



DOCUMENT AUTOMATION SOFTWARE

ACTIVEDOCS V MICROSOFT® WORD MAIL MERGE

Prepared by: Martin Srubar
Sales Engineer

Audience: ActiveDocs Evaluator

Abstract: A comparison of the capabilities of ActiveDocs and Microsoft® Word Mail Merge.

OVERLAND PARK

Southcreek Office Park
7301 West 129th Street
Suite 160
Overland Park, KS 66213, USA
Ph +1 913 888 1999

LONDON

199 Bishopsgate
London
EC2M 3TY
United Kingdom
Ph +44 20 3290 1788

AUCKLAND

Level 6, 27 Gillies Avenue
Newmarket, Auckland 1023
Post: PO Box 289
Auckland 1140, New Zealand
Ph +64 9 520 5650

BRISBANE

192 Ann Street
Brisbane, QLD 4000
Post: PO Box 604
Paradise Point QLD 4216, Australia
Ph +61 7 3040 6616



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Contents

| | | |
|----------|---|----------|
| 1 | Summary | 1 |
| 2 | Microsoft® Word Mail Merge basic functionality | 2 |
| 3 | ActiveDocs basic functionality | 3 |
| 4 | Functionality comparison | 4 |
| 4.1 | Document creation workflows | 4 |
| 5 | Document creation process | 5 |
| 5.1 | Template building and maintenance | 5 |
| 5.2 | Integration capabilities | 7 |
| 5.3 | Document production performance | 7 |
| 6 | Conclusions | 9 |

1 Summary

Microsoft Word Mail Merge may satisfy the document automation needs of an individual or small business. Its deployment in the corporate environment is compromised by the lack of built-in support for business-driven template maintenance, content dependency management, higher-level integration, and scalability.

ActiveDocs provides a standardised and controlled environment for document creation driven by business logic, integrated content management, high flexibility for integration into current processes, and scalable performance.

2 Microsoft® Word Mail Merge basic functionality

The Mail Merge function in Microsoft Word is desktop-based and allows users to create documents by populating placeholder “merge fields” in templates with data from external sources such as Microsoft Excel spread sheets, Microsoft Access Database or other OLE DB/ODBC standard compliant resources.

The mail merge process is carried out on a client machine and the resulting documents can be stored on the client machine, in the file system, or printed directly. The process is driven, and actions are triggered, by the end user.

Advanced levels of functionality can be achieved but only by using bespoke VB Scripts for each application/mail merge template and implementing additional applications to manage template versioning & approval, and document approval workflow.

3 ActiveDocs basic functionality

ActiveDocs is a server-based application for automated document creation, using Microsoft Word merely as (1) a familiar environment for the creation of Templates, and (2) output document format options. The core of the application is ActiveDocs Composition Server, augmented by a sophisticated Template Design & Management interface called ActiveDocs Designer.

For user driven document creation the server processes the logic built into the Templates and collects data through a browser-based interview session facilitated by the ActiveDocs Document Wizard web application. The wizard will collect data from the user and/or use data from external sources such as OLE DB/ODBC standard compliant resources, Web Services, Microsoft Excel spread sheets, SharePoint lists, and Microsoft Access databases. The server produces the document, updating Word fields such as page numbering and tables of contents/images, and creates output in any of the document formats available in Microsoft Word or via external drivers. The server may also send the output into a workflow and/or queue it for delivery via existing print, email or fax infrastructure.

If user input is not required, ActiveDocs Automated Mode document generation is facilitated via XML-based web services allowing the triggering of document creation by an external event, passing on required data for low- or high- volume mass production of documents in a short period of time.

Complex rules based on business logic can be imposed on Templates without the need for programming.

Seamless integration of ActiveDocs into Microsoft Dynamics CRM and SharePoint Server can be achieved through available implementation solutions. Integration with other CRM or DMS implementation is facilitated by deliberate engineering for integration via event handlers throughout the document creation process as well as total control over the User Interface appearance.

4 Functionality comparison

The functionality of Microsoft Word Mail Merge and ActiveDocs will be assessed in five major areas relevant to document creation.

4.1 Document creation workflows

There are several workflows to be considered during the process of document creation.

- Template building and approval workflow
- Reusable blocks of text workflow
- Document approval process workflow

Typically, a template for each type of document needs to be created and approved to be used for creating customer facing documents. The need for template versioning, approver comments, and prevention of editing collisions arises. The same needs are applicable to reusable blocks of text (such as terms and conditions, standardized paragraphs, etc.).

After a document has been created an approval workflow is often required. A typical example would be a loan approval by a manager when the loan amount exceeds certain amount.

The table below compares the functionality of Microsoft Word Mail Merge and ActiveDocs in the area of document creation workflows.

| Document creation workflows functionality comparison | | |
|--|---|----------------------|
| Feature | Microsoft Word Mail Merge | ActiveDocs |
| Template versioning | Implementation of other software needed | Native functionality |
| Reusable text-block versioning | Implementation of other software needed | Native functionality |
| Template approval | Implementation of other software needed | Native functionality |
| Reusable text-block approval | Implementation of other software needed | Native functionality |
| Prevention of editing collisions | Implementation of other software needed | Native functionality |
| Document approval workflows | Implementation of other software needed | Native functionality |
| Conditional workflows | Not available | Native functionality |
| Workflow email notifications | Implementation of other software needed | Native functionality |

5 Document creation process

Commonly, a document may be based on information stored in a company's databases or other systems, as well as information provided by the user at the time of document creation. A typical example could be an insurance policy document where customer details, address, claims history etc., are stored in a database and information about the type of cover, excess, premium etc., are entered manually. To compile the document, the document creator has to have both sets of information available.

In the case of using Microsoft Word Mail Merge this will require manual document editing (error prone) or the use of complex fields at multiple places in the template from which the document is created.

In the case of using ActiveDocs the user will be presented with one seamless environment of the Document Wizard, combining the data inputs from the databases and the user.

The table below compares the functionality of Microsoft Word and ActiveDocs in the area of the document creation process.

| Document creation process functionality comparison | | |
|---|--|---|
| Feature | Microsoft Word Mail Merge | ActiveDocs |
| Data input from a database | Native functionality | Native functionality |
| Image database compatibility | Not available | Native functionality |
| Multiple data sources | Not available | Native functionality |
| End user data entry | Free text editing | Native functionality |
| End user data entry | Fields | Data type specific fields with designed-in calculations and validation. |
| End user data entry | Multiple instances of the same data require multiple entries | Multiple instances of the same data require one field entry only. |

5.1 Template building and maintenance

Templates are usually created in the environment of Microsoft Word. Fields to be replaced by information from databases are inserted, re-usable blocks of text are put in place and business logic is applied on the content. Microsoft Word and ActiveDocs differ greatly in the area of template building and maintenance.

Microsoft Word replaces the mail merge fields with appropriate database data by simple "search and replace" functionality. Any additional logic needs to be added through VB Script over the mail merge fields or other fields. This creates a need for coding if advanced functionality is required in an individual template. This also makes populating repeating items, such as list of claims, difficult, not taking into consideration difficulties connecting more than one database to Microsoft Word Mail Merge.

ActiveDocs provides Template Designers with the ability to calculate, validate, use, and reuse fields and lists, and to apply business logic without a need for coding by using ActiveDocs Rules designed using natural language. Such Rules can be based on user entries as well as calculated values. Lists of repeating items may be used to build tables and charts.

If a change to a template is required, in case of Microsoft Word Mail Merge, the usually a programmer needs to be involved to adjust the VB Script to the changed document and/or business logic.

ActiveDocs is designed to allow Templates to be changed by business users.

The table below compares the functionality of Microsoft Word and ActiveDocs in the area of template building and maintenance.

| Template building and maintenance functionality comparison | | |
|---|--|--|
| Feature | Microsoft Word Mail Merge | ActiveDocs |
| Field replacement from database | Native functionality | Native functionality |
| Applied business logic | VB Script coding within the template required | Native functionality |
| Calculating values within the template | VB Script coding within the template required | Native functionality |
| Repeating item lists | VB Script coding within the template required | Native functionality |
| Charts based on template/database data | Not available | Native functionality |
| Ease of maintenance of the templates | Text replacement – Easy (risk of affecting VB Script) Template logic change – coding required | Text replacement – Easy (not affecting the rules) Template logic change – Multiple option list selection, automatically matching renamed fields |
| Skill set required for template maintenance | VB Script programming – Advanced user Microsoft Word – Advanced user | Microsoft Word – Intermediate user |
| Reusable text blocks | Partially supported through standard Word functionality. Dependency management is limited | Native functionality - fully supported with inbuilt dependency management |
| Reusable field and rule definitions | Not available | Native functionality |
| Reusable data connection definitions | Not available | Native functionality |

5.2 Integration capabilities

Microsoft Word and ActiveDocs approach integration from two different angles. As a part of the Microsoft Office suite, Word is a software product open to integration of plug-ins developed by third parties but it does not offer many possibilities for integration into custom-built solutions on the document creation level. In fact the highest level of integration can be achieved on the document level, where third party software may be used to manage document storage and/or workflows.

ActiveDocs is purposefully designed for integrating document creation into users' current processes and software, such as CRM. Third party applications can interface with ActiveDocs Express Wizard and Document Wizard at every step of the document creation process through appropriate event handlers. The look of the ActiveDocs wizards can be customized and seamlessly integrated with current systems.

For detailed analysis of integration capabilities of ActiveDocs, please refer to the whitepaper: *ActiveDocs: Integration with Microsoft® SharePoint, Microsoft® Dynamics CRM, and Other Applications*

The table below compares the functionality of Microsoft Word and ActiveDocs in the area of integration capabilities.

| Integration capabilities comparison | | |
|---|---------------------------|---|
| Feature | Microsoft Word Mail Merge | ActiveDocs |
| Integration with document management systems | Native functionality | Native capability |
| Customization of application appearance | Limited | Full customization through HTML and CSS |
| Integration during the document creation process | Not available | Native capability |
| External event triggered document creation | Not available | Native capability |
| Interaction between the applications during the document creation process | Not available | Native capability |

5.3 Document production performance

Document production performance assessment becomes important when the need for near-real-time or high volume document production arises. Microsoft Word Mail Merge can be used for creation of large volumes of documents; however as it is not a server application its performance is limited by the end user machine and it can easily tie up an end-user machine for long periods. More importantly, scalability cannot be achieved.

ActiveDocs fully supports scale-up and scale-out architecture allowing the use of multiple threads via multiple processors on the server and by supporting the deployment of additional servers for load-sharing as the need for higher volume document production develops. Additional servers and CPUs can be deployed without affecting current production capabilities.

For detailed analysis of topology and performance of ActiveDocs, please refer to the whitepaper:
ActiveDocs Topology and Performance

The table below compares the functionality of Microsoft Word and ActiveDocs in the area of document production performance.

| Document production performance comparison | | |
|--|----------------------------------|----------------------|
| Feature | Microsoft Word Mail Merge | ActiveDocs |
| Scale-up (additional CPUs) | Limited by the end user machine | Native capability |
| Scale-out (additional servers) | Not available | Native capability |
| Hardware upgrade without affecting production capabilities | Not available | Native capability |
| Unmanned document production | Not available | Native functionality |
| Reporting on document production | Not available | Native functionality |

6 Conclusions

Microsoft Word Mail Merge's default functionality satisfies requirements for low volume document production not requiring business logic implementation into templates. The mail merge functionality can be greatly enhanced by implementing VB Script programming over fields in Microsoft Word. This, however, increases template creation and maintenance costs, as well as the complexity of the template itself. Editing, auditing, securing, and controlling deployment of templates becomes more difficult and requires a higher skill set. If templates, reusable blocks of text and created documents are subject to a workflow, an additional application must be deployed to manage the needs of audit and approval. Microsoft Word appears unsuitable for high volume automated document production due to the limitations of the scalability and unmanned document production capabilities.

ActiveDocs is designed for needs of both ad-hoc User-Driven document creation and low- or high- volume Automated document production. Template creation and maintenance costs are reduced by using the familiar Word environment for Template design and by incorporating the advanced functions of ActiveDocs through an add-in allowing easy implementation of business logic into Templates – 'typed' fields, field validation, calculations, default values, multiple data source integration, data filtering, repeating item lists, dynamic charts & tables, reusable field-and-rule sets, and blocks of common text (Snippets). The document creation process is driven from the environment of the Express Wizard / Document Wizard web applications, allowing users to create documents from Templates with nothing more than a web browser. Permissions for access to Template types and post-creation functions are well controlled.

ActiveDocs also supports Template and Snippet version control and pre-publishing approval functions, as well as workflow management over created documents. Document workflows can be easily outsourced to external systems that are already part of the customer's processes. Integration of document production can be done seamlessly through the Express Wizard and Document Wizard event handlers, and full customization of the document creation user interface. ActiveDocs Composition Server is optimized for scale-up and scale-out architecture and allows on-the-fly performance increase when required.

In general, Microsoft Word Mail Merge satisfies needs of document production of an individual or small business/department, in the same way that Microsoft Word as a text editor allows full customization of documents. However its deployment as a corporate solution of document creation is questionable as template editing and customization is error prone which is usually not acceptable when creating customer-facing documents. ActiveDocs provides an environment for standardized and controlled document creation processes, and for document creation driven by business logic. This, together with the integration capabilities and scalability make it an all-round and ready-made solution for deployment in a corporate environment.