

**North West
Arkansas
Community
College**

**Distance Education
Report 1996-97**

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Distance Education Report

1996-97 Report on the Distance Education and Compressed Interactive Video Program at NorthWest Arkansas Community College, in partnership with the Center for Instructional Technology, College of Education, University of Arkansas at Fayetteville.

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Forward and Acknowledgments

The partnership between NorthWest Arkansas Community College and the University of Arkansas for distance education by compressed interactive video (CIV) has been tentatively established for some time now but it was in October 1996 that the contract establishing my position was signed. In the seven months since then, the program has undergone a steady process of development and growth. The first class conducted by compressed interactive video occurred in January of 1997. The class, ACSK 0013 Prealgebra has proceeded smoothly since then and the faculty and students have been very positive. While there are still concerns and details to work out, my feeling is that the groundwork for a thriving distance education program is nearly in place. My hope is that we will be able to make larger strides this coming year as other institutions become aware of our facility. In fact, we have already been approached about classes by other higher education institutions. Also, as we cement the guidelines by which compressed video classes are developed here at NWACC, it should be easier for interested faculty to develop prospective classes.

The growth of the program has required patience and caution as we wish to develop classes and partnerships that have long term potential wherever possible. I am among the most impatient of people in the desire that the program will expand quickly. Fortunately I have been surrounded by wise and thoughtful people who have shared their experience in education and technology as well as their personal and professional support for the program and myself. Without them, our progress would have been greatly limited. My thanks go to Dr. Jacqueline O'Dell for her mentorship, wisdom and for her vision of a higher education system in Arkansas that takes full advantage of the new and exciting technologies available, as well as for the confidence she has expressed in me for this job; Dr. Karen Hodges, who has been my supervisor at the college, for her support, wise and thoughtful advice, enthusiasm for the technology, and for keeping me up to speed on the administrative procedures of the college; Bob Craig for his tireless aid, advice and patient cooperation on the Prealgebra class, the development of a faculty/presenter's training program and countless smaller projects; Dr. Teresa O'Brien for her leadership role at NWACC as chairperson of the Distance Education committee, and Dr. Jerry Vervack for his enthusiasm and flexible cooperation in scheduling the distance education classroom. Special notice goes to Jim Barnsley and Kurtis Johnston who, in addition to their busy jobs, serve as backup facilitators in case I am unavailable due to illness or emergency. Finally, my thanks to Dr. Pederson, the Associate Chancellor for Academic Affairs at the University of Arkansas, Dr. Burns, the President of NorthWest Arkansas Community College, Dean Stegman and Former Associate Dean Fratzke of the College of Education at the University of Arkansas for their vision, enthusiasm and support for the development of compressed video at NWACC and its partnership with the University of Arkansas.

Abstract

NorthWest Arkansas Community College has one compressed video unit (VTEL Media Max) located at BII 104 in Rogers, AR. The equipment was provided by the University of Arkansas' College of Education via the Center for Instructional Technology.

The college formed a Distance Education Committee to address issues that would be brought up by the use of compressed video and other technologies. The committee selected a Prealgebra class (to UAF) to serve as a pilot project for the College. In addition, the committee has been at work, trying to promote training in compressed video and develop a protocol for distance education usage.

In addition to the Prealgebra course, the college has conducted a Grant Writing Seminar for interested faculty and staff. We have also received a Microorganisms class from SAU-Camden (with a Job Hazard Analysis course to follow June 3).

Classes in the planning stage include an OSHA 10 hour compliance course which failed to make during the spring but will hopefully occur during the summer. Also, the fall should see a Beginning Algebra course, an evening math course (probably Prealgebra) and an Environmental Science course.

Other proposed classes and programs included Dental Hygiene (from UAMS), Masters in Nursing (from UAMS), Concurrent Credit Classes to area high schools, and International and Multicultural related classes to other higher education institutions.

Other projects and organizations the college has been involved in include Starnet, the Arkansas Compressed Video Users Group (of which I am currently secretary of); the Higher Education Consortium on Telecommunications; the Goals 2000 Users/Presenters Training Project; In-house Compressed Interactive Video Training with the University of Arkansas at Fayetteville, and a grant writing class conducted by Dr. James Swartz of the University.

I have also participated in several demonstrations as both a representative of the College and the University, including a meeting of the Arkansas Joint Legislative Committee on Technology at which the University of Arkansas System Chancellors presented reports on distance education (Bob Craig of UAF and I assisted Chancellor Ferritor with his presentation). I also facilitated the College's participation as a demonstration site for a visit to the University of Arkansas at Fayetteville by Dr. Steve Floyd, the Deputy Director of Academic Affairs for ADHE.

In addition to these efforts, I have had the opportunity to participate on a limited basis with the Jason Project during its run at the Walton Arts Center in Fayetteville.

The budget information for distance education is primarily stipulated by the contract between the University of Arkansas' Center for Instructional Technology and NorthWest Arkansas Community College. The amount paid to the CIT by the college was \$28,500 out of which I received a salary of \$20,997 for nine months. The remainder of the money went towards my fringe benefits and a monthly Maintenance and Overhead budget of \$300. In addition to these moneys, the phone, FAX and printing costs I incurred were covered by the office of the Dean of Instruction, Dr. Karen Hodges.

The future for NWACC is bright, with a growing number of technologies and opportunities becoming available. We have developed a 5-year distance education plan to incorporate these into the College and to expand our distance education offerings. While the plan is certainly optimistic, it is also realistically possible. While it is impossible to say what the technological horizons will be like six months from now, let alone five years, we feel that this plan offers flexibility while setting a number of goals that are attainable.

The Equipment and Site (BII 104, Rogers, AR)

At present we have one compressed video unit at NWACC. The unit consists of a VTEL 486 Media Max computer running at 25 Mhz, with 8 MB of RAM and a 210 MB hard drive. The Media Max contains a CODEC card as the compression/decompression hardware and runs on an Intel/MS-DOS platform with VTEL software running the operation of the unit. The unit is mobile, containing two 27" monitors with side speakers. We presently have two cameras in the room: the primary camera is a VTEL Smartcam and photographs the students and instructor. The second camera is an ELMO document camera for video of slides, handouts and overheads. The unit has three microphones: two table mikes and a clip-on microphone (or lavalier mike). The unit is controlled by a Pen Pal brand videoconferencing board and a VTEL keyboard. Connections are made to the state network which is administered by Southwestern Bell. The connections are made through a quarter T-1 line at 384 KBps (although the practical bandwidth is 336 KBps). The video runs at 15 frames per second. At present, the Southwestern Bell network is in-state. It is possible to access out-of-state or international sites (as well as sites in-state not on the network) that use ISDN which is a type of communication line that allows sites to dial directly to one another without contacting a host provider such as Southwestern Bell. The primary manner in which these types of connections are made is to use an ISDN line (or multiple lines) and an ISDN specific router. Southwestern Bell provides a gateway to these sites from their MCU in Little Rock. Unfortunately, at present, aside from "test" connections, they do not offer this as a regular service. Although we have not conducted a class using an ISDN gateway, we have done a test connection to Mississippi County Community College in similar fashion through a gateway provided by Arkansas State University. There was no decline in quality whatsoever.

In addition, the unit will support a variety of media, including computer presentations (with the use of a scan converter, which we do not have full time access to at NWACC) and videotape.

The distance education site is located at the Business and Industry Workforce Development Institute and Adult Education Center (BII), room 104. The room shares space with non-distance education classes. The regular distance education configuration for the room is a U (see figure 1) or V shape (see figure 2) with the unit placed at the front of the room and the instructor, ELMO, Penpal and keyboard at the back of the room, situated on the bridge of the U or V. The regular microphones sit on stand-alone desks in the center of the room and the lavalier microphone is attached to the ELMO and serves as the instructor's mike. The instructor has the option of wearing the lavalier as a clip-on. The room seats 10 students and the instructor in its V configuration and 15 students and the instructor in its largest U configuration. These are the maximum seating capacities for the room at present. Other configurations are not practical as the primary camera is situated beneath the monitors rather than above them. This means that a standard row configuration will result in the instructor and most of the students being obstructed by the front row of students. The U and V configurations also provided students with a clear view of both the instructor and the monitors, allowing for a somewhat more normal classroom environment.

Movement of the equipment to the Central Educational Facility (CEF) has been approved by the Board of Trustees and is expected to take place at the end of the Fall 1997 semester at the earliest. To maximize usage of the equipment, I recommended that the following additional equipment be considered for purchase:

- A multimedia computer for presentations (note that if money for an upgrade to the VTEL Pentium system is available, it will negate much of the need for this item)
- A scan converter for running computer presentations to the Media Max (note that if money for an upgrade to the VTEL Pentium system is available, it will negate much of the need for this item)
- Additional Monitors -either 27" or 32" (2)
- Additional Microphones (2-4) including a large mike with desktop stand
- An audioboard to run the additional microphones
 - T1 access to the Lecture Hall

Figure 1

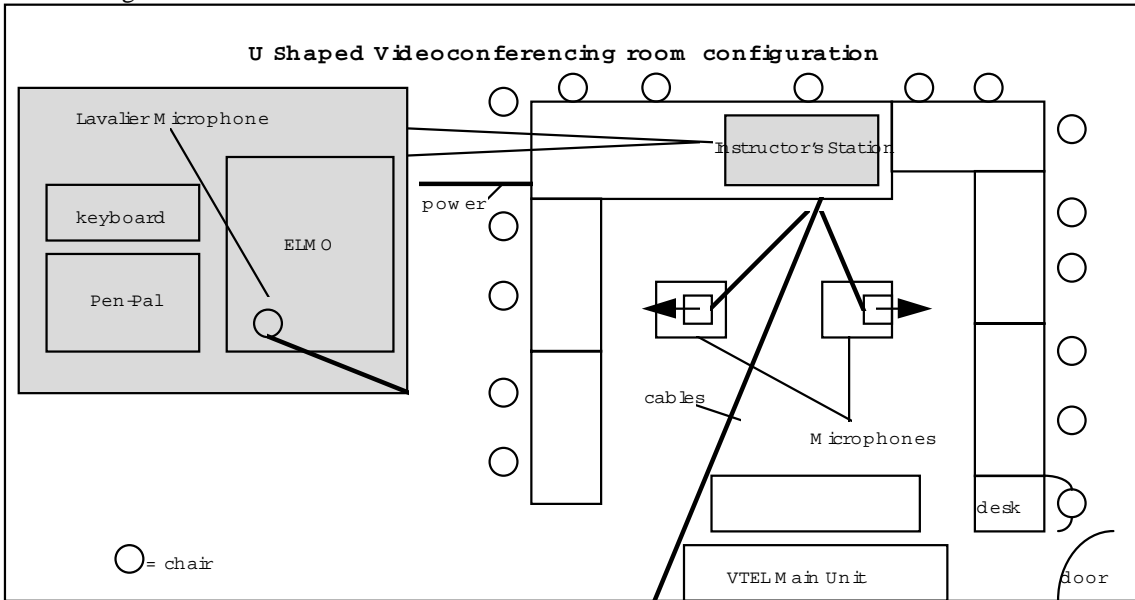
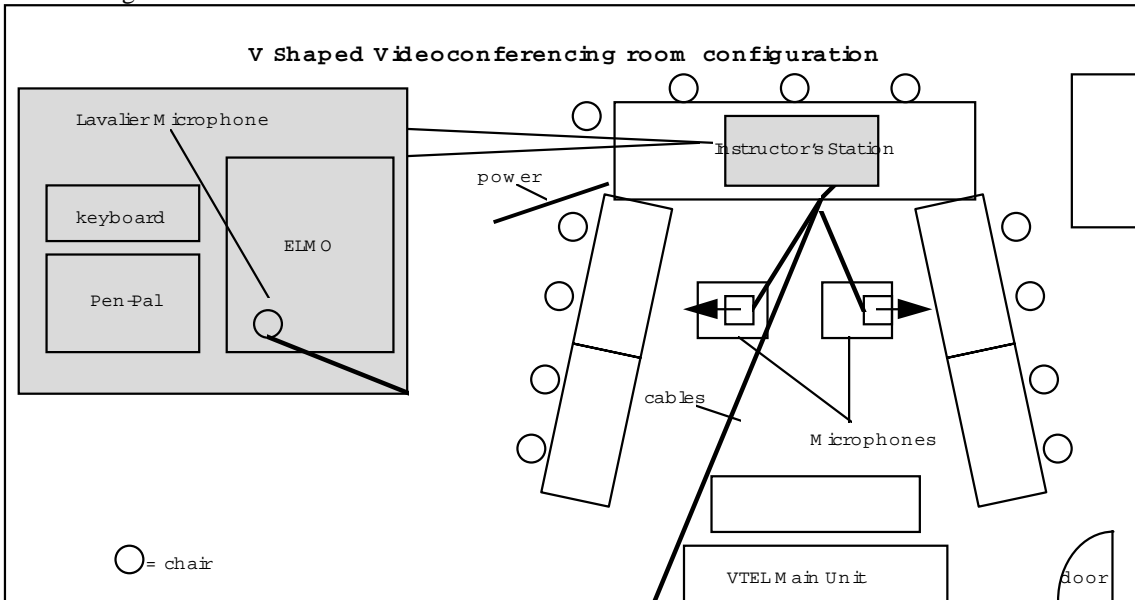


Figure 2



Program Development

In order for us to develop what would be an entirely new program here at NWACC, it was necessary to establish what steps were going to be taken and how fast to proceed. The administration and faculty have been involved to some degree at every step the program has taken, and this has resulted in a positive environment for progress.

NWACC Distance Education Committee

The college chose a slow but steady pace in establishing the compressed video program. The central idea is that we will develop the program carefully, so as to avoid administrative, political and/or technical missteps along the way. The first step in establishing the program was obtaining the equipment from the University in 1995. This was followed by my hiring in 1996 as the compressed video facilitator, although I have been asked to provide assistance with the development of other distance education and learning technologies.

The next step was to involve the faculty. A faculty committee for distance education was created in the fall of 1996 to evaluate the potential uses of the compressed interactive video system and develop a protocol for usage and the development of classes for the system. The committee has been chaired by Dr. Teresa O'Brien, Lead Faculty for the Math Department, and Dr. Jerry Vervack, Division Chair for Social Sciences and Facilities Director. Dr. O'Brien is currently the chairperson. In addition to Dr. O'Brien, Dr. Vervack and myself, the other members of the Distance Education committee are as follows:

Addie Adamson- Instructor, Communication and Arts
Jim Barnsley- Learning Lab Supervisor, Academic Skills/General Studies
Brad Bratton- GED Examiner, Adult Education
Caroline Burton- Instructor, Chemistry/A & P
Ann Garrigues- Director of Nursing Education
Karen Hodges- Dean of Instruction
Kurtis Johnston- Director of Academic Computing
Louise Lamb- Library Director
Victoria McClendon- Administrator, Academic Skills
Carol Olson- Instructor, Academic Skills-Math
John Story- Instructor, Science and Math
Janette Summers- Instructor, Academic Skills
Guangqiu Xu- Instructor, Western Civilization

In addition to the above NorthWest Arkansas Community College faculty, the following faculty/staff members at the University of Arkansas also participate on the committee:

Bob Craig- Compressed Video Facilitator, University of Arkansas
Vickie Claflin- Director of Student Support Services and Instructor of International Adult Education

Dr. O'Brien began the work of the committee by developing a survey of distance education usage, with special emphasis on compressed video. The goal in developing the survey, was to gauge what kinds of projects were being done by two-year schools around the state and how they have addressed particular problems in producing, broadcasting and receiving distance education classes. The information gathered would then give us a head start in the development of our own program. Dr. O'Brien sent the survey to all of the two-year colleges in the state and received a large response. The information included led the committee to believe that while there were some schools who had significant experience with distance education, a large body of the two-year schools did not have an active distance education program as of yet. Even those institutions with programs had several issues to resolve both within the program and relating to the statewide network of users. In particular were questions about cooperative efforts with other schools and fee charges for site usage (In fact only North Arkansas Community and Technical College responded with a specific site charge amount). Some of the institutions already have cooperative agreements with four-year institutions through University Centers on their campuses. Some of these agreements were established by providing the necessary start up equipment, as in our case. Others arose out of the need for specific undergraduate classes or programs. ASU has a network of two-year schools that receive classes

through University Centers on their campus. Westark Community College also has a University Center that works with 4 four-year institutions and provides bachelor's degree programs through compressed video and other forms of distance education. Other institutions are loosely affiliated with four-year schools. The University of Arkansas Community College at Hope is indirectly affiliated with the University of Arkansas. These affiliations are important as they help to reduce costs for schools as they start up and maintain distance education programs, especially compressed video.

A wide variety of courses has been presented by distance education at these schools. Among the offerings have been classes in Sociology, Nursing, Non-Credit Development- staff & community, Tech-Prep related, Foreign Language, Allied-Health, Western Civilization, Beginning German, Art Appreciation, Introduction to Psychology (by cable TV), Freshman English, College Algebra, Humanities, Composition, US History, Computer Science, and Study Skills. These classes were presented to a wide audience, including high school students seeking concurrent credit, traditional and non-traditional two and four year students, and non-degree seeking students from businesses and the community. The distance education facilities were also used for faculty/staff training, community enrichment, and meetings/videoconferences.

In addition the survey asked about specifics of each program including face-to-face interaction, start up costs, access to site facilities and resources, as well as assessments of the advantages and disadvantages of distance education.

The survey results were distributed to the Distance Education Committee members for their review. A copy is available on request from my office.

The committee met for the first time on October 25, 1996. I was introduced and given an opportunity to discuss some of my goals and vision for the program, which are presently revised and included in the Recommendations section below. It was suggested and agreed to that the first semester of distance education at the College be aimed at producing a single pilot course in order that we may iron out problems before expanding offerings. Dr. O'Brien recommended the formation of 5 teams to continue to explore distance education issues as the college prepared to begin. These teams looked at our equipment and site, the survey results, other sites, and available literature on distance education and produce reports on each issue. A fifth team explored the possibility of a Prealgebra course as the pilot course, a course of action that was ultimately approved. In addition to the survey results and site information noted above, Dr. Hodges and Dr. Clafin have compiled a survey of some of the available literature. I was primarily responsible for site visits although I was accompanied on my visit to North Arkansas Community and Technical College (NACTC) by Addie Adamson, Carol Olson and Janette Summers.

Generally, the site visits confirmed Dr. O'Brien's survey results. In addition to NACTC, I visited Westark Community College in Ft. Smith and The Harvey and Bernice Jones Center for Families in Springdale. Each site had developed its own strategy for the use of their equipment based on their institution's needs. NACTC primarily delivered classes by full motion video to area high schools in cooperation with the OUR Cooperative in Harrison. The full motion video system used is somewhat bulky, requiring up to eight monitors in the room at the same time. They received classes by compressed video from four-year institutions around the state, particularly the University of Central Arkansas. Their compressed video equipment uses the same state standard that NWACC uses. Westark receives classes through its University Center as described above. They also have a separate compressed video classroom that handles non-credit courses such as Continuing Education and Business and Industry. Their classrooms themselves are well designed to maximize audio and video. They have insulated walls (firewalls) and computer flooring to facilitate the many cables and wires in a CIV classroom. They also have an audience camera set facing opposite the instructor's camera. This allows the room to be set up like a normal classroom without sacrificing a view of the audience. The only drawback to the room is the presence of a large whiteboard behind the instructor which creates some glare. The Jones Center uses a cabinet unit similar to our own. However, their unit is Pentium based and runs Windows 95 which means that they can run computer presentations and demonstrations on camera without the use of additional hardware. They primarily receive health and family related videoconferences, most of which come from the UAMS group.

The committee then set out to build upon the development of the program by combining into three new teams. The first team was responsible for the development and support of the Prealgebra class. The bulk of the work here consisted of the instructors preparations and training to teach the class via compressed video. (This information is detailed in the section on the initial Prealgebra class below.) The second team was responsible for faculty development, both in the use of the equipment and by the equipment. The primary result of this work is the Grant Writing seminar in late February and early March

(see below). In addition the training scheduled for this summer comes out of the work done here. Finally, the third team's responsibility was to begin laying down the framework for a protocol by which the equipment was to be used and classes/events were to be developed and marketed. This protocol was not only to apply to the compressed interactive video equipment but also to all distance education at NWACC. This team laid out a general set of goals and plans for the use of compressed video, satellite downlink and uplink, cable, and Internet/telecommunications based independent interactive study. These teams' work evolved into the work of the final two teams which were organized into subcommittees. The first subcommittee was to carry on the plans to train faculty in the use of the equipment. This work has primarily been done by Bob Craig and myself out of necessity as we are designing the training. The other subcommittee was to fully develop a protocol for NWACC Distance Education.

Protocol Subcommittee

The Distance Education Subcommittee on Protocol consists of Dr. Karen Hodges, Addie Adamson, Caroline Burton, Brad Bratton, Teresa O'Brien, Janette Summers, Jerry Vervack and myself. Our goals were to establish and develop the specific elements of a protocol, or set of guidelines for the use of distance education at NWACC. This would encompass everything from how classes would be created or chosen for different delivery systems, to what kinds of fees would be charged for site usage and in what circumstances, to who could register for these courses and how would they do so.

The first part of the process was to decide what the specific elements of such a plan would be. We eventually came to agreement on these points:

- Faculty Compensation: How much money or time credit should be given to compensate instructors for additional preparation in DE?
- Class Development: Who should develop classes for DE? Who should promote and market them? Who will authorize these classes and at what administrative levels?
- Usage (Rules and Fees): Who should be allowed to use the DE equipment? How much in fees should be charged to which users if they are charged at all? Should we mirror the charges of other sites around the state or set our own specific ones? Where should moneys collected from site fees go?
- Marketing: How will DE classes be marketed and by whom? How much money is available for marketing?
- Cooperative Agreements: Who will negotiate cooperative agreements with other sites? Will these agreements alter regular usage fees and regulations?
- Materials and Facilitation: How much will be spent to copy and print materials for classes, both outgoing and incoming? Will we institute charges for materials as other sites do?
- Support Services: What services will we make available to students who are attending DE classes at NWACC that originate from other sites? How will we insure that our students at other sites will receive support that is equivalent to local students?
- Registration: How will DE students be registered? What will be required by NWACC for remote students who primarily attend another institution? By the state? How will students be evaluated for placement in classes requiring prerequisites or minimum test scores?
- Site Visits: How often will instructors teaching classes that originate from NWACC be required to visit their remote students?
- Student Fees: What type of tuition will out-of-district students pay? Will we charge any kind of distance education fee for remote students? Can we make the Internet available to local DE students as well as remote? What other fees do we need to consider charging (or not charging)?

Competition: How can we avoid competing directly with other institutions in their territory?
 In what ways can we cooperate with other institutions to avoid competition?

The Faculty Compensation issue was initially addressed by Dr. Hodges. She presented recommendations to the Committee for amounts and procedures regarding compensation, which are listed below in the preliminary guidelines proposal. I was responsible for initially designing an institutional structure by which classes might be developed and approved. I also presented recommendations. As both Dr. Hodges' and my recommendations overlapped, I was given the task of combining the two, after receiving feedback from the members of the Committee. Dr. Linda Dayton helped to resolve the registration portion of the guidelines by creating a form for remote students to register with, by mail. The state is requiring specific information on these students so as to track them better and study which and how many students are using this resource, which unfortunately has created delays in the development of the form. Hopefully, this issue will be resolved soon. The other issues have been dealt with by relying on information obtained from other institutions and groups, including Starnet (see below). As Starnet and other state entities are trying to unify certain elements of usage, the more closely we can emulate other institutions' policies, the less likely we will be required to change our own in the near future.

Proposed Guidelines for NWACC Distance Education

These guidelines are still subject to approval by the Distance Education Sub-Committee on Protocol, the Dean of Instruction, The College President, and the Board of Trustees. In all likelihood these guidelines will be modified by one or more of these persons or groups. The guidelines are based on compressed interactive video usage but we have tried to set them so that they may be generally applied to all distance education usage. The recommended guidelines are as follows:

- 1. Faculty Compensation:**
 - A.** Faculty may apply for a \$500 stipend for the development of distance education classes. The process of application is described in the course development section below (see #2) and requires approval by the appropriate Division Chair, the Dean of Instruction, and the College President. If approved, the amount will be paid upon submission of the course syllabus to this review team.
 - B.** Instructors will be paid a “distance factor” fee to compensate them for additional responsibilities inherent to distance education. This amount will be \$350 for every remote site that enrolls a minimum of 12 students.
 - C.** Instructors will be reimbursed for travel to remote sites at the standard state-approved rate of travel reimbursement.

- 2. Class Development:**
 - A.** Instructors wishing to obtain approval to prepare and teach a distance education class must first complete a brief proposal form for the class including a description of the course, the intended audience (including specific sites), and a brief rationale as to why the course should be taught by distance education.
 - B.** The proposal must first receive approval from the Chair of the Division originating the class. If the class is a new course, then the course must be submitted to the Curriculum Committee within the time designated by College procedure. Approval from the Chairperson of the Committee must be obtained at that time. The proposal must also receive approval from the Dean of Instruction, who oversees the Distance Education program.
 - C.** A letter from the corresponding department or administrative official at each proposed remote site, must be received to indicate that the proposed course is acceptable at that institution. The letter(s) will be included with the institutional review form. The Dean of Instruction may, at her discretion, waive this requirement.
 - D.** After approval has been obtained, the instructor must notify the Compressed Video Facilitator of the class, establish times and certify remote locations for the course so that it may be scheduled. The instructor may notify the Facilitator about the potential class at any time during the process but cannot be guaranteed a time slot until the institutional review process has finished.
 - E.** Classes received from other sites will require the Dean of Instruction’s approval and approval from the corresponding NWACC department.

3. Usage (Rules and Fees): **A.** The Dean of Instruction with the advice and consent of the College President and the Board of Trustees will decide which persons and entities may use the Distance Education facilities of the College. Federal regulations regarding equal opportunity will apply fully in determining who may and who may not use the facilities.

B. Until such time as a statewide higher education committee proposes set rates across Arkansas, the rate schedule for CIV usage from outside agencies is as follows:

Educational Rates- \$50 per hour (APPROVED AT \$35 in July)

Continuing Education/Administrative Use

By a State Agency- \$100 per hour

Non-State Entity- \$200 per hour

Facilitator Cost

Weekdays (regular working hours)- \$15 per hour

Evenings and Weekends- \$25 per hour

In addition, a \$100 fee will be charged if cancellation is requested within 48 hours of the event.

This rate is negotiable with the permission of the Dean of Instruction or the College President. This rate does not apply to usage by the University of Arkansas at Fayetteville of the Compressed Interactive Video unit.

Rates for other distance education usage will be determined as those technologies are implemented.

Copying, FAX and other material resources will be charged at cost. This charge may be waived by the Dean of Instruction or the College President.

C. All parties using the facilities will be responsible for any damages incurred during such use.

4. Marketing: All marketing for classes and events and the corresponding costs will be the responsibility of the department from which the class originates. The distance education will assist where necessary in the marketing of courses.

5. Cooperative Agreements: All cooperative agreements between NWACC and other institutions in distance education will be negotiated according to the standard College procedures for such agreements. The Dean of Instruction must approve any cooperative agreement which uses distance education facilities of the College. All corresponding distance education fees may be waived or discounted by the Dean of Instruction or the College President at their discretion. Other fees are subject to NWACC regulations.

6. Support Services: **A.** NWACC will make available any institutional resources and services necessary for students enrolled in distance education classes originating from other institutions, who are not enrolled in classes at NWACC (students presently enrolled at NWACC are already eligible for those resources and services). All students will be responsible for any corresponding fees for the usage of these resources

and services, and failure to pay these fees may result in the withholding of those resources and services.

B. NWACC will work to ensure that students enrolled in NWACC classes at remote locations will have access to the equivalent resources and services available to students in the same class on the NWACC campus.

7. Registration:

A. NWACC students at remote locations will be registered by mail or phone in advance of the starting date of the class(es) they are registering for, or may be registered on-site in particular situations. These students will also be provided a form that will enable NWACC to meet state guidelines for registration. Local students will be registered in the traditional manner.

B. Students registering for classes requiring prerequisites and/ or placement tests, are responsible for demonstrating that they can be placed into the class. Where such evidence can not be demonstrated, these students must meet the placement requirements as set by the department sponsoring the course. This includes all required tests and interviews.

8. Site Visits:

Instructors teaching distance education by compressed video or another comparable distance educational delivery system must visit the remote site(s) no fewer than 3 times for 1 site, 2 times each for two sites, or 1 time per site where there are 3 or more sites. If possible, the instructor should encourage remote students to visit the local site at least once.

9. Student Tuition & Fees:

A. Remote students will be charged out-of-district tuition for all academic credit classes from NWACC. The only exception to this rule is remote students whose domicile residence is in-district.

B. Business and Industry and other non-credit classes will charge tuition to remote students as required by their departmental guidelines.

C. Remote students will be subject to all general NWACC fees but will be exempt from those that are charged for specific on-campus services, such as the co-curricular fee. Instead, remote students will be charged a distance learning fee of \$25 (APPROVED AT \$5 in July) for expenses relating to courses conducted by distance education (including site/line charges and Internet fees). This fee may be waived only by the Dean of Instruction or the College President.

10. Competition:

NorthWest Arkansas Community College will not knowingly compete with the offerings of other state supported educational institutions in Arkansas in their immediate locations. Courses from other institutions that compete with College offerings will not be accepted unless permitted by the corresponding Division Chair, the Dean of Instruction or the College President.

NWACC Distance Education Website

In order to better promote the college's compressed video equipment, I designed a website (at <http://www.nwacc.cc.ar.us/disted/NWACCDE.htm>). The purpose of the website is fourfold. First, the website offers information on what compressed interactive video is and a basic description of how it works. Also included in this section is a description of the unit in use at NWACC. Second, the website provides information on who to contact if an individual or group would like to conduct classes, meetings, seminars, interviews or other business by compressed video. Third, the website has a fairly large (and growing) list of web links to other webpages and sites that deal with compressed video, distance education or general education. Fourth, the website contains a schedule of classes and events that are in the distance education room, including classes that occupy the room but do not use the compressed video equipment. the website is also linked to and from the NWACC website. The NWACC website uses a photo from the distance education website. The picture on the main front page of the NWACC website is the same one that is found on the distance education front page.

The website is listed on several of the major WWW directories including Yahoo!, Excite, Infoseek and Webcrawler. Requests about classes have come in from as far as Virginia in the United States and we have even received a request for information from an individual in India!

Plans to upgrade the website this summer include adding video of a CIV class in action, a larger and more detailed schedule and adding more sophisticated graphic images to the site. Depending on how large the new graphics are, it may be necessary to create a text only version of the site for people viewing from home with slower connections. Links to a compressed video tutorial page are also in the works (as is the page...see **Compressed Video Training Development** below).

The web server is maintained by the Academic Computing Department headed by Kurtis Johnston. Kurtis has been invaluable in giving me as much access to this resource as possible.

Classes Conducted

Of course the chief goal of the distance education program is to provide educational opportunities to and from the College. The following section details the offerings from our initial year of distance education. One of the courses planned for the spring did not make. As we are hopeful that the class will develop at a future date it is listed in the planned courses section below.

Prealgebra-Pilot Project (to the University of Arkansas)

The College chose as its pilot distance education class a developmental math course titled Prealgebra ACSK 0013.

Development (Why Prealgebra?)

The Prealgebra course was selected for several reasons. Primarily, the class was suggested by the Associate Chancellor for Academic Affairs, Dr. Don Pederson. The University has recently closed its Academic Development Office in keeping with revised goals and objectives for the school. Unfortunately, large numbers of incoming students are math deficient. The University Math department does offer a developmental course Beginning and Intermediate Algebra MATH 0003, but a substantial percentage of the population required to take the course as a precursor to College Algebra are failing. Since there was no course available on campus that preceded MATH 0003, many students were commuting to NWACC to take Prealgebra ACSK 0013 and Beginning Algebra ACSK 0023. Dr. Pederson's vision was for those classes to be available on campus in Fayetteville by distance education, so that students could attend their regular University classes as well, without a substantial commute.

Other reasons for selecting Prealgebra involved the personnel who were willing to participate in this inaugural course. As the Chairperson of the Distance Education Committee, Dr. O'Brien is also the Lead Faculty for the Math Department, a math course, developmental or otherwise, would be easier to fit into the spring schedule which at the time, was already developed. In addition, two instructors from the Academic Skills department, which produces the Prealgebra course, are on the Distance Education Committee.

Beyond those very practical reasons lie an interest in attempting a mathematics course over compressed video, shared by the UAF members of the Distance Education Committee.

Marketing and Registration

As the first distance education class ever produced by NWACC, careful thought went into the processes of marketing the class and registering students. Unfortunately, time was a negative factor as the class was scheduled for the spring semester of 1997 and going into development in October of 1996. An advantage was gained thanks to the University of Arkansas' Office of Student Support Services and its director, Dr. Vickie Claflin. Dr. Claflin offered to help promote the class to the Advisors Council at the University. In addition, with the help of Victoria McClendon and the Academic Skills department, I created a brochure for the class that was distributed through UAF's Student Support Services. The brochure contained information about the class and the delivery system. Ultimately, six of a possible twelve remote students signed on for the class.

Registration was more difficult as we did not want to establish a method which would prove impractical in the eventuality that we send classes to more remote areas and also where a class would overfill. It was finally necessary to register the remote students on-site at Fayetteville, emphasizing that this could not be guaranteed as the regular procedure by which registration would be conducted.

Instructors and Training

The instructors were volunteers from the Academic Skills department who also served on the Distance Education Committee. Carol Olson is a full-time faculty member at NWACC who teaches several math courses, both developmental and regular. Janette Summers is a part-time faculty member who teaches developmental math in the Academic Skills department, and a Doctoral student in the College of Education. She is a former member of the University's Academic Development Office as well, which provided more insight on our prospective audience.

The training for the instructors was over several sessions between an hour and an hour-and-a-half. The first session focused on the equipment and its operation. Further training sessions addressed specific

elements of the Prealgebra course and teaching using the system. One issue that was addressed was how to replicate the strategy of working problems on the board in the classroom while on video. Using a regular whiteboard and writing on camera would not work as the whiteboards create glare, making the writing difficult, if not impossible, to see. The ultimate solution was to use a yellow legal pad and a black Sharpie marker. The instructors simply worked the problems on the pad under the ELMO document camera. The yellow pad and black marker provided maximum contrast, making the writing easier to read. In addition, as the work was being shown on the monitors opposite the instructor (as well as at the remote site), the students could focus solely on the work as the instructor was not visible at the time. The downside of this tactic would be that the instructor would be off-camera for large periods of time, making interactive communication more difficult. The only way to counter this, it was decided, was to break the presentation down into smaller bits with breaks where the instructor would be on camera to address the class, if even for only a moment. The instructor could also switch to themselves when asked a question during the presentation. All of this meant that the instructor had a new element to consider as they taught: What were the students looking at as the class unfolded?

The final training session was a two-and-a-half hour session in which Carol and Janette were able to teach an entire class period, using the system, to Bob Craig and myself. This gave them a feel for timing and structure before they went into the CIV classroom environment for the first time. Both instructors have remarked that the practice time they received was extremely beneficial in preparing for the class and running things smoothly.

Webpage

I created a webpage as an additional resource for the students in this class. The webpage consisted of six sections. The first was the main introductory page. The second was a page where students could find math related links that either applied to their class or to math in general. The third was a page dedicated to any general news that instructors wished to relay to the class or news that affected the class. The fourth was a schedule of topics and events in the class broken down into a day by day format. This page also contained the dates of the tests and quizzes in the class. The fifth section was an on-line syllabus (from a copy provided by the instructors) that students with web access could refer to if needed. This page also contained e-mail links so that students could send instructors messages if needed. The instructors could only answer if the student had an e-mail account. The sixth and final page was, unfortunately, never used. This was a page designed to take examples from the class and show them with any additional commentary from the instructor. Time proved to be the greatest factor for the instructors' inability to take advantage of this section although both showed strong interest in this type of support.

Students

The semester started with six students at the UAF site and twelve at NWACC. There were a large number of drops during the early class period, all at the local site. It is impossible to identify if any of these students dropped because of intimidation by the presence of the technology. As this particular audience is at academic risk, there are numerous factors that may explain the drops. The instructors have indicated that this kind of result is not uncommon. The remote students all stayed for most of the semester (one student stopped coming with about three to four weeks left). This probably is a result of the need for this particular section as there were no others available on the UAF Campus. One of the instructors also hypothesized that the difference may be the result of the tendency for community college students to be more likely to drop a course than university students. In any case, the end of the semester found only 9 students regularly attending the class, with one other attending occasionally. All the remaining remote students attended on a fairly regular basis.

It is difficult at this early stage to offer an assessment of student performance in the CIV class as opposed to a regular classroom environment as the small number of students in this class and other factors (developmental audience, non-traditional students) significantly reduce the validity of comparative studies. If any observation can be made about the two groups, it is that they both behaved in similar fashion. That is to say that each group had members that were very committed to the course studies and some that were less than committed. It is impossible to establish whether each group would have behaved differently had their roles (local and remote) been reversed. Nonetheless, a listing of grades from the group, anonymously categorized by local and away sites, is below.

Local Site (NWACC)- Number of students=5 Grades- A=1, B=1, C=1, D=0, F=2
 Remote Site (UAF)- Number of students=6 Grades- A=1, B=1, C=1, D=2, F=1

The instructors have indicated that these results are not unusual for this subject matter and audience, although they emphasized that there is no way at present to verify that there are no differences between distance education and non-distance education classes based on this group of students.

Class Experience and Evaluations

Overall the class appeared to work well in the format chosen. The central two problems for the instructors was the lack of commitment from many of the students to work outside the classroom, including making use of instructor office hours, and keeping up with the class schedule. The first problem was out of the instructors' hands. The second was the result of several factors not necessarily related to the technology. Although the audio delay and occasional miscue with a camera did cause slight delays, the major delays were attributed to the class' struggle with the work (caused in part by the failure to consistently do outside work) which created numerous questions in the classroom. Another factor was the 50 minute period in which the class was conducted. The normal periods for Prealgebra at NWACC are 80 minutes. A shorter period meant more periods in the semester meaning that more time overall was going toward the 5 minute question and answer period at the beginning of class.

The instructors adapted to the equipment well. Apart from the occasional miscue, which is typical of any usage, they were very aware of the camera and audio. They were very comfortable with the equipment, the only problems coming from adjusting to the differences in the NWACC and UAF systems when they visited UAF. They also worked very hard at involving the remote site in the environment by asking questions and addressing points of remote students. As this was a team taught pilot course, and as Janette worked at the University as well, she was able to visit the remote site frequently. This meant that the class was not typical of a normal distance education class, but was beneficial to the students.

The students were allowed to evaluate the use of the technology and the facilitators at each site to provide feedback as to which elements were working best. There were two evaluations that were constructed as Likeart Scales. An item analysis is below with the average score from each site listed by the question. **1=strongly disagree, 2=disagree, 3=not sure, 4=agree, 5=strongly agree.**

Question	UAF	NWACC	Both
<i>Technology Evaluation</i>			
1. The use of video (the cameras) in this class was effective.	4.2	3	3.6
2. The video image was difficult to view.	1.2	2.2	1.7
3. The audio was easy to follow.	4	4	4
4. The notes and overheads were easy to read.	3.8	3.4	3.6
5. I had a clear view of the monitors from my seat.	4.6	4.4	4.5
6. The difference in the video and the audio was distracting.	2	2	2
7. The document stand camera was used effectively.	4.2	4	4.1
8. The classroom environment was comfortable (i.e., lighting, temperature, etc...)	4	3	3.5
9. The video delay eventually became less noticeable.	4.4	3.8	4.1
10. I felt the technology delayed the pace at which the material was presented.	2	2.4	2.2
11. The material was suitable for the technology used to present it.	4	2.8	3.4
12. The instructor used the technology in an effective and interesting way.	4.4	3.6	4
13. The overall use of the technology in this class was effective.	4.4	3.4	3.9
14. I would take another class using this	4.4	3.6	4

technology.

Facilitator Evaluation

1. The facilitator established comfortable guidelines for classroom presentation and interaction.	4.2	4	4.1
2. When necessary, the facilitator provided adequate instruction in the use of the equipment.	4.4	4	4.2
3. The facilitator resolved technical problems efficiently.	4.4	3.8	4.1
4. The facilitator was available to assist and answer questions.	4.8	4	4.4
5. The facilitator made other technologies available as needed (i.e., FAX, copier, etc...)	3.8	4.4	4.1
6. The facilitator provided a flexible and comfortable learning environment.	4.4	3.6	4
7. The facilitator provided a variety of support options. (Webpage access, e-mail, etc...)	4.4	4.4	4.4
8. The facilitator was courteous.	4.6	4.2	4.4
9. This class would have been less successful without the facilitator.	4.8	4.2	4.5
10. Overall, the facilitator was effective in the performance of their duties.	4.8	4	4.4

It is clearly apparent that the local group was less satisfied that the remote group with the facilitation and technology. However, it is difficult to draw significance as two evaluations of the five in the local group were significantly lower than the other three, which were quite high. In a larger group it is possible that the two lower evaluations might balance out even more.

Grant Writing Seminar (from the University of Arkansas)

One of the suggested projects from the Distance Education Committee was to find a faculty development project that could be conducted by compressed video. The reasoning for this suggestion was two-fold. First, such a project would give the faculty who participated a chance to see the equipment in action, including some possible uses of its components. Second, it would demonstrate how valuable resources and experiences could be obtained by compressed interactive video where they may otherwise have been unavailable.

After some thought I recommended to Dr. Hodges that we do a Grant Writing Seminar. The speaker would be Dr. James Swartz of the Educational Technology Department of the University of Arkansas at Fayetteville. The choice seemed logical to me as I was taking Dr. Swartz's Grant Writing in Instructional Technology class at the time for professional development and found it to be an invaluable experience. Dr. Hodges concurred that the subject matter and speaker would be valuable to the faculty. In addition, the timing seemed fortuitous as the College was in the process of hiring an individual who would specialize in Grant Writing. Our hope was that this experience would prepare faculty and staff to work with this individual in preparing grant information and projects. Dr. Hodges also set a goal of having at least one member of every department attend in order to disseminate the information as widely as possible.

Development

The development of the Grant Writing Seminar was fairly smooth with the central issue being when to hold it. Dr. Swartz was eager to sign on to the project and Dr. Hodges arranged for a stipend to be made available to him. The time for the seminar was set for February 28 and March 7 of 1997. Each session would run from 3:00 p.m. until 6:00 p.m. The sessions were two parts of a single seminar. The Seminar was to be delivered from the GRAD 343 at the University of Arkansas and the other participating site would be BIT 104 at NWACC. Due to the unusual nature of the project, it was decided that some of the attendees would participate at the Fayetteville site. Normally, the central idea behind a distance learning class is to limit the time and mileage necessary for students to travel. Because we felt that this seminar was as much promotion of the delivery system as grant writing, we chose this approach. Other important factors were the limited size of BIT 104 (15 participants maximum) and that there would time for one seminar over the two Fridays. It was decided though, that in order to make available the information to those who were unable to attend, the seminar would be videotaped and made available (along with handouts) in the NWACC Library.

Marketing

Marketing the class consisted of making the faculty aware of the seminar and then registering individuals to attend. Dr. Hodges announced the seminar in the faculty newsletter. In addition, I created an application/registration form with her supervision, that was distributed to faculty and staff. They returned the registrations to me and I kept a tally of those who would attend. The Rogers site was filled at the maximum of 15, so it was important to encourage those who could to attend in Fayetteville. Ultimately 33 individuals signed up for the seminar.

Development of Materials and Presentation

Most of the materials used in the seminar were already in existence, having been culled from the grant writing class Dr. Swartz conducts on a regular basis for the University. However, I was asked to participate in the creation of two resources for the seminar. The first was a list of grant resources that could be found in the NWACC Library. This list was put into the form of an APA style bibliography and presented along with the rest of the handouts used by Dr. Swartz. The second was the creation of a Power Point presentation to be shown to the audience. The presentation consisted of topic titles that were used as breaks between subjects. Dr. Swartz requested that the presentation be on-screen as he lectured. Bob Craig and I transferred the presentation to the Media Max computer as slides using a scan converter from the ETEC department. This allowed Dr. Swartz and the slides to be visible at the remote site (NWACC) at the same time. At the local site, the audience could see the remote audience and the slides on the monitors. Finally, the final work done in preparing the materials for the seminar was copying the handouts and arranging them into folders for the participants. I performed this task a few days before the seminar and delivered the local site's folders to Bob Craig.

The Seminar

The seminar itself went very well by all accounts. The participants were very interactive after some initial hesitation. Much of this interactivity was due to Dr. Swartz's easygoing lecture style, which requires involvement from the audience. In addition, between the two sessions, participants were asked to work on grant materials that they evaluated in the second session. The information and presentation were universally judged as first rate. Evaluations were handed out but only a few were returned. All were very positive though and the general feedback I received was that although some of the faculty and staff were still somewhat skeptical of the use of compressed interactive video as a delivery system in their classes, the Grant Writing seminar was a success. As far as technical flaws there was only one to speak of as the iris on the NWACC unit's Smartcam behaved erratically towards the very end of the first session. It did not result in downtime and was easily corrected by rebooting the Media Max. The videotapes of the seminar (and the handouts) can presently be obtained at the reserve desk of the NWACC library.

Microorganisms (from SAU-Camden for Area Wastewater Personnel)

In the Spring of 96 we were asked to participate in a class originating from Southern Arkansas University at Camden. The class was a course in identifying microorganisms to assess wastewater treatment efficiency. The course was delivered on May 13, 1997, from 2:00-5:00 p.m. and was the first course of any kind that NWACC has participated in, outside of our partnership with the University of Arkansas at Fayetteville. Other institutions that participated were UALR, Westark and ASU. The on-site participants were personnel from area wastewater treatment plants. A representative from the Rogers plant, Luanne Diffin, brought workbooks and registration forms for the course to our site. The marketing of the course was done by the developers. Unfortunately, we did not receive details on how many would attend at our site (ultimately six) or what the procedures for registration and attendance would be until the day of the presentation. Much of this is attributable to the fact that this was the first time this kind of course has been offered by CIV.

The actual course itself suffered somewhat from the inexperience factor as well as the unusual setup of SAU-Camden's room. The camera and monitors were in a corner of the room beside the instructor and facing out into the class. This forced the instructor to turn away from the camera to address the on site students and vice-versa to address the remote students. The organizers and host site personnel are very conscientious about their presentation though, and my hope is that future classes will take advantage of their experience with this course. There was a brief video presentation that worked well and the instructor presented a number of color slides. Font size was a problem, as most of the slide text was difficult to read, but less so as the instructor orally identified the objects shown.

Ms. Diffin indicated that these classes occurred frequently out of Camden, but had never been done by CIV before. There is a strong possibility, unless the Business and Industry departments develop similar courses, that we can participate in more of these classes in the future. We did not charge site fees for these two classes as our guidelines were not in place when we were asked to participate. In future, these classes maybe a good source of revenue. As we can charge up to \$50 per physical hour for site usage (more if the client is not an educational institution), a three hour course with pre and post connection time could bring up to \$200, or just over a third of the monthly line charge. Businesses that wish to use our system to send workshops and classes to other sites, or have meetings with counterparts at those sites would pay larger fees as well as cover the other sites' usage fees. This is certainly an avenue to explore. I am hopeful that we can market this area soon and that word-of-mouth will also bring potential users.

Classes in the Planning Stage

There are three classes presently lined up for the fall semester and a fourth developing for summer (at the time of this writing). They are all at various stages of planning. As they were forwarded before the College guidelines were developed, they each have unique evolutionary processes that merit attention. Another course (OSHA) was originally planned for the Spring semester but did not make by the scheduled date. There is still hope that the class will go through in the future.

OSHA 10 hour compliance course (to Mississippi County Community College)

With the cooperation of the Business and Industry department, an OSHA 10 hour compliance course was scheduled for five two hour sessions (April 14, 16, 21, 23, 28 from 9:00-11:00 a.m.) with Mississippi County Community College in Blytheville, AR. The course was to be taught by John Dayton, an adjunct faculty member with B&I. He participated in a one-and-a-half hour training session in preparation. The course was promoted to the MCCC B&I department who would advertise and recruit in Blytheville. Ultimately, the course failed to attract the anticipated audience, possibly because of the multiple short sessions which would be less attractive to businesses sending employees but were necessary because of our Spring schedule. Another possibility was the short amount of time that MCCC had to promote the course. In any case, B&I hopes to make the course at a later date. The summer may provide more flexibility in setting up course time, especially after the main summer session is over.

The cost of delivering the course to MCCC, which is a satellite compressed video site of Arkansas State University, would have been \$750 (\$50 per hour for 15 hours, 10 course hours and 5 hours of pre- and post-connection time). This price will come down if we are able to deliver the course in fewer sessions as the pre and post times will be reduced.

Prealgebra Summer 97 (to the Jones Center for Families and UAF)

In an effort to produce a CIV class for the summer and to explore potential audiences for the delivery system, it was suggested that a Prealgebra section be offered to the Harvey and Bernice Jones Center for Families in the summer of 1997. In addition, the University of Arkansas at Fayetteville was included to help in filling out the roster. The course was scheduled to begin on May 27 and to run through the regular NWACC summer session (to July 8) Mondays through Thursdays from 1:00-3:00 p.m. Unfortunately, due to the short amount of time given to marketing the course, it failed to make. The time I had planned to work on this course will be used to promote the fall evening course.

Beginning Algebra (to the University of Arkansas)

Besides Prealgebra, we are offering the University of Arkansas the next course in the ACSK developmental math regimen, Beginning Algebra. This offering is the second of our classes for UAF students who are deficient in math but are not ready for the University's developmental math course (MATH 0003). It is anticipated that this course, which is the equivalent of a prerequisite to MATH 0003, will grow in popularity as most students seek to take as few non-credit developmental courses as possible. This course is scheduled to meet in the same time slot as the spring Prealgebra course (1:00-2:00 p.m. MWF) and will probably have at least a few of the UAF students from that class.

Development

The Beginning Algebra course will be taught by Janette Summers, who is adjunct faculty in the Academic Skills department and was one of the instructors of the pilot Prealgebra course. She will be developing the course throughout the summer and has received one of the \$500 stipends to do so.

We have briefly discussed some of the elements that will be used in the course. A webpage will be constructed and we hope to take advantage of it to show examples from the class, a project that was planned for the spring Prealgebra class but never completed. The webpage will otherwise be very similar to the Prealgebra webpage in structure. Multimedia is always a possibility but most likely Janette will present the course as she did in Prealgebra, using a notepad as her chalkboard and interacting with the students by requiring them to participate in solving problems. This presentation format requires occasional breaks to make visual contact as the instructor is off camera for long periods of time while using the ELMO

document camera to show the notepad. This strategy seems to work well, although, as in the Prealgebra course, there will be the pressure of maintaining the class schedule in a 50 minute period.

With only one instructor, students will find it more difficult to meet their instructor during office hours. This was already a difficulty for the remote students, even with two instructors, one of whom was in Fayetteville frequently. The other instructor for the spring Prealgebra, Carol Olson, has suggested a mandatory period before and/or after class in which the remote students (and local) could come in and ask questions about assignments. This happened informally with the spring class. It is to be hoped that, a more fully developed webpage will help meet this need as well.

As with the Prealgebra class, there will be support software and videos available as well that will aid the student in working independently.

Marketing and Registration

Fortunately, the spring Prealgebra class has created contacts and lines of communication between the University and NWACC, allowing us to better inform advisors of this class. The Office of Student Support Services has forwarded brochures to the Advisory Council so that faculty advisors are aware of the availability of a developmental math class to their students who are struggling with MATH 0003. Once again the brochures themselves are modifications of the spring version that I have altered to fit this class. We have also made contact with the Office for Non-Traditional Students who have expressed interest in this class in particular. Victoria McClendon, faculty chair for Academic Skills has been invaluable in handling many of these contacts. In addition, this class was one of the first two classes listed in the NWACC racing form as an official distance education class (along with the Environmental Science course-see below).

The central difficulty lies in registering the students. The protocol calls for registration by mail or phone. At this writing, Dr. Linda Dayton of the NWACC Student Services department has volunteered to prepare a registration form for remote students that will meet all of the state guidelines for distance education. The state is requiring specific information on these students in order to track them better and study which and how many students are using this resource. In all likelihood, the registration process will be resolved this summer. If we do not have this problem resolved by the fall, the students will probably be registered on site as the spring Prealgebra students were. The only obstacle to this option would be if the class filled early with students seeking a seat. I am attempting to keep a roster of students who have already requested a place in the class. If necessary, these students may be encouraged to drive to NWACC and register on campus.

Environmental Science (to the University of Arkansas)

Dr. Marvin Galloway, Division Chair, Science and Math and Cindy Hammons of Business and Industry are developing an Environmental Science lecture course for Agronomy students at the University of Arkansas at Fayetteville. The course was one of the first two listed in the NWACC racing form as an official distance education class (along with Beginning Algebra). The course is scheduled for the fall of 1997 and will run on Tuesdays and Thursdays from 11:00 a.m.-12:30 p.m.

Development

In the early spring of 1997, Dr. Galloway was contacted by faculty from the University of Arkansas' Department of Agronomy who asked if NWACC could provide Introduction to Environmental Science for their students in Fayetteville. The College of Agriculture had been offering the class, but only annually, with full professors teaching the course. They made the request of NWACC in order to maximize their resources. The logical next step was to offer the course by compressed video so that these students could remain at their local campus. Dr. Galloway made the suggestion to the department and they responded favorably. The only potential obstacle was the possible necessity of a lab course to go with the lecture. Fortunately a lab is not required in Environmental Science under the Agronomy degree. For those other degree majors who are required to enroll in an Environmental Science lab, the College plans to make one available on campus in Rogers.

Dr. Galloway and Ms. Hammons will team teach the course and will be invited to participate in CIV training at the earliest convenient time. I will encourage the development of a webpage for the course to aid the remote UAF students and will also suggest a listserve. It should not be difficult to arrange one with the University's Department of Computing Services.

Marketing

The marketing of this particular class has been left up to the faculty involved both at NWACC and UAF. The Agronomy department will advise its students of the availability of an Environmental Science class that they can attend on campus. NWACC will do the same for its local students. Dr. Galloway has advised me that he will probably register the remote students on site, which will avoid any of the temporary pitfalls of registration we face until a final form and procedure is set.

Prealgebra Fall 97 (to the Jones Center for Families and other)

The local hospitals, particularly Washington Regional Medical Center in Fayetteville, have indicated an interest in a Prealgebra section for their nursing staff. Originally we hoped to include this audience in the population of our daytime Prealgebra course in the spring but their needs were for an evening course. We are planning to create an evening section of the Prealgebra course for this audience in the fall. At present there has been little work done on this course but preliminary indications are that interest will be high. At present, plans are to offer the course one night a week from 6:00-9:00 p.m. Possible sites include the Jones Center for Families, the AHEC in Springdale and the University of Arkansas. The University site's availability depends upon whether or not a new unit is installed or transferred there as the original unit is booked for all evenings in the fall. The Jones Center would be a good candidate despite the failure to make a summer course there, and we may certainly consider cross-marketing the course to both the nurses and area families.

Until more work is done on the course, it is unlikely to know who may be teaching it although Janette Summers is a strong possibility based on her experience. In any case, I hope to begin lining up the course in June. It is worthwhile to note that if we are able to deliver this course to the Jones Center, a webpage would offer support as the Center offers access to the web for members and membership is presently free.

Classes and/or Programs in the Exploratory Stage

In addition to the classes listed above, there have been a number of options that I have explored over the past year. Some were quickly dismissed due to the impracticability of using compressed video to deliver them, while others were more carefully explored and may yet hold possibilities.

Business and Industry

High on the list of priorities has been the establishment of Business and Industry classes. In addition to the attempted OSHA classes with MCCC and the classes from SAU, there has been discussion with Westark Community College about an exchange of classes. Westark is especially interested in providing ISO 9000 classes to this area. Unfortunately, there is presently some departmental conflict as to who will be responsible for the non-credit compressed video classes at Westark. I have been assured that the problem is not serious and will be worked out this summer. Until then we have been unable to provide or receive non-credit classes from Westark.

Along with the OSHA class that was targeted for MCCC, there have been discussions about providing classes to other locations as well, including Pulaski Technical College. Little has been established so far, after a period of initial optimism. It is to be hoped that as our site becomes more visible to other members of the state, there will be more consideration of our offerings.

There has been strong interest in the Business and Industry's Hazardous Materials class. Unfortunately, due to the large amount of hands-on training required (including the use of safety suits), it appears highly impractical to attempt to deliver this course by CIV.

Another obstacle to providing B&I courses has been the site costs, as high as \$50 per physical hour in some locations. This must be weighed against the cost of providing an instructor full time to a remote location and against practical tuition charges for these classes. The immediate solution is to seek sites with lower usage fees. This is almost impossible in the northeast part of the state where most sites are in partnership with Arkansas State University. A similar situation exists with the AHEC's and UAMS. The fees themselves are a necessary charge for most sites, to cover line charges, equipment costs and personnel. As we begin to institute our own fees (see protocol) there is the possibility that those moneys may balance against future costs. Another consideration is the effort by members of Starnet (see below) to standardized site usage fees. In all likelihood, the fee rates will be standardized up to the levels of the four year schools, rather than down to the levels of the two-year and technical schools. While this would increase revenue for schools receiving classes, it would make it considerably more difficult for smaller schools to produce classes as the usage rates would be unavoidable.

Dental Hygiene

Recently, the Allied Health department approached me about setting up a conference with faculty at UAMS for the delivery of Dental Hygiene courses by compressed video. A preliminary meeting has been arranged and hopefully this meeting will clarify when and how this program will be established. At present, this appears to be a strong possibility for a long term partnership agreement.

There will no doubt need to be an examination of the requirements for this kind of program and whether classes by CIV can fulfill them. However, UAMS has a great deal of experience in delivering medical training by compressed video and I am sure that any obstacles can be successfully overcome.

Nursing

From early on there has been interest in the possibility of providing Master's level Nursing courses to personnel in the area from UAMS or another source. The primary obstacle to moving forward with this project is the possibility of competition with the University of Arkansas at Fayetteville, which may be planning to begin its own Master's Nursing program in the future. I have no concrete information as to whether or not this will happen and await the decision of the NWACC department of Nursing as to whether or not they feel comfortable in proceeding with this type of program. If and when this occurs, it will be necessary to work out an agreement with the provider, either UAMS or UAF if they choose to deliver by CIV, and schedule the class rotation necessary for the degree plan. The participating students would of course be enrolled in whatever graduate institution was providing the curriculum, eliminating any potential conflict with the college's mission as a two-year institution.

The workability of a Nursing degree by CIV will be similar to the Dental Hygiene program. Any elements of the program that cannot be delivered by CIV will need to be addressed at the start so that students will be aware of all requirements they must meet.

ESL

NWACC has received considerable grant moneys for their English as a Second Language program. It seems natural then to consider the possibility of conducting these classes over compressed video. Unfortunately, the program is limited to the immediate districts in which the college resides. This fact automatically disqualifies the possibility of compressed video classes in this program for the time being as the distance and travel time for the target population to attend these classes is extremely reasonable, even if there were compressed video facilities available to transmit to. If the state structure for these classes changes or if there arises a need for interdistrict cooperation in class delivery, then such circumstances will necessarily require the consideration of compressed video as a potential delivery system. As to the practicability of the subject matter for the media, I have personally sat in on a Spanish class conducted by CIV (a project sponsored by Southwestern Bell). That class appeared to function very efficiently. ESL classes are certainly a possibility in the future if the circumstances allow.

Concurrent Credit Classes with Local School Districts

The College's Step Ahead program for concurrent high school and college credit offers a number of possibilities for the use of CIV, if the area school districts obtain the necessary equipment. There is the possibility of writing a grant in cooperation with the local districts and perhaps UAF (which is doing some preliminary work with some of the districts already in this capacity) to obtain compatible CIV equipment (see Grant Idea below). The Springdale school district already has this equipment available thanks to the Jones Foundation. My sources tell me that at present it is little used and that there is interest in a project that would utilize the equipment. At present, the College's practice of hiring qualified high school faculty as adjunct college faculty to teach these courses precludes the use of compressed video as the instructors are already on site. However, if the school districts request courses for which there are no qualified local instructors, the option of delivering classes by CIV is already a consideration. North Arkansas Community and Technical College already provide a number of classes to districts in their area using a full motion video system provided by a grant written by the OUR Cooperative. While full motion is certainly a good delivery system, compressed video should be more than adequate for the target population described here, that is: college bound high school students.

There has been a strong indication that another Step Ahead partner, the Lincoln school district, is looking into obtaining videoconferencing equipment. I have not yet been able to ascertain whether this equipment will be compressed video or a full motion solution. The full motion delivery system would in all likelihood be ATM (Asynchronous Transfer Mode) which as I understand it, requires fiber-optic lines. In any case, Southwestern Bell has indicated that they are working on providing a gateway between compressed video sites and ATM sites. There is no indication yet whether the use of such a gateway would incur additional charges. In any case, if Lincoln does obtain videoconferencing equipment, they are a logical audience for CIV delivered Step Ahead classes.

If agreements can be worked out with these two school districts, it would seem likely that a run of successful CIV classes would encourage other districts to acquire the means to participate. Again, any grant moneys that can be obtained for this purpose will only serve to accelerate the process.

Social Sciences Classes

It is worthwhile to mention that the Springdale school district has had difficulty in finding faculty that are qualified under the Step Ahead program standards, to teach some of the Social Studies classes that they have requested (notably Western Civilization). If this situation does not change in the immediate future, this will provide a prime opportunity to pilot a Step Ahead CIV course to the district. This possibility is in fact already under consideration although no formal overtures have yet been made.

International and Multicultural Studies Classes

Along with the work of the Distance Education Subcommittee on Protocol listed above, there was a strong opinion from the members of this committee that one of the options for distance education classes

that needs exploring is the possibility of delivering classes that explore international or multicultural issues. The College has a diverse body of faculty members who could provide classes in this subject area. The consensus was that this is an area where the College could offer the rest of the state a unique resource, particularly other two-year institutions. There has been little else discussed in this area since then but it is definitely worth exploring. More will be able to be done as the protocol for class development falls into use.

Graduate Programs

The other major area that has been considered is the possibility of making graduate course from the University of Arkansas system available at the College for area teachers who wish to obtain graduate hours towards a degree. I discussed this possibility with the former Associate Dean of the College of Education, Dr. Mel Fratzke, before he moved on to his present post at John Brown University. Dr. Fratzke indicated that such classes were a possibility but felt caution should be exercised in making graduate hours available on a two-year campus so near to the University. A starting point for such a project would be to find College staff and faculty who were interested in such credit. If this could be done, then a natural audience would grow out of those classes. At present, it has been suggested that there is not a large body of faculty or staff who would be interested, due to the high percentage of faculty who possess doctoral degrees, although I know personally of at least two faculty/staff members of the College who are commuting to Fayetteville to take distance education classes by CIV. This is only a preliminary observation though and may be subject to change after further investigation. In retrospect though, this course of action will be a lower priority until a demand for graduate hours by CIV becomes apparent.

Other Distance Education Projects and Participation

Besides the classes and events that I have been trying to arrange, there have been other projects in which I have been active. Many of these are on a statewide level, involving other institutions. I have tried to make this list as comprehensive as possible.

Starnet

Starnet is the state network of educational compressed videoconferencing sites, also called the Video Users Group. The actual members are a collection of coordinators, facilitators and administrators from the institutions that use compressed interactive video. The organization's primary mission is to work together to resolve problems and create solutions for the state compressed video network. Member institutions in addition to NWACC include: The University of Arkansas at Fayetteville, The University of Arkansas at Little Rock, The University of Arkansas for Medical Sciences, Arkansas State University, Phillips County Community College, Westark Community College, The University of Central Arkansas, Pulaski Technical College and the Mid-South Center at UALR. The group meets at least once a month by videoconference. A Starnet listserve presently exists and is managed by the University of Arkansas Department of Computing Services. The president of the group is currently Dana French of UAMS. Bob Craig of UAF is the vice-president.

Secretary

I was recently elected to serve as secretary for Starnet 1996-97. My duties chiefly consist of producing and disseminating the minutes of the monthly meetings. I am also called upon to forward information to the listserve on occasions.

Proposed Website

The members have been looking for a way to better market the offerings in distance education that are available. One suggestion that has been offered by Dr. Jacqueline O'Dell, Bob Craig and myself has been to construct a Starnet website where links to member schedules and information could be made available on the WWW. The two alternatives that have been discussed are a single website, where all the members' schedules are kept and modified by way of an on-line database. The other, more popular solution, is for each member institution to create its own individual distance education webpage and link them from a central page, providing whatever information members would like to have on the central page. Plans are to create a demo page for members to scrutinize and then develop an actual page from that demo. I have volunteered to develop the demo page and have already performed some work in this area, having created a demo Starnet minutes page at Dr. O'Dell's request.

Guidelines and Cooperation

The main issue before Starnet in recent months is how better to create uniform operations between network members. At present, all network members are essentially independent contractors. As such, each site has its own policies and protocols for compressed video classes and meetings, including fees and charges for site usage. In addition, because of the manner in which the network has developed, some sites have relatively new equipment and a variety of connection options (standard state network, ISDN, bonded ISDN). On top of this, some members are also using full-motion video for classes aimed at the K-12 age group. The goal is to create guidelines at the state level that sites can use as a model for themselves to follow. Among suggestions is a statewide uniform fee system to avoid confusion and limit competition between sites. However, in all likelihood, the fee rates will be standardized up to the levels of the four year schools, rather than down to the levels of the two-year and technical schools. While this would increase revenue for schools receiving classes, it would make it considerably more difficult for smaller schools to produce classes as the usage rates would be unavoidable. I have put the suggestion before the group that we have a face to face meeting including administrators from each site to resolve these issues as efficiently as possible. The suggestion has been received with some interest, but there are no concrete plans for such a meeting at this writing.

Higher Education Consortium on Telecommunications

One of my first duties as Compressed Video Facilitator was to attend the Higher Education Consortium on Telecommunications meeting on October 30, 1996. This group is made up of administrators and staff from several higher education institutions around the state. The group's purpose is to cooperate in uses of telecommunications at all levels of higher education in the state of Arkansas. The meeting saw the group break up into committees. As I was attending in the place of NWACC faculty member Addie Adamson, I sat in on the committee she was listed with, **Emerging Technologies/ Cooperative Production**. Participating members of this particular committee, in addition to myself, were: **Gordon Watts** (Chair), Vice President of Instruction at *North Arkansas Community College, Harrison*; **Jack McCord**, Vice President for Academics at *Black River Technical College, Pocahontas*; **Susan Asbell**, Vice President at *Ouachita Tech College*; **Loretta Price**, Dean of Continuing Education at *UAPB*; **Harriet Frazier**, Dean of Instruction at *Pulaski Tech*; and **David Phillips**, Telecommunications Director at *University of Arkansas Community College at Hope* (Formerly Red River Community College).

The central issues that came under discussion in this committee were the kinds of technology that each institution was using, how we were using it, and how we could maintain the use of it. Growing costs were a primary concern, especially in light of the fact that the technological industry is heavily market driven. Emphasis was placed on finding the best solution for the best price, one that would last and be productive. Communication between technicians and administrators/faculty was another concern. The feeling was prevalent that each group often failed to communicate with each other, relying on their own terminology which was referred to as "edu-babble" and "techno-speak". Competition between institutions was yet another concern with some members feeling that such competition already existed and was becoming a problem. Finally, the committee discussed access to sites outside Arkansas. There is great interest in such access and the primary solution mentioned was ISDN which is a type of communications that allows point-to-point dial-up. This type of communications allows sites to dial each other directly without need for a central network provider such as Southwestern Bell. Unfortunately, the dial-up costs can be as high as or higher than a standard monthly T1 line charge.

The committees then met together for joint session that primarily consisted of a discussion of the AETN telecourse program. The joint session leader also mentioned that several listserves were now available to the consortium members although to date they have been little used. Finally, a training program in broadcasting classes and multimedia was set to occur during the spring. I received one follow-up notice about this program but do not recall ever receiving specific dates for such training.

Overall, each institution is clearly interested in the cooperative use of telecommunications technologies in higher education but it appears that it will be sometime before a more cohesive network develops.

Goals 2000 Users/Presenters Training

Through the influence of Bob Craig of the University of Arkansas, I was invited to participate in a project for the training of distance education users and presenters. The project is under the Goals 2000 umbrella and is sponsored by Dawson Education Cooperative, Malvern School District, Arkansas Educational Television Network, Arkansas Department of Higher Education and the University of Arkansas Medical Science Campus and the OUR Cooperative in Harrison, AR. In theory, the ultimate goal for the project is to create a training manual and program for teachers at all levels in Arkansas who will use some form of technology based distance education. In practice, the main technologies under consideration are those related to interactive video, both compressed and full motion. I went into the initial meeting with some ambivalence as Bob Craig and I have been independently working on our own training plan for compressed video users, based on our experience and a large body of information culled from the Internet. My interest in training solutions for our users overcame my doubts and the meetings provided some interesting perspectives, especially as many instructors who use the technology on a practical, everyday basis, were invited.

Hot Springs Meeting

The first conference was held in Hot Springs on November 3-4, 1996. The stated purpose of the conference was to convene Arkansas' *best, experienced*, distance learning (two-way, interactive systems) teachers to assist the planning committee through discussion and brainstorming about specific training needs and content for modular users/ presenters training in 1996-97. It began with an introduction to the purpose of the meeting and the project, including a brief examination of some of the technologies to be included. In addition, there was a report on information gathered about distance education programs in other parts of the country, which proved inconclusive. The participants were divided into groups which met over dinner. These groups would perform the bulk of the work the next day in a large brainstorming session. The session was structured to gain responses to questions on general issues in distance education. These responses would be discussed and then gathered to aid a second group in laying out the solid groundwork for a manual and program of training. The brainstorming session proved invaluable as a wide variety of perspectives on everyday issues were presented. The details ranged from which types of subject matter should and should not be taught using distance education and how they should be taught over each system, to the different ways in which the teacher/pupil relationship can be affected/enhanced by or in spite of the technology. Participants ranged from college instructors and high school teachers to technology professionals.

After the morning session, participants were invited to visit the Arkansas School for Math and Sciences to view a mathematics course by full motion interactive video. This demonstration proved to have an equal amount of strengths and weaknesses. The video and audio were broadcast quality but the remote monitor was split into 4 screens for much of the lesson which proved distracting. In addition, the day of our visit, the video at one of the sites failed leaving the viewers at other sites with an empty quarter of the screen. According to the organizers though, this kind of technical difficulty is not the norm for that particular version of full motion video.

Finally, the participants returned to the conference where each of the groups gave a report on their brainstorming session. The groups offered interesting perspectives and a general picture of the needs and concerns of those who use the system emerged. This initial meeting seemed fairly successful.

Ferndale Meeting

The next meeting was held on March 16-17 at the 4H Conference Center in Ferndale, AR just outside Little Rock. Again I was able to attend this meeting through the influence of Bob Craig of UAF. This meeting proposed to get down to the bare essentials of a training manual and program. The participants were introduced and presented the objectives of the meeting, which were to lay down the framework for a manual on distance education usage and presentation. After a brief review of the brainstorming work from the November conference, we were assigned to three groups. These groups were given the task of laying out the elements and needs of training in three areas: equipment usage, course development and teaching styles. The groups worked diligently at the task and came up with three alternative perspectives on how the training should be organized. Closer examination revealed that the difficulties of putting together specifics for a manual/training program were not suited to a two day conference/meeting. The second day was to have been for the groups to finalize the plan/outline but instead was structured so that each group would take two aspects of the training and list as many detailed suggestions as possible about that particular element. These suggestions would then be combined and molded into the manual by a smaller writing group to meet at a later time. It was announced that the plans for the project include pilot training sessions this summer at a variety of sites. At present, there has been no word on the writing group or when and where the initial training will take place.

Compressed Video Training Development with University of Arkansas

I have been working with Bob Craig, my colleague at UAF, on a training program of our own. The work has been done off and on throughout the Fall '96 and Spring '97 semesters and is approaching completion. From this point we plan to do a preliminary presentation (Learner Verification and Revision) and then initially use the training program with faculty from both the NWACC and UAF campuses. There are plans to offer the training to K-12 instructors as well. These plans depend upon what type of interactive video the local school districts decide to use and whether or not the Goals 2000 training plan becomes mandatory throughout the state. In any case, this plan will definitely serve the faculty at our respective institutions. The goals are to provide the faculty members with a background on distance

education, introduce them to the equipment (and offer practical experience on it) and discuss/practice the kinds of presentation and teaching skills that work best over the system.

Survey of Interest

In preparation for this training program, I prepared a survey to gauge faculty interest in and knowledge about the technology of compressed interactive video. The results have aided me in narrowing down who will participate in the training this summer. Of the 200 or so surveys that were sent out, only about 30-40 were returned. The majority of the faculty who responded were positive about the technology but not all felt that it could be applied to teaching classes in their subject area. A core group of potential trainees has been selected from the positive respondents and this group will be pared down to the initial training group, based on availability and need (those who will definitely use the system in the summer or fall).

Training Outline

The training outline that serves as the backbone for this plan has been heavily modified as we progress. The information used has come primarily from the Internet. The outline can be found in Appendix A.

Presentation Plan and Materials

In addition to the outline, we are developing handouts, a Power Point presentation and various strategies to use in presenting our material. The training will be conducted over compressed interactive video allowing the instructors a first-hand viewpoint from which to base judgments of the technology and its usage. Bob Craig and I intend to demonstrate as many possibilities as we can conceive of, so that instructors will be aware of what they can and cannot do over CIV. The initial training will probably take place in late June-early July. Included will be training for instructors who will use the system in the fall.

NWACC Faculty Training in Associated Technologies

In addition to the compressed interactive video training, I intend to conduct faculty training in technologies that can offer extra support to a distance education class. These technologies include e-mail, HTML (HyperText Markup Language)- the language of the World Wide Web, and multimedia presentation. The training will focus on introducing and applying these technologies in the distance education (and regular) classroom. Both the Business/Computer Department under Jerry May and Academic Computing Department under Kurtis Johnston have been encouraging about this plan and have said that facilities are available. I am hopeful that I will be able to conduct this training sometime during the summer as this seems to be the best time for the faculty. The first session will probably be on navigating the World Wide Web, followed by a primer on the basics of Web Page design for those who are interested.

Other Training

In addition to the training plans mentioned above, I will be participating in a one day training session for the College of Agriculture at the University of Arkansas. This training will be in conjunction with the University of Arkansas' compressed video department. NWACC will serve as a remote site for this training. The training itself will consist of an orientation and practice session for faculty from the College.

Grant Writing Class (Professional Development)

During the Spring semester I enrolled in an Educational Technology class, Grant Writing in Instructional Technology, for professional development. The course focused on the process of grant seeking, and writing. Each member of the class was expected to produce the paperwork associated with a grant proposal including a letter of inquiry, a pre-proposal (also called a concept paper), an abstract, and the actual full proposal. The full proposal included a need statement, objectives, plan of action, evaluation, budget with accompanying narrative, a PERT chart diagramming what will be done when, and a personnel narrative. I was able to take the course through my U of A faculty/staff discount. The course information and work has proved invaluable in helping me to realize what goes into a grant proposal in terms of time

and effort. Also invaluable were the perspectives of many of the guest speakers and the professor, Dr. James Swartz, who provided insight into what grant providers would fund (ideas) and what they would not fund (equipment).

Grant Idea-Regional K-12/Higher Ed. Interactive Video Network

In the Grant Writing Class it was strongly suggested that we attempt to take our proposals from class and, after first obtaining institutional approval, attempt to get them funded. This led me to strongly consider what needs could be met for the college and other institutions by compressed video. The result was an idea for a compressed interactive video network of rural school districts. The districts would each have a system and facilitator paid out of the grant. The network would center around the University of Arkansas and NWACC, who would provide concurrent credit courses over the network. The grant would also implement upgrades to the systems at the U of A and NWACC, bringing them up to the level of the new systems that would go into the school districts. The initial proposal is finished as of the end of the class. My next objective is to present the proposal to my supervisors, Dr. Jacqueline O'Dell at the CIT and Dr. Karen Hodges at NWACC, for evaluation and suggestions. The feasibility of the grant idea will depend upon several recent developments. The possibility of a compressed video system going to Lincoln and surrounding districts is one of these developments. The other is the possibility of the cooperatives statewide obtaining compressed video or some other interactive distance education delivery system. Finally, there is the possibility that the K-12 districts may wish to go to full motion video, which the U of A and NWACC have not yet adopted. However, in this eventuality, the grant could simply be altered to reflect the different technology and provide for new units rather than upgrades at the U of A and NWACC.

Other Events and Projects of Note

In addition to my normal duties as compressed video facilitator for NWACC, I have been asked to assist with or sit in on distance education events at the University of Arkansas either in person or by compressed video. These events primarily consist of demonstrations for visiting faculty, administrators or legislators. Some of the events involve alternative forms of distance education and offer a different perspective that may prove useful in the future.

Participation with University of Arkansas on Demos and Conferences

I have participated in several demonstrations for visitors to the University of Arkansas Distance Education room. Generally NWACC acts as a remote site and I facilitate the remote connection from there. However, on occasion I participate in Fayetteville. The majority of demonstrations are for administration and faculty who have never seen the equipment in use before. When unobtrusive, some of our visitors sit in on classes to see the teacher/learner dynamics on CIV. One of our demonstrations was viewed by a local journalist, Dana Gehringer, who wrote an article in the Morning News about the Prealgebra class. Some of the demonstrations and test connections I have participated in include demonstrations for international visitors. Professors from Scotland and an Education director from South Africa are among the visitors. In addition, I participated in a demonstration for Dr. Steve Floyd, the Deputy Director for Academic Affairs, Arkansas Department of Higher Education. I also had the privilege of witnessing the first ever international compressed interactive video connection to an educational institution in Arkansas. This videoconference originated from Australia and was conducted by ISDN at a cost of \$200 (US) per hour.

Assisted in Chancellor's Presentation to Legislature on Distance Education

In October the Joint Legislative Committee on Telecommunications met in Little Rock for presentations by the Chancellors of the University of Arkansas System on Distance Education. As part of these presentations, Bob Craig and I worked with former University of Arkansas at Fayetteville Chancellor Dan Ferritor and members of his staff on his presentation. The Chancellor's staff sent a computer presentation that we modified by adding pictures, also sent from the Chancellor's office, to his specification (much of the credit for these modifications goes to Bob Craig). A scan converter was used to connect the computer to the CIV system so that the presentation could be shown to the other sites. We then ran the technical part of the presentation for Dr. Ferritor, Bob Craig operating the cameras and myself advancing the presentation slides. The presentation appeared quite successful and Dr. Ferritor was very appreciative of the work done.

Participation in the Jason Project

I was also fortunate this year to be able to participate briefly in the **Jason Project**. Created by Dr. Bob Ballard, who is famous for his expedition that discovered the wreckage of the Titanic, Jason uses live satellite broadcasts and interactive connections via the Internet to educate K-12 students about science and technology. In particular, the program focuses on the sciences of geology, geography, anthropology, biology and zoology. The focus on technology centers upon the ways in which the information is being delivered. This year's program originated from Yellowstone National Park and Iceland. It focused on the geyser basin in Yellowstone and the volcanic activity that is its source. A team in Iceland was connected to Yellowstone by a version of compressed video (albeit one somewhat slower than our own). The footage from Yellowstone was broadcast live, with the exception of bad weather, by satellite to sites all over the United States as well as one site in Great Britain and another in Bermuda. Certain sites are called PIN (Primary Interactive Network) sites. At these sites students can interact with Dr. Ballard and the Jason personnel by asking questions and transmitting them along with a picture and a sound clip to Yellowstone by way of high speed communications lines the Internet. Selected students also were allowed to control a videocamera set atop Old Faithful Lodge which provided controllers a chance to navigate their way around the park with a built in compass and viewers with a variety of pictures of the geysers.

Although my own participation was limited to assisting with the recording of questions and one interactive camera driver, the experience proved very enlightening about the possibilities of distance education and both the strengths and weaknesses of the Jason Project have given me much to consider as we prepare to possibly invest in satellite technology of one form or another at NWACC.

NWACC Photos and Other Cooperative Efforts

As an employee of the University working at the College I have tried to be available to College faculty and staff to assist them in projects or areas where I have experience. This occurs as my schedule permits.

In the fall semester, Kurtis Johnston and I took photographs of the College for use on the NWACC website at some future date. We used a 8mm videocamera (my family's) to shoot video of various parts of the campus including the new lecture hall (White Hall), Allied Health, student art, the computer labs, and the Library. I then used a Macintosh AV (Audio/Video) computer in the Graphic Design lab to transfer selected frames to Adobe Photoshop, a bitmap photo-editing software package, where I converted the pictures into an Internet ready format (.GIF). Kurtis then loaded the photos on to the server for use at a future date.

I have also been asked to instruct advanced Graphic Design students in the basics of webpage design. This will occur in either the fall 97 or spring 98 semester.

Budget Information

Because of my unusual position working on the NWACC campus as a University employee but funded by NWACC, the budgetary information is largely dealt with by my supervisors. The overall amount paid to the University by NWACC was \$28,500. My present salary worked out over the nine-month contract to approximately \$2,333 per month before cafeteria plan and taxes. The standard University fringe benefits moneys (calculated at 23%) were on top of that amount. In addition, the moneys provided by NWACC to the University's Center for Instructional Technology allotted approximately \$300 per month for a Maintenance and Overhead budget that was primarily used to cover travel expenses and office supplies. The M&O moneys not spent remain in the CIT account from which my salary is drawn.

Expenses charged to the M&O account in the past year are listed below. There is at least one travel expense, for the Goals 2000 Ferndale conference in March, that is still outstanding and not included in this list. In addition there is the possibility that moneys from this account will be used to purchase equipment for distance education usage at NWACC.

<u>Item</u>	<u>Cost</u>
Office supplies (folders, stapler, pens, etc...)	\$40.69
Mileage-Little Rock Trip	\$107.52
Mileage-Hot Springs Conference	\$106.96
Office Supplies-Folders	\$2.50

In addition, the Office of the Dean of Instruction at NWACC (Dr. Hodges) covered a number of other expenses including my cellular (and only) phone, long distance (cellular phone and FAX), mail and copying.

The phone was procured on a contract with Alltel which offers 300 free minutes for \$50.00 per month, not including long distance charges outside the standard service area.

5 year Distance Education Plan

At the request of Dr. Bob Burns, President of NWACC, Dr. Hodges and I, with the input of others, have collaborated on a five-year distance education plan for the college. Like any long term plan, flexibility is extremely important. Because distance education relies so heavily on technology and technology changes so quickly, we must be prepared to change also. What this plan seeks to do is to establish goals and objectives for the College and provide guidelines for the future. The foundation of any successful long term plan will be the mission statement of the institution. The mission statement objectives provided a starting point for this plan.

The Mission Statement of NWACC-Objectives

There are seven objectives listed in the Mission Statement of the College:

1. To offer courses leading to associate degrees suited for transfer to the senior colleges and universities at the upper division level.
2. To maintain a quality library.
3. To offer courses leading to associate degrees and certificates in technical and vocational program areas.
4. To provide preparatory skill development in mathematics, reading and English for youth and adults whose previous educational achievements may have been insufficient to allow them to reach their personal or occupational goals, or to succeed in college-level courses.
5. To establish a cooperative effort with business and industry and local Chambers of Commerce to provide job entry-level skills, by retraining or upgrading.
6. To provide student services including, but not limited to, counseling and guidance, career exploration and assistance, and financial aid.
7. Quality of life enrichment courses will be provided in cooperation with the local programs RENEW and BEEP.

College Goals and Objectives for Distance Education

These objectives provide the basis for a number of proposed projects and goals. These ideas and concepts are listed below. Beside each of them is the Mission Statement Objective(s) to which they most closely correspond.

1. Academic Classes/Courses/Programs- Credit courses leading to degrees in academic, technical and vocational areas. Includes courses originated at NWACC as well as from other sites. (Objectives 1, 3).
2. International/Multicultural Courses- Academic courses, independent projects and events relating to international or multicultural studies. Includes cultural exchanges and demonstrations (Objectives 1, 7).
3. Seminars- Both business and academic. Informational and educational meetings, presentations and events scheduled either individually or as part of a class. Materials could be taped and made available in the Library (All Objectives).
4. Business and Industry Courses and Training- Courses to both local and remote businesses and industry. Includes OSHA and other government and safety courses. Also includes receiving courses not available on this campus (Objectives 3, 5).

5. Private Business Usage- Usage by area based businesses, Chamber of Commerce and others for training, communications and presentations both domestic and international (Objectives 3, 5).
6. ASCK Classes- Academic Skills classes to the University of Arkansas at Fayetteville and other area entities that demonstrate a need, including area families, nurses and secondary students (Objective 4).
7. Interviews- Interviews of individuals for job placement, financial aid, hiring, counseling, recruiting and other purposes academic, vocational or administrative (Objective 6).
8. Life Enrichment Courses- Courses aimed at life enrichment for elderly and other members of the community. Can originate from NWACC or other sites. Includes health and family related courses and workshops as well as arts and humanities (Objective 7).
9. Concurrent Credit (Step Ahead)- Dual credit courses with area high school districts in various subject matter (Objectives 1, 3).
10. Regional Interactive Network- Network of secondary schools linked to NWACC and UAF for facilitation of class exchange including Step Ahead and AP courses (Objectives 1, 3, 4).
11. Literacy Courses and Support- Courses aimed at improving literacy in the Northwest Arkansas community (Objective 4).
12. Community/Civic/Arts Usage- Use of facilities to transmit local community, civic or arts related events or programs to other communities throughout the state (Objectives 5, 7).
13. Teleconferencing- Interactive communications between NWACC site and remote sites both locally and around the state and world (Objectives 1, 3, 5, 6, 7).
14. GED and Tutoring- General Equivalency Diplomas/Degrees- High School Equivalency Tutoring and Training (Objective 4).
15. Adult Education Courses- Other Adult Education courses and training (Objective 4).
16. Telecourses- Courses based on professional video production originating from NWACC or another party (AETN, PBS, other institutions), tapes to be kept in the Library (Objectives 1, 2, 3, 5).
17. Vocational and Technical Courses- Classes and Programs in Allied Health, Fire Science, Nursing, etc... (Objective 3).
18. Classes and Job Training for Late Shift Workers- Academic and business courses and training for workers on shifts that preclude normal college attendance (Objectives 1, 3, 5).
19. Open Entrance/Exit Courses- Independent study courses for academic, technical or vocational credit as well as non-credit. Other uses as well, including life enrichment and informational (Objectives 1, 3, 5, 6, 7).
20. Library Video Resources Collection- Collection of distance education resources based in Library including credit and non-credit classes, workshops and seminars discussed elsewhere, as well as support materials for other classes and events (Objective 2).
21. Continuing Education Classes- Classes for those individuals who would like to continue their education outside of a degree plan for professional or personal development (Objectives 4, 7).
22. Support for All Classes- Support for classes, both traditional and at a distance, at NWACC (All Objectives).

In addition to these specific mission related goals, there are other goals and plans we are looking to that are not related specifically to the mission plan except as a whole. They are:

1. Continual Upgrade - Upgrading of facilities and equipment on a regular basis so as to maintain an effective program that is compatible with other sites and institutions.
2. Administrative Usage- Use of distance education facilities and equipment to facilitate administrative business and duties.
3. Cable Connection- Connect to area cable network to make public broadcast programming available.
4. Local Promotional Broadcast- A regular means to promote college plans and business as well as faculty, staff and administrative projects. One possibility is a cable TV show broadcast on a periodic basis.
5. Local TV Channel- Establishment of a channel on the district cable providers lines for broadcast of college events, news and programming.
6. Production and Broadcast Facility- Establishment of a facility for the production and broadcast of video programming from NWACC.
7. Downlink Unit- Acquisition of a downlink satellite unit to receive educational programming, classes and events.
8. Obtain Interactive Television Equipment- Obtain and maintain interactive television/video equipment as needed, including terrestrial and/or satellite solutions.
9. Develop an Interactive Network of Schools- In addition to a regional network with specific goals and objectives, establish a statewide network to facilitate communication and cooperative endeavors between state educational institutions. If necessary, join an already existing network(s) and encourage others to do so as well.
10. Interstate and International Courses and Cooperation- As the cost and technological barriers of telecommunications and information exchange declines and our communities become more global in focus, it will be necessary to make available interstate and international means of interactive communication by a variety of delivery options.
11. Cooperation and Course Exchanges- In order to make the widest possible variety of educational opportunities available to the community, we intend to establish cooperative relations with other schools in-state, domestic and international, including exchanges of courses and programs.
12. Move Compressed Video Equipment to the Central Educational Facility- Move CIV equipment into one of the new rooms on the east end of CEF at the end of the Fall 1997 semester.
13. Design and Build a Full-Time Permanent Compressed Video/Distance Education Classroom(s)- Construct a classroom(s) designed for interactive video, compressed or full motion and other distance education.

Within the framework of these objectives and goals, we must establish what forms of distance education technology are available to the College, either immediately or in the near future. At present, we have organized these technologies into four groups, all of which are interrelated in some fashion. They are:

1. Interactive Video (terrestrial- phone lines or fiberoptic), either Compressed or Full-Motion.

2. Telecourses, either Cable TV or Videocassettes. This technology can also make use of both Interactive Video and Satellite.
3. Satellite, either Analog or Digital (with the potential for interactivity).
4. Internet and World Wide Web.

In addition to these technologies are traditional correspondence, interactive CD-ROM and other forms of distance education. We have focused on the above four because they fit more closely into the College's existing plans and goals as described above.

Next we must identify which of the projects listed above fall under which technology. As mentioned before, several of the projects can be enacted over more than one technology, possibly at the same time. Therefore there will be some repetition as they are categorized below.

1. Interactive Video (terrestrial- phone lines or fiberoptic), either Compressed or Full-Motion.

Academic Classes/Courses/Programs
 International/Multicultural Studies
 Seminars
 Business and Industry Courses and Training
 Private Business Usage
 ASCK Classes
 Interviews
 Life Enrichment Courses
 Concurrent Credit (Step Ahead)
 Regional Interactive Network
 Literacy Courses and Support
 Community/Civic/Arts Usage
 Teleconferencing
 GED and Tutoring
 Adult Education Courses
 Continuing Education Classes
 Vocational and Technical Courses
 Continual Upgrade
 Administrative Usage
 Obtain Interactive Television Equipment
 Develop an Interactive Network of Schools
 Interstate and International Courses and Cooperation
 Cooperation and Course Exchanges
 Move CIV Equipment to CEF
 New Full-Time Permanent Classroom

2. Telecourses, either Cable TV or Videocassettes. This section can also make use of both Interactive Video and Satellite.

Academic Classes/Courses/Programs
International/Multicultural Studies
Business and Industry Courses and Training
Life Enrichment Courses
Literacy Courses and Support
Community/Civic/Arts Usage
GED and Tutoring
Telecourses
Adult Education Courses
Continuing Education Classes
Vocational and Technical Courses
Classes and Job Training for Late Shift Workers
Open Entrance/Exit Courses
Library Video Resources Collection
Support for All Classes
Cable Connection
Local Promotional Broadcast
Local TV Channel
Production and Broadcast Facility
Downlink Unit

3. Satellite, either Analog or Digital (with the potential for interactivity).

Academic Classes/Courses/Programs
International/Multicultural Studies
Seminars
Business and Industry Courses and Training
Private Business Usage
ASCK Classes
Interviews
Life Enrichment Courses
Concurrent Credit (Step Ahead)
Regional Interactive Network
Literacy Courses and Support
Community/Civic/Arts Usage
Teleconferencing
GED and Tutoring
Adult Education Courses
Continuing Education Classes
Vocational and Technical Courses
Continual Upgrade
Administrative Usage
Obtain Interactive Television Equipment
Develop an Interactive Network of Schools
Interstate and International Courses and Cooperation
Cooperation and Course Exchanges
Downlink Unit
Library Video Resources Collection
New Permanent Full-Time Classroom

4. Internet and World Wide Web.

Academic Classes/Courses/Programs (on-line classes)
International/Multicultural Studies (on-line classes and information/education)
Business and Industry Courses and Training (on-line classes)
ASCK Classes (on-line classes)
Interviews (desktop videoconferencing)
Life Enrichment Courses (on-line classes)
Community/Civic/Arts Usage
Teleconferencing (desktop videoconferencing)
GED and Tutoring (on-line classes)
Adult Education Courses (on-line classes)
Continuing Education Classes (on-line classes)
Vocational and Technical Courses (on-line classes)
Continual Upgrade
Administrative Usage
Support for All Classes

Each of these projects is feasible within the next five years provide that the funds are available and that the respective departments are willing to develop them.

In order to establish how each of these projects can be integrated into the plans of the College, we have established a recommended timeline under which these technologies can be implemented. This timeline is subject to change with the priorities and needs of the college, and also as the technologies that make them possible evolve and advance. It is important to note that similar items on the timeline may have widely differing start dates, depending on the technology used. This is merely a reflection of which technologies NWACC is currently using and which ones are still in the near future. The start times chosen are what we consider the earliest possible dates based on the time it will take to organize funding, materials, equipment and any divisional, departmental or institutional cooperation. Again, these dates are not absolutes and may change with priorities or if funding is unexpectedly made available.

**5 Year Distance Education Plan
NorthWest Arkansas Community College**

Technologies/Projects 1997-1999	key	Fall 1997	Spring 1998	Summer 1998	Fall 1998	Spring 1999	Summer 1999
Compressed Video							
Academic Classes							
International/Multicultural Studies							
Upgrade to Windows95/Pentium							
Seminars							
Business & Industry Courses							
Private Business Usage							
ASCK Classes to UAF							
Interviews (Personnel and Student)							
Life Enrichment Courses							
Administrative Usage (Meetings...)							
Concurrent Credit (Step Ahead)							
Regional CIV Network							
Literacy Courses and Support							
Vocational and Technical Classes							
Community/Civic/Arts Usage							
New Room (Temporary) in CEF							
Permanent Full-Time CIV Room							
Cable Television/Videotape							
Academic Classes							
International/Multicultural Studies							
TCA Cable Connection to NWACC							
NWACC Show on Local Cable							
GED Tapes/Tutoring							
Adult Education Courses							
NWACC Channel on Rogers & Bent.							
Broadcast & Production Facility							
Business and Industry Training							
Counseling Program							
Vocational and Technical Classes							
Taped Telecourses (Independent)							
Job Training for 2nd & 3rd Shift Workers							
Life Enrichment Courses and Programs							
Open Entrance/Exit Videotape Courses							
Library Video Resources Collection							
Technologies/Projects 1997-1999	key	Fall 1997	Spring 1998	Summer 1998	Fall 1998	Spring 1999	Summer 1999
Satellite (Analog and Digital)							
Downlink Unit							

**5 Year Distance Education Plan
NorthWest Arkansas Community College**

Interactive Satellite Equipment							
Interactive Satellite Network							
Satellite Video/Teleconferences							
Seminars and Other Business Courses							
Academic Courses							
International/Multicultural Studies							
Vocational and Technical Courses							
Interstate Broadcast Courses							
International Broadcast Courses							
Business Usage Domestic & International							
Continuing Education Classes							
Course Exchanges							
International Partnerships and Coop.							
Internet and World Wide Web							
WWW Support for Other Classes							
On-Line Classes							
Listserves for Classes							

**5 Year Distance Education Plan
NorthWest Arkansas Community College**

Technologies/Projects 1999-2001	key	Fall 1999	Spring 2000	Summer 2000	Fall 2000	Spring 2001	Summer 2001
Compressed Video							
Academic Classes							
International/Multicultural Studies							
Upgrade to Windows95/Pentium							
Seminars							
Business & Industry Courses							
Private Business Usage							
ASCK Classes to UAF							
Interviews (Personnel and Student)							
Life Enrichment Courses							
Administrative Usage (Meetings...)							
Concurrent Credit (Step Ahead)							
Regional CIV Network							
Literacy Courses and Support							
Vocational and Technical Classes							
Community/Civic/Arts Usage							
New Room (Temporary) in CEF							
Permanent Full-Time CIV Room							
Cable Television/Videotape							
Academic Classes							
International/Multicultural Studies							
TCA Cable Connection to NWACC							
NWACC Show on Local Cable							
GED Tapes/Tutoring							
Adult Education Courses							
NWACC Channel on Rogers & Bent.							
Broadcast & Production Facility							
Business and Industry Training							
Counseling Program							
Vocational and Technical Classes							
Taped Telecourses (Independent)							
Job Training for 2nd & 3rd Shift Workers							
Life Enrichment Courses and Programs							
Open Entrance/Exit Videotape Courses							
Library Video Resources Collection							
Technologies/Projects 1999-2001	key	Fall 1999	Spring 2000	Summer 2000	Fall 2000	Spring 2001	Summer 2001
Satellite (Analog and Digital)							
Downlink Unit							

**5 Year Distance Education Plan
NorthWest Arkansas Community College**

Interactive Satellite Equipment							
Interactive Satellite Network							
Satellite Video/Teleconferences							
Seminars and Other Business Courses							
Academic Courses							
International/Multicultural Studies							
Vocational and Technical Classes							
Interstate Broadcast Courses							
International Broadcast Courses							
Business Usage Domestic & International							
Continuing Education Classes							
Course Exchanges							
International Partnerships and Coop.							
Internet and World Wide Web							
WWW Support for Other Classes							
On-Line Classes							
Listserve for Classes							

**5 Year Distance Education Plan
NorthWest Arkansas Community College**

Technologies/Projects 2001-2002	key	Fall 2001	Spring 2002	Summer 2002
Compressed Video				
Academic Classes				
International/Multicultural Studies				
Upgrade to Windows95/Pentium				
Seminars				
Business & Industry Courses				
Private Business Usage				
ASCK Classes to UAF				
Interviews (Personnel and Student)				
Life Enrichment Courses				
Administrative Usage (Meetings...)				
Concurrent Credit (Step Ahead)				
Regional CIV Network				
Literacy Courses and Support				
Vocational and Technical Classes				
Community/Civic/Arts Usage				
New Room (Temporary) in CEF				
Permanent Full-Time CIV Room				
Cable Television/Videotape				
Academic Classes				
International/Multicultural Studies				
TCA Cable Connection to NWACC				
NWACC Show on Local Cable				
GED Tapes/Tutoring				
Adult Education Courses				
NWACC Channel on Rogers & Bent.				
Broadcast & Production Facility				
Business and Industry Training				
Counseling Program				
Vocational and Technical Classes				
Taped Telecourses (Independent)				
Job Training for 2nd & 3rd Shift Workers				
Life Enrichment Courses and Programs				
Open Entrance/Exit Videotape Courses				
Library Video Resources Collection				
Technologies/Projects 2001-2002	key	Fall 2001	Spring 2002	Summer 2002
Satellite (Analog and Digital)				
Downlink Unit				

**5 Year Distance Education Plan
NorthWest Arkansas Community College**

Interactive Satellite Equipment				
Interactive Satellite Network				
Satellite Video/Teleconferences				
Seminars and Other Business Courses				
Academic Courses				
International/Multicultural Studies				
Vocational and Technical Classes				
Interstate Broadcast Courses				
International Broadcast Courses				
Business Usage Domestic & International				
Continuing Education Classes				
Course Exchanges				
International Partnerships and Coop.				
Internet and World Wide Web				
WWW Support for Other Classes				
On-Line Classes				
Listserves for Classes				

Summary and Conclusions

Although the initial process of starting up classes has been slow, I believe that this period has given NWACC a chance to see what kind of commitment is necessary to build a successful distance education program. I also believe that NWACC is committed to such a program and look forward to participating in its development.

Key to the success of the Prealgebra class was faculty involvement and enthusiasm. In my opinion, this will continue to be the most important factor towards building a successful program. Without the support and interest of those who will develop and teach the classes, distance education cannot flourish. Because distance education takes extra work and preparation when compared to regular classes, teachers must be committed to producing the finest classes possible. Some faculty will avoid using, or attempting to use, the technology. This will occur for a variety of reasons, from lack of compatibility between subject and medium, to lack of a distant audience for their subject matter. Regardless of whether or not faculty members use the equipment and technologies, their support is paramount in encouraging those who do have the opportunity to teach at a distance. At present, NWACC faculty have a very positive attitude toward the new technologies and several faculty members have expressed personal interest in particular elements of the distance education program. If we are able to nourish this attitude, the future will be bright for distance education at NWACC.

The administration has always maintained a positive and forward-thinking attitude towards distance education and is very future minded. Despite this, they have maintain a patient and thoughtful approach towards the implementation of these technologies. My feeling is that growth will begin to accelerate as institutional elements of the program fall into place, such as the Guidelines for Use and the 5 Year Distance Education Plan. The President and the Board of Trustees have already approved the relocation of the compressed video equipment to the main campus building, indicating that distance education is a priority at NWACC.

It has become apparent to me in the last year or so that distance education is approaching a watershed period of growth and utilization. Regional telecommunications companies are marketing distance education technologies more aggressively than ever and costs are dropping. In addition, many public school districts in Arkansas are now interested in joining the higher education institutions in the state who have utilized this technology for some time now. Those same institutions are looking towards improving their equipment and expanding their options.

As the technologies improve, satellite costs decline and the Internet is upgraded to faster and faster transmission capabilities, distance education will become commonplace in schools. Already most computer users with access to the Internet can directly videoconference with anyone in the world, provided they have the right equipment. As video compression and access speeds improve, the possibility exists that students will be able to attend classes from their home desktop someday, communicating with instructors from around the world. While those days are still ahead of us, we need to be aware that the kinds of technologies found in distance education will only become more common and will continue to alter the traditional paradigms of classroom communication. As we work now to utilize the technologies we have at our disposal, we must ever keep one eye on the future so that when it arrives, we will be ready to meet it.

Appendix A

Training Outline

I. What is Distance Education?

A. Definition

1. Garrison and Shale's Definition (1987)

- a. Distance education implies that the majority of educational communication between teacher and student occurs non-contiguously.
- b. Distance education involves two-way communication between teacher and student for the purpose of facilitating and supporting the educational process.
- c. Distance education uses technology to mediate the necessary two-way communication.

B. Why Teach at a Distance?

1. Reach a Wider Student Audience
2. Meet the Needs of Students Who are Unable to Attend On-Campus Classes
3. Involve Outside Speakers Who Would Otherwise be Unavailable
4. Link Students from Different Social, Cultural, Economic, and Experiential backgrounds.

C. History

1. First Generation- Non Communicative

- a. 1700-1900 Correspondence

2. Second Generation- Production and Distribution of Teaching Materials- Distance Learning (Studying)

- a. 1920's Slides and Motion Pictures
- b. 1930's Instructional Radio
- c. Late 1940's -1950's Instructional Television
- d. 1960's-70's Audio and Video Tapes
- e. 1960's-70's Educational Television Stations
- f. Late 1960's-1970's Microwave Transmissions

3. Third Generation- Interactive Communication- Distance Education (Teaching)

- a. Audioconferencing (Teleconferencing)
- b. Computer Based
 - (1) Audiographics
 - (2) Internet (E-Mail, WWW...)
- c. Videoconferencing (Save strengths/weaknesses-in detail later)
 - (1) Compressed Video
 - (2) Full Motion
 - (3) Desktop Videoconferencing

4. Two Forms of Distance Education

- a. Traditional Correspondence- Based
- b. Telecommunications -Based

II. What is Compressed Interactive Video?

A. How it works

1. Compression (CODEC:COder-DECOder) A Large Amount of Information Sent Through a Small Pipeline.
2. Audiovisual Effects Caused by Compression.
 - a. Video Delay and Ghosting
 - b. Audio Delay and Clipping (Echoing)

B. Equipment

1. Demonstration
2. Practice

C. The Basics of Presentation

1. Dress

- a. Solid Dark or Neutral Colors
 - b. Avoid Bold, Complex Patterns
- 2. Consider How You Like to Present
- 3. Maintain Appropriate On-Camera Position
- 4. Move and Gesture Slowly and Smoothly
- 5. Make Eye Contact with the Camera Lens and the Audience at Your Location.
- 6. Speak in a Strong, Clear Voice- Adjust to the Audio Delay
 - a. Double Usual Wait After Questions and Comments
 - b. Reiterate Remote Comments
- 7. Maintain Enthusiasm for Technology and Subject Matter
- 8. Know Your Audience
 - a. Communicate with Remote Participants by Name or Location
 - (1) Make a Roster and Seating Chart for All Sites
 - (2) Use Participant Names
 - (3) Open with an Informal Roll Call
- 9. Acquaint Audience with the Technology
 - a. Establish Audience Protocol and Etiquette
 - (1) Speak in a Strong Steady Voice
 - (2) Be Courteous of Your Fellow Participants
 - (a) Take Turns Speaking
 - (b) Keep Noise to a Minimum
 - (3) Inform the Instructor of Technical Problems
 - (4) Interact! CIV is not Television.

D. Audio-Visual Aids

(Preview on Compressed Video before Using!)

- 1. Overheads and Computer Presentations
 - a. Essential Visual Principles
 - (1) Use Visuals When Appropriate
 - (a) Communicate the Idea
 - (b) Aesthetics
 - (2) Text
 - (a) Size
 - (b) Style
 - (3) Landscape Orientation
 - (4) Margins and Essential Area
 - (5) Color
 - (a) Hot and Warm Colors Vs. Cool Colors
 - (b) Backgrounds
 - (c) Text and Foreground Graphics
 - (d) Contrast
 - (6) Arrangement
- 2. Pictures, Slides and Photos
- 3. Video (Videotapes and Computer Generated)
 - a. Keep it Brief
 - b. Preview the Video, Check Audio and Other Technical Elements
- 4. Documents

5. Handwritten Notes
 - a. Contrasts
 - b. Readability
 6. Real Objects / Demonstrations
 7. Internet
 8. Other (Audio cassettes & CDs,)
- III. Teaching on Compressed Interactive Video
- A. Adapting Teaching Strategies for Classroom Presentation with Interactive Video
 1. Humanize the Course by Focusing on the Students not the Delivery System
 2. Pre-Class
 - a. Encourage Classroom Interaction
 - (1) Give Students Experience with the Equipment
 - (2) Encourage Interaction Between Sites
 - (3) Warm-Up Activities
 3. Beginning of Class
 - a. Informal Roll Call
 - b. Questions and Answers
 4. The Lesson
 - a. Preview the Lesson Objectives
 - b. Short Instructional Segments (15-20 minutes)
 - c. Plan with Interaction in Mind and Alternate Learning Activities

(1) Brain Storming	(11) Individual Practice Exercises
(2) Buzz/Breakout Session	(12) Interview
(3) Case Study	(13) Lecture
(4) Debate	(14) Panel Discussion
(5) Demonstration	(15) Reactor Panel
(6) Discussion	(16) Role Playing
(7) Field Trips	(17) Questions and Answers
(8) Group to Group Discussions	
(9) Group Work Sessions	(18) Trigger Video
(10) Guest Speaker	(19) Video Clips
 - d. Summarization of the Lesson and Student Feedback
 5. End of Class
 - a. Evaluate the Day's Lesson and Technology- Revise as Necessary
 - (1) Student-Teacher Interaction
 - (2) Time Management
 - (3) Technical Aspects
 - (a) Are the Students Comfortable with the Atmosphere
 - (b) Is There a Better Way to Utilize the Technology?
 - (c) Were the Materials Effective?
 6. Other
 - a. Visit Remote Sites if Possible
 - B. Support Issues
 1. Administrative Support
 - a. Instructional Materials
 - (1) Work with Facilitators (Local and Remote) to Provide Materials (Tests, Handouts, etc...)
 - (2) Keep a List of Addresses for Mailing Materials

b. Support Technologies

(1) Telephone and FAX

(a) Have a List of Telephone Numbers (Facilitators, Rooms, Students, FAX)

(2) E-Mail and Listserves

(3) WWW

(a) Institutional Homepages

(b) Class Homepage (Administrative Information, News, Scheduling, Registering for the Class, etc...)

2. Instructional Support

a. Be Available

(1) Set Office Hours When You May be Reached by Phone

(2) Provide a Variety of Ways for Students to Communicate with You

(3) Arrange Schedule to Come Early to Class and Communicate with Remote Students

b. Make Student Support as Equitable as Possible

(1) Be Aware of Available Support Facilities at Remote Sites (Libraries, Learning Labs, etc...)

c. Support Technologies

(1) Be Available for Communication.

(a) Telephone and FAX

(b) E-Mail and Listserves

(2) Supplemental Student Support

(a) Stand Alone Software Packages

(b) Audiotapes and Videotapes

(c) WWW

(i) Class Homepages (Instructional

Information, Syllabus, Examples, etc...)

(ii) Subject Related Websites

IV. Summary and Conclusions

A. Distance Education Exists to Help Meet the Instructional Needs of Remote Students

1. Identify Your Audience (Who Needs this Course and Why Do It by Distance Education?).

2. Make Sure the Use of the Technology is Appropriate for

a. The Audience (Remote AND Local)

b. The Course Objectives

(Not technology for its own sake)

3. Interactivity

B. Teaching Strategies to Remember

1. The Teacher/Student Relationship is Still the Primary Learning Relationship.

2. Interact With and Involve Your Students With the Lesson (Don't Be a Talking Head!).

3. Use a Variety of Resources to Communicate With Your Student.

C. Become Familiar With Whatever Technology or System You Use.

1. You Don't Have to Be an Expert.

2. Be Aware of the Possibilities and Limitations.

3. Know Where to Get Help.

This outline is subject to further revision.

Report by Clint Brooks
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Distance Education Guidelines are based on
the Recommendations of the Distance Education
Subcommittee on Protocol,
NorthWest Arkansas Community College

5 Year Distance Education Plan by
Dr. Karen Hodges and Clint Brooks
with the assistance and input of NWACC faculty and staff

Training Outline for Compressed Video
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