

**Impact of the Distance Learning Initiative on the Resident Program  
and  
A Proposed Plan for Implementing Common Objectives**

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## **Abstract**

A great deal of confusion has been generated by recent announcements about fundamental changes to the educational program at Masters Institute. This confusion has been deepened in the multimedia faculty because we have not seen specific and detailed guidelines of the new education program and because there are serious (and I believe legitimate) concerns about its implementation. Four main goals, however, have been articulated by Mark Adams: 1) replacing the Macintosh Operating System with the Microsoft Windows Operating System for all multimedia software, 2) incorporating more internet/web technology into the curriculum, 3) implementing a Distance Learning program that uses an exclusively PC/Web delivery system, and 4) harmonizing the "Distance" and "Residence" programs so that they offer a virtually identical educational experience for both types of students.

This document seeks to elucidate the reasons for the present state of confusion, discuss challenges with the present strategy to implement Distance Learning, describe an optimal strategy for implementing the Distance Learning, and propose a plan to accomplish our goals in a more manageable and efficient manner.

## **Assumptions About Distance Learning**

Unfortunately, the impression of the overall program that has been given is two-fold and divergent: 1) that the Distance Learning (DL) component will simply "adapt" the present AS and BS programs for a multimedia delivery, and 2) that both the AS and BS programs will fundamentally change to reflect the requirements that DL has for incorporating its PC/Web design specifications. These approaches are, of course, mutually exclusive — the former representing a slight paradigm shift of material delivery, and the latter a radical change that effects all aspects of pedagogy... computer operating system platform, educational outcomes, records automation, progress tracking and grading, and instructional modes.

The expectation is that the Residence Program (RP) will eventually catch up with the advances being made in DL; that it will be changed as a result of the work being done to bring the DL program on line. Two methods to accomplish this have been discussed: 1) to incorporate changes to individual RP courses as the corresponding course is developed for DL, and 2) to begin changing the Resident program in the higher 3D portion of AS classes (introducing new 3D software as well as the PC platform), working up towards the BS level, then changing the lower level courses. The first approach, that of developing both program changes concurrently, has the advantage of design cohesion. It has the disadvantage of taking a good deal of time to implement. Given the present rate of changes in the computer industry, we run the risk of teaching already obsolete applications by the time we create adequate course material to cover them. The second approach, to develop curriculum separately, requires that development is done in an unsynchronized manner for both programs.

## **Challenges With The Present Implementation Approach**

At the present time all effort seems to be focused on implementing the DL aspect of the education program as soon as possible. An impressive amount of development work on web pages explaining the program, individual course designs, scripts for follow-along videos, web-based assignments, and databases, has been done. Because Multimedia instructors are expected to participate in both the DL and Residential portions of the program they have been asked to perform as Subject Matter Experts (SMEs) to assist in facilitating the DL web-based instructional designs.

## DL/RP Implementation Proposal

Because video tapes will be required for the DL programs, some instructors have been approached to videotape their (or other instructor's) lectures and demonstrations. Both prospects have been presented as "opportunities" for the instructors involved to learn how to do instructional development for web-based material, for them to spend quality time with the DOS-Windows operating system, and for them to make a contribution to the curriculum they will eventually be required to teach.

While running the risk of possibly angering some, please allow me to apologize in advance, but also state that admonitions towards the Multimedia faculty to participate in the DL program have been clumsy at best and heavy-handed at worst. The very real prospect of possibly losing your job because you do not feel prepared to participate is implied. Even though participating in the development of DL material may involve a substantial investment in time and effort on the part of an individual faculty member, there has been no additional incentive offered to do so. The arguments cut both ways... Masters has the prerogative to change its instructional delivery operating system and its method of instruction, and can expect (within reason) that its instructors make curriculum changes as required, while on the other hand, Instructors have a right to expect that the rules of the instruction game are not changed in mid-stream; that their jobs should not be threatened because of it, and that Masters would need to compensate any multimedia professional for performing these kinds of additional services.

Please refer to the attached Figure 1 - Present Implementation Strategy. This graphic illustrates some of the problems which can be viewed as inherent in the present implementation strategy. Most notably, the Instructors will be required to participate in both DL and RPs without a clear idea of how to reconcile the responsibilities of both. This is mainly because course material is fixed for DL students. If a DL student is having trouble keeping up with the rest of the class there are no clear mechanisms in place to correct for this. How exactly will an Instructor manage such timing and pacing problems from a distance? How will an Instructor manage grading for both students? Will there be extra pay for developing additional material for DL students, such as attending chat lines, or managing projects from a distance?

Another major question is how much interaction will there be between the Instructors and the DL program? Will there be an effective and timely mechanism in place to make course changes? Will the web-based course material be flexible enough to accommodate the minor day-to-day adjustments to course material that Instructors make? How will suggestions for changing, improving, or complaining about the DL policies and course material be made?

Because the Bachelors Program is not yet implemented on the Residence side of the equation, DL is now forging ahead with its own version of how the program should look. This means that there is even less of an opportunity to define what the differences are between DL and the Resident program. Instead of having a solid Bachelors program in place with which to draw a curriculum from, the two programs will be in direct competition for resources.

All the questions raised above not only require a *significant* investment in time, money, and personnel resources in order just to answer, but additionally once the answers are found still further resources will be required to execute our plans.

The salient problem in the present strategy to implement the DL program is that it actually places the Instructor too far outside the teaching loop. The feedback mechanism is faulty because too many changes are required to the present system of delivering course material, there are presently no tools available to automate record-keeping for both modes of teaching, and there is no adequate design philosophy in place to integrate both modes of teaching (Distance and Residence). Under the present implementation strategy, the instructor may or may not have adequate automation tools

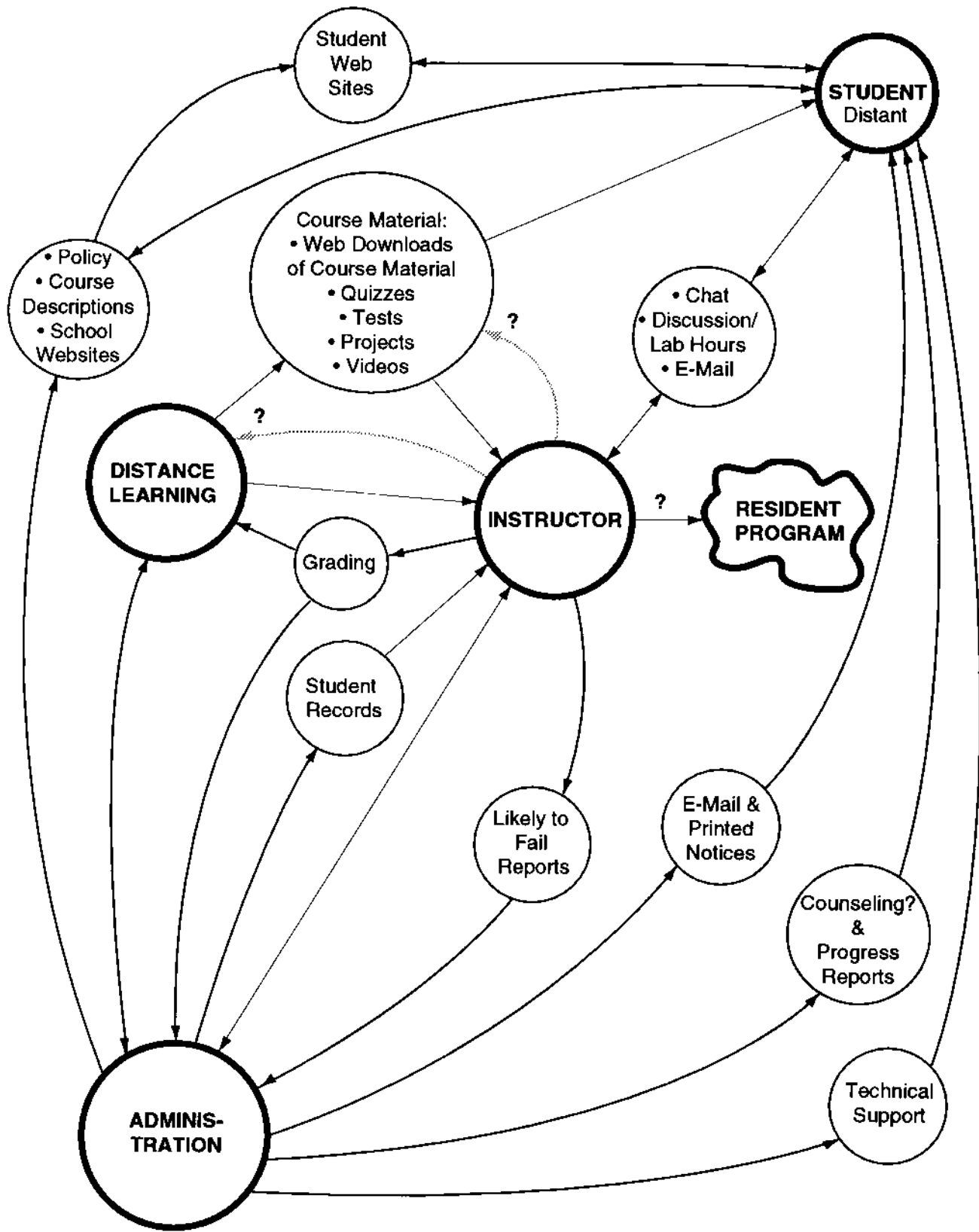


Figure 1 - Present Implementation Strategy

at his or her disposal, there are two clearly separate types of students with (initially) clearly separate means of interacting with them, the DL program drives the timing and content of course delivery, and the Instructor who teaches in the RP may or may not have any interaction with an Instructor who teaches in the DL program.

### **An Optimal Implementation Strategy**

Refer to Figure 2 - Preferred Implementation Strategy. This graphic illustrates what can be viewed as a more balanced, structured, and achievable strategy to implement changes to both programs. This is based upon several fundamental concepts: 1) that the Instructor should be the primary course provider and that the technology or method to deliver that material should be as transparent as possible, 2) that development of methods to automate the educational system experience should be shifted from the technology of course delivery to providing the Instructor, the Distant Student, and the Resident Student with tools to best emulate as “virtual” a classroom as possible, and 3) the system of instruction should not be dependent upon any particular hardware or operating system.

Essential to these concepts is the development of intelligent, easily configurable, and powerful relational databases. These databases will provide a high degree of automation by allowing easy access to, and creation of, pertinent student records, such as attendance, likely to fail reports, progress reports, and grades. Quizzes and tests should be automated as much as possible, so that software can handle much of the grading, and class size will not be as much of an issue. This will allow Instructors to concentrate on more project-oriented educational activities. Such powerful relational databases to be developed will also radically improve communication between Administration, Instructors, and all Students. Automation of the educational process through the use of sophisticated database and expert systems will ensure that the Instructor/Student relationship is *improved* by technology, and not hindered by it.

Figure 2 shows that students are both distant and resident, and that the DL program is closely linked to the administration. This means that students who live within driving distance of Masters Institute should be able to take advantage of DL features. Both Instructors and resident-distance students should be able to access the Masters Institute web pages, regardless of the operating system they are using (Mac, PC, UNIX, future OS) and interact with it. This kind of cross-platform delivery of HTML and database functions will be most certainly be needed at all times, and should be included into our *present* system development efforts.

An ideal implementation plan should allow for more change-related interaction between Instructors and all students. For example, there should be provisions for “Feeds” in real time (and/or digitally stored for web delivery) for both DL and Resident students. Under the present implementation plan instructional changes will likely not be easily incorporated into course material. One thing to carefully consider is the fact that the serendipity, spontaneity, relevance, and timeliness of “live” teaching cannot be replaced by any technology. Therefore, our development goals should be to provide DL students with an ability to view (and possibly participate in) classroom environments as much as possible, rather than focusing solely on “canned” delivery. Figure 2 illustrates the feedback loops necessary to accomplish this goal.

What is apparent in an examination of the means to accomplish our goals is that Masters Institute must make changes — not only to the way it develops DL methodologies, incorporating more internet/web technology into the curriculum, and replacing instructional operating systems — but that it must also make extensive, well-planned, and highly coordinated changes to its database capability, and information management *infrastructure* as well.

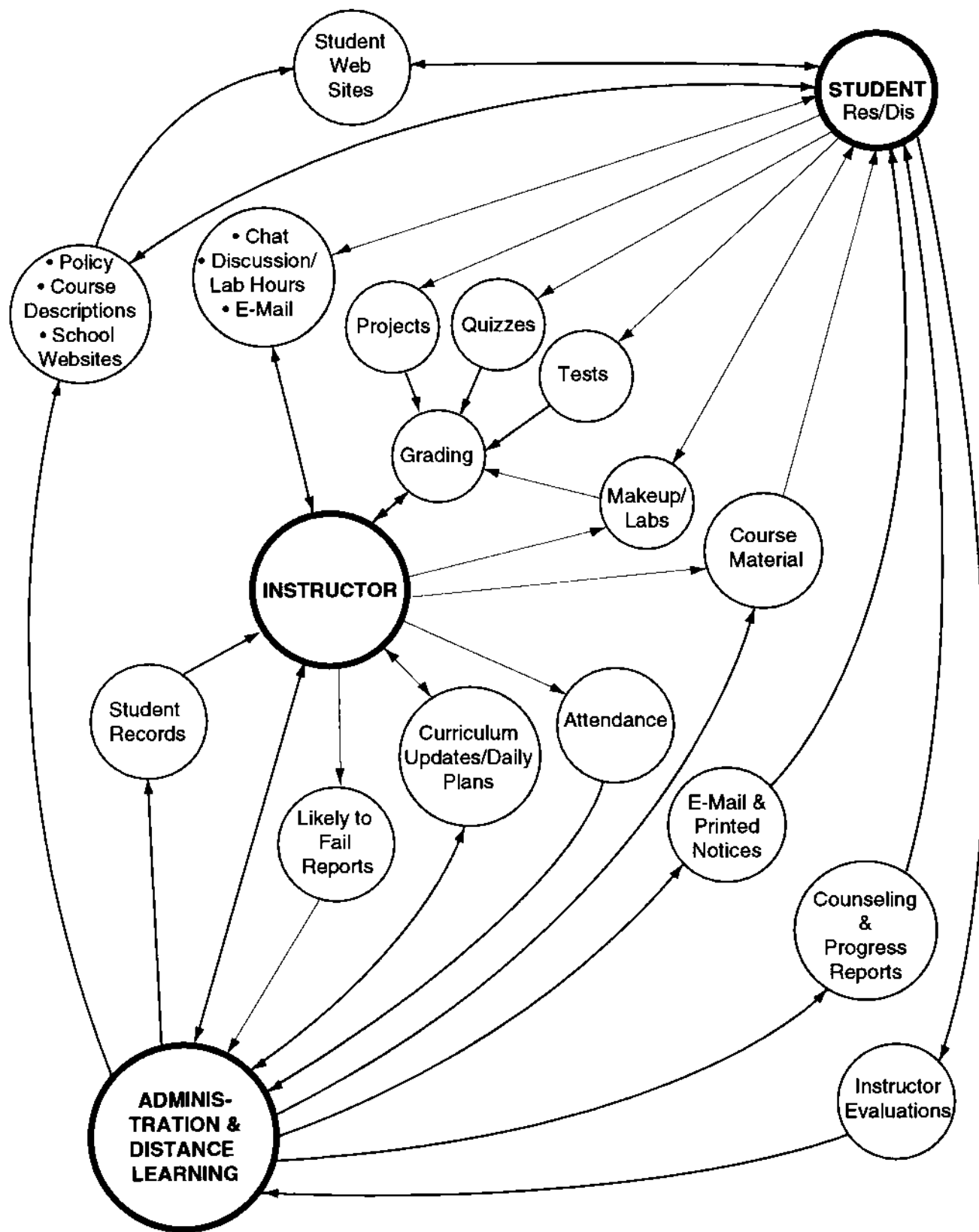


Figure 2 - Preferred Implementation Strategy

## A Multi-Track Development Proposal

Our goals for the overall Education Program at Masters can be thusly stated:

- 1) Replacing the current multimedia software delivery operating system
- 2) Incorporating more internet/web technology into the curriculum
- 3) Implementing a Distance Learning program
- 4) Harmonizing the material in Distance and RPs

Given these facts, some very important questions arise. What happens if the DL program takes longer to develop than planned, is not able to overcome the significant challenges it faces, or does not prove to be a viable program at this time? Why shouldn't students in the resident program be able to take advantage of DL technology? Why do the two programs need to "track" each other after all? By moving exclusively to the PC will we fall into the trap of not providing cross-platform training to our students? How can we capitalize on the advantages of the resident program while maintaining a high level of excellence for DL students? How can we assure our faculty that their contributions will be valued?

At this point, given the lack of an adequate database infrastructure, attempting to reconcile, harmonize, or otherwise merge the two programs will cause more conflict and confusion than is wise — since ultimately both programs must use a jointly designed information system in the future. By attempting to bring both programs to our common goals while simultaneously using the same resources damages both. On the other hand, developing either or both programs without simultaneously upgrading our database and records management capabilities may prove to be disastrous.

We propose a three-track approach... one which will hopefully allow us to prioritize our efforts and maximize the relative strengths of each functional group (DL, RP, and Administration). For purposes of discussion we refer to the "Administration" as that entity which will create the automation tools necessary to perform the record-keeping and student-teacher communication functions (Victor's group?). Our proposal is comprised of the following parts:

- 1) That DL and RP both coordinate *independently* with the Administration to develop databases and other performance enhancing technologies to ensure that the instructor is provided with the best environment for teaching and that both types of students benefit from the technological improvements we will make.
- 2) That the RP develops a curriculum that is PC-based and web-capable to be put in place over the next year for both the Associates program and the Bachelors program. This will ensure that the advantages of the resident program can be fully explored and a course of education can be developed that exploits these advantages where possible.
- 3) That DL develops a curriculum that is PC-based and web-deliverable, which is developed solely with outside sources, and independent from the RP faculty resources. This curriculum should be based upon what is currently being taught at Masters Institute in the RP, and not changed to accommodate for web delivery. This will ensure that the advantages of Distance Learning can be fully exploited. It will also ensure that the inevitable changes for such an on-going developmental project will not adversely affect the resident program.

## DL/RP Implementation Proposal

- 4) That the DL and RP "harmonize" the separately developed courses as much as possible, and whenever possible. However, priority should be given to the RP, since its curriculum is already accredited. In addition, DL should not develop curriculum independently of the RP if a desired course does not currently exist. In such cases, DL should submit a plan for such a course to the appropriate RP heads for approval and/or modification before implementation.

Having the RP be involved in the design and creation of applications for databases and record-keeping is a very good idea. After all, many of the people involved in DL at this point actually came from the RP faculty. There is a great deal of talent and expertise waiting to be tapped, if used appropriately — in fact, several instructors in the Multimedia Department have already developed such tools, capable of running on both Macintosh and PC platforms that provide automatic quizzes, record-keeping, grading, course outlines, and project outlines. These programs have all been written in high level object oriented programming languages that are network-compatible and web-compatible. They can be smoothly integrated into an overall MIS framework, plus they would have the additional advantage of being developed by faculty who is intimately familiar with the requirements.

Even though the ultimate plan is for the RP and DL to be using the same platform (PC-Windows), many technical issues stand in the way of a smooth implementation. For example, a PC optimized for multimedia may not offer the same price-performance capabilities for network and systems training. Hardware configurations for DL hardware and software may simply not be appropriate, or necessary in the RP. Already it can be seen that vendors of both hardware and software may not cooperate with Masters Institute's plans to offer their products for an educational discount at a distance. Licensing issues have already prohibited the use of SoftImage over the network. The RP would like very much to teach SoftImage on the PC. Would we be forced to teach another program simply because it is network friendly? This is only one of many examples of the kinds of developmental and technological issues that *will* stymie the DL as it moves towards developing its programs. If the RP is also tied to these kinds of issues, and is not free to develop towards our common goals independent of DL, the issues could very well cripple the RP significantly.

We believe that a multitrack development program for accomplishing our common goals has great merit and we urge management to seriously consider this approach.