
Healthcare InfoTech

A Biomedical Business International Weekly Publication

FRIDAY, JAN. 29, 1999 • VOL. 2, No. 4 • PAGE 1 OF 6

Business Report

Power databases: 2nd in a series

Public health data system wins NIH grant support

By DON LONG

Healthcare InfoTech Managing Editor

You can find IT for pharmaceutical discovery, IT for regulatory management, IT for hospitals and patient medical records, IT for this, that and just about anything you want in healthcare.

But little for public health.

"The needs in this area are just incredible," says Richard Thomas, PhD, vice president and founder of Medical Services Research Group (MSRG; Memphis). "It's like describing what existed in banking in the 1970s. Until just two or three years ago, there was no appreciation for the need for this sort of thing nationally."

Thus Thomas says that while healthcare often lags behind industry and even government in IT awareness, public health is even slower to identify and act on this

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McKessonHBOC reports flat income, no new deals

A Healthcare InfoTech Staff Report

So far this year, there has been little news from HBOC (Atlanta) – now McKessonHBOC. After completing several acquisitions at whirlwind pace to conclude 1998, climaxing with the announcement of the merger with pharmaceutical and medical supplier McKesson, the giant healthcare IT supplier has been quiet.

Many attending Hambrecht & Quist's (San Francisco) 1999 Healthcare Conference at the beginning of the month probably expected some new bombshell announcement. But McKesson President Mark Pulido did little more than acknowledge that the acquisition and merger with HBOC had been completed, tacking on a review of the company's products and services. Since then, the company has done little more than issue standard press releases concerning earnings, new board policies and product adoptions.

McKessonHBOC's earnings report was undoubtedly the
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Contributing Editor's notebook

Intel ups the ante on processor speed in wake of new Apples

By ARTHUR GASCH

Healthcare InfoTech Contributing Editor

Now that the 333 MHz. Apple computers are out, claiming to execute programs two to four times faster than the 450 MHz. Pentium IIs from Intel (the world's largest chip manufacturer), it was only a matter of time before Intel would be expected to respond. It didn't take long. Intel announced to the press that its latest CPU in the labs, although substantially different from the current Pentium Pro architecture, has been christened the "Pentium III" series, and will be deliverable around the end of 1999.

These new CPUs provide a superset of the Pentium II instruction set, including dozens of new instructions. More importantly, these chips operate at clock speeds of 500 and 600 MHz., and have the ability to send their own

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Major security hole found in Microsoft Office product

A Healthcare InfoTech Staff Report

The Bible says, "my people perish for lack of knowledge," and it turns out that so do computer systems, particularly when it comes to viruses and unplugged security holes. Users of Microsoft Office may have missed the fact that a glaring hole in security is created by the Office Suite, providing would-be intruders access to an entire system at the operating system level, using Office as an intermediate surrogate for the attack. This exists with even the newest versions of Office software, as well as some older ones.

Any computers running Office and having Internet access need to immediately download a patch from Microsoft that will close this hole, the largest and most serious security hole ever found in Office/Explorer/Outlook products.

This "fix" should not be considered optional; rather, it is essential to restore the security of a system and any net-
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ACQUISITIONS & AGREEMENTS

• **Affiliated Physicians Network** (Fort Lee, NJ) has reached an agreement with **Impath** (New York) to develop a new joint venture organization to provide oncology-related clinical research and information services to the biopharmaceutical industry. The new entity will use APN's network of community-based cancer specialists and Impath's expertise in cancer analysis, database, and data assessment capabilities.

• **Bioreason** (Santa Fe, NM) has formed a software development collaboration with the **Parke-Davis Pharmaceutical Research Division** (Ann Arbor, MI) of Warner-Lambert for Bioreason's first commercial software system, called LeadFinder. The product automatically generates pharmaceutical knowledge about new drug leads from high-throughput screening data.

• **CTC Laboratory Systems** (Japan) will represent and distribute products from **ID Business Solutions** (Guildford, U.K.) in that country, and support all of ID's products. CTC will distribute ActivityBase, Object Manager, SARgen, and Xlfit products, and also will provide technical support and product customization in Japan.

• **Eclipsys** (Delray Beach, FL) has become the licensee of the Trillium MCS (managed care system) software from **Health Systems Technologies** (Seattle).

• **Highmark** (Camp Hill, PA), an insurance company, has signed an agreement with **Empower Health** (Austin, TX), to use drkoop.com, its Internet site led by Dr. C. Everett Koop, former U.S. Surgeon General, allowing Highmark to deliver the Internet site's healthcare content and tools to its 18 million members. Highmark does business as Highmark Blue Cross Blue Shield in western Pennsylvania, and elsewhere in the state as Pennsylvania Blue Shield.

• **InfoMedtrics** (Needham Heights, MA) has formed a partnership with **Computer Sciences** (El Segundo, CA) to provide Fortune 500 companies with a fully integrated and customized system for managing healthcare and disability

costs, and quality of care. InfoMedtrics' Healthcare Information Center will be used to manage group health, worker's compensation, disability, occupational health and safety, and financial and clinical data.

• **PhyWell** (Jacksonville, FL) has completed its purchase of the web site *guidetohealth.com*, and its parent company, **Guide to Health Inc.** The web site name has been changed to *e-Well.com*, reflecting the new owner's intent to broaden the health education content and retail capabilities. The site provides consumers, physicians, and patients access to health and disease information, slide shows, audio clips, and a bookstore.

• **Quintiles Transnational** (Research Triangle Park, NC), has signed an agreement to acquire Envoy (Nashville), a provider of electronic data interchange and data mining services.

• **Shimadzu Scientific Instruments** (Columbia, MD) and **Bristol-Myers Squibb** (New York) have formed a licensing agreement allowing Shimadzu to market Bristol-Myers Squibb's customized hardware and proprietary software for performing liquid chromatography. The licensed technology includes hardware modifications to enable increased capacity for autosamplers and fraction collectors used in high performance liquid chromatography.

• **Superior Consultant Holdings** (Southfield, MI) has acquired the Integration Services Group of **Healthdyne Information Enterprises** (Marietta, GA). The group offers healthcare-related integration consulting services and was unrelated to Healthdyne's core business of message brokering. The asset purchase is comprised entirely of cash and is valued at \$2.2 million.

• **X-Rite** (San Francisco) has announced an agreement that calls for its Monitor Optimizer to be used to support the Universal Series Bus interface architecture on **Apple** Macintosh systems. The optimizer is a four-channel colorimeter providing accurate monitor calibration. It will be offered at the same price (\$595) as the serial-based counterparts, but has been restyled along the lines of Apple's iMac.

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Smart card use in the U.S. is subject of university's study

Smart cards may not be just for Visa and Mastercard transactions. Variations that include a CPU and expanded storage capacity have been available for years and are widely used in Europe and Asia, but have never really taken off in the U.S.

That situation may be about to change, based on the outcome of a study being conducted at the Washington University School of Medicine, in which pregnant women are being given health ID cards with their demographic and medical information, to use during their natal care. In this study, half the participants are being tracked with the cards and card readers, and the other half are being handled with pen and paper records.

The study will document the improvements in access (if any) and other benefits of using smart cards to automate these patients' medical records access, according to Dr. Gilad Gross, MD, who is directing the study. In addition to patient demographics, the smart cards include lab results, images, and diagnosis. Gross presented some data at the Society of Critical Care Medicine (SCCM) meeting held earlier this week in San Francisco. (For more information from SCCM, see the March issue of *The BBI Newsletter*, a sister publication to *Healthcare InfoTech*.)

If adopted, the system would have modest costs to both the patients and providers. Cards for individuals are about \$5 to \$7 in quantities, and readers around \$75 to \$100. Such a storage approach leaves the patient as the "owner" of his or her medical record, and in control of who accesses it, why and when – other radical ideas whose time may have finally come in America.

– Arthur Gasch

Public Health

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need. He and MSRG are determined to change that.

MSRG recently was awarded a two-year Phase II Small Business Innovative Research Grant of \$750,000 to develop a public health data management system. That system will attempt to take all the disparate information concerning healthcare – plus whatever is healthcare-related – pull it together into one data bank, and then manipulate it to understand what is going on in the public health sector and to guide decision-making and policy-making.

Thomas predicts that the Public Health Data Management System (PH/DMS) MSRG is creating will go far beyond the traditional approaches to managing data traditionally practiced in public health.

"Public health has limped along for decades with minimal access to relevant information without software designed specifically for public health research, monitoring and reporting." He adds that "the technological capa-

bilities are now available to facilitate such a project, and at much less cost than at any time in the past."

Some of its uses, he says, will be to determine a community's health status, develop community health "report cards," monitor health trends, track disease trends, and identify links between public health and the other factors impacting public health. The result Thomas hopes for is to help public health officials develop better strategies for meeting public health needs.

Because the PH/DMS will be used by so many different groups and agencies, he says the system will have to be some sort of hybrid, combining a general data warehousing template but customizable to the various user systems. The core of the system is emphasis on SAS technology from the SAS Institute (Cary, NC), providing end-to-end data warehousing, and the rapid manipulation of the various data sources which then produce results through an intuitive graphical interface.

"This is not earth-shaking," Thomas says. "We're just creating a way of accessing data which hasn't been brought together before but is being demanded by all kinds of groups, from local, state and federal agencies to consumer groups. There is a growing and tremendous interest in this kind of data and how it can be used in public health."

Formed in 1988, MSRG is a private company that has primarily focused on information consulting and has developed selected software products for data management. Thomas received his education at Vanderbilt University as a medical sociologist, and he says he began realizing, about two years ago, that what the company was doing could help to fill the huge IT cap in the public health sector.

MSRG is developing the prototype system, which it hopes to have completed and deployed at several sites during the first year of the grant, with the second year then dedicated to refining the system, adding more capabilities to it and deploying it at many more sites.

Six beta sites already have been selected, and Thomas says the company is open to proposals from any interested agencies for additional deployment of the PH/DMS system. While much of the ongoing work of testing and development will be supported through additional grant funding, those groups serving as beta sites will be expected to offer "some level of financial commitment to the project," Thomas says.

Besides this project, Thomas predicts that MSRG will launch a second product with a public health orientation sometime in the next 90 days.

Overall, he describes the company's new strategy as an attempt to put public health information "in action." But because this area has lagged so far behind other healthcare IT sectors, the effort isn't to take public health into the 21st century, he says. "We're just trying to bring it into the 20th century." ■

Notebook

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unique ID code, a digital serial number, when queried. This is the default capability, which the user can switch off, but it is automatically re-enabled when the PC is rebooted. This will make the chips very attractive to the medical application community, as it is a major aid in identifying with whom someone is talking over a network. It also will be helpful for tech support issues.

Tracking remote users now depends on "cookies" that are left behind, but with digital IDs, the data on users would be much more specific. On the other hand, such features could be exploited to track users of the net, which some claim is an invasion of privacy.

Presumably with the Pentium III chips being sampled this year, we can expect to see workstations with these in place in 2000. This fact should be taken into account by healthcare enterprises looking to implement enterprise-wide, hardware platforms. Those who are still investing in Pentium CPUs, even the 233 MHz flavor or lesser CPUs, may be just investing in premature obsolescence.

To help obsolescence along, Intel and AMD have dropped their prices on lower-end CPUs, like the Celeron, which are now about \$80. We hear – unofficially, of course – that Celeron chips can be connected in dual-processor motherboards, to create some cheap, high-powered processing machines, but that would not be a warranted use of the chip.

Internet bottleneck in enterprise-wide computing

As the healthcare providers move more to the Internet to connect themselves into a network, the access speed on the net becomes more of an issue. While a 56K modem may be adequate for consumers to access their favorite webs, it can be too slow for medical access in a busy doctor's office, particularly if a lot of data has to be retrieved about the patient.

The regional phone companies have offered ISDN, but that only doubles the throughput, and can be very expensive. Dedicated T1 and T3 lines or frame relay is really expensive, and not needed all the time. Dial-up, on-demand access is a solution, but not available everywhere, and still quite expensive.

What is needed is a flat-fee, higher-speed access – and that is just what cable modems offer. Ranging in cost from \$49 to \$99 per month, these devices provide 1,500 kbaud access to the Internet, or 20+ times the speed for about three times the monthly access fee. As a result of this value, revenues from cable modem access grew 60% in 1998 alone, according to data published by the Cahners In-Stat Group, and is expected to grow by 120% in 2000. Revenues are expected to reach \$800 million by 2003. The current installed base is about 1 million units, but most cable companies report that less than 10% of their sub-

scribers order these units, so there is ample room for the market to grow. One large cable provider, @Home, reported that its cable modem subscriber base has grown from 50,000 units to 330,000 units in the past year.

Cable modems hit the sweet spot in the market, providing an optimal mix of affordable cost and high-speed access to the net for the medical (physicians' office) user. We believe they have a critical role to play in connecting the more remote sites of the sprawling healthcare enterprise. Connecting customer installations to vendor service centers is another use of cable modems, which allows vendors to "look in on" the operation of their products at customer sites. These also can make software update downloads to customers fast and transparent to users.

Here comes Jini

Creating a working network using Microsoft Windows and NT server, while not rocket science, may still be a bit frustrating and beyond average business users, who have no real interest in learning the details of TCP-IP, RCP, or even LSMFT in order to get their workstation connected and running on a network. Sun Microsystems has realized that, and created Jini, a technology that will make hopping onto a network as easy as plugging in an extension telephone.

After lots of hoopla, it appears Sun Microsystems is ready to go. At a press conference this past Monday, the company announced that its 35 partners – including such well-known names as Hewlett-Packard, Seagate and Philips – will begin embedding Jini in their products. By later this year, configuring and connecting network devices will become accomplishments that even senior executives who have few clues as to how to use the PCs on their desks can accomplish without calling in the IT department. ■

Security

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works to which it may be attached. Any computer on a corporate network that is not updated with this patch, creates a security hole and access point to the entire network. This issue takes on even more importance in a large, intranet corporate setting, particularly healthcare enterprises that may have hundreds to thousands of workstations, many of which may use Microsoft Office in addition to other specialized medical applications.

Woody Leonard at www.WOPR.com made us aware of the problem, and also got the attention of Microsoft in expediting preparation of a patch to resolve the problem. Leonard is the author of many books on Microsoft Office, including the "Mother of All Office" series, and also does a monthly magazine article series as well.

Microsoft is to be commended for its prompt response on this one. The company analyzed the problem and made a patch available in about two weeks, record time. ■

I N S T A L L A T I O N S

• **Clinitec International** (Horsham, PA) said that Daughters of Charity Information Services (DCIS) has selected Clinitec's NextGen Electronic Medical Records System as one of the systems DCIS will support within the healthcare practices and institutions that comprise or are affiliated with the Daughters of Charity National Health System (DCNHS). DCIS provides information systems and solutions to DCNHS, a network of approximately 50 Catholic hospitals – with more than 12,600 beds – nursing homes, rehabilitation clinics, medical practices, outreach centers and psychiatric wards in 12 states. NextGen is an electronic medical records system designed to improve quality, reduce risk, cut costs and increase revenues.

• **Dendrite International** (Morristown, NJ) said that Solvay Pharmaceuticals (Marietta, GA) will upgrade its sales force automation system to ForcePharma, Dendrite's newest sales force effectiveness software. Solvay also will use ForceAnalyzeRx from Dendrite, a business analysis tool for sales managers and sales representatives. Dendrite reports that its products are being used by more than 40,000 sales representatives and their managers in more than 150 major corporations in 17 countries.

• **Oracle** (Minnetonka, MN) said that Allina Health System (Minneapolis) is moving its information management systems to the Oracle8 database, an enterprise-

wide solution designed to deliver scalability and improved performance to Allina's applications. The product's Internet computing architecture will allow the healthcare provider to respond more rapidly to patient needs by distributing services such as stay-well programs to patients in outlying areas. According to Allina, the improved performance has made its data activity warehouse response time 10 times faster than previously. Additionally, Allina now will be able to distribute its healthcare applications to small clinics in remote locations throughout four states.

• The Patient Communicator software produced by **Outcome** (Austin, TX) is being implemented by Sulzer Orthopedics (also Austin) to collect surgical outcomes data for accreditation, quality care documentation and clinical process/patient care improvement in the orthopedic specialty area. Patient Communicator software connects physicians and their patients securely via Internet or local network. Users can send and receive messages, review educational or wellness information and input data about their current health status, health risks, ongoing chronic disease condition or their satisfaction with recent treatments, data which historically has been extremely fragmented.

• Siemens DirX MetaHub directory from **Siemens Information and Communication Networks** (Boca Raton, FL) has been selected by Digital Medical Systems (Burlington, MA) for its information networks connecting medical providers with healthcare organizations, patients
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McKessonHBOC

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biggest news, the company reporting a surge in revenue but flat earnings growth because of a charge of \$17.2 million related to the acquisitions of RedLine HealthCare and Keystone Bottling. Without the charge, revenue would have been \$59.4 million. With it, the revenue was \$42.2 million, a meager increase over the year-ago quarter revenue figure of \$42 million. While this report was in line with analysts' predictions, and the company said it remained on target to reach its goal of \$3 in earnings per share in fiscal 2000, shareholders apparently expected more; on Tuesday the company's share price dropped 10% to \$72.

Shareholder concern was apparently focused on the HBOC side, with reported software sales of \$150 million. Some had predicted sales in this sector of \$165 million to \$180 million. Nevertheless, the HBO unit performance appeared strong, profit rose 36% for the third quarter to \$142 million, excluding charges. Revenue rose 19% to \$469 million, the increases coming mostly from service (55%), software (32%) and then hardware (13%).

To reach its year 2000 goal, Pulido said in a statement

that the company is projecting internal growth of 20% annually "in both our healthcare supply management and information technology businesses."

In another statement issued Wednesday, the company said that its board of directors had established a new annual dividend policy of 24 cents per share on the company's common stock. The board then declared a regular quarterly dividend of six cents per share, to be paid April 1 to stockholders of record on March 1. Charles McCall, McKessonHBOC chairman, said that the payout rate "compares favorably to other large, rapidly growing companies. Most importantly, it will enable McKessonHBOC to re-invest incremental cash from earnings in product development and other growth opportunities. Given our demonstrated high returns on invested capital, we expect that this will deliver enhanced long-term value to stockholders."

The company also reported that Serv All/SHA (Columbus, OH), a large independent retail pharmacy network with more than 2,700 members, has adopted HBOC's OmniLink product, a centralized pharmacy computer application. OmniLink will be used to perform pre- and post-edits for on-line confirmation of daily price updates and managed care requirements. ■

PEOPLE IN PLACES

- Mark Pearson, PhD, has been elected to the board of directors of **Base4 Bioinformatics** (Toronto, Canada), a developer of data management tools for the pharmaceutical and biotechnology industries. Until recently, Pearson was president of Molecumetics and has held executive positions with E.I. duPont de Nemours & Co. and its affiliates.

- Jon Rompon has been named vice president of the Healthcare Business Strategy Consulting Practice of **First Consulting Group** (Long Beach, CA), a provider of operations and information management services to various sectors of healthcare. Rompon most recently was director of Perot Systems' SAI division.

- Sue Dubman has been named vice president, technology, and chief technology officer for **Coi Solutions** (New York). She will be responsible for the network/applications architecture, e-commerce and security/certification requirements for the World Telehealth Corp. Project, a global electronic healthcare service awarded to Coi. Most recently Dubman worked in the pharmaceutical, biotech and healthcare industries in the areas of clinical trial management, document management and home health care systems.

- Albert Waxman, PhD, has been elected chairman of the board of directors for **Health Hero Network** (Mountain View, CA), a healthcare information services firm. Waxman is senior managing director at Psilos Group Managers LLC.

- Joel Birnbaum, senior vice president for research and development and director of **HP Laboratories** at Hewlett-Packard (Palo Alto, California) will resign those positions Feb. 2 and fill the newly created consulting position of chief scientist for HP. Dick Lampman, director of the Information Technology Center at HP Laboratories, and Edward Karrer, director of the Microelectronics and measurement Solutions Center at HP Laboratories, will

manage HP Laboratories until a new director is named.

- Suzanne Sblendorio has been promoted from senior vice president of operations and development to chief operating officer for **Home Care Information Systems** (HCIS; Bloomfield, NJ), a division of Medic Computer Systems. Sblendorio will fill the executive management role at HCIS, following the resignation of Steven Griff as company president.

- Michael Savage has announced his resignation as president of **MSI** (Princeton, NJ), a business which develops molecular modeling, simulation and informatics software and services and is a unit of Pharmacopeia. He will also resign from the company's board of directors but continue as a company consultant. His responsibilities will be handled by Saiid Zarrabian, the company's chief operating officer.

- John Andrews has been promoted from vice president for sales and marketing to chief operating officer for **Molecular Applications Group** (Palo Alto, CA), a software-based life sciences company. Paul Thomas, PhD, has been promoted from research scientist to executive director of research. And Chris Lee, PhD, a company co-founder and director, has been named chief science advisor. Lee was vice president of research at MAG before becoming assistant professor in UCLA's departments of chemistry and biochemistry.

- Roy Dorado has been named director of operations, and Timothy Ainoa has been named product marketing manager for **Neoforma** (Santa Clara, CA), the developer of Neoforma.com, designed to generate qualified sales leads to healthcare vendors. Dorado previously was senior director of acquisitions and global integration of mergers for Autodesk. Ainoa was previously product manager for new and used equipment.

- Hanjoo Na and Michael Shin have been named senior staff engineers at **Unigten** (Fremont, CA), a designer and manufacturer of memory products for the medical and telecommunications industries. Na was previously a senior test engineer at Hundai Electronics Industries, while Shin previously was a senior design engineer at LG Semiconductor.

Installations

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and payers. DirX MetaHub manages and stores digital certificates used to identify authorized users within a public key infrastructure, providing DMS clients with efficient, secure access to confidential patient information over the Internet. DMS says it is implementing a secure solution with DirX MetaHub for a leading physician practice management firm.

- ThinkMed Expert from **ThinkMed** (Milwaukee) has been adopted by Wellmark (Des Moines, IA), formerly known as BlueCross BlueShield of Iowa. ThinkMed Expert is a physician-developed population health management software allowing a clinical user to search, analyze, filter and report on data by disease category, co-morbidity, severity, level of risk, employer group and so on, with the intention of targeting case, disease and other medical management initiatives. Wellmark covers 1.7 million lives in Iowa, South Dakota, Nebraska, Illinois and Wisconsin.