MSPnet Strategic Plan

1.0 OVERVIEW

MSPnet is a five-year infrastructure and communications project that will create, implement and facilitate, a web-based, interactive electronic community that will build capacity and enrich the knowledge base of the Math Science Partnerships. The goals of the project are to facilitate communication and collaboration between and within the MSPs, and to provide a vehicle for dissemination to the public.

Specifically, MSPnet will:

1) expand MSP projects' access to, and ability to share, resources, emerging research , tools, best practices, obstacles, and strategies;

2) strengthen geographically dispersed partnerships by enhancing and sustaining dialogue through innovative collaborative tools, events, and structures;

3) create a growing archive, for both researchers and practitioners, of the lessons and accomplishments of the MSP program;
4) enhance the public's access to, and knowledge of, the MSP program;
5) conduct research on the impact of online formats, functionalities, and structures to enhance large-scale educational reform efforts.

2.0 PLAN OF WORK

In order to accomplish the goals of the project MSPnet staff will engage in the following four categories of activities:

- Technical design
- Service
- Engagement with MSP and RETA projects
- Formative Evaluation and Research

This work will continue throughout the five-year period. The full outline of this work has been described in the MSPnet proposal. This strategic plan will focus on the work that is currently underway, and that which will be accomplished within the first year of the grant. It will describe actions, decisions, and processes that are currently being put into place in order to support the realization our vision for the creation of an effective medium to enhance communication between the MSPs, to facilitate communication between constituencies within the MSPs, and to provide access and information to the public at large.

2.1. Technical Design

MSPnet leverages work done in LSC-Net (ESI 9812831) as well as work prepared under a design grant (MSP-023472) Yet despite prior work (both on the nature of communities, and tools) the development work for this grant is extremely ambitious. It should be stated that most of the design work that we have been engaged in this fall (see §2.11 below) is largely invisible to the user. It is this work, however, that allows the user to move seamlessly through the site, and that enables the site to respond intelligently to the user's profile and needs by distinguishing between different constituencies of users. The MSP community is an extremely complex one. It is made up of different types of projects (RETA, Comprehensive, Targeted, Institute), different kinds of users (PIs co-PIs, K-12 teachers, K-12 administrators, etc), and intersecting interest groups that may extend across several projects (e.g. higher education mathematics faculty, three projects engaged in research conducted by one RETA project). Our technical work this fall has kept this complexity in mind while designing different permissions systems, as well as different spaces and modes of interaction.

The technical work has involved not only programmers, but also content management staff, researchers, designers, and PIs. The team meets several times a week to discuss design decisions, implications for the user, and review of "use cases." In addition we have had a comprehensive review by an independent systems architect consultant. She has reviewed our design looking at issues of security, flexibility, scalability, and usability.

The technical work can be divided into the following categories

- systems architecture decisions
- Hub format and functionality decisions
- Project Space format and functionality decisions

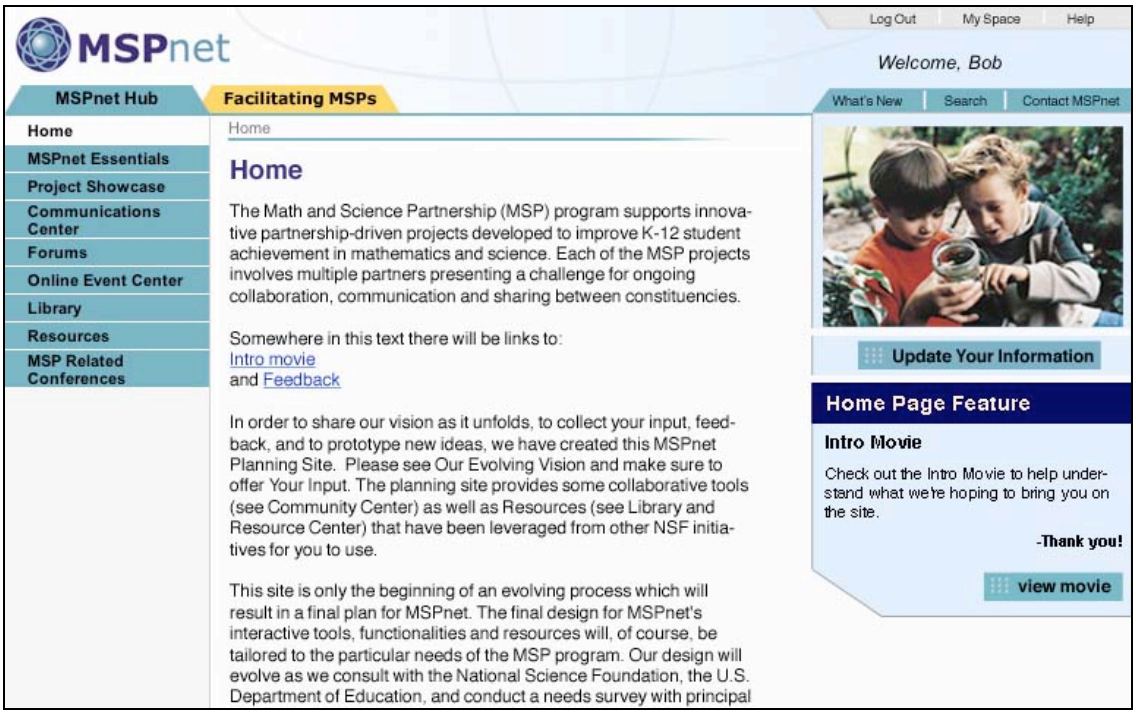
Each is described below.

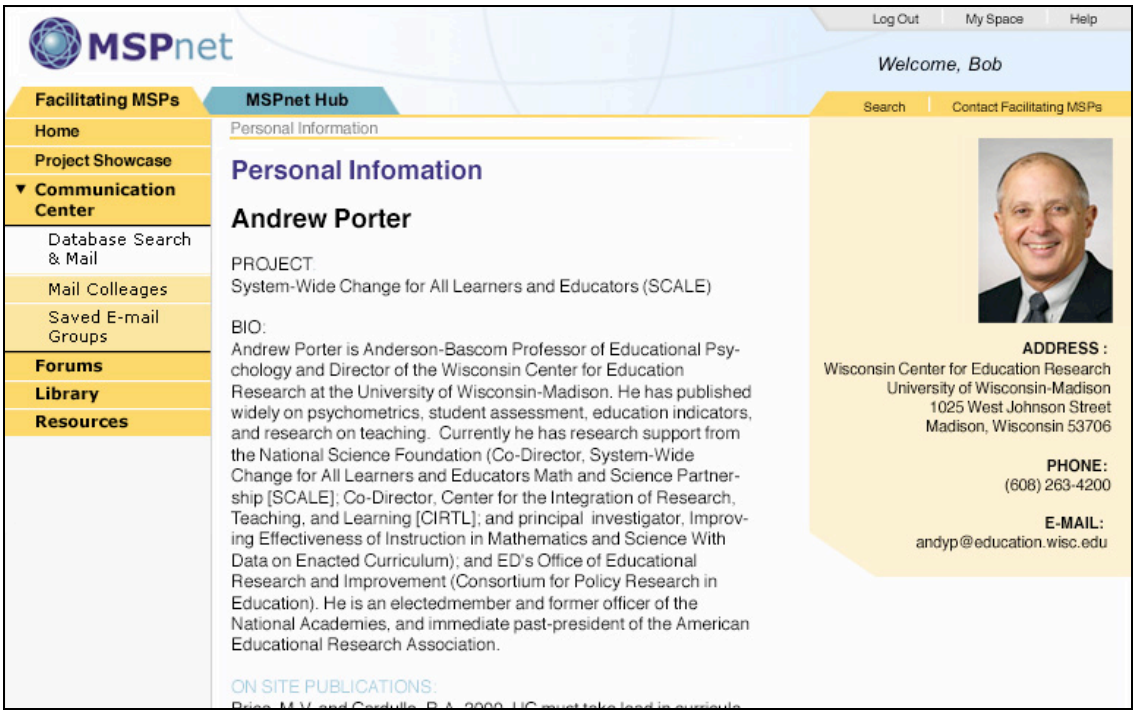
2.11. Technical design: systems architecture

Designing interacting communities (HUB and PROJECT SPACES)

Our aim is to provide a seamless design where staff can navigate between two communities with a simple click. The first community consists of leaders of all the MSP projects, where as the second community is comprised of staff affiliated with a particular project.

We provide to screen shots below. The first shows the Hub view, while the second shows the Project view.





The HUB. This community is comprised of leadership of the MSP Comprehensive, Targeted, RETA, (and eventually Institute) projects. We define leadership loosely, and leave open discretion to individual projects. We anticipate that leadership will include a greater cadre than PIs, co-PIs, and lead evaluators, but will be more circumscribed than "all staff loosely affiliated with an MSP." In order provide some target, we anticipate up to 50 leaders per project, and suggest that these leaders include higher education partners, administrators of participating schools, teacher leaders, and other professional development providers.

The "Project Community" Each project (Comprehensive, Targeted, Institute, RETA) will have their own community space. Members of the Project Community will be determined by project leadership, but we anticipate that it can include all staff members affiliated with that project.

The public will be able to view sections of both the HUB and project spaces, such as journal articles that appear in the HUB library, or project abstracts that appear on PROJECT COMMUNITY spaces. However the public will not be able to read annotated comments on library resources (that were written by HUB community members) nor will they be able to contribute comments.

Development of a sophisticated Access Permission Model

A great deal of our development effort this fall has been dedicated to creating the infrastructure for a sophisticated data-base permissions system. This will enable the system to identify users by their profile. For simplicity sake I provide three prototypes of users below:
[a] PI or project and member of both Hub and Project space,
[b] first-year teacher who is a member of the Project Space, but not a member of the Hub and
[c] public person who is neither a member of the Hub nor a project but want to gain information.

We have defined what each category of user will see in a given space, and what they will be able to do in that space. Their profile will be recognized as they log in, and their view of the site, and available options, will respond accordingly.

The access permission model has been built very flexibly to incorporate many different types of profiles of users. In industry this is sometimes described as an Access Control List. Developing a robust architecture for this at the outset will allow for scalability, security, privacy, and customization of the site.

Defining levels of privacy and access

It is important that that the users in this complicated system are informed of what is accessible to the public, what is accessible to members of a space (eg. the Hub or the Project Space), what is accessible to only defined subgroups, (eg. higher education faculty), and what is absolutely private (e.g. mail

correspondence). In order to delineate spaces for the users we have developed the following nomenclature:

Public: Open to anyone who accesses the site, regardless of whether or not they are logged in.
Protected: Open to MSP staff who have been assigned membership to the HUB, to the PROJECT SPACE or both
Restricted: Open only to subgroups, such as mathematics higher education faculty, or invited participants to a specific event.
Private: This area refers to mail sent by an individual to another individual or group of individuals through the site. This mail can only be read by the sender and his/her designated recipients. It will not be read by MSPnet administrators and will not be used, even for research purposes.

2.12 Technical Design of Hub Spaces

The MSPnet Hub space as described above will serve to create an electronic community that facilitates sharing of resources and discourse among the MSP projects. It is intended for the leadership of these projects (up to 50 people per project). People who are not members of the Hub will also be able to access resources and read many sections that have been designated as open to the public. However, non-members will not be able to post to this area, to annotate resources, to participate in special events or forums.

Below we briefly describe 9 sections of the site that will be launched at the end of January at the PI conference.

Home: The home page will show two tabs, one that accesses the Hub, and one that accesses a particular project space. The home page will give contextual information about the MSP program and will feature new events on the site. The home page will acknowledge NSF and have the appropriate disclaimer that not all views of contributors represent those of the Foundation.

MSPnet Essentials: This section of the site provides an on-line guide to the user as to how to use the MSPnet site. At launch it will have a section that explains *Membership,* including how users can join, add a colleague, or update their project and/or membership information. There will be a section for *Frequently Asked Questions* (which will evolve to a full help system), an *About Us* section, which provides a vision 90 second movie as well as background info about TERC, a *Feedback and Suggestions form,* and a way to *Contact Us.*

Project Showcase: This area will include a one stop portal to the MSP projects (with project abstracts, contact information, and links to websites (outside of MSPnet) that individual projects have mounted. It will also contain a similar portal to RETA world, where the RETAs will describe their work, the services that they are offering and the constituencies that they are

serving. While this section will be basic at rollout, we envision that it will grow to allow projects to highlight reports, press releases, vignettes, best practices, etc. This area will be accessible by members of the Hub as well as the public.

Mail Center: This section of the site allows members to both search the database for projects and people with similar interests and to send mail to individuals or groups. For example, it will be possible to search for all projects engaged in mathematics, serving rural K-8 schools. The user can then send a query to all of those who appeared in the results, or to a particular subset. The user can then save this group "Rural K-8 users" for future mailings. Users can also use the mail center in less complex ways, such as to e-mail three colleagues on different projects. This section of the site is only visible to members of the site. It is considered Private, in that mail will only be read by the sender and recipients. The subsections of this area at rollout will include *Search and Mail, Mail Colleagues,* and *Your Saved Groups.*

Forums: This area is dedicated to continuing exchanges, for short- and long-term special interest groups. Each Forum will be moderated by a member of the group, with support from TERC staff. Each forum will have a bulletin board for general announcement, and a threaded discussion area. The next iteration of MSPnet (to be released in the Fall of 2004) will add Chat functionality to the Forum spaces.

At rollout, the following groups will be established already: *MSPnet Lounge*, open to any member of the Hub; *Math Higher Ed*, for mathematics higher ed faculty; *Science Higher Ed,* for scientists; *K-12 Leadership*, for superintendents and other K-12 leaders sharing MSP project leadership; *PIs and Co-PIs*; and *Evaluators*. While the names of the Forums will be visible to logged in members of the hub, only members of a Forum will be able to read and post messages within a forum. Hence the forums are considered Restricted spaces. Hub members wishing to join a Forum can apply through a simple form that will be available at each forum entry point. We will create a forum for NSF program officers which (unlike the other forums) will be completely invisible to other logged in members. Only NSF program officers will be permitted to add new members to this group.

New Forums will be created (by request to MSPnet staff) as groups emerge which wish to make use of them — such forums might center on a particular policy issue, or professional development technique such as Lesson Study. In addition to participating in the standing discussions, Forum members will also be able to post resources for their Forum, and in the future will be able to schedule chat sessions with Forum colleagues.

Online Event Center*:* The Online Event Center at rollout will contain:
A *Speaker Hall,* where invited speakers or panels can present and moderate a follow-on discussion;

A *Discussion Hall*, where moderated discussions around themes or papers will take place;
A *Poster Hall* where multiple posters around a particular theme can be presented and discussed; and
A *Virtual Conference area* for events that combine speakers, discussions, posters, and discussants.

At rollout we intend to have a discussion in place (within the discussion hall) and an interactive speaker event within the speaker hall. The Poster Hall and Virtual Conference Center will have pointers to examples of these items from the LSC community. They will provide place-holders for us to experiment with one of the MSP projects that we will be working intensely with during the first year.

These events (depending on their nature) will be either Protected= available to all logged-in members of the space, or Restricted — available to only invited subsets of the community. Hub members will be able to request discussions and specify the invitation list (whether open to all participants, or to a specific group chosen as a Saved Group in the Communication Center). In a future version, Hub members will be able to create these discussions themselves, but for the first year such requests will be implemented by TERC staff. All Online Events once concluded will be archived, and readable by any Hub member.

Library. This area will include links to papers in several categories: *Ed Reform and Policy*; *Professional Development*; *Teaching and Learning*; and *MSP papers*. The site will be launched with over 300 such papers. We will feature and discuss some of these papers in the Discussion Hall, and we will focus on those that are particularly pertinent to the work of the MSPs and/or those authored by the MSP community.

At rollout, members will be able to annotate every paper in the library, by leaving a comment on how the resource was used, and if it was helpful. Members will also be able to add resources.

Hence the library resource objects will be viewable to logged in members as well as members of the public. However the annotated comments will only be viewable by those who are members of the HUB. Hence the library objects are denoted as Public while the annotations are Protected.

The second release of MSPnet (Fall of 2004) will enable all projects to copy resources within the HUB space to their Project Community space. The objects will be copied without the annotations, as the commentary on these resources is context-dependent. A resource that may be very useful to PIs from Higher Ed, may be not useful at all for first grade teachers. We will be experimenting with this functionality, this spring. with three MSP projects who will be working more intensely with us.

Resources: This area will include links to *Useful Websites, MSP Tools/Materials, MSP Program Notes*, and *Related NSF Programs.* Each of these is described below.

- *Useful Websites:* This area will provide links to mathematics, science, and technology curriculum materials, websites dedicated to math and science professional development, standards, assessment, public engagement, equity, research on math and science education, and databases such as the Eisenhower National Clearing House and ERIC.
- *MSP Program Notes:* Will link to sections of the NSF site with new solicitations, reports, press releases and announcements. It will also host any announcements sent by NSF to the MSP community.
- *MSP Tools/Materials:* Will provide a place where MSP projects can share various evaluation research, or professional development tools,
- *NSF Related Programs:* Will highlight work being done by the CLTs (and eventually link to CLTnet) and exemplary work being done by NSDL (the National Science Digital Library).

The resource objects will be viewable by the public. Logged-in members of the HUB will be able to annotate resources and read the comments of other members. Hence the resources will be public, but the annotations protected.

Conferences: The section of the site will provide information about MSP PI conferences, as well as conferences being hosted by RETA projects for the community. In addition it will have a calendar of conferences of interest that relate to science and mathematics educational reform.

2.13 Technical Design: Project Spaces

Each project will have its own community space as described above. At rollout in January project spaces will be limited in terms of their functionality, as we will be working with the community at large and with three MSP projects in particular (see engagement below) to define the interactive capacities for within project communication.

At rollout, each project will have the following spaces:
Home: This will display information such as name of project, funding info, contact information, features and news.

Project Showcase: This will present the project abstract, link to other project websites outside of MSPnet, press releases, project reports, project vignettes or highlights.

Mail Center**:** Each project will be able to send mail to individuals or groups within their project. They will also be able to save groups for later use. Projects will be able to add members and update their database.

Forums: At rollout each project will have one project-wide forum with a bulletin board and threaded discussion area. Projects may ask MSPnet staff to create other forums for particular subgroups, if they have an assigned moderator in place.

Online Event Center: This will only be available at roll-out to one of our experimental projects that we are working with intensively in the Spring (see Engagement below). Based on feedback we will release additional functionality to all projects in the fall of '04, in Version 2.

Library: Project members will be able to add items to the project-space library. In addition, they will be able to view all items in the Hub library space, and to copy them over to their project space. Once items are added to the project library, project members can comment on them, and read others' comments.

Resources: Project members will be able to add items to the project-space resource area. In addition, they will be able to view all items in the Hub resource area, and to copy them over to their project space. Once items are added to the project's Resources, project members can comment on them, and read others' comments.

2.2 Service

The goal of MSPnet's service component is to help members make the best use of the site, which includes integration of new members, trouble shooting, knowledge management, and helping people find ways to learn from each other using the resources they help to provide. All service components will be in place at rollout, and updated monthly. Specific tasks that we will engage in include:

Creation of Online Events to engage the community
While the site will provide a vehicle for communication throughout the year MSPnet staff will provide events that will draw people to the site.
Such events will include engaging speakers and panels to discuss a topic of interest to the community. In addition, we will work with RETA projects who wish to make use of the Online Event Center to host parts of their own workshops.

Continuous information-management support
Each section of the site will have pointers to new features that are highlighted. The home page will have a calendar of current and upcoming events. We will send out frequent announcements of new resources and events on MSPnet, call for participation encouraging submissions of reports from the field, research, and resources from the community, and highlight findings, strategies, and structures being employed by different MSPs. MSPnet staff will also summarize, synthesize, annotate resources, to prevent information overload.

Program archive to capture community memory. This archive of resources, research, models, tools, strategies, and discussions, will serve both the current MSP community as well as projects that are funded in subsequent years who wish to learn from the experiences of "veteran" MSPs. This will be a collaborative effort, and its success will depend in part on the MSPs' ability to share related documents and information. Our project contact and monitoring system will be designed in part to identify and elicit materials of value to cross-project sharing of craft learning about programmatic and strategic aspects of their work. These elements will be annotated and catalogued in ways that will allow their archival use.

Technical support: MSPnet staff will provide prompt technical support to assist users in communicating with others, in annotating materials, in contributing to discussions, forums, and special events, and in posting new resources to the community. Technical support will be provided through Contact Us forms on the site. Telephone help will also be made available. In addition we will work closely with three MSP projects to carefully monitor the kinds of concerns and needs for help that arise.

Support of yearly PI meetings. We expect to support yearly PI meetings through pre- and post-conference activities, and by posting papers and presentations so that they can be shared and discussed after the conference, by lead staff who were in attendance, as well as by other staff who were not able to attend. We have begun conversations with NSF program officers about the current plans for the 2004 PI meeting. Since our rollout for the MSP community will coincide with the 2004 PI meeting, our opportunities for pre-conference support will be limited, but we have engaged a professional documenter to prepare materials from the conference for posting on the MSPnet website, to support post-conference activities.

Creation of protocols for monitoring MSP news. Corresponding to outreach and communication with projects, we have begun the establishment of internal protocols to guide our staff in monitoring and updating information about program developments across the MSP community. This information will be digested and discussed at regular staff meetings, and will shape and inform our contacts with projects, our choice of resources to highlight and disseminate, and the on-line events that we create for the MSPs during the year.

2.3 Engagement with the MSP program and with MSP Comprehensive, Targeted and RETA projects

Gathering Information about MSP Project and their staff:
Our engagement with MSPs and RETAs is necessary both for our R&D work, and for our capability to serve the electronic community in support of the MSPs' work. The most important element we need is information about the MSPs' work and progress, and open lines of communication with the projects, to ensure that our information is up to date and accurate. A challenge that MSPnet will face early on is having an up to date database of leadership staff engaged in each of the MSP projects. We will rely on the NSF database to gain information as to PIs and co-PIs, and PI conference registration data to gather further information about other leadership staff. We will request each new member to MSPnet to fill out a form that will give us a clear sense of the forums and special interest groups which are most appropriate for them.

Establishment of contacts in all projects. In the period through January 31, 2004, we will seek to establish a contact person in each MSP and RETA project whom we can contact with news and alerts, and from whom we can get information and updates on project activities, project memberships, and related matter — the bread and butter of community building. This will inform our service component, and will complement activities such as our "What's New" bulletin, which will commence publication in January 2004.

Personal Networking, and keeping abreast of face-to-face MSP face-to-face activities:
It is important for MSP PIs and leadership staff to have personal contact with the staff of MSPnet and vice versa. This is all part of community building. People are more likely to contribute to a site, and to participate in it, if they are aware of the human face behind the URL.

MSPnet will seek to collect information about workshops and conferences sponsored by RETAs and others for MSPs, and when possible MSPnet staff will attend and observe. In the spring we attended the MSP workshop sponsored by the National Academy of Sciences on "How People Learn." Most recently, one of the PIs attended the meeting in Baltimore sponsored by the Utah State RETA project and CCSSO in the fall of 2003. Both of these conferences provided valuable information about current issues and attitudes among the attending MSP leadership, and this kind of networking interaction is a vital nutrient for our work.

Advisory Board Meeting: We are very fortunate to have a rich and broad advisory board that has representation from Comprehensive, Targeted, and RETA MSPs. It also brings expertise on the role of higher education. We will convene our first meeting with our board on December 3rd and 4th, and we look forward to hearing their perspectives on the needs of the MSPs.

Monthly communication with NSF:

The PIs have met twice with Program Officers at NSF. These meetings are particularly valuable as they offer a broad view of the goals, concerns, and events being planned for the program as a whole. We look forward to continuing having frequent meetings, in person, or by phone or video conference.

Working with Three collaborative projects.

An intrinsic part of our research and development strategy is the identification each year of 3-5 MSP projects that will collaborate with us more intensively than other projects do. These collaborations will have several outcomes: [1] Testing and evaluation of new technologies or techniques to support specific kinds of interactivity. This work will allow us to refine new tools or techniques in an intensive study, in preparation for making them available to the wider community. [2] Formative data which will provide a deeper understanding of the relation between MSP projects' goals and implementations, on the one hand, and tools and techniques for communication, on the other. This understanding will shape our development of tools, but also our programmatic and service work across MSPnet. [3] Case study and other research data. In many cases, these intensive collaborations will also provide a setting for formal study of electronic communities and their relation to the "off-line" components of projects.

Criteria and relation to development strategy

Projects chosen for partnership relationships will have:

- expressed a strong desire to work closely with MSPnet
- have technical capacity and incentive to update, moderate, and maintain an electronic community
- are willing to pilot new tools and to provide feedback on how functionalities are being used to enhance partnerships and communication structures
- may serve constituencies of particular interest (e.g. with a high proportion of underserved students)
- priority will be given to MSPs with have minority serving institutions

Stark County. We have already begun work with one project, the Stark County Math and Science Partnership, because they have asked to use our virtual conference tools to mount a teacher conference in May of 2004. In particular they are interested in having teachers develop their own poster hall, which the project will administer and moderate. They will also experiment with having keynote speakers, and discussants. This will be an excellent opportunity to observe how this suite of tools, which has been so useful in the past three years for the LSC Sustainability virtual conferences, can be used by MSPs (and potentiall other third parties) with our support for their own purposes.

Selection of the first-year intensive partners. During the month of January and February we will finalize selection of first year partners.

2.4 Evaluation and Research

Our formative evaluation effort will be ongoing. We will look at use of various sections of the site (forums, communication center, on-line event center, library) and also at use of functionalities (participation in discussion, posting a resource, annotating a paper). We will solicit feedback as well as receive feedback through the site as to areas that are problematic. We will also work with three projects intensively to learn more how the site is useful, and new areas that should be incorporated to enhance use.

Based on formative evaluation of the site, we will revise the first release of MSPnet with a second release – expected on October 1.

Research: MSPnet will provide an excellent opportunity to research communities of practice over a five-year period. We intend to carry out research that is both formative and intended to improve the development of the network as well as summative studies that will deepen the researchers and practitioner understanding of electronic communities of practice. Our research will draw on both quantitative measures as well as qualitative ones, and draw on statistics collected through the site on use, (by individual, group, constituency and project), focus groups, questionnaires, interviews, and qualitative content analysis of text messages. We will rely on statistical software (SPSS), quantitative analysis tools built into the MSPnet administrative infrastructure, and N-Vivo qualitative software.

Users will be informed of our intent to study interactions on the site, and all users will be assured that publications that result from our study will protect individual and project anonymity. Appropriate research protocols have been passed through our IRB for review.

During the first six months of the grant we will conduct a comprehensive review of the literature on methods of studying on-line communities. Methodologies will be reviewed and evaluated (with consultant methodologist and statisticians) and tools will be adapted and field-tested. This period (first six months) will coincide with the technical start up phase of the project.

Our research will study both the MSPnet system as a whole (including cross project, inter-project and public communication) as well as on in depth longitudinal studies of projects that use MSPnet tools to enhance collaboration and communication between partners and constituencies within their project.

1. Studying a complex system: MSPnet is designed to be a highly complex system; indeed it can be thought of as a network of networks. To understand the complexity it is worth considering that an individual user will be part of a project with its own project MSPnet view, part of a constituency (such as higher education) with its own special interest groups, and part of the MSP community (which connects all constituencies and projects). In addition this individual will be part of other related professional networks, which may be

linked to through the site. Our research will trace the evolution of this system and will study participation patterns, social interactions, information exchanged, and exchanges of reflective tacit knowledge. We will study the creation and culture of sub-communities, as well as cross-fertilization between communities. Our research will take a broad perspective, looking at the network as a whole, and examining how interactions in one part of the network, both technical and social, impacts on other aspects. The research will investigate the impact of new features (e.g. interactive poster halls), interactive events (online interactive speakers and workshops), collaborative formats (meeting halls and discussion halls), and new technologies (audio commenting, video sharing) on participation structures (overall, within and between constituencies), on participant role (active vs. passive, core vs. peripheral, respondent vs. facilitator) and on content exchanged (length, frequency, reference, context, reflectiveness). In addition, social factors of the system (which may seem to be outside factors of the network but indeed those should be considered as part of the whole system) such as culture of schools, districts, universities, political climate, competing demands, will be examined through analysis of site content, questionnaires, and interviews.

2. Case Studies: In addition to the comprehensive view of the system, we will also conduct case studies of individual subgroups in specific projects that use MSPnet tools to enhance within-project communication. These smaller subgroups will allow us to more carefully track the experience for an individual user, and defined user groups over a prolonged period of time. Selected case study sites will also explore new technology with us before it is shared with the community at large, serving as field test sites to inform the development of the network as a whole.

Within case studies we will study

- Emerging use over time and the role of the emergent administrator, facilitator, moderator
- Participation patterns within a community (addressing issues of leadership, voice, and equity)
- How users' participation in a subgroup effects their participation in the cross project MSP-net community
- The cultural norms that develop within subgroups and how they vary between each other
- The tension between subgroup membership and identity and openness to new constituents and users
- New collaborative structures that on-line communications permits (looking at the relationship between collaborative structures on-line and collaborative structures off-line)
- Exploration of the role that an electronic community plays in strengthening partnerships between higher education and K-12
- Analysis of partnerships in terms of issues addressed, symmetry, leadership, relationship and debate.

Case studies will also involve analysis of site use and of questionnaire data in a manner similar to that described above; however, field-test projects will be examined more in-depth utilizing semi-structured interviews over multiple time points and field site visits. All interviews will be audio-taped and transcribed. Qualitative analysis of interviews and site visit notes will be guided by Lincoln and Guba (1985) and Miles and Huberman (1984).

Understanding of electronic communities including role constitution, social interactions, and reflective content exchanged can be enhanced through discourse-analytic techniques looking at notion such as register, voice, cohesion, participant patterns, and participant style. "Discourse analysis provides a way to explore the structure as well as the themes of talk. In other words it enables us to look at how we talk, who we are as we talk, and what we talk about " (Drayton and Falk, 2003). Our work will analyze text-based materials from several interactive text based formats including discussions, interactive presentations, interactive panels, and poster hall interactions. We will draw on a range of techniques that enable an examination or participant structures and turn taking, roles and status among interlocutors,– and other social elements of the exchange, as well as patterns of interlocution and reflective discourse using reference height, width and depth.

3.0 Timeline for achieving goals and Benchmarks for Year 1.

October 1- January 1

Technical:

- Establishment of regular technical and design team meetings, for establishment, monitoring, and review of technical development plans.
- Completion of system architecture, complete with permissions model
- External review by independent systems architect consultant to check for issues of security, scalablility, flexibility, and usability.
- Design of spaces and functionalities for Hub
- Design of spaces and functionalities for Project Spaces
- Development of administrative functionalities, including capture of data for research purposes.

Service:

- Establishment of regular program-team meetings for planning, monitoring, and evaluation of program elements
- Planning first on-line event in Speaker Hall

Engagement:

- Establishment of regular program-team meetings for planning, monitoring, and evaluation of program elements
- Advisory Board meeting December 3-4, 2003
- Attend Utah State/CCSSO Evaluation meeting in Baltimore (Oct. 13-15)
- Attend monthly meetings with NSF program officers

Research:

- Establishment of regular research-team seminars
- Development of specific research questions for each strand of research (emergence and development of communities of practice, content analysis of exchanges in selected projects or communities, studies of information flow within partnerships or between projects)
- Refine first research questions for development of electronic communities in Hub and 3 collaborative projects

January 1- January 27

Technical:

- Intensive Q/A testing of site on test server
- Move to Production Server to prepare for full launch on January 27th.

Service

- Establish formal liaison with all MSP and RETA projects
- Implement regular contacts for news and developments with all projects

Engagement:

- Meeting with Program officers in mid-January to demonstrate site and prepare for launch. (suggested January 15th or thereafter)
- Selection of three MSP projects that will work intensively with MSPnet
- Engage Forum leaders from within the community

Research:

- Collect baseline data on MSPs
- Development of initial questionnaire to be answered on the site, and focus group formats that will be used at the MSP PI meeting in January.
- Focus groups with constituents at PI meeting in Jan.

Feb 1- June 1

Technical

- Development of administrative functionalities to support the Stark MSP project running its own virtual conference, that would then be shared with other MSP members
- Work to incorporate chat (synchronous communication) within forums and the online event center
- Incorporation of video and multi-media

Engagement

- Work intensively to customize the Project spaces for three MSP projects
- Collect updated information, and highlights from other MSP projects
- Create New Forums for MSP projects as necessary
- Create liaisons with selected RETA projects to incorporate some of their workshops or other events on-line

Service:

- Provide technical assistance to all new users
- Make contact with project liaisons to update information on MSPnet
- Begin to disseminate MSP What's New broadcasts
- Schedule monthly on-line speakers, or discussions to engage the community

Research

- Identification of data and data collection techniques and protocols for first case studies and for site interactions.
- Collect data on case studies; data analysis

June 1- October 1

Technology

- Engage in a revision cycle based on feedback from the MSP community
- Addition of new functionality to support within project communication
- October 1: Second release of MSPnet.

Service

- Revise help system for the site
- Continue to plan for monthly online events
- Provide on-going technical assistance

Engagement

- Continue collaborations with selected RETA projects to incorporate some of their workshops on-line
- Meet with NSF, and develop detailed strategies for Year 2.

Research

- completed data analysis of three Year 1 case studies.
- Identify and begin planning for Year 2 studies.