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Blood bank information systems

Part				
	t 1 of 7	Blood Bank Computer Systems Inc. Janel Hermsmeyer jhermsmeyer@bbcsinc.com 22255 68th Ave. South	Cerner Corp. Tom Meyer tmeyer@cerner.com 2800 Rockcreek Parkway	Information Data Management Inc. Susan L. McBride info@idm.com 9701 W. Higgins Rd., Ste. 500
See	accompanying article on page 56	Kent, WA 98032 888-738-2227 www.bbcsinc.com	Kansas City, M0 64117 816-201-0054 www.cemer.com	Rosemont, IL 60018 800-249-4276/847-825-2300 www.idm.com
Name	e of blood bank system	Blood Bank Control System	PathNet	IDM Select Series for Blood Centers
	/most recent system installation (for current release)	1987/2002	1997/2002	1999/2002
	ever blood bank system installation	_ or	1985	1991
	I number of contracts for operational sites	25 0	298 35	8
	. hospitals—donor and transfusion service . hospitals—transfusion service only	0	228	0
	. regional blood centers—donor service only	18	0	7
	regional blood centers—donor and transfusion service	7	4	0
	ntralized transfusion services in the U.S.	0	0	0
	eign hospitals/foreign regional blood centers allations underway that are not yet live	<u></u>	31 30 (30/0)	1 (Hong Kong) 0
	ospitals/regional blood centers)		00 (00/0)	·
Total	I number of sites operational	23	~450	8
Perc	entage of installations that are stand-alone systems	100%	<5%	100%
•In e	f to develop/install/support/other* entire company/in blood bank systems er=sales, marketing, administration, other co. functions	/9-5-4-7	750-1,700-750-1,125/22-24-10-25	24-3-13-10/—
	of different versions of software installed		2	5
	rsions of product covered by FDA 510(k) clearance	v. 4.4	Classic, Millennium	DID, DMIS 1.2, CDIS 1.0
	sions 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
Rang	ge in No. of terminals/workstations in live sites (ave.)	10-200+ (ave. 50)	5-500+ (ave. 10-20)	4–80 (ave. 30)
•Cen	ntral hardware	IBM AS/400	Compaq, IBM RS/6000	HP NetServers, HP 9000 business servers
•Ter	minals/workstations	IBM-compatible workstations and PCs	PCs, terminals (Classic)	Unix terminals/X-terminals, PCs, workstations
•Cen	ntral hardware redundant/fault-tolerant?	yes	yes	yes
Softv				
	gramming language(s)	RPG IBM 0S/400	Cobol, C++, Visual Basic Open VMS. AIX	Java, C++, C
	erating system(s) tabase platform	IBM DB2	Open VMS, AIX Cerner proprietary (Classic), Oracle (Millennium)	Unix Oracle
	l transaction logging?	yes	yes	yes
ava	ures (listed as a percentage of live installations, ailable but no installations, or not available)			
	t inventory	100%	100%	100%
	tologous and directed unit tracking	100%	100%	100%
	ssmatch results nt donor unit labels—bar coded	15% n/a	100% 10%	n/a 100%
	I support of ISBT 128 unit labeling	available in 2002	100%	n/a
	nor recruitment	100%	15%	100%
•Mol	bile scheduling	95%	15%	100%
	erface with blood grouping machines	75%	30%	available through IDM Surround
	urce/recovered plasma management	100%	100%	100%
	r-code reading wherever donor number is entered	100%	100%	100%
	hoc report writer	100% 100%	100% 15%	100%
	counts receivable nagement reports	100%	100%	n/a 100%
	ect entry of test results	100%	100%	100%
	ctronic crossmatch decision-making		30%	
		15%		n/a
•Lap	ptop-based mobile donor registration module	75%	n/a	n/a n/a
•Tra	otop-based mobile donor registration module ck all steps in production of product	75% 100%	100%	n/a 100%
•Tra	otop-based mobile donor registration module ick all steps in production of product ligen typing	75% 100% 100%	100% 100%	n/a 100% 100%
•Tra	otop-based mobile donor registration module ck all steps in production of product	75% 100%	100%	n/a 100%
•Tra	otop-based mobile donor registration module ick all steps in production of product ligen typing	75% 100% 100%	100% 100%	n/a 100% 100%
•Trac •Ant • Into	otop-based mobile donor registration module ck all steps in production of product ligen typing erface with blood irradiator/centrifuges	75% 100% 100% n/a	100% 100% n/a	n/a 100% 100% n/a
•Trac •Ant • Into	otop-based mobile donor registration module ck all steps in production of product igen typing erface with blood irradiator/centrifuges em provides standard ASTM/HL7 interface?	75% 100% 100% n/a	100% 100% n/a	n/a 100% 100% n/a no
• Trai • Anti • Inti Syste Tools	top-based mobile donor registration module ck all steps in production of product gigen typing gerface with blood irradiator/centrifuges em provides standard ASTM/HL7 interface? s to help clients validate their systems plete blood bank ASP solution?	75% 100% 100% n/a no separate department dedicated to development of validation protocols, flow charts, 24/7	100% 100% n/a yes virtual and instructor-led education, product support guides, application consultants yes	n/a 100% 100% n/a no product users manuals, product validation guide, configuration workshops, automated testing tools, training classes and materials, more yes
• Trai • Anti • Inti Syste Tools Comp	otop-based mobile donor registration module ck all steps in production of product ignen typing erface with blood irradiator/centrifuges em provides standard ASTM/HL7 interface? s to help clients validate their systems plete blood bank ASP solution? nod of charging for ASP service	75% 100% 100% 100% n/a no separate department dedicated to development of validation protocols, flow charts, 24/7 customer support	100% 100% n/a yes virtual and instructor-led education, product support guides, application consultants yes fixed fee	n/a 100% 100% n/a no product users manuals, product validation guide, configuration workshops, automated testing tools, training classes and materials, more yes fixed fee
• Trai • Ant • Into Syste Tools Comp Meth Clien	top-based mobile donor registration module ck all steps in production of product gigen typing gerface with blood irradiator/centrifuges em provides standard ASTM/HL7 interface? s to help clients validate their systems plete blood bank ASP solution?	75% 100% 100% 100% n/a no separate department dedicated to development of validation protocols, flow charts, 24/7 customer support	100% 100% n/a yes virtual and instructor-led education, product support guides, application consultants yes	n/a 100% 100% n/a no product users manuals, product validation guide, configuration workshops, automated testing tools, training classes and materials, more yes
• Trai • Ant • Int • Syste Tools Companded Clien ASP	plete blood bank ASP solution? plete blood bank ASP service to software required to stoffware required to software required to softwar	75% 100% 100% 100% n/a no separate department dedicated to development of validation protocols, flow charts, 24/7 customer support	100% 100% n/a yes virtual and instructor-led education, product support guides, application consultants yes fixed fee requires software be installed on client PC	n/a 100% 100% n/a no product users manuals, product validation guide, configuration workshops, automated testing tools, training classes and materials, more yes fixed fee uses dumb terminals requires use of private, dedicated circuit and
Train of Anti-	top-based mobile donor registration module ck all steps in production of product gigen typing erface with blood irradiator/centrifuges em provides standard ASTM/HL7 interface? Is to help clients validate their systems plete blood bank ASP solution? to dordraining for ASP service the software required information conduit at contracts supported from data center not operated by client at contracts supported from data center not operated by client	75% 100% 100% 100% n/a no separate department dedicated to development of validation protocols, flow charts, 24/7 customer support no	100% 100% 100% 100% 1/2 yes virtual and instructor-led education, product support guides, application consultants yes fixed fee requires software be installed on client PC requires use of private, dedicated circuit 92	n/a 100% 100% n/a no product users manuals, product validation guide, configuration workshops, automated testing tools, training classes and materials, more yes fixed fee uses dumb terminals requires use of private, dedicated circuit and virtual private network 0
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• Trai • Ant • Int • Int Syste Comment Meth Clien ASP Clien How Syste Provi HIS ii User Sour Can User Cust Cost	plete blood bank ASP solution? proud of charging for ASP service at software required information conduit at contracts supported from data center not operated by client data center is operated em provides indexed field in each test definition for LOINC code? ide LOINC dictionary for each new installation? interfaces interfaces interfaces group? ce code? user modify screens? -defined report writer? om programming? (hardware/software/monthly maintenance) allest	75% 100% 100% n/a no separate department dedicated to development of validation protocols, flow charts, 24/7 customer support no	100% 100% 100% 100% 100% 100% 100% 100%	n/a 100% 100% n/a no product users manuals, product validation guide, configuration workshops, automated testing tools, training classes and materials, more yes fixed fee uses dumb terminals requires use of private, dedicated circuit and virtual private network 0 by vendor no no n/a Abbott BBS/DMS, ARC, IDM Surround yes escrow no yes
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Train and a series of the ser	plete blood bank ASP solution? proud of charging for ASP service at software required information conduit at contracts supported from data center not operated by client data center is operated em provides indexed field in each test definition for LOINC code? ide LOINC dictionary for each new installation? interfaces interfaces interfaces group? ce code? user modify screens? -defined report writer? om programming? (hardware/software/monthly maintenance) allest	75% 100% 100% 100% n/a no separate department dedicated to development of validation protocols, flow charts, 24/7 customer support no	100% 100% 100% 100% 100% 100% 100% 100%	n/a 100% 100% n/a no product users manuals, product validation guide, configuration workshops, automated testing tools, training classes and materials, more yes fixed fee uses dumb terminals requires use of private, dedicated circuit and virtual private network 0 by vendor no no n/a Abbott BBS/DMS, ARC, IDM Surround yes escrow no yes
• Trace • Anth • Inth Systet Tools Common Meth Clien ASP Clien How Syste Frovi User Can User Cust Cost • Sm • Lar	top-based mobile donor registration module ck all steps in production of product gigen typing erface with blood irradiator/centrifuges em provides standard ASTM/HL7 interface? Is to help clients validate their systems plete blood bank ASP solution? and of charging for ASP service of charging for ASP service of software required information conduit ont contracts supported from data center not operated by client data center is operated em provides indexed field in each test definition for LOINC code? ide LOINC dictionary for each new installation? interfaces interfaces of code? user modify screens? -defined report writer? om programming? (hardware/software/monthly maintenance) allest gest	75% 100% 100% 100% 100% n/a no separate department dedicated to development of validation protocols, flow charts, 24/7 customer support no	100% 100% 100% 100% 100% 100% 100% 100%	n/a 100% n/a no product users manuals, product validation guide, configuration workshops, automated testing tools, training classes and materials, more yes fixed fee uses dumb terminals requires use of private, dedicated circuit and virtual private network 0 by vendor no no n/a Abbott BBS/DMS, ARC, IDM Surround yes escrow no yes yes

No. of a
•Versio Range

•Centra •Termi •Centra

Softwa •Progra
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Tools t

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Tabulatio

r 2002 October 2002 CAP TODAY / **59**

Blood bank information systems

Part 2 of 7 See accompanying article on page 56 Name of blood bank system Prifirst/most recent system installation (for current release) First ever blood bank system installation 11 Total number of contracts for operational sites 1	nformation Data Management Inc. Susan L. McBride info@idm.com 9701 W. Higgins Rd., Ste. 500	Mak-System Corp.	
See accompanying article on page 56 Name of blood bank system Pirst/most recent system installation (for current release) 1: Total number of contracts for operational sites 1 total number of contracts for operational sites			Meditech Inc.
Name of blood bank system Pr First/most recent system installation (for current release) 2 First ever blood bank system installation 1! Total number of contracts for operational sites 1	Rosemont, IL 60018	Stephanie Sajot s.sajot@mak-system.net 2720 River Rd., Ste. 225 Des Plaines, IL 60018	Paul Berthiaume pberthiaume@meditech.co Meditech Circle Westwood, MA 02090
First/most recent system installation (for current release) 2: First ever blood bank system installation 1: Total number of contracts for operational sites 1	300-249-4276/847-825-2300 www.idm.com	847-803-4863	781-821-3000 www.meditech.com
First ever blood bank system installation 19 Total number of contracts for operational sites 1	PCMS: Plasma Center Management System	Progesa	Meditech Blood Bank (Magic & client/serve
Total number of contracts for operational sites 1	2000/2000 1998	1985/2002 1985	2000 (Magic), 2001 (c/s)/2002 1969
ell S. hospitals—donor and transfusion corvice		470	668
	_	0	_
•U.S. hospitals—transfusion service only •U.S. regional blood centers—donor service only	-	0 4	_
•U.S. regional blood centers—donor and transfusion service —	<u> </u>	0	_
Centralized transfusion services in the U.S.	_	0	_
Foreign hospitals/foreign regional blood centers Installations underway that are not yet live	_ 1	466 15 (10/5)	— 40 (40/0)
(hospitals/regional blood centers)		13 (10/3)	40 (40/0)
Total number of sites operational 1	I 100%	 100%	1,712 0%
	00%	100%	0%
	24-3-13-10/—	92-38-45-72/—	_
*other=sales, marketing, administration, other co. functions			
No. of different versions of software installed 1 •Versions of product covered by FDA 510(k) clearance P	PCMS revisions 1.2, 2.0	 4.4	— 3 (Magic), 2 (c/s)
	PCMS revision 1.3.2	_	— (magic), 2 (6/3)
Range in No. of terminals/workstations in live sites (ave.) 5-	5-300 (ave. 150)	10-1,000 (ave. 100)	_
	HP NetServers, HP 9000 business servers	no restriction (any hardware with Unix)	Dell, EMC, IBM, JJ Wild
	Jnix terminals/X-terminals, PCs, workstations	Wyse, HP, IBM, DEC, PC	Dell, EMC, IBM, JJ Wild
voenuai nai uware reuunuani/raunt-toierant:	res	yes	yes
Software	loon 0	0.0 Pariff Iran	Marta
	Java, C Jnix	C, C++, Pro/5, Java Unix	Magic Windows 95, 98, 2000, ME, NT
	Oracle	Oracle, C-ISAM	Magic, SQL server
•Full transaction logging?	res	yes	yes
Features (listed as a percentage of live installations,			
available but no installations, or not available)			
	100% n/a	100% 100%	100% 80%
	n/a	100%	100%
	100%	100%	25%
•Full support of ISBT 128 unit labeling a	available in 2003	4 sites	available
•Donor recruitment n	n/a	100%	10%
	n/a	100%	10%
	n/a	100%	available
	100%	100%	100%
	100% 100%	100% 100%	100% 100%
	n/a	100%	100%
	100%	100%	100%
	100%	_	100%
	n/a	_	n/a
	n/a	100%	10%
	100%	_	100%
	100% n/a	_	80% 100%
	10	yes	
Interface with blood irradiator/centrifuges n.			yes
Interface with blood irradiator/centrifuges In System provides standard ASTM/HL7 interface?		·	
Interface with blood irradiator/centrifuges Nystem provides standard ASTM/HL7 interface? Tools to help clients validate their systems Potential	oroduct users manuals, validation guide, configu- ation workshops, automated testing tools, train- ng classes and materials, more	user guides, hazard analysis, training manu- als, data conversion, validation scenario sam- ples	yes validation guides
Interface with blood irradiator/centrifuges System provides standard ASTM/HL7 interface? not to help clients validate their systems ration in Complete blood bank ASP solution? yether interface in the provided in the pro	orduct users manuals, validation guide, configu- ation workshops, automated testing tools, train- ng classes and materials, more	user guides, hazard analysis, training manu- als, data conversion, validation scenario sam- ples	
Interface with blood irradiator/centrifuges System provides standard ASTM/HL7 interface? Tools to help clients validate their systems ptropic interface in the complete blood bank ASP solution? Method of charging for ASP service ### Complete blood bank ASP service ###################################	orduct users manuals, validation guide, configu- ation workshops, automated testing tools, train- ng classes and materials, more ves tixed fee	user guides, hazard analysis, training manu- als, data conversion, validation scenario sam- ples	validation guides
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Interface with blood irradiator/centrifuges System provides standard ASTM/HL7 interface? Tools to help clients validate their systems provides their systems Complete blood bank ASP solution? Method of charging for ASP service Client software required ASP information conduit Client contracts supported from data center not operated by client to the contracts supported from data center not operated by client Client contracts supported from data center not operated by client	oroduct users manuals, validation guide, configu- ation workshops, automated testing tools, train- ng classes and materials, more ves ixed fee uses dumb terminals equires use of private, dedicated circuit and vir- ual pirivate network	user guides, hazard analysis, training manu- als, data conversion, validation scenario sam- ples	validation guides
Interface with blood irradiator/centrifuges System provides standard ASTM/HL7 interface? Interface? Tools to help clients validate their systems Complete blood bank ASP solution? 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 by Interface? Interface interface interface? Interface interface interface? Interface interface interface? Interface inte	oroduct users manuals, validation guide, configu- ation workshops, automated testing tools, train- ng classes and materials, more yes tixed fee ses dumb terminals equires use of private, dedicated circuit and vir- ual private network	user guides, hazard analysis, training manu- als, data conversion, validation scenario sam- ples no	validation guides no
Interface with blood irradiator/centrifuges Interface? Interface ? Interface? Interface ?	oroduct users manuals, validation guide, configu- ation workshops, automated testing tools, train- ng classes and materials, more res tixed fee uses dumb terminals requires use of private, dedicated circuit and vir- ual private network o y vendor	user guides, hazard analysis, training manu- als, data conversion, validation scenario sam- ples	validation guides
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Interface with blood irradiator/centrifuges Interface? Interface with blood irradiator/centrifuges Interface? Interface? Interface? Interface with blood irradiator ASTM/HL7 interface? Interface with blood irradiate their systems Interface with blood irradiate their systems Interface with blood irradiate with	orduct users manuals, validation guide, configu- ation workshops, automated testing tools, train- ng classes and materials, more res tixed fee sixed fee sessed dumb terminals equires use of private, dedicated circuit and vir- ual private network o y vendor	user guides, hazard analysis, training manuals, data conversion, validation scenario samples no no no yes (meets online as well)	validation guides no
Interface with blood irradiator/centrifuges System provides standard ASTM/HL7 interface? Interface? Tools to help clients validate their systems Complete blood bank ASP solution? 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? In Provide LOINC dictionary for each new installation? HIS interfaces AU LISE group? Source code?	oroduct users manuals, validation guide, configu- ation workshops, automated testing tools, train- ng classes and materials, more vixed fee ses dumb terminals equires use of private, dedicated circuit and vir- ual private network on the set of the set	user guides, hazard analysis, training manuals, data conversion, validation scenario samples no no no no personal service de la conversion de la conversión de la conversió	validation guides no
Interface with blood irradiator/centrifuges System provides standard ASTM/HL7 interface? Interface? Tools to help clients validate their systems Interface Complete blood bank ASP solution? Method of charging for ASP service Client software required ASP information conduit Client contracts supported from data center not operated by client blood data center is operated System provides indexed field in each test definition for LOINC code? Interfaces LIS interfaces LIS interfaces LIS interfaces LIS interfaces LIS interfaces Can user modify screens?	oroduct users manuals, validation guide, configu- ation workshops, automated testing tools, train- ng classes and materials, more res tixed fee uses dumb terminals equires use of private, dedicated circuit and vir- ual private network 0 10 10 10 10 10 10 10 10 10 10 10 10 1	user guides, hazard analysis, training manuals, data conversion, validation scenario samples no no no yes (meets online as well)	validation guides no
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Interface with blood irradiator/centrifuges System provides standard ASTM/HL7 interface? Interface yet interfaces Tools to help clients validate their systems provides to help clients validate their systems provided of charging for ASP service Client software required ASP information conduit Client contracts supported from data center not operated by client to the data center is operated System provides indexed field in each test definition for LOINC code? Interfaces LIS interfaces LIS interfaces LIS interfaces LIS interfaces LIS interfaces Cust (hardware/software/monthly maintenance) System programming? Custom programming? System provides programming programming? System provides programming	oroduct users manuals, validation guide, configu- ation workshops, automated testing tools, train- ng classes and materials, more res tixed fee uses dumb terminals requires use of private, dedicated circuit and vir- ual private network 0 10 10 10 10 10 10 10 10 10 10 10 10 1	user guides, hazard analysis, training manuals, data conversion, validation scenario samples no no no no yes (meets online as well) escrow no Mak-System consists of blood bank profes-	validation guides no
Interface with blood irradiator/centrifuges System provides standard ASTM/HL7 interface? Interface yet in the provides standard ASTM/HL7 interface? Tools to help clients validate their systems provide Complete blood bank ASP solution? Whethod of charging for ASP service Client software required ASP information conduit Uclient contracts supported from data center not operated by client by the provide LOINC code? In provide LOINC dictionary for each new installation? HIS interfaces Interfaces Interfaces AUSER group? Source code? Can user modify screens? User defined report writer? Custom programming? Cost (hardware/software/monthly maintenance) *Smallest	oroduct users manuals, validation guide, configu- ation workshops, automated testing tools, train- ng classes and materials, more ves tixed fee uses dumb terminals equiries use of private, dedicated circuit and vir- ual private network)) y vendor 10 10 10 10 10 10 10 10 10 10 10 10 10	user guides, hazard analysis, training manuals, data conversion, validation scenario samples no	validation guides no

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Blood bank information systems

	Mediware Information Systems Inc.	Mediware Information Systems Inc.
Part 3 of 7	Chris Mutkoski chris.mutkoski@mediware.com	Chris Mutkoski chris.mutkoski@mediware.com
rait 3 UI 7		
	4000 Kruse Way Place, Bldg. 3, Ste. 210	9000 Harry Hines Blvd.
	Lake Oswego, OR 97035	Dallas, TX 75235
	503-697-3000	214-775-3010
See accompanying article on page 56	www.mediware.com	www.mediware.com
boo accompanying article on page oc	WWW.IIICUIWaic.com	WWW.IIICUIWGIC.COIII
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
Gentralized transfusion services in the U.S.	_	0
Foreign hospitals/foreign regional blood centers	_	0
Installations underway that are not yet live		
	-	4 (0/4)
(hospitals/regional blood centers)		
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		
outor—saios, marketing, auministration, diller co. lunctions		
No. of different versions of softwere installed	1	2
No. of different versions of software installed	1	2
	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	
Tun dansacdon logging:	IIU	yes
Factoria (listed as a consentant of the installations		
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
	100/0	
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	——————————————————————————————————————	
- interiace with blood irradiator/centrituges		n/a
Custom avaridos standard ACTM/U 7 1-1-10		
System provides standard ASTM/HL7 interface?	yes	no
Tools to hole affects will be a	Associates and and at	and the second s
Tools to help clients validate their systems	templates and scripts	validation templates
Complete blood bank ASP solution?	no	100
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	_	
and the special section is special section in the section in the section is special section in the section in the section is section in the section in		
System provides indexed field in each test definition for LOINC code?	no	no
Provide LOINC dictionary for each new installation?		
THOMAG LONG GIGUNALY FOR EACH NEW HISCARIATION?	no	no
IIIO latada a a	ONO NEW COMMENT COM	
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 voe
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	CGMP/manufacturing and process control to ensure product safety
	• integrated QC module	fully featured Windows-based donor application
	online patient, unit, donor history	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) First ever blood bank system installation	1981/2002 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	64-30-38-55/29-5-18-17
*other=sales, marketing, administration, other co. functions	04-30-33/25-3-10-17
No. of different versions of software installed	3
Versions of product covered by FDA 510(k) clearance Versions of product that did not require FDA 510(k) clearance	3 0
Range in No. of terminals/workstations in live sites (ave.)	1–60 (ave. 16)
•Central hardware	IBM RS/6000, Intel Pentium
•Central nardware •Terminals/workstations	PCs, any ANSI/VT 100-compatible terminal
Central hardware redundant/fault-tolerant?	yes
Software	C
Programming language(s) Operating system(s)	C 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 35%
Donor recruitment 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 Direct entry of test results	100% 100%
Purect entry of test results Electronic crossmatch decision-making	75%
Laptop-based mobile donor registration module	available
•Track all steps in production of product	100%
Antigen typing	available
	available
Interface with blood irradiator/centrifuges	
Interface with blood irradiator/centrifuges System provides standard ASTM/HL7 interface?	yes
Interface with blood irradiator/centrifuges System provides standard ASTM/HL7 interface?	
Interface with blood irradiator/centrifuges System provides standard ASTM/HL7 interface? Tools to help clients validate their systems Complete blood bank ASP solution?	yes validation primer, validation templates,
Interface with blood irradiator/centrifuges System provides standard ASTM/HL7 interface? Tools to help clients validate their systems Complete blood bank ASP solution? Method of charging for ASP service	yes validation primer, validation templates, training, test scripts, validation services
Interface with blood irradiator/centrifuges System provides standard ASTM/HL7 interface? Tools to help clients validate their systems Complete blood bank ASP solution? Method of charging for ASP service Client software required ASP information conduit	yes validation primer, validation templates, training, test scripts, validation services
Interface with blood irradiator/centrifuges System provides standard ASTM/HLT interface? Tools to help clients validate their systems Complete blood bank ASP solution? Method of charging for ASP service Client software required ASP information conduit Client contracts supported from data center not operated by client	yes validation primer, validation templates, training, test scripts, validation services
Interface with blood irradiator/centrifuges System provides standard ASTM/HL7 interface? Tools to help clients validate their systems Complete blood bank ASP solution? 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 validation primer, validation templates, training, test scripts, validation services
Interface with blood irradiator/centrifuges System provides standard ASTM/HL7 interface? Tools to help clients validate their systems Complete blood bank ASP solution? Method of charging for ASP service Client software required ASP information conduit Client contracts supported from data center not operated by client thow data center is operated System provides indexed field in each test definition for LOINC code? Provide LOINC dictionary for each new installation? HIS interfaces	yes validation primer, validation templates, training, test scripts, validation services no no no no McKesson, SMS, HDS, TDS
Interface with blood irradiator/centrifuges System provides standard ASTM/HL7 interface? Tools to help clients validate their systems Complete blood bank ASP solution? 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? Provide LOINC dictionary for each new installation? HIS interfaces LIS interfaces	yes validation primer, validation templates, training, test scripts, validation services no no no McKesson, SMS, HDS, TDS McKesson, SMS, DHT, NLFC, CCA, others
Interface with blood irradiator/centrifuges System provides standard ASTM/HL7 interface? Tools to help clients validate their systems Complete blood bank ASP solution? 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? Provide LOINC dictionary for each new installation? HIS interfaces LIS interfaces User group?	ves validation primer, validation templates, training, test scripts, validation services no no no McKesson, SMS, HDS, TDS McKesson, SMS, DHT, NLFC, CCA, others yes (meets online as well)
Interface with blood irradiator/centrifuges System provides standard ASTM/HL7 interface? Tools to help clients validate their systems Complete blood bank ASP solution? 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? Provide LOINC dictionary for each new installation? HIS interfaces User group? Source code?	validation primer, validation templates, training, test scripts, validation services no no no McKesson, SMS, HDS, TDS McKesson, SMS, DHT, NLFC, CCA, others yes (meets online as well)
Interface with blood irradiator/centrifuges System provides standard ASTM/HL7 interface? Tools to help clients validate their systems Complete blood bank ASP solution? 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? Provide LOINC dictionary for each new installation? HIS interfaces LIS interfaces User group? Source code? Can user modify screens?	yes validation primer, validation templates, training, test scripts, validation services no no no McKesson, SMS, HDS, TDS McKesson, SMS, DHT, NLFG, CCA, others yes (meets online as well)
Interface with blood irradiator/centrifuges System provides standard ASTM/HL7 interface? Tools to help clients validate their systems Complete blood bank ASP solution? 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? Provide LOINC dictionary for each new installation? HIS interfaces LIS interfaces User group? Source code? Can user modify screens? User-defined report writer?	yes validation primer, validation templates, training, test scripts, validation services no
Interface with blood irradiator/centrifuges System provides standard ASTM/HL7 interface? Tools to help clients validate their systems Complete blood bank ASP solution? 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? Provide LOINC dictionary for each new installation? HIS interfaces User group? Source code? Can user modify screens? User-defined report writer? Custom programming? Cost (hardware/software/monthly maintenance)	validation primer, validation templates, training, test scripts, validation services no
Interface with blood irradiator/centrifuges System provides standard ASTM/HL7 interface? Tools to help clients validate their systems Complete blood bank ASP solution? 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? Provide LOINC dictionary for each new installation? HIS interfaces Lise rigroup? Source code? Can user modify screens? User-defined report writer? Custom programming? Cost (hardware/software/monthly maintenance) *Smallest	validation primer, validation templates, training, test scripts, validation services no
Interface with blood irradiator/centrifuges System provides standard ASTM/HL7 interface? Tools to help clients validate their systems Complete blood bank ASP solution? 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? Provide LOINC dictionary for each new installation? HIS interfaces User group? Source code? Can user modify screens? User defined report writer? Custom programming? Cost (hardware/software/monthly maintenance) *Smallest *Largest	yes validation primer, validation templates, training, test scripts, validation services no
Interface with blood irradiator/centrifuges System provides standard ASTM/HL7 interface? Tools to help clients validate their systems Complete blood bank ASP solution? 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? Provide LOINC dictionary for each new installation? HIS interfaces Lise rgroup? Source code? Can user modify screens? User-defined report writer? Custom programming? Cost (hardware/software/monthly maintenance) *Smallest	yes validation primer, validation templates, training, test scripts, validation services no
Interface with blood irradiator/centrifuges System provides standard ASTM/HL7 interface? Tools to help clients validate their systems Complete blood bank ASP solution? 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? Provide LOINC dictionary for each new installation? HIS interfaces User group? Source code? Can user modify screens? User-defined report writer? Custom programming? Cost (hardware/software/monthly maintenance) *Smallest *Largest	validation primer, validation templates, training, test scripts, validation services no

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Blood bank information systems

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7	Part 5 of 7	Misys Healthcare Systems Ken Kark ken.kark@misyshealthcare.com	Misys Healthcare Systems Ken Kark ken.kark@misyshealthcare.com	Psyché Systems Corp. Patricia Salem pattys@psychesystems.com
		4801 E. Broadway Blvd. Tucson, AZ 85711	4801 E. Broadway Blvd. Tucson, AZ 85711	321 Fortune Blvd. Milford, MA 01757-1750
L	See accompanying article on page 56	520-570-2000 www.misyshealthcare.com	520-570-2000 www.misyshealthcare.com	800-345-1514 www.psychesystems.com
L	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 •U.S. hospitals—donor and transfusion service	69 —	450 69	6 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. •Foreign hospitals/foreign regional blood centers	_	0 9	0
	Installations underway that are not yet live	3 (3/0)	12 (12/0)	1 (1/0)
	(hospitals/regional blood centers)			
	Total number of sites operational Percentage of installations that are stand-alone systems	66 0%	438 0%	5 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
L	*other=sales, marketing, administration, other co. functions	040 400° 10070 4 0 E	040 400° 10000 4 0 E	3 10 10 0/4 0 0 0
	No. of different versions of software installed	3	3	1
	 Versions of product covered by FDA 510(k) clearance Versions of product that did not require FDA 510(k) clearance 	5.2 5.23, 5.3	5.2 5.23, 5.3	SBB v. 6.4 none
H	Range in No. of terminals/workstations in live sites (ave.)	4–500+ (ave. 15–20)	4–500+ (ave. 15–20)	2–20 (ave. 6)
H				
	•Central hardware •Terminals/workstations	Compaq Alpha, IBM RS/6000 PCs, terminals	Compaq Alpha, IBM RS/6000 PCs, terminals	Compaq Alpha 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 •Full transaction logging?	Intersystems M, Caché yes	Intersystems M, Caché yes	Oracle/SQL server yes
H		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 Full support of ISBT 128 unit labeling 	n/a 100%	n/a 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%	100% 100%	n/a 100%
	•Bar-code reading wherever donor number is entered •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 Laptop-based mobile donor registration module 	available in 2003 n/a	available in 2003 n/a	100% 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
Ī	System provides standard ASTM/HL7 interface?	yes	yes	yes
Ī	Tools to help clients validate their systems	validation protocols and guidelines, Misys	validation protocols and guidelines, Misys	documentation, training
L		Healthcare consulting	Healthcare consulting	
	Complete blood bank ASP solution? Method of charging for ASP service	no	no	yes fixed fee
	Client software required	_	Ξ	fixed fee browser-based, requires software be installed
	ASP information conduit	_	_	on client PC, uses dumb terminals requires use of private, dedicated circuit
	Client contracts supported from data center not operated by client How data center is operated	_	=	0
H				by vendor
	System provides indexed field in each test definition for LOINC code? Provide LOINC dictionary for each new installation?	no no	no no	yes no
Γ	HIS interfaces	McKesson, Siemens, Meditech, IDX, Cerner,	McKesson, Meditech, IDX, Phamis, Cerner,	Misys, Meditech, SMS, Cerner, McKesson, others
	LIS interfaces	Phamis, Eclipsys, others n/a	Eclipsys, others n/a	LabWeb
H	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? Custom programming?	yes yes	yes yes	yes no
H				
	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
H	Dietinguiching faaturee (cumplied by wooder)	integrated with blood transfusion & lab product	e integration with Micus I shareton	a complete ASD colution for all lab department.
	Distinguishing features (supplied by vendor)	Integrated with blood transfusion & lab product No. 1 in installation/support according to	integration with Misys Laboratory proactive utilization reports	 complete ASP solution for all lab departments customizable browser user interface
		KLAS survey		different levels of ASP support for varying
		† installation and support combined	† installation and support combined	levels of resources
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Part 6

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Blood bank information systems

Bioou na	ank inionnation system	Onto Operato Associato
	COO Caff Committee	Custos Comunitor Associatos
Part 6 of 7	SCC Soft Computer	Systec Computer Associates
rail 0 UI 7	Ellie Vahman ellie@softcomputer.com	Robert Capra bob@nxgt.com
	34350 U.S. Hwy. 19 North	28 North Country Rd.
	Palm Harbor, FL 34684	Mount Sinai, NY 11766
0	727-789-0100	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
nstallations underway that are not yet live	6 (6/0)	_
(hospitals/regional blood centers)	404	•
Fotal number of sites operational Percentage of installations that are stand-alone systems	181 4%	6 100%
Staff to develop/install/support/other*		
•In entire company/in blood bank systems *other=sales, marketing, administration, other co. functions	393-84-244-86/34-18-24-5	3.5-1-7.25-2/3.5-1-1.5-1
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	v. 19.1, v. 21 none	0
versions of product that the not require FDA STO(K) Clearance	HUHG	
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	— (101 210), mon 3 (101 2120)
oftware 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?		
ruii u alisacuoli loggilig:	yes	
eatures (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	_
ystem provides standard ASTM/HL7 interface?	yes	no
pols to help clients validate their systems	electronic screen capture and sample validation cases, critical	validation plans provided on user group request, automated s
	control function list to guide in test case development	
omplete blood bank ASP solution?	yes	no
lethod of charging for ASP service	fixed fee	
lient software required	requires software be installed on client PC, uses dumb terminals	_ / _ / _ / _ / _ / _ / _ / _ / _ / _ /
SP information conduit	requires use of private, dedicated circuit	_
lient contracts supported from data center not operated by client	1	/ <u>-</u>
ow data center is operated	by vendor	_
ystem provides indexed field in each test definition for LOINC code?	no	no
rovide LOINC dictionary for each new installation?	no	no
IS interfaces	Meditech, McKesson, Siemens, IDX, CPSI, others	_
IS interfaces	McKesson, Meditech, Misys, Cerner, Siemens, others	
ser group?	yes (meets online as well)	yes
Source code?	escrow	yes
Can user modify screens?	no	-
ser-defined report writer?	yes	_
ustom programming?	yes	_
cost (hardware/software/monthly maintenance)		
	\$20k/\$25k/\$0.7k	/\$50k/\$0k
Smallest	\$30k/\$35k/\$0.7k	—/\$50k/\$9k —/\$100k/\$19k
Largest	\$100k/\$200k/\$4k	
istinguishing features (supplied by vendor)	unit recall documentation	• flexible—operates in a manner unique to each user
distinguishing features (supplied by vendor)	unit recall documentation electronic crossmatch	flexible—operates in a manner unique to each user vendor provides validation support
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		
See accompanying article on page 50	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		
buici = suics, marketing, administration, other oc. fundations		
No. of Pillarent control of a financial control of the control of		
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)
		- V-11-21
Central hardware	HP, IBM, Sun	Intel-based servers
•Terminals/workstations	PCs or Wyse terminals	PCs
Central hardware redundant/fault-tolerant?	yes	yes
Software		
	Delphi Oreele DI (CO) Cold Fueig: 0	Dalahi COI
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
Tan aanoadan logging.	, , ,	,55
Francisco (Catadas a consentante of Catadas Ca		
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
	100%	
Bar-code reading wherever donor number is entered		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
		11/2
System provides standard ASTM/HL7 interface?	yes	yes
System provides standard ASTM/HL7 interface?	yes	
		yes
System provides standard ASTM/HL7 interface? Tools to help clients validate their systems	yes validation plan for all safety critical checks, sample test cases	yes validation guide, templates, validation test plan for all safety critical
		yes
		yes validation guide, templates, validation test plan for all safety critical
Tools to help clients validate their systems	validation plan for all safety critical checks, sample test cases	yes validation guide, templates, validation test plan for all safety critical control checks
		yes validation guide, templates, validation test plan for all safety critical
Tools to help clients validate their systems Complete blood bank ASP solution?	validation plan for all safety critical checks, sample test cases yes	yes validation guide, templates, validation test plan for all safety critical control checks
Tools to help clients validate their systems Complete blood bank ASP solution? Method of charging for ASP service	validation plan for all safety critical checks, sample test cases yes transaction-based	yes validation guide, templates, validation test plan for all safety critical control checks yes transaction-based
Tools to help clients validate their systems Complete blood bank ASP solution? Method of charging for ASP service Client software required	validation plan for all safety critical checks, sample test cases yes transaction-based browser-based	yes validation guide, templates, validation test plan for all safety critical control checks yes transaction-based browser-based
Tools to help clients validate their systems Complete blood bank ASP solution? Method of charging for ASP service Client software required ASP information conduit	validation plan for all safety critical checks, sample test cases yes transaction-based browser-based operates over Internet	yes validation guide, templates, validation test plan for all safety critical control checks yes transaction-based browser-based operates over Internet
Tools to help clients validate their systems Complete blood bank ASP solution? Method of charging for ASP service Client software required ASP information conduit Client contracts supported from data center not operated by client	validation plan for all safety critical checks, sample test cases yes transaction-based browser-based	yes validation guide, templates, validation test plan for all safety critical control checks yes transaction-based browser-based operates over Internet 0
Tools to help clients validate their systems Complete blood bank ASP solution? Method of charging for ASP service Client software required ASP information conduit	validation plan for all safety critical checks, sample test cases yes transaction-based browser-based operates over Internet	yes validation guide, templates, validation test plan for all safety critical control checks yes transaction-based browser-based operates over Internet
Tools to help clients validate their systems Complete blood bank ASP solution? Method of charging for ASP service Client software required ASP information conduit Client contracts supported from data center not operated by client	validation plan for all safety critical checks, sample test cases yes transaction-based browser-based operates over Internet 0	yes validation guide, templates, validation test plan for all safety critical control checks yes transaction-based browser-based operates over Internet 0
Tools to help clients validate their systems Complete blood bank ASP solution? 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	validation plan for all safety critical checks, sample test cases yes transaction-based browser-based operates over Internet 0 n/a	yes validation guide, templates, validation test plan for all safety critical control checks yes transaction-based browser-based operates over Internet 0 n/a
Tools to help clients validate their systems Complete blood bank ASP solution? 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?	validation plan for all safety critical checks, sample test cases yes transaction-based browser-based operates over Internet 0 n/a	yes validation guide, templates, validation test plan for all safety critical control checks yes transaction-based browser-based operates over Internet 0 n/a no
Tools to help clients validate their systems Complete blood bank ASP solution? 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	validation plan for all safety critical checks, sample test cases yes transaction-based browser-based operates over Internet 0 n/a	yes validation guide, templates, validation test plan for all safety critical control checks yes transaction-based browser-based operates over Internet 0 n/a
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Tools to help clients validate their systems Complete blood bank ASP solution? 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? Provide LOINC dictionary for each new installation?	validation plan for all safety critical checks, sample test cases yes transaction-based browser-based operates over Internet 0 n/a no	yes validation guide, templates, validation test plan for all safety critical control checks yes transaction-based browser-based operates over Internet 0 n/a no no SMS, McKesson, Keane, Phamis, Meditech, homegrown
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Tools to help clients validate their systems Complete blood bank ASP solution? 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? Provide LOINC dictionary for each new installation? HIS interfaces LIS interfaces	validation plan for all safety critical checks, sample test cases yes transaction-based browser-based operates over Internet 0 0 n/a no no	yes validation guide, templates, validation test plan for all safety critical control checks yes transaction-based browser-based operates over Internet 0 n/a no no SMS, McKesson, Keane, Phamis, Meditech, homegrown Triple G, SMS, Sunquest, Citation, CCA, Meditech, SCC, Cerner, others
Tools to help clients validate their systems Complete blood bank ASP solution? 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? Provide LOINC dictionary for each new installation? HIS interfaces LIS interfaces User group?	validation plan for all safety critical checks, sample test cases yes transaction-based browser-based operates over Internet 0 n/a no no no n/a n/a yes (meets online as well)	yes validation guide, templates, validation test plan for all safety critical control checks yes transaction-based browser-based operates over Internet 0 no no SMS, McKesson, Keane, Phamis, Meditech, homegrown Triple G, SMS, Sunquest, Citation, CCA, Meditech, SCC, Cerner, others yes (meets online as well)
Tools to help clients validate their systems Complete blood bank ASP solution? 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? Provide LOINC dictionary for each new installation? HIS interfaces User group? Source code?	validation plan for all safety critical checks, sample test cases yes transaction-based browser-based operates over Internet 0 n/a no no n/a n/a yes (meets online as well)	yes validation guide, templates, validation test plan for all safety critical control checks yes transaction-based browser-based operates over Internet 0 no no SMS, McKesson, Keane, Phamis, Meditech, homegrown Triple G, SMS, Sunquest, Citation, CCA, Meditech, SCC, Cerner, others yes (meets online as well) escrow
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Tools to help clients validate their systems Complete blood bank ASP solution? 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? Provide LOINC dictionary for each new installation? HIS interfaces LIS interfaces User group? Source code? Can user modify screens? User-defined report writer?	validation plan for all safety critical checks, sample test cases yes transaction-based browser-based operates over Internet 0 n/a no no n/a n/a yes (meets online as well)	yes validation guide, templates, validation test plan for all safety critical control checks yes transaction-based browser-based operates over Internet 0 no no SMS, McKesson, Keane, Phamis, Meditech, homegrown Triple G, SMS, Sunquest, Citation, CCA, Meditech, SCC, Cerner, others yes (meets online as well) escrow
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Tools to help clients validate their systems Complete blood bank ASP solution? 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? Provide LOINC dictionary for each new installation? HIS interfaces LIS interfaces User group? Source code? Can user modify screens? User-defined report writer?	validation plan for all safety critical checks, sample test cases yes transaction-based browser-based operates over Internet 0 n/a no no no nya yes (meets online as well) yes	yes validation guide, templates, validation test plan for all safety critical control checks yes transaction-based browser-based operates over Internet 0 n/a no no SMS, McKesson, Keane, Phamis, Meditech, homegrown Triple G, SMS, Sunquest, Citation, CCA, Meditech, SCC, Cerner, others yes (meets online as well) escrow no
Tools to help clients validate their systems Complete blood bank ASP solution? 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? Provide LOINC dictionary for each new installation? HIS interfaces LIS interfaces User group? Source code? Can user modify screens? User-defined report writer? Custom programming?	validation plan for all safety critical checks, sample test cases yes transaction-based browser-based operates over Internet 0 n/a no no no yes (meets online as well) yes yes	yes validation guide, templates, validation test plan for all safety critical control checks yes transaction-based browser-based operates over Internet 0 n/a no no SMS, McKesson, Keane, Phamis, Meditech, homegrown Triple G, SMS, Sunquest, Citation, CCA, Meditech, SCC, Cerner, others yes (meets online as well) escrow no
Tools to help clients validate their systems Complete blood bank ASP solution? 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? Provide LOINC dictionary for each new installation? HIS interfaces User group? Source code? Can user modify screens? User-defined report writer? Custom programming? Cost (hardware/software/monthly maintenance)	validation plan for all safety critical checks, sample test cases yes transaction-based browser-based operates over Internet 0 n/a no no no yes (meets online as well) yes yes	yes validation guide, templates, validation test plan for all safety critical control checks yes transaction-based browser-based operates over Internet 0 n/a no no SMS, McKesson, Keane, Phamis, Meditech, homegrown Triple G, SMS, Sunquest, Citation, CCA, Meditech, SCC, Cerner, others yes (meets online as well) escrow no
Tools to help clients validate their systems Complete blood bank ASP solution? 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? Provide LOINC dictionary for each new installation? HIS interfaces LLS interfaces User group? Source code? Can user modify screens? User-defined report writer? Custom programming? Cost (hardware/software/monthly maintenance) + Smallest	validation plan for all safety critical checks, sample test cases yes transaction-based browser-based operates over Internet 0 n/a no no no yes (meets online as well) yes yes	yes validation guide, templates, validation test plan for all safety critical control checks yes transaction-based browser-based operates over Internet 0 n/a no no SMS, McKesson, Keane, Phamis, Meditech, homegrown Triple G, SMS, Sunquest, Citation, CCA, Meditech, SCC, Cerner, others yes (meets online as well) escrow no
Tools to help clients validate their systems Complete blood bank ASP solution? 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? Provide LOINC dictionary for each new installation? HIS interfaces User group? Source code? Can user modify screens? User-defined report writer? Custom programming? Cost (hardware/software/monthly maintenance)	validation plan for all safety critical checks, sample test cases yes transaction-based browser-based operates over Internet 0 n/a no no no yes (meets online as well) yes yes	yes validation guide, templates, validation test plan for all safety critical control checks yes transaction-based browser-based operates over Internet 0 n/a no no SMS, McKesson, Keane, Phamis, Meditech, homegrown Triple G, SMS, Sunquest, Citation, CCA, Meditech, SCC, Cerner, others yes (meets online as well) escrow no
Tools to help clients validate their systems Complete blood bank ASP solution? 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? Provide LOINC dictionary for each new installation? HIS interfaces LLS interfaces User group? Source code? Can user modify screens? User-defined report writer? Custom programming? Cost (hardware/software/monthly maintenance) +\$mallest	validation plan for all safety critical checks, sample test cases yes transaction-based browser-based operates over Internet 0 n/a no no no yes (meets online as well) yes yes	yes validation guide, templates, validation test plan for all safety critical control checks yes transaction-based browser-based operates over Internet 0 n/a no no SMS, McKesson, Keane, Phamis, Meditech, homegrown Triple G, SMS, Sunquest, Citation, CCA, Meditech, SCC, Cerner, others yes (meets online as well) escrow no
Tools to help clients validate their systems Complete blood bank ASP solution? 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? Provide LOINC dictionary for each new installation? HIS interfaces LIS interfaces User group? Source code? Can user modify screens? User-defined report writer? Custom programming? Cost (hardware/software/monthly maintenance) •Smallest •Largest	validation plan for all safety critical checks, sample test cases yes transaction-based browser-based operates over Internet 0 n/a no no n/a n/a yes (meets online as well) yes yes yes yes	yes validation guide, templates, validation test plan for all safety critical control checks yes transaction-based browser-based operates over Internet 0 no no SMS, McKesson, Keane, Phamis, Meditech, homegrown Triple G, SMS, Sunquest, Citation, CCA, Meditech, SCC, Cerner, others yes (meets online as well) escrow no yes —
Tools to help clients validate their systems Complete blood bank ASP solution? 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? Provide LOINC dictionary for each new installation? HIS interfaces LLS interfaces User group? Source code? Can user modify screens? User-defined report writer? Custom programming? Cost (hardware/software/monthly maintenance) +\$mallest	validation plan for all safety critical checks, sample test cases yes transaction-based browser-based operates over Internet 0 n/a no no no n/a n/a yes (meets online as well) yes yes yes yes	yes validation guide, templates, validation test plan for all safety critical control checks yes transaction-based browser-based operates over Internet 0 n/a no no SMS, McKesson, Keane, Phamis, Meditech, homegrown Triple G, SMS, Sunquest, Citation, CCA, Meditech, SCC, Cerner, others yes (meets online as well) escrow no yes — • patent pending for advanced CTS and transfusion service
Tools to help clients validate their systems Complete blood bank ASP solution? 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? Provide LOINC dictionary for each new installation? HIS interfaces LIS interfaces User group? Source code? Can user modify screens? User-defined report writer? Custom programming? Cost (hardware/software/monthly maintenance) •Smallest •Largest	validation plan for all safety critical checks, sample test cases yes transaction-based browser-based operates over Internet 0 n/a no no n/a n/a yes (meets online as well) yes yes yes yes	yes validation guide, templates, validation test plan for all safety critical control checks yes transaction-based browser-based operates over Internet 0 no no SMS, McKesson, Keane, Phamis, Meditech, homegrown Triple G, SMS, Sunquest, Citation, CCA, Meditech, SCC, Cerner, others yes (meets online as well) escrow no yes
Tools to help clients validate their systems Complete blood bank ASP solution? 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? Provide LOINC dictionary for each new installation? HIS interfaces LIS interfaces User group? Source code? Can user modify screens? User-defined report writer? Custom programming? Cost (hardware/software/monthly maintenance) •Smallest •Largest	validation plan for all safety critical checks, sample test cases yes transaction-based browser-based operates over Internet 0 n/a no no no n/a n/a yes (meets online as well) yes yes yes yes	yes validation guide, templates, validation test plan for all safety critical control checks yes transaction-based browser-based operates over Internet 0 n/a no SMS, McKesson, Keane, Phamis, Meditech, homegrown Triple G, SMS, Sunquest, Citation, CCA, Meditech, SCC, Cerner, others yes (meets online as well) escrow no yes — - - * patent pending for advanced CTS and transfusion service functionality * comprehensive vein-to-vein solution
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