about MDL

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Company **MDL Information Systems** ("MDL") is the recognized leader in discovery informatics for the life sciences and chemistry in industry and academia. MDL software, content, and services provide the enterprise-wide discovery informatics framework for comprehensive and successful discovery research. We are an international business headquartered in San Leandro, CA with offices worldwide. MDL Information Systems, Inc. is a wholly owned subsidiary of Elsevier Science, Inc.

Founded In 1978, as Molecular Design Limited

Employees Approximately 460 worldwide

Customers Thousands of users at more than 900 customer sites worldwide representing the chemical, pharmaceutical, agrochemical, and biotechnology industries, government and educational institutions, hospitals, and utility companies.

MDL's Life Sciences and Chemistry Solutions

Architectures for Discovery Informatics

ISIS MDL's Integrated Scientific Information System (ISIS) serves as an information management framework for scientific data. ISIS provides extensive chemical representation features and powerful capabilities for searching chemical structures, reactions, and 3D molecular models. ISIS is also an application development environment that enables organizations to deploy innovative scientific software applications, such as chemical inventory systems, electronic lab journals, and systems for managing therapeutic-level lead candidates. ISIS is used at over 800 customer sites worldwide.

Highlights

Build queries and presentation-quality graphics: ISIS/Draw is a chemically intelligent drawing package.

Access personal chemical database and corporate data: ISIS/Base serves as a client for querying and accessing corporate data sources through ISIS/Host.

Register, retrieve, display, and analyze scientific information: ISIS/Host provides integrated access to data stored on the server in relational, chemical reaction, and 2D and 3D chemical structure databases.

Integrate into Oracle8*i*: ISIS/Direct is a data cartridge that enables research organizations to search chemical data and structures inside Oracle8*i* databases.

Manage and customize globally: The ISIS/Application Development Kit offers application building blocks and custom controls for building robust applications in the ISIS environment.

Chemscape and Chime Pro

As tightly integrated members of MDL's ISIS family of products, Chemscape Server and Chime Pro provide complete access to ISIS structure and data searching from within Web browsers. The Chime Pro plug-in offers platform-independent chemical structure visualization and database searching. By using Chime Pro in conjunction with Chemscape Server, scientists can search databases accessed through corporate intranets or the Internet. In addition, Chime Pro's JavaBean component enables developers to provide chemical structure rendering and visualization in pure Java applications and applets as well as in Web pages. Developers can also build applications integrating different types of data, including chemical structures, reactions, 3D models, assay data, inventory data, and excerpts from the chemical literature.

Cheminformatics Tools

Cheshire for ISIS

An object-oriented chemical structure automation environment, Cheshire for ISIS adds sophisticated chemical representation tools for manipulating chemical structures in ISIS. Using familiar programming constructs such as objects, methods, and properties, organizations can define cheminformatics business rules that can be called by different applications to perform a variety of operations, such as chemical convention checks, chemical structure validation, and physicochemical property calculations. MDL offers two levels of Cheshire functionality: a standard edition and an advanced edition. The advanced edition includes Rgroup handling in the Cheshire scripting language, which enables organizations to build applications for advanced query design and combinatorial chemistry.

AutoNom

AutoNom (**Auto**matic **Nom**enclature) generates IUPAC chemical names directly from graphical structures created in the Beilstein structure editor or ISIS/Draw. AutoNom 2000, released in the summer of 2000, supports stereochemical descriptors for chiral centers (*R*,*S*) and double bonds (*E*,*Z*), automatically numbers atom positions on molecules, and supports CAS naming conventions for ring systems. AutoNom 2000 Add-ins for ISIS/Desktop, released in early 2001, incorporates the AutoNom naming capability directly into ISIS/Draw and ISIS/Base.

CrossFire

CrossFire is an integrated client/server application for searching the world's largest electronic collections of organic chemistry and inorganic and organometallic data: CrossFire Beilstein and CrossFire Gmelin. CrossFire Web is a new desktop interface for CrossFire Direct, the company's Internet accessible client/server system that provides access to the CrossFire Beilstein and CrossFire Gmelin databases. A combination of on-screen guidance, context-sensitive tools, and seamless functional integration brings new users quickly up to speed and enables more efficient and comprehensive database searching and evaluation of results.

Élan

Élan is an electronic laboratory notebook system that enables scientists to easily create, store, and manage experiments and data for chemical synthesis. Using familiar industry-standard applications Microsoft Word and ISIS, Élan combines the flexibility and proof-of-invention legality of paper notebooks with the robust data handling capabilities of an electronic system. Élan is a standard MDL Consulting application that can be tailored to fit a company's discovery workflow.

High-Throughput Chemistry

Central Library

This server-based system combines the data management capabilities of Oracle with MDL's unparalleled expertise in handling chemical information. Central Library supports the day-to-day activities of combinatorial chemists, allowing them to integrate commercial and corporate chemical structure databases, access reagent databases, automatically process reagents into

libraries, and register and manage libraries. Reagents or synthesized products can be accessed using ISIS/Base, ISIS for Microsoft Excel, Project Library, or Reagent Selector.

Highlights

Access integrated data: Central Library can search MDL's ISIS chemical structure databases and proprietary databases. It can also search and retrieve reagents from standard commercial databases, such as MDL's Available Chemicals Directory (ACD), or retrieve reagent lists refined in Reagent Selector.

Use combinatorial methods: Central Library supports commonly used combinatorial methods, including arrayed, spatially addressable synthesis, encoded mixture synthesis, and deconvolution.

Manage library information in Oracle: Organizations benefit from MDL's superior chemical structure representation and searching algorithms without losing Oracle's relational power. Using single or multiple databases, companies can integrate structural and assay data transparently using Central Library and Oracle tables.

Search substructures and compare libraries: Central Library enables organizations to search chemical structures in libraries and to compare libraries with libraries. These powerful features let scientists ask specific questions about the nature and the content of different combinatorial libraries, thus hastening decisions about which compounds to make or buy.

Automate registration: Thanks to a feature called file-driven registration, compound and data registration can be automated and driven by instruments. The driving file lets chemists control the stereochemistry or regiochemistry of the reaction or the pooling method used. Output data can be automatically associated with compounds during registration.

Project Library

This ready-to-use, desktop software application manages combinatorial library data in project-level combinatorial chemistry tasks. The system supports commonly used combinatorial methods, integrates with commercial and corporate databases, and lets users process reagents into libraries automatically. Project Library also serves as a client for Central Library.

Reagent Selector

Reagent Selector offers scientists engaged in medium- and high-throughput synthesis a set of integrated tools for searching, selecting, locating, and obtaining compounds from in-house inventories and "shopping" for reagents using databases of commercial suppliers. Developed for synthetic, medicinal, and combinatorial chemists, Reagent Selector's architecture also helps IT professionals easily administer and customize the system in a variety of ways that unify and accelerate the scientist's workflow. Reagent Selector readily links to other MDL software systems, including ISIS, Central Library, Project Library, SMART, and Afferent.

Highlights

Query an integrated reagent datamart: Reagent Selector lets chemists query an integrated datamart of commercial reagent sources and in-house inventories.

Filter reagents: Chemists can include or exclude reagents using functional group, element, supplier, or other custom search criteria.

Cluster algorithms: Reagent Selector includes the K-MEANS clustering algorithm.

Calculate properties: Chemists can run in-house or commercially created algorithms to calculate properties for refining, sorting, and filtering reagent lists.

Expedite reagent acquisition: "Collect" and "Shop" modes assist chemists with locating compounds in-house or ordering compounds from chemical suppliers. Tables can be printed, exported to ASCII files, or forwarded to sample management systems such as MDL's SMART.

Access local currencies and price lists: Reagent Selector provides access to country- or company-specific supplier lists and converts prices to local currencies. Reagent Selector also enables chemists to automatically apply purity, package size, price, and preferred suppliers' selection criteria to large lists of reagents.

Afferent

Afferent is a knowledge base that assists chemists working in modern team-oriented chemical discovery to manage the broad range of experimental data and other information they generate and use by providing a software environment that models the real physical objects, chemistry, and events of the laboratory. Afferent represents reactions, detailed procedures, library products and analytical data in an Oracle database so they can easily be searched and shared. Afferent supports the expanding role of parallel chemistry in accelerated discovery research, offering chemists intuitive tools for building, synthesizing, archiving, and analyzing combinatorial libraries. Afferent integrates easily with other MDL software such as ISIS/Draw, Reagent Selector, and ISIS database products, as well as a variety of third-party software.

Biological Data Management

Assay Explorer

Assay Explorer is a powerful, customizable, and extensible biological data management system that provides biologists with the unparalleled ability to capture, analyze, and store all of their experimental results within the well-known Oracle environment. Assay Explorer's unique open Application Programmable Interface (API) and flexible data model make Assay Explorer the only commercial application that offers the flexibility that biologists need to capture both results and methodology. At the same time, IT departments can easily add extensions and customize Assay Explorer so that it fits into their company's unique workflow. Combined with a range of MDL cheminformatic tools, Assay Explorer provides the means for centrally storing and integrating biological and chemical data.

Highlights

Integration: Assay Explorer's flexibility enables scientists to link to external applications such as plate management, chemistry, statistical packages and data visualization software packages.

Analyze and summarize in a flexible environment: Assay Explorer places flexible report and display functions in scientists' hands, including chemical structures, bar charts, histograms, dose-response curves, and scattergrams.

Customize to meet growing demands: Assay Explorer is easy to customize without disrupting the discovery workflow. The integrated Visual Basic engine and exposed APIs enable organizations to create custom data-entry screens, reports, and queries and to build add-ins for communicating with laboratory instrumentation.

Flexible data model: Assay Explorer's unique use of variables allows database administrators to customise the underlying database within Oracle.

Improve data consistency and searchability: Organizations improve data consistency and searchability through Assay Explorer's Dictionary Manager, which can enforce a common vocabulary for assays, results, materials, and other variables.

Apex

Apex is an integrated plate management system that enables scientists to create, track and manage plates. By providing flexibility and integrating with Assay Explorer, Apex is a key element of a laboratory management solution. This integrated solution makes it possible for researchers to manage the information flow generated when making, screening, and analyzing thousands of chemical entities a day.

Highlights

Import Plate and Sample Information: Scientists can import plate and sample information into Apex via SDfiles or text files.

Create New Plates: From new or existing samples, scientists can create new plates with Apex, including dilution, dose response, and cherry-picked plates.

Reformat Plates: Apex can transform plates from one format to another, mapping overflow to additional plates if required.

Query the Database: With Apex, you can create complex queries to find plates, access sample data, and check plate status.

Track History: Apex lets users trace sample and plate histories.

Content Browsing, Data Analysis, and Visualization Tools

LitLink Servers

LitLink Servers are innovative software programs that link literature citations in desktop applications to journal articles, patents, and other documents. LitLink Server's dynamic linking system uses selected citations as input, automatically retrieving corresponding documents requested by researchers. LitLink/Standard Server and LitLink/Pro Server provide one-click access to multiple document sources and controlled citation linking to document sources.

LitLink/Standard Server: LitLink/Standard Server is ideally tailored for synthetic chemists and links citations in the CrossFire Beilstein database and MDL's toxicology and synthetic methodology databases to leading sources of articles and patents. Articles are available electronically from major scientific publishers.

LitLink/Pro Server: In addition to the functionality provided by LitLink/Standard Server, LitLink/Pro Server gives software developers tools for linking citations in Windows, Web, and Java applications to Internet or intranet document sites. For example, software applications can be LitLink-enabled to connect to internal and third-party sources for articles, patents, and reports. LitLink/Pro Server provides documented interfaces for adding new literature types; new document, journal, patent, and customer-defined sites; and custom citation parsers.

LitLink assists scientists in locating document providers and their documents cited in applications. Organizations are solely responsible for securing appropriate access rights to third-party documents. MDL claims no affiliation with, endorsement by, or sponsorship from the providers of these documents.

SCULPT

SCULPT is a desktop 3D visualization system built for chemists and biochemists. Its intuitive interface lets chemists quickly import compounds from ISIS so that they can explore the steric, electrostatic, and conformational effects of ligands and ligand-receptor complexes.

Highlights

Obtain 3D structural information: SCULPT automatically generates a low-energy 3D conformation when a scientist pastes a compound into SCULPT from ISIS/Draw, ISIS/Base, ISIS for Microsoft Excel, or Chime Pro. Scientists can quickly determine the orientation and distance between functional groups, the size and volume of a compound or important Rgroup, and the position and potential influence of hydrogen-bond donors and acceptors.

Explore and sample conformations: SCULPT's interface offers the same intuitive feel characteristic of plastic and brass models. As chemists interactively change the conformation of a molecule, SCULPT maintains valid bond geometry and non-bonded interactions in real-time.

Align compounds: SCULPT helps chemists discover structural relationships by automatically aligning compounds to each other or to bound ligands using two different algorithms: maximal common substructure (MCSS) or steric and electrostatic properties (SEAL).

Visualize 3D relationships: SCULPT provides high-quality visualizations, including solvent-accessible surfaces, protein ribbons, contact surfaces, and CPK and ball-and-stick rendering.

Facilitate communication: SCULPT helps multidisciplinary groups better communicate 3D information. SCULPT objects can be stored in Microsoft Word or email documents to provide both images and live 3D objects that reviewers can rotate and manipulate.

ISIS for Microsoft Excel

This data-analysis tool combines the familiar spreadsheet environment of Excel with the chemical-structure handling expertise of ISIS. The result is a flexible desktop application for retrieving, manipulating, and analyzing data and chemical structures together. ISIS for Excel is excellent for SAR analysis and converts an Excel spreadsheet into a database search engine, eliminating the tedious job of importing and exporting data from one program to another.

Managing Chemical Inventories

SMART

Sample Management and Reagent Tracking (SMART) is a modular chemical inventory system that helps organizations manage reagents and samples through the discovery workflow. SMART tracks a container throughout its inventory life cycle from pre-acquisition to disposal. SMART's tiered architecture includes a Web-based user interface, a relational database layer of in-house inventory and chemical supplier information, and business rules defining the core functionality. Core functionality is stored on the server, making the application adaptable and easy to maintain.

Core functionality: Locating inventory; identifying chemical suppliers using the Available Chemicals Directory (ACD); ordering reagents; tracking containers; barcoding; inventory reconciliation; disposal; administrative task management.

Options: Integration with a balance module; links to OHS MSDS data; barcode system integration.

MDL Content

Reference Databases in Chemistry and New Materials Discovery

CrossFire Beilstein

The world's largest chemical facts database, CrossFire Beilstein is the essential first step in the chemical discovery process. The database offers access to over two centuries of data describing preparations of known organic compounds. CrossFire Beilstein's intuitive search interface lets scientists quickly perform searches and hyperlink to relevant, related data, such as chemical structures, literature references, bioactivity data, and the properties of molecules participating in a preparation.

CrossFire Gmelin

Based on the Beilstein Handbook's sister publication, *Gmelin Handbook of Inorganic and Organometallic Chemistry*, CrossFire Gmelin is the world's largest compilation of inorganic and organometallic compounds and physical properties. With over 800 data fields containing physical property details on over 1.3 million compounds, CrossFire Gmelin is an ideal tool for researchers engaged in designing new materials and catalysts.

Bioactivity Databases

Comprehensive Medicinal Chemistry (CMC)

Derived from the Drug Compendium in Pergamon's *Comprehensive Medicinal Chemistry*, the CMC database provides 3D models and important biochemical properties, including drug class, logP, and pKa values for pharmaceutical compounds (1900-present). MDL updates CMC annually with compounds identified for the first time in the *United States Adopted Names* (USAN) list.

MDL Drug Data Report (MDDR)

This database covers patent literature, journals, meetings, and congresses. Produced by MDL and Prous Science, the database contains biologically relevant compounds and well-defined derivatives. The MDDR Finder allows scientists to search the database by structure or across relevant data fields. MDL also offers MDDR-3D, which can be used to explore 3D structure-activity relationships.

CrossFire Beilstein

Included in CrossFire Beilsteins's two-centuries worth of bioactivity, chemical, and physical property data is key information on how compounds interact with and affect organisms and the environment, such as data describing pharmacodynamics and environmental toxicology, transport, distribution, and fate.

Chemical Sourcing

Available Chemicals Directory (ACD)

ACD provides access to 2D and 3D structure, supplier, and pricing information for over a quarter of a million research-grade and bulk chemicals from over 600 suppliers. The database is complemented by several add-ons and is available in a variety of formats.

Highlights

Search by structure or data: The ACD Finder enables researchers to identify chemicals using structure or substructure, chemical name or synonym, CAS Registry Number, or molecular weight and formula as the search criteria.

Access safety and hazard data: The ACD Finder links users to MSDSs available in MDL's OHS MSDS databases licensed at a site.

Search 3D: The ACD-3D add-on contains 3D models for the structures in ACD.

Access compounds for HTS: ACD-Screening Compounds contains over one million structures to provide a diverse collection ideal for screening programs.

Use a variety of formats: ACD can be delivered as an ISIS database; packaged as the Chemical Products Information (CPI) File (delivered as Oracle export files); or assembled into MDL SD or RDfile format. ACD has also been developed as a Web version on ChemWeb.com.

Synthetic Methodology

Reaction Classification by InfoChem GmbH extends MDL's reaction retrieval system to index most of MDL's synthetic methodology databases, creating the world's most advanced system for selecting and evaluating synthetic methods. By grouping reactions into clusters of similar reaction types, chemists can determine a cluster group's relevance to a synthetic problem without wading through reaction after reaction in a hit list.

CrossFire Beilstein

CrossFire Beilstein offers scientists access to over two centuries of data describing preparations of known compounds. Scientists can use the database to locate starting materials, melting points, NMR spectra, MS spectra, and other physical property data to validate syntheses.

ChemInform Reaction Library

This compilation of 100 years of chemical literature citations contains reactions of current interest to synthetic chemists, with an emphasis on novel methodology. The collection is selected, abstracted, and organized by FIZ CHEMIE Berlin. The database provides convenient access to full reaction schemes.

Solid-Phase Organic REactions (SPORE)

Produced by MDL and FIZ CHEMIE Berlin, this database of reactions of small organic molecules on solid support is designed to meet the needs of synthetic organic chemists using solid-phase methodology. The database includes extensive data on solid-phase organic chemistry, such as information on polymeric materials, linkers, solid supports, and protecting groups. The database provides convenient access to full reaction schemes.

Reference Library of Synthetic Methodology

This broad collection of novel organic synthetic methodologies covers functional group transformations, metal-mediated chemistry, and asymmetric syntheses, as well as reactions abstracted from Dr. William Theilheimer's *Synthetic Methods of Organic Chemistry*.

Current Synthetic Methodology (CSM)

This database, organized by FIZ CHEMIE Berlin, contains the most innovative and significant reactions since 1992, emphasizing new synthetic methodologies, reactions that use new reagents or important modifications of known reagents, and regio-, chemo-, and stereo-selective reactions carried out on multifunctional substrates.

RX-JSM

An electronic version of Derwent's *Journal of Synthetic Methods* (1980-present), RX-JSM is a compilation of chemical reaction literature from international journals and patent sources. Updated semi-annually, the database contains detailed information about new synthetic methods, high-yield functional group transformations, improvements to existing methodologies, and reactions representing the most significant new patents.

ORGSYN

An electronic version of the entire series of *Organic Syntheses* (first published in 1921), ORGSYN provides simple graphical access to general synthetic methods and proven compound preparations. ORGSYN also contains information on product purity, product yield and hazards, as well as references to the original procedures and journal sources.

Comprehensive Heterocyclic Chemistry (CHC)

An electronic version of Pergamon's eight-volume *Comprehensive Heterocyclic Chemistry*, CHC covers syntheses of heterocyclic compounds, reactions of heterocyclic systems, and the use of heterocycles as synthetic precursors.

Metabolism and Toxicology

Metabolite

A complete metabolism information system, Metabolite comprises a database, registration system, and browsing interface. The Metabolite database is the only source that uses published information from multiple studies to assemble structural metabolic database entries for particular parent compounds. The Metabolite Registrar enables scientists to create, edit, and register metabolic schemes into corporate databases. And the Metabolite Browser offers a graphical interface for searching and displaying metabolic schemes stored in either Metabolite or corporate databases.

Toxicity

Toxicity is a structure-searchable database of toxic chemical substances. An Oracle-based system accessible through ISIS/Host, Toxicity contains data from *in vivo* and *in vitro* studies of acute toxicity, mutagenicity, skin and eye irritation, tumorigenicity and carcinogenicity, reproductive effects, and multiple dose effects. Toxicity currently covers the complete contents of the Registry of Toxic Effects of Chemical substances (RTECS) database produced by the U.S. National Institute for Occupational Safety and Health (NIOSH). Toxicity can also be used in conjunction with Metabolite; a single click enables scientists

browsing structures in either database to transfer between the databases to view relevant toxicity and biotransformation data.

Environmental, Health, and Safety

OHS MSDS authoring, reference, and hazard communication products offer EH&S solutions used by chemical manufacturers and users worldwide. MDL's OHS business is the world's largest producer of independently researched material safety data sheets (MSDSs) for use in hazard communication. OHS produces a range of MSDS databases and related systems that provide high-quality, up-to-date, and accurate chemical safety information.

Authoring

OHS MSDS outsourcing services provide professionally authored, high-quality MSDSs for an organization's own chemical substances. MSDSs are frequently updated and come with access to translations, assessment, maintenance, and other authoring services. Hosting and delivery options are also available.

Reference Databases

OHS Complete Reference System: An enterprise-wide resource for EH&S information, this system offers multiple OHS MSDS databases and other data in one easy-to-use interface. Scan, download from the Internet, or re-key MSDS data. Advanced searching provides easy access to many subjects valuable to chemical users and producers. Availability in U.S. English, Latin American Spanish, and Canadian French makes this system a relevant option for today's environments.

OHS Global Reference System: This system helps international organizations share EH&S information regardless of locale. Users receive high-quality data on a wide range of subjects. Data is available in U.S. English, Latin American Spanish, Canadian French, German, French, Italian, and U.K. English.

OHS MSDS ON DISC: This CD-ROM contains more than 20,000 independently researched OHS MSDSs. Ideal for individual or network use, this resource provides ready access to high-quality, comprehensive, and international information for hazard assessment, exposure monitoring, and chemical transport.

OHS Pure Substance Database: This database contains independently researched OHS MSDSs for more than 17,000 pure substances commonly used in global industry with data relating to European safety standards.

OHS Mixture Substance Database: A database containing independently researched MSDSs for more than 41,000 mixtures and trade name products. The most common industrial substances comprise 3,000 of these standard MSDSs.

OHS EH&S Data Elements: Provides key data from OHS MSDSs in a format to populate virtually any chemical information system.

Hazard Communication

OHS Inventory Match: An outsourced solution for premium hazard communication, OHS Inventory Match puts MDL in charge of researching and validating an organization's inventory of vendor MSDSs to match OHS industry standards. Merge MSDS databases with more than 56,000 OHS-researched MSDSs to provide the best tool for compliance and employee safety. Employees have easy-to-read MSDSs with consistent formats.

OHS HazCom System: This system provides an easy-access solution for everyday OSHA compliance by combining OHS MSDS databases and other MSDS databases into one centralized resource. Employees find MSDSs from a range of sources in various formats with both basic and advanced search capabilities.

Consulting and Educational Services

MDL Consulting Services

Throughout its history as a leader in discovery informatics, MDL has fostered many relationships with third-party technology and consulting firms to help design, manage, and implement a broad range of projects. The result is MDL Consulting Services, an international team of the most highly skilled scientific application developers in the industry. MDL consultants are assigned specific roles and responsibilities for each customer project. Organized globally, project managers deliver local projects and harmonize international projects across multiple sites.

The team uses standard software engineering practices, some of which provide for documentation milestones throughout a project. Its organization enables MDL Consulting Services to deliver high-quality projects throughout the world while remaining available to help customers with smaller projects.Whether projects involve robotics, analytical spectra, or readers, MDL Consulting Services works with a variety of organizations and industry-standard tools to ensure successful and robust implementations.

MDL Educational Services

MDL is a full-service provider of learning solutions—e.g., online help, online and paper documentation, instructor-led and self-paced training, reference manuals, quick references, job aids, etc. The goal of MDL Educational Services is to increase user productivity with MDL software and customized applications. MDL has proven experience in assessing the information needs of users and meeting those needs with the best support tools. Customers learn how to use software efficiently and become comfortable with new technologies.

The Elsevier Science Family

MDL is a subsidiary of Elsevier Science, the undisputed market leader in the publication and dissemination of literature covering the broad spectrum of scientific endeavors. Elsevier Science publications are written and edited by international scholars with excellent technical and scientific credentials and wide research and teaching experience in their respective fields.

Other members of the Elsevier Science family include:

BioMedNet, the Internet community for biological and medical researchers, featuring a full-text library, MEDLINE, a newsmagazine *HMS Beagle,* a job exchange, a shopping mall, Internet links, and special features. (**www.biomednet.com**)

ChemWeb, Inc., which produces ChemWeb.com, an online "club" for the world's chemistry researchers that delivers complete information resources for chemical research and communication via the World Wide Web. (**www.chemweb.com**)

Engineering Information, a leading provider of information, knowledge, and decision-making support for research and industrial practitioners in the applied physical sciences and engineering. It provides the online communities Ei Engineering Village, Ei Paper Village, and Ei Computing Village and offers electronic access to over 500 key Elsevier journals via Engineering Direct. (**www.ei.org**)

ScienceDirect is a Web Information Source for scientific, technical and medical (STM) research that offers access to more than 1,100 journals across 16 fields of science, including the social sciences. (**www.sciencedirect.com**)

Solution Partners

MDL works with leading computer solutions providers to ensure that its software runs in the multiplatform, multiapplication environments of its customers. MDL has partnerships with such vendors as Compaq Computer, International Business Machines Corporation (IBM), Silicon Graphics, Inc., and Sun Microsystems. Additional operating system and database integration is made possible by partnerships with Microsoft Corporation and Oracle Corporation.

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