Lulu Case Study

Executive Summary

Lulu helps authors, publishers, businesses, and educators publish and sell print on demand books and ebooks. Their DOC to PDF conversion system used Microsoft Word Automation which was unreliable and difficult to scale. After trying several products, Lulu decided to use Aspose.Words for .NET in their new platform. Aspose.Words takes Microsoft Word documents and changes them into PDF files that can be printed by any of Lulu's printing partners.

The new system is complex but the part that used Aspose.Words for .NET was quickly and easily built. Aspose's developers made a number of changes to the software to give Lulu exactly the features and functionality they needed. Aspose offers more than mere document conversion and Lulu is investigating other Aspose solutions to help address their current needs.

About Lulu

Lulu are a technology company that provides an open publishing platform where customers from all over the world can create, publish and sell print-on-demand books, ebooks, photobooks and calendars. Lulu's is an affordable route to self-publishing. As well as selling books on Lulu.com, Lulu helps authors reach other sales channels. The company offers editing, cover design, marketing and other services to support their customers.

Since Lulu started in 2002, over 1 million customers have created books on the site. Every month around 20,000 titles are published. Lulu is based in Raleigh, North Carolina, USA and has international website that serve UK, French, German, Italian, Spanish and Dutch customers.

Website: www.lulu.com

The Project

The basic function of Lulu's publishing platform is to receive manuscripts from customers and send them to printers for printing. The printers receive the manuscripts in PDF format but that is not always its original format.

Customers can submit manuscripts in any number of formats: many use Microsoft Word. Lulu's publishing platform converts incoming manuscripts to PDFs that can then be sent to the printer. The conversion is an automatic process. The document comes in, is converted and goes off to print without human intervention or review.

This means that it is very important that the PDF conversion is accurate. The PDF must look exactly as the Microsoft Word document and the PDF and PostScript markup inside the file must be syntactically correct so that the printers can parse it.

Lulu has been running for several years. The original conversion platform depended on Microsoft Automation for converting DOC files to PDFs. As the business grew and had to accommodate a much higher number of manuscripts, some problems with the existing platform became apparent.

- ✔ It did not scale,
- ✔ it did not support the latest Microsoft Word document formats, and
- ✔ it was not robust.

In short, the existing solution was not as dependable as Lulu needed it to be. The company decided to build a new platform using components that could support their continued growth.

Finding a Solution

Lulu looked at a number of different applications to solve their problem. What they needed was something that would convert DOC and DOCX files to PDF files correctly and quickly every time.

The new solution had to be

- ✔ better than the original,
- ✔ easy to integrate with the new framework and
- ✔ cost-effective.

Lulu's engineering team tested Aspose.Words for Java and Aspose.Words for .NET alongside the existing Microsoft Automation system and other applications. Each solution had its strengths and weaknesses but in the end, Aspose.Words for .NET won because

- ✔ it took only 10 lines of code to integrate it into the new platform,
- ✔ it is robust and scalable,
- ✔ supports all the file formats that Lulu need to support, and
- ✔ the licensing structure is straight-forward and cheaper over time than other solutions.

Getting Support

Any major implementation presents unexpected challenges and Lulu's new document conversion module was no exception. The converted files are sent to different printing companies depending on where they should be shipped. A book destined for Italy, for example, is printed by a printer in Europe.

When the converted files were tested, Lulu found that one of the printers could not print them. This was unacceptable: all printers must be able to print all files. Any other solution quickly becomes impossible to maintain.

Aspose's developers worked with Lulu to solve the problem so that all PDF files that Lulu's conversion framework creates can be printed by all of Lulu's printing companies. They also improved how drop-caps were handled when converted to PDF and added a number of other improvements.

The result is a product that meets Lulu's needs and can take any Microsoft Word document that a customer submits, regardless of the decorative bells and whistles the customer may have used to embellish their manuscript, and convert it to a PDF file that can be printed anywhere.

Next Steps

Lulu's initial Aspose implementation was a straightforward replacement of the current Microsoft Automation solution to ensure that their DOC to PDF conversion is reliable and scalable. There is so much more they can use Aspose to do.

EPUB for Ebooks

The ebook market is growing and is interesting to any publisher. At the moment, not all authors on Lulu use the EPUB conversion feature. This particular service is one that typically only authors that are very serious about their book will use. File conversion is always tricky and converting to EPUB and getting consistently good results can be difficult. Designing for print, where the page size is know, and designing for re-flowable content that must work equally well on a wide variety of screen sizes, requires different skills.

When it is possible to create a basic Microsoft Word template that authors can use to produce a predictably good EPUB file, more authors can get their books into a mobile format. Lulu wants to make their EPUB service more popular by providing the template and the conversion utility. They were keen to see that EPUB was one of the formats that Aspose.Words for .NET supports.

Automatic ISBN Placement

In the traditional publishing industry, cover art and copyright statements are created by or in close cooperation with the publishers. The copyright page in particular, with the ISBN, font information, Library of Congress classification and so on, is not something that authors normally have to think about. Not so when using an open publishing platform. At Lulu, many customers are their own publishers so they have to include the ISBN on the back cover and design their own copyright page.

Lulu would like to add a copyright page at the front of the book and add the ISBN barcode to the book cover for their customers. It saves customers time and work and means that ISBNs can be assigned just before the book goes to print. At the moment, customers must decide where they want the book to be sold before they even upload a file. Moving ISBN assignment to the end of the process also reduces the number of ISBNs that are assigned to projects that are never completed.

Aspose.Pdf's ability to work with PDF files could help Lulu realise their plans for automatic ISBN placement. Not only can Aspose.Pdf help auto-generate the copyright page based on information about the book that Lulu holds but it can also add the ISBN to the copyright page and the cover.

Summary

Lulu first came to Aspose to find a solution to their file conversion issues but have found that we offer much more. The conversion project has successfully gone live and Lulu are looking at what other issues they can solve with Aspose.Words for .NET and other Aspose products.

Aspose.Words for .NET has proven to be:

- ✔ **easy to integrate** – all that was needed was 10 lines of code,
- ✔ **cost-effective** – the project came in under budget and Aspose's costing was easier to predict and manage than that of some of the competing solutions,
- ✔ **robust and scalable** – the new framework is more reliable than the original one, and
- ✔ **full of potential** – Lulu are experimenting with Aspose.Words and other Aspose products to solve more problems.

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