Evolution of Collaboration by Using Microsoft Office Applications

Ivica Buzov
Administrative High-School
Varšavska 17, Zagreb, Croatia
ibuzov@gmail.com

Summary

Collaboration, especially the team work one, and implementation of projects are common in business environment nowadays the same way are the collaboration possibilities of mostly used office applications.

The author of this article analyzes possibilities of collaboration by using Microsoft Office's business applications: Word, Excel, PowerPoint, and Access. The versions of Microsoft Office 2003, Microsoft Office 2007, Microsoft Office 2010 with Web Apps are included in this article. We can monitor the options mostly from offline collaboration by using Microsoft Office 2003, through the combination of online and offline collaboration, by using Office version 2007 to mostly online collaboration, by using Office version 2010 and especially by using Web Apps and Microsoft Office365 at Cloud.

From each version of Microsoft Office to another one, it is possible to notice the evolution up to online synchronous collaboration options. Some of these features are: comments, tracking changes, document workspace, comparing and combining documents, publishing and sending documents, linking to other sources, collecting data through e-mail etc.

Moreover, we can notice collaboration as being asynchronous or synchronous one, or either client-based (desktop) or server-based (the Internet), extended by using other Microsoft business technologies like SharePoint sites and Groove workspaces with additional communication and collaboration tools.

Furthermore, what is very important in collaboration activities is the security of documents (files) and information, distribution channels and permission levels. This area is also covered, but only in basics.

Key words: evolution, collaboration, Microsoft, Office, 2003, 2007, 2010, Office 365, cloud, Word, Excel, Access, PowerPoint, Groove, SharePoint

Microsoft Office
Microsoft Office Versions, Editions, and Applications
Microsoft Office is widely spread office applications suite in our time. The Microsoft Office system versions are Microsoft Office 2003, 2007, and 2010.[1] There are different editions of Office suites in same version and they include some of the following basic business applications: Word, Excel. Access, PowerPoint, Outlook, or some following additional applications: Publisher, Project, Visio etc. No single edition includes all of these programs. Some programs are available separately.

The Microsoft Office 2010 system includes edition with Office Web Apps on the Microsoft cloud.[2]

New Microsoft Office Applications
So, while Microsoft Office 2003 introduces new applications: InfoPath 2003 and OneNote 2003, Microsoft Office 2007 introduces server-side tool Groove 2007, replaces FrontPage 2003 with SharePoint Designer 2007, and Microsoft Office 2010 replaces Groove 2007 with SharePoint Workspace and introduces Office Web Apps.

Asynchronous Offline Collaboration
In contemporary business environment teams usually work on documents. In team work there are usually needs to preview your colleagues' or employees' work, to make or suggest some changes, to control level of allowed changes with permissions and passwords, and to combine or compare different document versions.

Our focus will be mostly put on common Office applications like Word, Excel, PowerPoint, and Access. All these applications can directly send documents to

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[1] More information about Microsoft Office versions, editions, and including applications can be found at:
Behera, Suresh. Office Profesional Editions VS All Other Office 2003 Editions @ VSTO. 18.04.2006. http://weblogs.asp.net/sbehera/archive/2006/04/18/443219.aspx (12.06.2011.); Thurrott, Paul. Microsoft Office 2003 Editions Compared. 06.10.2010. http://www.winsupersite.com/ article/product-review/microsoft-office-2003-editions-compared (12.06.2011.); Cox, Joyce; Preppernau, Joan. Microsoft Office PowerPoint 2007 Step by Step. Redmond: Microsoft Press, Online Training Solutions, 2007, p. xxviii-xxix; Microsoft Office suites. 2011. http://office. microsoft.com/en-us/suites/ (20.06.2011.); Compare suites available through Volume Licensing. 2011. http://office.microsoft.com/en-us/buy/office-2010-volume-licensing-suites-comparison-FX101825637.aspx (20.06.2011.); Which suite is right for you? 2011. http://office.microsoft.com/ en-us/buy/office-2010-which-suite-is-right-for-you-FX101825640.aspx (20.06.2011.).

[2] Bott, Ed; Siechert, Carl. Microsoft Office 2010 Inside Out. Redmond: Microsoft Press, 2011, p. 19-20. Cox, Joyce; Lambert, Joan; Frye, Curtis. Microsoft Office Professional 2010. Redmond: Microsoft Press, 2011, p. xv.

other collaborators. Microsoft Office 2007 introduces, besides the feature of sending, the feature of publishing documents.[3]

Comments

All Microsoft Office versions have the option to insert comments in documents. Comments are usually used to ask the author, to give some suggestions or explain text or for formatting. Comments can be added in Word, Excel and PowerPoint, and not in Access

In the Word application, comments are placed in balloons in marking area and marked by name of its author/reviewer. Reviewing Pane is used to see comments and to edit or delete it.[4]

In the Excel application, comments are added to cell, and after you add a comment, comment flag appears in the cell, and a comment appears next to the cell. The comment can be shown all the time or hidden and appears when mouse pointer is moved onto the cell that contains comment. It's possible to select every cell containing comment by using 'Go To Special' dialog box.[5]

In the PowerPoint application, comments can be added to slide or slide object. If the slide object such as title or graphic is selected before adding comment, the comment icon appears in the upper-right corner of the object. Otherwise, the comment icon appears in the upper-left corner of the slide. The comment is hidden being clicked away from a comment box. However, there is a small icon with author's initials and number left. These comments can be all hidden, edited, or deleted.[6]

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[3] There are some differences between sent options at Microsoft Office 2003 applications: Access 2003 has features to be sent directly to the mail recipient and to mail the recipient as an attachment, PowerPoint 2003 has additional features to be sent to the mail recipient for review, to Exchange folder, to online meeting participant, to recipient using Internet fax service, Excel 2003 has additional feature to be sent to routing recipient, while Word has additional feature to be sent to recipient using fax-modem.

Microsoft Office 2007 introduces options to send and to publish. There are two options to send a copy of document to other people using e-mail message to send as an attachment or using Internet fax service to fax the document. There are options to publish document different for Office applications: Excel service (Excel 2007 only), package for CD and publish slides creating a Slide Library of slides (PowerPoint 2007 only), blog as blog post (Word 2007 only), document management server (Word 2007, Excel 2007, and PowerPoint 2007), and create document workspace for Word 2007, Excel 2007, and PowerPoint 2007 files. More: Share and publish your files in the 2007 Office release. 2011. http://office.microsoft.com/en-us/word-help/share-and-publish-your-files-in-the-2007-office-release-HA010214069.aspx?CTT=1 (22.06.2011.)

[4] Cox, Joyce; Preppernau, Joan. Microsoft Office Word 2007 Korak po korak.. Zagreb: Algoritam, 2008, p. 286-289.

[5] Frye, D. Curtis. Microsoft Excel 2007 Step by Step. Redmond: Microsoft Press, 2007, p. 349-351.

[6] Cox, Joyce; Preppernau, Joan. Microsoft Office 2007 Step by Step. Redmond: Microsoft Press, Online Training Solutions, 2007, 176-179.

Comments are useful as notes accompanying documents as suggestions, messages or warnings, but they are not applicable for simultaneous dialogue with others.

Track Changes

Whenever number of coworkers collaborate to produce or edit a document, it is very useful to turn on change tracking, which highlights every change made to the document, but in different color assigned to the user who has made changes. Every user has differently colored change. After the document is finished, changes can be accepted or rejected by using Previewing Pane. It is possible to either preview the changes made by one person only, more users or by the time the changes are made.[7]

There are options to hide all revisions of document, or to show only revisions as deleted text, inserted text, formatted text, or comments. It is possible is to show or hide revisions of one or selected reviewers. Moreover, it is possible to show original version with revisions or without them.[8] Change tracking are used by Word or Excel.

Track changes can be used when multiple authors work on the same document like publishers, lawyers, or businessmen, and it is used during the work on the document. When more then two persons use this option, many different versions and combinations of made changes could be made. Sometimes it is hard to follow which is the most recent and accurate version.

Comparing, Merging, and Combining Documents

In the process of working in a team, or with client, where people involved make certain changes, various versions of the same document may appear. Finally, these documents have either to compare, accept and reject changes, or merge/combine these document versions.

Word 2003 has option to compare and merge document, while Word 2007 has options to compare or to combine documents. Reviewing pane is used in both options, with additional possibility to show both the original document and revised document.[9]

PowerPoint 2003 has option to compare and merge presentations, but this presentation has to be sent as an attachment for a review. For comparing these

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[7] Frye, D. Curtis. Microsoft Excel 2007 Step by Step. Redmond: Microsoft Press, 2007, p. 351-354.

[8] Cox, Joyce; Preppernau, Joan. Microsoft Office Word 2007 Korak po korak.. Zagreb: Algoritam, 2008, p. 281-285

[9] Cox, Joyce; Preppernau, Joan. Microsoft Office Word 2007 Korak po korak.. Zagreb: Algoritam, 2008, p. 290-292

180

revisions of presentation, revisions pane is used where there is an option to show selected reviewer's changes.

Comparing, merging, and combining documents are features usually used after finishing work of few persons on same document, but making different versions of this document. It also can be used after receiving different versions of same document. Sometimes it is hard to follow which is the most recent and accurate version.

Asynchronous Network or Online Collaboration

Microsoft Office supports asynchronous online collaboration where documents are usually stored on server, network storage or shared folders and disks and by using shared document workspace, including other server-based business applications and services or products as SharePoint sites or Groove workspaces.

All recent Windows versions have option to create shared folder and disks or drives. There can be put files for collaboration with other people, restricted access by using permission level, but only in cases when client PC is turned on and is without document version control.[10]

Shared Workspace

Shared document workspace can be found in all Office versions, but also in some Office applications like Word, Excel, PowerPoint, and Visio.

In Office 2003 it's necessary to assign URL to shared document workspace which contains the copy of shared document. There is an option to invite other people to work on it, to assign tasks, or to link to other resources.[11]

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[10] Shared disks and shared folders can be used by Windows Explorer or administrative tool Computer Management. Permissions for sharing allows to add or to remove group or user and to set allow/deny i used File Sharing wizard with options to restrict permissions and users to shared folder from permission level Reader to Contributor or Co-owner. Preppernau, Joan; Cox, Joyce. Windows Vista Step by Step. Redmond: Microsoft Press, Online Training Solutions, 2007, p. 250-253.

In order to share files, it is necessary to turn on network discovery and file and printer sharing (they are turned on by default in Windows 7) so computer is visible in the Network group window on a Windows 7 computer. or in the Network folder window on a Windows XP or Windows Vista computer. There are options to share folder with specified user account or groups of users, and to set permission level from default level Read to Read/Write level. On Windows 7 there are also public folders: Public Documents, Public Downloads, Public Music, Public Pictures, and Public Videos. These public folders are turned on by default for Home Network, Work Network, and Public Network connections and visible to any user connected to these networks. Preppernau, Joan; Cox, Joyce. Windows 7 Step by Step. Redmond: Microsoft Press, Online Training Solutions, 2010, p. 85-97, 129-130.

[11] Create a Document Workspace. 2011. http://office.microsoft.com/en-us/word-help/create-a-document-workspace-HP006346865.aspx?CTT=1 (22.06.2011.). There is option to create shared workspace by using web browser and Microsoft Windows SharePoint Services Web, but only if you have permission to create Document Workspace.

Shared document spaces allow many users to work on same document and with only one (latest) version of it. There could be problem if somebody needs to work with or to view older version, because there is not useful document version history.

Groove Workspace
Microsoft Office introduces Groove 2007. Work in Groove 2007 is organized in workspaces, which provide access to information needed to be shared and tools needed for collaboration and communication during the team work. Document collaboration tools are used to share files an there are alerts when files and information have changed in a workspace and when team members perform important activities. There are tools for communication and organization like discussion tools for online conversations, such as Chat tool, meeting and calendar tools for tracking project milestones, meeting times, and updates, indicator to show online team member or contact, and there is integration with Microsoft Office Communicator 2005 and 2007 to initiate phone call or instant messaging session.[12] Groove is for smaller highly collaborative workgroup, which works simultaneously on the same file, although being made of mobile workers not always connected to the Internet. When member of Groove workspace is online he has the most up-to-date version of project documents with alerts what is changed and then he can use it when is offline. So Groove 2007 is highly effective for team members who travel and most of the time are offline.[13] Members of Groove workspace can be used as a virtual team of a people involved in a project or as members of an organization department.[14] Microsoft Office 2010 Professional Plus has SharePoint Workspace replacing formerly Groove Workspace.[15]
Groove workspace is very useful for project or team member usually mobile and working on documents using Internet connection in different time. There is possibility to have old version of his offline document if user has not been

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[12] Groove 2007 is Microsoft Office 2007 application and as client part of Enterprise and Ultimate Edition of Microsoft Office 2007 or as stand-alone product, and as Live version. Microsoft acquired Groove Networks in 2005. Earlier versions of Groove are known as Groove Virtual Office: Standard Edition, Project Edition, and File Sharing Edition. For full functionality of Groove 2007 there are Microsoft Office Groove Server technologies. Jewell, Rick; Pierce, John, Preppernau, Barry. Microsoft Office Groove 2007 Step by Step. Redmond: Microsoft Press, 2008, p. ix-x.

[13] Jewell, Rick; Pierce, John, Preppernau, Barry. Microsoft Office Groove 2007 Step by Step. Redmond: Microsoft Press, 2008, p. 234-236.

[14] Groove Workspace basics and the Office 2007 system. 2011. http://office.microsoft.com/en-us/sharepoint-workspace-help/groove-workspace-basics-and-the-2007-office-system-HA010234124.aspx?CTT=1 (22.06.2011.).

[15] Bott, Ed; Siechert, Carl. Microsoft Office 2010 Inside Out. Redmond: MS Press, 2011, p. 8.

connected for while on Internet and on Groove workspace many changes to shared document can be made.

SharePoint Sites

SharePoint is a server-based database application that uses a Web user interface for users to access this primarily file-storage mechanism with powerful collaboration tools built in and placed on SharePoint Server. SharePoint is used for larger collaboration solutions, and in difference to Groove, has file version control with ability to check the file out and check it in. When the member of team checks the file out, it is copied to his own computer. The copy of it is locked on the server so nobody can make any changes of the file, so it becomes the "read-only" file. After the member checks the file back in, with the description of changes made, the file is available to the other team members for editing. The file version means that several iterations of a file can be saved on the server. There is an additional feature to add SharePoint Files tool to any Groove 2007 workspace with ability to publish documents to a SharePoint documents library as synchronizer.[16]

This single Web-based environment for team collaboration, communication, and information sharing easily integrates with Microsoft Office. It's based on Windows SharePoint Services, component of Windows Server 2003 and 2008, providing infrastructure for teams to create Web sites to share information and collaborate with other users. It is possible to access this stored content from a Web browser or directly through Microsoft Office. SharePoint sites provide places to share various types of information, communication, and documents, facilitate team discussions, share document collaboration, for blogging, and building knowledge bases by using wiki. Document collaboration includes checking in/out documents, document version control and recovery of previous versions, and document level security. Team members work together on documents, tasks, contacts, events, calendars, wikis, and other information. SharePoint site can have subsites hierarchical organized. Some of SharePoint site tools are shared document libraries, contacts, calendars, task lists, discussions etc. Access to these sites is controlled by a role-based system based on permissions level specifying actions which users can perform on the site: read, contribute, design, have full control, and get limited permission level.[17]

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[16] Jewell, Rick; Pierce, John, Preppernau, Barry. Microsoft Office Groove 2007 Step by Step. Redmond: Microsoft Press, 2008, p. 234-245.

[17] Londer, Olga; English, Bill; Bleekerand, Todd; Coventry, Penelope. Microsoft Windows SharePoint Services Version 3.0 Step by Step. Redmond: Microsoft Press 2007, p. 10-17.

Microsoft Office 2007 introduces SharePoint Designer to easily manage SharePoint sites on SP Server, SharePoint Designer 2010 changes some useless features,[18] and Office 365 consists of SharePoint Online at Microsoft cloud.

SharePoint sites have history versions of documents, useful especially if somebody delete document or make unacceptable changes to older version. User cannot make changes to document if somebody else checks file out, because file is locked on server and other users can only view file.

Synchronous Online Collaboration

Microsoft Office 2010, while delivering desktop applications, introduces new concept of Office applications placed on Microsoft cloud: Web Apps.

Microsoft Office 365 is completely based on Microsoft cloud services. These online solutions can be accessed directly by using Microsoft Office 2010 applications or using Web browser. Microsoft Office 2010 has a feature of direct saving to cloud-based storage Windows Live SkyDrive on the Web.[19]

Office 365

Microsoft Office 365 consists of Internet-based Microsoft cloud services: Microsoft Office Web Apps as online companion to Microsoft Word, Excel, Access, and OneNote, Microsoft SharePoint Online, Microsoft Exchange Online, and Microsoft Lync Online. There is Office desktop setup to workstation for managing required components and updates, or can be used Microsoft Office 2010 as well as Office 2007 with SP2.[20]

Office Web Apps

Microsoft Office Web Apps is one of Microsoft cloud services available to users through Microsoft SharePoint Online and its part Microsoft Office 365, through Microsoft Windows Live, as well as through Microsoft Office 2010 Professional Plus edition (known as on-premises users).

Sharing documents is easy by using SharePoint Online document library, and easy to read and edit even with those users who don't have installed Office by using Web browser, opening and editing document directly in the browser, as well as in the Office client application.

Excel Web App has co-authoring option to simultaneously edit a workbook with people in other locations, also noticing other editor and his changes

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[18] Coventry, Penelope. Microsoft SharePoint Designer 2010 Step by Step. Sebastopol: O'Reily Media, 2010, p. 3-8.

[19] Bott, Ed; Siechert, Carl. Microsoft Office 2010 Inside Out. Redmond: Microsoft Press, 2011, p. 299-300.

[20] Versions of Windows supported by Office 365 are: Windows XP with SP3, Windows Vista SP2, Windows 7, and Windows Server 2008. Microsoft Office Web Apps Service Description. 28.06.2011. http://www.microsoft.com/download/en/details.aspx?id=13602 (29.06.2011.).

synchronize almost in the real time. This option is available and in OneNote Web App for Shared Notebooks.[21]

Web Apps allow different users to work on the same document in the same time, with no multiplications of same document or history versions problems. There could be confusing or even frustrating if many users make changes, deleting parts of document while others work on that document. For working on Web Apps stabile broadband Internet connection is also needed.

Conclusion

Collaboration, especially the teamwork one, and implementation of projects are common in business environment nowadays the same way are the collaboration possibilities of mostly used office applications. This collaboration between different users can be asynchronous or synchronous, offline or online, client-based or server-based. Microsoft Office 2003, 2007, 2010 versions provide different application features towards collaboration.

The earliest features such as comments in Word, Excel and PowerPoint, tracking changes in Word and Excel, comparing, merging and combining documents in Word and similar ones in Excel, are used for asynchronous offline collaborations and can be found in all Office versions: 2003, 2007, and 2010.

The beginnings of collaboration using networks can be found at shared document workspaces, based on shared files, folders and files, on clients organized in the same workgroup or domain.

Microsoft Office 2007 introduces Groove 2007 and SharePoint Designer 2007, and by using Groove Workspace and SharePoint sites, it provides combination of offline and online collaboration being based on new Microsoft server-based technology known as SharePoint.

Microsoft Office 2010 Professional Plus, besides client applications, introduces cloud-based services called Web Apps such as Word Web App, Excel Web App, PowerPoint Web App, and OneNote Web App. Sharing of documents is based on SharePoint Online document library or cloud-based storage Windows Live SkyDrive. It can be used even without an Office installed, but through using web browser. Co-authoring is a feature for simultaneous editing of Excel workbook and Word document or OneNote notebook. Web Apps are available through MS Office 2010 Professional Plus, Office 365 and SharePoint Online, as well as Microsoft Windows Live.

To sum up, all Office versions provide features for offline asynchronous collaboration, Office 2007 introduces additional feature for online asynchronous collaboration, Office 2010 Professional Plus with Web Apps and Office 365 provide features for online synchronous collaboration.

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[21] Ibidem.

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