

# THE COMPUTERWORLD HONORS PROGRAM

## CASE STUDY



**LOCATION:**  
*Cass Lake, Minnesota,  
United States*

**YEAR:**  
*2006*

**STATUS:**  
*Laureate*

**CATEGORY:**  
*Education and Academia*

**NOMINATING COMPANY:**  
*IBM Corporation*

### **ORGANIZATION:**

**Leech Lake Tribal College**

### **PROJECT NAME:**

**Tribal College Leads in On Demand Services**

### **Summary**

Leech Lake Tribal College is strategically utilizing technology in order to facilitate and provide greater educational opportunities for our tribal communities. Our community members face many challenges in seeking accessible educational opportunities, primarily due to geographically remote villages, poverty, and lack of transportation. As one solution to those educational obstacles, Leech Lake Tribal College, in partnership with IBM, has developed a wireless canopy project and implemented an e-commerce curriculum. Leech Lake Tribal College and IBM are also collaboratively planning an expansion of the wireless technology, in order to further develop the college's Community Learning Centers, strategically located within the Leech Lake Reservation. The Tribal College provides computer work stations and internet access at the Community Learning Centers, which will ultimately be connected to the LLTC student network via wireless and other broadband connectivity solutions. In addition, Leech Lake Tribal College is exploring other distance education technology solutions, such as ITV and two-way video classrooms, and has implemented its first distance education course this spring.

### **Introductory Overview**

Leech Lake Tribal College is currently offering the "Business Workforce Development Training" pilot course, which was developed in partnership with IBM. The e-curriculum is designed to take students from basic computer classes through advanced computer programming and e-business application development concepts. The educational model utilized for this curriculum is based upon a "blended learning" approach, integrating classroom lectures, hands-on lab exercises, and project teamwork to provide both the theoretical and practical training needed to develop strong e-business application development skills. This program is the first of its kind to be delivered via wireless solution to LLTC students. Students enrolled in the program are equipped with laptops with wireless access, and their course materials are all downloaded to their laptops via the wireless network.

The e-business curriculum uses both open-source and IBM-specific technologies, and the students learn practical e-business technology skills that are in high demand in the workforce. The program gradually introduces students to the basics, such as PCs, internet fundamentals and



# THE COMPUTERWORLD HONORS PROGRAM

## CASE STUDY

**ORGANIZATION:**

*Leech Lake Tribal College*

**PROJECT NAME:**

*Tribal College Leads in On Demand Services*

**LOCATION:**

*Cass Lake, Minnesota,  
United States*

**YEAR:**

*2006*

**STATUS:**

*Laureate*

**CATEGORY:**

*Education and Academia*

**NOMINATING COMPANY:**

*IBM Corporation*

operating system concepts, and moves on to more intermediate subjects, such as programming in C, C++, Java and software engineering. The final and most advanced course modules focus on object-oriented and web applications, in addition to e-business solution development using J2EE and enterprise computer framework.

One major educational obstacle faced by students on the Leech Lake Reservation is transportation. For many, it is a long journey back and forth to the college from their villages, and a large percentage of students do not have access to a reliable vehicle. Adequate public transportation doesn't exist. Transportation issues become even more arduous during the long winter months, when traveling to and from the college over icy back roads in sub-zero weather directly impacts students' ability to attend classes regularly. Leech Lake Tribal College's partnership and planning with IBM to further expand the wireless capacity to our remote villages will address some of those educational obstacles.

### Benefits

The Business Workforce Development Training program provides our students with valuable professional skills that will be marketable on and off the reservation, and prepares them to meet the challenges of e-business environments of the next generation. Leech Lake Tribal College, through the Business Workforce Development Training Program, is offering a premier program that exclusively focuses on the professional development of marketable and practical technological skills for our community.

In addition, the wireless canopy provides student access to the College's distance education course and the Business Workforce Development Training e-curriculum anywhere on campus. The Tribal College plans for expansion of the wireless capabilities to the remote Community Learning Centers will provide wireless connectivity for our students, both on and off campus. The benefits to the greater Leech Lake community are tremendous, as the Tribal College breaks down the educational barriers through the use of technology.

With regards to whether our project has fundamentally changed how tasks are performed, the answer is "not yet". As we are still in the pilot phase of this project, we anticipate those changes in the near future. Please see above regarding benefits.

### The Importance of Technology

Geographically, many communities around the Leech Lake Reservation may be as near as 30 miles to the Tribal College. However, due to its rural nature and the large bodies of water lying within the reservation, traveling to campus may involve a 60-90 minute drive around a lake. The strategy of bringing the Tribal College to the people through technology depends on the ability of broadband technology to deliver data quickly and cheaply to these remote communities located all over the reservation. Currently, we utilize a single wireless access point at four of the Community Learning Centers, which are not connected directly back into the student network on the college. In the future, the Tribal College intends to utilize a wireless backbone to connect the Community Learning Centers with the main campus, once resources are identified to do so. Once in place, the Tribal College can begin testing alternative bandwidth strategies, such as two-way video conferencing, with students in outlying communities.

Distant education itself is not a new concept. However, many of these endeavors have only



# THE COMPUTERWORLD HONORS PROGRAM

## CASE STUDY

**ORGANIZATION:**  
*Leech Lake Tribal College*

**PROJECT NAME:**  
*Tribal College Leads in On Demand Services*

**LOCATION:**  
*Cass Lake, Minnesota,  
United States*

**YEAR:**  
*2006*

**STATUS:**  
*Laureate*

**CATEGORY:**  
*Education and Academia*

**NOMINATING COMPANY:**  
*IBM Corporation*

targeted specific populations that are deemed able to take advantage of these opportunities. Much of the Leech Lake Reservation is poverty-stricken, and many of the people who live here are unable to take advantage of educational opportunities that are provided by regional institutions that provide online or ITV courses. Many families do not own a computer, nor are they sufficiently trained to operate one. With the assistance of broadband and wireless technology, Leech Lake Tribal College is attempting to take the classroom to the student, and to adequately prepare them for success at Leech Lake Tribal College and in their educational and professional endeavors after graduating from our college.

### Originality

The partnership between Leech Lake Tribal College and IBM is the most unique aspect of this project. IBM initiated the partnership in their effort to reach out to a tribal community within the United States. Initially, IBM and Leech Lake Tribal College representatives met together to explore the goals and outcomes of a potential partnership. Leech Lake Tribal College identified its capacity, needs, and resources and IBM listened. IBM, in turn, responded with the Business Workforce Development Training program proposal, which took into consideration Leech Lake's needs and limited resources. Together in partnership, Leech Lake Tribal College and IBM have brought a technological solution and unique educational opportunity to our community. Throughout the process, IBM has been very respectful of the unique needs of our Tribal College and has consistently demonstrated its commitment to ensuring a successful project. The originality of this project is founded upon the private corporation coming together with a tribal educational institution to provide greater access to education through technology.

### Success

Leech Lake Tribal College, through the Business Workforce Development Training program, is currently training a select group of students who are Tribal College employees. The dedication and interest of our students is demonstrated everyday in the classroom. Those "student" employees will then have the capacity to share their knowledge, skills, and abilities with other employees here at the Tribal College. In addition, the pilot course has generated great interest from the community, and many community members are very enthusiastic about the next Business Workforce Development Training cohort, and are excited about the future potential of attending college from within their own communities. A second cohort will be commenced once additional resources are developed in partnership with IBM.

By offering the pilot Business Workforce Development Training this spring, with future plans to implement a low maintenance wireless solution for greater geographic connectivity, Leech Lake Tribal College has a successful project that meets the educational needs of our community and that will continue well into the future.

### Difficulty

As with all tribally-controlled colleges and universities, funding and limited resources are perpetual issues at Leech Lake Tribal College. Much of the Tribal College's revenue derives from federal grant sources, which are typically for a discrete number of years and for specific goals and objectives. At this time, the Business Workforce Development Training project is only



# THE COMPUTERWORLD HONORS PROGRAM

---

## CASE STUDY

**ORGANIZATION:**

*Leech Lake Tribal College*

**PROJECT NAME:**

*Tribal College Leads in On  
Demand Services*

**LOCATION:**

*Cass Lake, Minnesota,  
United States*

**YEAR:**

*2006*

**STATUS:**

*Laureate*

**CATEGORY:**

*Education and Academia*

**NOMINATING COMPANY:**

*IBM Corporation*

restricted by the College's limited resources, both in terms of financial and human resources. However, Leech Lake Tribal College is working closely with IBM to identify and develop the additional resources necessary to fully implement the e-business project and to plan for expansion of the wireless mesh.