

# Optimize Offline Access for SharePoint® Sites

White Paper

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## Purpose of this Whitepaper

This document is intended for project leaders, Microsoft SharePoint® site designers and Microsoft SharePoint® administrators who are interested in evaluating the use of Colligo Reader and Colligo Contributor for taking SharePoint sites offline.

## Background

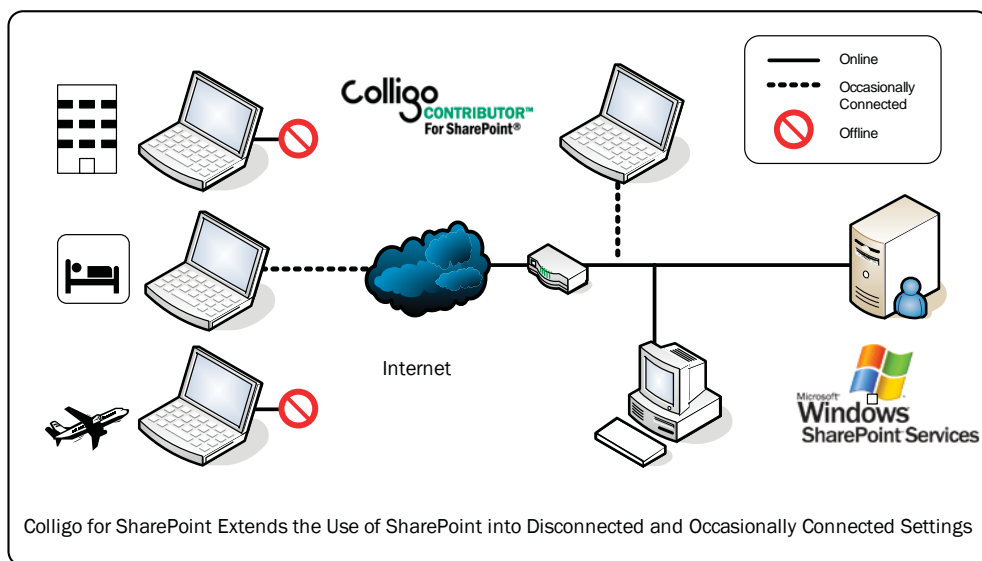
### The Problem: Microsoft SharePoint Sites Cannot be Accessed Offline

For many corporations, SharePoint is becoming the centerpiece of project management and collaboration for their business processes. However, since it can only be accessed through a browser and requires a constant connection to the server, SharePoint can only be used by people when they are “online”. This means that users working on a plane or at a client site cannot utilize the features of SharePoint until they are able to connect. It also means that the user experience is limited by the browser paradigm which significantly restricts the performance and usability of the application. To understand this restriction better, imagine only being able to access email through a browser on an Internet connection. This is probably fine for personal use but would not be accepted by enterprises for serious business use.

### Solution: Colligo Reader and Colligo Contributor

Created to deliver rich functionality in an uncomplicated way, the Colligo for SharePoint (CFS) product family, consisting of Colligo Reader and Colligo Contributor, is easy to deploy, install, learn and use. It requires no server components, has a very small footprint, and is compatible with the latest version of Windows SharePoint Services and SharePoint Portal Server.

Fig. 1



**Colligo Reader** provides read-only access to SharePoint content offline. It is an ideal solution for laptop users who have “Reader” privileges on a SharePoint site and are occasionally offline. Colligo Reader licenses are provided completely free of charge to end users.

**Colligo Contributor** is targeted at laptop users, such as members of project teams, with “Contributor”, “Designer” or “Administrator” privileges, who need to frequently modify content on SharePoint sites. Contributor enables them to create and edit documents, forms, list items and their associated properties when they are working offline then synchronize changes back to the server when they return online.



As shown in Fig.1 above, through deployment of CFS, SharePoint site Admins can support a large number of diverse users in different locations, working online and offline.

### **How the Capabilities of SharePoint Have Shaped the Features of Colligo**

Microsoft SharePoint is much more than a conventional content management platform. In fact, it is a sophisticated tool that enables site administrators and project managers, to easily deploy and modify Collaborative Workspaces on the Internet or corporate Intranet. SharePoint has a rich feature set that allows a variety of content types to be shared in document libraries, standard lists and custom lists, then organized using elements such as metadata and views. These basic building blocks can be combined in sites that can change depending on the content itself, when it is being viewed or who is viewing it. Properly designed SharePoint sites enable users to quickly access and modify the information of relevance to them when they need it, even if a site contains a huge amount of content.

SharePoint Workspaces can act as a hub for project activities of geographically dispersed teams from one company or different companies since they can be accessed through a corporate network or over the Internet. Features of the SharePoint platform can enable teams to organize projects and/or manage business processes. In addition to being able to read content, end users can easily edit and contribute content to a site.

Until recently, the rich features of SharePoint have only been accessible through a browser. Colligo for SharePoint (CFS) changes that. It extends the productivity gains that SharePoint provides by directly synchronizing online workspace elements, such as document and form libraries, custom lists, metadata and views, down to a rich client on a users laptop. It enables information to be organized, presented, edited and saved in an offline workspace just as it is online. CFS even preserves the file hierarchy of SharePoint sites so relative links between content are preserved offline.

CFS has additional features that simplify project team collaboration. For example, rather than checking content out of a workspace to edit it - locking it on the server like conventional document management platforms - CFS users are free to work with any list item or document offline and upon synchronization, detect editing conflicts so they can take the appropriate action. (Of course if content is actually checked out or designated as “read only” on the server, CFS will not overwrite it).

Colligo for SharePoint changes the way project teams use SharePoint. Rather than having to work online or copy files one-by-one to their laptops to work offline, mobile team members can simply synchronize sites to their laptop prior to disconnecting then continue to enjoy many of the features and benefits of SharePoint when they are working offline – anywhere.



## Example: Taking Collaborative Workspaces Offline with Colligo

### Purpose

The purpose of this section is to provide a more in depth example of how SharePoint features can be leveraged offline with Colligo Reader and Colligo Contributor.

### Introduction

One of the most common uses of SharePoint is for Project Teams to manage their on-going projects. These Collaborative Workspaces are central gathering places for the team's documents, information, team calendar, issue tracking as well as a host of other informational resources. The key features and benefits of a Collaborative Workspace are the ability to organize information, collaborate and keep a whole team working together no matter where they are physically located or what other projects they may be involved in.

The key principle behind SharePoint is collaboration; it is much more than a document storage tool. It is possible to simply store documents in a Shared Drive or Folder and replicate them to a Laptop using tools like SyncToy, and with VPN access you can work with these documents outside the office. SharePoint takes a team beyond that and opens up a whole tool set to organize, share and collaborate on documents; and with lists, even more information can be made available and become a direct part of the collaboration process.

### Elements of Online / Offline Collaboration Workspaces

#### Key Elements of taking Collaboration Workspaces offline are:

- Support for Document Libraries with columns, Views, Custom Views and Templates
- Support for Form Libraries with columns, Views, Custom Views and Templates
- Support for Lists and Custom Lists with Views, Custom Views, Filters and Attachments.
- Extension of the SharePoint paradigm and efficiencies to a rich desktop client
- Offline collaboration and synchronization of changes.



## Document & Form Libraries Online

### Document and Form Libraries:

- Document Libraries with columned data (properties/metadata)
- Interactive Forms with details showing in columns
- Columned data (properties/metadata) enforcement for new documents.
- Custom Templates for documents and Forms

Document Libraries can contain Project Requirements documents, Technical Design documents, Client or Cost approval Forms, Reference Document Libraries or perhaps Team Absence Request forms, with columned items showing versions and approval processes included. In SharePoint, the site Designer is able to create columns of information for the documents to highlight the important information regarding approval processes, version number, who last modified or added a document. These columns are directly connected to the Documents properties and custom properties, also referred to as metadata. This data can be viewed by all site users and changed on the fly from within the Document Library, providing immediate access to important information. Also it can be enforced for new documents being added to a Document Library.

**Fig.2: SharePoint Workspace Online view: Document Library showing columned custom metadata**

The screenshot displays the SharePoint Workspace Online interface for a document library named '1 - Requirements\*'. The main content area shows a table of documents with the following data:

Type	Name	Modified	Modified By	Spec.Team Reviewed	Client Reviewed	Estimated Cost	Estimated Close Date
Document	business_process_questions	3/21/2006 6:01 PM	Tony van Houten	Yes	Yes	\$1,000.00	1/20/2006
Document	customization_requirements_summary	3/21/2006 6:01 PM	Tony van Houten	Yes	Yes	\$10,000.00	2/28/2006
Document	Lorum11NEW	4/19/2006 2:48 PM	Tony van Houten	Yes	Yes	\$100.00	4/30/2006
Document	sample_sales_process_flowchart	3/21/2006	Tony van Houten	Yes			

The 'Colligo Contributor' window shows a local workspace view of the same library, displaying a list of document libraries and a table of documents with similar metadata columns.



In Document Libraries it is possible to create templates for the types of documents that will be stored there. A good example is a blank Team Absence Request InfoPath Form for an Absence Request Form Library. Each Team member will be able to access the Library and click “New” to open and fill out the blank form. Once saved to the Library the forms pertinent information will be displayed in the columns, so that a Manager can quickly determine which days various Team members have requested off and which requests have been approved.

## Document & Form Libraries Offline

While the ability to synchronize Documents, Forms and Document Libraries to a user’s laptop is useful, the unique value of Colligo for Sharepoint is derived from its ability to download and display custom metadata stored in the columns of the library. As illustrated in Fig. 2 the Colligo for SharePoint offline solution remains true to the SharePoint site designers’ intent for presenting and organizing information. For example, the column headings which are tied to the fields in the InfoPath forms, are identical in both the online and offline versions of the document library. This means that end users will require little or no training to use the library offline since they continue to work in the familiar SharePoint Workspace organizational paradigm.

### Lists & Custom Lists:

- Custom Lists for important Project Processes:
  - Like ‘Deliverables’
  - Issue Tracking
  - Events, etc.
- Attach documents and files to List Items

## Lists, Views and Filters Online

Lists and Custom-created Lists are very powerful SharePoint tools that allow the Workspace Administrator or Designer to organize and present important tabular information in ways that are accessible, clean and collaborative. Examples of useful Project Management Team Lists would include Deliverables, Tasks, Project Calendars, Travel Events, Resources, Contacts and Issues Tracking Lists. Not only can these lists display information, but files and documents can be attached to list items for reference. For example, a user has proposed a meeting to review an important part of the project which has reached a significant milestone, to prepare for the meeting he has attached a number of documents to the Events list item for review before the meeting. As the Event Calendar can be linked to Outlook, the teams members will be advised of the meeting and may then go and review the documentation.



### Views and Filters:

- Use Views and Custom Views:
  - Variables Like [Today] & [Me]
  - 'Group by'
  - Customized 'Group by'
- Use Filters to quick find groups of data in the columns

### Views & Filters

Organizing information within Lists and Document Libraries can be achieved very easily using SharePoint's Views and Custom Views. Variables such as [Me] and [Today] can be used to customize information into views that change depending on individual users or dates and the extremely useful "Group by" view can enable information to be organized depending on custom metadata. These views and the custom ones that the Workspace Designer create allows vast information in a list or Document Library to be sorted, filtered and presented in ways that enhance clarity and usability.

Fig.3



Colligo for SharePoint automatically populates the appropriate dropdown via User Lookups giving instant access to Workspace User Lists. This information can also be used to create custom views of a list for each user. So for example, by using the [Me] variable in the view definition, a task list can present each user with the tasks assigned just to them. The [Today] variable is another way to create views of items that change depending on the date.

Fig. 4 below shows an example of how the "Group by" View can be set up so that list items are organized according to metadata properties. For example, a list of issues could be grouped by Team Members, then by Item Priority, and then by Completion Status. The Designer of the List can optimize the efficiency for data viewing and retrieval, very simply and very quickly, by utilizing Views and creating Custom Views.

Filters are also available to the user to select and order data in a List or Document Library according to the data contained in the columns. This is a very good way to find groups of information quickly.



**Fig.4: SharePoint Workspace Online: List showing "All Issues"**

**SharePoint Workspace Online: List showing "All Issues"**

Project Management Demo  
Issue Tracker

Select a View: All Issues

Title	Status	Priority	Due Date	% Complete	Author	Resolution	Resolution Date	Resource Assigned	Date Assigned	Component
Bug item 335 - UI loading incorrectly for Reports pages.	Completed (2)	Normal	3/16/2006 12:00 AM	100%	David Campbell	3/15/2006	Brian Cuthbert	2/21/2006	UI	Sp
Make sure fonts are consistent throughout the site	In Progress	(1) High	3/30/2006 4:00 PM	20%	Bryan Baker		Kim Young			Pr
Modify Background Color	Completed (3)	Low		100%	Kim Young	3/14/2006	Mel Rathmore			De

**SharePoint Workspace Online: List showing "by Resource" View**

**SharePoint Workspace Online: List showing "by Resource" View**

Project Management Demo  
Issue Tracker

Select a View: By Resource

Title	Status	Priority	Due Date	% Complete
<b>Resource Assigned : (1)</b>				
User Documentation - Manual	Waiting on someone else	(2) Normal		
<b>Resource Assigned : Brian Cuthbert (1)</b>				
Bug item 335 - UI loading incorrectly for Reports pages.	Completed	(2) Normal	3/16/2006 12:00 AM	100%
<b>Resource Assigned : Kim Young (1)</b>				
Make sure fonts are consistent throughout the site	In Progress	(1) High	3/30/2006 4:00 PM	20%
<b>Resource Assigned : Mel Rathmore (2)</b>				
Modify Background Color	Completed	(3) Low		100%
low	(2) Normal			

**SharePoint Workspace Online: List showing "Group by Priority" View**

**SharePoint Workspace Online: List showing "Group by Priority" View**

Project Management Demo  
Issue Tracker

Select a View: Group by Priority

Title	Status	Priority	Due Date	% Complete	Author	Resolution	Resolution Date	Resource Assigned	Date Assigned	
<b>Priority : (1) High (1)</b>										
Make sure fonts are consistent throughout the site	In Progress	(1) High	3/30/2006 4:00 PM	20%	Bryan Baker			Kim Young		
<b>Priority : (2) Normal (3)</b>										
Bug item 335 - UI loading incorrectly for Reports pages.	Completed (2)	Normal	3/16/2006 12:00 AM	100%	David Campbell	3/15/2006	Brian Cuthbert	2/21/2006	UI	
User Documentation - Manual	New	(2) Normal			Tony van Houten			Mel Rathmore		
User Documentation - Quick Start	Waiting on someone else	(2) Normal			Tony van Houten					

**Workspace Offline with Colligo: List showing "Group by Priority" View**

**Workspace Offline with Colligo: List showing "Group by Priority" View**

Colligo Contributor

Workspace: Project Management Demo

Workspace Content

Document Libraries

- 1 - Requirements\*
- 2 - Plan
- 3 - Development
- 4 - Close-out
- Library
- Team Absence Request\*
- Templates and Forms

Lists

- 1 - Project Plan\*
- Default Values for drop-downs
- Deliverables
- Expenses
- Invoices
- Issue Tracker
- Milestones
- Project Announcements
- Project Calendar
- Project Management Links
- Resources

**Issue Tracker**

Select a View: Group by Priority

Title	Status	Priority	Due Date	% Complete	Author	Resolution	Resolution Date	Resource Assigned
<b>Priority: (1) High (1)</b>								
Make sure fonts are consist...	In Progress	(1) High	30/03/2006 4:00 PM	20%	bryan Baker			Kim Young
<b>Priority: (2) Normal (3)</b>								
Bug item 335 - UI loading inco...	Completed	(2) Normal	16/03/2006 12:00 AM	100%	David Campbell		15/03/2006	Brian Cuthbert
User Documentation - Manual	New	(2) Normal			Tony van Houten			Mel Rathmore
User Documentation - Quick S...	Waiting on someone else	(2) Normal			Tony van Houten			
<b>Priority: (3) Low (1)</b>								
Modify Background Color	Completed	(3) Low		100%	Kim Young			



## Lists, View and Filters Offline

The ability to take Lists, Custom Lists, their Views, Custom Views and Filters offline is extraordinarily powerful. The impact on a user's time can be significant as they will be able to work in the List offline as they would normally online. Fig. 3 illustrates how the Colligo for SharePoint offline view matches exactly with the online view of the Issues List. With an offline product like Colligo for SharePoint, there is no need to export this list to Excel, manually track the changes then manually update the original list when reconnected to SharePoint. A user needs to do no more than click "Synchronize" to download the Lists they require in the SharePoint Designer's original format. Conversely the user can edit and update Lists with equal ease.

## Extension of SharePoint to a Rich Desktop Client

If the offline solution is to provide significant value, it must maintain the familiar functions of SharePoint while taking advantage of the additional capabilities of a rich desktop client. This consists of the following elements:

- 1) Usability is critical to a smooth transition between online and offline. The user should be able to remain in the SharePoint paradigm when going offline and CFS enables them to do that. Furthermore, the rich .NET client architecture of Colligo provides some significant usability improvements such as the ability to drag and drop files in and out of doc libraries and right click to access functions.
- 2) Integration with desktop applications must be maintained in the offline case. Online SharePoint integrates directly with Microsoft Office applications and this is true offline in CFS as well. For example, InfoPath forms can be filled out on the laptop and, just as with the online experience, the value of the fields in the form will directly modify the value of the columns in the document library when the form is saved into the offline workspace. Colligo also goes beyond what is available online. For example, when creating a new document in a document library, the user is presented with the original template from the online site in addition to templates from other applications installed on the user's laptop.
- 3) Folder Hierarchy must be maintained in the offline client if relative document links in applications are to work properly. So, for example, if one Excel spreadsheet links to another (such as in a financial statement) this association will be maintained on the laptop.

## Offline Collaboration and Synchronization of Changes

Team members must be able to change lists, update documents and add content to their Workspace when offline. Rather than using document check in and check out that is a characteristic



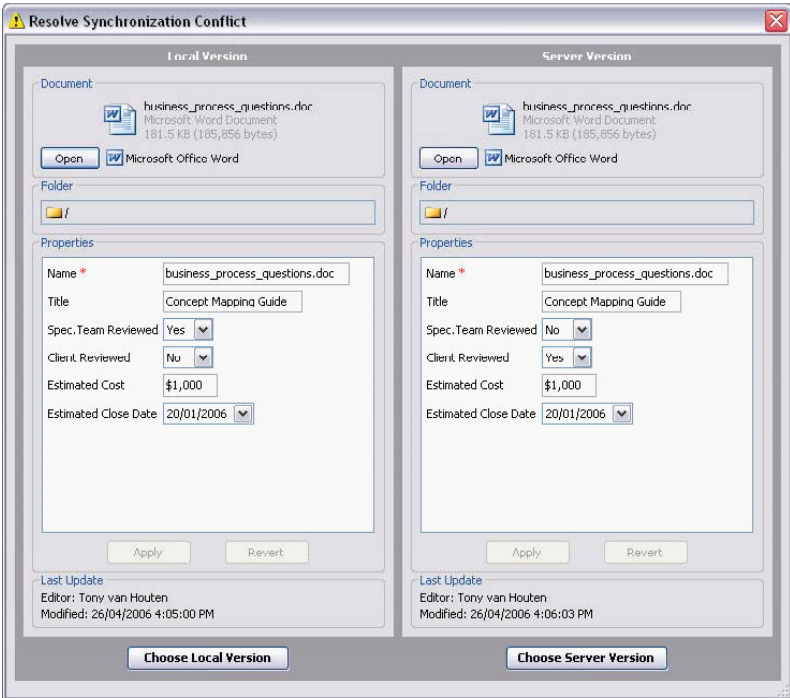
of document management platforms, Colligo for Sharepoint enables teams to collaborate on documents without locking them up. When multiple people are working on the same documents and lists with some online and others offline, there is a possibility of version conflicts and the software must accommodate this. There is a need for an uncomplicated resolution to version conflicts.

During synchronization, Colligo for SharePoint will detect any conflicts for any files and/or Lists that has been modified both locally and on the server. CFS provides a number of resolution options as seen in Fig.5 and Fig.6 below.

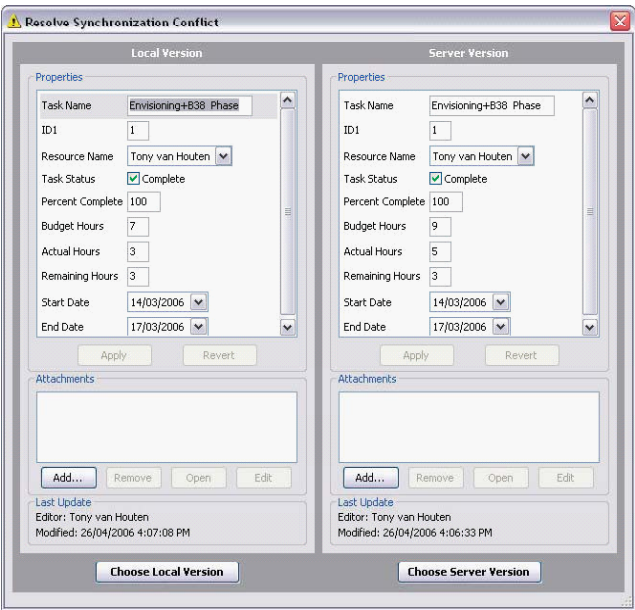
From the screen depicted in Fig.5 it is possible to review a file conflict, in this case a Word document, with the local version and the server version side by side, including properties and custom metadata.

The properties of one or the other may be modified and the changes applied to it. There is the option to review, edit, compare, and/or merge the two documents by opening them from this screen into MS Word. Or simply choose one version over the other, by selecting “Choose Local Version” or “Choose Server Version”. Any of these changes will take effect locally and be synchronized to the server on the next Synchronization.

**Fig.5 – Resolve Document/File Conflicts**



**Fig.6 – Resolve List Item Conflicts**



List item conflicts are likewise reviewed side-by-side with the Local Version and the Server Version being fully displayed, including any attachments. The user can then choose to edit one or the other of the list items or simply choose the Local or Server version as the one to be synchronized.

## Conclusions

For project managers and site designers, Microsoft Office SharePoint is a powerful tool for organizing and sharing documents, forms and lists online to maximize the productivity of project teams. As we have seen, Project Management Workspaces are not just about managing documents; they typically make full use of SharePoint features such as metadata for process/version control, custom lists and views. For mobile workers, it is imperative that these features be available offline so they can easily view, organize and edit content when they are working out of the office. Colligo offers the easiest to use and most complete solution for users to access the organizational and informational structures that are built into their SharePoint Workspaces.

For more information go to [www.colligo.com](http://www.colligo.com). To download individual copies of Colligo Reader, go to [www.colligo.com/products/sharepoint/reader.asp](http://www.colligo.com/products/sharepoint/reader.asp). To obtain a free corporate license for Colligo Reader, please contact [sales@colligo.com](mailto:sales@colligo.com) or call 604-685-7962 x230.



Colligo is a leading provider of offline collaboration solutions for mobile workers. Its software extends the use of applications such as Microsoft SharePoint, IBM Lotus Notes, and CaseWare into offline settings where users often have no access to the Internet or corporate servers. Colligo is a Microsoft Gold Certified ISV partner and IBM Business Partner. Its solutions are deployed in many large enterprises, such as PricewaterhouseCoopers, General Motors, Qualcomm and Grant Thornton in North America, Europe and Asia. For more information visit <http://www.colligo.com>.

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