

Blood banks retooling to manage growth of biologics

Karen Wagner

As the medical community increasingly uses stem cells, human tissue, bone marrow, and other biologics in patient treatment, how best to manage these products is likely to become an issue for many blood banks.

For some institutions, the solution will entail adding functionality for nonblood biologics management to their blood bank systems. For others, it will involve purchasing a system solely to address such needs. Indeed, many hospitals are now transplanting nonblood biologics, and some have adapted their blood bank systems to handle such products.

“Many of our university, research, and cancer center clients are involved with drawing and processing stem cells for autologous and allogeneic transplants and producing vaccines,” says Miklos Csore, senior vice president of research and development for Global Med Technologies, El Dorado Hills, Calif., which offers blood and nonblood biologics management tools. “Cord blood centers are becoming more numerous as well for the processing and storage of cord cells. On the tissue side, there is a trend, as regulations increase, for hospitals to give the transfusion services more oversight and responsibility for bone and tissue storage and issue.”

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Product Guide

Over the past few years, Mediware Information Systems, Lenexa, Kan., has seen an upswing in client demand for biologics management products. According to Mediware’s vice president of marketing and communication, John Van Blaricum, focus group research found that 50 percent of clients were adapting Mediware’s blood bank systems for use in tracking bones and tissues. “Of course the blood bank systems didn’t do everything they needed and didn’t exactly operate the way they should to support bone chips versus A-positive blood,” he says.

In response, Mediware established industry focus groups to determine what functionality customers wanted relative to biologics management. From that information, the company developed a standalone biologics management system.

Likewise, SCC Soft Computer, Clearwater, Fla., heeded customers’ needs, adding biologics management to its blood bank system after learning that many customers had begun using the system to handle bone and tissue products, says company CEO Gilbert Hakim.

SCC offers inventory management and tracking for bone and tissue products through the latest version of its SoftBank II blood services informa-

tion system, which received FDA approval in June and was released in August. “Some customers that use SoftBank II, version 25, will be using it to manage the inventory of bone and tissue products,” Hakim says.

But while companies such as Mediware, SCC, and Global Med are forging ahead on the biologics front, others say there isn’t enough customer demand to move forward with such functionality—yet.

The critical access and community hospital clients of Milford, Mass.-based Psyche Systems, for example, are too small to handle such products, says Brian Keefe, Psyche’s director of clinical product marketing. “We’re not focused on biologics,” he explains,

“because our customer base and our niche in the blood bank market is to provide affordable computerization and automation for blood banks still operating on paper. We offer bar-code tracking and identification of unit inventory, online patient history, basic transfusion workup, positive patient ID at the bedside—things like that.”

Westwood, Mass.-based Medical Information Technology, too, has made no immediate plans to develop a biologics management system. “It’s something that we

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Hakim



Keefe



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Blood banks retooling

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have heard about in the past, and it seems that we're getting a few more questions about it lately," says Christine Silva, manager of marketing support.

If enough customers become interested, she continues, Mediatech will incorporate biologics functionality into its blood bank system. "We are preparing a major rewrite of our laboratory and blood bank system in the next few years, so this is something that we perhaps would incorporate in that solution," Silva says, noting that any nonblood product management module would most likely include inventory and tracking functions. The next version of Mediatech's blood bank system is expect-

ed to be released in three to five years, she adds.

Nonblood biologics management is such a new area that the specialized systems of those companies interviewed by CAP TODAY were introduced in the United States during the past few years.

McKesson Provider Technologies, Alpharetta, Ga., added a tissue-management tool to its product portfolio in March 2008, when it acquired Ann Arbor, Mich.-based Rosebud Solutions. Rosebud had released the system in January 2007 in response to JCAHO standards for safe handling of tissue.

The system, Horizon Tissue Manager, is designed to create a more efficient tissue and device implant workflow process, from receipt at the facility to patient implant or final disposal, says Alicia Torres,

McKesson's vice president, solution line. The system automates management of the implant, she adds, which allows clinicians immediate access to implant records.



Torres

In June 2008, Mediware released BiologiCare specifically for bone and tissue management, rather than have its customers continue to use its blood bank system in a manner for which it was not intended, "a situation that Mediware felt was risky," Van Blaricum says.

BiologiCare has inventory, reconstitution, transportation, and auditing functionality. It interfaces with information systems in the operating room, Van Blaricum adds, so the biologic product can be tracked beyond delivery to the type

and date of surgery and, through an identification number, to the patient who receives the product.

BiologiCare uses the same architecture as Mediware's HCLL blood bank system but is not interfaced with that system. However, product managers for the two solutions are considering such an option. "We're investigating what makes sense for integration between the transfusion management and the biologics management [systems]," Van Blaricum says.

Mediware is scheduled to release version two of the bone and tissue management system this month. This latest version will be Web based, allowing nonblood bank users easy access to data. "With biologics, it's not just the blood bank community that needs information and access," Van Blaricum says. "There's the surgical teams and the nursing teams that also have input and play."



Van Blaricum

At NetLims, the focus is on the company's AutoFusion blood bank management system, which re-

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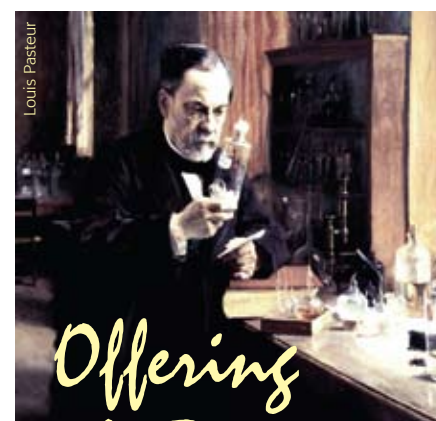
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ceived FDA 510(k) clearance in July. AutoFusion offers user-defined functionality, which means it can be set up to manage nonblood products, says Rami Jaschek, vice president of technology for NetLims, an Israel-based company with U.S. headquarters in Jersey City, NJ.

"Our blood bank [system] setup is by the clients," says Jaschek. "Tissues or factors being distributed are basically handled as additional product in the system. Just as I can issue a blood unit, I can issue a stem cell unit, or a bone marrow unit, or any other type of product because you can define all the rules and the system logic that applies to such a product.

"So a lot of what might be fixed code in other systems, in our system is set up so you can change it," he continues. "You start with a standard, but you can definitely change that."

AutoFusion offers a comprehensive set of functions for nonblood products, from generating labels during acquisition, to defining the processing that can be performed, such as thawing of a unit, to handling inventory and tracking, Jaschek says.

NetLims' clients are handling biologics as part of their inventory, just as they would any blood unit or other product they're distributing generally, Jaschek adds.

New to the U.S. market is Global Med Technologies' EdgeCell system, which has been avail-

able in Europe since 2002. EdgeCell manages the scheduling, collection, testing, processing, storage, transfer, and transplant of stem cells, tissue, and cord blood.

The strategic plan, says Csore, calls for incorporating EdgeCell into Global Med's Eldorado suite of blood bank management software products, where it will interface with other modules to offer a complete solution from donation to transplantation.

Global Med also markets Tracs4Life, subscription-based implant management software developed by Biomedical Synergies. Tracs4Life has been installed in several U.S. hospitals, including military facilities. The software manages receiving, storage, transplantation, and adverse event tracking for tissue and other biologics. "Tracs4Life also provides comprehensive recall processes, automatically completes tissue usage cards, and tracks products used in tissue preparation," Csore says.



Csore

Global Med, too, has initiated technology work groups, composed of blood bank, cellular, and other professionals, as well as Global Med development staff. The work groups study needs related to managing blood and nonblood products. "The cell group," says Csore, "is focused on studying trends and gathering

strategic information about the industry three to five years from now."

Karen Wagner is a freelance writer in Forest Lake, Ill.

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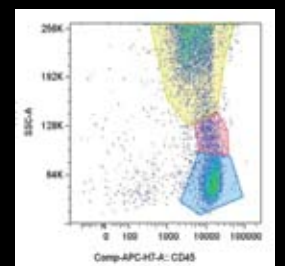
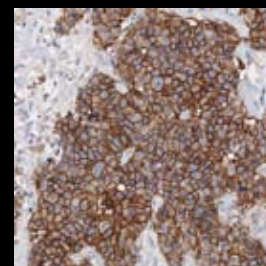
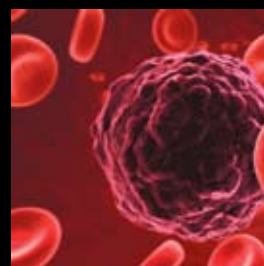
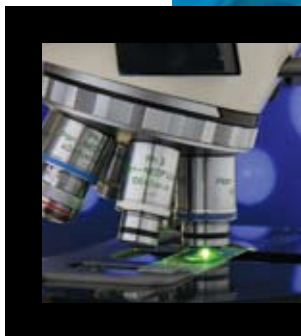
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Blood bank information systems

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See accompanying article on page 16			
Name of blood bank system	Blood Bank Control System	Cerner Millennium PathNet Blood Bank Transfusion	Centricity Laboratory Transfusion Medicine†
First ever/most recent blood bank system installation	1987/July 2009	1986/June 2009	1996/2009
Last major product release (for product featured)	March 2008	February 2009	2009
Total number of contracts for sites operating blood bank system	31	217	11
•Contracts for U.S. hospitals with donor and transfusion services	1	0	0
•Contracts for U.S. hospitals with transfusion service only	0	194	1
•Contracts for U.S. regional blood centers with donor service only	23	0	0
•Contracts for U.S. regional blood centers with donor and transfusion services	4	0	0
•Contracts for centralized transfusion services in the U.S.	2	0	0
•Contracts for foreign hospitals and regional blood centers	0	23 (Australia, Canada, England, Saudia Arabia, Singapore)	10 (Australia, New Zealand, United Kingdom, Canada)
•Contracts for other sites	1 (hemostatic solutions provider)	0	0
Number of contracts signed between June 2008–June 2009	0	—	0
Total number of sites operating blood bank system	120	—	20
Number of sites that went live between June 2008–June 2009	7	—	0
Installations not yet live (hospitals/regional blood centers/others)	1 (0/0/1 – medical device company)	—	1 (1/0/0)
Percentage of installations that are standalone blood bank systems	100%	0	0
Staff to develop/install and support/other* in entire company	15/8/2	1,609/3,277/2,618	46,000 total
Staff to develop/install and support/other* in blood bank systems	—	133/141/146	—
Number of different versions of this software installed	2	2	5
•Versions of product in field covered by FDA 510(k) clearance	BBCS 5.0, 4.4	Cerner Classic, Cerner Millennium	4.0, 4.1
•Versions of product that did not require FDA 510(k) clearance	—	—	2.4, 3.2, 3.3
Range in number of interactive workstations in live sites (average)	10–200 (average, 40)	—	2–10 (average, 6)
Central hardware or services type	IBM iSeries	Hewlett-Packard, IBM	Unix-based platforms
Workstations or PC platform	IBM-compatible workstations, PCs	Microsoft Windows locally or via Citrix thin client	PCs with Windows 2000, XP
Software programming language(s)	RPG 400, Java	Java, Visual Basic, C++, Visual C	C, C++, Unify Vision
Operating system(s)	OS/400	HP-UX, AIX, VMS	Unix
Databases and tools	IBM DB2	Oracle	Unify Dataserver database, Unify Development tool kit
Features (listed as percentage of live installs or based on availability)			
•Full support of ISBT 128 unit labeling	60%	95%	installed
•Bar-code reading of donor and unit information	100%	100%	100%
•Unit inventory	100%	100%	100%
•Autologous and directed unit tracking	100%	100%	100%
•Direct entry of test results	100%	100%	100%
•Crossmatch results	17%	100%	100%
•Electronic crossmatch decisionmaking	3%	>50%	installed
•Antigen typing	100%	100%	installed
•Integrated bedside check for transfusion	not available	1%	available through third party
•Track all steps in production of product	100%	100%	not available
•Print donor unit labels—bar coded	3%	100%	installed
•Interface with automated instruments	100%	>25%	installed
•Interface with blood irradiator or centrifuges	not available	not available	not available
•Centralized transfusion service capability	7%	available	installed
•Donor recruitment and management/donor questionnaire	installed/21%	available through company's LIS or via third party (both features)	not available/not available
•Mobile scheduling	installed	available through company's LIS or via third party	not available
•Laptop-based mobile donor registration module	installed	available through company's LIS or via third party	not available
•Source or recovered plasma management	100%	available through company's LIS or via third party	not available
•Accounts receivable	100%	<25%	not available
•Management reports/ad hoc report writer	100%/100%	100%/100%	100%/100%
•Quality control management/collection management	100%/100%	<25%/<25%	not available/not available
System provides standard HL7 interface?	yes (version 2.x configurable)	yes (versions 2.3, 2.4)	yes (versions 2.2, 2.3)
Interfaces to automated donor infectious disease testing instruments	uni-directional to Ortho, Immucor, Abbott, Olympus, IDM via Surround	—	—
Interfaces to automated ABO/Rh/antibody screening instruments	uni-directional to Ortho, Immucor, Abbott, Olympus	bi-directional to Ortho, Immucor, Abbott, DiaMed/Bio-Rad	bi-directional to Ortho, Immucor, Olympus, DiaMed/Bio-Rad, Wadiana
FDA 510(k)-approved interface to bedside patient ID system?	no	yes (to Cerner Bridge Medical)	no
•HISs interfaced to bedside patient ID system	—	Cerner, Epic, any supporting HL7 messaging	—
Languages (other than English) offered on system	—	German, Spanish, French	none
Tools to help clients validate their systems	validation protocols, flow charts, management guides, validation guide documents, risk mitigation online portal, 24/7 client support	certification guidelines, documentation, and consulting services	validation checklists that cover setup, testing, and verification; internal test case manual used for FDA validation available on request
Complete blood bank ASP solution?	yes	yes	no
Method of charging for ASP service	transaction based	fixed fee	—
Client software required	browser based or requires software be installed on a client PC	requires software be installed on a client PC, Citrix thin client	—
ASP information conduit	operates over the Internet	requires use of a VPN or other dedicated connection	—
Client contracts supported from data center not operated by client	3	197	—
How data center is operated	by a third party (blood bank or IBM business partner)	by vendor	—
System provides indexed field in each test definition for LOINC code?	no	yes	yes
Provide LOINC dictionary for each new installation?	no	yes	no
Information system interfaces	Cerner, Haemonetics, Medware, Meditech	McKesson, Siemens, Epic, Eclipsys, Meditech, others	Cerner, McKesson, Siemens, GE, Meditech, Epic
User group?	yes (meets in person annually)	yes (meets via Internet biannually; in person annually)	yes (meets via Internet quarterly; in person annually)
Source code?	no	escrow	escrow
User can modify screens?	no	yes	no
User-defined report writer/custom programming?	yes/yes	yes/yes	yes/no
Cost for smallest & largest standalone HW/SW/install & training/monthly maintenance	—	—	—
Cost for smallest & largest integrated HW/SW/install & training/monthly maintenance	—	—	—
Distinguishing features (supplied by vendor)	<ul style="list-style-type: none"> complete blood center management package from recruiting to transfusion self-registration and customizable online questionnaire capable of touch-screen integration support a paperless donor room highly configurable to fit the needs of large and small facilities 	<ul style="list-style-type: none"> positive patient ID capabilities at the patient bedside support for increased efficiencies through key capabilities, such as mother-baby linking, online secondary review of results (pre- or post-verification), quality control specific to blood bank workflows, computerized crossmatch, other offerings support for blood bank within a single LIS and EMR architecture 	<ul style="list-style-type: none"> fully integrated with all lab disciplines on a single relational database multi-lab functionality allows separate inventories and tracking of movement of units between labs full security over data access; extensive audit tracking
*other=sales, marketing, administration, other company functions Note: a dash in lieu of an answer means company did not answer question or question is not applicable			†formerly Triple G Ultra

Blood bank information systems

Part 2 of 6	Haemonetics Corp. Steven Slaw sslaw@haemonetics.com 9701 W. Higgins Rd., Suite 500 Rosemont, IL 60018 847-825-2300 www.haemonetics.com	McKesson Joseph R. Stabile joseph.stabile@mckesson.com 5995 Windward Parkway Alpharetta, GA 30005 404-338-4363 www.mckesson.com/laboratory	Medical Information Technology Paul Berthiaume pberthiaume@meditech.com Meditech Circle Westwood, MA 02090 781-821-3000 www.meditech.com
See accompanying article on page 16			
Name of blood bank system	Symphony [†]	Horizon Blood Bank [†]	Blood Bank System-6.0
First ever/most recent blood bank system installation	1991/2009	2004/June 2009	1981/April 2009
Last major product release (for product featured)	2009	July 2006 (new release, fall 2009)	April 2008
Total number of contracts for sites operating blood bank system	12	68	10
•Contracts for U.S. hospitals with donor and transfusion services	0	0	—
•Contracts for U.S. hospitals with transfusion service only	0	65	—
•Contracts for U.S. regional blood centers with donor service only	10	0	—
•Contracts for U.S. regional blood centers with donor and transfusion services	0	0	—
•Contracts for centralized transfusion services in the U.S.	0	0	—
•Contracts for foreign hospitals and regional blood centers	2 (Canada, Hong Kong)	3 (Canada)	—
•Contracts for other sites	0	0	—
Number of contracts signed between June 2008–June 2009	0	5	9
Total number of sites operating blood bank system	12	119	3 [†]
Number of sites that went live between June 2008–June 2009	3	21	1
Installations not yet live (hospitals/regional blood centers/others)	3 (0/3/0)	13 (13/0/0)	—
Percentage of installations that are standalone blood bank systems	10%	0	—
Staff to develop/install and support/other* in entire company	78/65/84	31,500 total	643/1,577/510
Staff to develop/install and support/other* in blood bank systems	28/20/34	49/108/43 ^{††}	22/80/5
Number of different versions of this software installed	3	3	3
•Versions of product in field covered by FDA 510(k) clearance	Prelude 1.3, Symphony 2.1, Symphony 2.4	SafeTrace Tx 3.2, 3.3, 3.4	Magic, client/server, 6.0
•Versions of product that did not require FDA 510(k) clearance	—	—	—
Range in number of interactive workstations in live sites (average)	4–50+ (average, 15)	1–6 (average, 2)	—
Central hardware or services type	Microsoft compatible	Intel- and Unix-based servers	Hewlett-Packard, Dell, EMC, IBM
Workstations or PC platform	Windows XP	PCs	any Windows-compliant PC using Windows 2000 Professional or higher
Software programming language(s)	Java	Delphi, SQL, Crystal Reports	self-developed programming language
Operating system(s)	Windows server	Windows XP Professional, Windows 2003 (Unix optional)	Windows server 2003 Enterprise x64 Edition or Datacenter 64 Edition
Databases and tools	Oracle	Oracle	Meditech database management system
Features (listed as percentage of live installs or based on availability)			
•Full support of ISBT 128 unit labeling	100%	installed	installed
•Bar-code reading of donor and unit information	100%	installed	100%
•Unit inventory	100%	installed	100%
•Autologous and directed unit tracking	100%	installed	100%
•Direct entry of test results	100%	installed	100%
•Crossmatch results	not available	installed	100%
•Electronic crossmatch decisionmaking	not available	installed	installed
•Antigen typing	not available	installed	installed
•Integrated bedside check for transfusion	not available	available in 2009 through company's LIS	installed
•Track all steps in production of product	100%	installed	installed
•Print donor unit labels—bar coded	100%	installed	installed
•Interface with automated instruments	100%	installed	installed
•Interface with blood irradiator or centrifuges	not available	installed	not available
•Centralized transfusion service capability	not available	installed	installed
•Donor recruitment and management/donor questionnaire	not available/100%	available via third party/available via third party	installed/installed
•Mobile scheduling	available via Altivation Software's Hemisphere	available via third party	installed
•Laptop-based mobile donor registration module	100%	available via third party	installed
•Source or recovered plasma management	100%	available via third party	installed
•Accounts receivable	not available	available via third party	installed
•Management reports/ad hoc report writer	100%/100%	installed/installed	100%/100%
•Quality control management/collection management	not available/100%	installed/available through company's LIS	installed/installed
System provides standard HL7 interface?	no	yes (version 2.2 and higher)	yes (version 2.4)
Interfaces to automated donor infectious disease testing instruments	uni-directional to Ortho, Immucor, Abbott, Olympus	—	—
Interfaces to automated ABO/Rh/antibody screening instruments	uni-directional to Ortho, Immucor, Abbott, Olympus	uni- and bi-directional to Ortho, Immucor, Olympus	uni-directional to Ortho, Immucor
FDA 510(k)-approved interface to bedside patient ID system?	no	no	yes (to Meditech solutions)
•HISs interfaced to bedside patient ID system	—	—	—
Languages (other than English) offered on system	—	—	Spanish in development
Tools to help clients validate their systems	user manuals, configuration worksheets, training classes and materials, validation guide, others	validation services and guidelines available for purchase from recommended third parties	user manual to address validation issues, training
Complete blood bank ASP solution?	yes	yes	no
Method of charging for ASP service	fixed fee	fixed fee or transaction based	—
Client software required	browser based or requires software be installed on a client PC	browser based or requires software be installed on a client PC	—
ASP information conduit	requires use of a VPN or other dedicated connection	operates over the Internet or requires use of a VPN or other dedicated connection	—
Client contracts supported from data center not operated by client	—	0	—
How data center is operated	by vendor	—	—
System provides indexed field in each test definition for LOINC code?	no	no	yes
Provide LOINC dictionary for each new installation?	no	no	no
Information system interfaces	BBCS, Cerner, Mak-System, Medware, Wyndgate	McKesson	Cerner, Siemens, McKesson, others
User group?	yes (meets in person annually)	yes (meets in person annually)	yes (meets in person and via Internet)
Source code?	escrow	escrow	yes
User can modify screens?	no	no	yes
User-defined report writer/custom programming?	yes/yes	yes/no	yes/no
Cost for smallest & largest standalone HW/SW/install & training/monthly maintenance	—	—	—
Cost for smallest & largest integrated HW/SW/install & training/monthly maintenance	—	—	—
Distinguishing features (supplied by vendor)	<ul style="list-style-type: none"> through the use of devices, consulting services, and software, Haemonetics provides a comprehensive approach to assisting customers complete software solution for blood centers, from recruitment through laboratory testing commitment to the entire blood management market, from donors to patients, through company's software, services, and devices 	<ul style="list-style-type: none"> numerous safety features, including Patient-At-A-Glance Bar patented CTS feature as part of the "Method and System for Managing Blood Products" Wyndgate's Service 360 commitment to ensure a quality implementation and support experience 	<ul style="list-style-type: none"> blood bank an integrated component of Meditech's HCIS blood bank and patient care solution fully integrated, fostering the sharing of blood bank transfusion information into a transfusion administration record, which uses bar-code readers to promote bedside transfusion verification provides electronic crossmatching
*other=sales, marketing, administration, other company functions Note: a dash in lieu of an answer means company did not answer question or question is not applicable	[†] formerly IDM Symphony	[†] software for Horizon Blood Bank supplied by Wyndgate Technologies ^{††} from Wyndgate Technologies (software supplier)	[†] based on total number of corporate sites, not individual sites

Tabulation does not represent an endorsement by the College of American Pathologists.

Blood bank information systems

Part 3 of 6	Medical Information Technology Paul Berthiaume pberthiaume@meditech.com Meditech Circle Westwood, MA 02090 781-821-3000 www.meditech.com	Medical Information Technology Paul Berthiaume pberthiaume@meditech.com Meditech Circle Westwood, MA 02090 781-821-3000 www.meditech.com	Mediware Information Systems Steve Sedlock steve.sedlock@mediware.com 1900 Spring Rd., Suite 450 Oak Brook, IL 60523 630-218-2700 www.mediware.com
See accompanying article on page 16			
Name of blood bank system	Blood Bank System—Client/Server	Blood Bank System—Magic	HCLL Transfusion and Donor
First ever/most recent blood bank system installation	1981/June 2009	1981/June 2009	1980/2009
Last major product release (for product featured)	April 2008	July 2008	2008
Total number of contracts for sites operating blood bank system	343	777	100
•Contracts for U.S. hospitals with donor and transfusion services	—	—	2
•Contracts for U.S. hospitals with transfusion service only	—	—	68
•Contracts for U.S. regional blood centers with donor service only	—	—	5
•Contracts for U.S. regional blood centers with donor and transfusion services	—	—	2
•Contracts for centralized transfusion services in the U.S.	—	—	20
•Contracts for foreign hospitals and regional blood centers	59 (Canada, Puerto Rico, Ireland, UAE, others)	88 (Canada, Puerto Rico, Ireland, UAE, others)	3 (Singapore, Saudi Arabia, Ireland)
•Contracts for other sites	—	—	0
Number of contracts signed between June 2008–June 2009	36	14	—
Total number of sites operating blood bank system	296†	662†	249
Number of sites that went live between June 2008–June 2009	43	10	110
Installations not yet live (hospitals/regional blood centers/others)	31	4	120 (120/0/0)
Percentage of installations that are standalone blood bank systems	—	—	85%
Staff to develop/install and support/other* in entire company	643/1,577/510	643/1,577/510	50/85/45
Staff to develop/install and support/other* in blood bank systems	22/80/5	22/80/5	32/50/11
Number of different versions of this software installed	3	3	12
•Versions of product in field covered by FDA 510(k) clearance	Magic, client/server, 6.0	Magic, client/server, 6.0	3.0
•Versions of product that did not require FDA 510(k) clearance	—	—	HCLL 2.9.0, 2.9.1, 2.9.2, 2.9.3, 2.9.4, 2.9.5, 3.1.0, 3.2.0; Donor 2.0.0, 2.1.0, 2.2.0
Range in number of interactive workstations in live sites (average)	—	—	2–50 (average, 8)
Central hardware or services type	Hewlett-Packard, Dell, EMC, IBM	Hewlett-Packard, Dell, EMC, IBM	Microsoft compatible
Workstations or PC platform	Hewlett-Packard, Dell, EMC, IBM	Hewlett-Packard, Dell, EMC, IBM	Microsoft compatible
Software programming language(s)	Magic	Magic	Visual Basic, C++, Microsoft .Net
Operating system(s)	Windows 2000, XP (client); Windows 2000, 2003 (server)	Windows 2000, XP (client); Magic (server)	Windows XP, 2000, 2003, 2005
Databases and tools	Magic, SQL Server 2005	Magic, SQL Server 2005	Microsoft SQL 2000, 2005
Features (listed as percentage of live installs or based on availability)			
•Full support of ISBT 128 unit labeling	installed	100%	installed
•Bar-code reading of donor and unit information	100%	100%	installed
•Unit inventory	100%	100%	installed
•Autologous and directed unit tracking	100%	100%	installed
•Direct entry of test results	100%	100%	installed
•Crossmatch results	100%	100%	installed
•Electronic crossmatch decisionmaking	installed	installed	installed
•Antigen typing	installed	installed	installed
•Integrated bedside check for transfusion	installed	installed	available but not installed
•Track all steps in production of product	installed	100%	installed
•Print donor unit labels—bar coded	installed	installed	installed
•Interface with automated instruments	installed	installed	installed
•Interface with blood irradiator or centrifuges	not available	not available	not available
•Centralized transfusion service capability	installed	100%	installed
•Donor recruitment and management/donor questionnaire	installed/installed	installed/installed	installed/not available
•Mobile scheduling	installed	installed	not available
•Laptop-based mobile donor registration module	installed	installed	not available
•Source or recovered plasma management	installed	installed	not available
•Accounts receivable	installed	installed	installed
•Management reports/ad hoc report writer	100%/100%	100%/100%	installed/installed
•Quality control management/collection management	installed/installed	installed/installed	installed/installed
System provides standard HL7 interface?	yes (version 2.4)	yes (version 2.4)	yes (version 3.2)
Interfaces to automated donor infectious disease testing instruments	—	—	uni-directional to BSL
Interfaces to automated ABO/Rh/antibody screening instruments	uni-directional to Ortho, Immucor	uni-directional to Ortho, Immucor	uni-directional to Biotest
FDA 510(k)-approved interface to bedside patient ID system?	yes (to Meditech solutions)	yes (to Meditech solutions)	yes (to Mediware BloodSafe Tx)
•HISs interfaced to bedside patient ID system	—	—	—
Languages (other than English) offered on system	Spanish in development	Spanish in development	none
Tools to help clients validate their systems	user manual to address validation issues, training	user manual to address validation issues, training	validation scripts
Complete blood bank ASP solution?	no	no	no
Method of charging for ASP service	—	—	—
Client software required	—	—	—
ASP information conduit	—	—	—
Client contracts supported from data center not operated by client	—	—	—
How data center is operated	—	—	—
System provides indexed field in each test definition for LOINC code?	yes	yes	no
Provide LOINC dictionary for each new installation?	no	no	no
Information system interfaces	Cerner, Siemens, McKesson, others	Cerner, Siemens, McKesson, others	Cerner, McKesson, Epic, Meditech, SCC Soft Computer, Sunquest, Opus, Invision, others
User group?	yes (meets in person and via Internet)	yes (meets in person and via Internet)	yes (meets in person annually; via Internet quarterly)
Source code?	yes	yes	escrow
User can modify screens?	yes	yes	yes
User-defined report writer/custom programming?	yes/no	yes/no	yes/no
Cost for smallest & largest standalone HW/SW/install & training/monthly maintenance	—	—	\$19.259k/\$46.5k/\$71.63k/\$.894k to \$32.562k/\$265k/\$75.09k/\$4.9k
Cost for smallest & largest integrated HW/SW/install & training/monthly maintenance	—	—	\$33.881k/\$58.5k/\$85.98k/\$1.414k to \$49.298k/\$277k/\$89.44k/\$5.42k
Distinguishing features (supplied by vendor)	<ul style="list-style-type: none"> • blood bank an integrated component of Meditech's HCIS • blood bank and patient care solution fully integrated, fostering the sharing of blood bank transfusion information into a transfusion administration record, which uses bar-code readers to promote bedside transfusion verification • provides electronic crossmatching 	<ul style="list-style-type: none"> • blood bank an integrated component of Meditech's HCIS • blood bank and patient care solution fully integrated, fostering the sharing of blood bank transfusion information into a transfusion administration record, which uses bar-code readers to promote bedside transfusion verification • provides electronic crossmatching 	<ul style="list-style-type: none"> • offers a seamlessly integrated, ClosedLoop solution that begins with donor collection and ends with final disposition of blood product • uses color-coded alerts for inventory management and patient data • over 60 safety checks performed at the time of editing, test entry, selection of products, and issuing
*other=sales, marketing, administration, other company functions Note: a dash in lieu of an answer means company did not answer question or question is not applicable		†based on total number of corporate sites, not individual sites	

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Blood bank information systems

Part 4 of 6	Mediware Information Systems Todd Collins todd.collins@mediware.com 7800 Belfort Parkway, Suite 291 Jacksonville, FL 32256 904-281-0467 www.mediware.com	NetLims LLC Avi Allerhand avi@netlims.com 111 Town Square Place, Suite 700 Jersey City, NJ 07310 201-894-5300 www.netlims.com	Psyche Systems Corp. Lisa-Jean Clifford lj@psychesystems.com 321 Fortune Blvd. Milford, MA 01757 508-473-1500 www.psychesystems.com
See accompanying article on page 16			
Name of blood bank system	LifeTrak	AutoFusion [†]	Systematic Blood Bank
First ever/most recent blood bank system installation	1980/June 2009	2002/April 2009	1987/October 2008
Last major product release (for product featured)	June 2009	March 2009	—
Total number of contracts for sites operating blood bank system	14	3	16
•Contracts for U.S. hospitals with donor and transfusion services	6	0	0
•Contracts for U.S. hospitals with transfusion service only	0	0	16
•Contracts for U.S. regional blood centers with donor service only	2	0	0
•Contracts for U.S. regional blood centers with donor and transfusion services	4	0	0
•Contracts for centralized transfusion services in the U.S.	1	0	0
•Contracts for foreign hospitals and regional blood centers	0	3 (Israel)	0
•Contracts for other sites	1 (donor testing)	0	0
Number of contracts signed between June 2008–June 2009	2	0	0
Total number of sites operating blood bank system	94	24	16
Number of sites that went live between June 2008–June 2009	4	5	2
Installations not yet live (hospitals/regional blood centers/others)	3 (2/1/0)	8 (8/0/0)	3 (3/0/0)
Percentage of installations that are standalone blood bank systems	27%	0	77%
Staff to develop/install and support/other* in entire company	50/85/45	59/40/14	20/20/9
Staff to develop/install and support/other* in blood bank systems	32/50/11	7/10/3	—
Number of different versions of this software installed	8	3	1
•Versions of product in field covered by FDA 510(k) clearance	2.03, 3.02	3.02-20080215	SBB 3.0
•Versions of product that did not require FDA 510(k) clearance	3.1.0, 3.1.2, 3.2, 3.3, 3.4.1, 4.2	3.01-20070501, 2.42-20040301	—
Range in number of interactive workstations in live sites (average)	7–335 (average, 100)	8–37 (average, 22)	1–5 (average, 2)
Central hardware or services type	Intel-based server (Linux)	Wintel (HP, IBM, Dell)	HP Alpha
Workstations or PC platform	Microsoft compatible	Wintel (HP, IBM, Dell)	Windows compatible
Software programming language(s)	Oracle Forms and Reports	C++	Fortran
Operating system(s)	Linux	Windows XP, 2000	VMS
Databases and tools	Oracle	Microsoft SQL, Oracle	proprietary
Features (listed as percentage of live installs or based on availability)			
•Full support of ISBT 128 unit labeling	87%	100%	100%
•Bar-code reading of donor and unit information	100%	100%	100%
•Unit inventory	94%	100%	100%
•Autologous and directed unit tracking	94%	100%	100%
•Direct entry of test results	94%	100%	100%
•Crossmatch results	not available	100%	100%
•Electronic crossmatch decisionmaking	not available	100%	100%
•Antigen typing	installed	100%	100%
•Integrated bedside check for transfusion	available through company's LIS or via third party	available but not installed	not available
•Track all steps in production of product	94%	100%	100%
•Print donor unit labels—bar coded	94%	82%	100%
•Interface with automated instruments	6%	100%	available in October 2009
•Interface with blood irradiator or centrifuges	available in December 2009	100%	not available
•Centralized transfusion service capability	available through company's LIS or via third party	100%	100%
•Donor recruitment and management/donor questionnaire	94%/94%	82%/82%	not available/not available
•Mobile scheduling	94%	available but not installed	not available
•Laptop-based mobile donor registration module	available in September 2009	100%	not available
•Source or recovered plasma management	94%	100%	not available
•Accounts receivable	—	available but not installed	not available
•Management reports/ad hoc report writer	100%/100%	100%/available through company's LIS or via third party	100%/100%
•Quality control management/collection management	100%/94%	available through company's LIS or via third party/100%	100%/not available
System provides standard HL7 interface?	yes (version 2.5)	yes (versions 2.3, 2.5)	yes (version 2.3)
Interfaces to automated donor infectious disease testing instruments	uni-directional to Ortho, Immucor, Abbott, Olympus, DiaMed/Bio-Rad, Chiron, Biotest	uni-directional to Vidas; bi-directional to Abbott	—
Interfaces to automated ABO/Rh/antibody screening instruments	uni-directional to Ortho, Immucor, Olympus, DiaMed/Bio-Rad, Biotest	uni-directional to Wadiana; bi-directional to Immucor	—
FDA 510(k)-approved interface to bedside patient ID system?	yes	no	no
•HISs interfaced to bedside patient ID system	Cerner, McKesson, Epic, Meditech, SCC Soft Computer, Sunquest, Opus, Invision, others	—	—
Languages (other than English) offered on system	—	Hebrew	—
Tools to help clients validate their systems	release notes, validation services, training	laboratory activity reports, system control embedded screens	validation guide
Complete blood bank ASP solution?	yes	no	yes
Method of charging for ASP service	fixed fee	—	fixed fee
Client software required	browser based	—	browser based
ASP information conduit	requires use of a VPN or other dedicated connection	—	requires use of a VPN or other dedicated connection
Client contracts supported from data center not operated by client	1	—	14
How data center is operated	by a third party (Peer1)	—	by vendor
System provides indexed field in each test definition for LOINC code?	no	yes	yes
Provide LOINC dictionary for each new installation?	no	no	no
Information system interfaces	Cerner	—	—
User group?	yes (meets in person at least annually)	yes (meets in person approximately biannually)	yes (meets in person every 2 years; via Internet daily)
Source code?	escrow	escrow	escrow
User can modify screens?	no	yes	yes
User-defined report writer/custom programming?	no/no	yes/yes	yes/no
Cost for smallest & largest standalone HW/SW/install & training/monthly maintenance	\$15k/\$75k—/\$2.085k to \$250k/\$400k—/\$35.415k	\$25k/\$150k—/\$3k to \$70k/\$500k—/\$8k	—
Cost for smallest & largest integrated HW/SW/install & training/monthly maintenance	—	—/\$275k—/\$4.5k to —/\$1.8k—/\$30k	—
Distinguishing features (supplied by vendor)	<ul style="list-style-type: none"> comprehensive donor-management system that features full integration with recruitment and retention products to streamline efficiencies used by prestigious hospitals and many large independent blood centers in the United States from recruiting to testing to transfusion, more than 60% of the nation's blood supply uses Mediware technology 	<ul style="list-style-type: none"> graphical, user-friendly, simple interface higher level of automation and decision support increase productivity and safety user-level configuration, setup, and user logic engine integration provide unparalleled ability to customize 	<ul style="list-style-type: none"> full online patient history offered as a standalone product and in a hosted environment ISBT 128 compliant; FDA approved
*other=sales, marketing, administration, other company functions Note: a dash in lieu of an answer means company did not answer question or question is not applicable		[†] product received FDA approval in July; not yet installed in United States	

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Blood bank information systems

Part 5 of 6	SCC Soft Computer Ellie Vahman ellie@softcomputer.com 5400 Tech Data Drive Clearwater, FL 33760 727-789-0100 www.softcomputer.com	SCC Soft Computer Ellie Vahman ellie@softcomputer.com 5400 Tech Data Drive Clearwater, FL 33760 727-789-0100 www.softcomputer.com	Sunquest Information Systems Elinore Craig elinore.craig@sunquestinfo.com 250 S. Williams Blvd. Tucson, AZ 85711 877-239-6337 www.sunquestinfo.com
See accompanying article on page 16			
Name of blood bank system	SoftBank II	SoftDonor	Sunquest Laboratory Blood Bank & Blood Donor modules†
First ever/most recent blood bank system installation	1992/June 2009	1992/June 2009	1985/2009
Last major product release (for product featured)	June 2009	January 2009	2009
Total number of contracts for sites operating blood bank system	173	17	353
•Contracts for U.S. hospitals with donor and transfusion services	15	15	37
•Contracts for U.S. hospitals with transfusion service only	152	0	303
•Contracts for U.S. regional blood centers with donor service only	0	1	0
•Contracts for U.S. regional blood centers with donor and transfusion services	0	0	0
•Contracts for centralized transfusion services in the U.S.	0	0	0
•Contracts for foreign hospitals and regional blood centers	6 (Canada)	1 (Canada)	13 (Bermuda, Canada, Ireland, UAE, UK)
•Contracts for other sites	0	0	0
Number of contracts signed between June 2008–June 2009	4	1	8
Total number of sites operating blood bank system	268	46	400+
Number of sites that went live between June 2008–June 2009	31	3	4
Installations not yet live (hospitals/regional blood centers/others)	11 (11/0/0)	1 (0/0/1 – university health system)	8 (8/0/0)
Percentage of installations that are standalone blood bank systems	4%	—	0
Staff to develop/install and support/other* in entire company	833/419/240	833/419/240	—
Staff to develop/install and support/other* in blood bank systems	35/23/15	35/23/15	—
Number of different versions of this software installed	8	3	3
•Versions of product in field covered by FDA 510(k) clearance	19.1, 21, 22, 23, 23 with SoftScape, 23.1 with DMSI (Oracle), 23.2, 25	4.3, 4.4, 4.5	Sunquest Laboratory Blood Bank and Blood Donor v6.0.1 for Laboratory v6.1 and v6.2
•Versions of product that did not require FDA 510(k) clearance	—	—	Sunquest Laboratory Blood Bank and Blood Donor v6.0.2 distributed with Laboratory v6.3, Sunquest Laboratory Blood Bank and Blood Donor v6.4
Range in number of interactive workstations in live sites (average)	1–100+ (average, 8)	3–10 (average, 8)	10–100+ (average, 20+)
Central hardware or services type	IBM pSeries	IBM pSeries	IBM pSeries, HP Integrity
Workstations or PC platform	PC	PC	Dell, HP Windows
Software programming language(s)	C, C++, .Net	C, C++, .Net	ANSI Standard M, Caché Script, Standard C/C++, Visual Basic, Visual C++, Active X
Operating system(s)	IBM AIX (Unix)	IBM AIX (Unix)	AIX, HP-UX, OpenVMS
Databases and tools	Oracle	Oracle	InterSystems Caché
Features (listed as percentage of live installs or based on availability)			
•Full support of ISBT 128 unit labeling	70%	available	100%
•Bar-code reading of donor and unit information	100%	100%	100%
•Unit inventory	100%	100%	100%
•Autologous and directed unit tracking	100%	100%	100%
•Direct entry of test results	100%	100%	100%
•Crossmatch results	100%	available via SCC's SoftBank	100%
•Electronic crossmatch decisionmaking	70%	available via SCC's SoftBank	15%
•Antigen typing	100%	100%	100%
•Integrated bedside check for transfusion	available in 2010	available in 2010	1%
•Track all steps in production of product	100%	100%	100%
•Print donor unit labels—bar coded	30%	available through company's LIS or via third party	15%
•Interface with automated instruments	30%	available via SCC's SoftBank	15%
•Interface with blood irradiator or centrifuges	10%	available via SCC's SoftBank	not available
•Centralized transfusion service capability	10%	available via SCC's SoftBank	100%
•Donor recruitment and management/donor questionnaire	available via SCC's SoftDonor (both features)	100%/100%	15%/not available
•Mobile scheduling	available via SCC's SoftDonor	50%	not available
•Laptop-based mobile donor registration module	available via SCC's SoftDonor	90%	not available
•Source or recovered plasma management	10%	100%	installed
•Accounts receivable	95%	100%	90% (charge capture)
•Management reports/ad hoc report writer	100%/100%	100%/100%	100%/100%
•Quality control management/collection management	100%/100% (specimen collection)	50%/100%	100%/25%
System provides standard HL7 interface?	yes (versions 2.1–2.5)	yes (versions 2.1–2.5)	yes (versions 2.3–3.0)
Interfaces to automated donor infectious disease testing instruments	—	—	—
Interfaces to automated ABO/Rh/antibody screening instruments	uni- and bi-directional to Ortho, Immucor	—	uni-directional to Ortho, Immucor, Abbott, Olympus, DiaMed/Bio-Rad; bi-directional to Ortho
FDA 510(k)-approved interface to bedside patient ID system?	yes (to SCC SoftID, CareFusion, BD.ID, Lattice)	yes (to SCC SoftID, CareFusion, BD.ID, Lattice)	yes (to Sunquest solutions)
•HISs interfaced to bedside patient ID system	—	—	Epic, Cerner, McKesson, Siemens, Eclipsys
Languages (other than English) offered on system	French	none	—
Tools to help clients validate their systems	critical control points and instructions on how to write test cases with electronic screen capture	critical control points and instructions on how to write test cases with electronic screen capture	client testing guidelines, documentation, training, consulting services
Complete blood bank ASP solution?	yes	yes	no
Method of charging for ASP service	fixed fee	fixed fee	—
Client software required	requires software be installed on a client PC	requires software be installed on a client PC	—
ASP information conduit	operates over the Internet	operates over the Internet	—
Client contracts supported from data center not operated by client	0	0	—
How data center is operated	by vendor	by vendor	—
System provides indexed field in each test definition for LOINC code?	no	no	no
Provide LOINC dictionary for each new installation?	no	no	no
Information system interfaces	Meditech, McKesson, Siemens, GE Healthcare, Cerner, CPSI, QuadraMed, Epic, Eclipsys, others	Meditech, McKesson, Siemens, GE Healthcare, Cerner, CPSI, QuadraMed, Epic, Eclipsys, others	Epic, McKesson, Meditech, Siemens, Eclipsys, Cerner, GE Healthcare, others
User group?	yes (meets in person annually)	yes (meets in person annually)	yes (meets in person and via Internet quarterly)
Source code?	escrow	escrow	escrow
User can modify screens?	no	no	no
User-defined report writer/custom programming?	yes/yes	yes/yes	yes/yes
Cost for smallest & largest standalone HW/SW/install & training/monthly maintenance	\$25k/\$30k/\$50k/\$.45k to \$50k/\$125k/\$80k/\$1.875k	\$25k/\$30k/\$50k/\$.45k to \$50k/\$125k/\$80k/\$1.875k	—
Cost for smallest & largest integrated HW/SW/install & training/monthly maintenance	\$40k/\$215k/\$150k/\$4.59k to \$400k/\$2.5m/\$1.1m/\$35k	\$40k/\$215k/\$150k/\$4.59k to \$400k/\$2.5m/\$1.1m/\$35k	—
Distinguishing features (supplied by vendor)	<ul style="list-style-type: none"> warns user of inconsistencies, errors, omissions, and presents user with an exception to describe problem before user can proceed; exception sent to manager for review user-definable worksheet allows for resulting of patient, unit, and crossmatch tests in batch mode emergency issue feature combines tasks 	<ul style="list-style-type: none"> powerful, user-defined test algorithms can automatically order required, repeat, and confirmatory tests detailed donor database search capability increases effectiveness of targeted recruiting efforts all significant steps in the donation process documented 	<ul style="list-style-type: none"> vein-to-vein data management of specimen collection, patient testing, crossmatch, issue, and transfusion full integration with LIS for reporting, inquiry, maintenance, and quality assurance unit inventory tracking and management
*other=sales, marketing, administration, other company functions Note: a dash in lieu of an answer means company did not answer question or question is not applicable			†formerly Misys Laboratory Blood Bank

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Blood bank information systems

Part 6 of 6	Wyndgate Technologies Scott Dustin dustins@globalmedtech.com 4925 Robert J. Mathews Parkway, Suite 100 El Dorado Hills, CA 95762 916-404-8400 www.wyndgate.com	Wyndgate Technologies Scott Dustin dustins@globalmedtech.com 4925 Robert J. Mathews Parkway, Suite 100 El Dorado Hills, CA 95762 916-404-8400 www.wyndgate.com	Wyndgate Technologies Scott Dustin dustins@globalmedtech.com 4925 Robert J. Mathews Parkway, Suite 100 El Dorado Hills, CA 95762 916-404-8400 www.wyndgate.com
See accompanying article on page 16			
Name of blood bank system	EIDorado Donor	SafeTrace	SafeTrace Tx
First ever/most recent blood bank system installation	1996/—†	1996/January 2009	1996/July 2009
Last major product release (for product featured)	August 2008	February 2006	May 2009
Total number of contracts for sites operating blood bank system	5†	57	266
•Contracts for U.S. hospitals with donor and transfusion services	2†	15	15
•Contracts for U.S. hospitals with transfusion service only	0	0	213
•Contracts for U.S. regional blood centers with donor service only	1†	23	0
•Contracts for U.S. regional blood centers with donor and transfusion services	1†	10	10
•Contracts for centralized transfusion services in the U.S.	0	5	19
•Contracts for foreign hospitals and regional blood centers	1 (Egypt)†	3 (Botswana, Ethiopia)	7 (Botswana, Ethiopia, Canada, Puerto Rico)
•Contracts for other sites	0	1 (hospital donor center using other transfusion)	2 (regional donor centers with transfusion only)
Number of contracts signed between June 2008–June 2009	4	2	23
Total number of sites operating blood bank system	0†	281	300
Number of sites that went live between June 2008–June 2009	0	19	24
Installations not yet live (hospitals/regional blood centers/others)	5 (3/2/0)	11 (7/4/0)	95 (94/1/0)
Percentage of installations that are standalone blood bank systems	0	—	0
Staff to develop/install and support/other* in entire company	49/108/43	49/108/43	49/108/43
Staff to develop/install and support/other* in blood bank systems	49/108/43	49/108/43	49/108/43
Number of different versions of this software installed	2	8	8
•Versions of product in field covered by FDA 510(k) clearance	all	all	all
•Versions of product that did not require FDA 510(k) clearance	—	—	—
Range in number of interactive workstations in live sites (average)	—	4–100+ (average, 20)	1–105 (average, 7)
Central hardware or services type	Windows	Unix-based servers, Sun, Hewlett-Packard, IBM	Intel based, determined by Oracle, ASP
Workstations or PC platform	Windows	PCs	PCs
Software programming language(s)	C++	Delphi, PL/SQL, .Net	Delphi
Operating system(s)	Windows, determined by Oracle	Unix	Windows XP Professional, Windows 2003, determined by Oracle
Databases and tools	Oracle	Oracle	Oracle, Crystal Reports
Features (listed as percentage of live installs or based on availability)			
•Full support of ISBT 128 unit labeling	installed	100%	100%
•Bar-code reading of donor and unit information	installed	100%	100%
•Unit inventory	installed	100%	100%
•Autologous and directed unit tracking	installed	100%	100%
•Direct entry of test results	installed	100%	100%
•Crossmatch results	available via Wyndgate's SafeTrace Tx	available via Wyndgate's SafeTrace Tx	100%
•Electronic crossmatch decisionmaking	available via Wyndgate's SafeTrace Tx	available via Wyndgate's SafeTrace Tx	70%
•Antigen typing	installed	100%	100%
•Integrated bedside check for transfusion	not available	not available	available via third party
•Track all steps in production of product	installed	100%	100%
•Print donor unit labels—bar coded	installed	100%	installed
•Interface with automated instruments	available in 2009	100%	installed
•Interface with blood irradiator or centrifuges	available in 2009	not available	installed
•Centralized transfusion service capability	not available	installed	100%
•Donor recruitment and management/donor questionnaire	available via Wyndgate's eDonor/available via Wyndgate's EIDorado Donor Doc	100%/available via Wyndgate's EIDorado Donor Doc	available via Wyndgate's eDonor/available via Wyndgate's EIDorado Donor Doc
•Mobile scheduling	available via Wyndgate's eDonor	100%	available via Wyndgate's eDonor
•Laptop-based mobile donor registration module	not available	installed	available via Wyndgate's SafeTrace
•Source or recovered plasma management	not available	installed	available via Wyndgate's SafeTrace
•Accounts receivable	available via third party	available via third party	available via third party
•Management reports/ad hoc report writer	installed/not available	100%/100%	100%/installed
•Quality control management/collection management	available via Wyndgate's Sapanet/installed	available via Wyndgate's Sapanet/100%	installed/—
System provides standard HL7 interface?	no	no	yes (versions 2.1, 2.2, 2.3)
Interfaces to automated donor infectious disease testing instruments	—	uni-directional to Ortho, Immucor, Abbott, Olympus, DiaMed/Bio-Rad, Hitachi, CaridianBCT; bi-directional to Hitachi, CaridianBCT	—
Interfaces to automated ABO/Rh/antibody screening instruments	—	uni-directional to Ortho, Immucor, Olympus	—
FDA 510(k)-approved interface to bedside patient ID system?	no	no	no
•HISs interfaced to bedside patient ID system	—	—	—
Languages (other than English) offered on system	—	—	—
Tools to help clients validate their systems	validation templates/test plan for safety critical control checks; validation services available through PeopleMed (Wyndgate Technologies subsidiary)	validation guidelines/templates/test plan for safety critical control checks; validation services available through PeopleMed (Wyndgate Technologies subsidiary)	validation guidelines/templates/test plan for safety critical control checks; validation services available through PeopleMed (Wyndgate Technologies subsidiary)
Complete blood bank ASP solution?	yes	yes	yes
Method of charging for ASP service	fixed fee or transaction based	fixed fee or transaction based	fixed fee or transaction based
Client software required	Citrix or remote desktop	Citrix or remote desktop	Citrix or remote desktop
ASP information conduit	requires use of a VPN or other dedicated connection	requires use of a VPN or other dedicated connection	requires use of a VPN or other dedicated connection
Client contracts supported from data center not operated by client	3	9	3
How data center is operated	by a third party (Hemo-Net)	by a third party (Hemo-Net)	by a third party (Hemo-Net)
System provides indexed field in each test definition for LOINC code?	no	no	no
Provide LOINC dictionary for each new installation?	no	no	no
Information system interfaces	Haemonetics	Haemonetics, Wyndgate Technologies	McKesson, Cerner, Siemens, GE Healthcare, CPSI, Meditech, SCC Soft Computer, Sysmex, Sunquest, others
User group?	yes (meets in person annually; via Internet, teleconferences)	yes (meets in person annually; via Internet, teleconferences)	yes (meets in person annually; via Internet, teleconferences)
Source code?	escrow	escrow	escrow
User can modify screens?	no	no	no
User-defined report writer/custom programming?	yes/yes	yes/yes	yes/yes
Cost for smallest & largest standalone HW/SW/install & training/monthly maintenance	—	—	—
Cost for smallest & largest integrated HW/SW/install & training/monthly maintenance	—	—	—
Distinguishing features (supplied by vendor)	<ul style="list-style-type: none"> extensive safety checks throughout system open workflow with extensive user-defined table-based rules Service 360 commitment to ensure quality customer implementation and support experience 	<ul style="list-style-type: none"> extensive safety checks throughout system; commitment to compliance open workflow with extensive user-defined table-based rules Service 360 commitment to ensure quality customer implementation and support experience 	<ul style="list-style-type: none"> extensive safety checks throughout system; commitment to compliance open workflow with extensive user-defined table-based rules Service 360 commitment to ensure quality customer implementation and support experience
*other=sales, marketing, administration, other company functions Note: a dash in lieu of an answer means company did not answer question or question is not applicable			
	†contracts signed for product but product not yet live		

Tabulation does not represent an endorsement by the College of American Pathologists.