Case Study
Merrill Corporation - UK & India

Customer and Industry
Merrill Corporation, Financial Print, based in London with services team in Chennai.

Products and services summary
- Arbortext Advanced Print Publisher from PTC
- Custom software design and build for conversion and specialist comparison needs
- Arbortext reseller services, consultancy, system design, solution development, training and support

New Requirements
The customers’ existing typesetting and workflow systems had evolved over 30 years, based around a product that was no longer being developed or maintained. As a result, they were not able to facilitate more exacting requirements within their workflow around document comparison, production speed and supporting new technologies.
For this reason, they started looking for replacement systems and components to deliver what was needed to remain competitive in the market place, while eliminating some highly expensive solution proposals and various pagination platform technology stacks, including XPP, Quark and InDesign.

Challenges
The challenges became clear from the early specification stages that the system must include, amongst other things:

- Improve the workflow production and turn around speed at every proofing stage.
- Be easy to re-train and use for Typesetter/Operators in multi-national global locations.
- Have the ability and capability for both manual and semi-automated pagination.
- Improve the quality of output and accuracy of comparison proofs in compliance with strict STBL (UK) & BaFin (DE) requirements, something that the customer was not able to fully achieve automatically with other comparison tools.
- Within a fixed budget and tight schedule.

Custom requirements included such needs as:
• Process and handle various quality MS Word customer source data into a manageable format for custom Typesetting and Comparison.
• Typeset data professionally to either the customers’ or ‘in-house’ style, with full manual control plus semi-automated components with potential for fully automated pagination.
• Accurate blacklining (strikethrough/red-lining/change tracking) at multiple proof cycle levels.
• Split/Sub large documents during composition and/or correction stages while retaining document integrity and custom workflow extensions.
• Produce a fully formatted document compare proof between any 2 cycle proof levels according to strict compliance for the UKLA and German regulators.
• To deliver and output typeset PDF & MS Word format readback.
• Offer pipeline options for XML/XBRL/Edgar2 conversion from completed typeset documents.

Solution
The custom workflow solution implemented for Merrill Corp. utilised the powerful Arbortext Advanced Print Publisher (formerly 3B2) as the composition platform, which has a long history in financial print and flexibility for customised environments.

The workflow was completed by 2 bespoke software tools and 1 continuous structured data markup (non-XML) language designed by tformat specifically for financial typesetting and comparison needs in mind. The software tools included a MS Word conversion and cleaning engine (CT) which takes documents no matter what condition and converts them quickly and uniformly into our custom structured data format. The validation and comparison engine (CC) validates this data at any stage of the workflow as required and provides the data comparison engine which is highly tuned for financial reporting document comparison.

Overcome competitive demands
• **Speed of processing and turn-around** ⇒ Data conversion, correction cycles, and composition.
• **Flexibility to adapt and change** ⇒ Adapt to new inputs, style requirements and the unexpected.
• **Accuracy & Compliance** ⇒ High accuracy of composition and comparative submission regulations.
• **Specialist Financial Typesetting** ⇒ Complex composition functionality easily controlled.

Conversion and pre-processing
• Fast conversion of MS Word documents into a format that is effective for structuring the output data and handling for internal workflow and typesetting.
• An environment to edit, author and structure the supplied converted data while maintaining data model integrity and validity.
• The flexibility of what can be brought out from the source Word document into the converted clean output.

Composition and document life-cycle
• Easy to use purpose-designed data model.
• Full manual WYSIWYG typesetting control with semi-automated processes from within the typesetting API, while maintaining the potential of full black box automation and cloud-based solutions.
• Flexible and easy to use desktop typesetting environment with an intuitive stylesheet and/or data-driven style and page layout controls.
• Accurate blacklining (strikethrough/red-lining/change tracking) at multiple proof cycle levels.
• Split & merge of large documents during composition and/or proofing stages to increase load balancing for faster turn-around times.
• Rendering of UKLA/STBL and German/BaFin regulatory compliant comparison proofs at any stage and between any cycle/proof level.

Document comparison and compliance
• Validation of the data ensures mark-up compliance at all stages of initial conversion through to typesetting.
• A comparison configuration set-up to ensure flexibility of threshold controls and highly intuitive comparison algorithms enables it to deliver UKLA/STBL and German/BaFin regulatory compliant comparisons.
• Real-time generated user mark-up/tag set documentation and error handling GUI integrated into the validation process.

Outcome & Benefits
After a period of feasibility studies followed by an extensive specification building and requirement gathering process, working very closely with the customers’ team our recommended approach was adopted. The new system has now replaced the entire Source input conversion tools, Composition System, document comparison tools and proof generation workflow.

After the initial delivery which came in on time and on budget, a period of system review, user training, feedback cycles and beta testing was undertaken before the system went into live production work in early 2017. The system has delivered improvements at each stage of the production process with a more intuitive, much faster, future proofed and highly extensible system.

This solution was developed and delivered in a collaborative partnership lead by tformat Ltd. For more information this bespoke financial print solution and software products see Squaremoons Publishing Solutions.