There are a variety of books written on the subject of leadership that can provide many useful insights into the attributes, responsibilities and profiles of administrators. A network of senior administrators who have willingly provided assistance to newly appointed administrators compliments these sources. Equally important are examples of specific cases that illustrate creative and successful leadership. In every instance it is a demonstration of the possibility of learning leadership and administrative skills in the academy.

Learning to Lead

Senior Peer Network

Bibliography

Special Cases Appendix
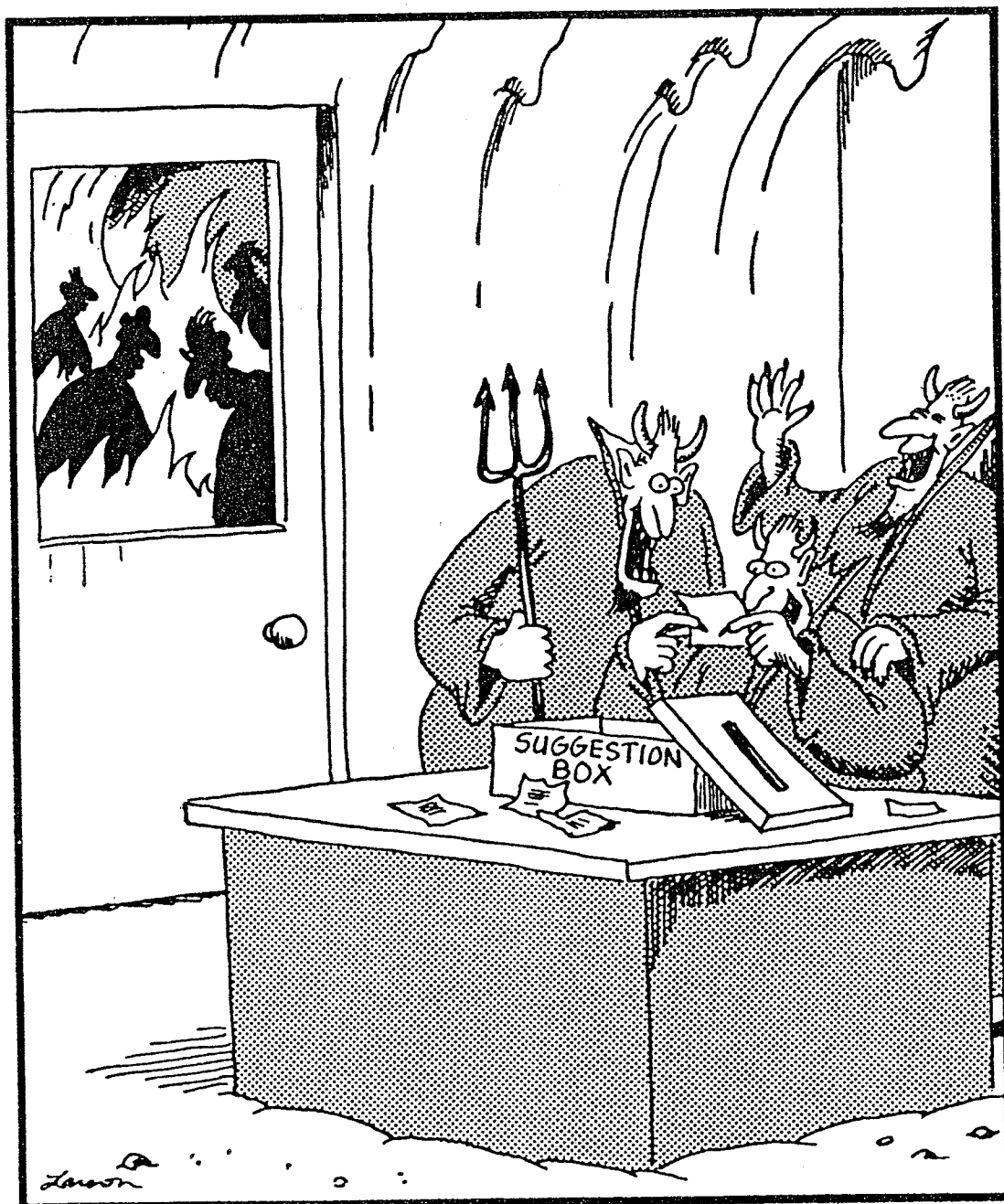
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> Several examples:
>> The Department Chair
>> Preparing for a Global Community: Achieving an international Perspective in Higher Education
>> Instituting Enduring Innovations: Achieving Continuity of Change in Higher Education
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Special Cases Appendix
Special Projects

Relevant Cases:

Campus Design
NC State University

Studio Furniture Project
NC State University

Integrated Digital Environment for the Academy
NC State University

Managing a School of Architecture with Eyes Open Idealism
Marvin J. Malecha

Faculty Work Load Guideline
Marvin J. Malecha

Campus Design at NC State University

A proposal developed jointly by:
  George Worsley, Vice Chancellor for Finance and Business
  Charles Leffler, Associate Vice Chancellor for Facilities
  Marvin J. Malecha, Dean, School of Design

Preface

This proposal has been prepared to respond to the mutual desire to strengthen the relationship between the School of Design and the facilities planning process with the intention to foster collaboration among the campus community as well as to initiate an interdisciplinary academic program dedicated to campus design.

The concept of the Campus Design Review Panel has been developed to focus on the quality of the campus environment in support of the authority vested in the Board of Trustees Buildings and Property Committee.

The quality of the campus environment communicates the dedication of the academic community to the excellence of the entire academic endeavor. It fosters excellence by providing the places and spaces where people can interact thereby experiencing the diversity of interests represented on campus, and it provides the setting for the highest of individual aspiration within a chosen discipline. The buildings through the language of architecture and their appearance in a broad campus context provide the stage-set for the wondrous diversity of activity that defines the University. Consideration for this setting must occupy the attention of the highest levels of the leadership of the University community.

The Campus Design Environment

The campus community is seeking to strengthen the strategies and building guidelines that will create a campus that is both distinctive and highly conducive to advanced academic study. The need to bring together many diverse aspects of this campus community is apparent in order to foster the long-term commitment necessary. Each constituency has a distinct idea for the future of the campus. This proposal is an attempt at finding these thoughts and putting them into practice on campus.

Trustee Buildings and Property Committee Authority

The Board of Trustees maintains final responsibility for the implementation of policies and practices related to the development of the physical environment of the campus. Among the responsibilities delegated to the Buildings and Property Committee regarding the physical environment are the following decisions.

- Physical Master Plan Approval
- Architect / Designer Selection
- Site Approval
- Approval of Plans and Specifications

The Campus Design Review Panel

The Panel Charge
This panel is intended to provide an advisory committee to review master plan issues and guidelines, consider the development of design guidelines for campus projects, review significant projects underway and determine critical issues for proactive investigation.

- Advise on architectural standards and guidelines for the campuses
- Advise on exterior material selections for use in the construction of projects
- Participate in peer review of campus design and physical master plan
- Review project plans for responsiveness to master plan standards and guidelines

The Scope of Responsibility
The scope of the responsibility of the Panel is to respond to projects of a significant nature with impacts on the aesthetic quality of the campus as well issues relating to the realization of the campus master plan.

- Projects with a budget greater than $1,000,000.00
- Projects with an impact on the exterior appearance of a building
- Projects with an impact on the physical master plan of the campus
- Utility and infrastructure projects where the work is concealed or the physical appearance is unchanged will be excluded from this process

The Panel Composition
The composition of the Campus Design Review Panel would bring campus expertise and greater continuity to the design process. Faculty appointees and campus area representatives are expected to have professional credentials or experiences that will contribute to the design review process. The composition of this Panel would include the following membership on three year staggered terms:

- One Trustee from the Buildings and Property Committee
    Appointed by the Chair of the Buildings and Property Committee
- One Trustee at Large
    Appointed by the Chair of the Board of Trustees
- The Associate Vice Chancellor for Facilities *
- The University Architect, Designated as the Chair of the Panel*
- The Associate University Architect*
- One faculty member from the Department of Architecture
    Appointed by the Dean of the School of Design
- One faculty member from the Department of Landscape Architecture
    Appointed by the Dean of the School of Design
- One faculty member from the campus at large
    and
- One member of each of the campus areas (N, S, W, Central and Centennial Campus)
    Appointed by the Chancellor from a slate of candidates nominated by the academic
deans
    * Standing Members

The Frequency of Meetings
The Campus Design Review Panel will meet on a regularly scheduled basis.
- Monthly Scheduled   Meetings, special meetings called as needed

The Design Process

There are many balances incorporated into the design process to insure that a broad perspective is maintained and that the beauty of the campus is enhanced.

Project Brief / Early Program Definition
The project brief identifies the program goals and the scope of the project, which includes related physical campus master plan goals and guidelines that may impact design and/or location. This scope may include infrastructure and landscape improvements. This aspect of the process is undertaken for approval by several groups.

- Recommendations by Facilities Division Staff
- Recommendations by user representatives
- **Recommendations by the Design Review Panel**

Architect / Designer Selection
The initial phase of project implementation is focused on the selection of design professionals uniquely qualified to undertake specific projects. This aspect of the process is undertaken for approval by several groups.

- Recommendation by Facilities Division Staff
- Interview and recommendation by the appointed selection committee
- Approval of selection by the Board of Trustees, Buildings and Properties Committee

Project Site Selection Approval
A project cannot proceed until it has properly resolved issues related to site selection that is influenced by programmatic need. This aspect of the process is undertaken for approval by several groups.

- Recommendation by Facilities Division Staff
- Recommendation by the appointed building committee
- Review by City of Raleigh Zoning Staff
- Recommendation by Campus Physical Environment Committee
    (generalized site selection)
- Review/Approval by the Board of Trustees, Buildings and Property Committee

Design (schematics and early design development) Approval
The early conceptual phases of a project leading into early design development are a critical phase in the life of a project. It is a time in the process where significant discussions related to the general construction of a building can be considerably modified. This aspect of the process is undertaken for approval by several groups.

- Recommendation by Facilities Division Staff
- Recommendation by the delegated building committee
- **Recommendation by the Campus Design Review Panel**
- Approval by the Board of Trustees, Buildings and Property Committee

Plans and Specifications (design development and mid construction document)   Approval
This final aspect of the review and recommendation stage for approval by the Board of Trustees is the critical step before proceeding to construction. This is the final opportunity to make any kind of revisions to the project before the completion of contract documents. This aspect of the process is undertaken for approval by several groups.

- Recommendations by Facilities Division Staff
- Recommendations by the delegated building committee
- State and local agency review
- Approval by the Board of Trustees, Buildings and Property Committee

School of Design Involvement

The opportunity presented by this proposal to the School of Design includes the option to establish a concentration in campus design. This option, an enhancement of current academic programs, could be offered to students of architecture and landscape architecture. This strategy provides an academic underpinning for the effort to improve our campus environment. The success of this proposal is dependent on the formation of a close working relationship among all campus organizations with responsibility for the physical environment.

A Professional Concentration in Campus Design

The establishment of this interest area is intended to support the needs of the Campus Design Review Panel while establishing a unique opportunity for students within the School of Design. The students and faculty involved in the professional concentration will be guided by the needs and requests emanating from the Campus Design Review Panel through the Facilities Division. This concentration will include the following components:

- **The Joint Studio and Seminar**
  The joint studio brings together students of Architecture and Landscape Architecture each semester to collaborate in teams on projects related to the campus. Students from other colleges will also be invited to participate on specific projects. The Joint Studio will be conducted every semester and may address projects from the Centennial Campus, the College of Veterinary Medicine campus or the precincts of the original campus.

- **Professor-Practicum Appointments**
  The professor-practicum appointments are proposed, on staggered three-year terms, to provide release time for faculty members to participate in University planning meetings, advise on with architect selection decisions, and the opportunity to recommend potential projects.

- **Graduate Assistant Appointments**
  Two graduate students would be appointed annually, one from architecture, the other from Landscape Architecture, to work in detail on specific projects that grow from the work of the studio.

- **Invited Studio Professional Peer Review**
  A regular review process by invited distinguished peers would introduce a level of expectation and challenge that would enhance the efforts of the students regarding the design of the campus. The peer reviewers would meet once at the conclusion of each semester. Each semester the reviewers would consider campus projects underway in the Joint Studio as well as provide the opportunity to critique selected campus plans and projects underway.

Phased Implementation

The implementation of the ideas expressed in this concept paper flow naturally from the most specific to the most general.

- **Phase One (Spring 1999)**
  Implementation of the Campus Design Review Panel.

- **Phase Two (Summer 1999)**
  Identification of faculty and students from the School of Design and Facilities Division staff to accept the responsibilities related to the work of the Design Review Panel (includes partial budget support).

- **Phase Three (Fall 1999)**
  Implementation of related studio course work and support courses to facilitate the involvement. (includes partial budget to support enhanced funding)

- **Phase Four (Fall 2000)**
  Implementation of the curricular concentration. (includes the necessary budget to provide support funding on a continuing basis)

A budget follows in the appendix to indicate the level of support necessary to implement the Campus Design Proposal.

Closing

The design of a university campus is directly related to the learning experience of students and the environment for the scholarship of faculty. Thomas Jefferson understood this integral relationship as he planned the University of Virginia.

> We wish to establish in the upper country, and more centrally for the State, a University on a plan so broad and liberal and modern, as to be worth patronizing with the public support.
> The first step is to obtain a good plan: that is, a judicious selection of the Sciences...[1]

Jefferson went on to call the result an "Academical Village." He foresaw the importance of the connection between the quality of the facilities, the learning experience of the students, and the ability of the University to attract the very best faculty.

> The great object of our aim from the beginning, has been to make the establishment the most eminent in the United States, in order to draw to it the youth of every state, but especially of the south and west. We have proposed, therefore, to call to it characters of the first order science from Europe, as well as our own country; and, not only by the salaries and the comforts of their situation, but by the distinguished scale of its structure and preparation, and the promise of future eminence which these would hold up, to induce them to commit their reputation to its future fortunes. Had we built a bam for a college, and log huts for accommodations, should we ever have had the assurance to propose to an European professor of that character to come to it?...to stop where we are is to abandon our high hopes, and become suitors to Yale and Harvard and secondary characters.[2]

Our challenges today on the NC State campus may be defined with similar terms. The physical environment of the campus, the learning experience of students, and the work of faculty and staff are vitally interconnected.

Notes

1. <u>Thomas Jefferson's Academical Village, The Creation of An Architectural Masterpiece</u>, Richard Guy Wilson, Editor, Bayly Art Museum of the University of Virginia, the University Press of Virginia, Charlottesville and London, 1993, page 11, note 19, Jefferson to Joseph Priestly, January 18, 1800, Honeywell, Appendix C, 215-16

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Appendix

Budget

This budget represents the annual cost of the campus design studio as it has been proposed. It is proposed as a new effort within the School to prevent conflicts with other required studio and seminar courses. This budget does not include additional staff time for the Facilities Division in support of the studio.

A Professional Concentration in Campus Design

The Joint Studio and Seminar   (Phase 3)   **29,000.00**
Architecture Professor   .33 release time/academic year
Landscape Architecture Professor   .33 release time/academic year

Graduate Assistant Appointments   (Phase 2)   **12,000.00**
Architecture Graduate Student (15 hrs/wk)   6,000.00/academic year
Landscape Architecture Graduate Student (15 hrs/wk) 6,000.00/academic year

Professor-Practicum Appointment   (Phase 2)   **7,500.00**
Professor serving in lead role of the Joint Studio with   .17 release time/academic year
the responsibility to coordinate all activities with
the offices of the Campus Architects and Facilities
Management

Invited Professional Peer Review   (Phase 4)   **10,000.00**
This represents the annual cost of reimbursement for travel to the
campus by a peer review committee of two individuals to visit
the campus once each semester and an honorarium for services.
approximately $2,500/individual/semester

Operating

Studio Support   (Phase 3)   **5,000.00**
This represents reimbursement for the student expenses incurred
working on campus projects including; photography, model building materials,
drawing materials, and related presentation materials.
$2,500/Semester

Printing, Publication, and Visualization (Phase 4)   **5,000.00**
This represents the issuance of a publication or Digital visualization of the
studio efforts following each semester. Publication and visualization efforts
would be prepared in the format of a series of guidelines that would give
direction to the future efforts of the University.
$2,500/Semester

Visualization
Special visualization studies utilizing the Vision Dome will require additional support funding

Total Annual Cost   **$68,500.00**

NORTH CAMPUS

WEST CAMPUS

Stadium / Arena
Precinct

CVM-1   CVM-2

□ 1-CVM
□ 2-Faculty Club

Beltline
Precinct ▷

BL-1

BL-2

□ 1-Arboretum
□ 2-Horticulture
   Farm
□ 3-Research Annex
   West

▽ Method Road
   Precinct

□ 1-Greenhouse Center
□ 2-King Village

▽ University Service
   Center Precinct

□ 1-North
□ 2-South

▽ North Campus
   Precinct

□ 1-West
□ 2-Central
□ 3-East

SOUTH CAMPUS

Western
Boulevard ▷
Precinct

□ 1-McKimmon Center
□ 2-Research Annex
   South
□ 3-Fraternity Court

◁ South Campus
   Precinct

□ 1-Doak Field
□ 2-Bragaw
□ 3-Food Science
□ 4-Carmichael
□ 5-Intramural
□ 6-Reynolds
□ 7-Weisiger-Brown

CENTRAL CAMPUS

Centennial Campus ▷
Precinct

□ 1-A.1 Cluster
□ 2-B.1 Cluster
□ 3-North Boundary
□ 4-Biotechnology
□ 5-Northwest
□ 6-Main Campus Drive East
□ 8-Town Center
□ 9-Residential 1
□ 10-Residential 2
□ 11-Executive Classroom
□ 12-South Campus Promontory
□ 13-Residential 3
□ 14-Residential 4
□ 15-South Campus Mall
□ 16-10.8 Area
□ 17-Middle School
□ 18-12.3 Area
□ 19-12.4, 12.5, 13.1 Areas
□ 20-11.3 Area
□ 21-11.5 Area
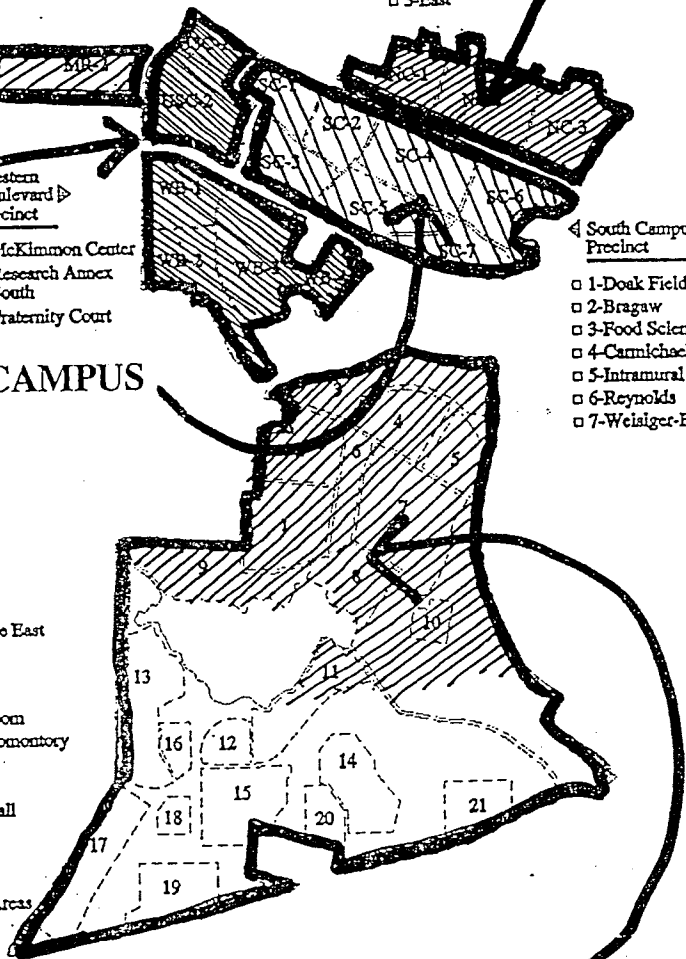
CENTENNIAL CAMPUS

NC STATE UNIVERSITY

28 December, 1998

MEMORANDUM

To: Dr. Charles Moreland, Interim Provost,
Vice Chancellor Research Administration

From: Marvin J. Malecha, FAIA
Dean, School of Design

Subject: **Studio Furniture Project**

Since my arrival as the dean of the School of Design I have been attempting to rectify long neglected furniture and facilities problems. I am pleased to note that over the past four and one half years we have made real progress. The last accreditation team to visit our School noted many of these same concerns and specifically noted deficiencies in our computer technology and general studio furnishings. Again, I am pleased to report that we have made considerable progress with our technology needs. However, we have only begun to address the issue of studio furnishings. Much of the studio equipment in the School actually dates from the founding of the programs in 1948 and very little of it is less than twenty years old. I am noting the obvious when I assess the importance of upgrading this equipment. Changes in technology have brought the computer onto the studio desk. The traditional drawing table is totally inadequate to meet this need. Given the extreme limitations of the School of Design operating budget, it is not possible to make substantial furniture and equipment expenditures.

Over the past year and a half I have worked with members of the School community that would meet the needs we have to provide 700 new tables and chairs for the studio. Toward this end we produced a design in-house and began to solicit participation from a variety of sources. An arrangement was made with Prison Industries and Dr. Stiles funded the initial phase of table purchases. Two hundred tables are presently being manufactured. I have attached all relevant information to provide you with a context for this request.

I am now writing to request that this project be funded to produce the remaining 500 tables and that funding also is allocated to provide 700 drafting chairs.

Table and Chair Acquisition Plan

Phase One (See October 21, memorandum)	**200 Tables**	**Underway**
Phase Two and Three combined	**500 Tables**	
University Funding Requested		$130,000.00
School Funding		$20,000.00
Approximate Manufacturing Savings		$50,000.00
Phase Two and Three Studio Chairs	**700 Chairs**	
University Funding Requested		$50,000.00
Total University Funding Requested		**$180,000.00**

It is my hope that we can move forward on this request. Our next accreditation visit is in early spring 2000. Having placed all new furniture in the studios in Fall 1999 would make a substantial impression. It is important to note that even without accreditation issues this is a long overdue issue to resolve. Thank you for your attention to this matter.

C: Dr. Bruce Mallette

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NC STATE UNIVERSITY
October 21, 1998

OCT 23 1998

T: Dottie
F: MAM

MEMORANDUM

TO: Dean Marvin J. Malecha, FAIA

FROM: Phillip J. Stiles, Provost and   *Phillip J. Stiles*
                Vice Chancellor for Academic Affairs

SUBJECT: Studio Furniture Project

As you know I think this approach shows insight into how partnerships can be of value to all participants. I think that the consideration of the status of economic enterprises in the state is important. For all the right reasons it is easy to say yes to the request for $40,000 for 1998-99.

bh

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university and a constituent institution of
The University of North Carolina

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NC STATE UNIVERSITY

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October 16, 1998

Memorandum

To: Dr. Phillip Stiles, Provost

From: Marvin J. Malecha, FAIA

Subject: Studio Furniture Project

I am writing to further explain a concept to address studio furniture needs in the School of Design. As you are aware from past discussions, the studio furniture is well past the time it should have been replaced. Most of the studio table inventory dates from the early 1950's to the late 1970's, we have even identified drawing tables that must have been purchased to initiate design studies on the NC State campus in 1948. This furniture has become woefully inadequate for several reasons.

> **The Condition of the Tables**
> The majority of the tables in the studio instructional environment are in very poor condition. The damage to the tops and related table hardware accrued over many years of use now make normal studio use difficult or even impossible. The condition of the tables have become an impediment to the learning experience of our students.
>
> **The Introduction of new technology into the studio teaching environment**
> The present table configuration and design is not conducive to the introduction of a computer into the studio environment. First, the table tops are set for drafting at a level requiring a stool. This ergonomic posture is entirely incorrect for computer usage. Second the table top size is set according to standard drawing paper size, this has been irrelevant for two decades. Third, storage size has been determined by the need to store a flat drawing. Such a need is greatly reduced by computer usage, and there is no storage capacity for a student owned computer. Finally, there is a need to introduce capacity at the desk for power supply strips that have independent power surge protection.
>
> **The Table Shortage**
> In addition to the condition and appropriateness of the existing tables, the School is approximately fifty (50) tables short of meeting the needs of the existing student population. To meet this need the School has purchased inexpensive folding tables until a more appropriate work surface can be identified. This is at best a temporary solution and it certainly is far short of acceptable studio furniture.

The need to address this problem in the School has become more critical as the technological capabilities of the students has increased. Seven hundred (700) tables are in need of replacement to meet the demands of the related student population.

A Creative Partnership
We have been seeking creative partnerships with various furniture manufacturers to find a solution that would be most cost effective. It has become apparent over the past several weeks that the most promising partnership is with North Carolina Prison

Industries. This partnerships comprised of an exchange of intellectual property, custom manufacturing to meet the specific needs of the School community, and reduced manufacturing costs thereby translating to a reduced purchasing price.

Shared Intellectual Property
The design of the table is best characterized as a shared responsibility by the dean of the School, the director of the School Material Laboratory, and inspired by the consultations of many students and faculty. In exchange for the cooperation of Prison Industries the School will share the intellectual property rights for the design of the table so that it could be offered for sale to the community.

Reduced Purchasing costs
In exchange for the right to manufacture the design of the table for general sale, the School will have the opportunity to purchase the tables for a significantly reduced cost by comparison to all other commercially offered studio tables.

A Continuing Partnership
The School is hoping to build a relationship with Prison Industries that could lead to other design-manufacturing collaborations.

Table Acquisition Plan
It is the hope of the School community that the matter of table replacement may be addressed over the next two years. This necessitates a phasing plan of no more than three stages. Each stage will have a University and a School component.

Phase One: 200 Tables

University Funding Requested	$40,000.00
School Funding Match	$20,000.00
Approximate Manufacturing Savings Match	$20,000.00

Phase Two: 300 Tables

University Funding Requested	$90,000.00
Approximate Manufacturing Savings Match	$30,000.00

Phase Three: 200 Tables

University Funding Requested	$40,000.00
School Funding Match	$20,000.00
Approximate Manufacturing Savings Match	$20,000.00

Total Tables: 700 Tables

University Funding Requested	$170,000.00
School Funding Match	$40,000.00
Approximate Manufacturing Savings Match	$70,000.00

I am forwarding this memorandum in order to request the funding for the initial phase of the table replacement plan. The University contribution to the first phase , as noted in the plan above, is $40,000.00. It is my hope that we can move forward with this request as soon as possible. Thank you for consideration of this request.
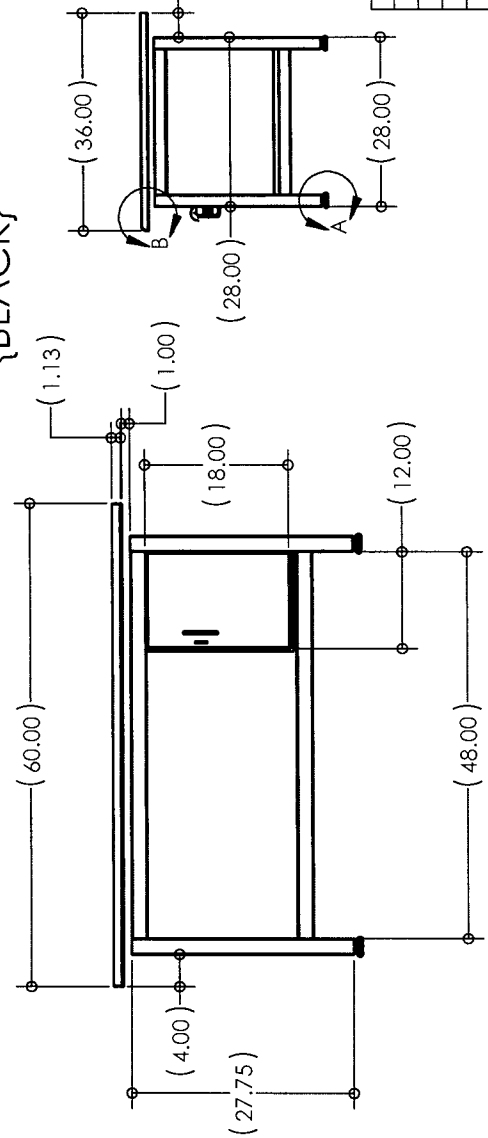
HANDLE & HASP

DETAIL D
SCALE 1 : 4

FRONT EDGE

(R1.00)

DETAIL B
SCALE 1 : 5

2 X 2 SQUARE STEEL
POWDER COATED:
{BLACK}

(4.00)

(36.00)

(28.00)

(28.00)

(1.13)

(1.00)

(18.00)

(12.00)

THREADED
METAL
SLIDER

TOP ~ RED OAK NATURAL
VARNISH / SEMI-GLOSS

DETAIL A
SCALE 1 : 5

(2.00)

(60.00)

(48.00)

(4.00)

(27.75)

18

Learnig to Lead

REVISIONS

REV   DESCRIPTION   DATE   APPROVED
                                      10/14/98   CJ

PARTS LIST

ITEM NO. | PART OR IDENTIFYING NO. | NOMENCLATURE OR DESCRIPTION | QTY REQD | MATERIAL SPECIFICATION

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ARE:
FRACTIONS DECIMALS ANGLES
            .XX± .XX   ± 1
            .XXX± .XXX

CAD GENERATED DRAWING
DO NOT MANUALLY UPDATE

APPROVALS   DATE
DRAWN   T. HOPPE   12/10/98
CHECKED
RESP ENG
MFG ENG
QUAL ENG

MATERIAL   --

FINISH   --

DO NOT SCALE DRAWING

NEXT ASSY   USED ON
APPLICATION

NCSU ~ SCHOOL OF DESIGN

STUDIO TABLE

SIZE   DWG. NO.
 B

SCALE VAR   CAD FILE   DESK1

REV
SHEET 1 OF 1

Office of the Dean
919.515.8310

Architecture
919.515.8350

Design and Technology
919.515.8322

Graphic Design
919.515.8326

Landscape Architecture
919.515.8340

Fax: 919.515.7330

November 1, 1995

MEMORANDUM

To: Dr. Phillip Stiles, Provost

From: Marvin J. Malecha, FAIA, Dean
        School of Design

Re: **Integrated Digital Environmental Proposal**

I am forwarding with this memorandum a proposal for the establishment of an integrated digital environment within the School of Design. The introduction of the computer into the professional design environment has significantly transformed practice. The very conduct of design services is now undergoing redefinition in a manner that was inconceivable only five years ago. Increasingly, we are being advised that our students will not find a place in the profession without the mastery of the most sophisticated digital tools. A recent visiting team from the National Architectural Accreditation Board found the School of Design seriously deficient in our ability to address this emergent technological transformation.

I believe we must introduce the new technologies into the conduct of our design community as soon as possible. Further, we must address this issue holistically rather than by singling out any one aspect of the School community. The concept that defines our approach must include an instructional component advancing the capability of each student, an advanced hardware and software component to promote research and creative activity, as aspect directed at the enhancement of service units including the library, the materials and media laboratories, a faculty component to insure advanced capabilities with relevant training opportunities, and an administrative component to link the design community effectively.

The proposal that accompanies this memorandum was prepared by a committee of faculty, staff and students charged with the task to define a program that would place the School of Design in a leadership position. The group has prepared an aggressive but realistic guide for what must be accomplished.

The proposal that follows identifies an initial capital investment of approximately $750,000 dollars directly related to instructional needs. Networking and Cable installation is estimated at approximately 300,000 dollars. Staff cost related to the installation of the system is estimated at approximately 75,000 dollars.

The recurring costs of the proposed network are estimated at 200,000 dollars for hardware costs and 100,000 dollars for related staff costs. Each student would also be expected to possess a personal computer.

The technology fee option of the University presents a reasonable funding option for a substantial portion of the request. The following chart demonstrates two possible funding options. This is calculated in 1995 dollars.

OPTION ONE

1.1   INITIAL 3 YEAR INVESTMENT

$300/semester, $600/year x 700 students =	$420,000
15% Sharing with University	($60,000)
15% Sharing with other school units	($60,000)
Total Available for Digital Investment	$300,000

1.2   MAINTENANCE PLAN (Subsequent years)

$230/semester, $460/year x 700 students =	$322,000
15% Sharing with University	($60,000)
15% Sharing with other school units	($62,000)
Total Available for ongoing maintenance	$200,000

1.3   NETWORK INVESTMENT $300,000

This assumes a University network investment

1.4   FACULTY COMPUTING $200,000

This assumes a University investment

OPTION TWO

2.1   INITIAL 3 YEAR INVESTMENT (For Repayment)

$200/semester, $400/year x 700 students =	$280,000
0% Sharing with University	(0)
Sharing with other school units	($30,000)
Total Available for Digital Investment	$250,000

2.2   MAINTENANCE PLAN (Subsequent years)

$200/semester, $400/year x 700 students =	$280,000
Sharing with University	($40,000)
Sharing with other school units	($40,000)
Total Available for ongoing maintenance	$200,000

2.3   UNIVERSITY COMMITMENT TO ACADEMIC COMPUTING

A commitment by the University to
Academic computing without exception of repayment $150,000

2.4   NETWORK INVESTMENT $300,000

This assumes a University network investment

2.5   FACULTY COMPUTING $200,000

This assumes a University investment

The proposal that has been prepared is the basis for the extensive discourse that I hope will now follow. The possibility for phasing of the investment, the nature of the technology fee change, and the staff and faculty requirements for the implementation of the plan are all open to an assessment leading to changes.

I am convinced that the School has lost the opportunity for any lengthy discourse on this subject. We must move decisively to address the incorporation of new technologies into the School of Design. I am providing with this memorandum several copies of this proposal so that you may share it with members of your staff, including Bill Willis, for comment.

I am looking forward to working with you on this subject.

Advance the technological capabilities of the School to enhance the academic experience, support research and creative activity, and improve administrative services.

Develop a plan for the incorporation of computers and related hardware into teaching, academic activities and administrative services.

Support the development of teaching, research and scholarship with the appropriate technology by providing the necessary technological resources to accomplish this task.

Facilitate support services for students, faculty, and administration by establishing and maintaining uniform compatibility in software and procedures.

Provide adequate instruction to insure the safe and productive utilization of all technological resources in the School.

Establish curricular experiences to insure that all students are able to meet the evolving technological literacy requirements of the professional environment.

Develop a coordinated plan for facilities and resource management related to technological advancement.

Develop a facilities management and expansion plan that will address the impact of new technologies on the facilities and equipment of the School.

Insure that funds are available for the process of upgrading faculty, staff and administrative computing environments.

Evaluate the existing physical situation to develop a plan to achieve a safe and productive work environment.

Develop procedures and set priorities for fair and efficient operation of physical resources including the consideration of technological requirements.

Develop a plan for upgrading classroom, instructional laboratory, studio and review area instructional technology support.

Develop a facilities plan for an integrated digital environment which will allow the movement of information between photography, modeling and analysis, and A/V production.

Build the digital connectivity of the School of Design.

Complete the process of connecting the School of Design computing resources to the University system. Bring the fiber optics network to all School of Design facilities.

Develop and maintain a Home Page for the School of Design within the University Web pages.

Build an interactive communication network among students, faculty and staff.

Foster technological capabilities that relate to the traditional skills inherent in the study of design.

Continue to maintain and improve the Materials, Print and Textiles, and Media Laboratories to insure that wood, synthetic, and metal working, printing, weaving, photography, and gaming (full scale modeling) activities can be properly served.

Establish a specific training program for all students, faculty and staff of the School, as a qualification for the use of the Materials, Print and Textiles, Computer, and Media Laboratories.

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SCHOOL OF DESIGN
STRATEGIC PLAN FOR TECHNOLOGY

Aspiration:

Advance the technological capabilities of the School to enhance the academic experience, improve administrative services and support research and creative activity.

Implementation Goal: IDEA

Integrated Digital Environment for the Academy

It has been the mission of the School of Design Technology and Computing Advisory Committee to develop a plan for implementing the 1995 School of Design Strategic Plan. As summarized in the 1995 Technology Task Force Report, the School of Design has a clearly demonstrated need for the technology to support a digitally integrated environment. This report is a request for funds to implement a goal to have a computer on every desk and an infrastructure to support multiple computing platforms. The concept of the integrated digital environment is intended to bring the School of Design into line with the reality of design practice and set the conditions for leadership among the community of design educators.

The School of Design is in a unique position to deliver an IDEA as a service to the University. We have faculty who have been pioneers in developing and using these tools, leaders who can implement the effective use of these new technologies, and we have the strong backing of the professional community in seeking the funds that are needed.

- Teaching: The integration of digital technology would prepare the school to continue to deliver high quality professional education in the near future. Collaboration within the school, the University, and the greater community would be encouraged—building a rich academic and professional community. Implementation of distance-learning programs could extend the scholarship of the faculty world-wide.

- Research and Extension: The School of Design is in a position to focus on creative solutions to visualization and communication problems. Through the University network and the World Wide Web, the fruits of our labors would reach a greater audience to the benefit of both those needing the information and the researcher needing critical feedback.

- Service: The School of Design's Service Units (Media, Materials, Print & Textile and Computing Labs) further the mission of the University through creative solutions to production problems. The service units would offer visualization, simulation, & rapid-prototyping laboratory, and electronic publication to the University.

Summary of Requested Funding for the IDEA

	1996-97	1997-98	1998-ongoing
One-time Funding	$ 1,282,300	$ 75,000	$ 0
Recurring (beginning 1997-98)	$ 0	$ 305,195*	$ 305,195*
TOTAL BY YEAR	$ 1,282,300	$ 380,195*	$ 305,195*
*includes salaries			

submitted to the dean 11/2/95

Concept for the Integrated Digital Environment

The fundamental concept of the integrated digital environment within the School of Design is to extend the reach of each member of the community. The environment proposed would transform the work environment of the studio, increase accessibility to library resources and enhance the prototyping capabilities of the school materials, media, print and textiles laboratories. The image of a tightly woven fabric dependent on each knot, defined by larger and smaller woven elements and secured to interests outside of its own structure, describes the integrated digital concept. (See attached diagram). The matrix for the School of Design environment is a wired jack for each student, faculty and staff member. This jack provides the opening to the capabilities available within the school, the University and the World Wide Web. The location of such ports throughout the School will justify the intended requirement that each student be required to purchase a computer (a phase-in program is intended). The second level of the fabric is the intention to provide studio clusters that will provide input and output devices and serve to enhance the capability of the individual workstation. The third level of the fabric would provide for three major laboratories: high-end imaging (visualization), environmental simulation, and rapid prototyping. These specialized laboratories will address the specific needs of a diverse design community and build on strengths already present in the school. Complementing this level of the fabric are walk-in laboratories and hands-on instructional capabilities. This laboratory capability will allow for the greatest diversity of software and hardware application. The fourth level of the fabric will be dedicated to the enhancement of library resources. The School of Design Library must be fully capable of developing multi-media materials including a CD ROM image collection, research-related information and video disc collections. The final level of the fabric is dedicated to the enhancement of administrative services.
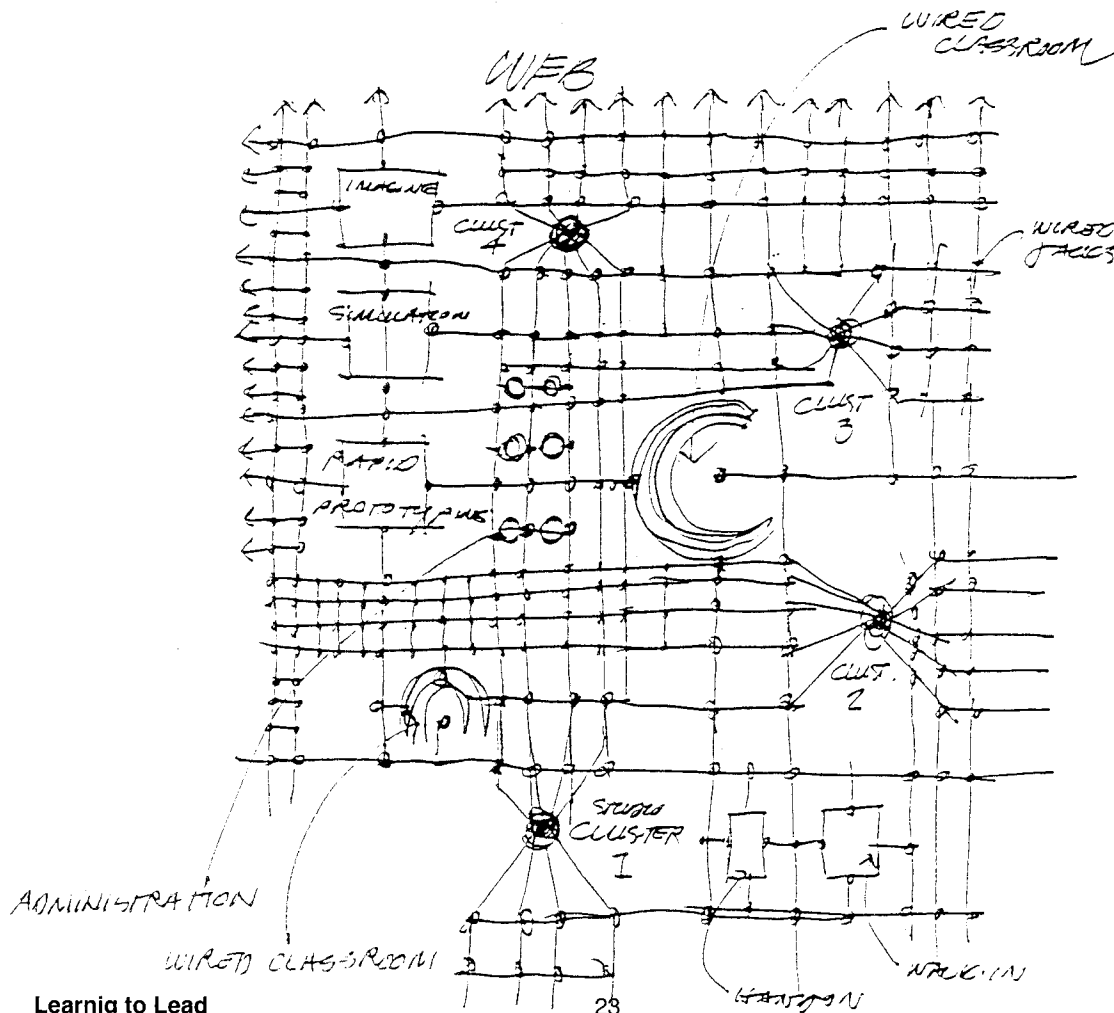
A School of Design IDEA:

Integrated Digital Environment for the Academy

1.   INTRODUCTION

1.1   From T-squares and Tripods to Networked Computers

The School of Design faces an enormous challenge in preparing students to navigate the electronic information environment in the fields of Architecture, Environmental Design, Graphic Design, Industrial Design, and Landscape Architecture. In the last ten years, computer technology radically reconfigured the nature of these design practices. These professions have moved from an age of T-squares and tripods into an age in which drawing, visualization, analysis, and communication require a networked computer on every desk. Not since the discovery of perspective in drawing has anything affected the design disciplines as much as these recent developments in information technology. Ten years ago, the time-effective use of computers in design was limited to large repetitive problems. Today, however, computers are used in almost every aspect of design. Competence in the tools of the electronic environment is now an essential qualification for our graduates to be competitive in their respective job markets.

As contemporary design projects expand in scale to include larger, more complex problems they also require large and diverse teams. The social aspect of all design professions has come to focus not only on the interaction between designer and client but between members in these interdisciplinary design teams. Communication among these disciplines is increasingly dependent on computers for collaboration—often across large distances. This has lead to the use of the computer as a shared work environment—often the only means for linking professionals across geographic and disciplinary space.

This new technology and way of working is also having an enormous impact on the design disciplines because it enhances the interaction of two critical aspects of design—analysis and synthesis. First, it enables the designer to "draw" and model physical alternatives faster, and then to "see" them from many more perspectives than would be possible by traditional means. Computer applications for drawing, modeling and rapid-prototyping allow designers to develop solutions and test their impact before implementation—to analyze and synthesize data in an array of visual and spatial options.

Second, the design problem has expanded to focus as much on the behavior of systems as the individual design product. Computer applications are providing the means for designers to manage complex data more quickly and accurately than through previous methods—calculating land and space use, energy consumption, lighting and material properties. Digital photography and remote sensing allows the recording and simulation of sites, human movements, and other physical data critical to design concept-formation and decision-making. Dynamic diagrams allow concepts to be represented by electronic data which can move and behave consistent with the nature of the concepts. Whether a physical or conceptual aspect of a design problem, it is now recorded, manipulated, transformed, and even prototyped in electronic environments.

Clearly, the nature of today's design practice demands technological proficiency. Because the tools have improved, the designer's products are more likely to be crisp, sharper, more compelling, more sophisticated. Client expectations of time, cost savings, and sophistication of product and the complexity of project structure make it impossible for offices to complete work solely through traditional methods. The office that fails to keep pace with technological advances risks failure in today's highly competitive marketplace. Graduates of programs in which the computer is not a integral part of problem solving and the designer's basic workstation are no longer employable in even the most traditional offices.

2.   RATIONALE

2.1   Move the School of Design to the Forefront in the Design Disciplines

Leadership in the design disciplines will be largely measured by which institutions are on-line, developing and teaching the new technologies, and disseminating research electronically. Leading institutions will collaborate with each other electronically—on research projects, curricula, and design charettes. Because the newest hardware and software are being implemented at many competitor schools, the School of Design must focus on building an up-to-date electronic infrastructure or find itself at a major disadvantage.

Demand for high-end peripheral equipment in support of multi-media work and graphic output has become increasingly important to producing competitive graduates of our programs. The expectations of portfolio work shown in qualifying for jobs rise with each technological breakthrough in industry. Students can no longer compete for positions in the design professions, especially graphic design, with projects printed in low resolution black and white output or videos of multi-media work recorded on low-end equipment from the early 1980s.

The faculty will continue to need up-to-date software, hardware, and technical support if they are to be competitive in seeking research funding, attracting the best graduate students, and developing new knowledge in their fields. Presently, student and faculty demand for access to digital technology and information technology research continues to exceed availability. Research opportunities involving computing are rapidly growing in the design disciplines but are limited without the infrastructure support outlined in this proposal. The IDEA funding would also create graduate teaching assistantships that will be used to attract strong candidates interested in computer technology to Architecture, Environmental Design, Graphic Design, Industrial Design, and Landscape Architecture.

Many schools are planning the type of infrastructure outlined in this proposal. In fact, schools ranging from public to private, small to large (eg. MIT, Carnegie Mellon, Univ. of Minn., Art Center School of Design, Mississippi State University) have it in place or are adopting it this year. This proposal asks for the necessary funding to build the infrastructure to allow the School of Design to move with these others to the forefront in information and computing technologies.

2.2   Build upon Existing Investment in School of Design Computing

The School of Design ad hoc Computing Committee, chaired by Professor Art Rice, developed a comprehensive computing plan in 1993 after two years of study which involved both faculty and students. This has formed the initial strategy for investing in computer technology. The plan for an Integrated Digital Environment for the Academy (IDEA) is the necessary development of the initial goals.

As a response to the 1993 Comprehensive Computing Plan, the School has revised its curriculum to add course content on these new technologies. In the case of Graphic Design, Environmental Design and Industrial Design, the curriculum has been entirely revised in response to the industry's move to the digital environment.

• The undergraduate curriculum in Graphic Design now requires a three course sequence in electronic imaging and studios that work almost entirely digitally in response to the changing professional demands. At the graduate level, where all work is done on computers, one semester of study is devoted exclusively to an examination of the shifting relationships between people and information brought about by digital technology.

- Architecture enhanced existing courses in building systems and revised the existing computer methods course. Architecture has promoted an active writing and publication schedule which utilizes the electronic media.

- Design and Technology enhanced existing courses and established new courses teaching digital communication design and analysis techniques. Industrial Design has also conducted an industry sponsored/funded collaborative project with a leading multimedia development group using the Internet as the primary communication medium—"FutureNet." Design enhanced existing courses and established new courses teaching digital multimedia design and collaboration with computer science.

- Students and faculty alike have an interest in electronic communications and have established several WWW sites. Several students and faculty have been involved with the projects such as "NC State SmartGuide: An Internet Multimedia Information Service," "Technopolis," and "Design-a-Plant." We also have established e-mail architectural pen pals with schools in Mississippi, Minnesota, and soon in Trondheim, Norway and Beijing, China. Graphic design students worked together with students from Rhode Island School of Design on studio projects. Anne Burdick edited 2 issues of *Emigre* using Internet to edit/ correspond with the writers and to link various designers with the writers into the final production of the magazine.

During the period since the 1993 plan, the School of Design Service Units—slide library, computing lab, materials lab, media lab and print and textiles lab—have dedicated over 80% of their equipment and maintenance budgets to support the electronic environment. The School of Design has tried to focus resources to support computing needs from available University technology fees, re-direction of some School of Design funds to computing, and from School of Design research funds. TA time has been reallocated or supplemented to assist with computer uses such as digital documentation of student projects, digital images for school publications, and technical support to faculty. The bulk of these expenditures have been during the past two years. During this time, the school has requested technology fees to support its more than 700 students. Both the 1993-94 and 1994-95 funding requests were approximately $210,000 to support computing and technology of which roughly $89,000 was received each year. Last year, 10 SUN SPARC workstations were also added to the labs. Prior to 1993 there was no major support. Digital technology serving the immediate needs of our students has been the principle use of the Technology Fee money in the school.

Although equipment has been upgraded, repaired, and enhanced as much as possible, it has become so over-burdened that it can no longer support even the current demands. At our current status, the School has 20 students per computer. These students are likely to have only 2 to 3 hours of access per week in support of up to 15 credits of design class registration requiring computer use. Funding this proposal will enable the School of Design to build the Integrated Digital Environment fundamental to teaching a curriculum responsive to professional standards. In order to meet the diverse computing requirements of the design disciplines, the plan must respond to the student demand for support for student-owned computers and a multiple platform environment. A modest but fundamental and essential beginning has been made. What is needed now is the follow-through required to build on that foundation.

2.3   Strong Leadership Ensures Effective Implementation

School of Design has a strong national reputation for design which, together with our past commitment to computing, provides an excellent base for further development. School of Design faculty are leaders in the professions as demonstrated by awards of highest recognition—six Fellows of the American Institute of Architecture (FAIA). We have past and current presidents of international organizations such as Council of Educators in Landscape Architecture (CELA), two past presidents of Association of Collegiate Schools of Architecture (ACSA), as well as officers in the American Society of Landscape Architecture (ASLA), Industrial Designers Society of America (IDSA), American Institute of Graphic Design (AIGA) and American Center for Design (ACD). We even helped to establish some of these organizations. For example, the national organization for research in design—Environmental Design Research Associations

(EDRA)—was founded at the School of Design in 1974. Meredith Davis founded the Graphic Design Education Association, a national organization that heads conferences, events and publishes *Graphic Design Education.*

School of Design also has a strong commitment to computing. Faculty research pioneers the development of design software tools. Landscape faculty recently developed a interactive viewshed and watershed mapping software useful to landscape architects. Currently under development are two instructional CD's on diagramming and mapping for design students and encoding and decoding visual information for middle school students. The School of Design has also been selected as an alpha and beta test site for Virtus WalkThru, Van Nostrand Reinhold's new CD on graphic design history and Alias's UpFront 3-D modeling application. Presently the School of Design is coordinating the efforts of the Design and Management of Information Networked Technologies Committee (DMINT) that includes representatives from College of Engineering, College of Management and School of Design. This committee is developing areas of cooperation, managing a conference funded by the National Science Foundation and developing proposals for new professional masters information management and design curricula.

In the last year organizations such as IBM, the Environmental Protection Agency, Microelectronics Center of North Carolina (MCNC) have involved the School of Design in advanced research projects. Graphic Design students have been working with IBM and the Department of Computer Science on the display of software performance results on the WWW; on computer programs that monitor medication compliance by head trauma patients with low vision and memory problems; on explorations of spatial navigation metaphors for interface design; and on interactive multimedia presentations about an array of topics ranging from learning to speak Italian to an analysis of broadcast media. Intelligent Tutoring Systems, Knowledge-Based Learning Environments, and other computer-based-instruction, digital design analysis and communications methodology have been developed by faculty such as Jon Fels, Art Rice, Patrick FitzGerald, Glenn Lewis, Georgia Bizios, John Tector and Roger Clark, Sharon Roe, Kermit Bailey, Scott Townsend, Meredith Davis, and Martha Scottford. This work is receiving national recognition.

The School of Design has sought to give all students at least some access to these new tools by raising private funds, by reallocating overhead and maintenance and research funds to computing and by investing Technology Fee money in this area. However, the impact has been too small to meet the instructional need. The faculty who use digital tools in their research are prevented from bringing this technology into the classroom because we lack fundamental network, hardware and software. In spite of this, the school has already implemented new and re-structured courses bringing the curriculum up to the level necessary to compete at even the most fundamental level. This effort has been hampered by limited access resulting in only a small impact upon student body. Only a few faculty are able to arrange the lab time and machine access to teach the courses now on the books. The opportunities for further development are impossible without support.

2.4 Strengthen Outstanding Undergraduate, Graduate, and Professional Programs

The School of Design offers professional undergraduate and terminal graduate degrees, as well as pre-professional degrees. The School of Design professional programs—Architecture, Landscape Architecture, Graphic Design, and Industrial Design—have won national recognition. Architecture students have continually claimed first and second place prizes in national competitions. Five Graphic Design students were premiated in the Aldus Software Competition. For each of the last three years, a School of Design graduate student has won the national Sigma Lambda Alpha scholarship awarded by CELA for outstanding graduate student in Landscape Architecture. The Graphic Design program is widely acknowledged to be among the top ten programs at the undergraduate level and among the top five most progressive graduate programs in the nation. The unique imaging curriculum in Graphic Design utilizes digital computing in publications such as *Print* and *ACD Statements.* Our graduate students work in leading design offices in an international context (Herman Miller; Grapus, Paris; Benetton, Milan;

Philips, Netherlands); they teach (Mohawk Valley Community College, Memphis State University, Northern Illinois University), and they continue to develop their academic research.

To be fully competitive and to provide intellectual leadership in the design disciplines, the School of Design must have current electronic tools. Funding the IDEA will enable the School of Design to provide the infrastructure of people and technology to make possible effective teaching and learning in this area. Students would purchase or lease personal computers (anticipated 1997-98 policy would require new School of Design students to provide their own personal computers) knowing that the infrastructure would be there to support their computing activity. Funding this IDEA will strengthen each of the disciplines of Architecture, Environmental Design, Graphic Design, Industrial Design, and Landscape Architecture by providing the means by which:

- All students gain a rich experience and a solid grounding in the computing technology used in research, design, and the specific computing skills required for employment in the design professions today;

- All students access images and research on-line, and communicate and collaborate with one another, with faculty, and with students at other schools. On-line access to slide library images and other materials would enhance students' abilities to review, study, and work with images;

- School of Design faculty teach and respond to changes in information and computing technology throughout its curriculum;

- High quality design education is delivered more efficiently. The IDEA proposal includes networked classrooms. Once the initiatives outlined in this proposal are implemented, the School of Design would begin offering distance learning programs;

- Leveraged funding from external donors helps make possible a partnership between students, the professional community, and the School of Design. In this partnership, external donors (with a stake in School of Design graduates having digital technology skills) would provide financial or in-kind support for School of Design computing needs.

2.5   Serve the Essential Needs of the State and the Nation

              Critical design challenges face the State of North Carolina, and the School of Design has conducted research on many of them. The School of Design has conducted major research and extension projects in environmental assessment and community planning throughout the state. This research needs to be readily available to the professions. The proposed electronic environment would support our land grant mission by making this information—publications, research, and image and geographic databases—accessible on-line from the School of Design Server.

- The Center for Universal Design (formerly Center for Accessible Housing) was established in 1989. Funded by the US Department of Education's National Institute on Disability and Rehabilitation Research, the Center serves as a state and national resource for accessible and universal design.
  o

- The Design Research Laboratory (formerly Virtual Environment Laboratory) has pioneered advanced computing applications in environmental simulation and visualization, architectural rendering and animation, and computer-based education. Since its inception in 1975, clients have included National Forest Service, the National Park Service, the US Environmental Protection Agency, the NC Division of Environmental Management, and the Research Triangle Foundation.

- The Graphic Design Center pairs student design teams with local and regional clients for profit and non-profit work. The Design Center is coordinated by a faculty member who also utilizes the professional skills and knowledge of the client within the context of the class-studio.

- The Coalition for Community Conservation, formed in the summer of 1993, combines the resources of the Department of Landscape Architecture and the Conservation Trust for NC. The coalition has worked with the City of Greenville, NC; Coalition for the Blue Ridge Parkway; Coalition of Asheville Neighborhoods; City of Magnolia, NC; and the National Committee for the New River.

- The Community Development Group created in 1970, provides opportunities for graduate students to integrate design, research, and community service. Since its inception, community service and research projects have been conducted in more than one hundred North Carolina communities. Community redevelopment through citizen participation has been the primary focus of these activities. Clients and collaborators have included the Agricultural Extension Service, the Agricultural Experiment Station, as well as such local and state agencies as the NC Arts Council, Lumbee Regional Development Association, an the Coastal Plains Regional Commission. Out-of-state funding has come from the US Department of Housing and Urban Development, the US Office of Economic Opportunity, the National Institute of Mental Health, and the National Endowment for the Arts.

- Individual faculty research is wide-ranging, for example: Robert Burns, *North Carolina Courthouse Study*; Henry Sanoff, *Design for Learning Environments*; Wayne Place, daylighting studies; Patrick Rand, brick cavity wall research.

Many of the school's faculty sought-after for their lectures or workshops could deliver these services at a distance, such as: Denis Wood, lectures on landscape semiotics, environmental cognition and the role of maps in society; Henry Sanoff, lectures and workshops on community development; Percy Hooper, workshops on modeling building; Peter Bachelor, workshops on city planning. Funding the IDEA would enable School of Design to offer distance-learning classes which could be taken at any campus in the state. In addition, lifetime continuing education for professionals is becoming a necessity. The School would be able to address these continuing education needs of all designers by offering courses in many areas, including courses in CAD, GIS, Rapid-Prototyping, Animation, and Multimedia.

3. COST SUMMARY

3.1 Summary of All Funding Needed

	1996-97	1997-98	1998-ongoing
One-time Funding	$ 1,282,300	$ 75,000	$ 0
Recurring (beginning 1997-98)	$ 0	$ 305,195*	$ 305,195*
TOTAL BY YEAR	$ 1,282,300	$ 380,195*	$ 305,195*

3.2 Summary of All Funding Requested by Category

	One-Time 1996-97	One-Time 1997-98	Recurring
Cabling Subtotal	$180,600	$0	$13,520
Network Subtotal	$111,300	$0	$40,250
Design Studio Subtotal	$75,190	$0	$9,600
Classroom Subtotal	$83,650	$0	$6,230
Teaching Lab Subtotal	$98,000	$0	$9,600
Simulations Lab Subtotal	$164,750	$0	$66,225
Imaging Lab and Library Subtotal	$121,310	$0	$13,970
Print and Textiles Lab Subtotal	$11,500	$0	$2,600
Rapid-Prototyping Lab Subtotal	$55,000	$0	$2,600
Faculty Computers Subtotal	$160,000	$0	$37,900
Administration Subtotal	$30,000	$30,000	$86,200*
Development Subtotal	$36,000	$45,000	$12,000
Space and Security Subtotal	$155,000	$0	$4,500
Total Funding Requested	1,282,300	75,000	305,195*

* includes salaries

4. DETAILED DESCRIPTIONS AND COSTS

4.1 Connectivity—Network Cabling, Hardware and Software

Current: The Computer Lab has 34 computers connected to the campus network. Of those 34 computers, 8 are Unity Computers. Knowing that a thin ethernet connection is to slow to deliver graphic and multimedia applications the school had taken a different approach to networking. Applications reside on the hard drive of the computer. Metering software—KeyServer—is used to keep track of software usage, greatly reducing the possibility of illegal copying. This reduces the load on the network and allows the software launch and work at the speed of the computer. Files are created and stored on the local hard disk. The network is used to move files from one computer to another to be worked on in conjunction with different input and output devices. Students use large format removable hard disk (syquest) to move files and store work done on the computer.

The school has had to spend more on software than planned because of the lack of progress networking to the University. The School of Design was initially scheduled by NC Telecommunications to have partial networking installed in 1993. As of November 1995, the school is still without the network.

Proposed: Sharing and accessing graphic information requires that computers and peripherals be connected by high speed ethernet networks. Multiple special purpose servers will be required to keep information moving in the School of Design. Servers will be established to allow the storage of graphics files as the work progresses from one stage to another and from one location to another. Applications will reside not only on the server but on student-owned computers as well. The need for access to storage—100 MB per student—in common spaces will be provided by networked removable storage devices of 1 gig or more. Students will need to move files to and from home directly to the School of Design in as direct a manner as possible. Student-owned computers will need to have access to WWW and other Internet Services and University Services.

The goal is to provide students with access to digital information in the most direct manner possible. Students will have a ubiquitous computing environment that allows them to gather and reassemble information and ideas in a method only possible in an non-linear environment.

University Servers
- World Wide Web and Internet Services
- E-Mail
- List Servers
- On-line School of Design Publications

School of Design Servers
- Large disk storage for students and faculty computing projects using multimedia, simulations, prototyping and graphics
- Database of images from Slide Library, Imaging Lab, and Environmental Simulations Lab
- Distance Learning

Funding for the IDEA will create this network, linking computers with all School of Design Server resources, the University Network, and the Internet. Network jacks will be installed at every students' desk in design studios, in every faculty and staff office, in classrooms, in jury rooms, in the slide library, in the multi-media lab, in the materials lab, and at all locations in the computing lab, as well as each of the School's Research Centers. The network will provide the necessary connection of School of Design administratively within and to the rest of the campus. In addition, jacks will be installed in the Design Library opening possibilities for subscription to full-text information services such as Lexus-Nexus. This network will link resources and programs that are physically separated to form an academy of designers.

	#	Unit cost	One-Time 1996-97	One-Time 1997-98	Recurring
Cabling and Associated Hardware					
Electrical conduit			79,000		
Carpentry			9,000		
Wiring/ network hardware	500	120	60,000		
Const. Coordination (Arch)			2,000		
Network Hubs	34	900	30,600		
Equipment maint/ ongoing upgrades					9,180
U Network Connection	7	620			4,340
Cabling Subtotal			**$180,600**	**$0**	**$13,520**
Network Server—Hardware and Software					
Network Servers					
with 10 GB Hard Drive	4	20,000	80,000		
Backup CD Writer	1	20,000	20,000		
Hardware maint/ ongoing upgrades					31,500
Network Software		11,300	11,300		
Metering software		8,750			8,750
Network Subtotal			**$111,300**	**$0**	**$40,250**

4.2 Academic Program Areas

Many areas of the School of Design academic programs require new or upgraded equipment and software. Recurring funds are included in the request for future upgrades of software, maintenance of hardware, and planning for long-term upgrades of equipment. The School of Design has established a standing committee to review and make recommendations to the dean regarding these funds. The *Technology and Computing Advisory Committee* is guided by its overreaching goal/ mission:

> "This committee shall advise the dean as to the fair and equitable distribution of resources acquired primarily through the student technology fees (operating guidelines, procedures, criteria, priorities). Recommendations of the technology committee will reflect a support of academic curriculum first and foremost. Recommendations of the technology committee will be clear, concise, and timely in order to support innovation in the curriculum. Recommendations of the technology committee will, whenever possible, share, combine, and build a collective attitude."

4.2.1 Design Studios and Jury Rooms

Current: There are no network jacks in the design studios. Students use the printers in the computer lab when they have access. Also, there is no place where students can display video or computer-driven work to an audience.

Proposed: More than 700 graduate and undergraduate students will have basic laser printing and scanning capability in the design studios. From jacks at their desks, students will be able to use these printers as well as other printers and plotters in the building and on the University Network. All the areas regularly used for review—jury rooms—will have ethernet jacks available. In addition, some landscape architecture will be equipped with clusters of

high-end personal computer to allow students direct access to more advanced applications central to their studio work.

	#	Unit cost	One-Time 1996-97	One-Time 1997-98	Recurring
Hardware (2 high-end Clusters)					
High-end Personal Computer	8	4,000	32,000		
Scanners for clusters	2	1,000	2,000		
11X17 Laser Printers for clusters	2	3,500	7,000		
large removable storage device	2	219	438		
Hardware (8 gen Studio Clusters)					
11X17 Laser Printers for studios	8	3,500	28,000		
Scanners for studios	4	1,000	4,000		
large removable storage device	8	219	1,752		
Equipment maint/ongoing upgrades					9,600
Design Studio Subtotal			**$75,190**	**$0**	**$9,600**

4.2.2   Classrooms

Current: No classrooms in the School of Design buildings are equipped with computer projection or network connections. Most rooms have poor light control and room darkening options. The School of Design Computing Lab has two low-end portable projectors it uses for teaching demonstrations.

Proposed: The IDEA Funding will be used to equip one School of Design classroom in Brooks Hall and the Kamphoefner Auditorium with video and computer projection equipment to support multi-media presentations, computer-based instruction and distance-learning. Other portable projectors will allow computer-based instruction in various other classrooms or in the jury spaces. The School of Design computer lab will continue to be used for teaching that requires hands-on use of the computers.

	#	Unit cost	One-Time 1996-97	One-Time 1997-98	Recurring
Wired Classroom					
Graphics Projector	2	18,000	36,000		
Cabling and installation	2	2,500	5,000		
Projection Screen	1	250	250		
Black-out shades	1	1,500	1,500		
Portable Equipment					
Portable Data Projector	5	8,000	40,000		
Portable Video Players	3	300	900		
Equipment maint/ongoing upgrades					6,230
Classroom Subtotal			**$83,650**	**$0**	**$6,230**

4.2.3   Hands-on Teaching Lab and Environmental Simulations Lab

Current Computing Lab: The computing lab has a collection of machines ranging from Macintosh SE's to Sun workstations. Most of the computers used for teaching are mid-range Mac's which must run all the software for all departments and all curricular agenda. This produces a recurring problem of software configuration incompatibility. There is no teaching

space other than the walk-in lab. There is only one control point and that is for the entire lab. Off-hours access is limited by difficulties in providing control and security.

Proposed Teaching Lab: The existing lab would be divided into a Teaching Lab and an Environmental Simulations Lab. The teaching lab will continue to support hands-on computer teaching for graduate and undergraduate classes. The Lab will also function off-hours as a general lab used by Design Fundamentals students and other students who will not be required to have their own computers. And it will be available for use by students whose own computers are not available due to repair.

Proposed Environmental Simulations Lab: The Simulations Lab will contain equipment not duplicated in studio environments. The lab will also provide special output devices in a lab environment with staff experienced in the unique issues relevant to 3-D reproduction (a type of service bureau). The IDEA funding will focus the capabilities of the current lab in 203 Brooks hall to meet the needs of an Environmental Simulations lab which:

- is available to students who need computing capacities beyond those provided by a super-fast laptop or personal computers;
- is available to student and faculty for high-end computing, including satellite image processing, geographic information systems, 3-D modeling, rapid-prototyping;
- establishes a School of Design "Electronic Help Desk" to provide assistance to students and faculty in using and maintaining their equipment (repair assistance already available from the point of purchase or at the University). The Electronic Help Desk will also monitor leased equipment and software licenses for the college;
- offers high quality, large-format printers and plotters with greater capacity than those in the design studios.

	#	Unit cost	One-Time 1996-97	One-Time 1997-98	Recurring
Teaching Lab					
Graphics Projector	1	18,000	18,000		
Cabling and installation	1	2,000	2,000		
Upgraded or new lab computers	15	3,200	48,000		
Software for teaching computers	15	2,000	30,000		
Equipment maint/ongoing upgrades					9,600
Teaching Lab Subtotal			$98,000	$0	$9,600
Simulations Lab					
High speed workstations	4	20,000	80,000		
Upgraded or new lab computers	6	4,000	24,000		
Printers and Plotter					
Color laser printer	1	10,000	10,000		
Ink-jet color printers	2	2,500	5,000		
"E" size color plotter	1	8,000	8,000		
Peripherals					
Slide Scanner (600 dpi)	1	1,750	1,750		
Flat Bed Scanner (600 dpi)	1	2,000	2,000		
2 GB Hard Disk	1	2,000	2,000		
CD-R (CD-ROM back-up)	1	2,000	2,000		
Equipment maint/ongoing upgrades					56,925
Software					
Software for lab computers	15	2,000	30,000		
Software upgrades					9,300
Simulations Lab Subtotal			$164,750	$0	$66,225

4.2.4   Imaging Lab and Image Library

Current Photogragphy, Graphic Arts and Video Labs: The School of Design photography studio equipment and photographic and graphic arts printing facilities are based in traditional photographic media (silver-based film and chemical processes). The video editing system is linear tape-based with single event memory controller.

Proposed Imaging Lab: The Imaging Lab will focus on the electronic digital imaging, manipulation, structuring and sequencing in photography, graphic arts and video. Traditional darkroom functions would be phased out as they are re-located on campus. Elimination of film and chemistry also provides the advantages of eliminating existing health and safety problems and hazardous waste disposal costs. Electronic media will provide students and faculty with digital images for use directly in page layout or with image manipulation software without the considerable time required in conventional photographic development. Digital video acquisition and non-linear random access editing offers great image quality and speed benefits over analog linear video.

By focusing on high-end imaging, software configuration incompatibility between the labs can be eliminated. The lab will also provide service bureau type special output devices in a graphic arts lab environment with staff experienced in the unique issues relevant to graphic arts reproduction. Proposed plan includes:

- providing a digital workstation (PowerMac and slide scanner) for electronic documentation of student projects (documentation is required for accreditation);
- establishing a high-end imaging center providing access to digital cameras, both portable and studio versions, image processing computers and high resolution black and white and photo-realistic color printers to be used by all students and faculty;
- establishing a digital video and audio recording and editing capability with output to videotape and CD authoring to be used by all students and faculty;
- providing students with the capability to produce high quality presentations combining video animation, still images, text and sound;
- providing lab staff members training to gain expertise in digital imaging;
- replacing traditional photography techniques with slide scanners and digital cameras for use in the studio and in the field;
- replacing photo enlargers and darkroom with computers and special photo-realistic printers;

Current Slide Library: Limited collection of 64,000 aging slides. Slides are placed on reserve in the library for use by students and faculty, removing the originals from circulation. The viewing facility consists of slide viewers in the slide library. Study slides for history courses are available on "CourseWare" in the computer lab.

Proposed Image Library: The slide library will expand its current collection to better meet student and faculty needs by establishing a slide catalog database on a 4-station LAN that would encompass the entire collection:
- providing low-resolution "thumbnail" images of slides along with database catalog information on each image.
- providing a high-resolution archive of images linked to the database catalog.
- storing slide library databases on the School of Design Servers where they could be distributed electronically.

The viewing facility will be supplemented by the following capabilities:
- complete access to slide collection images in digital format.
- digital collections of study images from lectures and studios.
- the capacity for faculty to design study programs and quizzes that merge the slide catalog with lecture material for student exercises and independent study.

	#	Unit cost	One-Time 1996-97	One-Time 1997-98	Recurring
Hardware in Design Library					
4 station LAN	4	2,000	8,000		
Hardware in Imaging Lab					
Upgraded or new lab computers	6	4,000	24,000		
GB drives	3	250	750		
additional 32 MB RAM	3	1200	3,600		
Scanning station microcomputers	3	5,000	15,000		
Slide Scanners	2	1,750	3,500		
High speed/ high resolution Slide Scanner	1	7,000	7,000		
Frame Accu. Recorder/ Controller	1	4,500	4,500		
Video camera	1	2,000	2,000		
Non-linear digital video edit system	3	9,000	27,000		
Digital camera, 35mm format	1	7,000	7,000		
Digital cameras for general use	5	900	4,500		
Laser printer, tabloid size, 1200 dpi	1	6,000	6,000		
Removeable Storage Device	3	220	660		
Equipment maint/ongoing upgrades					10,650
Software					
Imaging lab and graphic arts software			1,800		1,800
CD ROM digital image collections					500
DNA Meganet site license	1	1,000	1,000		
Thumbs Up 6-user license	1	5,000	5,000		
Software upgrades and training					1,020
Imaging Lab and Library Subtotal			$121,310	$0	$13,970

4.2.5   Materials Lab and Rapid-Prototyping Lab

Current Materials Labs: The materials lab uses traditional methods only—woodworking and metalworking. There is no current method for translating the digital models into physical product. The print and textile lab has traditional looms.

Proposed Upgrade of Print and Textile Lab: The print and textiles lab requires mid-range computers to run industry-driven applications for the generation of print and textile patterns.

Proposed Rapid-Prototyping Lab: The prototyping lab will focus on a finite set of operations not duplicated in studio environments—object manufacturing, advanced product modeling, analysis, & rapid-prototyping—eliminating software configuration incompatibility. The lab will also provide special output devices in a lab environment with staff experienced in the unique issues relevant to rapid-prototyping (service bureau). This new equipment would make it possible to control by computer the modeling in all our disciplines. It is ideal for intricate 3D model fabrication, signage, furniture and scale architectural models.

Rapid prototyping of the 3-D product concept model is achieved without any tooling. The prototype is formed directly from the original 3-D product concept data. Parts with complex shapes and even with interior features are built within hours. Rapid Prototyping systems can reduce prototyping cost by as much as 90%. The data generated by the solids modeling software will accommodate downstream activities such as CNC Tooling, Finite Element Analysis and Mold Flow Analysis.

	#	Unit cost	One-Time 1996-97	One-Time 1997-98	Recurring
Print and Textiles Lab					
Personal computer	2	2,000	4,000		
11X17 Laser Printer	1	3,500	3,500		
Software					
loom interface	1	4,000	4,000		
Equipment maint/ongoing upgrades					2,600
Print and Textiles Lab Subtotal			**$11,500**	**$0**	**$2,600**
Rapid-Prototyping Lab					
Milling Machine	1	35,000	35,000		
CNC controlled					
Overhead router system					
High Speed Graphics Computer	1	20,000	20,000		
Equipment maint/ongoing upgrades					2,600
Rapid-Prototyping Lab Subtotal			**$55,000**	**$0**	**$2,600**

4.2.6 Faculty Computers

Current: The quality and capacity of computers used by School of Design faculty varies widely. A few faculty have newer computers which are connected to the ethernet, but roughly half of the faculty have fairly old equipment without the capacity to access graphic images.

Proposed: All regular (tenure-track and tenured) faculty members and full-time professional staff members will be provided with a computer and software which will enable them to more efficiently support, develop and teach School of Design courses. A computer "pool" will also be created for adjunct and part-time faculty to use during semesters that they are teaching. All of these computers will have the capabilities of the students' computers and will be upgraded as requirements for students' computers are changed.

	#	Unit cost	One-Time 1996-97	One-Time 1997-98	Recurring
Computers for regular faculty					
Personal computer or laptop	26	2,000	52,000		
Hardware maint/ongoing upgrades					20,000
Affiliated faculty computer pool					
Personal computer or laptop	10	3,000	30,000		
Equipment maint/ongoing upgrades					8,000
Software					
Software (ed. disc, pricing)	52	1,500	78,000		
Software upgrades					9,900
Faculty Computers Subtotal			**$160,000**	**$0**	**$37,900**

4.3　Administrative Support

Current: The School of Design already has three service unit directors that report to the dean's office—media, materials and computing. The computing lab and materials lab have salaried assistants and work-study help.

Proposed: New positions within School of Design will be required to support the new computing areas in the program and guarantee coordination and effective use of hardware, software, and faculty and staff time. The following positions would be added to and managed within those service units to ensure that all the existing service unit resources work together with the new electronic resources.

Program Coordinator/ Network Administrator (recurring 100% time)
> Responsibilities include coordinating the IDEA (all the various parts of School of Design's electronic environment). This would include overseeing the School of Design's Computing, Materials and Media Labs, scheduling employees, and ensuring the network is properly maintained. The Coordinator will be familiar with network software, supervise repairs of equipment, work with faculty and staff to choose and purchase new hardware and software, and be responsible for School of Design and WWW servers.

School of Design Computing Laboratories TAs/ Attendants (recurring 25-30% time)
> Grad Assistants and Undergrad Attendant positions will assist students in the Service Labs and help man the Electronic Help Desk. The School of Design Labs will be open approximately 80 hours per week. This funding will provide a base level of staffing which the lab has not had in previous years.

Slide Library Data Entry Assistants (two year 50% time)
> This person will enter the files for a selection of approximately 20,000 slides already available through the School of Design collection to bring the collection database up to its full potential as a research/ teaching resource. In addition, this individual will coordinate the purchase of digital image packages which will expand the school's image collection.

	#	Unit cost	One-Time 1996-97	One-Time 1997-98	Recurring
School of Design Network Coordinator					
1 FTE (salary and fringe)					55,000
Computer Lab TAs/Attendants					
25% Grad Assistants (9mo)	3	6,000			18,000
25% Ugrad Attendants (9mo)	3	3,600			10,800
25% Ugrad Attendants (3mo ss)	2	1,200			2,400
Slide Library Data Entry Assistants					
50% Data entry assist (12 mo)	3	10,000	30,000		
50% Data entry assist (12 mo)	3	10,000		30,000	
Administration Subtotal			$30,000	$30,000	$86,200

4.4   Training and Course Development

Current: Faculty and staff have had to acquire skills and expertise on their own or by using limited departmental professional development funding for travel to attend workshops. The School has provided some workshops for faculty.

Proposed: Staff in the slide library and photo/video lab need to attend seminars on digital imaging. Funds will provide for intensive training and course development during the first two years of this program, with ongoing funds for continuing training.

Faculty and Staff Training
> School of Design faculty will receive training in various forms of software used by Architecture, Environmental Design, Graphic Design, Industrial Design, and Landscape Architecture allowing faculty to encourage and support student use of computing in both academic and studio classes. Ongoing training will continue for faculty and professional staff in such topics as network-based and distance learning teaching techniques and software.

Course Development
> A course development grant pool will be created for regular and adjunct faculty and staff who work on course development projects, enabling them to apply for funding by writing a proposal for developing specific computer-based instruction for their classes. These competitive grants would be administered by School of Design and could be used for release times, RA support, summer salary, special materials, or software.

	#	Unit cost	One-Time 1996-97	One-Time 1997-98	Recurring
Faculty and Staff Training					
Intensive courses (instr's salary)	2	3,000	6,000		
Intensive courses (instr's salary)	5	3,000		15,000	
Professional development/ training					
$200/yr x 60 faculty and prof. staff					12,000
Course Development					
96-97 Course Development Grant Pool					
Faculty release time or summer salary					
6-10 grants @ $1500-4000 each			25,000		
Grant matl's and supplies			5,000		
97-98 Course Development Grant Pool					
Faculty release time or summer salary					
6-10 grants @ $1500-4000 each				25,000	
Grant matl's and supplies				5,000	
Development Subtotal			$36,000	$45,000	$12,000

4.5   Space Planning and Security Measures

Current: The School of Design has had no major renovation for nearly 20 years. Minor improvements, sponsored by private funding, are presently underway. An accessibility project has also been initiated by the University. The School community has been informed of a networking effort but no work has begun. The school has no provision for electrical power upgrades or security systems.

Proposed: The existing computer lab and adjacent classroom (Brooks Hall 202 and 203) will be remodeled to provide a control desk, secure office for lab director, server room, an equipment storage room, projection room, teaching lab and a mult-media presentation classroom.

The existing darkroom will be remodeled with the adjoining areas to provide the new imaging center. The sinks will be removed and lighting and electrical upgraded to meet computing environment standards. Some new furniture will be required for the imaging center.

Install card-key security system to secure critical studio areas and the Simulations and Imaging Labs in order to provide 24 hour access to these high-demand areas. All other security will be either traditional key locks or lockable cabinets.

	#	Unit cost	1996-97	One-Time 1997-98	One-Time Recurring
Remodel					
Simulations lab/ classroom			30,000		
Multi-media lab (remove trad. equip)				30,000	
Rapid-prototyping lab			10,000		
Install card-key security system to critical areas			50,000		4,500
Provide lockers and light cable security					
for studio clusters and lab areas	10	3,500	35,000		
Space and Security Subtotal			$155,000	$0	$4,500

5.   OUTCOMES
                      STRATEGIC PLAN FOR TECHNOLOGY

                  Aspiration:
                  *Advance the technological capabilities of the School to
                  enhance the academic experience, improve administrative
                  services and support research and creative activity.*

5.1   **Implementation Goal:**
                  Integrated Digital Environment for the Academy

The goals involved in the strategic direction are the outcomes of the School of Design desire:

- To provide every student and faculty member with individual CAD workstations suited to the demands of their profession and research, most of which will be powered by the next generation of super-fast laptop or personal computers provided by the students, networked together and linked to a central server that will have the latest software;

- To continue to maintain central labs that will function as the School of Design computing service bureau with high-end computing and visualization hardware and software;

- To have every course in the curriculum take advantage of the information and computing technology, using the appropriate software to aid in instruction and course work; and

- To use the electronic environment to assist in integrating core content courses and design studios.

In order to meet that goal, in 1996-97 the School of Design will:

- Initiate IDEA funding, both recurring and one-time, to implement the skeleton of the network system and central server;

- Request the establishment of a requirement for student-owned super-fast laptop or personal computers for selected professional, graduate and undergraduate programs. Implementation would begin with 1997-1998 new students;

- Establish a grant program to make it possible for under-privileged students in the selected professional, graduate and undergraduate programs to lease or buy the next generation of super-fast laptop or personal computers;

- Continue to upgrade the existing service units to meet the IDEA goals; and

- Seek opportunities for outside support in this area (e.g. recent gifts......).

During 1997-98, School of Design will:

- Implement the full network and central server in a renovated computing lab;

- Integrate the use of information and computing technology across the curriculum;

- Refine and keep up-to-date the use of information and computing technology across the curriculum;

- Explore the possibility of expanding core professional degree programs to remote sites within North Carolina by using Distance-Learning Technology; and

- Continue to seek outside private support for computing needs.

5.2   Consequences of not funding this request:

Simply put, without this support, the School of Design faces a weakened ability to recruit high-quality students, loss of top faculty and staff, a downturn in the national rankings of professional programs, loss of support from the professional community, and ultimately, the inability to maintain accreditation of professional programs.

Dean Marvin Malecha, Ann Sundberg (School of Design Development Officer) and others who work on fundraising for the School of Design continue to report that the professional community is asking that School of Design graduates be familiar with computer technology. The professional community is at the same time supportive of the school and the tradition of excellence at the School of Design and disappointed that the leadership in computing is not forthcoming. The School of Design must be able to give students a full education—one that includes adequate opportunities for them to acquire an understanding of the principles of computer-aided design and other digital technologies—in order to obtain meaningful employment and contribute to society.

Accreditation teams for Architecture and Landscape Architecture professional programs now review computer equipment and facilities as part of their accreditation review. If the School of Design cannot remain at least relatively current in these technologies, the accreditation of School of Design's professional programs may be jeopardized. For example, the 1995 report of the National Architecture Accreditation Board (NAAB), as cited on page 14 of the document, was emphatic in its recommendation regarding the implementation of new technologies.

> Computers have become an essential part of architectural practice. The computer is a tool and students must be facile with all of the tools of the profession.

> The computer program must be strengthened if students are to meet the needs of the professional community upon graduation. Computer hardware and software and their constant updating require capitalization or a creative approach to equipment acquisition. The Department of Architecture must explore with the University various ways of creating a program which can continue to grow. Several schools now require students to come to school with their own computers. The students responded positively to this approach at the open student meeting. Other schools have maximized their research links and acquired very sophisticated equipment for students to access through grants and links with computer hardware and software companies.

Prospective School of Design students are increasingly more computer-aware and are increasingly more sophisticated consumers. If the School of Design's computer instruction, hardware, and software fall behind those of other universities, we will lose top students to other institutions. At present, our students are reporting to us that the technical schools in the triangle area have computing equipment and facilities far superior to ours.

Support for the technologies used by faculty in their research is critical in attracting and retaining faculty at the leading edge of the design disciplines. Several School of Design faculty will retire in the next few years. Without the appropriate technology to support faculty research, the school will not be competitive in seeking either research dollars or the best new faculty.

Design Research
Computing Cluster
Computing Cluster
Walk-in Cluster

Library
KAM Auditorium
Brooks
Multimedia
Materials
Print & Textiles

Studio
Network Connections

Administration/Staff
Network Connections

Faculty
Network Connections

University
Network Connections
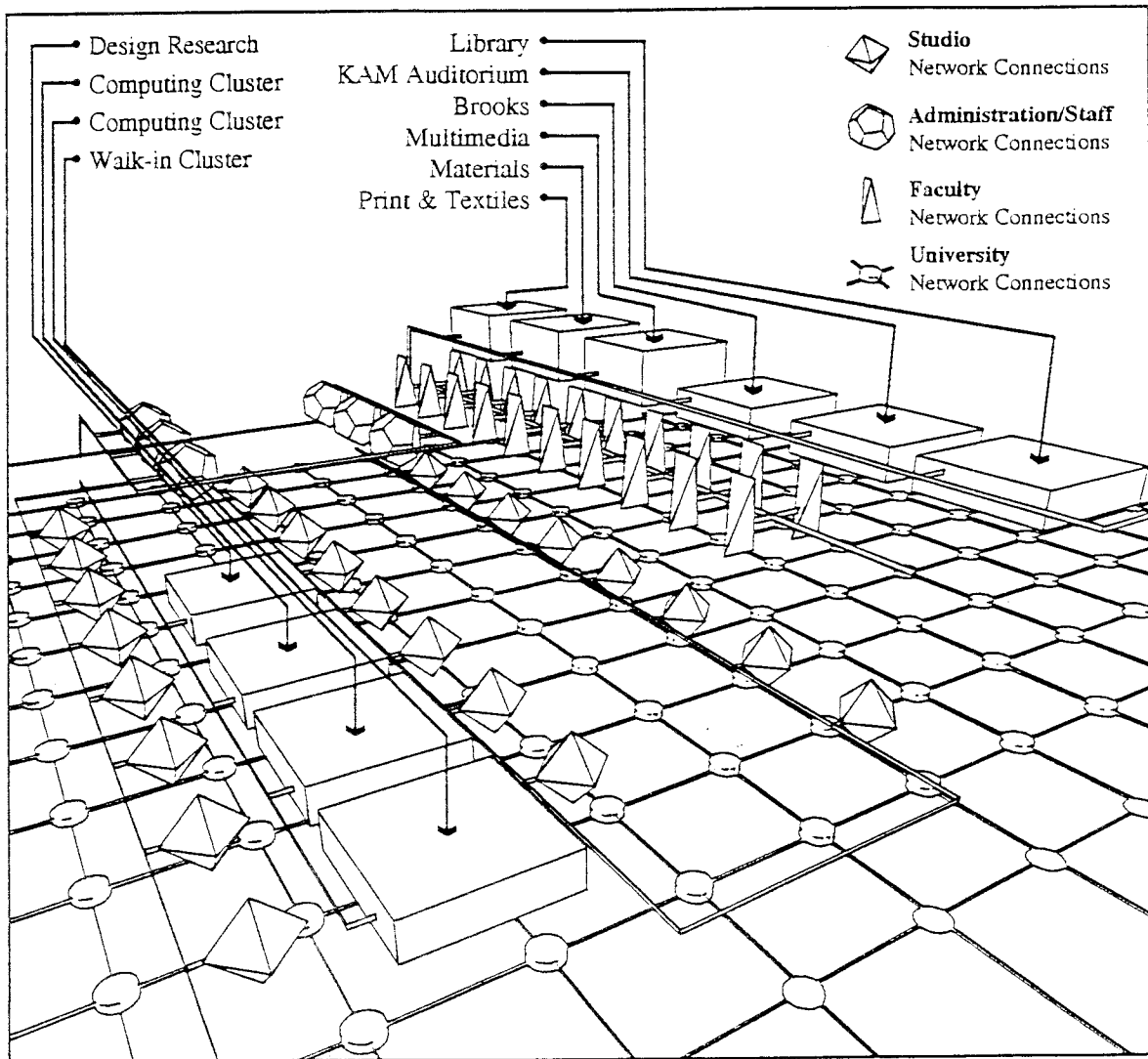
September, 1999
Chania, Greece

EAAE

Managing A School of Architecture

With

"Eyes open Idealism"

A presentation to the second annual meeting of the heads of architecture schools in Europe, a European Association for Architectural Education event.

Marvin J. Malecha, FAIA, Hon. EAAE
Dean of the School of Design at NC State University

1

Prologue

The management of a school of architecture and design is a great privilege. The individual chosen to lead is given the opportunity to live the life of the mind and engage in creative thought with individuals who possess creative abilities of the first order. Yet, it is also a personal challenge. It is a position guided by a strong belief system that is tested each and every day the individual remains in office. It is a position that allows an individual the opportunity to foster the meeting of the best human aspirations with unbounded energy. And, it is a position that demands that the worst of human nature be confronted. This paper is presented from a base of experience equaling more than twenty years of duties including departmental leadership and deanship. It is a paper that assumes that the individual who accepts the leadership of an architectural program has not only been chosen because of administrative ability, but most importantly because of a demonstrated devotion to the pursuit of design studies. The responsibility for leadership in the academy is dependent on the ability of an individual to form a relationship of trust with a complex community of specific constituencies and dependents who often have conflicting opinions. An individual who aspires to lead must articulate a vision of the organization that connects with the most dedicated theorist and the most ardent keeper of the institutional legacy. The dean and department head must be willing and able to assume the

role of teacher to both faculty and staff regarding the most pressing issues before the community.

Two individuals came to mind as I prepared the text of this presentation. The first, Panos Koulermos, took me under his wing as I assumed the Department Chair position at Cal Poly Pomona. His experience and guidance as a dear friend inspired me to understand that all we do in life begins with passion and idealism.

Many of the observations of this text are the result of a close collaboration with Dean Robert Greenstreet. I am thankful for this collaboration as it has made me a more reflective academic leader.
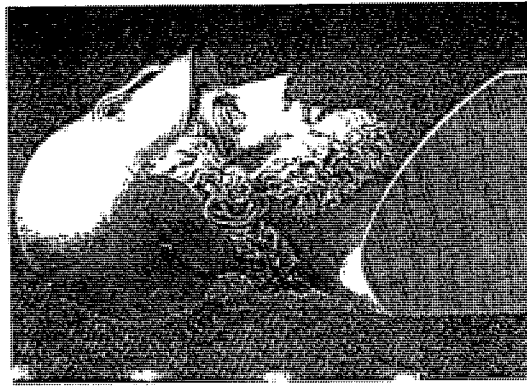
Marvin J. Malecha

makes life sweet and raises the quality of life for every one. Above all, Pericles convinced the Athenians, that their private needs, both moral, and material, required the kind of community Athens had become. Therefore, they were willing to run risks in its defense, make sacrifices on its behalf, and restrain their passions and desires to preserve it.

Donald Kagan, Pericles of Athens and the Birth of Democracy, The Triumph of Vision in Leadership, NY: Touchstone Publishers, 1991, p. 273
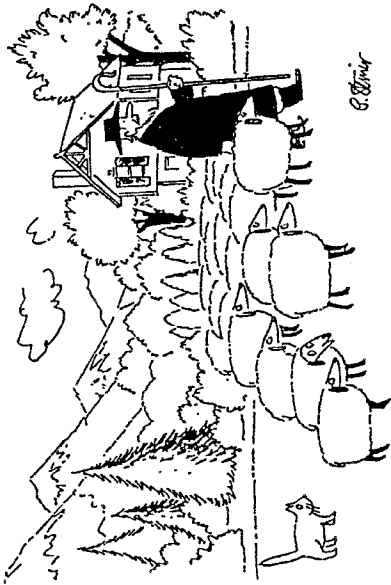

1. Pericles of Athens

5

Leadership in Design Education

It is appropriate at meeting convened in Greece to begin a mini-seminar on leadership strategies by citing the accomplishments of one of the most significant leaders in history, Pericles of Athens. The Athenian democracy has become the touchstone of western civilization and the educational exploration of the philosophical schools of Athens continues to inspire our intellectual investigations even today. It is a model of considerable inspiration for the text of this presentation. Leadership is a concept that is as often defined by intelligent following as it is by courageous trail blazing. However it is defined, leadership must set out the aspirations of those who comprise the community. The strength of leadership is marked by the openness to accountability.

The story of the Athenians in the times of Pericles suggests that the creation and survival of democracy requires leadership of a high order. When tested the Athenians behaved with the required devotion, wisdom, and moderation in a large part because they had been inspired by the democratic vision and example that Pericles had so effectively communicated to them. It was a vision that exalted the individual within the political community; it limited the scope and power of the state, leaving enough space for individual freedom, privacy, and the human dignity of which they are a crucial part. It rejected the leveling principle pursued by Ancient Sparta. By rewarding merit, it encouraged the individual and excellence that

4

"She's not all over you, but she gets the job done."

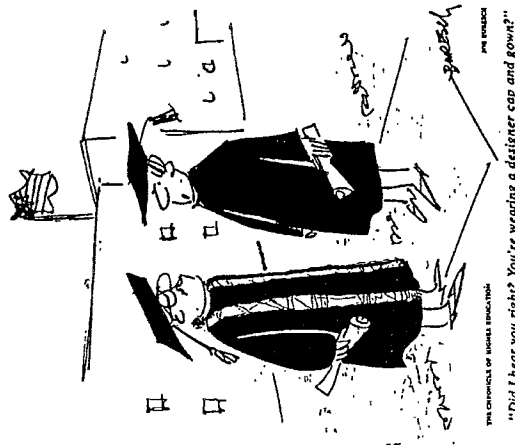### 3. Defending a Demanding Democracy

The leadership of an academic program today functions within a demanding and often difficult democracy. The faculty, non-academic staff, students and alumni are well informed and eager to promote specific positions and priorities. This is a creative citizenry not willing to simply accept a means of doing at face value. The senior administration of a significant academic institution expect that the school or college will creatively be positioned by the dean to attract significant funding The office of a department head or dean is an office requiring reflection-

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"Well, we're lost. I knew from the start that it was just plain idiotic to choose a leader based simply on the size of his or her respective pith helmet. Sorry, Cromwell."

2. Leading from a Base of Experience

A base of experience provides the context of leadership. The issue is can the individual who would lead learn from past experience so as to be able to apply lessons to related but different situations.

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in-action. It is an office that is frequently assessing the bottom line cost for the desired outcome.

The dean or department head should recognize that every move he or she makes will be observed and interpreted. The adoption of the design method as the basis for action is an acceptance of the symbolic nature of the actions of an academic leader in the design professions. The design method is founded on the concept of exploration. It is a process of seeking a greater metaphor for action even while attention to detail is recognized as central to the realization of a plan. The design process is dependent on a vision and it can only be determined as successful when the outcomes are measurable. This understanding is at the very root of this paper.

Why should a discussion of management be included in such a distinguished setting as a meeting of the architecture programs of Europe? Again the advantage of the study and practice of architecture presents the example of what is required to realize an exceptional structure. It is the discipline of decision making in situations of conflicted priorities with information that comes to the situation from disparate sources. The most sublime curricular aspirations have no hope of realization without a culture of management. In a society that expects an ever more entrepreneurial spirit the academic can not assume that such expectations will stop at the door of the academy. And, the encouragement and development of academic and non

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academic staff has become a central aspect of the dean's responsibilities. Why should a discussion of management be included in such a distinguished meeting of educational leaders? Because without increasingly sophisticated management strategies in architectural education the dreams shared at this meeting will not be realized. This is not a message unique to the United States. It is a growing reality for all educators.

THE CHRONICLE OF HIGHER EDUCATION
"*Did I hear you right? You're wearing a designer cap and gown?*"

4.   Representing Design Attitudes on Campus
Among the most visible of duties for a leader of a design program is the promotion and nurturing of design on campus. This is a responsibility that requires persistence and opportunism. The dean's message that each

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project of graphic identity, art in public places, landscape and building design, and discussion of teaching pedagogy, is important to a design program must be continually reinforced. Clearly, a campus that values the study of literature would never celebrate the acquisition of mediocre examples of writing. So too it must be clear that mediocrity in design cannot be celebrated. The pedagogy of design education has much to offer even the most established institutions. It is a message of the value of the study of design and architecture to a university community. A passion for good design not only underlies the leadership of a dean within a program, but it is the foundation of respect that a dean receives from colleagues and administrative superiors on campus.

5. A Shared Rather than Imposed Mythology

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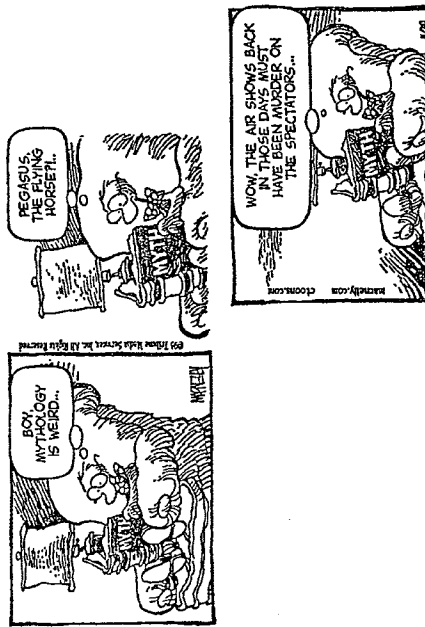
Leadership that is successful fosters a belief system that is inclusive rather than elitist. Certainly, the value an individual can bring to leadership can be considerable. But if the belief system of that individual is such that it demeans the contributions of others it will soon be seen as imposed, or worse by those who will be expected to work with it. Successful leadership encourages vigorous discourse on subject that define the value system of the community. When the mythology of the place is developed under such conditions it will transcend individuals and time to foster a deep legacy for the program.
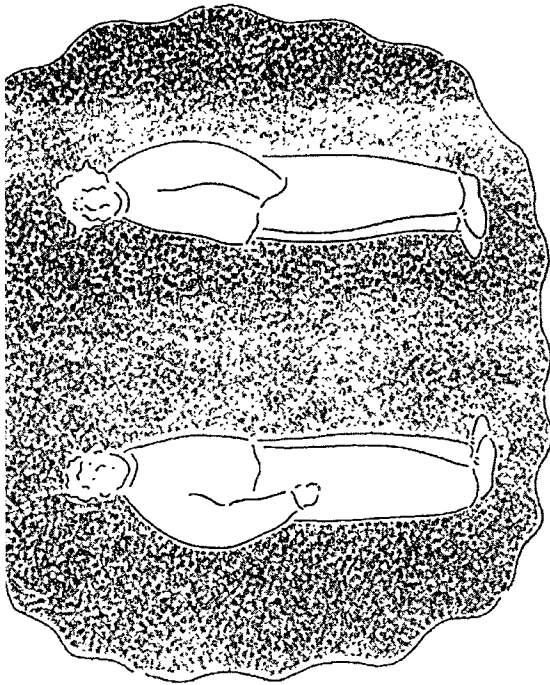
6. Fostering a Climate of Respect

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Suddenly, a heated exchange took place between the king and the moat contractor.

7. Maintaining Direct Involvement

Academic leadership is hands-on. Intelligent delegation is a necessary aspect of deanship. However, even in the situations of delegation the outcomes must be understood and the means to resolution clearly agreed upon among the leadership team. There is no such thing as necessary deniability when it comes to the areas of responsibility assigned to a dean. The ultimate success of a term of academic leadership is dependent upon the details of execution. Just as the most interesting concept for the design of a building can be undone by the quality of the details of its execution, so too can the ideas underlying a deanship be derailed by the inability to implement key aspect of administration. The final analysis of a deanship will demonstrate the necessity for the close attention to details for effective leadership.

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Leadership begins in a climate of respect. Even the most difficult issues can be brought to resolution when the dignity and values of others are honored. A climate of respect is at the very heart of the design community environment. The speculation of the design studio demands that an open climate free of ridicule or harassment exists for the flowering of ideas. The moment this environment erodes is the moment that the search for ideas ends. Disagreement in the academic environment is a healthy sign. It indicates that the life of the mind is continually refreshed. It demands that the proponents of an idea must be prepared to be tested. However, disagreement can only flourish where ideas are kept apart from personal judgements. The open and honest criticism of ideas cannot be confused with judgement of personal worth or the value of individual character. It is the responsibility of the academic administrator to guide and protect the generation of ideas while insuring and environment of personal dignity.

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Choosing Status Over Results
Is it a Personal and professional failure if the organization you lead does not make it objectives?
Is success a career move?
Can the organization succeed without you?

Choosing Popularity Over Accountability
Are you reports close personal friends?
Does it bother you if your reports are unhappy with you?
Are you reluctant to give negative feedback?

Choosing Certainty Over Clarity
Must you be intellectually precise?
Do you wait for more information before acting?
Do you enjoy debating details?

Choosing Harmony Over Productive Conflict
Do you prefer pleasant meetings?
Are meetings you lead often boring?
Are you uncomfortable if your direct reports argue?

Choosing Invulnerability Over Trust
Can you admit when you are wrong?
Do you fear others want your job?
Do you keep you weaknesses secret ?

Patrick Lencioni, The Five temptations of a CEO
9. Five Temptations of Leadership

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THE CHRONICLE OF HIGHER EDUCATION
"You know me, I'm a problem solver. I listen. I flirt with understanding. I move on."
CHRISTOPHER BURKE

8. Comprehending Disparate Information
Among the most interesting and frustrating aspects of academic leadership is the dynamic nature of the information and experiences. Meetings often occur on fifteen minute intervals on subjects as diverse as a student grievance and a call from the university chancellor. In any of these cases the individual must be prepared to think quickly and to comprehend the issues of the situation with little time for reflection. This stretches the individuals ability to deal with any one issue substantively. The individual must identify issues where substantive thought can be engaged.

The ultimate skill is to learn what you do best and seek to spend as much time as possible in that endeavor.
Ken Carbone

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Leadership is measured by the outcomes of the involvement of an individual in a community. The five temptations of leadership as articulated by Patrick Lencioni in The Five temptations of a CEO clearly articulates the expectations of a leader by identifying the temptations that work against effective leadership. The enhancement of individual status should never be confused with real gains on behalf of the organization. Popularity is the leader's temptation while accountability is the necessary measure of an individual's ability to lead. Everyone seeks approval and affection, but holding a standard often is an unpopular responsibility. Leadership often requires the choice of a path of action before each of the facts are known and every detail resolved. The dependents of leadership require a sense of continual movement. The leader must be prepared to act and to adjust rather than to wait for the certain solution. Delay is the enemy of flexibility in leadership and flexibility is the fuel for continual reconfiguration and improvement in a complex academic community.

Chose **Trust**

Over **Invulnerability**

Chose **Conflict**

Over **Harmony**

Chose **Clarity**

Over **Certainty**

Chose **Accountability**

Over **Popularity**

Chose **Results**

Over **Status**

Patrick Lencioni, The Five temptations of a CEO

10.   Overcoming the Five Temptations

The lessons of overcoming the temptations of leadership, again noted by Patrick Lencioni, ring true with experience. The leader must seek the very best with experience. The leader must seek the very best colleagues and then be willing to trust those individuals to act responsibly and appropriately. Harmony is a great temptation for those responsible to convene and moderate diverse interests. However, the search for

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harmony may subdue the vital need for diverse opinions in a healthy community. Those who express alternate points of view are a valuable asset to the organization. The leader is expected to keep the community in a continual state of development and maturation. Such a process requires action and reflection to be continually interactive rather than linear. Perhaps the most difficult aspect of leadership is that accountability must take precedence over popularity. The academic leader must communicate the effectiveness of individuals including faculty and support staff. When accountability is uncertain the message the leader sends to the community is that the stated goals of the community are also uncertain.
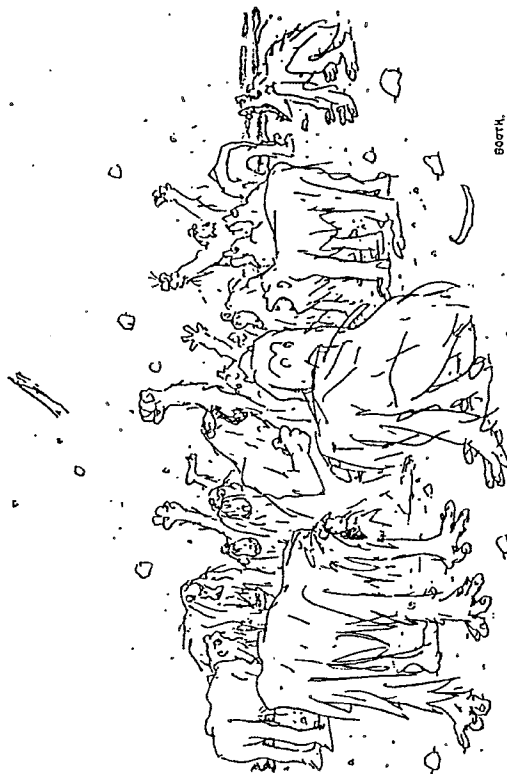
The credit for effective leadership emanates from the successes and accomplishments of those who are led. When credit for leadership is directly sought after it is elusive. This is the puzzle of leadership. Those who seek self aggrandizement by definition fail at the fundamental requirement of the effective leader, that is to see to the success of others.

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Building Relationships

Among the Constituencies and Dependencies of Leadership

Academic leadership is founded on trust and respect rather than power and vested authority. The sword, shield, and helmet that is issued to an academic dean along with academic regalia are no more than the toys of children, rubber painted to simulate steel. If the choice is ever made to utilize these weapons the combatant will be essentially unarmed in the arena. Selflessness rather than ego propel academic leadership. And the resolution of disparate ideas and people through diplomacy is more effective than a demonstration of power. The academic leader is challenged to walk along the paths of divergent interest groups. Five major constituencies comprise the academic community; students, faculty, support staff, senior academic administration and the alumni and immediate professional friends of the program. There are several dependencies including; the community beyond the walls of the academy, parents, and future employers. Each of these constituencies and dependencies require a specific response from the academic leader, and, each of the representative groups expect the academic leader to walk in their shoes. Two models for action emerge. The first, the Clinton model, is the "I feel your pain" posture. This model depends on the individual who leads to either become fully involved with each of the groups or to be sensitive to their issues as

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they are experienced. The second model is Bobby Kennedy's posture, that is to represent the opinions and needs of each constituency and dependency to the others. The first is an attempt to have each constituency believe their needs are understood by a benevolent leader. The second is a step toward real progress by working toward the broad understanding of the complexity of the needs of each of the constituencies within a community by each of the constituencies of that community.

It is the students who must place the most trust in a dean or program head. Their time in the school is golden and it cannot be repeated. An academic leader cannot lose his or her connection to the students. If such a continuous communication between the dean and the students is lost, it is the undoing of the leadership of the program. The academic leader is a member of the faculty. An entire career is founded on academic accomplishment as a prelude to leadership. The line some would draw between administration and faculty is entirely artificial. The academic leader must resist this characterization or risk being isolated from faculty colleagues. The faculty expect recognition, support and appreciation. They wish to share in the decision process. The non-academic staff play an important role in the life of an academic community. Their role as advisors and advocates for the students must not be underestimated. Similarly the non-academic staff expect and deserve a voice in the life of a school. The dean is expected to be a senior member of this staff just as he or she is expected

to provide academic leadership. An academic leader must move with confidence in a variety of experiences as diverse as working in a traditional studio, conducting alumni receptions, and providing a tour of the school to a prospective student and his or her family.

The academic leader must move comfortably in the management of a larger academic community. The senior administration of the host institution for the study of design and architecture must be considered an important constituent of the dean or program leader. In the terms of a design professional, the senior administration must not be considered the enemy, they are an important client. The over-riding paradigm of the university environment is collegial. Those who would lead an academic program in such an environment must understand that to be valued in such an environment requires a demonstration of value. The splendid isolation of past design programs has been the undoing of many fine programs. Today the academic leader must engage the entire university community to be considered a valued member of the community.

"We may as well go home. It's obvious that this meeting isn't going to settle anything."

I HATE THE WAY J.B. RUNS THESE CREATIVE BRAINSTORMING SESSIONS.

SIT DOWN, STUPID! ANYBODY ELSE GOT ANY HALF-WIT IDEAS?

11.   Moderating the Discussion and Setting the Agenda

Among the most satisfying aspects of a leadership position is the discretion to set the agenda for discussion and action. This responsibility has the potential to significantly change the spirit of a place. To realize this potential the leader must be willing to connect resources to the discussion.

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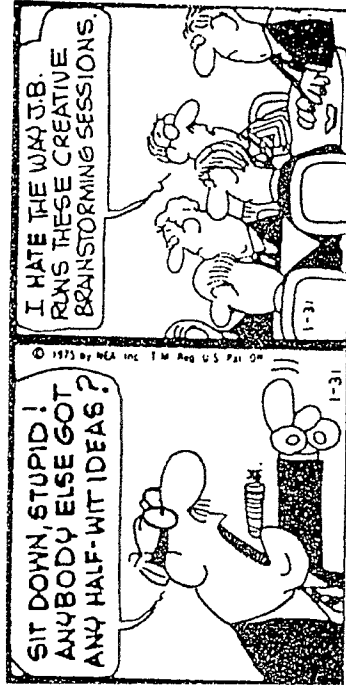
12.   Incorporating the Work and Ideas of Others

The responsibility of leadership is to establish concepts and ideas of such a nature, with general principles, that it is possible to incorporate the ideas of others. This process is essential for the engagement of a substantial portion of an academic community in the initiative underway. The dean or program head cannot lead without the engagement of a substantial portion of the community.

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The Philosophical Aspects of Cultural Difference

Developed by Edwin J. Nichols, Ph.D.

Ethnic Groups/ World Views	Axiology — THE NATURE OF VALUES	Epistemology — NATURE OF KNOWING THE	Logic — NATURE OF REASONING THE	Process — THE NATURE OF DOING
European Euro-American	**Member-Object** The highest value lies in the object or the acquisition of the object.	**Cognitive** One knows through counting and measuring.	**Dichotomous** Either/Or	**Technology** All sets are repeatable and reproducible.
African African-American Hispanics Arabs	**Member-Member** The highest value lies in the interpersonal relationships between persons.	**Affective** One knows through symbolic imagery and rhythm.	**Diunital** The union of opposites "Aztec Thought & Culture".	**Ntuology** All sets are interrelated through human and spiritual networks.
Asian Asian-American Polynesian	**Member-Group** The highest value lies in the cohesiveness of the group.	**Conative** One knows through striving toward the transcendence.	**Nyaya** The objective world is conceived independent of thought and mind.	**Cosmology** All sets are independently interrelated in the harmony of the universe.
Native American	**Member-Great Spirit** The highest value lies in oneness with the Great Spirit.	**Inspirational** One knows through reflection and spiritual receptivity.	**Wakan Tanka** "great mystery" (medicine wheel) 4 directions.	**Transcendence** All sets of life are interrelated through human, plant, mineral and spiritual networks.

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14. Accepting and Celebrating Diversity

Administrating a design program is an exercise in celebrating diversity. The varying approaches of designers indicate the vitality of the creative process. This diversity is strengthened by the incorporation of many intellectual traditions and cultural legacies. It is the responsibility of the academic leader to insure that the rich traditions of culture, race, gender and tradition are incorporated into the consideration of design studies.

Religious Truths

Taoism Shit happens.	**Confucianism** Confucious say, "Shit happens."	**Buddhism** If shit happens, it is not really shit.
Zen Buddhism What is the sound of shit happening?	**Hinduism** This shit happened before.	**Islam** If shit happens, it is the will of Allah.
Protestantism Let shit happen to someone else.	**Catholicism** If shit happens, then you deserve it.	**Judaism** Why does shit always happen to us?
New Age Affirm shit does not happen to me.	**Atheist** I don't believe this shit.	**Rastafarian** Let's roll that shit up and smoke it.

13. Recognizing Varying Perspectives

A healthy academic community is comprised of many, often conflicting perspectives. The academic leader can draw strength from these divergent perspectives. It is from an array of ideas from which new perspectives grow. Those who would blindly defend a single manner of thought are condemned to think inside of an accepted pattern and deprived of the opportunity to think creatively. Flexibility of action is absolutely essential for effective leadership.
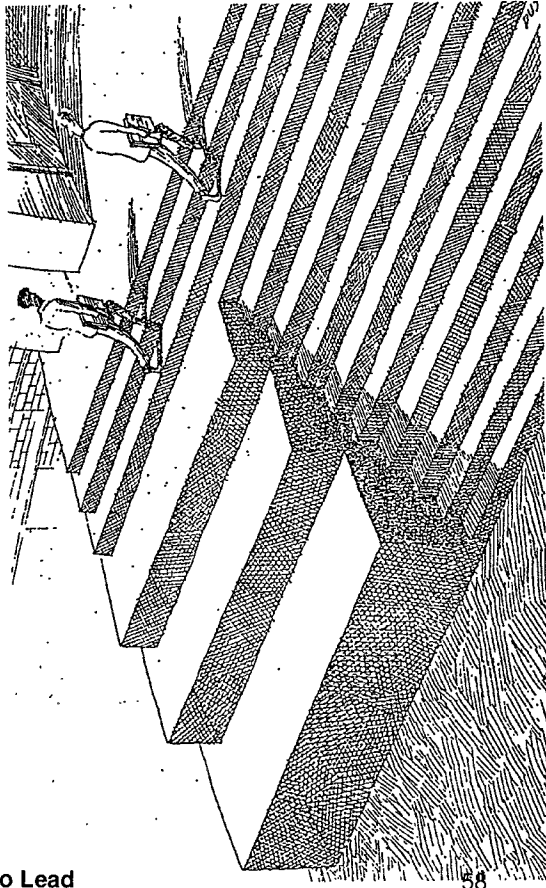
How to Solve Disputes

Home sharing is a business relationship with an unusually strong emotional component. To get along with your new partner, you'll have to learn how to share your disagreements When conflicts or disagreements arise, the National Shared Housing Resource Center suggests the following "Ten Commandments" for solving disputes.

State the problem and how you would like it resolved.

Discuss one issue at a time without being defensive.

Make sure you agree on what the problem is.

Listen carefully to what the other person is saying, thinking and feeling.

List different solutions for resolving the problem, don' disregard ideas, list specific steps.

Discuss possible solutions with the positive and negative aspects of each.

Chose a plan both parties are comfortable with.

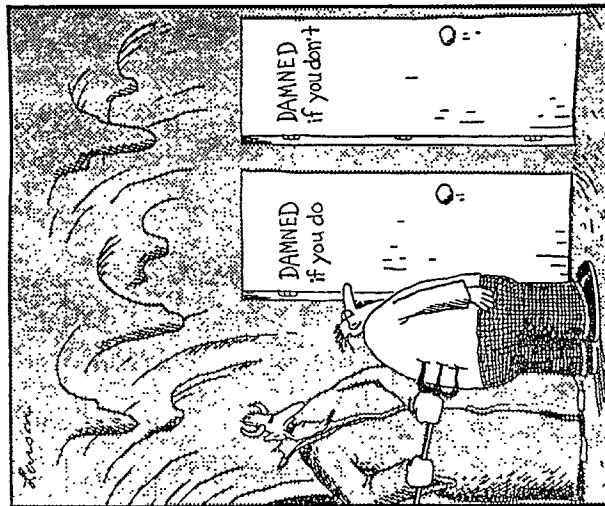*Decide the who, what, when, where, and why of the plan implementation.*

Decide on a time to discuss progress.

Take Pride in working out the problem.
National Shared Housing Resource Center

16. Resolving Disputes

Learnig to Lead

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15. Facilitating Opportunity

Among the most important responsibilities of an academic leader is the facilitation of opportunity. This is an active not a passive role. This responsibility includes curricular development, the hiring of a diverse faculty and non-academic support staff, and providing growth opportunities for every member of the school community.

The individual chosen to lead is, by the nature of the position, placed in a situation that places stress on a system. This is particularly true of the dean or program head who has accepted the position from outside of the community. In any case the foundation of decision making in situations of conflicted priorities is similar to conflict resolution. However, this is a matter related to the establishment of priorities. It is related to the need for continual growth and maturation of an institution. Decision making in conflicted situations emphasizes the need to act on matters where the path is not clear. In such instances the willingness to act is as important as the decision itself.

Resolving disputes is an unavoidable aspect of academic leadership. It is a test of the credibility the leader brings to the position. It is an exercise in clarity, listening and engagement. The resolution of disputes must become a shared responsibility among each of the parties involved. Dispute resolution is aided in situations when a clear framework for action exists. Freedom and order accompany each other. In the situation of dispute resolution the academic leader must provide the framework of order. In this way trust can underlie the decision process.

"C'mon, c'mon—it's either one or the other."

17. Decision Making in Conflicted Situations

A great deal of **intelligence** can be **invested in ignorance** when the **need for illusion** is **great.**

Saul Bellow

18.   Recognizing and Accepting Failure
Failure accompanies leadership. The academic leader must become adept at recognizing failure, either stopping what is underway or substantially changing the course of events. Everyone fails. It is better to recognize that failure is a natural accompaniment of action than to take no action at all.

Legacy and Aspirations

A dean assumes a historical context for the actions he or she instigates. The trace of past actions and the implications on the future of actions undertaken is a substantial effect of the leadership of an individual. No actions of leadership should be undertaken without this sensitivity. The academic leader must act with a long view backward and forward. The traces of the past are often lessons in how to proceed. Often ideas worthy of further consideration were mistakenly left behind in the enthusiasm of progress. The long view forward frames the investment in the future that must be undertaken. A mature academic leader understands that many of the fruits of the labor will not be realized until the next dean is in office. The realization of ideas may be even further into the future. Respecting past legacies and commitments is as important as establishing new traditions. Successive generations of leaders leave an imprint giving the community a complexity that is both enriching and challenging to future generations. A place without a past or tradition is an incomplete experience. The essence of an educational institution is dedicated as much to the treasuring and conveyance of legacy as it is about the preparation of the individual for a specific position in life. People with a heritage and traditions to maintain are more likely to be responsible for their own actions as they leave their own imprint on the future.
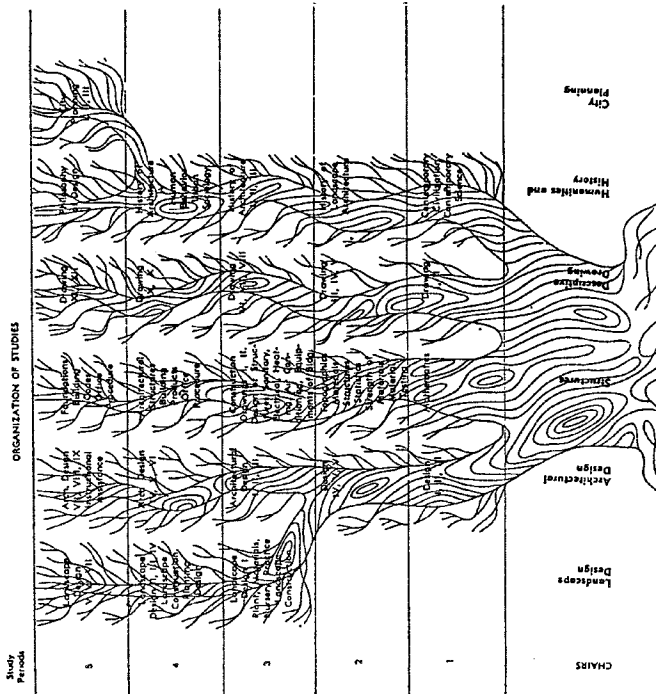
question what exists to provoke a responsive posture and to avoid the carrying out of retribution for past battles. The tradition of curricular development at NC State University School of Design was founded on a natural model emphasizing the interaction of information in the study of architecture. It serves as the foundation for the future model.

The Integrated Intellectual Ecosystem

20.   The NC State Curricular Ecology

The traditional model guiding the School of Design at NC State University provides the inspiration for a School now better described as a curricular ecology. It is important to realize that the latter model is clearly derived from the historical model. The new model will dramatically guide the University program with the same clarity that the first curricular tree demonstrated fifty years ago.

ORGANIZATION OF STUDIES

Study Periods

Elective

American or English Literature; Or Advanced Military Elective

Modern Language; Or Advanced Military

Military Science Sport Activities

English Composition Military Science Fundamental Activities Hygiene

Related Subjects

City Planning

Humanities and History

Descriptive Drawing

Structures

Architectural Design

Landscape Design

CHAIRS

19.   The NC State Curricular Tree

Unless the assignment is to build a new program, an academic leader's responsibility begins with the legacy of the place and its people. The individual who arrives at a school from the outside must carefully study what has occurred over the history of the program. The individual who assumes a position from the inside of an organization must begin his or her duties by stepping back from the perspective of a position held as a member of the community to objectively address the issues of the academic community. Just as the newly arrived leader should not assume all that is new is good and all that exists should be changed, the individual who assumes leadership from within should be aware of the need to

Develop Teaching, Research and Service
  Develop Faculty Enhancement
  Establish Recognition Programs
  Conduct Regular Assessment
Integrate the Humanities and the Sciences
  Network the School and the University
  Conduct Coursework Open to the University
Fully Employ Technology
  Promote development programs for the Faculty
  Develop Distance Education
  Weave New Technologies into Curricular Development
Collaborate with Business and Industry
  Commit to Continuing Education Course work
  Establish Sponsored Project Work
Expand Multi-Cultural and Global Awareness
  Conduct International Study
  Diversify the Student and Faculty Population
  Form partnerships with Institutions Abroad
Secure External Funding
  Lead a n Advancement Program
Establish a Management Culture
  Review School Management

Marvin J. Malecha

Fostering an Engaged Environment

The academic leader must lead the effort to foster an engaged posture by the faculty and students of a professional program. It is an opportunity to stimulate thought on the relevancy of a design and architecture program while engendering a commitment to social action on the part of design professionals. It is equally important that the academic leader work to engage the work of the professional program with the concerns and priorities of the university community. The splendid isolation of the past is an unwise and unfruitful position. There is great reward for engagement. The academic leader must accept engagement as a way of managing. It must be valued as a strategy with deep theoretical underpinnings.

Symbiosis and Leadership
  within the University
University Goals   School and College Goals
Improve Student Success and Satisfaction
  Emphasize the one on one nature of Design instruction
  Provide advising an Counseling services
Achieve a Diverse Community
  Develop outreach programs
  Develop Community Based Learning Experiences

Similarly, it is the responsibility of the academic leader to bring the goals of the academic program into symbiosis with the design professions and the community.

DEAN OF FACULTY

DEAN OF STUDENTS

DEAN OF SOUVENIRS, SPIN OFFS, PROMOTIONS AND LICENSED PRODUCTS
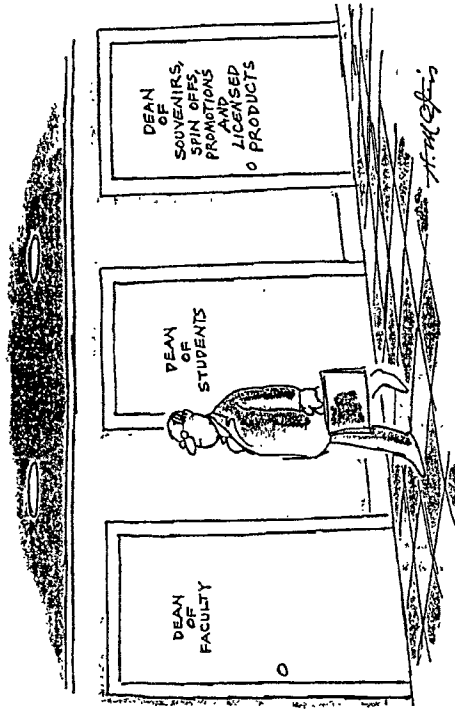
23. The Climate of a Multiplier

The role of the academic leader is to act as a multiplier of abilities, resources and dreams. It is at the very basis of education that individuals with aspirations arrive at the academy with the hope to build skill and understanding toward the realization of a productive life. A dean provides the setting for individuals to realize dreams. It is this role that justifies the responsibility of a dean or program head to dedicate considerable effort to the

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21. Symbiosis and Leadership within the University

It is the responsibility of the dean or program leader to bring the goals of the program into a symbiotic relationship with the goals of the university.

Symbiosis and Leadership

Community Goals
    with the Community
    School and College Goals

Maintain Professional Relationships
    Maintain Accreditation
    Establish Work-Study Programs
    Employ Practicing Professional
    Establish an Integrated Curriculum

Maintain Relationships with Peer Institutions
    Provide Curricular Leadership
    Seek to nurture a network of Peers
    Establish a Research

Connect the Work of Students and
    Faculty with Community Interests
    Establish an Extension Effort to
        reach the Community
    Dedicate Studio Work to the Needs
        of the Community

Marvin J. Malecha

22. Symbiosis and Leadership with the Community

Following directly on the responsibility to act as a multiplier of human, physical, and fiscal resources is the responsibility of a dean to venture ideas. Academic leadership must transcend management process by a fundamental engagement with ideas. It is a great privilege of leadership to be in a position to venture and act upon ideas. The most frequently expressed regret of the outgoing dean is that ideas were sacrificed for expediency or that ideas were never properly explored. The venturing of ideas requires an overt commitment to the intellectual exploration implied in such an effort.

A Personal Foundation of Substance

A career in academic management requires facility within the design disciplines. The academic responsibilities that define the position requires the individual who aspires to leadership to continually build a body of knowledge related to the discipline of architecture or design. The academic leader must continually be engaged in teaching, scholarship and practice to maintain credibility with students and academic colleagues alike. The nature of this involvement is obviously of a nature fundamentally different from the faculty in that it is only possible to continue such work in collaboration with others. Fundamentally, this is not as much a publish or perish
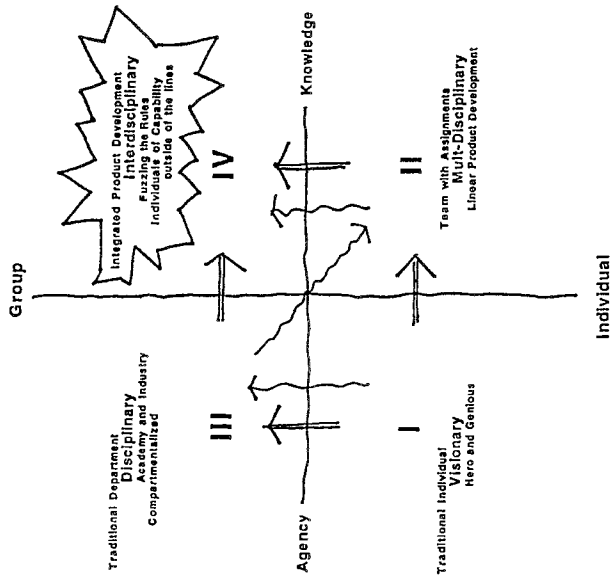
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raising of money. Such funds provide students with support for study, the faculty with development funds, improve facilities, and open possibilities for the entire community to grow beyond the limits imposed by basic funding. Accompanying the concept of multiplication is the reality of networking for the purpose of deal making within the academic community. Rewards come to the individual who is perceived as a vital member of the management team. Reward comes to the leader who surrenders to the needs of another knowing that such behavior prompts the community to address needs expressed by that individual. The academic leader is a multiplier of all that comes to the school.

Ideas are like the stars;
you will not succeed in touching them
with your hands.
But like the seafaring man
on the desert of waters,
You choose them as your guides,
And following them
you will reach your
destiny.

Carl Schurtz, 1859

24.   Venturing Ideas

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Group

Knowledge

Individual

Agency

IV
Integrated Product Development
Interdisciplinary
Fuzzing the Rules
Individuals of Capability
outside of the lines

III
Traditional Department
Disciplinary
Academy and Industry
Compartmentalized

II
Team with Assignments
Multi-Disciplinary
Linear Product Development

I
Traditional Individual
Visionary
Hero and Genious

26. **Seeking Collaborations**

The work of a dean or program leader is best realized in collaborations.

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mentality as it is an process of heightened awareness of what is underway in the design professions.
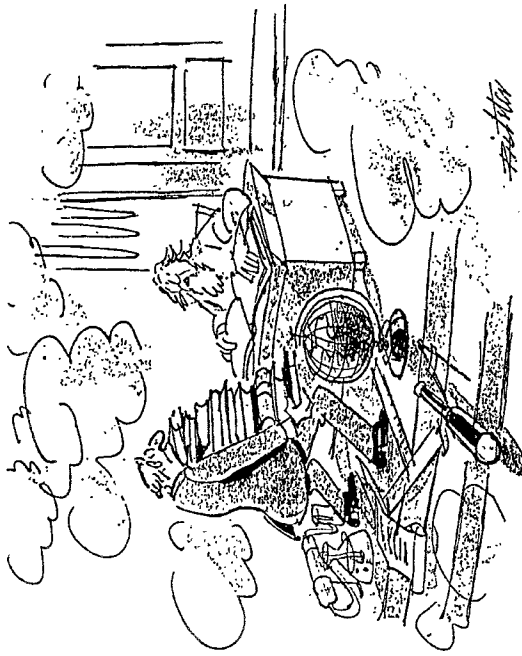
"*Very impressive, Dr. Burwick. But I'm afraid that up here we judge the quality of your life, not the quality of your scholarship.*"

25. **Building a Body of Work**

It is the quality of work and its influential nature that is important, not its quantity or relationship to traditional measures of publication that matters.

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R eflections on the nature of design studies requires asking the most essential questions. Is the studio the only place for the convergence of ideas? How are other course materials integrated into the studio experience? How is design thinking articulates as a distinct teaching pedagogy? What effect does change in society and in practice have on the academic experience? Should the academy in a more engaged posture accommodate change at a more rapid rate? And, does such rapid change threaten the responsibility for the maintenance of legacy implied in the role of the academy?

We live in an age of continuous change. The only constant we have at this point in our national development is change. And change is threatening. It creates apprehension. It makes us nervous. Fear brings about protectionism; economic protectionism, moral protectionism, demographic protectionism, political protectionism, academic and intellectual protectionism. The progress we have made in creating a democratic multi-cultural and multi-racial society is in doubt and further progress is threatened by fear: fear of change.

*Auturo Madrid, Less is Not More..in the Case of Education,
Brooklyn College commencement address, 4 June 1997*

Five Aphorisms

1. A bird in the hand
is worth two in the bush:
look to the **structure** of the school **at hand.**

2. Festina Lente, Hurry Slowly:
when and how are **ideas engaged** for
change, timing is everything.

3. Carpe Diem:
there are always **opportunities** to be **seized!**

4. Chose your battles carefully,
then fight the good fight:
change does not occur in isolation, what are the
limits to be pushed?

5. Horses for courses:
Who are the **people** at hand and what are their
capabilities?

Brian Wilson

27.   Deliberations on Change

The academy is often misunderstood as a bastion against change. What is most vehemently defended by the faculty is the control of personal aspirations and the time for substantive reflection. The statement paraphrased as, the reason academics battle so fiercely is that there is so little at stake. On the contrary, what is contested is the discretion of an individual over his or her own time. It is the very reason many individuals entered the academy in the first place. And, if time is our most valuable treasure, it is a battle for that which is most important. Yet, within this context is a need for continual growth and change. Toward this end the academic leader must motivate the faculty to continue maturing as teachers and scholars while holding each individual accountable for such growth.

Abilities and **Experience**

Community Patrons Clients

and Structural and Neighbors **Owners**

and **Users** digital currency

Regulatory and Funding Agencies

Mechanical and **Specialized Consultants**

Architects and **Graphics**

Landscape Interiors and Furniture and Fixtures

Marvin J. Malecha

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The study and practice of design is a life-long pursuit. It is a path undertaken as a calling and a choice. Along this path, design thinking is a way of seeing that provokes a common sense strategy to accommodate a life of continual change. The pursuit of a life in design is measured by artisanship, reflection, and social relevancy. It is a search for meaning and harmony in a world of far too little of either. The dynamic relationship between skillfulness and understanding gained from experience is the essence of a life in design. But, such a life is fueled by the promise that comes from an openness to new ways.

The University as a **Social Fabric,**

Engaged Community,

Industry **Departments** and

Committees and **Disciplines** of Study

and **Workshops**

Students **Staff** Social Welfare

Faculty College and **University**

**Parents** and **Family**

Social Welfare
Marvin J. Malecha

28. Patterns of Continual Reconfiguration in the Academy

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The very nature of the assignment of an academic leader is to bring change. This is an unavoidable aspect of what the individual brings to a position. This especially should be of no surprise to a design professional. A building carefully designed to respond to the needs of the inhabitants will never-the-less effect significant change upon those individuals. It must be this way or the building is a failure. So it is with leadership. The imposed stress of leadership should be embraced as a positive effect of leadership.

Expectations, Trust and Accountability

The life of an academic leader is defined by the heightened expectations that others hold for the effects of a leaders influence. It is fueled by the trust others place in the ability of a leader and it is clearly measured by specific outcomes for which the individual leader is held accountable. The dean or program head can resist this reality or accept and celebrate it as a stimulus for action. The community will more harshly judge the individual who does not act and will be less likely to trust the leader who is unwilling to be accountable.

29. Patterns of Continual Reconfiguration In Practice

There has never been a time of greater change in the design professions. The role of the academic leader is to observe and translate this change into the life of the academic community. There is a symbiotic relationship between education and practice. The academic leader is the umbilical cord between the two disparate worlds.
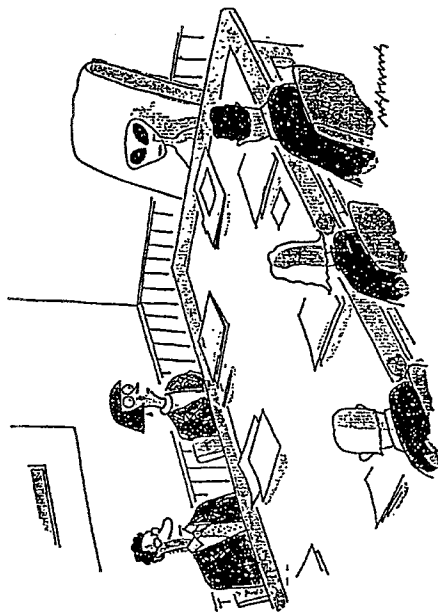
"First of all, I want to assure everyone that I'm not contemplating any major changes."

30. Imposing Stress by the Nature of the Assignment

Leadership Skills and Perspectives

Meeting Job Challenges
Resourcefulness, Doing Whatever it Takes
Being a Quick Study
Decisiveness

Leading People
Leading Employees,
Setting a Development Climate
Confronting Problem Employees
Work Team Orientation
Hiring Talented Staff

Respecting Self and Others
Building and Mending Relationships
Compassion and Sensitivity
Straightforwardness and Composure
Balance Between Personal Life and Work
Self-Awareness
Putting People at Ease
Acting with Flexibility

Center for Creative Leadership, Benchmarks, A Manual and Trainers Guide.

31. Expectations

The expectations for performance are becoming an increasingly articulated aspect of the appointment of an academic leader. It has become an addendum to the appointment contract in some universities. The

assessment of the performance of deans and program heads is a list that is ambitious and often focused on the responsibility of an individual to bring distinction to a program. This responsibility is articulated in a variety of ways but it always includes planning and resource management, participatory decision making, relationship building, program development, staff development, and leadership in teaching.

Employee performance reviews were due, and I had instructed a woman who worked for me to complete her own evaluation and bring it to me for signature.

Later that day, I called her into my office and held up the review. "What's this?" I asked. "You scored yourself 99 out of 100."

"Well," she replied, lowering her eyes, nobody's perfect."

Diane Sylvester.

32. Self-Assessment

An academic leader must develop the ability for self assessment. It is an important perspective that allows the individual to learn from mistakes as well as successes.

Over time the most important relationships an academic leader can form are those where honest criticism can influence behavior. No one is perfect, everyone can benefit from the observations of trusted advisors. The academic leader should seek to form such relationships. A support network is a decided advantage when difficult problems are confronted.

Now that **I'm here, we'll turn the program** around **360** degrees.

Jason Kidd, Dallas Mavericks

35. Outcomes
The academic leader should expect that there will be an expectations for outcomes. This expectation is no less important to the students and faculty than to the senior administration. The difference is what outcomes are expected. This returns the discussion to the concept of constituencies and dependencies. Each of these groups will expect to witness gains from their own perspective.

Cauliflower is nothing but **cabbage** with a **college education**

Mark Twain

33. A Sense of Humor
A part of the qualities associated with leadership is a sense of humor. It is the most valuable tool of an individual in a position of great seriousness to maintain emotional well being. The ability to laugh cannot be underestimated.
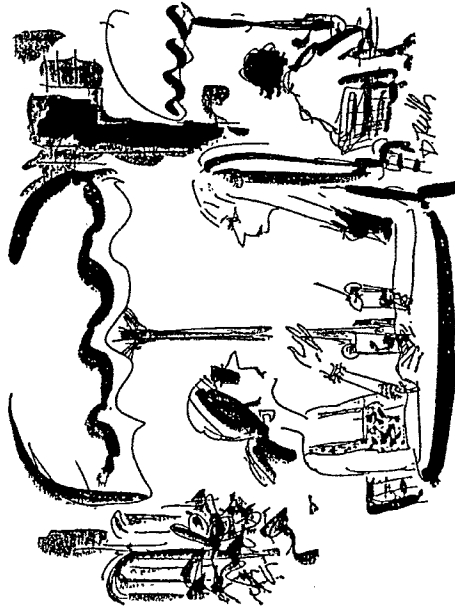
"The jury's still out on Marvin, but I'm running out of alternates."

34. Accepting and Maturing Through Criticism

The leadership of an academic program is a delicate balance of the manner by which students experience the curriculum, the philosophical underpinnings of the program, and the logistics necessary to carry out the experience. It is influenced significantly by the context in which it is offered. It is the responsibility of the dean or program head to amplify the accomplishments of the community and to accentuate the importance of the program to the greater community. This is especially important when the study of design and architecture is carried out in a much larger academic context. The substance the accompanies the act of amplification is often stimulated by the need to increase the influence of the program. This propels the study of design and architecture into community involvement and sponsored project work with business and industry. It is the responsibility of the dean to provide this perspective to individuals who might otherwise be completely consumed by personal interests.

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Closing Thoughts on the Life and the Expectations of a Dean

The management responsibilities of a dean are reflected in the legacy of Pericles. These perspectives engage a broad constituency and define an individual committed to a life of making connections among people, ideas and opportunities. It is a life filled with the opportunity to make a difference in the lives of others. It is a life that connects dreams with outcomes.

The Jack Russell Terrier will stand on his front legs to mark his territory higher so that dogs that follow deduce a larger dog and therefore, a larger threat.

36.   Leadership Skills and Perspectives

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Leadership perspectives when combined with a vision of a shining community on a hill define the expectations of a dean. These expectations, often ambitious for their expressed hopes for the impact of an individual on a program, define what is required of a dean.

Deanship requires leadership of a high order.
The academic leader is expected to articulate a clear belief system that is founded on fairness and open to scrutiny. Everyone within the academic community must know what the dean believes. It is a fundamental aspect of the respect required by the position. This aspect of a dean's leadership provides the foundation for every other requirement of the position.

Deanship requires the ability to form a shared vision.
The development of a shared vision for the community is among the most important responsibilities of the academic leader. The fostering of shared interests, rather than a disjointed collection of special interests, is dependent on the ability of the individual who leads the community to formulate a position, and communicate the shared vision to others. The act of listening begins the process of assimilation necessary for a shared vision.

Deanship requires rejoicing in the accomplishments of others.
The role of a dean or program head is a position that is founded on delight in the accomplishments of others. Success in an academic community is most exemplified

37.   The Shining City on a Hill

Academic leaders look to their respective programs as a shining city on a hill. It is an aspiration that drives experimentation and ambition. It is a healthy motivator even in the most dire situations. Every academic leader must lead from a dream of what might be even while knowing the reality of the situation at hand. Thomas Jefferson referred to this quality as "eyes open idealism." It is the most important characteristic of a leader.

in the commencement/graduation ceremony that celebrates the accomplishment of individuals who aspire to productive lives. Commencement also celebrates the success of faculty who have mentored and endured along with the students the trial of learning. A successful leader takes pride in facilitating the success of others. This may require both gentle and forceful interventions as issues such as tenure and promotion are considered. A successful academic leader sets the stage for the success of faculty, students and support staff.

Deanship is a life of multiplication.

A dean or program head is a multiplier. It is the responsibility of a dean to insure that a program multiplies the abilities of individuals, the resources available to the program, and the value of the program to its larger university and community context. A young student arrives on the doorstep of an institution with great aspirations, optimism, and intelligence. The academic program provides the setting and resources to challenge these talents and enhance them. The experience of the student through the program is intended to multiply every aspect of the students capabilities. This is a shared and essential definition of multiplication. The management of the program, by the dean or program head, demands a similar attitude. Fund raising has become an important duty of the dean as a by product of the responsibility top multiply the resources available to students and faculty. In many instances, particularly publicly funded institutions, there is an expectation that the leadership of the program will match

or exceed funding from the public budget. When the development of new sources of support is connected to the multiplication of the experiences of students, faculty, and support staff, it is an effort of the greatest importance.

Deanship requires the ability to manage assets and resources.

The role of an academic leader carries with it the management of people, facilities and resources. The question of goal setting with appropriate strategies, tactics and logistics applies in the academic setting as it does in any management situation. The successful presentation of a curricular plan relies on the ability of the academic leader to match people with assignments, to determine and realize the necessary facilities to foster success in the classroom, and the management of fiscal resources to insure that the necessary enhancements of facilities, equipment and visitors are a part of the normal experience of the school. This responsibility transcends property and equipment and includes the encouragement of individuals to continue personal growth and development. It is a responsibility to find the optimum morale of all members of the community to foster a spirit of achievement throughout the program. The reality of deanship today is that strong planning is often the only means to counter even or reduced funding sources. Flexibility and vitality in management often signals the ability to find alternate sources of funding and partnerships that enhance the academic experience in the most restricted of budget climates. All dreams begin

with what is, define what could be, and give context for goals and aspirations. However, it is the strategies, tactics, and logistics of management practices that together lead to the realization of dreams.

Deanship requires attention to details.
The effectiveness of the implementation of ideas is best illustrated in the details of execution. The attention to detail is as varied in its form as the reality of the facilities in which classes are conducted to the experiences of a visiting student and his or her parents the moment they enter the front door on an initial visit to the school. The academic leader must have the pulse of the program he or she leads. This can not be found behind the impressive desk of a dean. It is found by walking around, by implicating himself or herself in meetings as varied as curriculum and technology implementation, and it is found by visiting classrooms and faculty offices. A dean must be thoroughly immersed in the program he or she has chosen to lead.

Deanship requires the attitude of a teacher.
The effective academic leader is a teacher of teachers, administrators, support staff, and students. The paradigm of teaching combined with the paradigm of the design process articulates an intensely personal interactive relationship. It is the responsibility of the academic leader to guide the processes and vision of a program in much the same way that a studio master guides students through a complex design program. The clarity of the message must be clearly articulated before

proceeding into action items. There must be time for questions and challenges to the information. The dean must be patient with attempts to address issues and problems that are best described as mistakes of enthusiasm. And, it is the responsibility of the academic leader to prepare the next generation of leaders.

Deanship requires maintaining a personal perspective.
Academic leadership requires the perspective of substantive personal inquiry. The life of an administrator is significantly enhanced by continual contact with students in the classroom. This is only possible when the administrator remains current with professional and academic interests. A life of the mind must complement the every day decisions that demand attention. A strong personal life is also an important characteristic that enhances the ability of an individual to lead. A personal life in turmoil erode the individual's ability to place administrative decisions in the perspective of a greater life. It is equally essential that an individual who aspires to leadership must never make decisions in an atmosphere unbalanced by the need for revenge or to exact just desert. A strong personal life allows the individual to depersonalize what is intervening in the necessity of decision making in the work-place. A personal perspective on what is most important in life drive effective decision-making.

Deanship requires unbounded energy and enthusiasm.
The academic leader is the chief cheerleader of the program under his or her responsibility. It is the

persistence of the academic leader, sheer will power, that often brings ideas to life. It is not a position with a fixed time schedule or predictable agenda. Each day brings new challenges. Importantly, the energy and enthusiasm of the individual infects the entire community. A dearth of energy and enthusiasm on the part of the academic leader is an indicator of the energy and enthusiasm the constituents and dependents will have for the program.

Deanship requires the perspective of humanity.
The fact of leadership is that the important moments are generally at those times when the rules must be suspended or exceptions to the rule invoked. These are the moments when the humanity of the dean is more important than a robotic adherence to bureaucratic regulations. It has been said that a monkey can be taught to drive an automobile around the block but it is the judgement abilities of the human being that are required to achieve a license to drive. A dean is chosen for his or her ability to make reasoned and humane judgements on the margins of the life of a community.

As a **Dean**

It is an **Honor**

To **Witness**

So Much **Confusion**

Marvin J. Malecha

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Epilogue

I carry a portion of a seashell in my pocket that has been worn down by the sea to be in the shape of a wing. It is a good luck charm that was given to me by my daughter. This gift is the result of a lesson in trust that she taught me. She is a young woman of great energy and self-confidence. Not long after learning to drive she approached me with the idea that she would drive to the seashore with her friends to spend the day. It is about a two hour drive from our home. I objected, she persisted and I relented. But, not without great reservation and some harsh words on both of our parts. When she returned from her day in the sun she presented me with this gift of a wing. Not long after I celebrated a birthday. She wrote in her card to me a thank you note for allowing her wings to grow even if they were still only stubs. Without trust her wings could never grow. An academic leader must practice trust in order to build a team capable of mature decision making. Trust is difficult to practice. Yet, it is the very essence of leadership.

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Illustrations and Citations

T he illustrations that accompany this text are drawn from a variety of sources. But it is obvious that modern humor has inspired much of the comments of this text. The humorist often makes observations derived from astute observation of a world increasingly dependent on sophisticated management techniques. Leadership is an exercise in human relationships. This is never captured better than by the humorist.
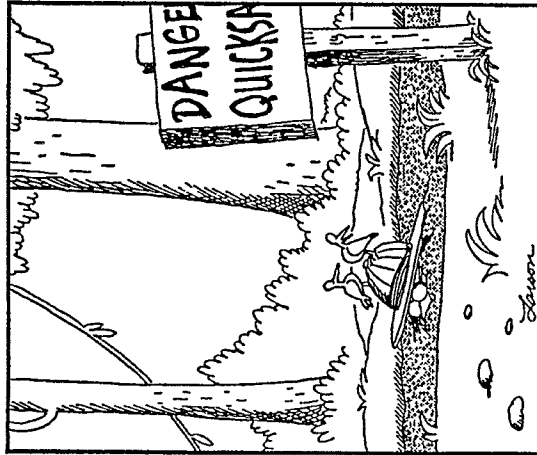
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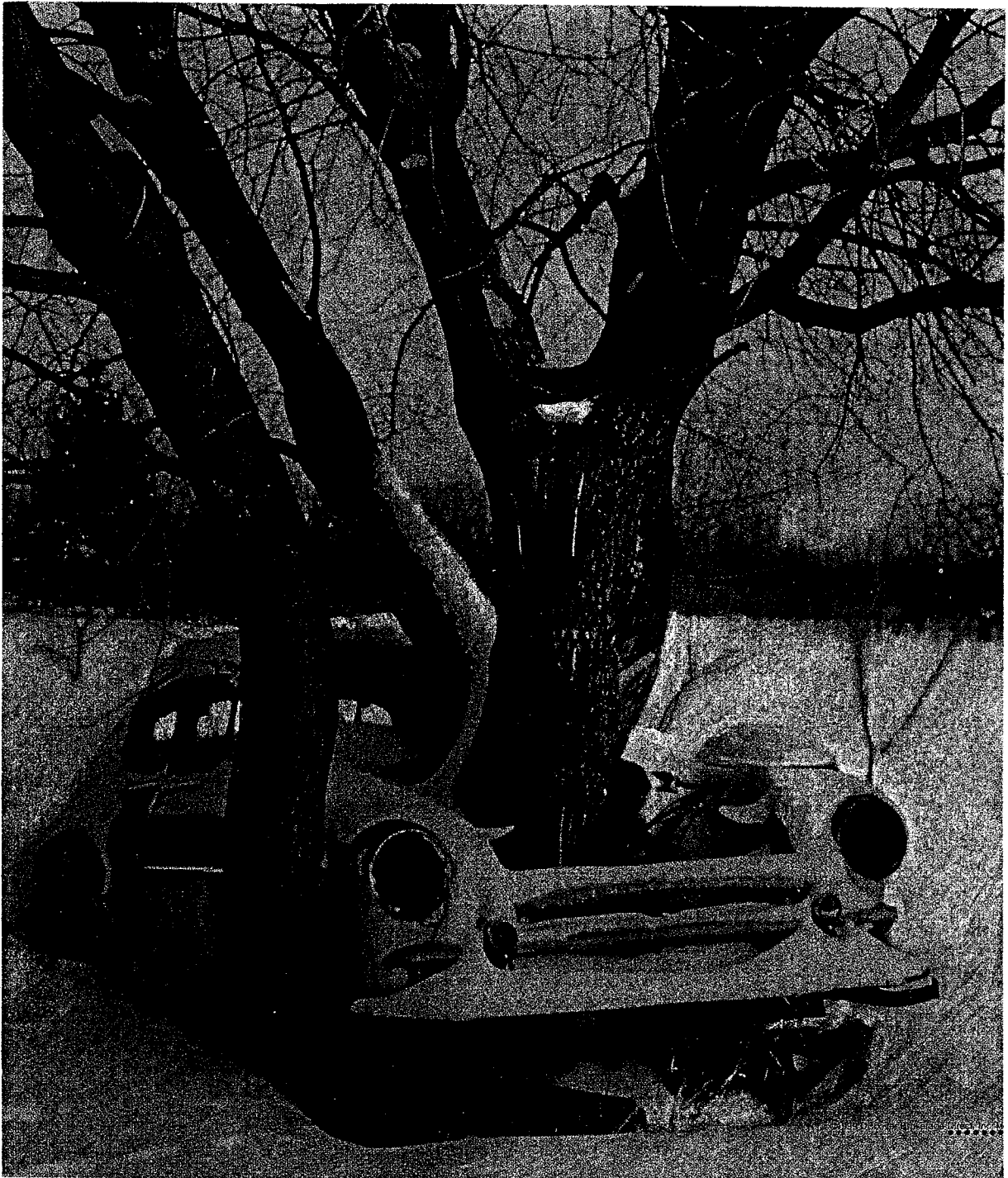27. Deliberations on Change

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"Say, there's something wrong here.... We may have to move shortly."

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34. Accepting and Maturing Through Criticism
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35. Outcomes
Jason Kidd

36. Leadership Skills and Perspectives
Source Unknown

37. The Shining City on a Hill
Source Unknown

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Progress and Obsolescence are a Short Distance Apart