

Reforging the Links Final Report

Interim Review

Near the end of the 1999 project year, Larry Dickerson considered the similarities and differences in the “essential elements” of the production and business models used by public television and distance education organizations. As a result, Mr. Dickerson asked the Reforging the Links meeting participants to suggest areas of cooperation for “future partnering” where these processes overlapped. The key suggested “overlap” opportunities for selected PTV business practice area follows:

- **Mission:** Portaling TV audiences to DE/CE opportunities
- **Needs Assessment:** Matching TV audience interests to DE/CE opportunities
- **Facilities Use:** Benefits of lower cost/unit, even for smaller DE audiences
- **Distribution:** Delivering "On Demand" Programming
- **Local Production:** Creating "good TV" with "hooks" to DE
- **Funding:** Ability to raise \$ from multiple sources

Discussions with Extension Administrators

The list of *partnering possibilities* developed at the September 1st, 1999 *Links* meeting was then combined with the *top opportunities* generated by discussions between DIU and LI. The resulting document was then shared with all *Links* participants, and was used as the template for a series of discussions between LI and DIU senior management and the UW Extension Chancellor and Vice Chancellor that took place during the fall of 1999.

At these meetings, this list of top opportunities was tested against the set of reasons Byron Knight and Mike Offerman each gave as to “why bother with the reforging exercise.” New reasons were added, other ones were deemed to be of less importance than originally thought.

Most interestingly, a new area relating to how WHA-TV could help the university Extension Division (home of both organizations) “position itself for the 21st Century” was developed during these high-level sessions. This renewed interest in “cooperating with Extension,” dovetailed nicely with both Penn State’s and Wisconsin’s support of the “Engaged University” concept. The role of public television’s digital production and distribution assets in the fulfillment of the Extension mission, became an important element in future *Links* discussions and outreach presentations.

The December Links Meeting

The resulting set of “administratively-validated” Top Reasons for PTV and D/Ed to Reforge was shared with *Links* participants at the December 2, 1999 meeting http://www.reforginglinks.uwex.edu/top_reasons.html, and is included below:

- **PTV gets DE/CE content for DTV**
- **PTV learns "new media" production methods from D/E staff**
(interactive media, instructional design, etc)
- **PTV strengthens case for DTV funding from University**
- **Administration and Regents understand potential of DTV**
For distribution of courseware; partnership promises new kinds of content for DTV datacast
- **PTV strengthens relationship with University System**
Becomes more visible as partner in University mission (Kellogg Report)
- **PTV/DE partnership will stimulate new solutions**
Client needs push creative envelope; access to combined resources will make it easier to "think out of the traditional box", create new solutions for clients, faculty, viewers
- **PTV/DE partnership maximize access to technology base**
Partnership will maximize availability of skills and at both organizations
- **PTV/DE partnership will help university generate new revenues**
Partners can create products that bring in new revenue to campuses; income that they wouldn't have gotten otherwise
- **PTV/DE partnership will help define University Outreach and Extension in 21st century**
PTV/DE partnership will help position the University as major D/Ed player, creating national leadership in educational telecommunications applications
- **PTV/DE partnership will help increase staff expertise within both organizations**
- **PTV/DE partnership will maximize use of common systems, resources, knowledge**
- **New Technology is itself an organizational "change agent"**
New revenues, wider audiences, are an incentive for change within the institution; helps overcome risk-aversion

The meeting reviewed these “reasons why” and also looked at the problems these new relationships would have to overcome (fig 1). The process of developing a “future essential model,” built on these new areas of cooperation, was started.

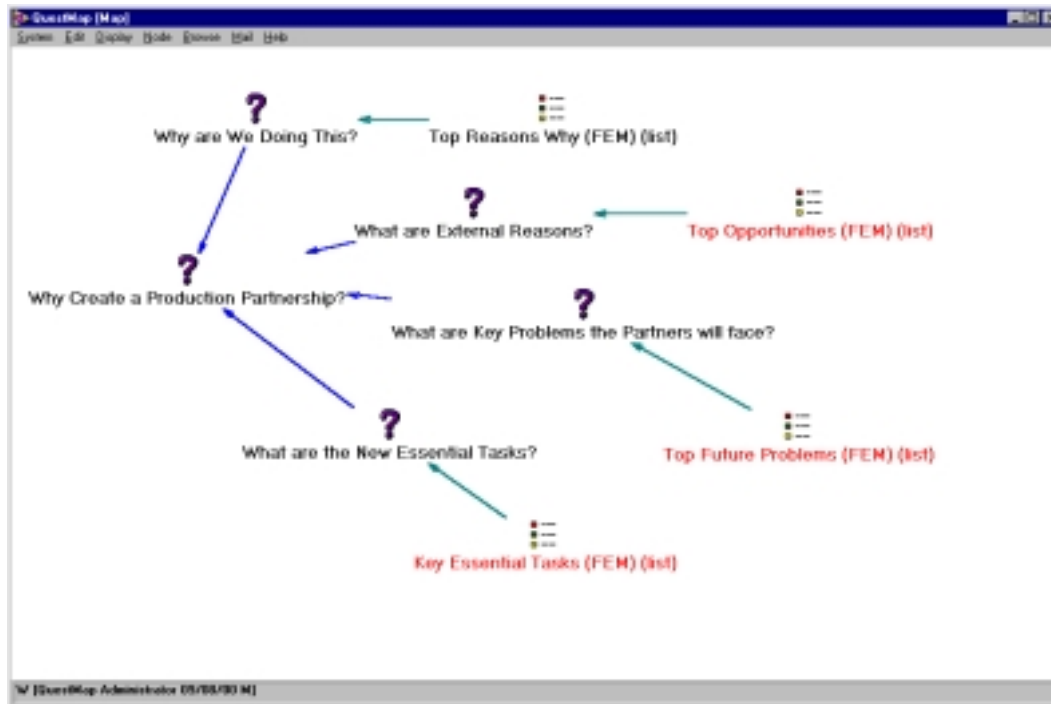


Figure 1

The top “essential tasks” for PTV in the future partnership were identified as the following:

- **PortalingTV audiences to CE opportunities**
- **Creating "good TV" with "hooks" to DE**
- **Matching TV audience interests to CE opportunities**
- **Developing new investment relationships**
- **Delivering "On Demand" Programming**
- **Supporting/marketing faculty via new media production**
- **Creating a mechanism for speculative development**

Producers Break-out Panel

In addition to validating the “reason why,” and beginning the development of a future essential model (FEM), the December meeting also provided a venue for two “break out” sessions. One was focused on the role of University PTV stations as “gateways” to Internet-2 development, the other provided an opportunity for executive producers from a number of *Links* stations to share their experiences new media partnering and job-sharing.

Staffing requirements, where to learn technology skills, the changing role of a multimedia producer, and potential models for new media products, were some of the questions raised. The panelists shared their contention, and the *Links* participants agreed, that successfully creating new partnerships will involve more than exchanging production staff members. New processes will need to be developed, new job descriptions created, and new kinds of training programs developed for these new positions.

The following questions were raised in the Producer's Panel discussion:

- **Question : Job description issues?**
- **Question : Pre-service training?**
- **Question : What was background?**
- **Question : What was original idea?**
- **Question : What have we learned so far?**
- **Question : What are most significant impediments?**
- **Question : What are next steps to integrate new skills?**
- **Question : What do we need to know (from experts, each other)?**
- **Question : How follow up on this for the next meeting(s)?**

Ms. Tina Hauser, a WHA-TV producer, who was “loaned” to LI for a one year “observation period,” led a panel discussion on her experiences at LI. She had hoped that in exchange for contributing her video production skills, she in turn would gain new media, instructional design, and digital streaming skills. She reported that the experiment had yielded mixed results. Without formal systems of training and mentoring, new media development and production skills were not well-transferred between organizations.

The producers recommended that the *Links* project find a way for them to continue their discussions. In response, a follow-up videoconference was

conducted on February 2, 2000 and an additional break-out session was added to the April 26 group meeting.

Summary through 1999

By the end of 1999, the Project participants had progressed from an inventory of tasks and assets associated with the Current Implementation (CIM), to an accepted understanding of the Current Essential Model for university-based PTV operations. They then moved on to identifying the forces leading to the creation of a Future Essential Model (FEM) for university PTV operations. They also validated the new tasks PTV stations would have to undertake as part of this new model.

One outcome of the process of validating the “reasons to partner” was a shift in focus from developing future capital acquisition and investment-seeking strategies, to those based on making PTV operations an integral part of the university’s outreach mission. While “frustration with complex university processes” remained a “top problem” with both LI and DIU, and while developing new capital acquisition strategies remained important to both organizations’ development directors, by the end of 1999, commercialization strategies were no longer WHA-TV’s chief reason for cooperation with LI.

Instead of arguing for “more freedom to make money,” *Links* participants began to develop an argument for renewed university support of PTV operations based on the following digital technology opportunities:

- **Linking DTV to datacast delivery of distance education content**
- **Producing and broadcasting “enhanced television” content that would combine traditional television “storytelling” with new links to university content resources, and**
- **Becoming gateways to broadband digital interconnections via advanced internet connectivity.**

Subsequent *Links* meetings in Year 2000 were focused on aligning the identified “core assets” of PTV with these new opportunities in digital production and distribution – for distance and continuing education partners, and for the tomorrow’s “enhanced television” broadcasts. They also asked how public television and distance learning units might use their intellectual property and brand-name assets to move their partnerships into the marketplace.

January – July, 2000: Core Strategies and Future Implementation Steps

In February 2000, a series of video teleconferences were held between Wisconsin Public Television and Penn State Public Broadcasting to validate the core strategies to support the key public television and distance education partnership goals. Prior to the videoconference the *Links* Core participants were also invited to rank order the earlier strategies, problems, opportunities, and assets lists. The top-ranked items from each list were then used as discussion triggers for the video conference sessions. The results of this poll was follows:

TOP OPPORTUNITIES	SUM	ST Dev	Average
Creating New Partnerships	14	0.4	2.8
Serving the Training D/E Market	13.5	0.4	2.7
Marketing Univ Content Resources	11.5	0.7	2.3
Tapping New Investment Capital	11.5	0.7	2.3
Tapping Corporate Research Support	9.5	0.8	1.9
Meeting Demand for High Quality MM/ Productions	6.5	0.4	1.3
TOP STRATEGIES			
Creating TV with Hooks to D/E, University Content	15	0.0	3.0
Serving On-Demand Programs	13	0.5	2.6
Finding and Marketing Faculty "Stars"	12.5	0.4	2.5
Portaling Audiences to D/E Programs	12	0.8	2.4
Seeking New Entrepreneurial Investments	9.5	0.7	1.9
TOP ASSETS			
Converting ideas to compelling visual stories	13	0.5	2.6
Understanding fit between client needs and technology	13	0.5	2.6
Access to university faculty	13	0.8	2.6
Knowledge of A/V production processes	12	0.5	2.4
Understanding value of contract against criteria	12	0.8	2.4
Finding and matching underwriters to programs	12	0.8	2.4
Holding audience loyalty/viewer support	11	0.7	2.2
Access to PBS branded programs	11	0.4	2.2
Understanding of PTV processes	11	0.7	2.2
Access to quality programming stream	11	0.4	2.2
Managing use of production resources	10	0.6	2
Understanding facilities demand	10	0.6	2
Knowledge of fundraising skills	10	0.0	2
Managing client expectations	9.5	0.8	1.9
Understanding project costs	9	0.7	1.8
Ability to produce/acquire pgms. that interest viewers	9	0.4	1.8
Production/staff scheduling systems	9	0.7	1.8
Cost accounting systems	8	0.8	1.6
Ability to build support for state tax \$	8	0.5	1.6
Intellectual Property negotiation skills	8	0.5	1.6

During the videoconference, each of the top strategies was discussed. Some of the observations relating to the addition of local enhancement “hooks” or “portals” within national programs, included the following:

- **Idea : local PTV stations will have to take responsibility as the "vettor" of other sites and linked resources**
- **Idea : this changes concept of what is "local" and what is “national” programming**
- **Idea : this changes the outreach department’s function**
- **Idea : this means looking at whole schedule as portal**

Concerns relating to developing on-demand program services focused on the need to experiment with program indexing technologies in order to master “video asset management” techniques. Classroom lectures, K-12 programs and other “niche” content were identified as likely content for such experimental services. Internet-2 was seen as powerful transport medium to connect campus-based PTV servers across the country.

The participants in the videoconference suggested that campus PTV stations work more closely with their counterparts within Extension and the Computing Services units to identify potential grant funding for multimedia, internet-based, or interactive/enhanced television productions.

March 2000 Meeting

How to leverage public television’s top-ranked assets in support of the top-ranked partnership strategies and identified new opportunities, became the focus of the remaining *Links* meetings and guest presentations. The March meeting included two presentations on the future market and emerging technologies of “enhanced television” and on-demand video services. The first, "Enhanced Television in Public Broadcasting" was led by Chris Atizena, Associate Director of Technology from PBS. The latter was led by nationally-known interactive media consultant and journalist, Gary Arlen.

Gary discussed seven key issues for PTV stations as they face the interactive media future:

- **DTV outlook**
- **New look of TV networks**
- **Interactive television**
- **Streaming media**
- **Community focus**
- **Opportunities for PTV**
- **Wild-card Issues**

Gary suggested that university PTV stations have a unique “branding advantage” in having both a PBS association and a locally-respected university name. He suggested increased collaboration between universities, building content for specialized audiences around “disaggregated and repackaged” video assets.

In the afternoon, *Links* “expert panelist” attorneys Michael Skindrud and Paula Jameson led a discussion of new media and university-based intellectual property rights. Mr. Skindrud moderated a panel consisting of Dr. Graham Spanier, President of Penn State University, Dr. John Wiley, Provost of the University of Wisconsin-Madison, and Dr. Stuart Gordon, Director, Technology Transfer Office San Diego State University Foundation. Ms. Jameson summarized the panel’s observations and observed that in the future, universities would have to act more like television producers in acquiring and protecting the multi-level rights to their intellectual products.

The final activity of the March meeting was a review of the top strategies in terms of (a) how well they matched the original *Links*’ goals, (b) leveraged new opportunities, and/or (c) reduced or exacerbated the identified problems for university PTV station entrepreneurial activities. The discussion of these strategies confirmed that the *Links* project had adopted a much more “public service” centered partnership model than had originally been conceived by WHA’s DIU and Learning Innovations. While the participants still were interested in “entrepreneurial strategies” relating to new media production, the top-scoring strategies focused on leveraging public television’s production skills and systems, and its new DTV datacast and interactivity technology assets to support the university’s public service mission.

Revalidating public broadcasting’s unique relationship to university Extension, to continuing and distance education, and to community partner organizations was seen as a more important priority than raising external investment capital for public television media production. Much of the success of the *Links* process has been to provide station participants with a vocabulary (of identified assets and new knowledge) to use with their university administration.

Moving to Implementation

Spring Activities

During the spring (April-June), Byron Knight (WPT) and Mike Offerman (LI) continued their “partnership” meetings. Their focus, like the *Links* process itself, turned more to redesigning Extension’s “new media” activities. Developing a Center for Media Innovations that would support the work of the university’s public broadcasting units (WHA Radio and Television), instruction teleconferencing (Instruction Communications Services) and distance education facility (the Pyle Center), and the needs of Cooperative Extension and the UW System, took center stage. Many of the Questmap™-charted lists of assets and opportunities were used by Byron at these meetings.

As a follow-up to these meetings, and as a direct result of the *Links* effort, an inter-departmental team was organized to develop new models for coordinating Extension telecommunications and computing activities. Interactive television, DTV datacast, server-based video delivery, and Internet-2 connections, were all identified as Wisconsin Public Television strategies that should be supported by Extension administration. One outcome of this study was the creation of the Broadcasting and Media Innovations Division of Extension, recognizing the critical “link” between public service broadcasting and the future of the “digital land-grant university.”

The overlap between the *Reforging the Links* effort and the *PTV Internet-2 Initiative* (another Future Fund project) also grew during this time period. The membership of the two projects was drawn from the same pool of university stations – stations that already had good working relations with their campus Information Technology units and senior administration. Five of the *Links* participants (core stations WHA, WPSX, KWSU, and “tribune” members WKAR and KAMU) were also active in the *Internet-2* project. In addition, John Reim (KBYU) and Bill Buxton (WUSF) of the *I-2 Project*, attended the spring *Links* sessions. Thus, it was appropriate for the final *Links* meeting to include discussions of how *Internet-2* could be a test-bed for future PTV programming and production operations.

July 2000 Meeting

The final *Links* meeting took place on July 12 and 13 at the Pyle Center in Madison. In addition to the *Links* participants, these meetings were also attended by station managers involved in the *Internet-2 Project* and the Higher Education Telecommunication Consortium. The combined sessions focused on the following four areas:

- The future of public television – in terms of audience expectations, the impacts of interactive technology, and new “eLearning” business opportunities;
- Demonstrations of Internet-protocol video applications made possible by university PTV partnerships with the campus Internet-2 organizations;
- Summarizing the “lessons learned” by the project participants; and
- Recommending action steps after the project's completion.

David Liroff of WGBH responded to the *Links* “asset mapping” and “future essential model-building” with the observation that “technology was freeing audiences to choose their own media experiences based on their needs, not the best laid plans of public broadcasters or universities.” He suggested that stations focus on customer interests, not just leveraging their self-defined “assets.”

Drs. Judith and David Leroy, suggested that public television was still a powerful community resource, and a potential focus for community identity. The continued sharing of PTV and local university extension outreach – both respected “community brands” – was encouraged.

Doug Weiss described how CPB was directly responding to the initial *Links* business partnership challenge on a national level. He summarized the efforts of CPB to research the economics of a university-PTV-business partnership in the production and distribution of distance learning programs.

The afternoon of July 12th was set aside for “hands-on” demonstrations of Internet-2 based video applications. Server-based “video-on-demand,” remote searching and preview of indexed video assets, and locally-created interactive television examples (using WebTV) were presented both as a preview of internet technologies, and as actual implementation examples of university-PTV partnership strategies.

Beyond these “future-technology” presentations, group discussions over the two meeting days were focused on “what was learned” and “what should be the next steps.” The Core station managers and distance education leaders described their expectations and their surprises over the course of the *Links* effort.

- While Learning Innovations did not receive a *business plan* from WHA, Mike Offerman reported, his organization learned a number of *business practices* that had made his media production operation more efficient. Production process convergence has revealed the harder issues of “culture” that separates television and instructional producers.
- Byron Knight and Cooperative Extension Dean Carl O’Conner shared the process of “rethinking the old silos” that kept university media production, distribution and marketing organizations apart in the past. They described how the *Links* project had spurred the “evaluation of assets” within Extension, and led to the process of creating a “more integrated” new media telecommunications organization within UW Extension. They pointed to a number of interactive television pilots that linked PTV’s ability to attract audiences to Extension’s ability to provide these audiences with the information and skills needed for personal, business or community betterment.
- Ted Krichels of WPSX described how his station and PSU were discovering that they both needed to change. That it was not a question of the television station becoming a distance education outlet for university courses, but how to be a resource for the university’s public service mission while serving the needs and interests of its viewing audience.
- Dennis Haarsager agreed that even at stations with strong distance education missions, “the relationship must be reinvented regularly.”
- Gary Miller also confirmed that the *Links* discussions and presentations had helped Penn State World Campus “think beyond the silos.” He shared a number of ways that World Campus and PSU Extension hoped to use enhanced PTV as well as webcasting technologies to serve new audiences in the coming years. He also reported that, like Learning Innovations, his organization now too had a new rate card based upon the production models developed by WPSX-TV.
- Muriel Oaks summarized her presentation about Reforging the Links that she gave at the National University Telecommunications Network (NUTN) meeting in Toronto. “*We’ve had a close working relationship between PTV and DE for many years, but it really took this project to move us forward with some specific team activities. We’ve sent several different people to the Reforging meetings over the past 1 1/2 years, and all have returned with new ideas and an enthusiasm for enhanced collaboration,*” she told the *Links* members via a videotape presentation.

Prior to her NUTN presentation, Dr. Oaks had asked the *Links* members to share the ways *Links* had stimulated new projects and/or new cooperation between PTV and distance education on their campuses. Some of the examples she shared with her colleagues in Toronto (and reported back to the *Links* session via videotape) included the following email excerpts:

*Like many university licensees, our station had grown away from the institution and was finding it difficult to re-establish meaningful partnerships. As a result of the Reforging the Links meetings we re-focused our efforts. It took a few lunches and candid discussions, but our persistence was rewarded when the station was invited to be a member of the Virtual Instructional Team for the Advancement of Learning. This led to regular contact with our peers through joint projects including the creation of a CD, web site and an inventory of university resources... Other discussions with Academic Computing and the university Internet-2 representative explored digital video, video streaming and Internet-2. – **William Buxton, WUSF-TV***

*At Penn State, we have a long history of collaboration among Public Broadcasting, Distance Education, and Cooperative Extension. However, the collaboration has not been active for the past decade or so, and the three units have moved apart. Today, we are all part of the same general organization--Outreach and Cooperative Extension--and we are all take initiatives to move to a digital environment. Reforging the Links has given us an opportunity to work together and think creatively together across organizational lines to envision a new, collaborative, multi-audience, multi-level programming approach based on an interest in common content areas or common social problems. We are hoping that one of the legacies of Reforging the Links will be new programs that attract better funding because they attack issues in a multi-dimensional way and make better use of University resources. – **Gary Miller, Penn State University***

*I think the principal benefit to SDSU has been coming together with other institutions and public television stations to discuss distance learning, strategies, practices, etc. This has been something new for us - generally it is difficult just to get different departments, colleges, faculty at the university to come together to discuss important development and collaborate on projects - despite a general desire to do so. Most of the time it seems we each reinvent the wheel -- and suffer from the same mistakes. The Reforging project has enabled us to learn from other universities and to share with others what we have discovered on our own. The thing I anticipate most from the project is the development of best practices - for marketing, development, production, distribution of distance education projects... The Reforging project enabled us to come together (distance ed & PBS sides of each institution) - something I don't think would have happened otherwise. – **Traecy Lau, San Diego State University***

The final portion of the meeting was devoted to “next steps” planning. Three small group discussions took place: one group focused on the *production partnership strategies*, the second on *PTV and university relationships*, while the third looked at *community engagement in the age of media-on-demand*. Each group was provided with the list of top strategies and opportunities. They were asked to suggest short-term steps stations should consider implementing in the next months that would build on the *Links* process.

The **Production Team** recommended the following:

- Develop a database, listserv of what stations are doing in terms of interactive multimedia production
- Develop new job descriptions and skills requirements for new media production sharing between PTV and university distance education/web media centers
- Organize a series of local station Interactive Television “summits” to compliment the PBS enhanced television initiatives
- Use the Internet-2 connections at university PTV stations to experiment with collaborative production and post-production processes.

The **University Relationship Team** stressed the importance of “building on the collaboration to date.” They felt that the *Links* project had already raised the visibility of PTV at a number of university distance education and extension gatherings [the aforementioned NUTN meeting, Byron Knight’s presentation at the National Association of State and Land Grant Universities and Colleges (NASALGUC), Steven Vedro’s talk at the National University Continuing Education Association (NUCEA)], and that it was critical to “keep up the visibility.” They agreed with the David and Judith Leroy that the area of “civic engagement” was a natural partnership opportunity for local public television stations and their “engaged university” neighbors. They also recommended that public television be included in national standards-setting forums working on media-based “learning objects.”

The **Community Relationship Team** endorsed the development of PTV-based “information portals.” They suggested that university PTV stations take the lead in creating new links to faculty-developed multimedia, community and continuing education and extension division resources via interactive television links, station websites, and new outreach partnerships. “Just do it,” was their recommendation!

The meeting concluded with a recommendation that the assets of the Project be made available to other PTV licensees who may discover themselves being asked to engage in an asset-mapping and links-defining process with their community partners a year or two down the line.

Final Overview

From April of 1998 through July of this year, the University of Wisconsin's WHA-TV, with the support of the CPB Future Fund for Television, hosted a series of conferences, online discussions, and a structured case study looking at strengthening the relationship between university-based PTV stations and their host institutions.

With the participation of station managers, distance education professionals, and television and web-based producers from 10 campuses, the *Reforging the Links* project tackled the challenge of identifying the core "digital assets" that would insure that PTV had a "seat at the table" when the university was allocating "new media" resources. In the midst of increased fascination – and financial support – for *e-Learning* ventures and the development of web-based interactive media production and delivery, how could public television's one-way, broadcast-based, linear storytellers make themselves not only relevant, but also necessary?

The initial partners for *Links* were WHA-TV's Digital Innovations Unit (DIU) and the University of Wisconsin System's Learning Innovations Center (LI). The former was created by WHA to aggregate its digital production resources under a single executive producer, and provide that producer with permission to experiment with new technology. The DIU was provided additional training and equipment resources for multimedia production. UW Learning Innovations was created by the Board of Regents to market the university's multiple campus courses to an international audience for online learning and corporate training. It was the University's plan to help pay for the online course development with revenues from providing services to corporations.

Byron Knight, General Manager of WHA, and Michael Offerman, Executive Director of LI, agreed to spend a year investigating how each unit could benefit from the other's expertise – in production, financial and operational management, marketing, and development. Key staff agreed to meet regularly, and some individuals "interned" across units. As this relationship developed it became clear that other university PTV stations could benefit from the results of the WHA-TV Learning Innovations collaboration – and the Wisconsin project could also learn from the experiences of other station managers who were also trying to "reforge" their university links.

With the encouragement of CPB Future Fund, WHA-TV enlisted the station managers and distance education directors of Penn State University (WPSX-TV) and Washington State University (KWSU-TV) to form the core partners of the *Reforging the Links* effort. Distance education and public television managers from seven other stations joined these six representatives. Over a two year period, this group met six times at the UW-Extension's Pyle Center to share experiences and strategies, hear from guest experts, critique the DIU-LI strategic business planning process, and identify PTV's core assets and future strategies

as higher education business partners. The *Links* partners agreed on these five areas of research and development: Capitalization, Funding and Underwriting, Content Development, Talent Rights and Rewards, University Connections and Disconnects, Production and Operations, Technology, and Marketing and Distribution. Meeting discussions, experts' white papers, presentations, and the "asset mapping" process were documented using Questmap™ software, and all materials have been posted to the project website reference library (www.reforginglinks.uwex.edu).

Lessons from Reforging the Links

Public television stations and campus distance education units found common reasons to "reforge" at least some links. At first, meetings focused on the status of relationships between PTV partners and their campus distance education (DE) "new media" organizations.

Through a guided process of homework assignments, station managers and staff met with their distance education media production partners, continuing education, and extension administrators to develop an initial set of "partnering benefits."

The resulting "top reasons for reforging the links" included the following:

At the operational level:

- PTV gets new university-based content for its DTV channels
- PTV/DE partnership will help increase staff expertise within both organizations; e.g., PTV learns "new media" production methods from D/E web/multimedia production staff, DE learns video narrative process

At the organizational level:

- PTV strengthens its historic relationship with the university; strengthens case for DTV funding.
- The PTV/DE partnership will maximize access to a technology base of common systems, resources, and knowledge, at both organizations.
- New technology will itself act as an organizational "change agent" for both partners.

At the institutional level:

- The PTV/DE partnership will help the university generate new revenues; position the both university partners as national "players."
- The PTV/DE partnership will help define University Outreach and Extension in 21st century.

This last bullet point proved very important because eventually, some of the public television participants expanded their relevance to include the “Outreach” and “Extension” initiatives of their campuses. Over the past two years the Kellogg Commission has issued a series of reports on the future of land-grant Universities. These reports entitled, *Returning to Our Roots: The Engaged University*, have stimulated thought and discussion about how “new media” can be utilized to engage the university in its community. This idea was stimulated in November of 1999 when representatives of the University of Wisconsin Extension demonstrated how interactive television was being used to interactively link public television programs to the content of UW Cooperative Extension.

With these group goals in mind, *Links* meetings became a venue for sharing best practices, strengths and weaknesses, as well as a forum to discuss how best to “leverage” PTV’s physical, intellectual and information “assets” to support these shared objectives.

Project Conclusions

1. Public television stations and campus distance education units found common reasons to “reforge” at least some of their links.

At first, meetings focused on status of relationships between PTV partners and their campus distance education (DE) “new media” organizations. Through a guided process of home work assignments, station managers and staff met with their distance education media production partners, continuing education and extension administrators, to develop an initial set of “partnering benefits.”

Many of the reasons for developing stronger partnerships focused on new technology challenges – how to effectively produce new multimedia content, how to distribute digital content, and how to retrain staff to operate in this new environment. Other reasons were driven by the impact of competition and the new marketplace for *e-learning*, and the need for PTV and distance education to act more “entrepreneurial.” The opportunity to develop new models for extending the university extension and public service mission into the digital age, was also a frequent suggestion as a “top reason.”

This last reason proved very important. Over the course of the project, many of the participating public television participants used information gathered and strategies developed at *Links* sessions to demonstrate their continued relevance to their campus “outreach” and “Extension” initiatives in light of the Kellogg Commission reports on the future of the land-grant Universities.¹

With these group goals in mind, *Links* meetings became a venue for sharing best practices and strengths and weaknesses, and discussing how best to “leverage” PTV’s physical, intellectual and information “assets” to support these shared objectives.

2. Reestablishing the PTV-University relationships overshadowed the initial focus on finding entrepreneurial investments

Ironically, the *Links* project probably exceeded expectations for all the participants except one – the primary DE partner, UW Learning Innovations! In the words of Michael Offerman, Director of LI, “having been in on the conceptualization, I had hopes that were probably unrealistic, and were not fully realized.”

¹ “Returning to Our Roots: The Engaged University, has stimulated thought and discussion about how “new media” can be utilized to engage the university in its community. In November of 1999 representatives of the University of Wisconsin Extension demonstrated how interactive television was being used in Wisconsin to connect public television programs to the content of UW Cooperative Extension. This demonstration was repeated by invitation at the National Association of State Universities and Land Grant Colleges annual meeting in November 1999.

Dr. Offerman is correct that the WHA/LI *Links* partnership did not result in Wisconsin Public Television building “a new business partnership with its campus entrepreneurial content marketing organization.” The emphasis here is on “entrepreneurial”. The ability of publicly supported institutions to compete in attracting venture capital and corporate clients was a major topic of the *Links* meetings. This goal, while still being explored by WHA and LI locally, and the Corporation for Public Broadcasting nationally, was the lowest-ranked final strategy of the *Links* participants.²

From about the end of 1999, it was clear that the majority of station and university participants were less interested in entrepreneurial ventures than they were in redefining their “public service media” roles in light of new technologies and the reevaluation of the university extension and outreach mission. This redefinition became an important outcome of the *Links* experience.

For Wisconsin and Penn State the renewed focus on the “extension mission” became very significant as distance education, cooperative extension, and public broadcasting all report to the same Chancellor. In these two large land-grant universities the mission of extending the university through digital technologies became as important as seeking online entrepreneurial ventures.

Links meetings provided a venue for sharing best practices, reviewing station strengths and weaknesses, and exploring new production and distribution opportunities. They provided access to nationally recognized experts, a place for station “new media” producers to develop cooperative production projects³, and an opportunity for station managers to have focused discussions on how best to “leverage” the assets of PTV in a university setting.

3. The “World Modeling” process succeeded in stimulating change

The structured use of “World Modeling” techniques to map both the business processes and the “assets” of PTV stations generated a series of discussions about a “future essential model” for university-PTV cooperation. These discussions focused on such things as:

- How to better align current assets (knowledge, facilities, processes) with the new business model strategies

² It is however one of the primary areas of research for Doug Weiss, CPB’s Vice President for Television Operations. A number of *Links* participants are working with Mr. Weiss as potential contributors and distribution channels for this entrepreneurial distance education initiative

³ WPSX used its *Links* contacts to develop new projects with WHA (women’s health) and with KPBS (comedy writing); KAMU and WKAR are discussing interactive teleconferences; WHA is exploring “local/national interactive production models” with both WGBH and The News Hour.

- How to better leverage and promote current assets to strengthen the perceived value of PTV to the university's (distance education and extension) business strategies
- How best to retrain (or retire) underutilized staff skills and/or replace or redesign obsolete facilities and/or production or distribution processes
- How best to recruit, share or contract for, identified "missing assets."

From these discussions, many stations created (and shared with each other) new job descriptions and joint appointment position descriptions. Identifying the many unique assets within PTV also helped station managers present themselves as still "relevant" to their campus's interactive media plans. Digital and enhanced television technologies, video server resources, multimedia production skills, audience knowledge, storytelling ability, and rate-based production processes were all identified as unique valuable assets of PTV organizations.

Ongoing discussions of strengths and weaknesses revealed areas where stations could contribute to their distance education units in terms of project development, production, marketing, and talent relationships. They also highlighted areas of conflict – sometimes in mission, sometimes in the "culture" of the business. In some areas it was discovered that cultural differences among the staff needed to be addressed; in others it was recognized that PTV and distance education audiences were different, and that serving these needs required different approaches to the business.

Finally, the process helped each partner identify strategies that allowed their unique assets to support the other's core mission. Creating "enhanced television" programs that use PTV's assets in storytelling and interactive technology to "portal" viewers to distance and continuing education programs and Extension-developed information resources was one such "future essential" business model.

4. Links was a catalyst for changes in the relationship between Wisconsin PTV and other University technology organizations

Despite the failure to produce massive amounts of new private sector investment in Learning Innovation's multimedia distance learning production, the World Modeling Case Study had a significant impact on both LI and DIU. By making the case that public television -- and especially digital public television -- was essential to the delivery of enhanced online courses developed by LI, attention was drawn to the importance of state investment in digital broadcasting datacast production and delivery technologies.

The creation of the Digital innovation unit within Wisconsin Public Television and the staff relationship with UW Learning Innovations gave each staff a new perspective regarding their products. For the TV staff, it drew attention to that fact that there will be more to their jobs than producing linear television programs.

They will be called on to put their storytelling and video/audio production skills to work in creating new forms of visual media. Some will reside on the internet, some will be broadcast, and some will serve as the basis of interactive instructional programming. The designers and developers of online courseware learned of the rich production value of utilizing streaming audio and video within their courses.

More importantly, the process of identifying new media assets within WHA-TV stimulated high level discussions on the organization of telecommunications activities within UW-Extension and the UW System. *Links* has resulted in WHA-TV becoming a core partner in Extension's media assets reorganization and an important player in the mission of outreach within the University System.⁴ WHA's relationship with the other *Links* stations was a significant factor in it becoming one of three national training sites for Microsoft's WebTV interactive technology.⁵ Finally, UW System recognized the station as a partner with Extension in supporting the work of the Department of Defense-funded Academic Advanced Distributed Learning Co-Lab for distance education innovation.

5. *Links* succeeded in establishing University PTV's "new tech credibility" – on campus, within higher education, within the PTV community

Links sessions became more than a place for distance education and PTV administrators to meet and compare notes. *Participation in the Links process became a mark of credibility.* For Wisconsin it meant national visibility for WHA-TV, Learning Innovations, and the Pyle Center; for many of the participating stations, their involvement with *Links* provided an entry key into the "new media" plans of their university administration. *Links* stations were "invited to the table" along with campus internet web site managers and CD-ROM producers. Interactive and digital video production and "wireless digital distribution" were recognized as PTV assets that were still relevant in the internet age.

Just as *Links* raised the visibility of the participating stations on their individual campuses, it also raised the visibility of public television within the higher education community. Because of *Links*, Byron Knight, Muriel Oaks, Michael Offerman, and Steven Vedro each had the opportunity to address a number of professional gatherings of university extension, distance and/or continuing education, and campus Internet-2 managers.

⁴ As the host site for *Links*, WHA-TV was utilized the Pyle Center, worked with Extension Instructional Communications Services (ICS) to support project-related video teleconferences and web-based streaming video presentations, and with UW-Madison's Division of Information Technology (DoIT) to support Internet-2 experiments and presentations. These relationships spurred the decision to create a new "Center for Broadcasting and Media Innovations" within Extension, and to ask Byron Knight to be its Director.

⁵ See <http://itv.wpt.org/training/>

The participating university-based stations also gained increased visibility and credibility within public broadcasting. Byron Knight, Dennis Haarsager and Steven Vedro spoke at national PTV meetings. The *PBS Interactive* and *WGBH Interactive* development teams, representatives from *The News Hour*, speakers from WGBH and from CPB, all met with *Links* participants in Madison. *Links* stations' connections to Internet-2 and their interest in developing enhanced local television prototypes, has attracted national partners from WGBH and The News Hour, and support from CPB for an *Internet-2 Interconnection Pilot*.⁶

Other stations -- university (WOSU), technical college (WMVS) and community-based (KTCA) – sent representatives to *Links* meetings, and at least one station representative (from UNC-TV) found his job duties expanded because of his *Links* involvement.

6. Many of the *Links* participants will continue to "evolve the *Links*"

A number of continuing relationships grew out of the *Links* project. Many of the stations are continuing to encourage their producers to meet together with their campus peers, and with partners from the other participating stations. Calls for a "multimedia production summit" and for a pilot project on "local/national enhanced media collaboration" came from the *Links* producer participants. These initiatives are being followed up by WHA-TV in its proposed transition of "Reforging the Links" to an "Evolving the Links" project.

The *Links* effort made it possible for WHA-TV to recognize its "core assets" in (a) video production and project management, in (b) knowing how to recognize and respond to changing audience needs and interests, and in (c) its unique relationship to university-based content knowledge and digital media facilities resources. Based upon these assets, it has identified the following three technology areas as critical future essential business activities:

- Interactive television – the ability to create interactive opportunities within broadcast video programs. These interactive links can be designed to add information to linear narrative. They can also be designed as "portals" to educational resources and to partnering community organizations.
- Broadband delivery – the ability to move "broadcast quality" video between production centers, broadcast stations, university classrooms, workplaces and homes via peer-to-peer interactive networks. As new forms of wireless and wired internet-protocol (IP) delivery come into the marketplace, university stations can become test sites for new delivery modalities. Internet-2 offers an immediate test-bed for new ways to schedule and program broadcast channels, to engage in new forms of collaborative production and post-production, and to create a model for the next generation "PTV intranet."

⁶ Byron Knight and Dennis Haarsager presented "Public Television Next Generation Broadband Intranet" at the PBS Fall Planning Meeting October 23, 2000. A CD-ROM of the presentation is available.

- Media asset management systems – as more video programs (and production segments) are digitally-encoded and made available to audiences (and other program producers, teachers, students and researchers) on an “on-demand” basis, PTV stations will need expertise in indexing, organizing and sharing these resources.

A follow-up proposal to the Future Fund will suggest a coherent plan for incorporating the above strategies into PTV business practices. Partners within the University of Wisconsin Extension, UW System, other *Links* and Internet-2 project participants, and from community-licensed PTV organizations, will be identified and recruited to carry on these Links-inspired activities.

Steps Towards Completion

In order to share the benefits of the *Links* process with as many stations as possible, the Project staff will convert the *Reforging the Links* web site from a “current status” resource for members to an interactive project archive. Project meeting minutes and selected Questmap™ representations, white papers and Powerpoints™, and audio and video clips from major presentations will be made available to all PTV stations through June 30, 2001.

The Project will also research the cost of (a) copying the entire web site to CD-ROM. This format will allow for wider distribution, a longer “shelf life,” and faster access to project content. The costs to add a “runtime” license for Questmap™ to this CD will also be explored. This addition would allow users to display *all* the project maps, to use the Questmap™ “search” function, and to open the “notes” fields associated with each Questmap™ icon. Finally, the costs and a sample syllabus for a seminar on the use of the project database tool and the World Modeling Asset Mapping Process, will be developed by the Project Consultant and submitted to CPB along with the CD-ROM production cost estimates.