



**THE CHALLENGES
OF
INNOVATION
AND CHANGE**

**AGAINST ALL ODDS –
THE VISION ATHENA PROGRAM:
AMERITECH INDIANA'S
MERGER WITH EDUCATION**

by Ruth E. Blankenbaker

It is not an easy task for the education culture to accept or even welcome change. The same is true for other cultures. Ask Ameritech Indiana.

When Ameritech, an Indiana telecommunications provider, needed to change its way of doing business to remain competitive in a rapidly changing world, it introduced its Opportunity Indiana plan to the public utility commission that regulates its telephone operations. This plan, a request for alternative regulations for certain aspects of Ameritech Indiana's telephone business, drew the attention of groups representing various sectors of the state's public. The push and pull of competing interests ensued.

Pushing and pulling is a scientific phenomenon that frequently creates tension and friction. It does in humans, too. In the culture of utility regulations, Ameritech's request to change seemed to create an overabundance of confusion, misinformation, misunderstanding, and a colorful spectrum of other emotions—in the general citizenry, certainly, but especially so within education, a group that frequently does not concern itself with matters of telephone company regulations.

In a concluding agreement between Ameritech Indiana and the interested parties, Ameritech committed to funding a non-profit organization with \$5M dollars per year for each year 1994 through 1999 so that schools in its service area could take advantage of broadband and digital technology. Ameritech also agreed to deploy fiber-based connections to schools, government centers, and hospitals within its service territory that wished to take advantage of broadband technologies. A telecommunications application requiring this type of technology is full motion, two-way interactive video. In business this service is called video conferencing; in education we call it distance learning.

Ameritech's commitment clearly targeted the education culture as its partner, for which it planned the provision of a telecommunications service that could change the way Indiana's classrooms benefited

students. However, there's a high probability that Ameritech's corporate hand-

book did not have written in it: "Educators tend to seek stability and resist change, especially change as dramatic and pervasive as a new direction."

A partnership with education often renders other unique challenges—especially so for the business world. For example, in my experience, many educators assume the business has ulterior motives in that the partnership will bring greater benefit to the business bottom line than it will to the minds of students in their classrooms.

What made Ameritech Indiana's partnership an even greater challenge is that educators were being asked to make financial commitments to the partnership, as the school needed to sign a contract for distance learning service prior to being able to use it. Financial commitment to a partnership is not a frequent occurrence in a culture that is more conditioned to receiving handouts than it is to providing handshakes. Ameritech's out-of-culture expectation made educators' early assumptions about a potential "hidden agenda" all the more rampant.

Ameritech's initiative revealed other discoveries in the education culture as well.

If you were to scatter throughout the landscape of the education community a vast amount of confusion, a high degree of suspicion, skepticism and mistrust of motive in Ameritech's Opportunity Indiana plan; and then if you were to intersperse these emotions with an absence of vision for the use of distance learning technology—then you would have adequately captured the scenery Ameritech faced when the Corporation for Educational Communications (CEC) was formed in July of 1994 as a part of its agreement for receiving certain alternative regulatory freedoms.

As though these adverse conditions weren't enough, Ameritech Indiana had to address other cultural realities as well. Business, political, social and quasi-legal pressures from worlds outside education surrounded Ameritech to create a potentially explosive mix that—with the slightest imbalance—could abort a newly emerging paradigm in education.

Given the turbulence created by Ameritech's request to change aspects of its business and its vision to change education, one might question the odds of its partnership with education ever surviving the tumultuous, early years.

However, through the artistry of corporate leadership, Ameritech engineered an effective bridge to span the private and public cultures. And, against all odds, five years following its launch, Ameritech Indiana's vision of providing a telecommunications service to benefit education survives.

In fact, many say Ameritech's vision thrives to the extent that CEC's Vision Athena distance learning program, in many ways, is taking on a life of its own—sustained by the vision of paradigm pioneers and valued by the many teachers, students, and administrators who experience the marvels of bringing the world into their classrooms through interactive video.

Unlike the goddess for which it is named, the Vision Athena program did not emerge fully formed. Development of the project has taken time. Even after five years of rapid growth it is still a young project advancing an ever-evolving technology. From its start, Vision Athena has eluded simple definitions. It began, in 1994, as an effort to help schools and community, cultural, higher education, and government organizations take advantage of the state's emerging telecommunications network. It quickly became an effort not just to pull fiber and flip switches but to create an affordable, equitable delivery system with content well-suited to the technology and to the teachers and students using it.

Depending on the perspective, Vision Athena has now, in its fifth year, come to look like several very complex projects in one. From one vantage, Vision Athena is about combining public and private resources to build a telecommunications infrastructure; from another, it is about building the support system—the human infrastructure critical to the successful integration of this technology into schools. Looked at yet another way, it is a project about creating learning communities that extend schools beyond their walls to community and cultural institutions, wherever they might be. Ultimately, Vision Athena is a project about innovation and change.

Over the past five years Vision Athena has made significant strides on all fronts, and somewhat truer to Athena herself, the patron not only of the arts and wisdom but also of war, the project has also taken on formidable challenges along the way.

BUILDING THE PROGRAM

If Ameritech Indiana's partnership with education is a successful merger, then how did this business achieve

such an uncommon accomplishment within the culture of education?

It is a mercurial task to define the organic growth and development of new systems, new worlds, or different paradigms. These phenomena rarely occur without a complex, intricate interplay of strategic designs—and paradigm pioneers, social entrepreneurs and change agents to implement them. The implementation of Ameritech's vision for bringing distance learning to schools within its service territory is no less multi-faceted.

By strategic design, the blueprint of Ameritech's architectural plan for building its bridge to education included the creation of a non-profit corporation. This non-profit, CEC, became the clear-span bridge that joined the public-private sector worlds. In effect, it was CEC's task to devise a mechanism by which a potentially large and unwieldy program could be organized and broken down into manageable parts.

STAKEHOLDERS AND STRATEGIC ALLIANCES

In the creation of CEC, the importance of stakeholders was not overlooked. CEC's board of directors is comprised of legislators, school administrators, educators, and constituents from the business world—a bedrock of stakeholders who could shield the organization from the tumultuous winds of change.

Strategic alliances were important, too. Once the board of directors was formed, CEC turned its attention to finding people willing to take the risks involved in bringing new ideas to individuals, groups, and institutions. And, if new approaches to teaching and learning were to mesh effectively with current understandings, then alliances had to be made with those who could work within the current thinking of the education culture.

STRATEGIC PLANNING

In the earliest stages of the Vision Athena Project, no one really knew just how big it might be, whether it might interest 60 schools or 600 schools. What the CEC staff and Ameritech did know was that there had to be some mechanism to organize the efforts, some way to take this potentially large project and break it down into manageable parts. Initially, there were essentially three sets of issues:

First were the technical issues and the consideration of network architecture. Ameritech was forbidden by regulations to have one switching center for the state, so the CEC staff, working with Ameritech, had to establish some hierarchy in the switching system and geographically tandem locations for switching within the LATAs (Local Access and Transport Areas). Besides not knowing how many schools might eventually be

online, Ameritech did not really know how to price the system; what all those involved in the early discussions did know was that there had to be free calling areas, so that the schools could communicate without incurring toll charges.

Second, and related to this, were the challenges created by the different time zones in the northwestern and southeastern areas of the state, time zones which themselves changed with the presence or absence of daylight savings time.

The third set of issues, and in many ways the most complex, involved getting school corporations to work cooperatively. Even with advanced communications technologies, superintendents, service centers directors, technology coordinators, and teachers had to sit down at the table before they could put their students in touch with one another. This is not necessarily something school corporations have historically, or cheerfully, done. They may have met on the football field, but as rivals; they may have vied for the same funds, but as competitors. School systems are often microcosms of local politics. Needs vary, resources vary. CEC felt, however, that new partnerships had to be forged in order to create manageable units and, eventually, achieve Vision Athena's goal of breaking down the walls that isolate schools and students and perpetuate inequities.

CEC leaders looked to other states like Iowa and Wisconsin, but existing models did not fit Indiana's goal of a statewide network, one that was community-driven, eventually self-sustaining, and, to the degree that it was possible, free from enervating bureaucracies.

REGIONAL SUPPORT

Moving the organization toward a statewide vision of using distance learning technologies also required the development of roadways that connected CEC to hubs throughout the state. CEC therefore established clusters of school corporations based on the administrative boundaries of Indiana's regional Educational Service Centers and the Ameritech service areas. Clusters made sense administratively; schools could collaborate to provide the benefits of resource- and cost-sharing, coordinate planning of curriculum and services, and schedule courses and events.

As with any technology-based change—especially one launched in a tumultuous milieu, and complicated by the traditional conservatism of school systems, and the involvement of institutions traditionally not involved in secondary education—new relationships needed to be established and given time to coalesce. The “cluster” concept was one way of addressing the social and educational change issues in an emerging collaborative, which relied on building communities of interest.

THE HUMAN INFRASTRUCTURE

With funding from CEC, distance learning coordinators (DLCs) were hired for each of the twelve clusters eventually developed throughout the state. It is they who are, in essence, the change agents.

In the course of their day-to-day work, coordinators wear a number of different hats. In those areas where the school corporations are still considering participation, coordinators explain the network's costs and benefits, and the types of grants available to them through CEC. For those schools that are a part of the Vision Athena program, they seek out content providers and help schools adapt the distance learning opportunities to their needs.

In addition to their development work, coordinators also handle the daily planning and scheduling of network activities—a full-time job in itself—and one that grows more demanding as network participants and events increase. Supporting a new technology is time consuming for DLCs. And, the challenges of providing support make it abundantly clear that technical reliability, having a primary contact person in each school, and training—on the equipment itself as well as on the best practices in interactive classrooms—are essential to the project's success.

Vision Athena DLCs also work to make distance learning an institutionalized part of schooling in the face of other daunting challenges: school budgets, many of which are shrinking; class bells, few of which are in sync; local policies and politics, all different and all complex; the culture of schools, universes unto themselves; the governance of a technology innovation for which there is little research on record; and the use of a video-based learning environment for which there is even less legal precedent concerning issues of rights and responsibilities of teachers and students.

Rather than seeing such challenges as roadblocks, however, the coordinators recognize them as hurdles to maneuver around as they move schools toward the use of a powerful, transforming technology. Daily, and in myriad ways, coordinators help schools articulate their visions for implementing distance learning, help educators define the details of distance learning plans, and organize their individual cluster to accept ownership of the project.

Regional coordinators also meet regularly to share information and activities among clusters in order to achieve an integrated approach of common methods and procedures. In addition to reassuring coordinators themselves they are part of an overall system, these meetings also serve to help in the development and refinement of operational methods to help schools from repeatedly reinventing the wheel. And, the meetings provide CEC the opportunity to give leader-

ship and management oversight to the Vision Athena program.

Collectively, these coordinators engender the development of content, define the project locally and regionally, and build, piece by piece, the support system needed to make this project a routine part of schooling and not just another add-on technology.

ADDRESSING TECHNOLOGY CHALLENGES

CEC was not created with the express purpose of being in an intermediary role to resolve technical and service problem issues; however, by necessity it took on this responsibility. Because of the organization's educational goals, it found itself with a unique leverage in negotiations with the private sector to solve nagging technical challenges that accompany the growth of any new technology.

Early on, CEC established a technology coordination panel with representatives from Ameritech, CEC's vendor for hardware packages, and distance learning coordinators to ensure a quality, smooth, end-to-end technology implementation program as well as to establish a means to assess maintenance quality issues. The creation of this panel initiated a communications flow between CEC management, vendor representatives, and distance learning coordinators—a strategically important process for integrated planning in the resolution of distance learning service issues. These types of quality control are crucial to all customers of telecommunications services, but especially so to an education customer base that depends on immediate and reliable service for programming.

It is not enough, though, to simply surface quality issues. Ameritech Indiana knew technical and network issues must be resolved—professionally and with speed—if educators who encountered the challenges were not to lose their vision. Month by month, the distance learning coordinators surfaced and presented challenges for Ameritech's resolution. Day-by-day, Ameritech addressed the problems until they were resolved. For example, when it was determined that audio problems were caused by Ameritech's installed network bricks, Ameritech solved the problems by placing filters on the bricks. When educators expressed dissatisfaction with the poor quality of the quad split feature of the video service, Ameritech upgraded its network to resolve the problem.

Throughout the years of the development of the Vision Athena program, CEC staff worked aggressively to meet perhaps even greater challenges. Building equity into the network architecture, improving interLATA connections, and reaching those in the less populous parts of the state and those outside of Ameritech service areas were critical issues CEC brought to Ameritech's attention. Some of these issues

Ameritech *could* address; others required CEC to bring other educators and other telephone companies into the dialogue to explore opening the state's telecommunications industry to competition, growth, and cooperation in distance learning efforts. Equity of access to distance learning technologies among all schools within the state is a looming challenge that has yet to be resolved.

DEVELOPING CONTENT

Embodied in the strategic plan of the Vision Athena program was the recognition that schools could have fiber to their door, distance learning equipment in their rooms, and coordinators to guide and train teachers in effective use of the technology. However, without the addition of content to access, there was little incentive to draw educators to distance learning rooms.

Certainly one thing that sells the potential of Vision Athena to school administrators and corporation boards is the promise of instructional content that goes beyond courses currently available. More important to some schools than courses are the rich array of cultural and community resources they have access to and the intellectual opportunities afforded them through interaction with Vision Athena content providers.

CEC staff members coordinate activities between providers and schools, help match content offerings to school needs, develop uniform procedures, and work to assure alignment of content with Indiana's state proficiencies.

Through an investment of nearly three million dollars from CEC, these institutions offer students and teachers access to museum collections; behind-the-scenes looks at sharks, industries, and Broadway shows; and conversations with writers, scientists, health professionals, and storytellers. The Chicago Field Museum, the Smithsonian, and many other distant resources now regularly add their vast array of resources to the project's offerings, which now appear in CEC's Distance Learning Content Catalog and on its website, www.cec.state.in.us under the link, "Vision Athena Events."

TEACHER AS LEADER

As inviting as access to community, health, university, and cultural institutions has been for teachers who are eager to enrich their classrooms by giving students "access to the world," the opportunity to develop content themselves has been an even more powerful agent of classroom change. Grants specifically targeted to teachers tap a valuable resource and give educators a chance to be in on content decisions. Most important, the granting of these awards acknowledges the importance of the educator in CEC's vision.

The grants also give teachers a chance to explore and employ the use of two-way, interactive video as a tool for other instructional ends. Increasing numbers of educators use the video network for discussions about timely issues like school violence, block scheduling and multicultural education. These kinds of dialogues are slowly changing the way schools and teachers view themselves, the process of education, and the range of resources available to students.

MARKS OF A MATURING PROGRAM

The unprecedented growth, development and penetration of the Vision Athena program within the short span of five years seems nearly incomprehensible.

- From the connection of four Indianapolis schools in the winter of '94 using 48 network hours—to the interaction of over 300 schools, content providers, and community-based organizations utilizing nearly 40,000 network hours in '98;
- From a single class of children learning about animals at the Indianapolis Zoo—to hundreds of Indiana students statewide experiencing an integrated curriculum provided through the collaboration of many content providers around the common theme of *The Padshahnama*, the 17th century art masterpieces featured in *King of the World*, *A Mughal Manuscript from the Royal Library*, *Windsor Castle*;
- From teachers of neighboring schools connecting their students for classroom projects—to a teacher teaching her class from the Alaskan wilderness;
- From students reading about Holocaust survivors in their history books—to classes of students from urban, suburban and rural schools collaborating in their discussions with a Holocaust survivor communicating with them from hundreds of miles away;
- From students shyly waving to each other on the television screen—to students in thoughtful dialog with others in schools from Ireland, England, Japan, Africa and many other cultures much different from their own;
- From students learning in isolation from textbooks in their classrooms—to students from ten collaborating schools connecting through distance learning technologies to a city's Metropolitan Planning Organization to solve dynamic, real world issues upon which they can have an impact;
- From a simple vision in 1994, which imagined the potential of distance learning technology, the Vision Athena program has organically grown to such complexity and impact that it nearly defies an ability to define.

AT THE CLOSE OF YEAR FIVE

It has not been an easy task for education to accept or even welcome distance learning technologies into their culture. It has not been an easy challenge for Ameritech Indiana to roll out a new and untried technology for the education market. But through it all, and against so many odds, those involved with the Vision Athena distance learning program have learned at least one thing: they have the ability to change and the courage to alter their future.

Educators have experienced the frustration yet the empowerment that comes from taking risks, trying new technologies, and bringing new ideas in new ways to students within their classrooms through two-way, interactive video distance learning.

The two worlds—one public, the other private—have learned so much about and so much from each other. Ameritech Indiana has modeled for educators its belief that conflict should be seen as a challenge for creative thinking—for it is through the chaos of conflict and change that new worlds are born, new cultures are created, and new technologies are deployed and refined. Educators have proven to Ameritech that they are up to the challenges inherent to innovation and change—and that they *can* disprove so many common assumptions about education.

Together, those involved in this public-private partnership have learned that failures are the stepping stones to success. And, they have come to a common understanding: the Vision Athena program is, ultimately, a public-private initiative forever changing the future of education in Indiana's classrooms.

ABOUT THE AUTHOR:

Ruth E. Blankenbaker was the director of technology at Park Tudor School, a private K-12 school in Indianapolis, for eleven years prior to assuming the executive directorship of CEC. She has served in various capacities on the boards of the International Society for Technology Educators and the Indiana Computer Educators. She was hired by CEC two weeks after it was incorporated and has been with the Vision Athena project since that time.