Blood bank information systems

Part 1 of 7

See accompanying article on page 56

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Name of blood bank system	Blood Bank Control System	PathNet	IDM Select Series for Blood Centers
First/most recent system installation (for current release)	1987/2002	1997/2002	1999/2002
First ever blood bank system installation	—	1985	1991
Total number of contracts for operational sites	25	298	8
•U.S. hospitals—donor and transfusion service	0	35	0
•U.S. hospitals—transfusion service only	0	228	0
•U.S. regional blood centers—donor service only	18	0	7
•U.S. regional blood centers—donor and transfusion service	7	4	0
•Centralized transfusion services in the U.S.	0	0	0
•Foreign hospitals/foreign regional blood centers	0	31	1 (Hong Kong)
Installations underway that are not yet live (hospitals/regional blood centers)	—	30 (30/0)	0
Total number of sites operational	23	~450	8
Percentage of installations that are stand-alone systems	100%	<5%	100%
Staff to develop/install/support/other* •In entire company/in blood bank systems *other=sales, marketing, administration, other co. functions	—/9-5-4-7	750-1,700-750-1,125/22-24-10-25	24-3-13-10/—
No. of different versions of software installed	—	2	5
•Versions of product covered by FDA 510(k) clearance	v. 4.4	Classic, Millennium	DID, DMIS 1.2, CDIS 1.0
•Versions of product that did not require FDA 510(k) clearance	n/a	n/a	DMIS 1.2.2 & 1.2.1, CDIS 1.2.2 & 1.1.2, InTouch 1.5
Range in No. of terminals/workstations in live sites (ave.)	10–200+ (ave. 50)	5–500+ (ave. 10–20)	4–80 (ave. 30)
•Central hardware	IBM AS/400	Compaq, IBM RS/6000	HP NetServers, HP 9000 business servers
•Terminals/workstations	IBM-compatible workstations and PCs	PCs, terminals (Classic)	Unix terminals/X-terminals, PCs, workstations
•Central hardware redundant/fault-tolerant?	yes	yes	yes
Software •Programming language(s)	RPG	Cobol, C++, Visual Basic	Java, C++, C
•Operating system(s)	IBM OS/400	Open VMS, AIX	Unix
•Database platform	IBM DB2	Cerner proprietary (Classic), Oracle (Millennium)	Oracle
•Full transaction logging?	yes	yes	yes
Features (listed as a percentage of live installations, available but no installations, or not available)			
•Unit inventory	100%	100%	100%
•Autologous and directed unit tracking	100%	100%	100%
•Crossmatch results	15%	100%	n/a
•Print donor unit labels—bar coded	n/a	10%	100%
•Full support of ISBT 128 unit labeling	available in 2002	100%	n/a
•Donor recruitment	100%	15%	100%
•Mobile scheduling	95%	15%	100%
•Interface with blood grouping machines	75%	30%	available through IDM Surround
•Source/recovered plasma management	100%	100%	100%
•Bar-code reading wherever donor number is entered	100%	100%	100%
•Ad hoc report writer	100%	100%	100%
•Accounts receivable	100%	15%	n/a
•Management reports	100%	100%	100%
•Direct entry of test results	100%	100%	100%
•Electronic crossmatch decision-making	15%	30%	n/a
•Laptop-based mobile donor registration module	75%	n/a	n/a
•Track all steps in production of product	100%	100%	100%
•Antigen typing	100%	100%	100%
• Interface with blood irradiator/centrifuges	n/a	n/a	n/a
System provides standard ASTM/HL7 interface?	no	yes	no
Tools to help clients validate their systems	separate department dedicated to development of validation protocols, flow charts, 24/7 customer support	virtual and instructor-led education, product support guides, application consultants	product users manuals, product validation guide, configuration workshops, automated testing tools, training classes and materials, more
Complete blood bank ASP solution?	no	yes	yes
Method of charging for ASP service	—	fixed fee	fixed fee
Client software required	—	requires software be installed on client PC	uses dumb terminals
ASP information conduit	—	requires use of private, dedicated circuit	requires use of private, dedicated circuit and virtual private network
Client contracts supported from data center not operated by client	—	92	0
How data center is operated	—	by vendor	by vendor
System provides indexed field in each test definition for LOINC code?	no	yes	no
Provide LOINC dictionary for each new installation?	no	—	no
HIS interfaces	—	major vendors	n/a
LIS interfaces	—	major LIS vendors thru reference lab interface	Abbott BBS/DMS, ARC, IDM Surround
User group?	yes	yes	yes
Source code?	escrow	escrow	escrow
Can user modify screens?	—	yes	no
User-defined report writer?	—	yes	yes
Custom programming?	—	yes	yes
Cost (hardware/software/monthly maintenance)			
•Smallest	$30k/$35k/$1k	—	—
•Largest	$200k/$500k/$10k	—	—
Distinguishing features (supplied by vendor)	• 24/7 customer support • customer support and software upgrades included in maintenance fee • real-time donor-to-patient integration	• fully integrated with laboratory information system • advanced decision-support tools • comprehensive automated/crossmatch features	• over two decades of experience in regulated software • 24/7 customer support services • large customer base and financial stability

Survey editor: Raymond D. Aller, MD

Part 2

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Blood bank information systems

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Part 2 of 7 **See accompanying article on page 56**			
Name of blood bank system	PCMS: Plasma Center Management System	Progesa	Meditech Blood Bank (Magic & client/server)†
First/most recent system installation (for current release)	2000/2000	1985/2002	2000 (Magic), 2001 (c/s)/2002
First ever blood bank system installation	1998	1985	1969
Total number of contracts for operational sites	1	470	668
•U.S. hospitals—donor and transfusion service	—	0	—
•U.S. hospitals—transfusion service only	—	0	—
•U.S. regional blood centers—donor service only	—	4	—
•U.S. regional blood centers—donor and transfusion service	—	0	—
•Centralized transfusion services in the U.S.	—	0	—
•Foreign hospitals/foreign regional blood centers	—	466	—
Installations underway that are not yet live (hospitals/regional blood centers)	0	15 (10/5)	40 (40/0)
Total number of sites operational	1	—	1,712
Percentage of installations that are stand-alone systems	100%	100%	0%
Staff to develop/install/support/other* •In entire company/in blood bank systems **other=sales, marketing, administration, other co. functions*	 24-3-13-10/—	 92-38-45-72/—	 —
No. of different versions of software installed	1	—	—
•Versions of product covered by FDA 510(k) clearance	PCMS revisions 1.2, 2.0	4.4	3 (Magic), 2 (c/s)
•Versions of product that did not require FDA 510(k) clearance	PCMS revision 1.3.2	—	—
Range in No. of terminals/workstations in live sites (ave.)	5–300 (ave. 150)	10–1,000 (ave. 100)	—
•Central hardware	HP NetServers, HP 9000 business servers	no restriction (any hardware with Unix)	Dell, EMC, IBM, JJ Wild
•Terminals/workstations	Unix terminals/X-terminals, PCs, workstations	Wyse, HP, IBM, DEC, PC	Dell, EMC, IBM, JJ Wild
•Central hardware redundant/fault-tolerant?	yes	yes	yes
Software •Programming language(s)	 Java, C	 C, C++, Pro/5, Java	 Magic
•Operating system(s)	Unix	Unix	Windows 95, 98, 2000, ME, NT
•Database platform	Oracle	Oracle, C-ISAM	Magic, SQL server
•Full transaction logging?	yes	yes	yes
Features (listed as a percentage of live installations, available but no installations, or not available) •Unit inventory	 100%	 100%	 100%
•Autologous and directed unit tracking	n/a	100%	80%
•Crossmatch results	n/a	100%	100%
•Print donor unit labels—bar coded	100%	100%	25%
•Full support of ISBT 128 unit labeling	available in 2003	4 sites	available
•Donor recruitment	n/a	100%	10%
•Mobile scheduling	n/a	100%	10%
•Interface with blood grouping machines	n/a	100%	available
•Source/recovered plasma management	100%	100%	100%
•Bar-code reading wherever donor number is entered	100%	100%	100%
•Ad hoc report writer	100%	100%	100%
•Accounts receivable	n/a	100%	100%
•Management reports	100%	100%	100%
•Direct entry of test results	100%	—	100%
•Electronic crossmatch decision-making	n/a	—	n/a
•Laptop-based mobile donor registration module	n/a	100%	10%
•Track all steps in production of product	100%	—	100%
•Antigen typing	100%	—	80%
• Interface with blood irradiator/centrifuges	n/a	—	100%
System provides standard ASTM/HL7 interface?	no	yes	yes
Tools to help clients validate their systems	product users manuals, validation guide, configuration workshops, automated testing tools, training classes and materials, more	user guides, hazard analysis, training manuals, data conversion, validation scenario samples	validation guides
Complete blood bank ASP solution?	yes	no	no
Method of charging for ASP service	fixed fee	—	—
Client software required	uses dumb terminals	—	—
ASP information conduit	requires use of private, dedicated circuit and virtual private network	—	—
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
HIS interfaces	n/a	—	Cerner, McKesson, others
LIS interfaces	Abbott BBS/DMS, IDM Surround	—	Cerner, Sunquest, others
User group?	no	yes (meets online as well)	yes (meets online as well)
Source code?	escrow	escrow	yes
Can user modify screens?	no	no	yes
User-defined report writer?	yes	—	yes
Custom programming?	yes	—	yes
Cost (hardware/software/monthly maintenance) •Smallest	 —	 —	 —
•Largest	—	—	—
Distinguishing features (supplied by vendor)	• over two decades of experience in regulated software • 24/7 customer support services • large customer base and financial stability	• Mak-System consists of blood bank professionals and physicians • modular, integrated application with abundant functionality	• integration throughout HCIS • 99% customer retention rate *† information listed combines Magic and client/server products*

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Blood bank information systems

Part 3 of 7

See accompanying article on page 56

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Name of blood bank system	LifeLine Blood Bank Data Management System	LifeTrak
First/most recent system installation (for current release)	1999/2001	1999/2001
First ever blood bank system installation	1984	1999
Total number of contracts for operational sites	191	2
•U.S. hospitals—donor and transfusion service	—	0
•U.S. hospitals—transfusion service only	—	0
•U.S. regional blood centers—donor service only	—	1 (and 1 testing center)
•U.S. regional blood centers—donor and transfusion service	—	0
•Centralized transfusion services in the U.S.	—	0
•Foreign hospitals/foreign regional blood centers	—	0
Installations underway that are not yet live (hospitals/regional blood centers)	—	4 (0/4)
Total number of sites operational	191	2
Percentage of installations that are stand-alone systems	100%	100%
Staff to develop/install/support/other*		
•In entire company/in blood bank systems	64-30-38-55/29-5-18-17	64-30-38-55/29-5-18-17
other=sales, marketing, administration, other co. functions		
No. of different versions of software installed	1	2
•Versions of product covered by FDA 510(k) clearance	1	2
•Versions of product that did not require FDA 510(k) clearance	0	0
Range in No. of terminals/workstations in live sites (ave.)	1–80 (ave. 6)	12–60 (ave. 30)
•Central hardware	PC server—Compaq, HP, etc.	HP, Intel products
•Terminals/workstations	PC—Compaq, HP, etc.	PCs
•Central hardware redundant/fault-tolerant?	yes	yes
Software		
•Programming language(s)	Quick Basic	Oracle Developer 2000
•Operating system(s)	Novell, NT	Unix–Linux
•Database platform	Btrieve	Oracle 8i
•Full transaction logging?	no	yes
Features (listed as a percentage of live installations, available but no installations, or not available)		
•Unit inventory	100%	available
•Autologous and directed unit tracking	100%	available
•Crossmatch results	100%	n/a
•Print donor unit labels—bar coded	—	n/a
•Full support of ISBT 128 unit labeling	100%	available
•Donor recruitment	40%	available
•Mobile scheduling	30%	available
•Interface with blood grouping machines	10%	available
•Source/recovered plasma management	—	available
•Bar-code reading wherever donor number is entered	100%	available
•Ad hoc report writer	75%	available
•Accounts receivable	n/a	n/a
•Management reports	100%	available
•Direct entry of test results	100%	available
•Electronic crossmatch decision-making	—	n/a
•Laptop-based mobile donor registration module	30%	available
•Track all steps in production of product	100%	—
•Antigen typing	100%	available
• Interface with blood irradiator/centrifuges	—	n/a
System provides standard ASTM/HL7 interface?	yes	no
Tools to help clients validate their systems	templates and scripts	validation templates
Complete blood bank ASP solution?	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?	no	no
Provide LOINC dictionary for each new installation?	no	no
HIS interfaces	SMS, McKesson, Sunquest, CHC	—
LIS interfaces	SMS, McKesson, Sunquest, CHC	—
User group?	yes	yes
Source code?	escrow	escrow
Can user modify screens?	yes	no
User-defined report writer?	yes	yes
Custom programming?	yes	no
Cost (hardware/software/monthly maintenance)		
•Smallest	$8k/$20k/$0.5k	$50k/$45k/$1.2k
•Largest	$75k/$100k/$2k	$250k/$700k/$10k
Distinguishing features (supplied by vendor)	• no downtime backup • integrated QC module • online patient, unit, donor history	• CGMP/manufacturing and process control to ensure product safety • fully featured Windows-based donor application • strong customer support and staff experience in donor center environment

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Blood bank information systems

Part 4 of 7	**Mediware Information Systems Inc.** **Chris Mutkoski** chris.mutkoski@mediware.com **25 Melville Park Rd.** **Melville, NY 11747**
See accompanying article on page 56	**516-962-0100** www.mediware.com

Name of blood bank system	Hemocare
First/most recent system installation (for current release)	1981/2002
First ever blood bank system installation	1978
Total number of contracts for operational sites	251
•U.S. hospitals—donor and transfusion service	—
•U.S. hospitals—transfusion service only	—
•U.S. regional blood centers—donor service only	—
•U.S. regional blood centers—donor and transfusion service	—
•Centralized transfusion services in the U.S.	—
•Foreign hospitals/foreign regional blood centers	—
Installations underway that are not yet live (hospitals/regional blood centers)	32 (32/0)
Total number of sites operational	251
Percentage of installations that are stand-alone systems	100%

Staff to develop/install/support/other* •In entire company/in blood bank systems *other=sales, marketing, administration, other co. functions*	64-30-38-55/29-5-18-17

No. of different versions of software installed	3
•Versions of product covered by FDA 510(k) clearance	3
•Versions of product that did not require FDA 510(k) clearance	0

Range in No. of terminals/workstations in live sites (ave.)	1–60 (ave. 16)

•Central hardware	IBM RS/6000, Intel Pentium
•Terminals/workstations	PCs, any ANSI/VT 100-compatible terminal
•Central hardware redundant/fault-tolerant?	yes

Software	
•Programming language(s)	C
•Operating system(s)	Unix
•Database platform	ISAM File Handler
•Full transaction logging?	yes

Features (listed as a percentage of live installations, available but no installations, or not available)	
•Unit inventory	100%
•Autologous and directed unit tracking	100%
•Crossmatch results	100%
•Print donor unit labels—bar coded	100%
•Full support of ISBT 128 unit labeling	available
•Donor recruitment	35%
•Mobile scheduling	n/a
•Interface with blood grouping machines	n/a
•Source/recovered plasma management	100%
•Bar-code reading wherever donor number is entered	100%
•Ad hoc report writer	60%
•Accounts receivable	100%
•Management reports	100%
•Direct entry of test results	100%
•Electronic crossmatch decision-making	75%
•Laptop-based mobile donor registration module	available
•Track all steps in production of product	100%
•Antigen typing	available
• Interface with blood irradiator/centrifuges	available

System provides standard ASTM/HL7 interface?	yes

Tools to help clients validate their systems	validation primer, validation templates, training, test scripts, validation services

Complete blood bank ASP solution?	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?	no
Provide LOINC dictionary for each new installation?	no

HIS interfaces	McKesson, SMS, HDS, TDS
LIS interfaces	McKesson, SMS, DHT, NLFC, CCA, others

User group?	yes (meets online as well)
Source code?	escrow
Can user modify screens?	no
User-defined report writer?	yes
Custom programming?	yes

Cost (hardware/software/monthly maintenance)	
•Smallest	$10k/$20k/$0.5k
•Largest	$100k/$300k/$7k

Distinguishing features (supplied by vendor)	• financial stability • over 20 years in market with large user base • all service, installation, and support conducted by blood banker

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Circle no. 48 on reader service card

Blood bank information systems

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Part 5 of 7 *See accompanying article on page 56*			
Name of blood bank system	**Misys Blood Bank Donor**	**Misys Blood Bank Transfusion**	**LabWeb–SBB**
First/most recent system installation (for current release)	2002/2002	2002/2002	1975/2002
First ever blood bank system installation	1985	1985	1975
Total number of contracts for operational sites	69	450	6
•U.S. hospitals—donor and transfusion service	—	69	0
•U.S. hospitals—transfusion service only	—	372	6
•U.S. regional blood centers—donor service only	—	0	0
•U.S. regional blood centers—donor and transfusion service	—	0	0
•Centralized transfusion services in the U.S.	—	0	0
•Foreign hospitals/foreign regional blood centers	—	9	0
Installations underway that are not yet live (hospitals/regional blood centers)	3 (3/0)	12 (12/0)	1 (1/0)
Total number of sites operational	66	438	5
Percentage of installations that are stand-alone systems	0%	0%	0%
Staff to develop/install/support/other*			
•In entire company/in blood bank systems	340–480†-165/8-4-6-2	340–480†-165/8-4-6-2	9-15-10-6/4-8-5-3
*other=sales, marketing, administration, other co. functions			
No. of different versions of software installed	3	3	1
•Versions of product covered by FDA 510(k) clearance	5.2	5.2	SBB v. 6.4
•Versions of product that did not require FDA 510(k) clearance	5.23, 5.3	5.23, 5.3	none
Range in No. of terminals/workstations in live sites (ave.)	4–500+ (ave. 15–20)	4–500+ (ave. 15–20)	2–20 (ave. 6)
•Central hardware	Compaq Alpha, IBM RS/6000	Compaq Alpha, IBM RS/6000	Compaq Alpha
•Terminals/workstations	PCs, terminals	PCs, terminals	Windows compatible
•Central hardware redundant/fault-tolerant?	on request	on request	yes
Software			
•Programming language(s)	Open M, Caché, C, C++	Open M, Caché, C, C++	Fortran
•Operating system(s)	DEC Unix, Open VMS, AIX	DEC Unix, Open VMS, AIX	Open VMS
•Database platform	Intersystems M, Caché	Intersystems M, Caché	Oracle/SQL server
•Full transaction logging?	yes	yes	yes
Features (listed as a percentage of live installations, available but no installations, or not available)			
•Unit inventory	100%	100%	100%
•Autologous and directed unit tracking	100%	100%	100%
•Crossmatch results	n/a	100%	100%
•Print donor unit labels—bar coded	n/a	n/a	100%
•Full support of ISBT 128 unit labeling	100%	100%	100%
•Donor recruitment	15%	15%	n/a
•Mobile scheduling	n/a	n/a	n/a
•Interface with blood grouping machines	available in 2003	available in 2003	n/a
•Source/recovered plasma management	100%	100%	n/a
•Bar-code reading wherever donor number is entered	100%	100%	100%
•Ad hoc report writer	100%	100%	100%
•Accounts receivable	100% (charge capture)	100% (charge capture)	n/a
•Management reports	100%	100%	100%
•Direct entry of test results	100%	100%	100%
•Electronic crossmatch decision-making	available in 2003	available in 2003	100%
•Laptop-based mobile donor registration module	n/a	n/a	n/a
•Track all steps in production of product	100%	100%	100%
•Antigen typing	100%	100%	100%
• Interface with blood irradiator/centrifuges	n/a	n/a	n/a
System provides standard ASTM/HL7 interface?	yes	yes	yes
Tools to help clients validate their systems	validation protocols and guidelines, Misys Healthcare consulting	validation protocols and guidelines, Misys Healthcare consulting	documentation, training
Complete blood bank ASP solution?	no	no	yes
Method of charging for ASP service	—	—	fixed fee
Client software required	—	—	browser-based, requires software be installed on client PC, uses dumb terminals
ASP information conduit	—	—	requires use of private, dedicated circuit
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
HIS interfaces	McKesson, Siemens, Meditech, IDX, Cerner, Phamis, Eclipsys, others	McKesson, Meditech, IDX, Phamis, Cerner, Eclipsys, others	Misys, Meditech, SMS, Cerner, McKesson, others
LIS interfaces	n/a	n/a	LabWeb
User group?	yes (meets online as well)	yes (meets online as well)	yes
Source code?	escrow	escrow	yes
Can user modify screens?	no	no	yes
User-defined report writer?	yes	yes	yes
Custom programming?	yes	yes	no
Cost (hardware/software/monthly maintenance)			
•Smallest	$50k/$100k/$1.5k	$50k/$100k/$1.5k	$10k/$10k/$0.15k
•Largest	$100k/$250k/$4k+	$100k/$250k/$4k+	$100k/$50k/$0.5k
Distinguishing features (supplied by vendor)	• integrated with blood transfusion & lab product • No. 1 in installation/support according to KLAS survey *† installation and support combined*	• integration with Misys Laboratory • proactive utilization reports *† installation and support combined*	• complete ASP solution for all lab departments • customizable browser user interface • different levels of ASP support for varying levels of resources

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Blood bank information systems

Part 6 of 7	**SCC Soft Computer** Ellie Vahman ellie@softcomputer.com 34350 U.S. Hwy. 19 North Palm Harbor, FL 34684 727-789-0100	**Systec Computer Associates** Robert Capra bob@nxgt.com 28 North Country Rd. Mount Sinai, NY 11766 631-473-5620
See accompanying article on page 56	www.softcomputer.com	www.lifetec.com

Name of blood bank system	SoftBank II	LifeTec
First/most recent system installation (for current release)	—/2002	1983/2000
First ever blood bank system installation	1992	1983
Total number of contracts for operational sites	125	6
•U.S. hospitals—donor and transfusion service	0	0
•U.S. hospitals—transfusion service only	107	0
•U.S. regional blood centers—donor service only	0	5
•U.S. regional blood centers—donor and transfusion service	0	1
•Centralized transfusion services in the U.S.	0	0
•Foreign hospitals/foreign regional blood centers	18	0
Installations underway that are not yet live (hospitals/regional blood centers)	6 (6/0)	—
Total number of sites operational	181	6
Percentage of installations that are stand-alone systems	4%	100%
Staff to develop/install/support/other*		
•In entire company/in blood bank systems	393-84-244-86/34-18-24-5	3.5-1-7.25-2/3.5-1-1.5-1
other=sales, marketing, administration, other co. functions		
No. of different versions of software installed	2	2
•Versions of product covered by FDA 510(k) clearance	v. 19.1, v. 21	revisions 2.20, 2.10
•Versions of product that did not require FDA 510(k) clearance	none	0
Range in No. of terminals/workstations in live sites (ave.)	1–90+ (ave. 8)	10–200 (ave. 40)
•Central hardware	IBM pSeries F620 model 6F1	DG (rev. 2.10), Intel Pentium server (rev. 2.20)
•Terminals/workstations	PCs or ASCII terminals	DG or PC (rev. 2.10), Intel PC (rev. 2.20)
•Central hardware redundant/fault-tolerant?	yes	—
Software		
•Programming language(s)	C	Universal Business Basic (rev. 2.10), Transoft UBL (rev. 2.20)
•Operating system(s)	Unix	Unix (rev. 2.10), Windows NT (rev. 2.20)
•Database platform	Centura's Raima-db-Vista	SQL server (rev. 2.10, 2.20)
•Full transaction logging?	yes	—
Features (listed as a percentage of live installations, available but no installations, or not available)		
•Unit inventory	100%	100%
•Autologous and directed unit tracking	100%	100%
•Crossmatch results	100%	0
•Print donor unit labels—bar coded	100%	100%
•Full support of ISBT 128 unit labeling	50%	available
•Donor recruitment	n/a	100%
•Mobile scheduling	n/a	100%
•Interface with blood grouping machines	available in June 2003	100%
•Source/recovered plasma management	—	100%
•Bar-code reading wherever donor number is entered	100%	100%
•Ad hoc report writer	100%	100%
•Accounts receivable	90%	100%
•Management reports	100%	100%
•Direct entry of test results	100%	100%
•Electronic crossmatch decision-making	50%	0
•Laptop-based mobile donor registration module	n/a	100%
•Track all steps in production of product	100%	100%
•Antigen typing	100%	100%
• Interface with blood irradiator/centrifuges	available in June 2003	—
System provides standard ASTM/HL7 interface?	yes	no
Tools to help clients validate their systems	electronic screen capture and sample validation cases, critical control function list to guide in test case development	validation plans provided on user group request, automated scripts
Complete blood bank ASP solution?	yes	no
Method of charging for ASP service	fixed fee	—
Client software required	requires software be installed on client PC, uses dumb terminals	—
ASP information conduit	requires use of private, dedicated circuit	—
Client contracts supported from data center not operated by client	1	—
How data center is operated	by vendor	—
System provides indexed field in each test definition for LOINC code?	no	no
Provide LOINC dictionary for each new installation?	no	no
HIS interfaces	Meditech, McKesson, Siemens, IDX, CPSI, others	—
LIS interfaces	McKesson, Meditech, Misys, Cerner, Siemens, others	—
User group?	yes (meets online as well)	yes
Source code?	escrow	yes
Can user modify screens?	no	—
User-defined report writer?	yes	—
Custom programming?	yes	—
Cost (hardware/software/monthly maintenance)		
•Smallest	$30k/$35k/$0.7k	—/$50k/$9k
•Largest	$100k/$200k/$4k	—/$100k/$19k
Distinguishing features (supplied by vendor)	• unit recall documentation • electronic crossmatch • multi-site inventory	• flexible—operates in a manner unique to each user • vendor provides validation support • annual maintenance fees set by user group

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Blood bank information systems

	Wyndgate Technologies	Wyndgate Technologies
Part 7 of 7	**Patti Larson** patti@wyndgate.com	**Patti Larson** patti@wyndgate.com
	4925 Robert J. Mathews Parkway, Ste. 100	4925 Robert J. Mathews Parkway, Ste. 100
	El Dorado Hills, CA 95762	El Dorado Hills, CA 95762
	916-404-8400	916-404-8400
See accompanying article on page 56	www.wyndgate.com	www.wyndgate.com
Name of blood bank system	**SafeTrace**	**SafeTrace Tx**
First/most recent system installation (for current release)	**1996/2002**	**1999/2002**
First ever blood bank system installation	**1996**	**1999**
Total number of contracts for operational sites	**29**	**17**
•U.S. hospitals—donor and transfusion service	3	2
•U.S. hospitals—transfusion service only	0	11
•U.S. regional blood centers—donor service only	22	0
•U.S. regional blood centers—donor and transfusion service	4	2
•Centralized transfusion services in the U.S.	0	2
•Foreign hospitals/foreign regional blood centers	0	0
Installations underway that are not yet live	**6 (2/4)**	**32 (28/4)**
(hospitals/regional blood centers)		
Total number of sites operational	**114+**	**31**
Percentage of installations that are stand-alone systems	**100%**	**100%**
Staff to develop/install/support/other*		
•In entire company/in blood bank systems	**14-10-6-21/—**	**14-10-6-21/—**
*other=sales, marketing, administration, other co. functions		
No. of different versions of software installed	**—**	**—**
•Versions of product covered by FDA 510(k) clearance	all	all
•Versions of product that did not require FDA 510(k) clearance	none	none
Range in No. of terminals/workstations in live sites (ave.)	**3–200 (ave. 45)**	**1–75 (ave. 8)**
•Central hardware	**HP, IBM, Sun**	**Intel-based servers**
•Terminals/workstations	**PCs or Wyse terminals**	**PCs**
•Central hardware redundant/fault-tolerant?	**yes**	**yes**
Software		
•Programming language(s)	**Delphi, Oracle, PL/SQL, Cold Fusion, C++**	**Delphi, SQL**
•Operating system(s)	**Unix**	**Windows NT, 2000**
•Database platform	**Oracle RDBMS**	**Oracle**
•Full transaction logging?	**yes**	**yes**
Features (listed as a percentage of live installations,		
available but no installations, or not available)		
•Unit inventory	100%	100%
•Autologous and directed unit tracking	100%	100%
•Crossmatch results	n/a	100%
•Print donor unit labels—bar coded	100%	100%
•Full support of ISBT 128 unit labeling	100%	100%
•Donor recruitment	100%	n/a
•Mobile scheduling	100%	n/a
•Interface with blood grouping machines	100%	100%
•Source/recovered plasma management	100%	n/a
•Bar-code reading wherever donor number is entered	100%	100%
•Ad hoc report writer	100%	100%
•Accounts receivable	100% (charge capture)	n/a
•Management reports	100%	100%
•Direct entry of test results	100%	100%
•Electronic crossmatch decision-making	n/a	100%
•Laptop-based mobile donor registration module	100%	n/a
•Track all steps in production of product	100%	100%
•Antigen typing	100%	100%
• Interface with blood irradiator/centrifuges	100%	n/a
System provides standard ASTM/HL7 interface?	**yes**	**yes**
Tools to help clients validate their systems	**validation plan for all safety critical checks, sample test cases**	**validation guide, templates, validation test plan for all safety critical control checks**
Complete blood bank ASP solution?	**yes**	**yes**
Method of charging for ASP service	**transaction-based**	**transaction-based**
Client software required	**browser-based**	**browser-based**
ASP information conduit	**operates over Internet**	**operates over Internet**
Client contracts supported from data center not operated by client	**0**	**0**
How data center is operated	**n/a**	**n/a**
System provides indexed field in each test definition for LOINC code?	**no**	**no**
Provide LOINC dictionary for each new installation?	**no**	**no**
HIS interfaces	**n/a**	**SMS, McKesson, Keane, Phamis, Meditech, homegrown**
LIS interfaces	**n/a**	**Triple G, SMS, Sunquest, Citation, CCA, Meditech, SCC, Cerner, others**
User group?	**yes (meets online as well)**	**yes (meets online as well)**
Source code?	**yes**	**escrow**
Can user modify screens?	**yes**	**no**
User-defined report writer?	**yes**	**yes**
Custom programming?	**yes**	**—**
Cost (hardware/software/monthly maintenance)		
•Smallest	**—**	**—**
•Largest	**—**	**—**
Distinguishing features (supplied by vendor)	• **complete vein-to-vein solution**	• **patent pending for advanced CTS and transfusion service functionality**
	• **outstanding record of safety, compliance, and service**	• **comprehensive vein-to-vein solution**
		• **superior safety, compliance, and service records**