



ASPOSE WORDS

Surgical Notes, Inc.

Virtual Medical Records

Stenson, Eric J. (May, 2009)

Product Background / Overview

Surgical Notes, Inc., based in Dallas, Texas, is a leading innovator in administrative medical technology. The company's flagship product, SN Chart, revolutionized medical transcription and is currently used by more than 14,500 physicians at over 400 facilities nationwide.

Managing the administrative cost of medicine is important to all stakeholders – doctors, administrators, insurance companies and patients. Unfortunately, upwards of 25% of all medical costs currently relate to the administrative components, not patient care. To help the ASC market contain cost and realize operational efficiencies, Surgical Notes developed an electronic medical records product *VMR Express*.

VMR Express allows medical offices to electronically prepare medical charts at the time of the patient encounter. All of the forms are created as templates in Microsoft Word and the program automatically generates a barcode on the documents and pre-fills patient data. This saves the medical facilities from using preprinted forms, allows the forms to be scanned for electronic retrieval and eliminates costly sticky labels commonly used to “place” patient data on charts.

Requirements Scenario

The developers of *VMR Express* were presented with several challenges. Medical facilities are immediately moving to electronic records and the target was to quickly deliver a product to market without sacrificing quality. As Brian Meredith, Senior Vice President for Development stated:

“Our customers have known Surgical Notes as a strong partner. They have consistently received a high quality product and top notch customer service. Although the goal was to bring a product to market quickly, under no circumstances would the company sacrifice any of its quality standards and we did not want one shortcoming to undermine the project as an entirety.”

The company first attempted automation through the Microsoft Word VBA interop, freely available from Microsoft. This was unsuccessful. In addition to completing the forms, with printing each form has its own settings for printer, paper tray, simplex or duplex, rotation, et cetera. The automation through the freely available Microsoft Office SDK simply could not handle the constant setting changes and forms that were designed to print on plain paper, for example, were printing on expensive label sheets. The company needed a solution.

"A typical chart might be consist of more than 20 different Word documents. When printing through the standard word automation, it just didn't work. It was time consuming and prone to failure. We needed a reliable solution", continued Meredith.

In addition, the company's test product not only had to open Microsoft Word and each document to send the form to the printer, but Microsoft Word and each form file had to be opened to write the patient data to the various fields. A typical chart could take several minutes to prepare.

Meredith was quick to address this challenge. *"In addition to wanting to solve the printing issues, we also wanted a mechanism to write data to Microsoft Word document fields without opening the document or Microsoft Word. We found our solution in Aspose."*

Solution Implementation

Utilizing VB.NET 2008, the programming team created a straight forward application to control printer properties and write data to the various Word document form fields. The programmers then made a COM-accessible object and implemented the solution into the existing VB6-based electronic medical records product.

"Testing and debugging of the product was relatively easy" explained Meredith. "After we configured our application, we tested several test packets. Our project is complex, so it took a few hours to debug code and apply all settings properly. We were very pleased with the results and level of support from ASPOSE."

Benefits

Surgical Notes is confident that both it and its customers are the true winners with ASPOSE.WORDS. Using the product, Surgical Notes was able to:

- Solve a technical task of continually changing printers
- Solve a technical task of setting complex printer settings, including paper trays, duplex mode, number of copies and destination printer.
- Print a Microsoft Word document without opening Microsoft Word
- Write data to a Microsoft Word document without opening Microsoft Word.

Not only was Surgical Notes able to quickly address a growing concern over

document printing, the company was also able to provide a faster product for its clients. When the developers used the ASPOSE.WORDS component instead of the Microsoft automation SDK, an added benefit was that documents could be prepared and printed without opening Microsoft Word. This provided a time savings of approximately 3 minutes per forms package.

Conclusion

A major differentiation in any software product is quality. In this case, the quality of the ASPOSE.WORDS component has helped Surgical Notes achieve its quality standards for its new electronic medical records component and provided a significant savings in development time and document preparation time.

Developers often look to components to achieve complex tasks, yet sometimes the objectives are as simple as programmatically completing forms and printing documents. While SDK tools and components from Microsoft were able to complete much of this, the office SDK available from Microsoft could not compare with the stability, rich features, and “code only” solution offered by ASPOSE.WORDS.





VMR-Express - Control Center - [Schedule]

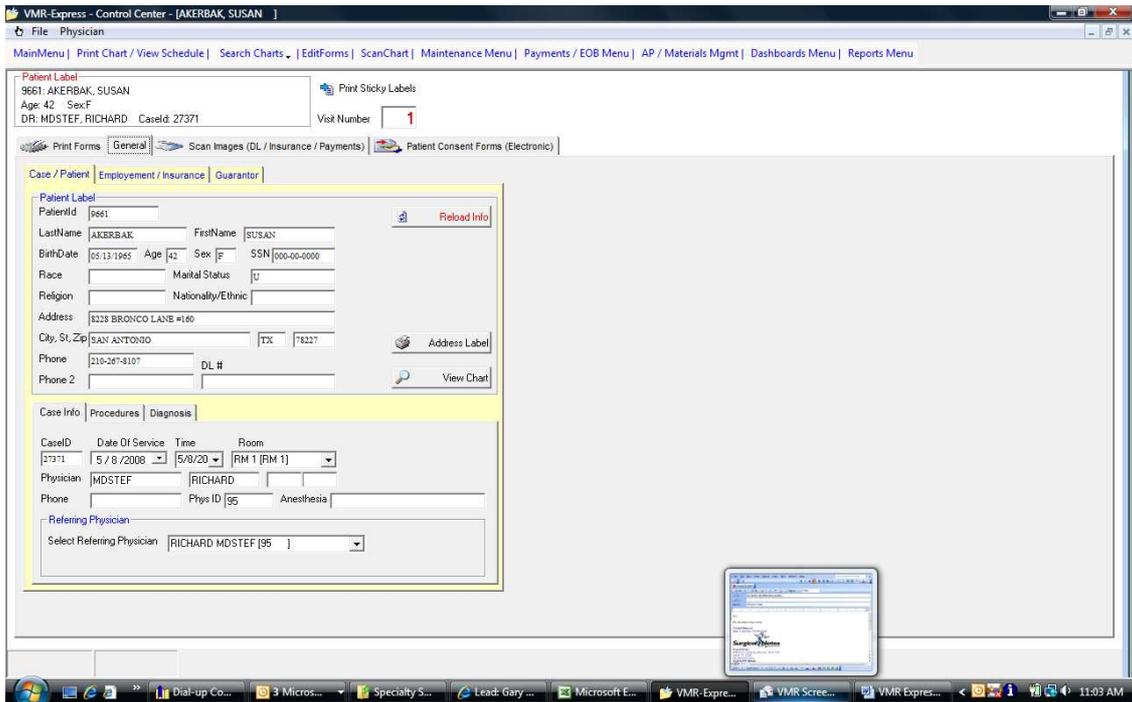
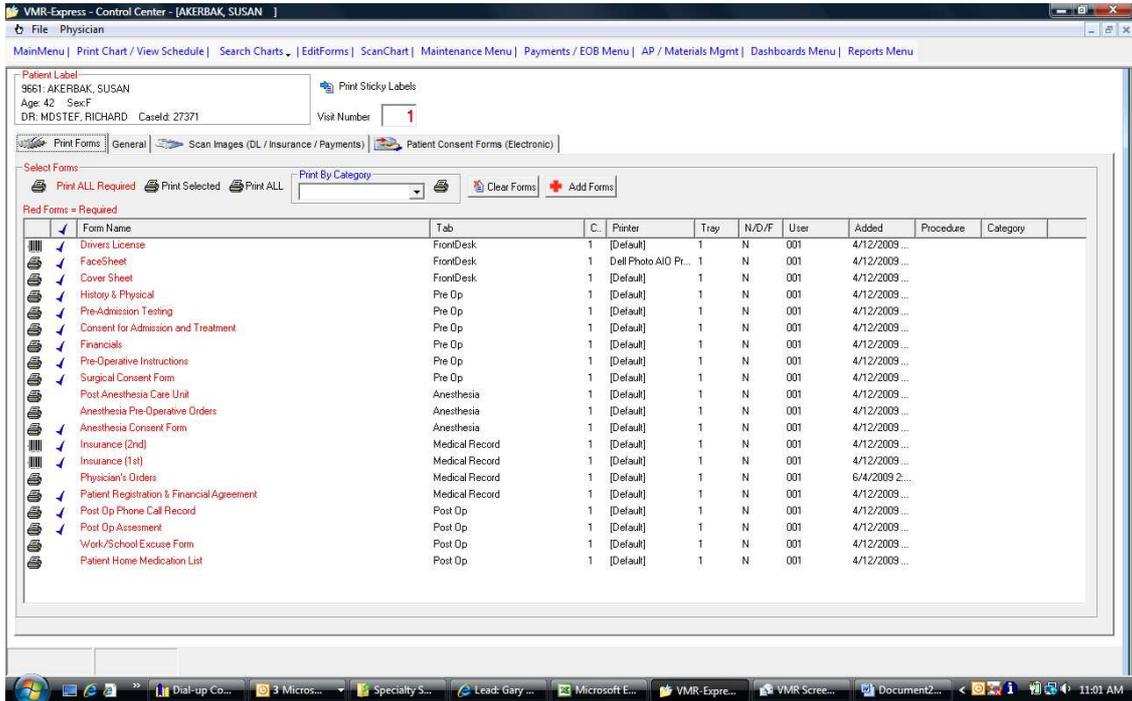
File

Main Menu | Print Chart / View Schedule | Search Charts | EditForms | ScanChart | Maintenance Menu | Payments / EOB Menu | AP / Materials Mgmt | Dashboards Menu | Reports Menu

May 2008 **Thu May/08/2008** Print Pack of Selected Forms Group Room Sort By Time Sort By Patient

	Time	Phy ID	Phy Last	Phy First	CaseId	Patient Last	Patient First	M	Patie...	Visit	DOB	Age	Sex	SSN	Anes
RM 1															
	08:00 A	95	MDSTEF	RICHARD	27371	AKERBAK	SUSAN		9661	1	5/13/1965	42	F	000-00-0000	
	09:00 A	95	MDSTEF	RICHARD	27372	MITHSMI	GREGORY		9662	1	6/12/1963	44	M	000-00-0000	
	10:00 A	95	MDSTEF	RICHARD	27397	ALUZDEL	RUDY III	M	9665	1	7/23/1975	32	M	000-00-0000	
	01:00 P	77	MDSCHU	STEVEN	27342	MRIEEMR	JAY		9638	1	7/13/1925	82	M	000-00-0000	
RM 2															
	07:30 A	87	MDSCHM	DAVID	26381	RISHPAR	BARBARA	H	9654	1	2/3/1950	58	F	000-00-0000	
	08:30 A	87	MDSCHM	DAVID	27149	IETONIE	STEPHANIE	M	9655	1	11/22/1991	16	F	000-00-0000	
	09:30 A	87	MDSCHM	DAVID	27206	ARZAGAR	RACHEL	M	8121	2	10/25/1993	14	F	000-00-0000	
	10:30 A	87	MDSCHM	DAVID	27204	OLLYCON	KATHRYN		9657	1	5/29/1993	14	F	000-00-0000	
	12:00 P	502	DPHALL	MARQUE	27399	AENZSAE	FELIX	L	9656	1	5/15/1972	35	M	000-00-0000	
RM 4															
	06:30 A	510	MDCURT	RALPH	27286	RICHAUR	NICOLE	B	9669	1	1/31/1992	16	F	000-00-0000	
	08:30 A	510	MDCURT	RALPH	27287	REALVL	NANCY		9660	1	2/18/1992	16	F	000-00-0000	
	10:30 A	91	MDPERR	BRIAN	27212	LSENNIE	MCKENZIE	J	9658	1	5/5/1999	9	M	000-00-0000	
RM 5															
	07:30 A	567	MDORTE	DELID	26310	OFEZLOP	MIGUEL	A	9663	1	2/17/1982	26	M	000-00-0000	
	09:30 A	567	MDORTE	DELID	27376	LENSWEL	BARRIE	I	9664	1	3/10/1936	72	F	000-00-0000	

© Aspose Pty Ltd. All rights reserved. www.aspose.com



VMR-Express - Control Center - [Forms]

File

MainMenu | Print Chart / View Schedule | Search Charts | EditForms | ScanChart | Maintenance Menu | Payments / EOB Menu | AP / Materials Mgmt | Dashboards Menu | Reports Menu

+ Add Record Edit Record Delete Record Print List Search Refresh Facility Demo

Form	CSD	Trans...	Anesthesia	Room	Ext	Sex	Procedure	Copies	Printer	Tray	N/D/F	Order	Facility	Withi...	Active		
DEFAULT																	
SIS																	
FrontDesk																	
Drivers License	...	True	False			doc	N	1	[Default]	...	1	N	0	Demo	...	0	True
FaceSheet	...	True	False			doc	N	1	Dell PhotoA...	1	N	1	Demo	...	0	True	
Cover Sheet	...	False	False			doc	N	1	[Default]	...	1	N	1	Demo	...	0	True
Pre Op																	
History & Physical	...	True	False			doc	N	1	[Default]	...	1	N	1	Demo	...	0	True
Pre-Admission Testing	...	False	False			doc	N	1	[Default]	...	1	N	1	Demo	...	0	True
Consent for Admission and Treatment	...	True	True			doc	N	1	[Default]	...	1	N	1	Demo	...	0	True
Financials	...	False	False			doc	N	1	[Default]	...	1	N	1	Demo	...	0	True
Pre-Operative Instructions	...	False	False			doc	N	1	[Default]	...	1	N	1	Demo	...	0	True
Surgical Consent Form	...	False	False			doc	N	1	[Default]	...	1	N	4	Demo	...	0	True
Anesthesia																	
Anesthesia Pre-Operative Orders	...	False	False			doc	N	1	[Default]	...	1	N	1	Demo	...	0	True
Anesthesia Consent Form	...	False	False			doc	N	1	[Default]	...	1	N	1	Demo	...	0	True
Post Anesthesia Care Unit	...	False	False			doc	N	1	[Default]	...	1	N	1	Demo	...	0	True
Medical Record																	
Physician's Orders	...	False	False			doc	N	1	[Default]	...	1	N	1	Demo	...	0	True
Insurance (1st)	...	True	False			doc	N	1	[Default]	...	1	N	1	Demo	...	0	True
Insurance (2nd)	...	False	False			doc	N	1	[Default]	...	1	N	1	Demo	...	0	True
Anesthesia Record	...	False	False			doc	N	1	[Default]	...	1	N	1	Demo	...	0	True
Patient Registration & Financial Agreement	...	False	False			doc	N	1	[Default]	...	1	N	13	Demo	...	0	True
Financials																	
Billing Form	...	False	False			doc	N	ACHILLES:...	2	[Default]		N	11	Demo	...	0	True
Post Op																	
Post Op Phone Call Record	...	False	False			doc	N	1	[Default]	...	1	N	1	Demo	...	0	True
Post Op Assessment	...	True	True			doc	N	1	[Default]	...	1	N	1	Demo	...	0	True
Consent	...	False	False			doc	N	1	[Default]	...		N	12	Demo	...	0	False

Last Update: 6/8/2009 11:03:50 AM