



IST Collaborative Tools Phase IIA Project Report

IST Collaborative Tools Phase IIA Project Report

July 27, 2007

Executive Summary

In Spring 2007, the IST Collaborative Tools team carried out Phase IIA of its project work, with the goal of bringing to IST a set of online tools that can help staff work collaboratively in project and service team contexts.

This project phase built on the extensive user needs assessment conducted during Phase I in Fall 2006. In Phase IIA, the IST Collaborative Tools team carried out further research into IST staff tasks and goals, including interviews with representatives of 15 distinct IST job roles. This led to the creation of the following "go/no-go" criteria for selecting a common team collaboration suite for use by IST:

Architectural Requirements

- Integrate with CalNet account/identity management.
- Keep restricted data safe.
- Present a robust Application Programming Interface (API).
- Support systematic data import/export.
- Support cross-browser and platform compatibility.
- Allow users to create and administer project sites.
- Have support available.

Feature Requirements

- Document (file) sharing.
- Collaborative writing.
- Email archiving.
- Project management features – task (to-do list) assignment and tracking, milestone publishing and tracking.

After developing these criteria, the team carried out an initial screening of a large number of collaborative tool products, comparing their architectural characteristics and feature sets to these criteria. This screening included the tools most commonly in use in IST today, bSpace, CalShare, and Basecamp, as well as others identified during the team's product research in

Phases I and IIA. On the basis of this initial screening, the team feels the following products are worthy of further, deeper evaluation in the next phase of the project:

- CalShare (based on Microsoft Sharepoint 2007. See <http://www.microsoft.com/sharepoint/default.msp>)
- SiteScape ICEcore (a new version of the former SiteScape Forum product. See http://www.sitescape.com/products/data_sheets/ICEcore_datasheet.pdf)
- OpenText Livelink/eDOCS (<http://www.opentext.com/2/sol-products/sol-pro-edocs-products2.htm>)
- ActiveCollab (<http://www.activecollab.com/>)
- Vignette Collaboration (<http://www.vignette.com/us/Products/Collaboration>)
- Lotus Quickr (<http://www.ibm.com/lotus/quickr>)

As there are continually new products in this space being introduced into the market, the next phase of this project may discover other products that meet our criteria and wish to examine those as well. One of the strengths of the criteria developed in this phase of the project is that they make doing an initial assessment of suitability quite easy.

Two of the commonly used collaborative tools currently commonly used in IST, Basecamp and bSpace, do not currently meet the criteria. Basecamp does not currently provide a high level of safety for restricted data, nor does it provide email archiving. bSpace does not meet the project management criterion. These issues may be resolved in the future and the next phase of the project should continue to monitor developments in these products.

Introduction

UC Berkeley's Information Services and Technology (IST) Division is faced with a growing need for tools to facilitate the collaborative work of its staff. Departments, units, groups, and projects within IST employ diverse methods of collaborating online, having come up with many different ways of, for instance, working together on documents or assigning and tracking the status of tasks. In addition, their shared data is often scattered across multiple locations on the web, the campus network, and individual hard drives.

With no easy, uniform way to manage communications around shared work on any particular service or project, staff members across IST often feel overwhelmed by the volume of email messages and documents they must track and sift through in the course of their work, and frustrated when attempting to locate a particular item. Further, those who work in close contact with campus customers speak of difficulty in working collaboratively with these

clients.

Team collaboration suites, sometimes called "workspace" suites – applications that create online "spaces" in which members of a team can work together, performing activities such as sharing documents, writing collaboratively, and assigning and tracking team tasks – offer considerable promise for supporting and enhancing the effectiveness of some of the collaborative work performed by IST staff. Various groups in IST have begun using several such suites on an *ad hoc* basis in a number of project, service and unit activities. Familiar examples include CalShare (previously called BearShare), bSpace, and Basecamp. Yet, as adopted, these additional solutions have further complicated the division's overall collaboration efforts. This diversity of collaborative work processes makes management oversight of multiple projects and services challenging.

In response, the Collaboration Services group within the Collaboration, Presentation, and Analysis (CPA) unit of IST's Data Services Department, under the sponsorship of David A. Greenbaum, Director of Data Services, initiated a project to investigate available team collaboration suites, with participants from each of IST's four major departments. The ultimate goal of the project is to recommend a single product, or perhaps a small set of products, for adoption IST-wide. The final phase of the project will deliver that recommendation, as well as a plan to guide the implementation of the selected tool(s).

The Web-based Team Workspace/Collaborative Suite project (commonly known as the IST Collaborative Tools project) has now completed Phase IIA of this initiative. This report documents the activities and the outcomes of that project phase.

About the Project

PHASE I

Phase I of this project took place between September and November 2006. A team of nine IST staff members representing each IST department and the Office of the Chief Information Officer (OCIO) conducted research and analysis on collaborative behaviors and needs within IST. Through staff surveys, focus groups, and interviews, the project team generated a detailed picture of collaboration in several parts of the organization. The team found that most collaboration currently takes place outside of the context of team collaboration suites, using tools such as email (Calmail); online calendars (CalAgenda); instant messaging; bug tracking, change management and ticketing systems; file servers; and project management systems, to name a few. IST staff, on the whole, are still new to the use of team workspaces, but those

who have used this type of tool have found them to be helpful, albeit with some frustrations. Overall, the research showed much room for improvement across the wide range of tools used by IST staff; with better training and stronger support, many tools, both common and new, could be used more effectively.

The Phase I project team concluded its work with the recommendations that IST:

- Formally evaluate available workspace collaboration suites against technical, licensing and feature requirements listed in the final report.
- Select a standard "toolbox" of task-specific collaborative tools adapted to the different sorts of collaborative processes in the organization.
- Provide ongoing support (possibly based in the Technology Program Office) for this toolbox of collaborative tools.

The full Phase I report is available online at http://oneist.berkeley.edu/data-services/2006/11/ist_collaborative_tools_report.html

PHASE IIA PROPOSAL

The proposal for Phase IIA was submitted to the IST Transition Team on February 15, 2007. The proposal is available on the web at http://ist.berkeley.edu/one-ist/projectproposals/CollabToolsPh2a_proposal.pdf

PHASE IIA PROJECT TEAM

The project team members for Phase IIA were:

Chris Ashley

Randy Ballew

Allison Bloodworth

Ian Crew

Kevin Haney

Rick Jaffe

Jeff McCullough

Aron Roberts

Gary Thackeray

Allison Bloodworth and Gary Thackeray joined the project team in Phase IIA.

PHASE IIA PACE AND SCOPE

At the request of project sponsor David Greenbaum, the pace of Phase II of the project was deliberately slowed to allow time for the Campus Collaborative Tools Partnership Investigation Committee to complete its work. That campus-wide effort explored the possibility that the UC Berkeley campus might partner with Google and/or Microsoft to deliver services including email, calendaring, and web file storage. The services provided in some possible scenarios included team collaboration suite-like offerings similar to the ones being evaluated in the IST collaborative tools project. Therefore, the originally planned Phase II of this project was split into two phases, IIA and IIB, while awaiting a clearer indication of the ecosystem in which the product(s) that it eventually recommends might operate.

The Campus Collaborative Tools Partnership Investigation Committee recommended against the campus entering into the type of partnership described above with either Google or Microsoft, at least at this time. The results of their work appears in Appendix 1 of this report.

Phase IIA had three objectives:

- Refine the list of technical and licensing criteria developed in Phase I into a list of critical “go/no-go” criteria.
- Evaluate several leading candidates against these criteria to test the criteria for feasibility.
- Publicize and solicit feedback on this list of “go/no-go” criteria from IST/OCIO staff.

The project team accomplished both of the first two objectives; this report is a starting point toward fulfillment of the third objective. In addition, the team was able to complete further research, building on the results of Phase I, to gain a more complete understanding of the collaborative needs of IST staff. (For details, see Task Analysis, below.)

PHASE IIA TIMELINE

Phase IIA of the project was approved on 2/28/2007, and completed on 5/15/2007.

Phase IIA Project Activities

TASK ANALYSIS

The two new Phase IIA project members expressed the need to more fully understand the collaborative practices of IST staff. Allison Bloodworth, bringing her background in user needs analysis to the group, suggested that the project evaluate the frequency and importance

of a range of common tasks across various work roles in IST. To carry out this investigation, the project team interviewed approximately two dozen staff members performing a variety of functions within the organization.

The selected respondents were interviewed individually, or in some cases with a small group of colleagues with whom they work closely. Each was asked to give a ranking of none, low, medium, or high with respect to the frequency that they performed a set of collaborative tasks, and the importance of performing those tasks to their group's work.

The team compiled the results into a matrix displaying the list of tasks against fifteen distinct IST work roles identified by the research, showing the varying frequency and importance ratings of each task by the respondents in each role. The raw analyses are attached in Appendices 2 and 3 of this report.

This task analysis showed that the most essential capabilities for a collaborative tool for IST were:

- Working with people outside of their own group (and outside IST). This behavior was rated as frequently performed and important by respondents representing 93% (14 out of 15) of the IST work roles.
- Task assignment and tracking (rated highly by 80% of the roles).
- Project management (rated equally as important as task assignment and tracking, and only slightly less frequently performed, by 93% of the roles).
- Document sharing (73%).

Two other tasks scored 'Medium High:'

- Writing/publishing documentation (67%).
- Collaborative writing (60%).

Beyond these six tasks, two critical needs emerged from the research, particularly from interviews with Human Resources (HR) and Policy staff. In these roles (and likely, others), IST staff members require the ability to:

- Set access permissions flexibly, and at a fine-grained level (preferably by item), in order to maintain the confidentiality of documents.
- Manage workflow. For example, in the course of a project or case, employment paperwork and other documents might flow from manager to HR staff to Director to the

Deputy Chief Information Officer for IST and back again. As documents are passed along, business rules could track and constrain each step to help ensure timely processing and maintain confidentiality throughout.

Because these last two needs were uncovered only during the interviews, they did not receive evaluation by all respondents. Therefore, they do not appear in the quantitative summary in the appendices.

The task analysis performed in Phase IIA, combined with the research data from Phase I, gives IST a rich understanding of its collaborative practices and needs. For IST as a whole, the set of tasks delineated above defines the most crucial needs, and shapes the core requirements of any prospective collaboration tool suite. From this understanding, we can move forward towards selecting a tool (or tools) that provide value to the organization.

CRITERIA DEFINITION

Guided by the results of the task analysis, the project team refined the technical, feature, and licensing requirements developed in Phase I into a list of "go/no-go" criteria that any tool selected by IST must meet. The team sorted these criteria into:

- Architectural requirements, relating to system-level functionality, interoperability, user experience, and support;
- Feature requirements, pertaining to functionality that the tool provides to users, and hence the tasks and behaviors it can facilitate; and
- Licensing & policy requirements, such as cost, accessibility, compliance, and business resumption capabilities.

Following is a proposed list of essential requirements for any tool implemented IST-wide.

Architectural Requirements

The product(s) we adopt must meet the following system-level specifications:

- *"Work with other people,"* i.e., make it feasible to leverage the campus's CalNet infrastructure for authentication, authorization, and account management.
- *Keep restricted data safe.* Servers and document repositories must be hosted in house, and allow highly granular permissions (preferably, by item; otherwise, by role).
- *Present a robust Application Programming Interface (API).* The product architecture must allow us to write custom modules for authentication, data access, etc., to enable the tool to integrate with other tools used in IST.

- *Support systematic data import/export* that makes it possible to extract data for migration to a successor suite or tool, whether through an API or other means.
- *Support cross-browser and platform compatibility* so that the tool is functional to users of multiple browsers and operating system platforms, including, at least, Internet Explorer and Firefox on Windows and Safari and Firefox on Mac OS X.
- *Allow users to create and administer project sites*, such that any user can create a new project site, manage user/group access permissions for the site, etc. without the intervention of the administrator of the service.
- *Have support available*, either from the vendor or through a third party.

Feature Requirements

The product(s) we adopt must support:

- *Document (file) sharing*. Ideally, this component of the product would include a check in/check out system that allows only one person at a time to edit a document.
- *Collaborative writing*. The product should include a tool, such as a wiki, that allows multiple authors to edit a document in place on a server, managing conflicts between simultaneous edits and tracking changes between versions. (The tool does not need to enable users to work on the same copy of the document concurrently, although some tools facilitate that type of collaboration.) The tool should provide a history, and allow rollback to a previous version.
- *Email archiving*. The product should be capable of storing email pertinent to a project within that project's workspace. This allows participants to continue to correspond via email outside of the product, while capturing that correspondence within the workspace.
- *Project management features – task (to-do list) assignment and tracking, milestone publishing and tracking*. The product should provide lightweight features in support of project management, but is not expected to duplicate the feature set of dedicated tools like Microsoft Project, such as those relating to resources, dependencies, and the like.

As noted above, workflow management was identified through user research as an important need of some critical roles within IST. While this feature may not be a universal requirement of all IST collaboration, it is one that would add immense value to any workspace product adopted by the organization.

Licensing and Policy Requirements

The project did not address licensing requirements in this phase of work. Financial issues were left to the next phase, when selection decisions will be made. In the interim, the project sponsor and other IST directors can consider the level of support available for the adoption of

a team workspace/collaboration suite.

Privacy and security issues have been addressed indirectly by the architectural requirements for in-house hosting and granular permissions described above. Aside from that, the project team did not develop a separate list of criteria pertaining to policy requirements (e.g. accessibility, compliance, business resumption).

Initial Pass at Screening Products against Criteria

The team then used the criteria above in an initial screening process. In this process, the team was able to winnow down a large number of available products to a relatively small number of candidate products which appear, at first glance, to meet all or most of these criteria. See Appendix 4 for the matrix of products vs. criteria. As we more closely evaluate this smaller set of candidates in a future project phase, these criteria can be weighted to facilitate the decision-making process.

After this first screening pass against these criteria, the following tools appear worthy of further investigation during the next phase of this project:

- CalShare (based on Microsoft Sharepoint 2007. See <http://www.microsoft.com/sharepoint/default.mspix>)
- SiteScape ICEcore (a new version of the former SiteScape Forum product. See http://www.sitescape.com/products/data_sheets/ICEcore_datasheet.pdf)
- OpenText Livelink/eDOCS (<http://www.opentext.com/2/sol-products/sol-pro-edocs-products2.htm>)
- ActiveCollab (<http://www.activecollab.com/>)
- Vignette Collaboration (<http://www.vignette.com/us/Products/Collaboration>)
- Lotus Quickr (<http://www.ibm.com/lotus/quickr>)

Two of the commonly used collaborative tools currently commonly used in IST, Basecamp and bSpace, do not currently meet the criteria. Basecamp does not currently provide a high level of safety for restricted data, nor does it provide email archiving. bSpace does not meet the project management criterion. These issues may be resolved in the future and the next phase of the project should continue to monitor developments in these products.

As it is hosted off-campus by a third-party provider, storing restricted data on a Basecamp site becomes problematic for legal and policy reasons. Future developments in the legal, policy, or technical arena may alleviate those concerns, and the project team should track any

such developments.

bSpace is based on an open-source platform (Sakai), and IST could choose to invest in the creation of a tool that provides the currently missing project management features, allowing bSpace to meet that criterion. The project team should investigate that possibility during competitive product evaluations.

Appendix 1: Results of the Campus Collaborative Tools Partnership Investigation

See http://oneist.berkeley.edu/data-services/2007/06/report_on_campus_collaborative.html

Appendix 2: Frequency and Importance of Collaborative Tasks Performed by IST Staff

The team compiled the results into a matrix displaying the list of tasks against fifteen distinct IST work roles identified by the research, showing the varying frequency and importance ratings of each task by the respondents in each role. The cells of the matrix were color coded according to ranking (no color for none, green for low, yellow for medium, and red for high). The resulting chart illuminates a core set of tasks that are performed with frequency and importance across the organization; for several of the tasks (displayed in rows), red and yellow cells stretch uninterrupted (or nearly so) across the spreadsheet. The finished task analysis document is attached below.

Appendix 3: Calculation of Most Common Tasks Performed by IST Staff

(See below)

Appendix 4: Preliminary Evaluation of Collaborative Tools vs. "Go-No Go Criteria

(See below)

Last modified at 7/27/2007 6:00 PM by [Ian Crew](#)

	Communications/Editorial/ Content Developer		Sales/Consulting/TAM/Pro ject Management		Developer/Designer		Management		DBA		Sys Admin- WINDOW		HR Employee Relations		Payroll/Purchasing/Budgeti ng (Business Services)	
	Frequency	Importance	Frequency	Importance	Frequency	Importance	Frequency	Importance	Frequency	Importance	Frequency	Importance	Frequency	Importance	Frequency	Importance
Extra confidentiality for online discussions and document sharing, such as person by person access permissions set at the folder (or	?? [B2]	??											?? [AB4]	??		
Materials Development (Is this really a	HIGH]	HIGH														
Program and Initiative Development (Is this a gathering of smaller tasks/processes?)													HIGH [AB5]	HIGH		
Supervisory tasks (different than above, if any)																
RATING SCALE:																
NONE, LOW, MEDIUM, HIGH																
Groups																
* Project Team																
* Support Desk Group																
* Business Services																
* Technical Administrators																
To Do's: Talk with Business Services - Kevin																
Rick to talk with Emily, Laura, Karen, Peggy, Clarissa, Sarita																
Notes:	[B1]: For Policy discuss'ns, web changes													[AB1] More and more, recently	[AB2] IM used only if critical	

	HR Operations		Decision Support		Service/Help Desk Consultant		Desktop Support/Field Tech		Sys Admin-UNIX		Computer Labs		Administrative Analyst/Assistant	
	Frequency	Importance	Frequency	Importance	Frequency	Importance	Frequency	Importance	Frequency	Importance	Frequency	Importance	Frequency	Importance
Extra connectivity for online discussions and document sharing, such as person by person access permissions set at the folder (or	HIGH	HIGH	HIGH	HIGH										
Materials Development (Is this really a	MEDIUM	HIGH												
Program and Initiative Development (Is this a gathering of smaller tasks/processes?)	MEDIUM	MEDIUM												
Supervisory tasks (different than above, if any)	HIGH	HIGH												
RATING SCALE:														
NONE, LOW, MEDIUM, HIGH														
Groups														
* Project Team														
* Support Desk Group														
* Business Services														
* Technical Administrators														
To Do's: Talk with Business Services - Kevin														
Rick to talk with Emily, Laura, Karen Peggy, Glarissa, Sarita														
Notes:	[AD1] Long term goal is to have comprehensive web site						[1] LOW for long-time staff; HIGH for new hires	[2] Via SMS text messages, rather than IM						

	Communications/Editorial/ Content Developer		Sales/Consulting/TAM/Pro ject Management		Developer/Designer		Management		DBA		Sys Admin- WINDOW		HR Employee Relations		Payroll/Purchasing/Budgeti ng (Business Services)	
	Frequency	Importance	Frequency	Importance	Frequency	Importance	Frequency	Importance	Frequency	Importance	Frequency	Importance	Frequency	Importance	Frequency	Importance
Rick: Tasks still missing from this list include: presentation-making (at trainings, etc.); research (particularly web-based); calendaring; email;	[B2] - might be necessary/desirable													[AB3] This work sent to Natalie		
														[AB4] Maybe desirable/necessary for job actions, searches, and other employment cases		
														[AB5] e.g., Spot Award, Performance Mgmt		

**Appendix 3: Calculation of Most Common Tasks Performed by IST Staff
IST Collaborative Tools, Phase 2A, 2007-04-24
Task analysis - numeric summary of results**

This worksheet was used to numerically rate, than rank, the relative frequency that IST staff performed various collaborative tasks in the course of their work, and the importance of those tasks to their work.

This worksheet consolidates and summarizes data gathered from interviews with representatives from 15 different work roles across IST, which had been captured in a separate "task analysis" worksheet.

These interviews were conducted during Spring 2007 by the IST Collaborative Tools project, comprised of members from every IST department. The ultimate goal of that project was to select tools, such as team (or workspace) collaboration suites, that facilitate collaborative work within IST. The task analysis process was used to identify the functionality that must be offered by any such tools.

As shown in the key below, task ratings are on a scale from 0 to 3, where 3.0 would represent a uniform rating (across all 15 work roles) of high frequency or importance for a particular collaborative task, 2.0 a uniform rating of medium frequency or importance, 1.0 a uniform rating of low, and 0 a uniform rating of none.

	Frequency/ Importance	Narrative ranking (corresponds to scores at left)	% of 15 roles rating this HIGH (either in frequency, importance, or both)
Working with people outside their own group	2.8/2.9	HIGH	93%
* Task Assignment & Tracking	2.8/2.8	HIGH	80%
Project Management	2.7/2.8	HIGH	93%
Document sharing	2.5/2.7	HIGH	73%
* Writing/Publishing documentation	2.3/2.5	MEDIUM/HIGH	67%
Collaborative writing	2.1/2.5	MEDIUM/HIGH	60%
Ticketing (Issues, service request)	1.9/2.0	MEDIUM	60%
Creating/editing web pages	1.5/2.2	MEDIUM	60%
Time Tracking	1.7/1.7	MEDIUM	47%
Instant messaging	1.5/1.7	MEDIUM	40%
Bug Tracking	1.1/1.2	LOW	33%
Thought leading	1.1/1.2	LOW	13%
Source code management & versioning	1.1/1.1	LOW	33%
Data/Object Modeling	0.5/0.8	LOW	13%

Mean ratings from all 15 roles, based on:
HIGH = 3
MEDIUM = 2
LOW = 1
NONE = 0

Other functionality categories;
Workflow (task tracking on steroids: defined handoffs, other business rules, etc.)
Discussion Groups (Virtual Meetings:)
*Conference calls
*Video conferencing
*Screen sharing
Extra confidentiality for online discussions and document sharing, such as person by person access permissions set at the folder (or document) level, rather than by project
Training and Materials
Development (Is this really a separate set of tasks?)

Program and Initiative
Development (Is this a gathering of smaller tasks/processes?)
Supervisory tasks (different than above, if any)

Appendix 4: Preliminary Evaluation of Collaborative Tools vs. "Go-No Go Criteria
IST - Collaborative Tools Project : Preliminary Requirements & Assessment
 May 10, 2007

	ActiveCollab	BaseCamp	bSpace	CalShare	Central Desktop	Citrix GoToMeeting/Online	Dot Project	Intel SuiteTwo	Jive Clearspace	Joyent Connector	Lotus Connections	Lotus Quikr	OpenText Livelink/eDOCS	Simdesk On-demand Computing	SiteScape Forum
Architectural Requirements (Go/No-go)															
Work w. Other People (integrate w. CalNet)	Y	N	Y	Y	N	N	N? (can authenticate via LDAP)	kinda Y	Y		?	Y	Y	N	?
Keeps Restricted Data Safe															
Host in-house	Y	N	Y	Y	N	N	Y	Y	Y		Y	Y	Y	Maybe	Y
Highly granular permissions (by item)	Y	N	N?	Y	?	?	N	N	N?			Y	Apparently	?	? (probably Y)
Robust API															
Data I/O	Y	Y	?	Y		?	Y (via Import/Export module)	N	? (RSS only?)		?	Y?	Apparently	?	? (probably Y)
Custom modules (language)	Y (PHP5)	N	Y (Java)	Y (.NET)		?	N	N	Y (Java)		?	Y (JSP/Java)	Y (Java)	?	? (prob. Y) (Tcl)
Cross-Browser/Platform Compatibility	Y	Y	?	?	Y	?	Y?	?	Y		Y	Y	?	Somewhat	Y
Users Create and Administer Project Sites	N?	?	Y	?	Y?	?	Y	N	N?		Y	Y	Unclear	Unclear	?
Support available	N				Y	?	?N	N	Y		Y	Y	Y	Y	Y
Feature Requirements (Go/No-go)															
Document Sharing (File sharing)	Y	Y	Y	Y	Y	?	Y	Y	Y		Y	Y	Y	Y	Y
Collaborative Writing	Y	Y	Y	Y	?	Y?	N	Y	Y		N	Y	With related product	N	Y
Email Archiving	?	N	Y	Y	N?	?	Y	n	N		N	Y	With related product	Y?	Y
Project Management															
Task assignment/tracking (To do)	Y	Y	N	Y	Y	?	Y	n	N		Y	Y	Y	N	Y
Milestones	Y	Y	N?	Y	Y	?	Y	n	N		N?	Y	Y	N	?
Wish List / Features on the Horizon (please add below)															
Tagging of Documents/emails									Y(documents)		Y (documents)			Need sister product	
Unified Messaging—A unified inbox for email, calendar, voicemail, faxes and threaded discussions											N		N		
"Presence Awareness" (who is online and available to collaborate)							Note: this is mostly a project management system		Y					Need sister product	
Map-based interface for locating documents														Need sister product	
Web log tool														Apparently	

Explanations of selected Architectural Requirements above:

Work w. Other People (integrate w. CalNet): Product makes it feasible to leverage the CalNet infrastructure for authentication, authorization, and account mgmt.

Robust API: Custom modules—Customers can code new tools/modules for authentication, data access, etc., in the language(s) specified.

Cross-Browser/Platform Compatibility: The product is fully usable to users of multiple browsers and OS platforms, including at least IE and Firefox on Windows and Safari and Firefox on Mac OS.

Users Create and Administer Project Sites: Any user can create a new project sites, manage user/group access permissions for the site, etc. without the intervention of the administrator of the service.

Explanations of selected Feature Requirements above:

Collaborative Writing: The product includes a tool, such as a wiki, that allows multiple authors to edit a document in place on a server, managing conflicts between simultaneous edits and tracking changes between versions.

Email Archiving: The product is capable of storing email pertinent to a project within that project's workspace. This allows participants to continue to correspond via email outside of the product, while capturing that correspondence within the workspace.

Project Management: The product provides lightweight features in support of project management, although is not expected to duplicate the feature set of dedicated tools like Microsoft Project, such as those relating to resources, dependencies, and the like.

IST - Collaborative Tools Project : Preliminary Requirements :
 May 10, 2007

	Townsquare (MIG)	Trac	Traction Teampage	Twiki	Vignette Collaboration	Worksmart/ Pandora Networks	Zimbra	Zoho Virtual Office
Architectural Requirements (Go/No-go)								
Work w. Other People (integrate w. CalNet)	N	Probably N	? (probably Y)	N	y		?	Y/N
Keeps Restricted Data Safe								
Host in-house	Perhaps	Y	Y	Y	Y		Y	N
Highly granular permissions (by item)	N	Y	Y	N	?		N/A	N
Robust API								
Data I/O	?	?	? (probably Y)	?	Y		?	Y
Custom modules (language)	Perhaps (PHP)	Y (Python)	Y (Java)	Y (Perl)	Y		Y (web svcs)	N?
Cross-Browser/Platform Compatibility	Y	? (probably Y)	Y	Y	?		Y?	Y
Users Create and Administer Project Sites	Y	N	?	Y	Y		N	Y
Support available	Perhaps	N	Y	N	Y		Y	
Feature Requirements (Go/No-go)								
Document Sharing (File sharing)	Y	N	Y	Y	Y		N	Y
Collaborative Writing	N	Y	Y	Y	?		N	Y
Email Archiving	N	?	Y	N	maybe Y		N	Y
Project Management								
Task assignment/tracking (To do)	N	Y	N	N	Y		N	Y
Milestones	N	Y	N	N	?		N	Y
Wish List / Features on the Horizon (please add below)								
Tagging of Documents/emails	N						Y	
Unified Messaging—A unified inbox for email, calendar, voicemail, faxes and threaded discussions	N						Note: This is really an email and calendaring system	
"Presence Awareness" (who is online and available to collaborate)	N							
Map-based interface for locating documents	Y							
Web log tool	N							