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WHITEPAPER

How to Use MS Word with SAP to Create and Process Text Based Business Documents

Using these two applications together, taking the best of each to create text heavy form letters, is an excellent way to improve IT and general business efficiency.

Background

SAP is designed to handle heavy volume, security and the integrity of business data; MS Word is efficient for text processing and formatting. When text customization, page text layout, and word processing is integral to a document, then using a combination of SAP to load the data and MS Word for formatting is often the best solution. The more text is integral to a Business Form, the more advantageous it is to use word processing to merge SAP secured data with detailed context and explanations.

Examples are numerous in Corporations. From a Sales Quotation to an Employee Compensation Letter, a wide range of business forms can be addressed. Some may require interaction with users to offer text customization, others may require batch processing turning thousands documents into enhanced business letters at one time.

This whitepaper provides an overview of the methodology required to implement and tailor such a solution. IT departments are facing increasing requests from business users to support ever changing business needs. Their ability to provide solutions not only for Data and Process, but also for word processing quality rendering and flexibility can increase productivity and customer satisfaction.

Which technology is best suited for your company's needs

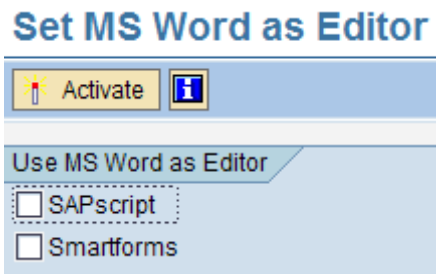
The commonly used available technologies for exporting SAP data into MS Word include self development in ABAP, taking advantage of SAP built-in solutions, or using one of several third party solutions.
An overview of each is provided below:

ABAP Integration
ABAP developers can integrate Word objects using the OLE concept. Embedding external objects into ABAP code requires the creation and the setting of properties.

```
CREATE OBJECT …
SET PROPERTY OF …
CALL METHOD OF…
```

The application of OOXML (Open Office XML) allows proceeding in a more flexible way. The user can create a MS Word document as a template. Using the extension ZIP the ABAP developer generates a folder following the open packing convention. The file can then be uploaded to the SAP server where the ZIP object appears in the ABAP code. This ABAP programming method gives users the ability to launch document creation when needed. It is however a manual process that requires a significant effort from IT and regular changes to ABAP code.

SAP built-in solutions
The purpose of the MS Word interface in SAP is to send and to fetch data as well as adding comments to documents. Since these requirements are minimal the functions available through this interface are reduced to a small set of Word features.



In addition, SAP provides an MS Word SAPscript editor that's main function is the editing of characters from multiple languages in unicode systems. The styles are reduced to those from SAPscript or Smart Form.

The above two options prove useful when SAP users would like to apply a small amount of changes to their SAP forms. A third option, the Template Designer is an integrated module in SAP. Before starting template creation the SAP user defines an object type, a data type and the language. After downloading the schema to a local machine the user can modify the XML Tags and integrate the formatting between the structured data information. In order to apply the template the user navigates in SAP to the concerned object. This procedure is a good way for users with SAP knowledge who are familiar with XML.

Third party products

The solutions available on the market can be grouped into two categories according to the underlying technology.

Third party add-ins are available that integrate SAP access into MS Word. Since this is a tight integration high compatibility between the two programs is required. New releases of MS Office or SAP can cause interaction conflicts. A preferred type of add-in uses extraction and importing SAP data into Word is handled by structured files like XSF. These solutions are independent of updates and releases and guarantee compatibility, since structured files do not change their characteristics after an upgrade to new SAP or Office versions.

IT Managers most common requirements regarding SAP to MS Word integration are:

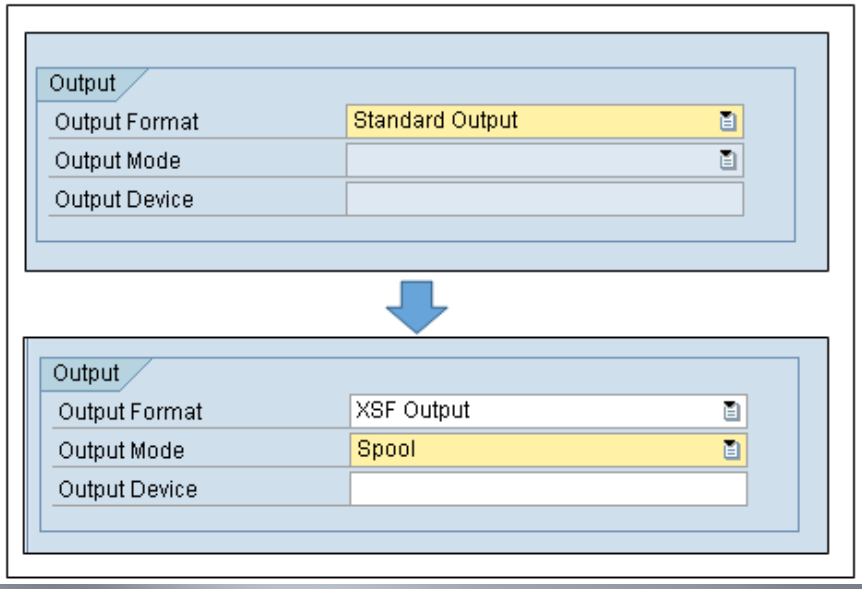
- Launch an MS Word process from SAP
- Select appropriate MS Word template and open it on an SAP User's desktop
- Lock areas in a Word document which contains SAP data
- Store a copy of the final document to SAP DMS or an archive
- Be SAP Module and MS Word Version independent

Extraction and import solutions best match IT's most common requirements. Its methodology, implementation and benefits are explained in detail within the following chapters.

Which Business Documents are most likely to require Text Processing

In a typical business any document that is used for external communication, e.g. any type of business letter; like reminders, or second dunning letters are likely candidates to require some text customization. For example, sales quotations may require word processing and layout customization easiest done in Word, in the HR department compensation review statements typically require text editing. Also, marketing actions like event announcements and news releases are often text based documents married to data.

Since any Smartform or Sapscript Output can be exported as a structured file such as XSF or RDI, (one just needs to select the option) all SAP modules are capable of taking advantage of a Word Processing enhanced document creation.



When to choose SmartForms vs. MS Word options

In general, MS Word is preferable when the business form:
- contains a lot of text and a small amount of SAP Data,
- needs to be adapted to the recipient's information needs
- requires users to input a lot of text with custom positioning
- text volume is not easy to determine during the template creation.

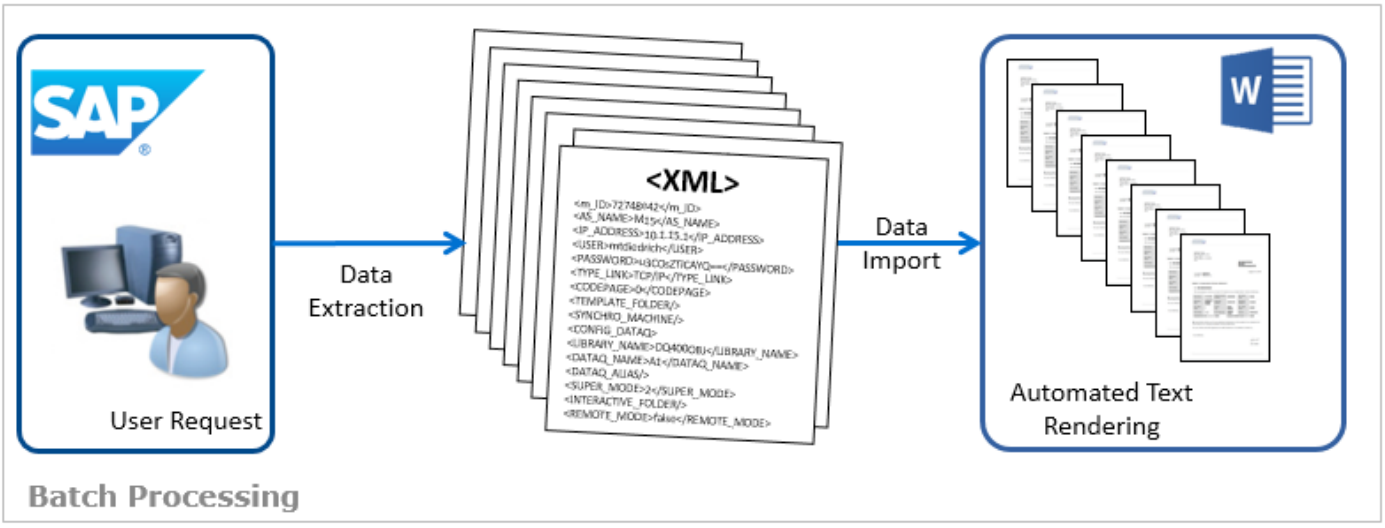
SmartForms remains a better choice if the document includes a lot of SAP Data and just a small and easy to integrate amount of text.

Different modes to extract Data from SAP into Word

In order to import SAP data into MS Word one of several different process modes can be used. The following chapter provides an overview of three different ways to create MS Word end documents that include data extracted from SAP.

Batch processing

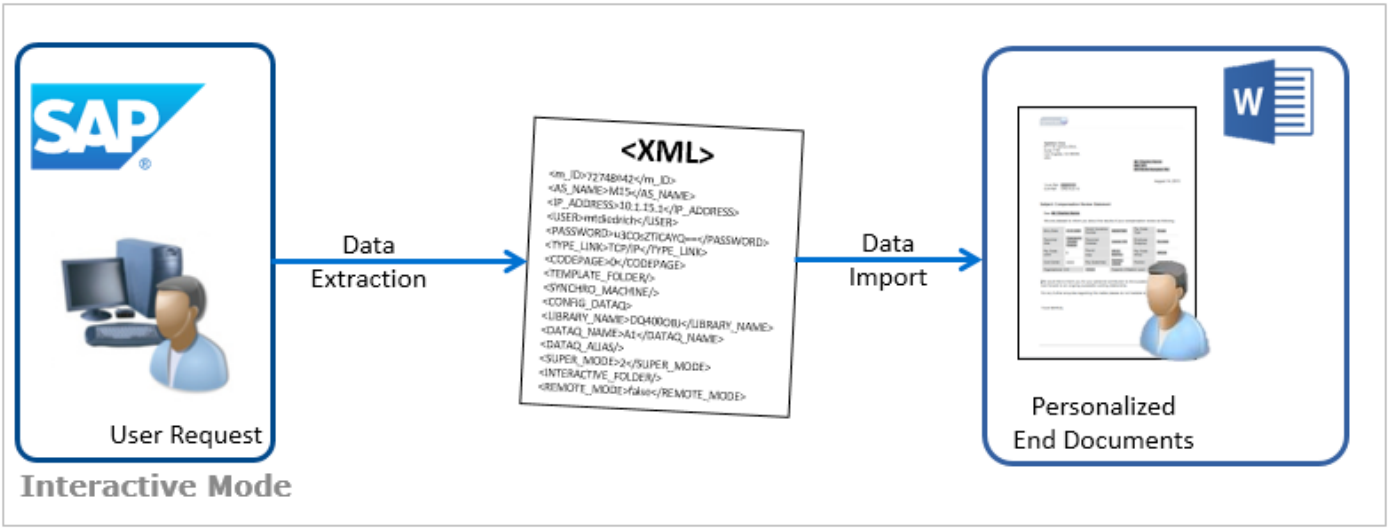
This mode enables users to run a group of business documents within SAP. Through structured files (XML) the data for these files is extracted so that it may be imported into Word. The end documents are saved in a shared folder on a designated server.



Using this process takes full advantage of the sophisticated and automated text rendering available in Word. If needed some or all of these documents can be can modified personalizing them for each recipient.

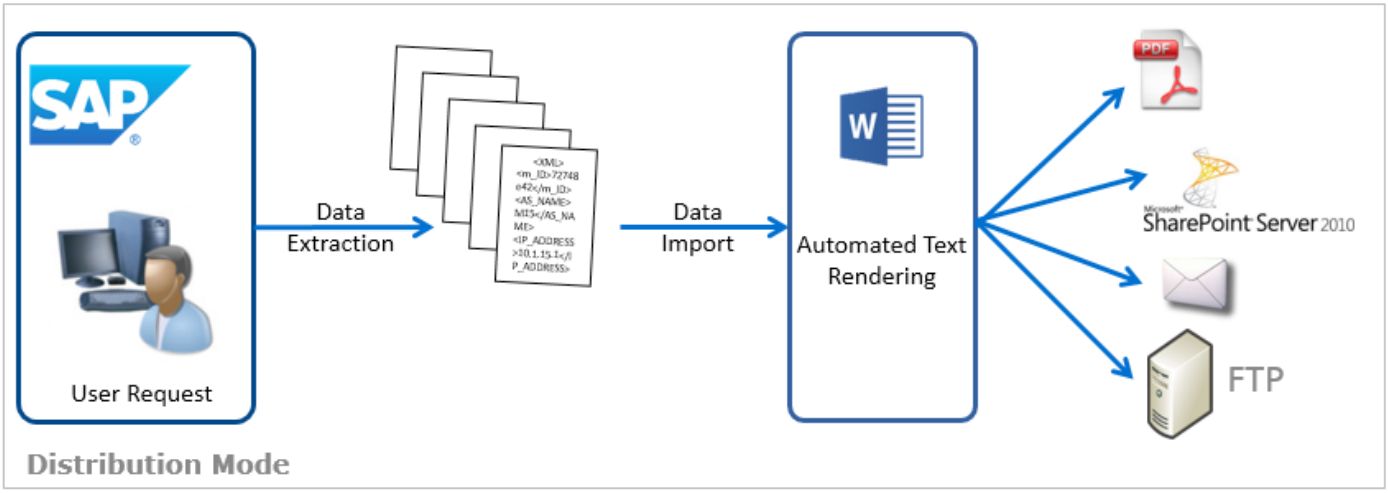
Interactive Mode

If the user needs to modify the content of a business document for one or a just a few recipients, interactive mode is more efficient. In interactive mode the generated document is opened on the user's computer and the text can be edited directly in Word.



Distribution Mode

This mode combines automated batch processing with end document distribution.

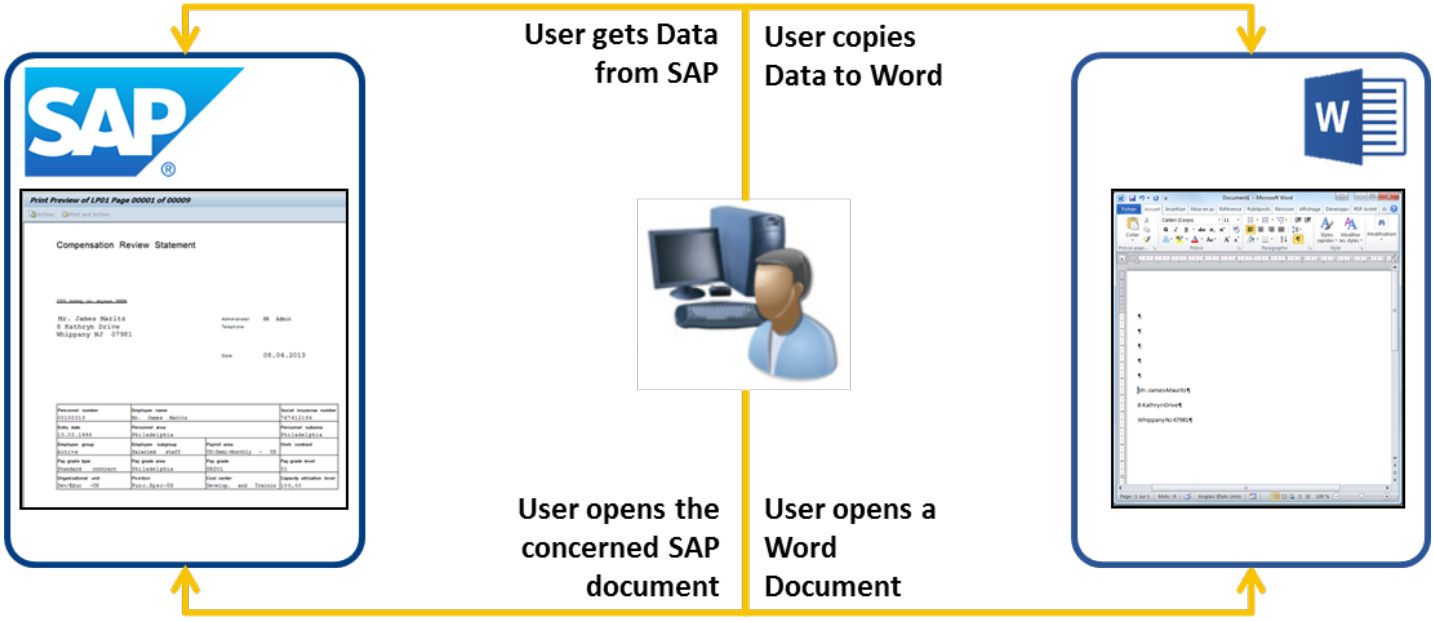


For example the document can be delivered via e-mail, uploaded to MS SharePoint or sent to an FTP server. The following chapter provides an overview of using distribution mode.

A perfect balance = Secured Data + Customized Text

SAP delivers secured data thanks to precise processes reflecting business procedures in an exact way; the data is robust and secure. IT managers want to take advantage of the robustness and stability of their SAP system when creating business documents. The idea of integrating MS Word with SAP data may cause concerns about security, human influence on data integrity causing instability, a slowdown of processes, and higher transaction costs, since the documents have to be interacted more frequently.

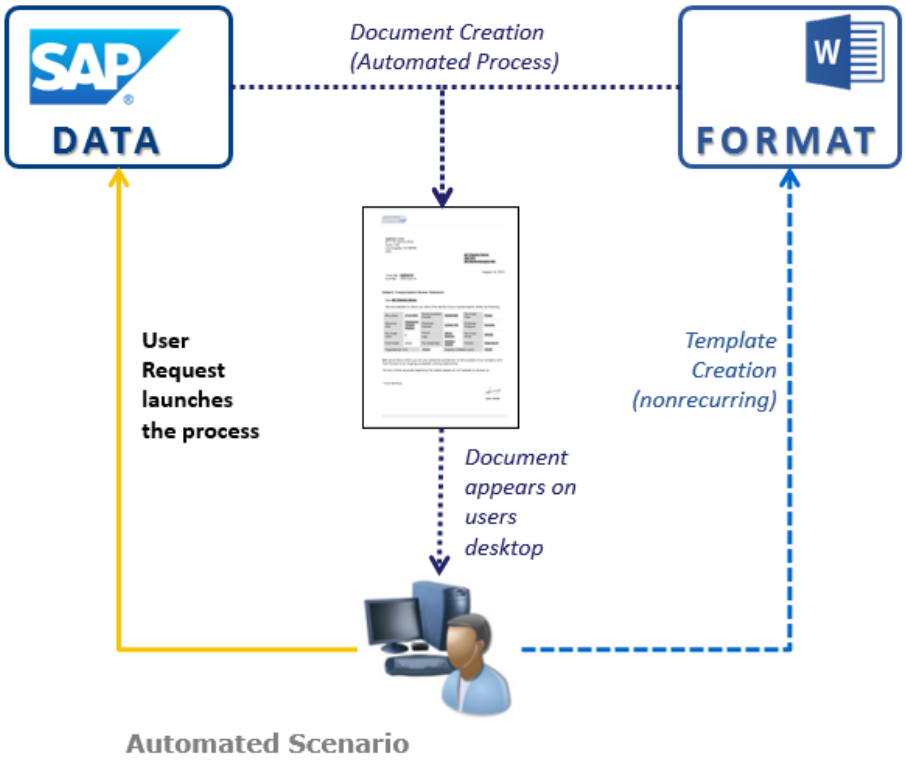
These objections are understandable when MS Word is used in the way shown below:



Non automated Scenario

However, matching and filling up MS word Forms Fields with extracted SAP Data, then turning-on MS Section Lock capabilities in a Word Template, secures the whole process.

When completing the tasks using the below scenario security and data integrity are insured. MS Word is integrated in an automated and secure manner.



Automated Scenario

The advantages: document security AND document customization

- A Word Template can be designed by End Users that meet their own requirements
- The Template is then enriched via Form Fields populated by SAP Data.
- Documents are secured by an SAP administrator who locks the security sensitive portions of the documents (a standard Word function)
- Word Macros and VBA enhancements can be implemented to handle special requirements
- The user launches the process in SAP, the data is automatically populated via XML then launches on the user's desktop for customization
- A copy of the final document may be saved in SAP DMS with relevant metadata, achieving traceability.

A Secure Productive Enhancement to SAP Document Creation

The above described MS Word with SAP data automated solution allows IT managers to control the document creation process since the data is securely imported, the process is fully traceable and the IT department has the final say over the templates – even if they are designed by the end user- since they are embedded into the process by an IT administrator.

Since end users work with familiar program, Microsoft Word, they will embrace this solution, and also be empowered to modify the text and the form of the documents according to their requirements – without any additional training. This independence allows the IT department to focus on development and maintenance instead of applying tedious ABAP code changes regularly to adapt to changing user requirements.

Conclusions

Many SAP Module created documents can benefit from MS Word's text rendering capability, solving text heavy SAP user requirements easily and quickly. Because of the ability to customize the templates and user's familiarity with Word, adaption is fast and painless. The ability to use batch processing takes advantage of SAP's robustness and high volume capabilities. The solution can be implemented in a fast and smooth way in just a few days

About the Author

Marie-Theres Diedrich obtained a French – German double master degree in computer studies from EM Strasbourg Business School (France) and University of Technology Dresden (Germany) and has experience with different types of information systems. As a Customer Engineer for Symtrax, she has implemented ERP to MS Word solutions for Social Housing and Medical Insurance Companies

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