Doctorates: 10). Technicians & Auxiliaries: 130
Fields of R&D: Computational analysis on advanced designs, precision and dynamic models for wind-tunnel testing; structural design and testing, utilizing the latest metallurgical and composite materials, N/C programming and precision machining, wind tunnel blades, structural excitatron systems, motor simulators, helicopter blades/hubs, test stands
- D335 DYNAMIC HEALTH CARE TECHNOLOGIES, INC.**, 101 S Hall Lane, Maitland, FL 32751. Tel: 407-875-9991; WATS: 800-832-3020; Fax 407-875-9915. (p)
Chief Exec Officer David M Pomerance; *Pres & Chief Operating Officer* Mitchel J Laskey
Professional Staff: 55
Fields of R&D: Product-oriented research and development in CMP integrated systems design
- D336 DYNAMIC PICTURES INC.**, 5225 Betsy Ross Dr, Santa Clara, CA 95054. Tel: 408-327-9000; Fax 408-327-9010. (p)
Pres Brian Kelleher; *VPres Software* Ko Yu; *VPres Hardware* Tom Dewey
Fields of R&D: Applied and product-oriented research and development in scaleable graphic acceleration hardware and software
- D337 DYNAMIC RESOURCES INC.**,* 1866 Independence Square, Atlanta, GA 30338. Tel: 770-391-9330; Fax 770-392-4317; Elec Mail: atl.dynares.com. (ic)
Pres Jane Park
Fields of R&D: Product-oriented research in computerized software imaging and documentation

D338 DYNAMIC SCIENCES INTERNATIONAL INC, 6130 Variel Ave, Woodland Hills, CA 91367. Tel: 818-226-6262; Fax 818-226-6265. (gic)
Chief Exec Officer & Pres Eli Shiri; *Gen Mgr* Bob Cook
Professional Staff: 35 (Doctorates: 15)—Electrical engineering, information technology, mathematics, systems analysis, systems integration. Technicians & Auxiliaries: 25
Fields of R&D: Product-oriented research in navigation, controls, telecommunications and test instrumentation

D339 DYNAMICS CORPORATION OF AMERICA, 475 Steamboat Rd, Greenwich, CT 06830. Tel: 203-869-3211; Fax 203-869-8708. (pc)
Pres Andrew Lozyniak
R&D Expen: \$1,664,000

.1 **-Anemostat Products Division**, 888 N Keyser Ave, PO Box 1083, Scranton, PA 18501. Tel: 717-346-6586; Fax 717-342-8559. (pc)
VPres & Gen Mgr Patrick J Sheridan
Professional Staff: 10. Technicians & Auxiliaries: 5

.2 **-Air Distribution Laboratory**, 888 N Keyser Ave, PO Box 1083, Scranton, PA 18501. Tel: 717-346-6586; Fax 717-342-8559. (pc)
Chief Applications Engineer Bill Waeldner
Professional Staff: 3. Technicians & Auxiliaries: 8
Fields of R&D: Studies of air distribution and acoustical sound control in comfort air conditioning systems; development of outlet terminals and air temperature and volume regulators

.3 **-Fermont Division**, 141 North Ave, Bridgeport, CT 06606. Tel: 203-366-5211; Telex: 96-4365; Fax 203-367-3642; Elec Mail: 367-3642. (c)
Pres Tom Santoro

Professional Staff: 6. Technicians & Auxiliaries: 8
Fields of R&D: Product-oriented research in the major field of energy conversion and conservation; particular emphasis is on emergency power systems for the optimum utilization of emergency power through state-of-the-art concepts such as peak shaving and total energy systems

.4 **-International Electronic Research Corporation**, 135 W Magnolia Blvd, Burbank, CA 91502-7704. Tel: 818-842-7277. (p)
Fields of R&D: Design and manufacture heat dissipators/sinks and the Zero Insertion force printed circuit board retainer

.5 **-Reeves-Hoffman Division**, 400 W North St, Carlisle, PA 17013-2248. Tel: 717-243-5929. (p)
Fields of R&D: Design and manufacture quartz crystals, crystal oscillators, crystal filters and glass-to-metal hermetic seal packages

D340 DYNAMICS HEALTHCARE TECHNOLOGIES INC, (Formerly Dimensional Medicine), 10901 Bren Rd E, Minnetonka, MN 55343. Tel: 612-938-8280; Fax 612-936-8500. (p)
Chief Exec Officer Mitchell Laskey
Fields of R&D: Applied product design of software for radiology departments

D341 DYNAMICS RESEARCH CORPORATION, 60 Frontage Rd, Andover, MA 01810. Tel: 508-658-6100; Fax 508-475-8205. (p)
Chmn John S Anderegg Jr; *Chief Exec Officer & Pres* Albert Rand; *VPres Contracts* Arthur Brown; *VPres Encoder Div-Metrographic* Chester Ju; *VPres Human Resources* John Wilkinson
Fields of R&D: Research and analysis of inertial navigation systems and data conversion and display systems; design and fabrication of optical, digital shaft angle encoders for aerospace and industrial applications; precision ruled patterns and reticles

D342 DYNAMICS TECHNOLOGY, INC,* 21311 Hawthorne Blvd, Torrance, CA 90503. Tel: 310-543-5433; Fax 310-543-2117. (g)
Chief Exec Officer & Chmn Bd Dr Denny R S Ko; *Pres* Dr Steven R Borchardt
Professional Staff: 18 (Doctorates: 7)—Aerodynamics, applied mathematics, fluid mechanics, heat and mass transfer, mechanical engineering, physical oceanography, physics, thermodynamics. Technicians & Auxiliaries: 4
Fields of R&D: Theoretical and experimental research of boundary layers, turbulent wakes, separated flow, surface and internal waves, oceanic turbulence, submersible performance and stability, surface ship hydrodynamics; electromagnetics and acoustic radiation, propagation and scattering; engineering and computer modeling, numerical simulation, energy and environmental studies, fiber optic instrument development, remote sensing, image processing, custom instrumentation

D343 DYNAMOLD, INC, 2905 Shamrock, PO Box 9617, Fort Worth, TX 76107. Tel: 817-335-0862; Telex: 379-1940 DYNAM; Fax 817-877-5203. (pi)
Pres P Michael Peck; *Research Consultant* Dr Henry Weltman
Professional Staff: 2 (Doctorates: 1)—Chemistry. Technicians & Auxiliaries: 1
Fields of R&D: Product-oriented detections for poisonous gas, non-destructive testing materials for ferro non-magnetic parts; moldable epoxy shims for composite structures, hard and flexible replicating materials; environmentally compliant wipe solvents

D344 DYNAMOTION ATI CORP,* 1639 E Edinger, Santa Ana, CA 92705. Tel: 714-541-2927; Fax 714-541-0307. (p)
Pres John Hopper
Fields of R&D: Product-oriented research and development of miscellaneous electric machinery; drilling and routing machines for circuit boards

D345 DYNASTAT, INC, Suite 4, 2704 Rio Grande, Austin, TX 78705. Tel: 512-476-4797. (p)
Pres Dr William D Voiers
Professional Staff: 4 (Doctorates: 1). Technicians & Auxiliaries: 6
Fields of R&D: Basic research in speech perception; evaluation of voice communications systems; research in problems of multidimensional scaling of speech sounds, voices and communication systems; animal behavior

D346 DYNASTY TECHNOLOGY, Suite K, 1031 E Duane Ave, Sunnyvale, CA 94086. Tel: 408-720-3350; Fax 408-720-3355. (pc)
Pres & Engineering Dir Khalid Hamade
Fields of R&D: Product-oriented research in systems integration and development

D347 DYNASURF CORPORATION, 1426 Fleet St, Baltimore, MD 21231. Tel: 410-276-2112; Fax 410-276-3524; Elec Mail: webbge@clark.net. (pc)
Chief Exec Officer Jeremy Helfand; *Pres* Abraham Helfand; *Technical Dir* Greg Webb
Professional Staff: 10 (Doctorates: 1)—Chemical engineering, detergents, polymers, surfactants. Technicians & Auxiliaries: 1
R&D Expen: \$500,000
Fields of R&D: Research and development of coatings, polymers, surfactants, detergents, disinfectants, sanitizers and cosmetics

D348 DYNATECH CORPORATION, 3 New England Executive Park, Burlington, MA 01803. Tel: 617-272-6100; Fax 617-272-2304. (p)
Chmn, Chief Exec Officer & Pres John F Reno; *Corporate VPres Communication Test Technologies* Div John R Peeler; *Corporate VPres Corporate Development* Samuel W Tishler; *Mgr Corporate Communications* Steve Cantor; *Corporate VPres Human Resources* John A Mixon
Fields of R&D: Network technology solutions

.1 **-TTC (Telecommunications Techniques Corporation)**, 20400 Observation Dr, Germantown, MD 20876. Tel: 301-353-1550; Fax 301-353-0234. (p)
Pres John R Peeler; *Pub Relations Specialist* Rob Clark
Fields of R&D: Product-oriented research in fiber optics

DYNATHERM CORPORATION
 See DTX Corporation

D349 DYNATRONICS CORP, 7030 Park Center Dr, Salt Lake City, UT 84121-6618. Tel: 801-568-7000; Fax 801-568-7711. (i)
Pres Kelynn H Cullimore Jr; *VPres R&D* John Ramey
Fields of R&D: Product-oriented enhancement of medical diagnostic devices for physical and industrial medicine market

D350 DYNACORP I&ET, 6101 Stevenson Ave, Alexandria, VA 22304. Tel: 703-461-2000; Fax 703-461-2020.
Facility Mgr Kim Quimby

.1 **-Aerotherm Corporation**, 580 Clyde Ave, Mountain View, CA 94043. Tel: 415-961-6100; Fax 415-964-8349. (pgic)
Pres Dr Charles Nardo
Fields of R&D: Basic, applied and product-oriented research in aerospace: strategic and tactical missile weapon systems

.2 **-Dyn Meridian**, 3204 Tower Oaks Blvd, PO Box 6012, Rockville, MD 20852. Tel: 301-984-7300; Fax 301-984-3199. (g)
Actg Dir John Schmid
Professional Staff: 60 (Doctorates: 10)—Engineering, physics. Technicians & Auxiliaries: 10
Fields of R&D: Exploratory and applied research in the fields of operations analysis; instrumentation; ocean dynamics and acoustics; computer simulation

D351 DYNETICS, INC,* 1000 Explorer Blvd NW, Huntsville, AL 35806. Tel: 205-922-9230; Fax 205-922-9255; Elec Mail: @dynamics.com. (pgic)
Pres Marcus J Bendickson PhD; *Operations Mgr* Bob O Wilson; *Div Mgr* Herbert M Barnard; *Personnel Dir & Safety Officer* Donna E Brewington; *Chief Scientist* Mervin C Budge PhD
Professional Staff: 215 (Doctorates: 17)—Computer science, electrical engineering, law, mathematics, mechanical engineering, medical physiology, systems analysis. Technicians & Auxiliaries: 70
Fields of R&D: Applied research in the fields of total weapons system design and development as well as communications and control systems analysis; radar, optics, sensor design, mathematical analysis, data processing and software development

DYNEX TECHNOLOGIES
 See Thermo Electron Corporation

D352 DYNISCO, INC, 4 Commercial St, Sharon, MA 02067. Tel: 617-784-8400; Fax 617-784-6139.
Pres Richard Paolino

.1 **-Kayeness, Inc**, Suite 101, 115 Thousand Oaks Blvd, PO Box 709, Morgantown, PA 15543. Tel: 610-286-7555; Fax 610-286-9396. (i)
Pres Rich Pavero; *Sr R&D Engineer* Gregory Wasno
Professional Staff: 3 (Doctorates: 1)—Automation, extrusion plastics, mechanical engineering, plastics, physical testing. Technicians & Auxiliaries: 5
Fields of R&D: Product-oriented research in plastic polymer processing and processes, mechanical devices for future products and processes

D353 DYNO NOBEL (Subsidiary of Dyno Industrier AS, Oslo, Norway), Cross Roads Tower, 11th Floor, Salt Lake City, UT 84144. Tel: 801-364-4800; Telex: 38-8353; Cable: IRECO SLC; Fax 801-328-6452.
VPres Technical Admin Robert A Bingham; *Dir Research* Dr Walter B Sudweeks
Professional Staff: 21 (Doctorates: 6)—Chemistry. Technicians & Auxiliaries: 7
Fields of R&D: Industrial explosives

1 --Dyno-Nobel, Inc., Ulster Ave, Port Ewen, NY 12466. Tel: 914-338-2144; Fax 914-338-3566.
Plant Mgr Walter Rizzi; *Technical Supt* Bill I Cote
Professional Staff: 9. Technicians & Auxiliaries: 7
Fields of R&D: Product-oriented research in initiation of pyrotechnics and solid explosives, reaction rates of solid state oxidation reduction

2 --Dyno-Nobel, 1320 Guliffa Dr, Donora, PA 15033. Tel: 412-379-8100; Fax 412-379-4770.
Plant Mgr Steven Burgin
Professional Staff: 1 (Doctorates: 1)—Chemistry. Technicians & Auxiliaries: 1
Fields of R&D: Product and process improvements for ammonia oxidation and prilled ammonium nitrate

D354 DYSON-KISSNER-MORAN CORP., 565 Fifth Ave, New York, NY 10017. Tel: 212-661-4600; Fax 212-986-2268.
Chmn, Chief Exec Officer & Pres Robert R Dyson

1 --Kearney-National, Inc., 108 Corporate Park Dr, White Plains, NY 10604. Tel: 914-694-6700; Fax 914-694-6513.
Chief Exec Officer Joseph L Aurichio
Fields of R&D: Product-oriented research in electric and electronic components; electric power distribution products

2 --Wabash Magnetics, 1375 Swan St, Huntington, IN 46750-0829. Tel: 219-356-8300; Fax 219-356-9464.
Chief Exec Officer C J Gallagher

3 ---Spectrol Electronics, 4051 Greystone Dr, Ontario, CA 91761. Tel: 909-923-3313; Fax 909-923-3503.
Pres Frank Echevarria; *Engineering Mgr* Don Alman; *Dir Engineering* Dan Sparks
Professional Staff: 11. Technicians & Auxiliaries: 6
Fields of R&D: Applied precision and trimming potentiometers, rotary switches, turns-counting dials, electromechanical components and automotive sensors

E

E1 EA ENGINEERING, SCIENCE & TECHNOLOGY, INC.* (c)
 11019 McCormick Rd, Cockeysville, MD 21031. Tel: 410-584-7000; Fax 410-527-1068.

Chmn, Chief Exec Officer & Pres Loren D Jensen; *Sr Toxicologist* James J Gift PhD; *Sr Environmental Scientist* J Emil Morhardt PhD; *Sr Environmental Scientist* Sylvia S Morhardt PhD; *Environmental Engineer* J H Zarzycki PE; *Dir EA Labs* Reza Karimi PhD
Professional Staff: 400 (Doctorates: 48)—Air sciences and planning, aquatic ecology, biology, civil engineering, energy, engineering, environmental engineering, fuels, health physics, biostatistics, environmental chemistry, environmental toxicology, toxic and hazardous materials control, geology and hydrogeology, geophysics, information systems, terrestrial ecology. Technicians & Auxiliaries: 300
Fields of R&D: Applied research and development for state-of-the-art methodology for environmental toxicology, environmental chemistry, and multi-discipline environment impact assessment; development of methodology for analyzing the effects of perturbations (toxic substance, hazardous materials, thermal, entrainment and impingement) through multi-medium risk assessments, environmental engineering, toxic and hazardous materials control.
 Regional Offices: Newburgh, NY; Deerfield, IL; San Francisco, CA; Lincoln, NE; Seattle, WA; Dallas, TX; Charlotte, NC; N Palm Beach, FL; Atlanta, GA; Washington, DC; Los Angeles, CA; Anchorage, AK; Fairbanks, AK; Honolulu, HI; Berkeley Hts, NJ; New Castle, DE; Colorado Springs, CO; San Antonio, TX; Sacramento, CA

E2 EAGER & ASSOCIATES, 3500 NW Glenridge Pl, Corvallis, OR 97330. Tel: 541-752-9651.

Chief Exec Officer & Pres Walter J Eager; *Project Assoc* Dr Francis Liu
Professional Staff: 4 (Doctorates: 2)—Oceanography, resource engineering, computer science. Technicians & Auxiliaries: 2
Fields of R&D: Applied and product-oriented research on manufacturing, resource extraction, and ocean structures and equipment

E3 EAGLE MAGNETIC COMPANY, INC., 7417 Crawfordville Rd, Indianapolis, IN 46214. Tel: 317-297-1030; Fax 317-299-1323.

Pres & Chief Research Exec John L Coddington; *Dir Engineering & Manufacturing* Ray L DeGregorio
Professional Staff: 4 (Doctorates: 1)—Custom designs, EMC magnetic fields, EMI, ferromagnetic materials. Technicians & Auxiliaries: 5
Fields of R&D: Problem solving and basic research on EMI magnetic field effects on sensitive electronic devices like CRT, CRT/Fiberoptics, magnetic heads; solutions include interfering source shields, blocking and envelope types

E4 EAGLE-PICHER INDUSTRIES, INC., 580 Walnut, PO Box 779, Cincinnati, OH 45201. Tel: 513-721-7010; Fax 513-721-2341.
Chmn & Chief Exec Officer Thomas E Petry; *Pres & Chief Operating Officer* Andries Ruijsseenaars

1 --Technologies Division, C & Porter St, PO Box 47, Joplin, MO 64802. Tel: 417-623-8000; Fax 417-623-3818.
Pres Bill Long; *VPres Chemicals Dept* Don Leggett; *QC Mgr* Cheryl McGee
Professional Staff: 3 (Doctorates: 1)—Chemical engineering, chemistry. Technicians & Auxiliaries: 4
Fields of R&D: Applied research in process engineering, inorganic pigments, hydro and pyro processing, coatings and elastomers

2 --Commercial Products, PO Box 130, Seneca, MO 64865. Tel: 417-776-2256; Fax 417-776-2257.
VPres & Gen Mgr Mark Jost; *Plant Mgr* Joe Grizzle; *Research Assoc* Gonzalo Rey
Professional Staff: 4. Technicians & Auxiliaries: 4
Fields of R&D: Special purpose batteries

3 --Environmental Science & Technology, 200 B J Tunnell, Miami, OK 74354. Tel: 918-540-1507; WATS: 800-331-3144; Fax 918-540-1659, 918-542-3223.

Chief Operating Officer William E Long
Professional Staff: 12 (Doctorates: 2). Technicians & Auxiliaries: 200
Fields of R&D: Product-oriented research in full service analytical lab servicing high purity materials, environmental and nuclear market; full line of clean sample containers for environmental testing

4 --Michigan Automotive Research Corporation, 1254 N Main, PO Box 7209, Ann Arbor, MI 48107. Tel: 313-995-2544; Fax 313-995-9301.

Pres Michael J Boerma
Fields of R&D: Basic and product-oriented research in automotive testing and emission testing

5 --Wolverine Gasket Division, 2638 Princess, Inkster, MI 48141. Tel: 313-562-6400; TWX: 810-221-5124; Fax 313-562-8248.

Pres Dennis K Weber; *VPres Technology* Dr Ayaz Sheikh
Professional Staff: 17 (Doctorates: 2)—Paper, polymer chemistry. Technicians & Auxiliaries: 16
Fields of R&D: Applied polymer composite sealing devices, gaskets, sound suppressors, laminates and noise reduction systems, primarily for the automotive industry

E5 EAGLE POINT SOFTWARE CORP., 4131 Westmark Dr, Dubuque, IA 52002. Tel: 319-556-8392; Fax 319-356-5321.

Chief Exec Officer & Pres Rod Blum
Fields of R&D: Product-oriented research in developing software for civil engineering, surveying construction and landscaping

E6 EAGLE TELEPHONICS, INC., Suite 203, 3880 Veterans' Memorial Hwy, Bohemia, NY 11716. Tel: 516-471-3600.

Chief Exec Officer Rick Riccoboni
Fields of R&D: Product-oriented research and development in the field of communications

EAGLE TRAFFIC CONTROL SYSTEMS

See Siemens Automotive Corporation

E7 EARMARK, INC., 1125 Dixwell Ave, Hamden, CT 06514. Tel: 203-777-2130; Fax 203-777-2886.

Pres G Bloom; *Dir Engineering* R A Valley
Professional Staff: 2. Technicians & Auxiliaries: 2
Fields of R&D: Wireless audio equipment for industrial communication with hearing protection earmuffs; FM auditory training systems

E8 THE EARTHGRAINS COMPANY, 8400 Maryland Ave, Clayton, MO 63105. Tel: 314-259-7000; Fax 314-259-7284.

VPres Corporate R&D Ken A Reynolds; *Librn* Mary Butler; *Center Dir* Iris Lee; *Center Dir* Alastair Pringle; *Center Dir* Phil Davis; *Center Dir* Frank Kirner
Professional Staff: 71 (Doctorates: 18)—Analytical chemistry, biochemistry, fermentation, flavor chemistry, food science, genetics, organic chemistry, physical chemistry, plant science. Technicians & Auxiliaries: 14
Fields of R&D: Applied and product-oriented research in yeasts, biotechnology, brewing, baked goods, snacks and beer

E9 EARTHLINK NETWORK, INC., 3100 New York Dr, Pasadena, CA 91107. Tel: 626-296-2400; Fax 626-296-2470.

Chief Exec Officer Garry Betty; *VPres R&D* Richard Edmiston; *Dir Software Development* Brian Yoder
Fields of R&D: Product-oriented research and development of Internet services and support systems

E10 EARTHNET LABORATORIES, INC., 414 W California Ave, Ruston, LA 71270. Tel: 318-255-0060; WATS: 800-256-4362; Fax 318-251-5614.

Owner Robert C Smith
Professional Staff: 25 (Doctorates: 7)—Aquatic biology, biochemistry, chemical engineering, food science, microbiology, physical chemistry, toxicology. Technicians & Auxiliaries: 20
Fields of R&D: Applied research focused upon solving environmental and industrial hygiene problems associated with industry with an emphasis upon oil and mineral, chemical, petroleum refining, petrochemical, pulp and paper, forest and building products, food

service, and other heavy and light manufacturing/production industries; emphasis on groundwater, solid/hazardous waste, wastewater and air research

EARTHSAT

See Earth Satellite Corporation

- E11 EARTH SATELLITE CORPORATION**, (EarthSat), Suite 400, (pgic)
6011 Executive Blvd, Rockville, MD 20852-3804. Tel: 301-231-0660;
Telex: 124-8618; Cable: ESCO UT; Fax 301-231-5020.
Chair & Chief Exec Officer J Robert Porter Jr; *Pres & Chief Operating Officer* Leonard Jaffe; *VPres & Chief Geologist* John Everett; *VPres Program Development* Roger Mitchell; *VPres Environmental Sciences* Greg Koeln
Professional Staff: 30 (Doctorates: 5)—Environment, geology, physics. Technicians & Auxiliaries: 20
Fields of R&D: Application of aircraft and spacecraft remote sensing technology to natural resources investigations including forestry inventories, geological studies, range management, coastal studies, water pollution and wetlands mapping; computer enhancement of spacecraft remote sensing imagery; photographic processing of spacecraft and aircraft remotes

EARTH SCIENCES & RESOURCES INSTITUTE

See University of South Carolina at Columbia

- E12 EARTH TECH**, Suite 5000, 100 W Broadway, Long Beach, CA (p)
90802. Tel: 562-495-4449; Fax 562-426-0666.
Chief Exec Officer & Pres Diane C Creel; *Chief Engineer* Chuck Comstock
Fields of R&D: Waste management and engineering; environmental engineering and geotechnical engineering; environmental sciences; environmental engineering; air quality; hazardous waste; engineering and remediation; facilities engineering; infrastructure services and contract operations; geotechnical laboratories

EASTERN ASSOCIATED COAL CORPORATION

See Peabody Holdings Company

- E13 EASTERN COLOR & CHEMICAL CO**, 35 Livingston St, PO (pc)
Box 6161, Providence, RI 02904. Tel: 401-331-9000; Fax 401-331-2155.
Pres & Recruiting Contact Barry S Shepard; *VPres & Chemical Dir* Truman Clary; *Asst Chemical Dir* Fred Savell; *Lab Mgr* Bart Latkowski
Professional Staff: 6. Technicians & Auxiliaries: 8
Fields of R&D: Textile chemistry, flame retardants, dye auxiliaries, pigments, inks and specialty coatings and chemicals for the textile industry

- .1 -Chemical Coatings Corp**, 35 Livingston St, PO Box 6161, (i)
Providence, RI 02904. Tel: 401-331-9000; Fax 401-331-2155.
Chief Operating Exec Barry S Shepard; *Chemical Dir* Truman Clary; *Chemist* Bart Latkowski; *Technical Mgr* Fred Savell
Professional Staff: 3 (Doctorates: 1)—Analytical chemistry. Technicians & Auxiliaries: 3
Fields of R&D: Textiles, coatings and industrial chemicals
- .2 -Pigment Division**, PO Box 6161, Providence, RI 02940. Tel: (p)
401-331-9000; Fax 401-331-2155.
Pres B S Shepard; *Technical Dir* William Cavdoso
Professional Staff: 6. Technicians & Auxiliaries: 8
Fields of R&D: Chemicals and pigments for the textile industry

- E14 THE EASTERN COMPANY**, 112 Bridge St, PO Box 460, (p)
Naugatuck, CT 06770. Tel: 203-729-2255; Fax 203-723-8653.
Chief Exec Officer Stedman G Sweet
Professional Staff: 6. Technicians & Auxiliaries: 10

- .1 -Eberhard Manufacturing Co Division**, 21944 Drake Rd, (i)
Strongsville, OH 44136. Tel: 216-238-9720; Fax 216-572-2732.
Chief Exec Officer & Pres Frank Breker
Professional Staff: 1
Fields of R&D: Basic, applied and product-oriented research on vehicle, industrial and container hardware

- E15 EASTERN ENVIRONMENT SERVICES**, Rte 309 N, Drums, (p)
PA 18222-9804. Tel: 717-788-7020; Fax 717-788-3257.
Chief Exec Officer William Skuba
Fields of R&D: Hazardous waste management

- E16 EASTERN LABORATORY SERVICE**, 517 N George St, (pgc)
York, PA 17404. Tel: 717-846-4953; Fax 717-846-4986.
Pres K G Rao PhD
Professional Staff: 5 (Doctorates: 2)—Biochemistry, chemistry. Technicians & Auxiliaries: 1
Fields of R&D: Analytical services, research and consulting involving agriculture, food, feed, water, sewage and industrial waste

- E17 EASTERN MICHIGAN UNIVERSITY**, 430 W Forest Ave, (p)
Ypsilanti, MI 48197. Tel: 313-487-1849; Fax 313-487-8755.
Pres Dr William E Shelton; *Dir Coatings Research Institute* Dr John L Massingill Jr

- .1 -College of Technology**, 122 Sill Hall, Ypsilanti, MI 48197. Tel: 313-487-1161.
Dept Head Paul Kuwik

- .2 --Coatings Research Institute**, 430 W Forest Ave, Ypsilanti, MI (gic)
48197. Tel: 313-487-2203; Fax 313-483-0085; Elec Mail: John.Massingill@emich.edu.
Dir Dr John L Massingill Jr; *Professor Emeritus* Dr Taki Anagnostou; *Professor & Research Assoc* Dr Frank Jones; *Professor & Research Assoc* Dr Jim Woo; *Professor & Research Assoc* Dr Jamil Baghdachi; *Adjunct Professor* Mark Hedstrom; *Adjunct Professor* Paul Ziemer
Professional Staff: 16 (Doctorates: 6)—Coatings, organic, polymers. Technicians & Auxiliaries: 10
R&D Expen: \$1,000,000
Fields of R&D: Basic and applied research on coatings particularly on problem solving for industry; extensive instrumentation in support of coatings and polymers research

EASTERN TECHNOLOGIES LTD

Now C Systems

- E18 EASTMAN CHEMICAL COMPANY**, PO Box 1972, (p)
Kingsport, TN 37662. Tel: 423-229-2000; Cable: TEN EASTMAN; Fax 423-229-1256.

VPres R&D J D Holmes
Professional Staff: 1400 (Doctorates: 250)—Chemical engineering, chemistry, engineering mechanics, mathematics, mechanical engineering, physics. Technicians & Auxiliaries: 650
Fields of R&D: Pioneering and exploratory, fundamental and applied research in organic chemistry, catalysis, high pressure, inks, filter products, stabilization photographic chemicals, polymers, cellulose esters, performance plastics, textile chemistry, fibers, chemical physics, physical and analytical chemistry, mechanical engineering, unit operations, design data, process design, powder coatings

- .1 -Texas Eastman Division-Research & Development Laboratory**, (p)
Hwy 149, Box 7444, Longview, TX 75607. Tel: 903-237-5000; Fax 903-237-5371.
Pres Garland S Williamson; *Dir R&D* Robert R Schmidt; *Dir Professional Employment* R N Grace
Professional Staff: 91 (Doctorates: 43)—Chemical engineering, chemistry. Technicians & Auxiliaries: 48
Fields of R&D: Research and manufacture chemicals - photography, film development

- E19 EASTMAN DENTAL CENTER**, 625 Elmwood Ave, (pgic)
Rochester, NY 14620. Tel: 716-275-5001; Fax 716-244-8772, 716-244-8705.

Dir Ronald J Billings; *Librn* June Glaser; *Pub Relations & Development* Lisa Farrell
Professional Staff: 22 (Doctorates: 25)—Biochemistry, biostatistics, cardiology, dentistry, epidemiology, microbiology, oral biology, orthodontics, periodontology. Technicians & Auxiliaries: 25
Fields of R&D: Clinical trials of preventive and therapeutic agents, remineralization of tooth structure, trace elements, cariogenicity of foods, experimental gingivitis, microbiology of dental plaque, dental implants, dental sealants, treatment of periodontal disease, temporomandibular joint disease

- .1 -Office of Research Administration**, 625 Elmwood Ave, (gic)
Rochester, NY 14620. Tel: 716-275-5096; Elec Mail: dzero@edc.rochester.edu.
Chief Operating Officer Dr Ronald Billings; *Research Dir* Dr Domenick Zero; *Librn* June Glaser; *Recruiting Contact* Judy Katilaz; *Professor* Ross Tallents; *Professor* Jack Caton; *Asst Professor* Carol Shields; *Asst Professor* S A Mundorff; *Asst Professor* Roxanne Lowenguth; *Asst Professor* Jean Fu; *Asst Professor* Mark Moss; *Asst Professor* John Punzie; *Assoc Professor* Tim Blieden; *Asst Professor* Andre Mol
Professional Staff: 30 (Doctorates: 10)—Biochemistry, dental imaging, dentistry, epidemiology, immunology, microbiology. Technicians & Auxiliaries: 20
Fields of R&D: Cariogenicity of foods, animal experimentation, trace elements, biochemistry, dental decay, dental microbiology; enamel apatites, remineralization, physical chemistry, biochemistry, fluoride chemistry; intra-oral studies; lasers and dentistry; guided tissue regeneration of the periodontum

- .2 -Eastman Dental Center Research**, 625 Elmwood Ave, (pgic)
Rochester, NY 14620. Tel: 716-275-5051; Fax 716-244-8772; Elec Mail: markmoss@ed1.edc.edu.
Dir Ronald J Billings MSd; *Assoc Dir Research* Domenick T Zero MS; *Librn* June Glaser; *Dir Human Resources* Judy Katilaz; *Epidemiologist* Dr Mark Moss
Professional Staff: 16 (Doctorates: 9)—Biochemistry, dental surgery, epidemiology, immunology, oral pathology, oral radiology. Technicians & Auxiliaries: 30
Fields of R&D: Clinical trials, epidemiology, biometrics; evaluation of dental and third party programs; economics of dental care; dental imaging; dental caries; oral health

- .3 -General Dentistry**, 625 Elmwood Ave, Rochester, NY 14620. (pgic)
Tel: 716-275-5087; Fax 716-244-8772.
Program Dir Dr Hans Malmstrom
Professional Staff: 2. Technicians & Auxiliaries: 2
Fields of R&D: Dental equipment evaluation, clinical trials, behavioral science in dentistry, survey design

- .4 -Periodontology**, 625 Elmwood Ave, Rochester, NY 14620. Tel: (pgic)
716-275-5046; Fax 716-244-8772.
Program Dir Dr Jack Caton
Professional Staff: 8. Technicians & Auxiliaries: 3
Fields of R&D: Periodontal disease, dental histology, oral medicine, oral biology; experimental pathology; ultrastructure

- .5 -Prosthodontic Research**, 625 Elmwood Ave, Rochester, NY (pgic)
14620. Tel: 716-275-5051; Fax 716-244-8772.
Program Dir Dr G N Graser; *Clinical Instructor* Dr C M Oster
Professional Staff: 11 (Doctorates: 6)—Dental materials, implantology, prosthodontics. Technicians & Auxiliaries: 5
Fields of R&D: Applied and product oriented research in prosthodontic materials, including metals, porcelains, acrylic resins; impression materials including silicones, thiokol rubbers, polyethers; implants; denture cleansers; denture liners; denture pain relievers; denture attachments
- E20 EASTMAN KODAK COMPANY**, 343 State St, Rochester, NY 14650. Tel: 716-724-4000; Fax 716-477-1498.
Chief Operating Officer George M C Fisher; *Chief Research Officer* James W Meyer; *Librn* Marcia McDugle; *Recruiting Contact* Dr Jim Pearson PhD
Professional Staff: (Doctorates: 9)—Chemical engineering, chemistry, computer science, electrical engineering, environmental engineering, materials science, mathematics, mechanical engineering, physics
- .1 -Kodak Equipment Manufacturing Division**, 901 Elmgrove Rd, Rochester, NY 14653. Tel: 716-726-2276. (pi)
VPres & Gen Mgr Equipment Manufacturing F D Zafino
Professional Staff: 60. Technicians & Auxiliaries: 20
Fields of R&D: Applied research in physics and engineering to establish experimental and analytical foundations for new and improved processes and electro, photo-optical, and mechanical products; specialties include math-modeling and analysis, measurement, surface and material physics, electronics applications and optical and mechanisms developments
- .2 -Kodak R&D**, Bldg 83, 1999 Lake Ave, 7th Floor, Rochester, NY 14650-2210. Tel: 716-722-0346; Fax 716-477-1498. (p)
Sr VPres, Chief Technical Officer & Imaging Dir Dr James W Meyer
Professional Staff: 6500 (Doctorates: 586). Technicians & Auxiliaries: 2000
Fields of R&D: Applied research and development on photographic film, plates, paper and photographic chemicals, including new product development, product improvement and manufacturing process improvement; electronic and digital research and development of systems to capture, process, store and display electronic images;
- .3 -Scientific Imaging Systems**, 4 Science Park, New Haven, CT (pc)
06511-1986. Tel: 203-786-5600; WATS: 800-225-5352; Fax 203-786-5694.
Gen Mgr Linda Jagusiak; *Dir R&D* Dr John Hooper
Fields of R&D: Product-oriented research for the enhancement of biotechnology
- E21 EAST PACIFIC CHEMICAL CO**, 6323 Fifth Ave NE, Seattle, WA 98115. Tel: 206-523-0168. (pc)
Proprietor & Chief Exec Officer Charles W Turner
Professional Staff: 1 (Doctorates: 3)—Analytical chemistry, inorganic chemistry, geochemistry
Fields of R&D: Chemical analysis of rocks, minerals and water; isolation and characterization of new elements; investigation of properties of new elements and their compounds and developing uses for them
- E22 EATON CORPORATION**, Eaton Ctr, 1111 Superior Ave, Cleveland, OH 44114-2584. Tel: 216-523-5000; Telex: 687-3223; TWX: 810-421-8664; Cable: EATON CORP CLV; Fax 216-479-7014.
Chmn & Chief Exec Officer Stephen R Hardis; *Pres & Chief Operating Officer* Alexander M Cutler; *VPres Technical Management* Stanley V Jaskolski; *VPres Corporate Affairs* John W Hushen
- .1 -Corporate Research & Development Detroit Center**, 26201 Northwestern Hwy, PO Box 766, Southfield, MI 48037-0766. Tel: 248-354-2700; Cable: EATON SFLD; Fax 248-354-2739. (pgic)
Human Resources Mgr V A Lutz
Professional Staff: 130 (Doctorates: 5)—Analytical engineering, electrical engineering, electronics engineering, materials engineering, mechanical engineering. Technicians & Auxiliaries: 135
Fields of R&D: Applied research and development in the transportation, agricultural, automotive, industrial power transmission, fluid power, electronic, electromechanical and mechanical, controls and materials processing industries
- .2 -Commercial Controls Division**, 2300 Northwood Dr, Salisbury, MD 21801. Tel: 410-546-9778; Fax 410-546-9676. (p)
Gen Mgr John Gilbert
- .3 -Eaton Corp Commercial Controls Division, Heinemann Products**, 2300 Northwood Dr, Salisbury, MD 21801. Tel: 410-546-9778; Fax 410-546-9676. (p)
Gen Mgr John Gilbert
Fields of R&D: Hydraulic-magnetic circuit protectors and miniature circuit breakers
- .4 -Cutler Hammer-Oldsmar**, 110 Douglas Rd E, PO Box 6030, Oldsmar, FL 34677. Tel: 813-855-4621; Telex: 89-8354; Fax 813-852-6527. (i)
Business Unit Mgr Richard Toye; *Mgr Solid State Motor Control Marketing* Chris Radley; *Mgr Engineering* Jim Sember
Professional Staff: 7. Technicians & Auxiliaries: 9
Fields of R&D: Power factor control systems and equipment; solid state motor controls; adjustable frequency controllers
- .5 -Hydraulic Division**, 3401 E Fourth St, PO Box 1028, Hutchinson, KS 67504-1028. Tel: 316-663-5751; Fax 316-665-4162. (i)
Plant Mgr Chief Davidson; *Mgr Personnel* Evan Arrowsmith
Professional Staff: 8. Technicians & Auxiliaries: 22
Fields of R&D: Hydraulic systems and components
- .6 -Manufacturing Technologies Center**, 32500 Chardon Rd, Willoughby Hills, OH 44092. Tel: 216-523-5000; Cable: EATONCORP CLV; Fax 216-479-7014. (p)
Mgr Human Resources Karen Currie; *VPres Manufacturing Technologies* William Muir
Professional Staff: 46 (Doctorates: 1)—Energy engineering, environmental engineering, facilities planning engineering, industrial engineering, manufacturing development engineering, manufacturing engineering, manufacturing systems engineering, materials engineering, mechanical engineering, plant engineering. Technicians & Auxiliaries: 64
Fields of R&D: Research in manufacturing engineering, with emphasis on materials and processing development, studies on methods, materials handling, work simplification and measurement, control and plant facilities and equipment; automation engineering, including design and fabrication of high speed automated machinery; production planning, including material and inventory control
- .7 --Corporate Research & Development-Milwaukee Center**, 4201 N 27th St, Milwaukee, WI 53216. Tel: 414-449-6000; Telex: 26716; TWX: 910-262-3089; Cable: FASCIMILE; Fax 414-449-6221. (p)
VPres Technical Management Stanley V Jaskolski; *Personnel Mgr* Joel Wenger; *Exec Mgr Technology Development* Glen Allgaier
Professional Staff: 90 (Doctorates: 11)—Chemical engineering, electrical engineering, electronics engineering, mechanical engineering, metallurgical engineering. Technicians & Auxiliaries: 50
Fields of R&D: Research, design, development, test evaluation and pilot plant production of electrical and electronic controls; applied research in magnetics, electrical contacts, semiconductor circuit applications, materials and structures and electromagnetic theory; chemistry pointed generally to areas of insulators, insulation systems and finishes; applied research in manufacturing processes, industrial metallurgy, welding, plastic and metal finishes
- .8 ---Cutler Hammer, Inc**, 4201 N 27th St, PO Box 1128, Milwaukee, WI 53216. Tel: 414-449-6000; Fax 414-449-6221. (p)
Gen Mgr David Adams
Professional Staff: Technicians & Auxiliaries: 5
Fields of R&D: Electrical short circuits; testing and analysis of high power electrical equipment
- E23 EBAA IRON, INC**, County Rd 442, FM 570 S, Eastland, TX 76448. Tel: 254-629-1737; Fax 254-629-2910. (p)
Chmn & Pres Earl C Bradley; *Exec VPres & Secy* Billye B Bradley; *VPres Foundries* Earl Bullock; *Chief Engineer* Dennis Shumard
Fields of R&D: Product-oriented research in performance of underground pipes and pipe lines
- E24 EBERHARD ENGINEERING, P C**, 129 Oser Ave, Hauppauge, NY 11788-3806. Tel: 516-436-5800; Fax 516-436-5805. (gi)
Pres Diane Eberhard
Fields of R&D: Developer of computer aided drafting and design software and systems
- E25 EBON RESEARCH SYSTEMS,*** 1173 Spring Centre South Blvd, Altamonte Springs, FL 32714. Tel: 407-682-1511. (gic)
Pres Dr Florence J Hicks-Alexander
Fields of R&D: Technical assistance, data analysis, data entry, impact evaluations and needs assessments in the human needs area and research regarding social and health problems; environmental sciences, library sciences; safety engineering; lab animal husbandry; messenger services and translation interpretation services
- E26 EBSCO INDUSTRIES**, 5724 Hwy 280 E, Birmingham, AL 35242. Tel: 205-991-6600; Fax 205-991-1479. (p)
Pres Jim Stephens
- .1 -Vitronic**, Suite 200, 969 Executive Pkwy, Saint Louis, MO 63141. Tel: 314-434-9222; Fax 314-434-8953. (p)
Operations Mgr Thomas Miller
Fields of R&D: Product-oriented design and manufacture of vinyl ad specialties
- E27 EBTEC CORP** (Subsidiary of TI Group, London, England), 120 Shoemaker Lane, PO Box 465, Agawam, MA 01001. Tel: 413-786-0393; Fax 413-789-2851. (i)
Pres John Leveille
Professional Staff: 2
Fields of R&D: High energy beam (laser and electron beam) technology for industrial welding, cutting, and drilling of metals and non-metals
- E28 ECC INTERNATIONAL CORP**, 175 Strafford Ave, Wayne, PA 19087. Tel: 610-687-2600; Fax 610-254-9268. (g)
Chief Exec Officer & Pres George W Murphy; *VPres Marketing* Patrick Donohue
Fields of R&D: Applied and product-oriented research in enhancement of computer products
- E29 ECC INTERNATIONAL, INC-AMERICAN DIVISION** (Subsidiary of ECC International, St Austell, England), Suite 300, 100 Mansell Ct E, Roswell, GA 30076. Tel: 770-594-0660; Fax 770-645-3384. (p)
Pres Dennis Rediker

- .1 -Calcium Products Division**, PO Box 330, Sylacauga, AL 35150. (p)
Tel: 205-249-4901; Fax 205-208-4600.
Gen Mgr Ray Etheridge; *Technical Mgr* Paul Prescott
Fields of R&D: Sealouts; adhesives; plastics and polymers
- .2 -ECC International**, PO Box 471, Sandersville, GA 31082. Tel: (i)
912-552-6136; Fax 912-553-5444.
VPres Technology Dr Philip Jones; *Quality Assurance Mgr* Dr Philip M Prichard; *Analytical Mgr* Dr Bob Pruett; *Ions Mgr* Dr Tony Lyons; *Process & Development Mgr* Randy Smith
Fields of R&D: Process kaolin for development in paper production
- .3 -ECC International**, 380 Smyrna Church Rd, Sandersville, GA (p)
31082. Tel: 912-552-2553; Fax 912-553-5797.
Plant Mgr Chris Boyd
Professional Staff: 3
Fields of R&D: Basic and applied research on clay mineral surface chemistry and clay-organic reactions
- E30 ECCO CONSULTING, INC**, 200 Fleet St N, 5th Floor, (ic)
Pittsburgh, PA 15220. Tel: 937-937-3226; Fax 937-928-8218.
Pres Joseph C Ott
Fields of R&D: Research in custom software and turnkey systems on mini computers
- E31 ECHELON CORPORATION**, 4015 Miranda Ave, Palo Alto, (pg)
CA 94304. Tel: 650-855-7400; Fax 650-856-6153.
Chief Exec Officer & Pres M Kenneth Oshman; *VPres & Chief Technology Officer* Robert Dolin; *VPres Engineering* Jim Kasson
Fields of R&D: Applied and product-oriented research in hardware and software components and solutions for OEM's and integrated systems
- E32 ECHLIN, INC**, 100 Double Beach Rd, Branford, CT 06405.
Tel: 203-481-5751; Fax 203-488-0370.
Chmn Bd, Chief Exec Officer & Pres Larry McCurdy
- .1 -ACC Electronics Company**, 1300 W Oak, PO Box 788, (p)
Independence, KS 67301. Tel: 316-331-1000.
Gen Mgr Darrill Unruh; *Engineering Dir* Jerry Alexander; *Chief Manufacturing Engineer* Leon Allen
Fields of R&D: Product-oriented research in thick film and automobile electronic controls manufacturing
- .2 -Ace Electric Co, Inc**, Hwy 69 S, Columbus, KS 66725. Tel: (i)
316-429-1000; Fax 316-429-1003.
Pres Dennis Desmond
Fields of R&D: Product-oriented research in parts for automotive rebuilders
- .3 -Continental Hose**, 500 Raybestos Dr, Upper Sandusky, OH (i)
43351-9663. Tel: 419-294-3827; Fax 419-294-3250.
Div Mgr Lewie Ekleberry
Fields of R&D: Product-oriented research in manufacturing hydraulic brake line hose and power steering hose
- .4 -Sprague Devices, Inc**, 107 Eastwood Rd, Michigan City, IN (p)
46360. Tel: 219-872-7295; Fax 219-879-2321.
Pres James Davis
Fields of R&D: Windshield wiper/washer controls and motors (air pressure and electric)
- ECHO WASTE TECHNOLOGY**
See RPC, Inc
- E33 ECKENFELDER, INC,*** 227 French Landing Dr, Nashville, (pgic)
TN 37228. Tel: 615-255-2288; Fax 615-256-8332.
Chmn & Pres James H Clarke PhD; *Div Dir Remedial Technologies Development* Ann N Clarke PhD; *Librn* Ted Bugg; *Asst Technical Dir* Kenton H Oma PE; *Environmental Scientist* Maria M Megehee; *Technical Dir Bioremediation* Robert D Norris PhD
Professional Staff: Technicians & Auxiliaries: 30
Fields of R&D: Applied research in design, development and testing of innovative remedial technologies for the treatment of contaminated environmental media--soil, surface water, groundwater, air and materials of construction
- E34 ECKY ENTERPRISES**, 4820 Twin Valley Dr, Austin, TX (c)
78731. Tel: 512-450-1958; Fax 512-450-1958; Elec Mail: ecky-enterprises@hotmail.com.
Chief Operating Officer Eric K Y Chan PhD
Professional Staff: 1 (Doctorates: 1)—Digital signal processing, image processing
Fields of R&D: Internet multimedia research and development with focus on digital signal and image processing algorithm development
- E35 ECLIPSE, INC**, 1665 Elmwood Rd, Rockford, IL 61103. Tel:
815-877-3031; Fax 815-877-2656.
Pres Douglas Perks
- .1 -Eclipse Combustion Division**, 1665 Elmwood Rd, Rockford, IL (pi)
61103. Tel: 815-877-3031; Fax 815-877-2656.
Pres Jim White; *VPres Product Development* David Collier; *Product Development* Lyle Spielman
Professional Staff: 2. Technicians & Auxiliaries: 6
Fields of R&D: Applied research on industrial combustion devices, valves and fittings
- E36 ECLIPSYS CORP**, 200 Ashford Ctr, Atlanta, GA 30338. Tel: (pgic)
404-847-5000; Fax 404-847-5700.
Pres & Chief Operating Officer Harvey Wilson; *VPres R&D* Brian Neitzel
Professional Staff: 100 (Doctorates: 5)—Computer engineering, industrial engineering, life science, mechanical engineering, optics. Technicians & Auxiliaries: 248
Fields of R&D: Hospital data systems; medical data systems
- .1 -Eclipsys Corp**, No 200, Bldg D, 2550 N First St, San Jose, CA (i)
95131-1015. Tel: 408-432-8400; Fax 408-943-5700.
VPres R&D Brian Neitzel
Professional Staff: 130 (Doctorates: 10)—Computer science, engineering. Technicians & Auxiliaries: 5
Fields of R&D: Health care and hospital information systems
- E37 ECLIPTEK CORPORATION**, Suite B, 3545 Cadillac Ave, (p)
Costa Mesa, CA 92626. Tel: 714-433-1200; Fax 714-433-1234; Elec Mail: ecsales@ecliptek.com.
Pres Cary Rosen; *VPres Engineering* Tom Culhane
Fields of R&D: Applied and product-oriented research in quartz crystals, crystal oscillators, TCXO's and VCXO's
- ECODYNE**
See The Marmon Group, Inc
- ECODYNE COOLING TOWER SERVICES**
Now Ceramic Cooling Tower Co
- E38 ECOGEN, INC,*** 2005 Cabot Blvd W, Langhorne, PA 19047. (p)
Tel: 215-757-1590; Fax 215-757-2956.
Chmn Jack Davies; *Chief Exec Officer & Pres* James P Reilly Jr
Fields of R&D: Applied and product-oriented research in biological insecticides
- E39 ECOLAB, INC**, Ecolab Ctr, 370 N Wabasha, Saint Paul, MN (p)
55102. Tel: 612-293-2233; Fax 612-450-9802.
Chief Exec Officer Allan L Schuman; *Chief Technical Officer & Sr VPres* William Tuominen
Professional Staff: 167 (Doctorates: 23)—Analytical-polymer chemistry, biochemistry, biology, chemical engineering, chemistry, entomology, food science, inorganic chemistry, mechanical engineering, y, textile science. Technicians & Auxiliaries: 173
Fields of R&D: Scientific cleaning; environmental sanitation; chemical specialties
- .1 -ECOLAB**, 840 Sibley Memorial Hwy, Saint Paul, MN 55118. (p)
Tel: 612-451-5600; Fax 612-451-2574.
Sr VPres Corporate Technology Dr F W Tuominen; *VPres Food & Beverage Research* Dr B R Cords; *Mgr Corporate Information Ctr* Eugene Damilenko
Professional Staff: 260 (Doctorates: 28). Technicians & Auxiliaries: 165
Fields of R&D: Development of products and systems for scientific cleaning and environmental sanitation; research and development of detergents and chemicals for cleaning in ware washing, industrial cleaning process, food plant and other specialty applications, sanitizers for environmental sanitation, such as hospital and equipment with control devices to regulate the degree of concentration being dispensed
- E40 ECOLOGY & ENVIRONMENT, INC**, Buffalo Corporate Ctr, (gic)
368 Pleasant View Dr, Lancaster, NY 14086-1397. Tel: 716-684-8060; Fax 716-684-0844; Elec Mail: nrs02@ene.com.
Pres Gerhard J Neumaier; *Librn* Terry Wolfe; *Lab Mgr* Gary E Hahn
Professional Staff: 700 (Doctorates: 50)—Biology, chemistry, computer science, ecology, environmental engineering, hazardous waste management, hazards and risk analysis, hydrogeology, limnology, toxicology, technical writing. Technicians & Auxiliaries: 100
Fields of R&D: Complete range of environmental sciences; environmental impact assessment; hazards and risk evaluation; hazardous waste management; environmental, chemical and biological analysis; hazardous waste site engineering, spill emergency response; pollution prevention and control; environmental data management; environmental forensic analysis
- .1 -Analytical Services Center**, 4493 Walden Ave, Lancaster, NY (pgic)
14086. Tel: 716-685-8080; Fax 716-685-0852.
Dir Gary E Hahn
Professional Staff: 55 (Doctorates: 3)—Air quality, asbestos, biomonitoring, earth science, inorganic chemistry, noise, organic chemistry, soil analysis, toxicology, water quality. Technicians & Auxiliaries: 38
Fields of R&D: Environmental testing and analysis of air, water, groundwater and soil samples; asbestos testing; environmental toxicology
- .2 -John Gartner & Co, Technical Marketing Consultants**, 26 (ic)
Chasewood Lane, East Amherst, NY 14051-1813. Tel: 716-688-7876; Fax 716-639-0747; Elec Mail: jngartner@aol.com.
Chief Exec Officer & Pres John Gartner
Professional Staff: 2
Fields of R&D: Marketing research and planning services for industrial companies and professional firms; consultation on all matters concerning sales and marketing for clients with products and services with high technical content
- E41 ECON, INC**, Suite 402, 711 W Bay Area Blvd, Webster, TX (gic)
77598. Tel: 281-554-7592; Fax 281-554-4481; Elec Mail: econsw@aol.com.

Pres Helene Skratt; *Exec Staff* Edwin Dupnick PhD; *Exec Staff* John P Skratt; *VPres Operations* Robert V Phillips; *VPres Resources* D'Ann Blanton

Professional Staff: 15 (Doctorates: 2)—Systems engineering. Technicians & Auxiliaries: 5

Fields of R&D: Economic policy studies, cost benefit analysis, operation research, mathematical and statistical analysis, general research and consulting services in space technology and engineering and environmental remediation

- .1 **-Southwestern Office**, Suite 402, 711 W Bay Area Blvd, (gc)
Webster, TX 77598. Tel: 281-554-7592; Fax 281-554-4481.

Dir Research Robert V Phillips

Professional Staff: 5 (Doctorates: 1)—Systems engineering. Technicians & Auxiliaries: 4

Fields of R&D: Economic policy studies, cost benefit analysis, operation research, mathematical and statistical analysis, general research and consulting services in earth sciences, oceanography, space technology and agriculture

- .2 **-Western Office**, Suite E, 2940 Union Ave, San Jose, CA (gic)
95124. Tel: 408-369-9878; Fax 408-369-0490; Elec Mail: econwest@aol.com.

Pres Helene Skratt; *Chief Cost Analyst* Charles V Hopkins

Professional Staff: 6 (Doctorates: 1)—Operations research. Technicians & Auxiliaries: 1

Fields of R&D: Economic policy studies, cost benefit analysis, operation research, mathematical and statistical analysis, general research and consulting services in earth sciences, oceanography, space technology and agriculture

- E42 **ECONOMIC & ISSUES RESEARCH, INCORPORATED**, (gic)
4637 Jamestown Ave, Baton Rouge, LA 70808. Tel: 504-927-7533; Fax 504-923-0823.

Pres Dr Eugene C McCann; *Exec VPres R&D* Roger Burford

Professional Staff: 2 (Doctorates: 2)—Computer science, economics, management, statistics. Technicians & Auxiliaries: 2

Fields of R&D: Market research and analysis, community studies, management sciences, feasibility studies, projections and forecasts, economic and statistical analysis, management information systems, behavioral and normative models, public opinion surveys and market research

- E43 **ECONOMIC CONSULTANTS ORGANIZATION, INC**, 30 (gic)
Fieldstone Dr, Grand Island, NY 14072. Tel: 716-773-1904; Fax 716-773-0961.

Pres Roy Gerard

Professional Staff: 3 (Doctorates: 2)—Economics, sociology. Technicians & Auxiliaries: 1

Fields of R&D: Applied research in demographic analysis; neighborhood commercial and housing revitalization; costs of development; environmental impact statements; housing market; industrial development; financial packaging; economic loss

- E44 **ECONOMICS & TECHNOLOGY, INC**, One Washington (gic)
Mall, Boston, MA 02108. Tel: 617-227-0900; Fax 617-227-5535.

Pres Dr Lee L Selwyn

Professional Staff: 12 (Doctorates: 2)—Economics, forensic research, information systems, management sciences, telecommunications. Technicians & Auxiliaries: 11

Fields of R&D: Economics, management and regulation of telephone and cable communications; rate structure research, preparation of expert testimony, information and tariff services

- E45 **ECONOMICS RESEARCH ASSOCIATES**, 10990 Wilshire (gic)
Blvd, Los Angeles, CA 90024. Tel: 310-477-9585; Fax 310-478-1950.

Pres Austin G Anderson

Professional Staff: 55. Technicians & Auxiliaries: 35

Fields of R&D: Feasibility studies and project planning, generally in economics and finance, with emphasis on land economics, recreational and municipal facilities; planning and urban systems planning.

Other offices in San Francisco, Calif; San Diego, Calif; Chicago, Ill; Mclean, Vir; London, England

- E46 **ECOS CORPORATION**,* 1577 New Britain Ave, Farmington, (pic)
CT 06032. Tel: 860-677-1588.

Pres & Mgr R&D Michael A Dauria; *VPres & Research Librn* Maria S Hodgeson; *Design Research Consultant* Sheila Haggerty; *Energy Consultant* James M Salisbury

Professional Staff: 5 (Doctorates: 3)—Environmental psychology, environmental structure design, human ecology, land planning, solar engineering, value engineering. Technicians & Auxiliaries: 4

Fields of R&D: Residential and commercial solar space heating, energy conservation through the optimization of thermal envelope components; environmental design research into development of positive attitudes towards energy conservation by resident; design and development of solar energy efficient, environmentally sensitive residential structures and professional office buildings; areas of concentration: design patterns; construction techniques, blending with earth electromagnetic energies; construction scrap recycling and waste management; environmental design research; effect of spatial configurations and orientations on social behavior; land planning for energy resource conservation and impact of place design on human bioelectromagnetic energies

- E47 **ECOS, INC**, 152 Commonwealth Ave, Concord, MA 01742- (pgic)
2943. Tel: 508-369-3951; Fax 508-369-2484.

Chief Exec Officer David Del Porto; *Gen Mgr* Austin Shealsley

Professional Staff: 3 (Doctorates: 1)—Biology, ecology, energy conservation. Technicians & Auxiliaries: 2

Fields of R&D: Water and energy conservation; biological applications to waste treatment

- E48 **ECOSOMETRICS, INCORPORATED**,* 4715 Cordell Ave, (gc)
Bethesda, MD 20814. Tel: 301-652-2414; Fax 301-907-8952.

Pres Jon E Burkhardt

Professional Staff: 8 (Doctorates: 1)—Econometrics, gerontology, market research, social impact studies, transportation planning. Technicians & Auxiliaries: 4

Fields of R&D: Econometric analysis of product demands; systems analysis of large scale transport systems; planning of paratransit operations and socio-economic impact statements, market research and surveys, gerontology; transportation research plans, strategic planning, ADA experts, paratransit software, intercity bus plans, short range transit plans

- E49 **ECOSYSTEMS MANAGEMENT ASSOCIATES, INC**, Suite (ic)
L, 2270 Camino Vida Roble, Carlsbad, CA 92009. Tel: 760-438-8682; Fax 760-438-8684.

Pres Patricia Zabloudil; *Project Mgr* Neil Marshall

Professional Staff: 14 (Doctorates: 7)—Biology, computer science, electronic engineering, geology, geophysics, hydrology, microbiology, oceanography, physics. Technicians & Auxiliaries: 6

Fields of R&D: Oceanographic studies; geological, geophysical and environmental assessment

- E50 **ECOTOPE, INC**,* 2812 E Madison St, Seattle, WA 98112. (pgic)
Tel: 206-322-3753; Fax 206-325-7270; Elec Mail: ecotope@eskimo.com.

Pres David Baylon; *Mgr* Shelly Borrelli; *Sr Scientist* Larry Palmiter

Professional Staff: 7. Technicians & Auxiliaries: 5

Fields of R&D: Applied and basic research in building systems computer models; energy efficient building design and analysis; ventilation and infiltration analysis

ECOWATER INDUSTRIAL SYSTEMS, INC

See The Marmon Group, Inc

- E51 **ECRI**, 5200 Butler Pike, Plymouth Meeting, PA 19462. Tel: (pgc)
610-825-6000; Fax 610-834-1275; Elec Mail: ecric@hslc.org.

Pres Joel J Nobel MD; *VPres Lab Operations & Recruiting Contact* James Keller; *VPres Planning* Jeffrey Lerner PhD; *Sr Librn* Evelyn Kuserk; *Chief Scientist* G Guy Knickerbocker PhD; *VPres Health Systems Group* Anthony Montagnolo; *Dir Forensic Engineering & Accident Investigation* Mark Bruley

Professional Staff: 98 (Doctorates: 12)—Biomedical engineering, computer science, electrical engineering, electronics engineering, health policy analysis, hospital environmental management, hospital planning, indoor air pollution, industrial engineering, instrumentation, materials engineering, mechanical engineering, medical sciences biostatistics, risk management. Technicians & Auxiliaries: 112

Fields of R&D: Applied research in biomedical engineering; medical product testing and evaluation; technology assessment; health facilities design; health economics; risk management; accident investigation; evaluation and testing of consumer and industrial products, materials, processing and services

- .1 **-ECRI Laboratories**, 5200 Butler Pike, Plymouth Meeting, PA (ic)
19462. Tel: 610-825-6000; Fax 610-834-1275; Elec Mail: ecric@hslc.org.

Pres Joel J Nobel; *Sr Librn* Evelyn Kuserk; *Sr Project Engineer* Albert L De Richmond; *Sr Project Engineer* Christian Lavanchy; *Project Engineer* Paula Kolar

Professional Staff: 70 (Doctorates: 10)—Biochemistry, electrical engineering, law, medicine, neurosciences, statistics. Technicians & Auxiliaries: 120

Fields of R&D: Basic research and testing on all types of products, processes and materials for safety, performance or cost effectiveness; services include vibration, environmental, flammability, strength, electrical characteristics & ergonomics; non-profit testing exclusive of medical products

ECUSTA RESEARCH DEPARTMENT

See P H Glatfelter Co

- E52 **EDAC TECHNOLOGIES CORP**, 1790 New Britain Ave, (pi)
Farmington, CT 06032. Tel: 860-677-2603; Fax 860-677-6316.

Chief Exec Officer & Pres Frank Moskey; *Machine Design Mgr* Bill Wiggins

Fields of R&D: Product-oriented research in the enhancement of the design and engineering and related services to aerospace industry, automated product and assembly system

- .1 **-Gros-Ite Industries**, 1790 New Britain Ave, Farmington, CT (p)
06032. Tel: 860-677-2693; Fax 860-677-7344.

Pres Frank Moskey; *Production Mgr* Mickey Achilli

Fields of R&D: Design, development, fabrication of a family of environmental test equipment and chambers; walk-in rooms for testing under conditions of altitude-temperature-humidity, temperature-humidity, altitude-temperature; equipment for testing under conditions of sand and dust, temperature and relative humidity, temperature and pressure

EDA INSTRUMENTS INC
 See Develcon Electronics Ltd

- E53 EDAW, INC**, 753 Davis St, San Francisco, CA 94111. Tel: 415-433-1484; Fax 415-788-4875. (c)

Pres Joseph Brown

Fields of R&D: Landscape architecture, environmental impact reports and assessment studies, urban design, land use planning, regional planning, site and master planning, computer mapping technologies and cartography

- .1 -EDAW, Inc**, Suite 400, 17875 VonKarman Ave, Irvine, CA 92614. Tel: 714-660-8044; Fax 714-660-1046. (gic)

VPres Dan Herman

Professional Staff: 150

Fields of R&D: Landscape architecture, environmental impact reports and assessment studies, urban design, land use planning, regional planning, site and master planning, computer mapping technologies and cartography

- .2 -EDAW, Inc**, Suite 510, 511 16th St, Denver, CO 80202. Tel: 303-595-4522; Fax 303-595-4434. (p)

VPres William Vitek

Fields of R&D: Landscape architecture, environmental impact reports and assessment studies, urban design, land use planning, regional planning, computer mapping technologies and cartography

- .3 -EDAW, Inc**, 240 E Mountain Ave, Fort Collins, CO 80524. Tel: 970-484-6073; Telex: 45-0092; Fax 970-484-8518. (pgc)

Officer In Charge William Vitek

Fields of R&D: Landscape architecture, environmental impact records and assessment studies, urban design, land use planning, regional planning, site and master planning, computer mapping technologies and cartography

- .4 -EDAW, Inc**, Suite 100, 3475 Lennox Rd, Atlanta, GA 30326. Tel: 404-365-1110; Fax 404-365-1129. (i)

Fields of R&D: Landscape architecture environmental impact reports and assessment studies, urban design, land use planning, regional planning, site and master planning, computer mapping technologies and cartography

- .5 -EDAW, Inc**, 601 Prince St, Alexandria, VA 22314. Tel: 703-836-1414; Telex: 53-0277; Fax 730-549-5869. (gic)

Pres Joseph Brown

Fields of R&D: Landscape architecture, environmental impact reports and assessment studies, urban design, land use planning, regional planning, site and master planning, computer mapping technologies and cartography

- .6 -EDAW, Inc**, Suite 601, 1505 Western Ave, Seattle, WA 98101. Tel: 206-622-1176; Fax 206-343-9809. (i)

Dir Operations Jill Sterrett

Fields of R&D: Landscape architecture, environmental impact reports and assessment studies, urban design, land use planning, regional planning, site and master planning, computer mapping technologies and cartography, graphics

EDAX INTERNATIONAL

See Philips Electronics North America Corp

- E54 EDCOR ELECTRONICS**, 7130 National Parks Hwy, Carlsbad, NM 88220. Tel: 505-887-6790; WATS: 800-854-0259; Fax 505-887-6880; Elec Mail: edcorusa.com. (pc)

Chief Exec Officer & Pres Phyllis Weston

Professional Staff: 4. Technicians & Auxiliaries: 4

Fields of R&D: Product-oriented research in audio electronics and low power; VHF electronics

- E55 EDD HELMS ELECTRIC**, (Formerly Hotelecop, Inc), 17850 NE Fifth Ave, Miami, FL 33162. Tel: 305-651-5176; Fax 305-651-7731. (p)

Pres W Edd Helms

Fields of R&D: Product-oriented research in facsimile networking and telecommunications

- E56 EDDY COMPANY**, 13590 Niabi, Apple Valley, CA 92308. Tel: 760-961-8457; Fax 760-961-8458. (p)

Chief Research Officer Wayne Rodgers

Professional Staff: 1

Fields of R&D: Product development of optical thin films; fiber optic chemical analyzers motor vehicle analytical systems

- .1 -Eddy Company**, Marketing Department, PO Box 842, Lafayette, CA 94549. Tel: 510-283-0148; Fax 510-283-8948. (pgi)

Chief Exec Officer Charles R Vogel

Professional Staff: 1. Technicians & Auxiliaries: 3

Fields of R&D: Research in optical thin film coatings

- E57 E B EDDY FOREST PRODUCTS, LTD**, 6 Booth St, Ottawa, ON K1R 6K8. Tel: 613-782-2574; Fax 613-782-2515. (p)

Pres E F Boswell; Engineering Supt Brian Overton; Environmental Supt Christine Villeneuve

Professional Staff: 2

Fields of R&D: Product-oriented research in enhancement of paper development, pulp and paper mill

- E58 EDELBROCK CORP**, 2700 California St, Torrance, CA 90503. Tel: 310-781-2222; Fax 310-320-1187. (p)

Pres & Chief Operating Officer Victor Edelbrock; Gen Mgr Jeffrey Thompson; VPres R&D Don Waite

Fields of R&D: Product-oriented research in after market high performance automotive parts

- E59 EDER ASSOCIATES CONSULTING ENGINEERS, PC**, 480 Forest Ave, Locust Valley, NY 11560. Tel: 516-671-8440; Fax 516-671-3349. (i)

Pres & Principal Leonard J Eder

Professional Staff: 85 (Doctorates: 1)—Toxicology. Technicians & Auxiliaries: 8

Fields of R&D: Applied and developmental research on systems used to control environmental pollution, especially industrial wastewater treatment, reclamation and reuse, and solid and hazardous waste management.

Offices in: Madison, Wis Ann Arbor, Mich Augusta, Ga

- E60 EDER INDUSTRIES, INC.*** 2250 W Southbranch Blvd, Oak Creek, WI 53154. Tel: 414-761-0400; Fax 414-761-0582. (ic)

Pres Richard H Marks; Dir Software R&D Ronald R Rutowski; Dir Engineering & R&D Roger W Rossmann

Professional Staff: 7 (Doctorates: 2)—Electronics, mechanical engineering. Technicians & Auxiliaries: 55

Fields of R&D: Applied research on special electronic controls, circuit cards and modules

- E61 EDGE SWEETS COMPANY.*** 2887 Three Mile Rd NW, Grand Rapids, MI 49544. Tel: 616-453-5458; Cable: SWEETSCO; Fax 616-453-6227. (pi)

Pres Dieter Misch; VPres Sales Dario Ramazzotti; VPres Engineering Ed Thompson

Professional Staff: 8 (Doctorates: 2)—Mechanical engineering, chemistry. Technicians & Auxiliaries: 6

Fields of R&D: Development of machinery to produce polyurethane foam and polyurethane elastomers; development of application technology for urethane foams and elastomers, including studies for turnkey operations

EDGETECH

See Victoreen, Inc

- E62 EDI**, One Research Dr, Westborough, MA 01581. Tel: 508-366-5151.

Pres Don McGuiness

- .1 -Crystallume**, 3506 Bassett St, Santa Clara, CA 95054-2704. Tel: 408-653-1700; Fax 408-324-2958, 408-653-1710. (pgi)

VPres John A Herb

Professional Staff: 18 (Doctorates: 10)—Biology, electrical engineering, electro chemistry, geology, materials science, physical chemistry, physics, plasma physics. Technicians & Auxiliaries: 5

Fields of R&D: Basic, applied and product-oriented research to develop CVD diamond products in thermal, mechanical, optical and electronic areas; applications and products include heat sinks, windows, membranes, radiation detectors, bearings, composites and diamond materials; research in diamond deposition processes to optimize chemistry for applications use

- E63 EDIFY CORPORATION**, 2840 San Tomas Expressway, Santa Clara, CA 95051. Tel: 408-982-2000; Fax 408-982-0777. (p)

Pres Jeffrey M Crowe; VPres Engineering Martin Lane Smith

Fields of R&D: Applied research and development of self-service software for the financial services market and human resources department of corporations

EDISON BIOTECHNOLOGY INSTITUTE

See Ohio University

- E64 EDISON INTERNATIONAL**, 2244 Walnut Grove Ave, Rosemead, CA 91770. Tel: 818-302-1212. (p)

Chief Exec Officer John E Bryson

Fields of R&D: Basic, applied and product-oriented research in electric utility

THOMAS EDISON TECHNICAL CENTER

See Cooper Industries, Inc

- E65 EDISON WELDING INSTITUTE**, 1250 Arthur Adams Dr, Columbus, OH 43221. Tel: 614-688-5000; Fax 614-486-9528. (gic)

Exec Dir Karl F Graff; Admin Dept Mgr Sherri Keckley; Information Servs Sheri Sharp; Mgr Engineering Dept Dr Robin Gordon

Professional Staff: 45 (Doctorates: 15)—Materials engineering, materials science, mechanical engineering, metallurgical engineering, metallurgy, organic chemistry, welding engineering. Technicians & Auxiliaries: 21

Fields of R&D: Research and development in all aspects of welding and joining of metals and non-metals including design, material selection, fabrication and failure investigation

EDITEK, INC

Now Medtox Diagonatic Lab

- E66 EDMARK CORP**, 6727 185th Ave NE, Redmond, WA 98052. Tel: 206-556-8400; Fax 206-556-8430. (p)

Gen Mgr Donna Stanger

Fields of R&D: Develop and publish educational software for children, ages 2-12, as well as for consumer and educational markets

EDOCO

See Tridel Enterprises Inc

- E67 EDO CORPORATION**, 14-04 111th St, College Point, NY 11356. Tel: 718-321-4000; TWX: 710-582-3023; Fax 718-321-4194. *Chmn Bd, Chief Exec Officer & Pres* Frank Fariello
Professional Staff: 72. Technicians & Auxiliaries: 72
- .1 -Acoustics Division**, 2645 S 300 West, Salt Lake City, UT 84115. Tel: 801-486-7481; Fax 801-484-3301. *Electrical Engineering Mgr* Howard P Jones; *Underwater Acoustics Physicist* David Baird
Professional Staff: 18. Technicians & Auxiliaries: 14
Fields of R&D: Basic and applied research in underwater acoustics; active noise & vibration control with piezo-actuators
- .2 -EDO Barnes Engineering**, 88 Long Hill Cross Rd, Shelton, CT 06484. Tel: 203-926-1777; Fax 203-926-1030. *Pres* Frank A Fariello; *Dir Human Resources* Bruce Henkle; *Defense & Space Systems* Ira Kaplan
Fields of R&D: Product-oriented research in infrared sensors, radiometers and microelectronic thermal testing equipment
- .3 -EDO Fiber Science**, 506 N Billy Mitchell Rd, PO Box 22540, Salt Lake City, UT 84122-0540. Tel: 801-537-1800; TWX: 910-925-4029; Fax 801-363-9554. *Gen Mgr* Mike Therson; *Dir Operations* Kent Anderson; *Engineering Mgr* Steven Rudgers
Professional Staff: 4. Technicians & Auxiliaries: 7
Fields of R&D: Fiber reinforced composite structures, aerospace applications; pollution and marine applications
- .4 -Industrial Products Division**, 2645 S 300 West, Salt Lake City, UT 84115. Tel: 801-486-7481. *Div VPres* Ira Kaplan
- .5 -Marine & Aircraft**, 14-04 111th St, College Point, NY 11356. Tel: 718-321-4000; Fax 718-939-0119. *VPres & Mgr* Ira Kaplan; *VPres Engineering & R&D* Frank Otto
Professional Staff: 80 (Doctorates: 2)—Electrical engineering, physics. Technicians & Auxiliaries: 150
Fields of R&D: Sonar; displays technology; hydrodynamics; minicomputer and microprocessor technology; signal processing; aircraft armaments
- E68 EDS CORP**, 5400 Legacy, Plano, TX 75024. Tel: 972-604-6000; Fax 972-605-6796. *Chmn & Chief Exec Officer* Lester M Alberthal; *Pres* Jeff Heller
Fields of R&D: Product-oriented research and provider of communications and computer-based services; developer of financial software
- .1 -EDS Utility Industry Associates, Inc**, Suite 800, 100 Northcreek, Atlanta, GA 30327. Tel: 404-261-5256; Fax 404-237-6307, 404-261-0037. *Pres* Bill Grabske
Professional Staff: 40 (Doctorates: 12)—Computer science, electrical engineering, mechanical engineering, operations research
Fields of R&D: Developer of software for electric and gas utilities and provider of consulting and custom programming services; provider of utility systems integration, outsources and co-sources
- E69 EDSTROM INDUSTRIES, INC**,* 819 Bakke Ave, Waterford, WI 53185. Tel: 414-534-5181; Fax 414-534-5184. *Pres & Chief Exec Officer* W E Edstrom; *Lab Products Mgr* Ed Froehlich
Professional Staff: 7. Technicians & Auxiliaries: 16
Fields of R&D: Applied research in animal care equipment; electronic control and monitoring equipment; fluid proportioning equipment
- E70 EDUCATIONAL COMMISSION FOR FOREIGN MEDICAL GRADUATES**,* University City Science Ctr, 3624 Market St, 4th Floor, Philadelphia, PA 19104. Tel: 215-386-5900; Fax 215-387-9963. *Pres* Nancy Gary MD; *VPres Operations* Marie L Shafron; *Asst VPres R&D* Miriam Friedran PhD; *Dir Planning* Magdalene Miranda
Professional Staff: 5 (Doctorates: 3)—Health care services, medical education, medicine, microbiology. Technicians & Auxiliaries: 65
Fields of R&D: Applied testing of health manpower; examination performance characteristics; qualification and distribution of physicians
- E71 EDUCATION TURNKEY SYSTEMS, INC**, 256 N Washington St, Falls Church, VA 22046. Tel: 703-536-2310; Fax 703-536-3225. *Pres* Charles L Blaschke; *Treas & Sr Research Assoc* Blair H Curry
Professional Staff: 4. Technicians & Auxiliaries: 2
Fields of R&D: Applied research in education including the cost and effectiveness of reading and math programs, individualized programs, special education and compensatory education; turnkey applications of micro-computers; market research of K-12 education market and related niche markets including literacy, JTPA, ESL and pre-school
- E72 EDWARDS ENGINEERING CORP**, 101 Alexander Ave, Pompton Plains, NJ 07444. Tel: 201-835-2800; Fax 201-835-3222. *Chmn & Pres* Richard Waldrop; *Dir R&D* Norm Watt
Professional Staff: 11
Fields of R&D: Product-oriented research in the enhancement of heating and cooling transferring equipment

EDWARDS HIGH VACUUM INTERNATIONAL

See The BOC Group, Inc

EDWARD VALVES, INC

See BTR, Inc

- E73 EFCO CORPORATION**, 1000 County Rd, Monett, MO 65708. Tel: 417-235-3193; Fax 417-235-7313. *Chief Exec Officer & Chmn* William Terry Fuldner; *Pres* Christopher T Fuldner; *VPres Engineering* Jack Appel
Fields of R&D: Product-oriented research in the enhancement of architectural aluminum windows and custom curtain walls
- E74 EFEH & ASSOCIATES**,* 10919 Sagewind Dr, Houston, TX 77089. Tel: 281-996-5031; Fax 281-996-5550. *Chmn & Chief Exec Officer* Dr Edwin B Smith Jr
Professional Staff: 3 (Doctorates: 1)—Biochemistry, chemistry, microbiology. Technicians & Auxiliaries: 5
Fields of R&D: Applied research and testing on corrosion; corrosive water and food; basic research on contract basis
- E75 EFFICIENT NETWORKS, INC**, Suite 1200, 4201 Spring Valley Rd, Dallas, TX 75244. Tel: 972-991-3884; Fax 972-991-3887. *Chief Exec Officer & Pres* Mark A Floyd; *VPres Engineering* Tricia Hosek
Fields of R&D: Applied and product-oriented research and development, manufacturing and marketing of high speed networking solutions for the endstation and embedded systems including adapters, software and management for ATM and ADSL technologies
- E76 EFI ELECTRONICS CORPORATION**, 2415 S 2300 West, Salt Lake City, UT 84119. Tel: 801-977-9009; Fax 801-977-0200. *Pres* Richard Clasen; *Chief Engineer* Perry Law
Professional Staff: 2 (Doctorates: 12)
Fields of R&D: Product-oriented research in transient suppression systems and devices
- E77 EFTC**, 244 Dundee Ave, Greeley, CO 80634. Tel: 970-353-3100; Fax 970-346-1701. *Chief Exec Officer* Augie Bruchlman; *Dir Engineering* Lloyd McConnell
- .1 -EFTC**, 9351 Grant St, Denver, CO 80229. Tel: 303-451-8200; Fax 303-451-8210. *Dir Engineering* Lloyd McConnell
Fields of R&D: Product-oriented research in process development as it relates to products manufactured for electronics OEM customers
- E78 EG&G, INC**, 45 William St, Wellesley, MA 02181. Tel: 617-237-5100; Fax 617-431-4115. *Chmn & Chief Exec Officer* John M Kucharski; *VPres Communications & Investor Relations* Deborah S Lorenz
- .1 -EG&G Amorphous Silicone**, 2175 Mission College Blvd, Santa Clara, CA 95054. Tel: 408-565-0850; Fax 408-565-0793
- .2 --EG&G Judson**, 221 Commerce Dr, Montgomeryville, PA 18936. Tel: 215-368-6900; Fax 215-362-6107. *Gen Mgr* Joseph Slawek
Fields of R&D: Product-oriented research in infrared and fiber-optic components—detectors, sensors, multi-element arrays, dewar packages and preamplifiers; application of infrared materials including germanium, indium antimonide, indium arsenide and mercury cadmium telluride, indiumgallium arsenide
- .3 --EG&G Optoelectronics Canada**, 22001 Dumberry Rd, Vaudreuil, PQ J7V 8P7. Tel: 514-424-3300; Fax 514-424-3413. *Group Exec* Paul Beech; *Gen Mgr* Paul Ron Swarbrick
Fields of R&D: Research and development of optical emitters and detectors
- .4 --EG&G Reticon**, 345 Potrero Ave, Sunnyvale, CA 94086. Tel: 408-738-4266; Fax 408-738-6979. *Gen Mgr* Chris Raanes
Professional Staff: 40 (Doctorates: 10)—Electrical engineering, physics. Technicians & Auxiliaries: 20
Fields of R&D: Manufacturer and designer of custom and standard product solid state image sensors, CCDs, photodiode arrays, platinum silicide arrays, solid state line scan and area cameras
- .5 --EG&G Vactec**, 10900 Page Blvd, Saint Louis, MO 63132. Tel: 314-423-4900; Fax 314-423-3956. *Gen Mgr* Paul Shaver
Fields of R&D: Product-oriented research in custom and commercial optoelectronic components for street light controls, television brightness controls and slide projectors; photodiodes used in smoke detectors, cameras, and medical and chemical instruments; sensing devices used in photocopiers, computer peripherals, and industrial controls
- .6 -EG&G Birtcher Industrial Products**, 4505 N Arden Dr, PO Box 5268, El Monte, CA 91734-1268. Tel: 626-442-2572; Fax 626-442-8127. *Pres* Ray Bond
Fields of R&D: Product-oriented research in printed circuit board card guides, accessory products and PCB racks and enclosures