



Academic Medical Center (AMC)

Accelerating the speed and security of a patient record workflow

The Benefits

- Integrated simultaneously with multiple document repositories running on different operating systems
- Transformed rtf, html, plain text and Word document to PDF without the need for the native application
- Automated document publishing - merging, form filling, security, header/footers and watermarking
- No longer dependant on large resource-hogging applications like Word, Firefox & Acrobat
- Decreased IT spend and time spent managing systems and maintaining PCs

A medical complex might not be the first place you would expect to find the world's largest collection of post-war Dutch art treasures, but then Amsterdam's Academic Medical Center (AMC) is no ordinary hospital. In fact, the AMC is Holland's premier medical center and one of the country's largest teaching hospitals. Like the MaRS Centre in Toronto, Canada and other similar medical research and innovation campuses around the globe, the AMC strives to be ground zero for the next generation of medical discoveries and biotech breakthroughs. The AMC is not **on** the leading edge, it **IS** the leading edge. But what's the deal with all the art (they've even published a book about it)?

According to software engineer Frank Manshande of AMC's Project Services and Integration Group, the connection between art and medicine is stronger than it might at first appear. It is not an accident that the organization's Website prominently features an image of Rembrandt's 1632 masterwork "The Anatomy Lesson" on its homepage. "There is a tradition of the doctor as a kind of artist," Mr. Manshande believes. "My colleagues and I who design and implement the applications and systems that run the technology are, in a way, providing the canvas for the artists to work." When looked at from that perspective, the massive art collection doesn't seem so unusual after all.

However, not everything at AMC was a masterpiece. The document workflow for the electronic patient records needed a few touch-ups here and there. "Our problem was that the application produced new files created primarily in Microsoft Word rich text format," Mr. Manshande explained. "We wanted to avoid requiring client machines to launch Word, with all its inherent issues, just so users could view our documents. Mr. Manshande and his team, led by Arnaud Lauteslager, needed a simple but powerful tool that could convert RTF files to PDF, the recognized, global document standard.

"Our needs were not overly complex," Mr. Manshande recalls, "but they were quite specific. We needed support for RTF files but we also needed to be able to convert password protected Word documents, HTML files, plain text, as well as the ability to create PDF overlays. We had some concern that most out of the box applications would either give us too much unnecessary and expensive functionality or they would require costly customizations. That's where Adlib enters the picture."

Frank and his team researched the tools available on the market and quickly zeroed in on Adlib Express Server Version 3.8. "Adlib had all the features we were looking for and it was remarkably easy to integrate with our current set up," he said. "Express Server handles our conversion jobs and our users are then able to view the patient files using a product called ICEpdf, which runs in a proprietary application we call the AZD (AMC Zorg Desktop) client.

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Software Engineer
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The AZD client acts as a kind of Web portal and displays medical information about patients coming from about 50 different data sources, using jdbc, sockets, samba etc. Each AZD client used by the doctors and other medical staff runs on standard Windows XP machines throughout the hospital. It is very convenient.” AMC runs Adlib on Windows Server machines with its Zouga server platform running on Linux for maximum flexibility.

AMC is also making use of its Adlib solution to overcome a simple but highly sensitive problem. As Mr. Manshande explained, “Adlib’s PDF overlay features allow us to distinguish between the viewing of the original version on screen and the printing of an “overlayed” version with dynamically generated headers and footers to identify who printed the PDF and the date and time it was printed. This is important to us because our documents contain highly confidential patient information and this helps to mitigate the risk of users leaving forgotten files on a printer for anyone to see.”

Ensuring that the overlay did not overwrite the information on the original documents, painting over the original canvas if you will, ended up being the trickiest part of the implementation for the AMC team. “We tried several fixes using different settings in our DPI files. Finally we deployed unique DPIs to manage each of our data sources. That solved it. The technical support we received from Adlib was prompt, professional and completely focused on our needs.” Mr. Manshande stressed that he has not needed much support for the Adlib solution as there have been few issues since deploying Express Server. He also appreciates that neither his team nor the end users required any formal training to manage the new workflow.

AMC has discovered that it’s new Adlib powered workflow has driven efficiencies beyond the scope of the team’s original expectations. In addition to avoiding potential training costs, Mr. Manshande’s team found that the new workflow had made his client machines “more stable”, as they no longer need to depend on large resource-hogging applications like Word, Firefox or Acrobat. The AMC team can also control the way end users view the documents in the system. “We can limit users to accessing only one specific patient file at a time. Because the generated PDFs are displayed within our own viewer application, we can close the window as soon as the user tries to open a new document. This would be a much trickier operation if we tried to do this with an instance of Word or Explorer. This clearly helps us to save time and money maintaining our client machines.”

Frank Manshande and the AMC team are looking forward to upgrading to Adlib ExpressConversion & ExpressRecognition Server 4.0 and further accelerating the speed and security of the AMC patient record workflow. One invaluable benefit of spending less time managing systems and maintaining PCs, is that Frank and his team have more time to explore that world class art collection. Rembrandt would be right at home we think.

For more on the Academic Medical Center’s art collection, please see:
<http://www.amc.uva.nl/index.cfm?pid=2586>

About Adlib Software

Adlib Software is a leading provider of document conversion, transformation and publishing software. Its products integrate seamlessly with enterprise application software as part of a strategic content management workflow or collectively act as a framework for a stand alone solution. Adlib’s Document Transformation Framework has a modular architecture allowing for a single feature adoption or an entire end to end document conversion and workflow automation solution.



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