

Fox Environmental confidential Copyright © 2004 Susan Kaltenbach. All rights reserved.	Fox Portal and Document Repository Project Functional Specification
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Introduction

In the past, Fox employees found it difficult to locate the information and documents they need. The situation has several causes. The most prevalent problem is our lack of document organization and categorization. Employees experience pain when attempting to share documents with one another, save their documents in a common space, or discover an existing document

Currently, documents are saved in a wide variety of locations (see Figure 1 below). In some cases, a SharePoint team site is used to share documents. Employees also save documents on their hard drives, or in numerous server areas. The most obvious problem with this diversity of locations is the inability to work on a current doc copy. Secondly, an employee's hard drive (or a server) might not be backed up.

This lack of document organization and discoverability causes the division to lose resources, not only in the waste of employee's time - there is also a serious loss of *institutional knowledge* when employees leave:

- Employees get 50%-75% of their relevant information directly from other people.
- More than 80% of enterprise's digitized information resides in individual hard drives and personal files.
- Individuals hold the key to the knowledge economy and most of it is lost when they leave the enterprise.¹

Lack of Document Management

The Fox division has no centralized document management system. Documents are stored in several locations with no common index. The Fox Portal and Document Repository Project addresses these needs by using SharePoint Portal Services (SPS) products to manage documents and make them searchable.

SharePoint Team Services is already used by several individual teams. This has resulted in a tremendous amount of potential locations. An audit done in April 2003 revealed at least 30 Web sites containing documents. The results of this audit are shown in Figure 1 below.

¹ From "The Knowledge Worker Investment Paradox" Gartner research 7/17/2002

Work sample for Susan Kaltenbach. All rights reserved. Company and individual names have been changed to protect confidentiality.

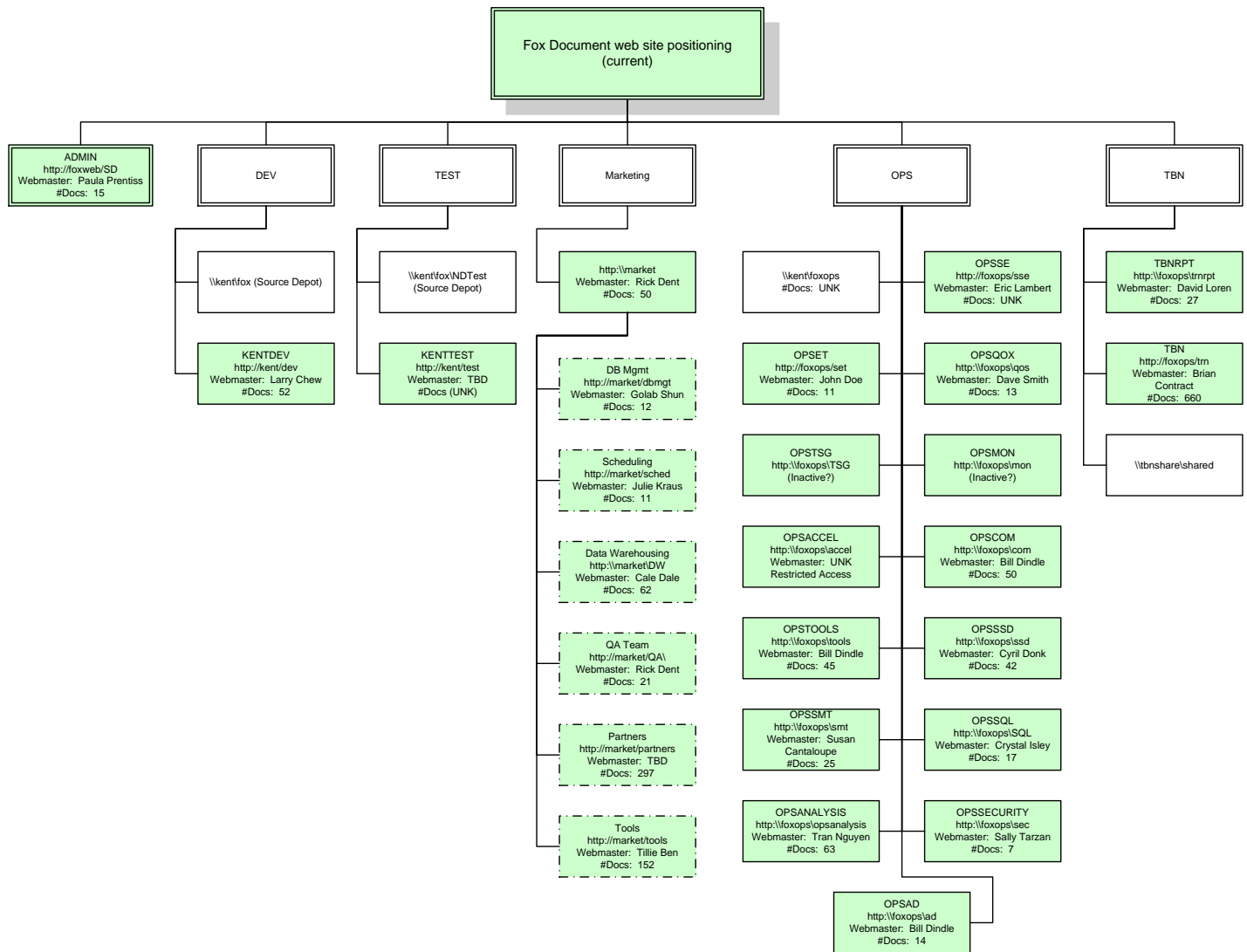


Figure 1: Fox document locations (April 2003)

Goals:

The Fox Portal and Document Repository project has two goals:

1. Create a single search point for locating all Fox Project documents.
2. Install a document management system that meets the requirements of the Fox division.

Non-Goals:

1. This project does not encompass document templates or document naming conventions. These two items will be addressed in Phase 2 of the Document Management project.
2. This project does not include formal training for the SharePoint Services projects.
3. This project does not include any discussion of the MySite feature.

Dependencies Mapping

Partners

Partner	Nature of Dependency
ENN	ENN will host the Fox SPS portal Web site. (NOTE: Changed to self-hosted; see final Operations Guide.)

Feature Dependencies

Feature	Nature of Dependency
Microsoft Office SharePoint™ Portal Server 2003	The portal is based on out-of-the-box functionality of the SPS portal product.

Work Items

Milestone Schedule

Milestone schedule to follow.

Priority 1: Must Have(s)

Sub-Feature	Description
Document Management System	The ability to manage Fox documents using a system incorporating version histories, document alerts, document "lock outs," check-in and check out, etc.
Single-point search for all Fox core project documents	The ability to locate any Fox core project document using a single point of entry for search.
Project Subwebs	A WSS Web site for all Fox projects
Team Subwebs	A WSS Web site for all Fox teams

Priority 2: Should Have(s)

Sub-Feature	Description
Metadata filtering	Building a metadata identifier process that allows for more precise searching when using the SharePoint Advanced Search page.

Priority 3: Like to Have(s)

Sub-Feature	Description
-------------	-------------

Live “dashboard” view of Fox data	Using a web component of Fox, report “live” data on the Fox home page in a designated area.
Reference Web site	A single location to look for Fox reference information, such as server naming conventions, glossary, etc.
Fox Tools	Possible side bar to the portal home page that gives links to the Fox glossary, etc.

Priority 4: Probably Won’t Have(s)

Sub-Feature	Description
My Site	The “My Site” SharePoint 2.0 Web site service is a new feature of the SharePoint Services product group. It will be introduced at a later time, possibly by ENN.

Design Details

Installation

Procedures for installing SPS 2.0 are documented in the <http://spgweb/Installation> doc located at http://fox/sites/adhoc/Archive_of_prior_22004/SPS_Installation_Steps.doc.

Software

This project will use Microsoft’s SharePoint Portal Services 2.0 software, release date October 2003. This “third-party” software can be used with out-of-the-box functionalities. Further development of the portal server can be accomplished with additional user development.

Required software for **installation**:

- Microsoft SharePoint Portal Services 2.0
- Windows Server 2003 RC2
- SQL Server 2000 SP3

Required software for Web site **administration**:

- Same as above
- Also Microsoft FrontPage 2003

Characteristics of SharePoint Portal Services 2.0

Document Management

Microsoft Office SPS products incorporate a new and richly-featured document management system. This new system gives us the ability to manage documents with a system that includes document editing, version histories, document alerts, document “lock outs,” check-in and check out, etc.

Windows SharePoint Services out-of-the-box team Web site

It is simple to generate SPS subwebs in the form of Windows SharePoint Services team sites. These sites allow team-level control of the subweb’s real estate. WSS inherits the out-of-the-box experience that made SharePoint Team Services 1.0 so easy to use. A WSS site administrator can begin administering their site and users with little ramp up.

User Education

Documentation

No division-level UA documents will be generated for this project. There will be several presentations, demonstrations, and other information available online, but Fox training documents will not be produced. The documentation set provided by SPS is richly detailed and should suffice for the UA needs of the Fox user. The user interface for SPS document management is extremely easy to use.

Help File Requirements

SPS is a fully developed software product and comes with its own online help file. The same is true of Windows SharePoint Services (WSS). Administrative guides to both SharePoint products are available within the application itself and also at productsweb. A copy of the SPS Portal administrative guide is kept at <http://www.microsoft.com/downloads/details.aspx?FamilyID=47405143-F586-4941-92F5-048BF00CF332&displaylang=en>.

Training Requirements

Training is required on two separate levels.

1. Both the Technical and Administrative portal administrators will need instruction on how to perform basic, essential functions with the portal, such as creating sites and workspace areas.
2. Subweb administrators with experience of STS 1.0 should have little difficulty ramping up to the new Windows SharePoint Services site administration. Reference material will be provided (i.e. WSS Admin guides etc.). Other Subweb administrators may require further training; that issue is still unresolved.

Early Adopters

A working model of the Fox SharePoint portal Web site will begin use in EOM August 2003. This working model will be used by a group of “early adopters.” Five early adopters have volunteered to use the new SPS model for their regular daily operations. It is important to remember that the early adopters will be using the ENN-based server, and that the URLs below are only temporary.

Early Adopters selected for the August 2003 trial include:

Project/Team Name	Current URL	Contact Person
Adhoc working committee	http://team/sites/adhoc	Adhoc working committee
Data Warehouse	http://team/sites/dw	Data Warehouse
Fox Service Delivery Team	http://team/sites/foxsdteam	Fox Service Delivery Team
OHI Advisory Panel board	http://team/sites/ohi	OHI Advisory Panel board
Poptimization	http://team/sites/pop	Poptimization

Security

Internal

Internal security will be handled through the use of SPS administrative tools. The SPS tools provide options to limit user access in a wide variety of scenarios. Web site access can be restricted by using the user permissions function (native to the user) and user roles function (native to the list/document library). These internal security tools are described in further detail in the **Controlling User Access** section.

Administration

After Web site creation, the administration can be broken down into two parts: Overall administration and technical administration.

Overall Administration

The Administrator will implement guidelines for creating Web sites, adding users, etc. The following are typical Administrator scenarios. (Suggested criteria for each situation are included.)

1. A person wants to be added as a portal user.

Criteria 1: Is their supervisor making the request? Although it is at the Administrator’s discretion, typically an employee cannot ask to be added with permissions. This request needs to come from their supervisor.

Criteria 2: What is their correct user status? We will have anonymous browser access to all registered NT users. The supervisor needs to indicate what user status is required.

2. The user wants to create a portal subweb for their new product.

Criteria 1: Is the project/team valid? The validity of a project can be determined by reviewing the weekly Program Manager projects status report generated by FoxPM Group Manager Benita Howe (see Executive Project Status reports at http://foxpm/Team_Projects/Status/Forms/Executive%20Status%20on%20Current%20Projects.htm for an example of a status report).

Criteria 2: Is this a proper use of the subweb? Does the team or project need a centralized collection point, or is it simply one employee trying to get

Criteria 3: Is the correct party requesting the new subweb? Once again at the Administrator's discretion, only Lead PMs or Managers should have the authority to ask for a new portal subweb. This will help avoid the misuse of resources.

Criteria 4: Is there a lead and backup contact for subweb administration? Ideally, there would be two project/team members as web administrators.

NOTE: The Overall Administrator and the Technical Administrator will have default permissions over all subwebs and Web site pages.

3. The user wants to create new document metadata for library search purposes.

Criteria 1: Is the new categorization valid? The request needs to be evaluated based on its usefulness to other Fox division members.

Criteria 2: Is the new category technically feasible? This question can be answered by the technical administrator (below).

Technical Administration

The technical administrator will be responsible for performing all technical change requests outside the realm of the overall administrator. For example, the overall administrator can create a subweb at will, but the technical administrator would make sure the actual portal architecture can support requested changes.

1. A link between the document library and the project/team subweb is broken.
2. A subweb needs special permissions or security underpinnings.

Controlling User Access

SharePoint Portal Server 2003 offers two methods to allow site administrators to control access to specified document libraries: user properties and user roles. User properties are permissions attached to an individual user; and user roles are dictated within the confines of a list or document library. This functional specification only describes SharePoint user permissions. See Appendix C for more information on SharePoint user roles.

NOTE: Another option for users is to secure individual lists or document libraries using the Modify settings and columns link under the Quick Launch bar Actions section. More information is available in the Windows SharePoint Services administrative guide.

SPS 2.0 and WSS User Permissions

SPS Portals

Name of Group	Permissions
Member	Can view and personalize portal site content and create sites.
Administrator	Has full control of the site; usually the team/project owner. Responsible for all sections of the site include user authorization, section settings, site lists, and other WSS site components.
Web Designer	Can create lists and document libraries and customize pages in the Web site. Often acts as a secondary web administrator to make technical changes.
Contributor	Can add content to existing document libraries and lists. Usually members of the team/project project
Reader	Has read-only access to the Web site. Usually a site's anonymous access settings allow all NT-authenticated users Reader level authorization
Content Manager	Can create and manage areas, lists, libraries, and sites.

WSS Team Sites

Name of Group	Permissions
Administrator	Has full control of the site; usually the team/project owner. Responsible for all sections of the site include user authorization, section settings, site lists, and other WSS site components.
Web Designer	Can create lists and document libraries and customize pages in the Web site. Often acts as a secondary web administrator to make technical changes.
Contributor:	Can add content to existing document libraries and lists. Usually members of the team/project project
Reader	Has read-only access to the Web site. Usually a site's anonymous access settings allow all NT-authenticated users Reader level authorization

Portal architecture

A correct architecture is vitally important to the overall success of the project. The overall portal architecture will be informed by conventional Web site design guidelines. In this case, the architecture will be as “broad and shallow” as possible.² Simplifying the portal design and creating efficient categorization makes user navigation easier.

The architecture identifies two types of Web sites: **Teams** and **Projects**. Teams are groups of people who need a shared Web site, to be used continuously. Projects have a Web site used for a fixed amount of time until the project is completed. The Project Web site is then retired.

Figure 2 outlines a logical model of the Fox portal.

- The main portal (blue box) contains the home page, a meta site for Projects and Teams, and other potential sites such as a reference library or tools.
- WSS subwebs (red box) created by the portal can be Projects and Teams. The Project Web sites are created using a special template.
- The Fox portal search also crawls content outside its portal environment (green box). The outside content to searched mostly resides at <http://foxpm>.

² D. Sullivan. Internet Top Information Resource, Study Finds. *The Search Engine Report*, Feb. 6, 2001, <http://www.searchenginewatch.com/sereport/01/02-keen.html>.

Work sample for Susan Kaltenbach. All rights reserved. Company and individual names have been changed to protect confidentiality.

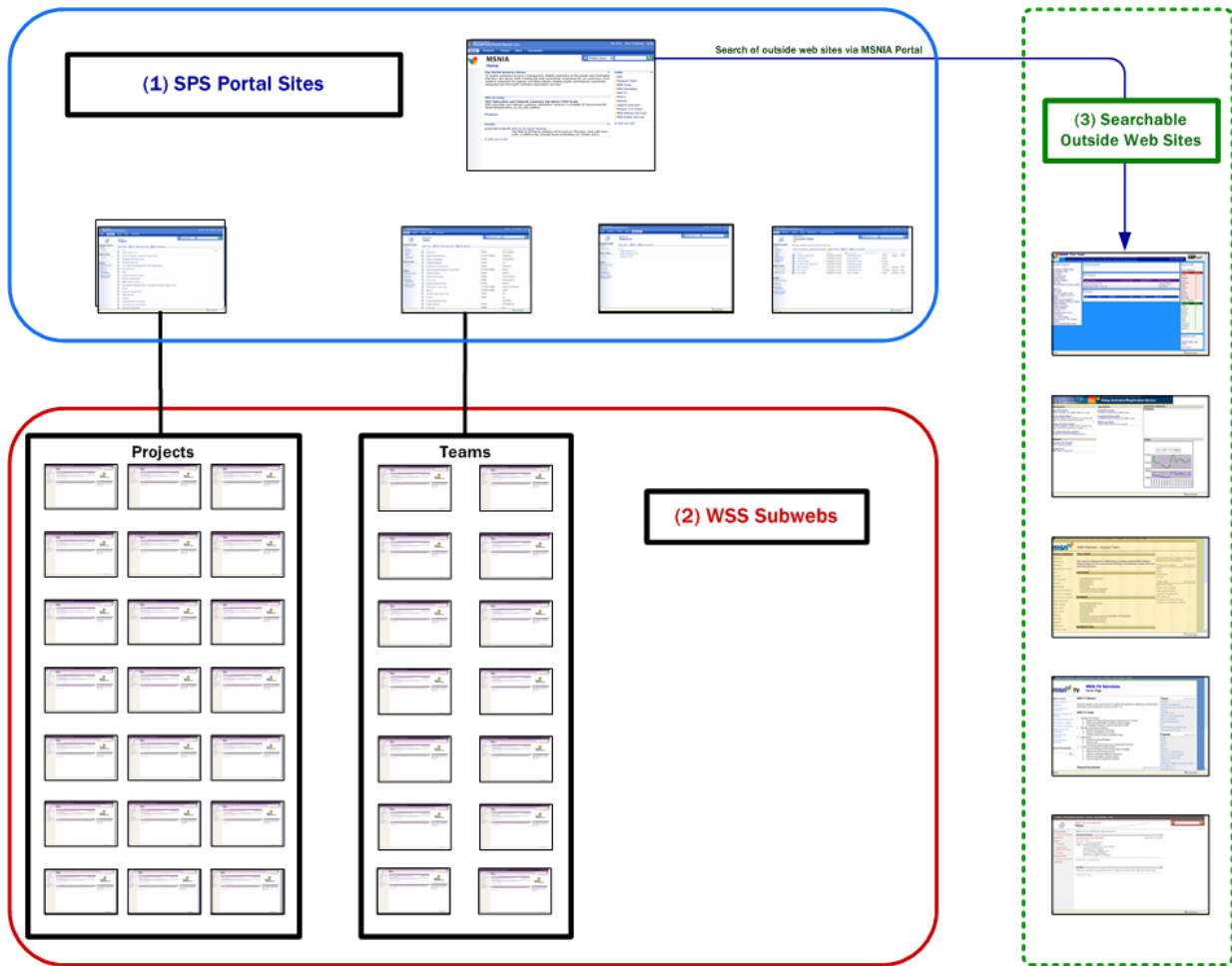


Figure 2: Architecture concept for Fox portal

Home page characteristics

The Fox portal home page is intended both as an introduction to Fox and an information gateway to the division. By default, it will contain a search box and a top navigation bar. There will be links to relevant external sites. In addition to the default items, it will contain administrative content currently residing at <http://foxweb/SD>. There may also be web components that provide a live view of Fox operations, but those components are not yet identified.

Subwebs

All of the Fox subwebs will have a layout dictated by a simple style sheet as outlined by the Administrator. These style sheets will include generalized guidelines as to screen real estate, font, etc. The overall style of all SharePoint 2.0 products will be similar based on the out-of-the-box default appearances.

Projects/Releases

Defined as development projects that are currently underway, which involve several Fox teams. All Projects to be included will be identified by the Fox Program Management team.

Teams

Defined as working groups of people who aren't necessarily joined by a single project. Teams to be migrated will be identified during the project based on investigation of current

Reference Information

The Reference portal page will contain reference information relevant to the daily operations of Fox. It will include general information such as a glossary, server naming conventions, etc. It will *not* include items normally contained in the Administration section, such as job announcements, new employee guides, etc.

- Error codes
- State diagrams
- Fox Architectural diagrams
- Partner Codes
- Glossary

(Outside subwebs)

This includes specialized subwebs that present information in a fashion not supported by SPS. An example is the Test team at <http://ksond3/test>.

Document Management

With the exception of the Dev and Test teams, there are currently no methods for Fox staff to manage their document content. These two groups currently use Source Depot (SD) as a document management method. However, SD is appropriate for managing production code, not MS Word or other types of documents.

Adhoc working team

Since no resources are budgeted for the portal development, a team of volunteers from each section will meet to discuss development questions and to perform short tasks. The team meets and works on an as-needed basis with no regular schedule. Issues are brought up on the agenda and work items are identified.

The current adhoc team members are:

Team Name	Team Member
Test Team	Mortimer Snerd
Dev Team	Lori Smith/Mark Franklin
SD Team	Marie Klein
Admin Team	Patsy Pindletown

Usability and Accessibility

Ideally, a full usability test would be performed and a usability report generated on the SPS portal site. This will not be possible due to resource constraints. However, we can incorporate some elements of usability testing during the actual project testing cycle.

In this case, the usability liaison would identify certain salient functions that are project requirements. Then the scenario needs to be created and a testing plan designed. Finally, the results of the test would be reviewed and a final pass/fail judgment will be made.

Test Issues

A test plan will be developed based on functions described within this specification's Scenarios section. When the portal nears completion, testing will be performed to make sure all requirements are met. See the portal test plan at http://fox/sites/adhoc/Archive_of_prior_22004/DocRepositoryTestPlan.doc.

Server Performance Requirements

- Maximum number of concurrent users: 200
- Maximum elapsed time to search for one portal document: 10 seconds
- Maximum elapsed time to make an administrative change to site: 30 seconds

FAQs

FAQs will be available for portal operations. These questions can range from administrative (policy) issues to technical issues (such as changing styles). The FAQs will be developed by the portal project PMs and the adhoc working team.

Risks

1. Sandbox production PC cannot be installed with correct software.
2. Fox divisions may choose not to adopt the portal site.
3. ENN hosting may not provide adequate service for final portal site.

Issue List

Issue	Notes	Date Resolved
ENN portal hosting does not allow direct subwebs.	Any subweb created under http://foxdemo will have a path of <code>//team/sites</code> . This is by design; the SPS and WSS servers are in two separate physical places.	9/8/03. No choice in the matter. An artifact of ENN hosting.
ENN hosting does not allow crawling of "outside" sites	Portal architecture must include crawling of "Searchables outside Web sites" (see section 3 of portal .vsd diagram). Not yet enabled in http://foxdemo . Working with Lauri Ellis to correct problem.	Open.
URL for Fox Portal Doc Repository	The new Fox Portal doc repository should eventually own the URL http://fox . No one claims ownership of it. We need to move our permanent portal to the Fox URL.	Open. Assigned to Mitchl as included with server set up.

Related Documents and References

Reference	Location
Doc Repository Test Plan	http://fox/sites/adhoc/Archive_of_prior_22004/DocRepositoryTestPlan.doc
Report of Document Management Findings	http://fox/sites/adhoc/Archive_of_prior_22004/Doc_version_control_brief.doc
Overall portal mockup (Visio, 8.5 MB)	http://fox/sites/adhoc/Archive_of_prior_22004/Overall_portal_mockup.vsd
Presentation at Fox all-hands meeting 6/19/03.	http://fox/sites/adhoc/Archive_of_prior_22004/AllHands.ppt

Glossary

Term	Definition
SharePoint 2.0 Products	The 2003 SharePoint Services technologies are SharePoint Portal Server (SPS) and Windows SharePoint Services (WSS). WSS is a subweb of SPS.
SPS	SharePoint Portal Services
WSS	Windows SharePoint Services
Core Project Document	A document used by more than one Fox team to develop, finalize and maintain a product. Examples include functional specifications, test plans, and operations manuals.
Team	A working group that maintains a separate identity and has internal requirements separate from the rest of Fox. Examples include Fox Planning or Fox Service Architecture. Typically, Teams have no end date.
Release	A project component that is being developed or updated in some fashion. The project involves members of different Fox teams such as Development, Testing, and Program Management.
Document	A file, usually in the .doc, .ppt, .mpp formats, that is stored in a repository for Fox staff use.
Project	A Web site for a particular deliverable(s), including any subsequent releases. Typically, Projects have a beginning and an end.

Appendix A: Comparison chart of document management methods

	Doc Lockdown	A minimum of nightly backups	Historical Review	One exclusive document copy?	Document check-in and check-out	Organizational branching/folders	Central location for documents (Based on administration)	GUI for locating documents	Easy to administer with little training required	Notes
SharePoint Team Services 1.1	No	Yes	No	No	No	Yes (subwebs)	Yes	Yes	Yes	Currently used by FoxPM and most Ops sections.
Windows SharePoint Services (formerly STS)	Yes	Yes	Yes	Yes	Yes	Yes (subwebs and other tools)	Yes	Yes	Yes	Upcoming product. Stable beta released 3/3/2003.
Standard Source Depot installation	Yes	Yes	Yes	Yes	Yes	Yes (branching)	Yes	No	No	Cannot handle Word documents. Currently used by Dev and Test sections.
Source Depot GUI installation	Yes	Yes	Yes	Yes	Yes	Yes (branching)	Yes	Yes/No	No	Cannot handle Word documents. The GUI installation only makes the standard client installation easier to use; it doesn't provide any additional functionality.

Appendix B: Document metadata descriptions for search filtering

Required?	Metadata type	Example Parameters:
Y	Document Owner	(owner alias)
Y	File Name	
Auto	Date Created	is exactly earlier than later than
Auto	Created by	(author alias)
Auto	Date Last Modified	is exactly earlier than later than
Auto	Last Modified by	(author alias)
Y	Document Type	DCR Development Spec Functional Spec Hardware BO Spec Operations Guide Process/Workflow Documentation Project Proposal/Vision and Scope Prop Doc Reporting Specification Test Plan Troubleshooting Guides
Y	Status	Review Draft Final Cancelled
Auto	Size	=, >, <, >=, <=
Y (Use same nomenclature as Product Studio?)	Project	Data Warehouse Web site Acceleration Talisman Etc.
Y	Release Version	1.0 – 1000.999. Associated with Project name column.
?	Team	Initiative PM GSC Reporting Etc.
N	Milestone	
N	Release ID	ID Name or Number alpha numeric
Y	Security	Public (anonymous access) Internal (user list) Confidential (small group of auth users)

Appendix C: Role Properties in SPS

In addition to the user properties assigned to each individual, Microsoft Office SharePoint Portal Server 2003 also uses **roles** within lists and libraries to provide different levels of access.

For example, a user can be assigned a Coordinator role within one document library, and a Reader role in another. To absolutely restrict access a user to a role gives that user permission to perform specific tasks, such as creating or editing documents.

Roles in the document library add actions such as check-in, check-out, publish, and approve to traditional file-access permissions, such as read, write, and change.

The SPS roles are described below.

Coordinator

A coordinator can manage an entire workspace or a specific folder. At the workspace level, coordinators perform administrative tasks such as customizing the dashboard site and managing document profiles, categories, and content sources. The coordinator also creates indexes of updated content when necessary or schedules this to occur automatically.

At the folder level, a coordinator manages folder security by configuring roles. The coordinator can add, edit, or delete documents from the folder and can create subfolders. For enhanced folders, the coordinator selects the appropriate approval process. In addition, the coordinator can undo a document check-out or end the publishing process.

SharePoint Portal Server automatically assigns the person who creates the workspace to the coordinator role at the workspace level and on all folders.

Coordinator Scenarios

- Establish a new subweb linked to portal
- Alter the layout of pages in workspace
- Modify navigation hierarchy
- “Undo” a document checkout made by another (unavailable) person
- Maintain events, announcements, and contact information
- Configure a new web part on a page
- Configure page layout
- Add a document library
- Configure portal-level access permissions - deny access to a specific document to specific groups or users; grant access to other users or groups
- Configure subweb-level access permissions - deny access to a specific document to specific groups or users; grant access to other users or groups
- Configure folder-level access permissions - deny access to a specific document to specific groups or users; grant access to other users or groups Remove permissions for someone leaving MSFT
- Change permissions for someone leaving Fox (or someone who changes roles within Fox)

- Provide permissions to new person joining Fox (or to a partner)
- Upgrade permissions for specific person in a specific subweb
- Monitor site (capacity, events, usage statistics, etc)

Author

An author can add, edit, delete, or read documents in the folder. In an enhanced folder, authors can also submit a document for publishing. An author can create, rename, and delete folders. Newly created folders inherit the role settings and folder policies from the parent folder. An author cannot change the roles or the approval policy on folders.

Author Scenarios

- Create, rename, delete folders
- Define links to external resources
- Customize my page
- Add, edit, delete content in repository
- Add, remove announcements
- Check out document, edit, check in
- Revert to a prior version of a document
- Change the metadata properties of an existing document
- Configure an alert on a document
- Remove existing content; remove old versions of content
- Fetch a document from backup
- Change the metadata properties of an existing document
- Configure document-level access permissions - deny access to a specific document to specific groups or users; grant access to other users or groups
- Maintain site map

Reader

A reader can search for and read documents but cannot add them to the workspace. All folder users have reader permissions by default. In an enhanced folder, readers cannot check out, edit, or delete workspace documents, and cannot view unpublished document drafts.

Reader Scenarios

- Search to find a document in repository (from portal, from subweb)
- Navigate to find a document in repository from portal
- Navigate from one subweb to another subweb
- Configure personal filters
- Use personal filter to find a document in repository
- Embed a link to a specific document in the repository
- View site map