

APPENDIX G — CENTER FOR CREATIVE ARTS

THE VANDERBILT CENTER

for

THE CREATIVE ARTS

A Recommendation to the

STRATEGIC ACADEMIC PLANNING GROUP

from

THE SENIOR STEERING COUNCIL

of

The College of Arts and Science
Strategic Academic Planning Committee

Developed from a report to SAP-CAS Caucus 1 by

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CENTER FOR CREATIVE ARTS EXECUTIVE SUMMARY

The SAPCAS Senior Steering Council recommends the establishment of a **Vanderbilt Center for the Creative Arts** on the Arts and Science College campus for the promotion of undergraduate creative activity, and graduate and faculty research. The Center will draw together and focus in one prominent location multiple artistic endeavors, including writing in many genres, acting, theatrical direction, film-making, digital composition, electronic music, all studio arts, imaging, graphic design, on-line journalism, photography, scene- and lighting-design, dance, and others that may emerge with advanced technology, student interest and faculty expertise.

At the outset the Center will house three principal components: Studio Art (drawing, painting, print-making, sculpture, ceramics, photography, design, video art, computer art, and multimedia); a Black Box Theatre (for the instruction of acting, directing, movement, voice, dance, and multimedia performance); and a Media Studies institute (with undergraduate and graduate degree opportunities in Film Studies and Digital Media). An academic Director will have responsibility for developing a full and expanding program of academically appropriate creative opportunities, and for guiding the design and construction of the building. The Center will also provide essential space for the instruction, encouragement, performance and assessment of creative writing and other student productions, and for dialogue in various formats on the research projects of scholars and graduate students investigating legal, social, economic, and cultural policy issues introduced by the media revolution.

Rationale

- ▶ The Center will rectify a long-standing marginalization of the arts in the College of Arts and Science and bring together into high-profile visibility multiform acts of campus creativity from basic drawing to digital wizardry.
- ▶ The Center will significantly assist efforts to retain and diversify the College student body and provide a venue for the exercise and exhibition of that diversity.
- ▶ The Center will offer opportunities for cross-fertilization among artists in several disciplines within and without the College (Blair, Engineering, Law, Divinity, Peabody, Owen)--both traditional artists and techno-artists--and stimulate interest in the outside community, especially among prospects for matriculation.
- ▶ The Center will eliminate the risk to student and faculty artists currently working in deteriorating facilities.
- ▶ The Center will strengthen and enrich relations between the University and the artistic culture of the larger community.
- ▶ The Center will engage undergraduates and graduate students together with research faculty in experimental creativity and scholarly inquiry into its meaning and implications for the culture.

- ▶ Uniquely among Research I institutions, the Center will promote the undergraduate creative artistic enterprise *as an opportunity of equal educational value with the research endeavor of the institution, and recognize it as essential part of the Vanderbilt mission.*

The Transinstitutional Nature of the Center for Creative Arts

Students from Peabody, Blair, and Engineering regularly enroll in courses in Theater, Media Studies, and Fine Arts, and earn double-majors in these programs, and these programs already involve faculty from outside the College. Graduate and professional students, and even faculty, also have the opportunity to participate in formal, academic activities in the creative arts. Clearly, the College does not have a monopoly on student and faculty participation in the creative arts. However, at present the College cannot meet the University's demand for existing courses and facilities in the creative arts, not to mention the needs posed by the expansion of the creative arts into new media and venues. The existing Studio Arts facilities are so overcrowded that only Fine Arts majors with a concentration in Studio Art are able to enroll in these courses. The Theater program suffers from lack of performance space; the Vanderbilt University Theater, which is funded in part through the Student Activity Fee, would benefit directly from the Black Box Theater, and the enhanced opportunity for interdisciplinary activities involving Fine Arts, Media Studies, and Music. Thus it is imperative to recognize that the Creative Arts Center will provide for the entire University both shared facilities for the creative arts and enhanced opportunities for instruction that will attract participation from across the entire University.

In its opening phase, the Center for the Creative Arts will involve principally three areas (Media Studies, Theater, and Studio Art); these programs will provide a strong foundation for further interdisciplinary expansion of the Center. The Center for Creative Arts would give us the only infrastructure that can support Creative Arts endeavors under consideration or development elsewhere in the University. The Director of the Center will be charged with bringing into the Center additional creative activities, such as all aspects of writing; the legal and business aspects of the creative arts, in particular digital media; dance; digital imaging and medical illustration; art therapy; dance; the integration of music performance with theater and digital media. Blair faculty are already participating in the Film Studies program.

Just as Blair provides a focus for the study, composition, and performance of music, Peabody for classical and computer pedagogy, the Medical Center for health, so too the Center for the Arts will stimulate and support creative art activity to the benefit of the entire University.

RECOMMENDED PROPOSAL:

A CENTER FOR THE CREATIVE ARTS

Developed from the report of SAPCAS Caucus I-C

Professors Carol Burke (Chair), Jay Clayton, Kate Daniels,
Terryll Hallquist, Gregg Horowitz, Marilyn Murphy, John Sloop,
and Dean Mark Wait

BACKGROUND

No university can hope to recruit a body of intellectually diverse undergraduates without featuring the arts and the vital role they play in academic life. A good deal of art is made at Vanderbilt, but it takes place in disparate locations, some too small, many without handicap access, and several unsafe. Prospective students on a campus tour of Vanderbilt are guaranteed to see students at the lab bench, in the classroom, and on the athletic field, but they will rarely encounter them making art. If a tour guide were to take them to the cramped, deteriorating Cohen Hall where studio art courses are currently taught, these prospective students would encounter rotting plaster, poorly ventilated classrooms, and students exiled to the hallways because of inadequate classroom space.

We propose that the University hire an academic Director to supervise the building and operation of a creative arts center in a prominent Arts and Science campus location that will bring together activity in all the arts (including painting and drawing, sculpture, ceramics, computer art, theatre, digital music, writing, and film), a place where even the casual student visitor will see art in progress, where students and faculty will celebrate the arts, where collaboration among the arts will flourish, and where scholars who are not themselves artists will be welcomed as partners in efforts to study with their students the proliferation of new media on the internet, for example, and to pursue their own research in film and video. Students may come to the arts center to take a course in the history of film but by an easy transition they will also learn to write screenplays and to produce films of their own. They will design, direct and perform plays, and they will read and share their latest poems, stories, essays, and other writing endeavors. In the media lab they will study digital photography, animation, and architecture. We believe that a Vanderbilt Arts Center not only will recruit students who seek to major in the arts but will also attract the pre-med keen to improve as a painter, the education major eager to learn more about art in order to incorporate it into his teaching, and the engineer determined to develop skills in design and animation.

Several years ago the administration acknowledged that our current studio art facility was too small, too dilapidated, and unsafe. University architects developed plans to construct a small 30,000 square foot building to be situated behind Branscomb Hall. At the time of the architectural plan, the cost was estimated at \$6,000,000. Subsequently, the Dean and the Development Office raised \$4,000,000 toward that building project. Our proposal advocates additional space for studio art in order to address the remarkable growth of student interest. Our

Studio Art program now turns away 40% of the undergraduates seeking to enroll in art courses. Among students, it is generally understood that unless you major in Fine Arts you will be denied entrance to the always over-subscribed studio art courses.

Conspicuously absent from that earlier plan is a computer lab in which studio art students can take courses in computer art. This proposal addresses that lack with the inclusion of a multi-purpose media lab. This lab will become the classroom for the faculty member in computer art whom the Fine Arts Department is currently recruiting and for faculty in other disciplines and other divisions interested in integrating digital media into their courses. The conception of the media lab recognizes the rapidity with which digitization is bringing about a convergence of the arts of film-making, music production, television, and radio with the new media of multimedia production, computer graphics and animation, and webpage design. The lab will consist of a single area of modular design with roughly thirty computer workstations that can be split into two classrooms or subdivided according to the size of teams engaged in individual projects. The aim is to maximize collaborative flow while preserving opportunities for intensely focused concentration. Because sound editing requires privacy, there will be six soundproof booths, each equipped with high-powered computers with substantial storage capacity and capable of editing extended film projects as well as performing rapid renderings of 3D animations.

The Arts Center will feature a modest black box theatre to address the critical need on campus for rehearsal and performance space. Fully equipped with light and sound equipment, the versatile theatre will host small performances, musical events, lectures, and readings. Uses of this flexible facility are outlined below.

Other than Studio Art classrooms and studios, a shared media lab, and a black box theatre, the remainder of the building will be dedicated to offices, two seminar rooms, a screening room that will double as a performance area, offices, and a common area. In the latter, we envision a coffee house that will serve as a gathering place for students making and sharing art, taking courses in artistic creativity, and assembling for readings, recitals, and performances.

The Center for the Creative Arts will not only gather together artistic activity currently taking place in several locations on campus; it will also feature the expansion of current offerings in Film and Media Studies. The attached Media Studies proposal requests funding so that current faculty can develop new courses, so that advanced graduate students can become prepared to teach film and media studies courses, and so that offerings in screen writing and film production can be augmented. Undergraduates will thus enjoy a larger range of courses, and graduate students will develop expertise in film and media studies to complement their work toward doctoral degrees in various departments.

Detailed discussion of the activities of the Center now follows:

STUDIO ART

The Department of Art and Art History hosts a small but active program in studio art with courses in both traditional and experimental media, including drawing, painting, printmaking,

sculpture, ceramics, photography, design, video art, and multimedia. In Spring 2002, the program will expand to add computer art to its roster of courses. While students throughout the university are welcome to take studio courses, Fine Arts majors for whom Studio Art courses are required have first priority. The demand for studio art courses far exceeds the supply and results in large waiting lists for every course long before pre-registration. Unhappy with the lack of access to studio art classes, Vanderbilt art students often opt to transfer to peer institutions whose offerings are more generous. Those who do get into the courses and complete the minor constitute a relatively satisfied group of graduates. According to former Associate Dean Graham, the two minors that students are most concerned about presenting on their transcripts are business and studio art.

A diverse group of artists with national reputations, studio art faculty believe that conceptual understanding goes hand-in-hand with technical proficiency, and they work to develop students intellectually as well as technically. They encourage students to research the theoretical context of the artistic methods they employ. This relatively small faculty has established a strong studio art minor that has placed its graduates in a number of fine graduate art programs, including the San Francisco Art Institute, the Rhode Island School of Design, the School of the Art Institute of Chicago, the University of Florida, the University of Chicago, the University of Tennessee, and Memphis State University. Every year the program awards one distinguished graduating senior the prestigious Margaret Stonewall Woolridge Hamblet Award. With the award's \$17,000 the honoree can travel and spend a year developing his or her art.

The studio art faculty has managed to do a good deal despite its limited resources and an inferior facility. Although Vanderbilt offers no program in architecture, Professor Michael Aurbach organized a pre-architecture program for undergraduates by defining a curriculum made up of exiting courses. This popular program has placed several Vanderbilt students in excellent graduate programs in architecture.

The studio art program faces two major problems: (1) a staff too small to meet the needs of all students seeking to take art courses; and (2) an inadequate facility. To help address the former, this proposal requests the creation of one new faculty position: a two-year senior lectureship (discipline to be determined every two years). This non-tenure track appointment would alleviate stress on the foundations courses, make available additional offerings in a particular area of concentration, and ease the burden of the Hamblet Award and exhibition. In addition to this new position, the Studio Art faculty feel very strongly that the current lectureship in computer art for which the department has authority to recruit should be upgraded to an Assistant Professorship. A regular faculty member would enjoy obvious advantages over a lecturer in developing a new area of the curriculum and in collaborating with faculty in other disciplines through the media center. The attached budget includes the estimated differential between a lectureship and an assistant professorship.

With respect to the current Studio Art facility, the Cohen building, Studio Art's home, suffers from many years of deferred maintenance, the evidence of which presents itself in curling plates of paint that fall from the walls and litter the floor, retrofitted air conditioning units that rain condensation, moisture that forms puddles in the stairwell and studios, and plaster walls that blister and froth from years of roof and steam leaks. Poor ventilation traps the noxious fumes

generated by oil-based solvents used in painting, sculpture, printmaking and by the spray fixative used in all drawing courses.

Two years ago, representatives of Risk Management and the St. Paul Insurance Company issued a safety report critical of the limited egress in the studios. In the event of an fire caused by highly flammable art supplies, lives might be lost because most studios maintain only one exit. For students unable to navigate the stairs at Cohen, studio art courses are off limits. For faculty transporting heavy art materials to classrooms on the top floors, Cohen's stairs are a constant frustration, not to mention a physical strain. Among the universities in Tennessee, Vanderbilt offers the most expensive art classes in the worst facilities.

The proposed Center for the Creative Arts would facilitate provision of more and larger classes, particularly in the areas of Ceramics and Printmaking. It would also provide critical storage space for student work, work that any student interested in applying to graduate school must keep in a safe place. The proposed Studio Art Space outlined in this proposal also includes 3600 sq. feet for senior studios. This presumes the development of a Studio Track for the Fine Arts major. Caucus I-3 did not discuss the merits of this new academic program, but an outline of it is attached as Appendix A. Were such a program to evolve, senior studio space would certainly make Vanderbilt competitive with other universities. Were such a program to evolve, the attrition rate might, in fact, fall.

BLACK BOX THEATRE

The Department of Theatre has long lamented the absence of a second work space in which to rehearse departmental plays and teach performance classes (acting, directing, movement and voice) when play schedules overlap and Neely Auditorium is occupied by a large multi-level set design. Not only will the flexible facility requested herein answer that need; it will also break down the isolation that currently segregates different art forms to different parts of the campus by providing an experimental place which features collaboration among the arts.

The advantages of the Black Box Theatre for interdisciplinary study and performance among the creative arts are many. The space will provide rehearsal and performance opportunities for those students who wish to culminate their multidisciplinary exploration of an artistic movement, say in Expressionism. See Appendix B, for the description of an interdisciplinary course of that title. Design students from Theatre and Studio Art might collaborate on the visual representation of a script developed by creative writers, actors and directors in English and Theatre. Student musicians and composers from Blair might create and perform a musical score to accompany the work. All of this creative intercourse could be realized in a Black Box Theatre. After hearing from several creative arts faculty from various disciplines and schools, it is our belief that these colleagues are eager to guide such collaborations. Already, lists of names for potential guest artists to enrich such ventures are being discussed.

Guest artists are often relegated to classrooms, inadequate venues in which to exploit the talents of these visitors. When these distinguished guests are properly accommodated in Neely, other important activities are typically bumped. This was the case during the three-day workshop in Classical Greek acting style taught by visiting artist, Olympia Dukakis: production work for a

major production had to be brought to a halt during the three-day intensive workshop. This fall, nothing but classroom space was available for Shakespeare scene studies led by internationally acclaimed director Jonathan Miller. Without the good will of Dean Wait of the Blair School in allowing theatre students to shove classroom desks out of the way, the Shakespeare workshop would not have had a home. The workshop and demonstration session led by the director and choreographer of *Rome and Jewels* last semester would have been better served by a black box space than by the tiny Sarratt stage designed primarily for film viewing.

The inclusion of a Black Box in the Arts Center will additionally benefit the Department of Theatre as it strives to offer advanced opportunities for its upper-class majors and minors, particularly in directing and lighting design. Finding dependable and appropriate rehearsal space for upper-level student directors ready to direct one-act plays is currently an impossibility on our campus. This proposed theatre will provide the much needed work area for those students as well as a lighting laboratory complete with instrumentation for students of lighting design. Department faculty and guest directors have also found themselves with no rehearsal space when Neely is otherwise occupied; this proposed theatre will address those needs.

The Black Box Theatre takes as its model several similar theatres (the Wallis Theatre at Northwestern University, the Freimann Stage at Whitman College, and Johnson Hall at Tennessee Performing Arts Center). Its dimensions and equipment define a facility that will accommodate an exciting range of possible uses. An approximately 40'-45' square, with a ceiling height of 25'-30', this space will yield square footage of between 1600 - 2025 square feet. (This size is determined by examining the current usage of Neely Auditorium and is also based upon past experience in other studio theatres.) The type of access to the lighting system dictates ceiling height. If students are able to access the lights via a catwalk or cable grid system above the space, a height of 30' would be needed; if they access lights solely via ladders or personnel lifts, then the ceiling height could be lower. Although the latter would save on initial construction costs, the latter would trade cost for ease and safety. Ladders and lifts require careful supervision; catwalks are decidedly safer.

In addition to actual theatre space, attached storage for lighting equipment, sound equipment, staging, and seating would also be necessary. An additional 20' square would probably suffice, making for a total of 2400 square feet for both the theatre and storage space.

Equipment

The lighting system proposed for the studio is a small package, ample for a wide range of uses of the space. As proposed, it is comprised of a computerized lighting control console, which is easily used by both novice and expert. There are 60 electronic dimmers for stage lighting, and 12 for use by work and house lighting. An architectural lighting control panel would be included for control of house and work lights. There are 60 stage lighting fixtures proposed, which allows for a good deal of variety of light plots and compositions.

A small system of projectors is suggested, for use by classes and in performances. A video projector, suitable for connection to either a computer or to a VCR, would enable experimentation with digital or analog video. A slide projector would be used to project still images. A mobile or fixed screen would provide the proper surface for effective projection.

The sound system is comprised of a small mixing console, with control for both microphone and audio devices. There are 4 speakers and amplifiers, which could be placed in either default positions, or moved as necessary. Playback of music or sound effects is made possible through two CD players, and 4 microphones are available for audio reinforcement. A rack or case that can be locked would be necessary to ensure the safety and security of this equipment. No theatre can function properly without an intercom system to connect technicians and the stage manager. A system composed of a base station/power supply and 6 headsets is specified.

Staging uses portable riser units, ranging from 8" - 24" in height. These can be used for both the stage platform and as risers for audience seating. 120 simple, plain seats are specified for audience seating and performers' use. Rolling caddies will make storage and moving of risers and seating easier.

Finally, basic scenic elements are recommended. Masking curtains to provide a backstage space, flats to provide walls and additional masking, and cubes for use by classes and performers will offer a basic set of tools with which one can experiment.

MEDIA STUDIES PROGRAM

Vanderbilt should seize the opportunity afforded by the capital campaign, the inauguration of a new chancellor, and the symbolic impetus of the new century to launch a Media Studies Program as part of the Center for the Creative Arts. This program will provide opportunities for teaching and research in all aspects of media today: film, video, and the new digital media, which encompass online writing, experimental film-making for the web, computer art, graphic design for the web, electronic music, and more. The Program will involve both undergraduates and graduate students in project-oriented courses both in film and interactive multimedia production and in seminars that reflect on the legal, social, economic and cultural policy issues that the media revolution presents.

Not since print technology revolutionized the cultures of Western Europe have assumptions about the nature and role of the arts been so in flux. Concepts at the center of our traditional sense of culture--the autonomy of the creative individual, the originality of the work of art, the authenticity of cultural acts, the uniqueness of self-consciousness, the absolute difference between technology and art--are up for redefinition because of the possibilities offered by new media. Many artists, writers, and musicians reject these challenges, often for excellent reasons, but few remain untouched by the important creative, intellectual, and policy issues such debates raise.

The recent case of Napster v. the major record labels is a symptom of the range and speed of change in recent years. What is intellectual property in the face of almost instantaneous duplication and transmission? Is copyright, itself a nineteenth-century invention, an outmoded concept? Our students are already immersed in these questions. More generally: what is the meaning of community in the age of online communication? What is civility without face-to-face debate? In the area of scholarly research and publication: what is the fate of the scholarly monograph in an age when traditional book publishing is becoming prohibitively expensive and

online publication so rapid and affordable? Is more information more freely circulated necessarily better information without the traditional gatekeepers?

The Media Studies Program would combine the study of such critical, historical, and policy issues with a hands-on orientation toward the production of film, video, and other digital media. As university-level disciplines, film and television production must be informed by the larger cultural questions these media provoke, or it becomes little more than an apprenticeship to industry. In the emerging digital arts, virtually every innovation must be accompanied by its own theoretical justification, for the new media are forced to demonstrate the principles by which they are to be understood.

Undergraduate and Graduate Programs

We recommend the institution of an undergraduate major in Media Studies, and a graduate program leading to a Certificate in Media Studies. The Major and the Certificate can be in one of the two following areas:

(A) **The Program in Film Studies.** This interdisciplinary program would build on the existing minor in Film Studies to develop, in stages, a Film Studies concentration for undergraduates and, later, a Certificate in Film Studies, which would supplement the PhD in departments that welcome it. Below we present the rationale for housing the Program in the Vanderbilt Center for the Creative Arts.

The Film Studies Major would be an outgrowth of the minor in Film Studies introduced this year. The minor consists of 18 hours: 3 from a cross-listed Introduction to Film Studies, 3 from a film theory course taken either in Philosophy or Communication Studies, 3 from a production course, and 9 from electives. At present, 10 faculty from 7 departments offer 17 courses per year that count toward the minor. A formal concentration in Film Studies consisting of 36 hours would become possible with the addition of only two faculty and one staff positions, detailed below (see Staffing).

These resources will contribute a total of 14 new courses to the present 17 for a total of 31 courses per year. The Film Studies faculty thus will be able to offer courses to the general undergraduate population while also being able to staff the courses necessary for a concentration.

The structure of the major would be:

- 3 hours of Introduction to Film Analysis
- 6 hours of film history
- 3 hours of film theory
- 3 hours of screenwriting
- 6 hours of film production
- 15 hours of electives

The Certificate in Film Studies for graduate students would supplement existing Ph.D. structures. On the model of the minor already required by some Ph.D. programs, it would consist of 9 hours of courses available for graduate credit. The availability of graduate fellowships in

Film Studies discussed below in connection with the undergraduate concentration in film studies will naturally generate a core of interested students. In combination with the less predictable but nonetheless growing number of students and faculty with film interests in English, philosophy, Spanish and Portuguese, and so on, the Film Studies fellowship program will justify the implementation of a Certificate in Film Studies within a very few years. If our prediction pans out, then some additional resources will be required, although not, we expect, any new appointments. Specifically, one devoted graduate Film Studies course per term will be created by buying out a course from the department of an affiliated Film Studies faculty.

The rationale for housing the Film Studies Program in the Vanderbilt Center for the Creative Arts is twofold. First, since the Film Studies concentration will have 9 hours of production and screen-writing, proximity to the film production facilities and the offices and workshops of writers will be essential. Second, proximity to the proposed digital media lab will permit great flexibility and creativity in the integration of media technology into courses in film history, criticism, and theory. Already, courses in film exist that take advantage of new technologies to solve one of the traditional problems of film classroom teaching--how to teach moving images alongside written texts. Vanderbilt does not now have the facilities to exploit these new courses, but the media lab will solve that problem. However, we envision even greater creativity in the invention of new kinds of courses that blend laboratory and academic activity. One possible course is presented below, but in general we hope that the ever greater intermixing of textual, visual, and new media resources will make the Film Studies Program at the Vanderbilt Center for the Creative Arts a laboratory for the invention of fresh techniques for film pedagogy.

The History of Film Editing: With the freeing of affiliated Film Studies faculty to teach more specialized courses in film history, one can envision comparative courses on the history of film techniques. While such a course could be taught using the technologies now used in film history courses (projectors, VCRs, DVDs, and so on), the same sort of course taught with interactive technologies would be infinitely more dynamic. In a course on the history of film editing, students will be able to see the effect of certain editing styles by visually contrasting the choices made by film artists with the other choices those artists might have made as well as, in effect, testing those choices for themselves. For instance, an instructor could teach a unit on the development of the jump cut by having students watch clips from landmark films in the history of the technique, edit their own specimen films, or "re-edit" sequences from films that do not use jump cutting. As another example, consider a class on the aesthetic differences between the tracking shot and the establishing shot/medium shot/close-up sequence in which students work out various reconstructions of famously damaged sequences from the films of Orson Welles. The interactive and hands-on experiences that the media lab will make available to teachers even of history and criticism courses are just being explored. The importance of integrating them into film teaching argues in favor of housing the Film Studies Program in the Vanderbilt Center for the Creative Arts.

(B) Digital Media courses. The Media Studies Program will offer or cross-list courses from other departments and schools in computer art, online graphic design, hypertext, sound art, and interactive multimedia forms. These courses would include both workshops in emerging media, which would be largely studio or computer-lab based, and seminars in the history or theory of media, which would include a lab component (as a fourth credit hour) in creative projects exploring a new media. Examples of each of these kinds of courses follow:

Workshop: Hypertext-Reading and Writing Online. This course is currently offered as a Freshman Seminar in the College of Arts and Science, but it could be significantly reconfigured and improved were it supported by the resources of a Media Center housed in the Vanderbilt Center for the Creative Arts. Hypertext is the emerging literature of the World Wide Web. Experimental hypertext novels create linked narratives with no beginnings or ends, literary mazes that can never be read twice in the same way. The possibilities of hypertext composition challenge established notions of literary form, leading critics to argue about how hypertext will transform research, editing, models of reading and writing, and the nature of literacy itself. Novelists and film-makers attempt to imagine the future of a wired society, while corporate culture strives to cash in on the World Wide Web. In this course, students explore emerging forms of hypertext through readings of cyberpunk fiction; hypertext fictions, both on the web and on CD-ROM; novels about the boundary between human and artificial life; movies that use cyborgs and virtual reality to speculate about the role of technology in society; critical theory about the future of electronic writing, the definition of cyberspace, and the future of literature in an age of hypertext. Students compose two collaborative hypertexts themselves during the semester. (See Appendix C)

Seminar on Shakespeare with Laboratory, producing an interactive edition of a play. Multimedia tools allow the editor to overcome the disabling divorce of dramatic performance from dramatic text by making it possible for her to annotate the text with multiple scenes aimed at representing divergent interpretations of the play. Such an edition could include an archive of historical documents, reviews, and criticism. It could also include slides representing set and costume designs from prior productions of the play. It would also be possible to construct a virtual stage that would allow the student as well as the amateur or professional practitioner to experiment with set designs and work out directorial options. In addition to the pedagogic value of involving students in the creation of such a resource, graduate students and faculty might ultimately decide to produce a scholarly edition based on this model. The users of such an edition would include scholars of the drama, students and teachers of theatre, dramaturgs, directors, and costume and set designers. Given that the project would have commercial applications, it would be a candidate for funding by Annenberg/CPB or for a contract with distributors of humanities software. There are numerous faculty in the English department, including Lynn Enterline, Chris Hassel, Dennis Kezar, Leah Marcus, and Kathryn Schwarz, who would have an interest in teaching such a course were the needed technical staff support available (see Staffing below).

Documentaries across the disciplines. Whether attempting to show the inside of an institution (Wiseman's *High School* and *Basic Training*), tell the story of an art movement (Russell's *Jazz*), capture a group event (*Hands on a Hard Body*) or celebrate individual obsessions (Morris's *Pet Cemetery*), the documentary film maker always adopts a point of view. Students will examine the depictions of "real people" and "real experiences" in documentary film, video, sound recordings, and on web sites in order to discover how "reality" is constructed. They will plan and execute a simple documentary of their own that will be the subject of a website they create.

Staffing (see Budget for details of estimated costs)

Staffing the Media Studies Program with personnel who are creative, technically expert, and capable of working with faculty and students is of the utmost importance. At its core the Media Studies Program will have the following members:

Existing Personnel

Faculty Director. This person will be actively involved in one of the new media disciplines---film, video, or other digital technology---and will have an interest in the history of media, cultural policy, or media theory. A&S has a number of faculty already on staff with the interests and expertise required for this position, including Jerome Christensen, Jay Clayton, and John Sloop.

Affiliated A&S faculty in Anthropology (Beth Conklin), Communications Studies and Theatre (Jon Hallquist, John Sloop), English (Vereen Bell, Jerome Christensen, Jay Clayton, Sam Girgus, Leah Marcus, Sheila Smith McKoy, Mark Wollaeger), Fine Arts (approved new position in computer art), German (Dieter Sevin), Philosophy (Gregg Horowitz), Political Science (Richard Pride), Religious Studies (Jay Geller), Spanish (John Crispin and Andres Zamora).

Affiliated faculty in other schools: Blair (Daniel Landes [computer music] and Stan Link [film sound tracks]), Engineering (Kazuhiko Kawamura [electronic and robotic musical instruments-see Appendix D], Richard Alan Peters II [computer graphics], D. Mitchell Wilkes [entertainment robotics]), and Law (Steven Hetcher [internet law, intellectual property, and privacy law] and Christopher Yoo [technology and freedom of speech issues]).

New Positions

Faculty appointment in screenwriting (one part-time adjunct).

Faculty appointment in film production (one part-time adjunct).

Technician in film and sound editing to maintain the equipment, assist in the editing studios, and train students and faculty in their use.

Vanderbilt Faculty and Student Fellows

The Media Studies Program will offer faculty fellowships of two kinds: research fellowships and teaching fellowships. For a Faculty Research Fellowship, a faculty member would propose a research project to a selection committee set up by the Program director including both faculty and senior technical staff. If selected, the faculty member would receive half-time teaching relief for a period of two years, as well as office space, student assistance, and consultative support from the Program's staff. Faculty Teaching Fellows will be appointed for a single year with relief from one course. The Faculty Teaching Fellow would be expected to develop a course that would entail collaboration with advanced students in a workshop environment with the goal of developing film or other digital applications that would facilitate

the conduct, presentation, and propagation of research in a particular field. The Program will host a maximum of four fellows at any one time: two Faculty Research Fellows, two Faculty Teaching Fellows.

Two graduate fellowships in Film Studies will be competitively awarded to students already admitted to graduate programs in the College. While these fellowships will support the students' work in their home departments, each graduate fellow will teach two Film Studies courses per year at the introductory level (Introduction to Film Analysis, Film Theory, and Introduction to Film History). Because these courses will be taught by graduate fellows, faculty who now teach the introductory courses for the minor will be available to teach 4 upper level undergraduate courses with no additional faculty appointments.

The Program will also offer Student Grants, in the \$300-500 range, at both the undergraduate and graduate level, in order to fund the expenses associated with film and other media projects. We envision making available up to six such grants per year. These stipends would be given to students who have demonstrated proficiency and imagination in developing film and other digital projects in order that they may have the opportunity to bring a meritorious project to completion or serve as a co-developer on a project undertaken by a faculty research fellow.

External Fellowships

We recommend that the College establish a Vanderbilt Media Studies Fellowship in order to recruit successful filmmakers and digital artists and entrepreneurs from the profit and non-profit sectors to take "sabbaticals" from their enterprises and occupy an office within the Center for the Creative Arts. Such a post would involve no formal obligations and would have to be flexible in its term, anything from a month to a year. The aim would be to attract Fellows who would appreciate the opportunity for conversations and consultations with imaginative faculty and students. The cost of supporting an outside fellow, which we have budgeted at \$40,000 a year, would be more than repaid by the publicity such a program would provide for the Center. We recommend funding for only five years, after which time Media Studies would be expected to generate permanent outside funding for these fellowships.

Vanderbilt Documentary Project

Vanderbilt hosts a number of courses dedicated exclusively or partially to the study of documentary films. In one course (English 269 taught by S. Girgus) students produce a film that documents their own university. Several faculty members and graduate students produce documentaries as a culmination of a research project. Even when funding is available to the senior faculty member, that funding rarely covers the entire cost of a project. The Vanderbilt Documentary Project will make small grants to faculty, graduate students, and undergraduates to assist in some aspect of documentary production. We recommend a modest \$5000 per year for five years with the assumption that in that five years the Media Studies program will be able to raise funds to provide ongoing support.

Facilities (see Budget for details of dimensions and estimated costs)

Shared computer lab. Offices for director, screenwriter, and faculty member in film production. Office space for fellows. Shared office for technician. Shared conference room/seminar room. One editing suite for 16mm film. Shared screening room for film and digital projection and for blue screen shoots. Adjoining projection booth with room for storage of films and film equipment.

Costs (see Budget for details)

Some of the infrastructure and operating costs would certainly be carried by outside grants, and those that were not could be offset to some extent by overhead from project-based grants. Faculty participation might be funded by individual departments, with infrastructure and basic staffing costs carried centrally by the Vanderbilt Center for the Creative Arts. A potential return of up to 100% in outside grant funding is possible.

Affiliations

The Media Studies Program will have its center in the College of Arts and Science, but from that center its activities will radiate throughout the University. The Dean of the Law School has endorsed a proposal in Law and Humanities, which includes an extensive component devoted to the legal implications of developing media. Media Studies will also provide collaborative opportunities for faculty and students at the Blair School of Music, the Divinity School, the Engineering School, and Peabody. Finally, the Program will involve social and natural sciences in projects that can benefit from humanities and arts applications suitable for an interactive medium.

The Vanderbilt University Library and the Vanderbilt University Press

A parallel unit will focus on the creation, maintenance, and use of scholarly electronic resources, run jointly by the Library and the Press. The Media Center will cooperate with this unit by facilitating the collaboration of faculty in the production of innovative electronic texts and journal publications.

The Office of Media Relations

The one University unit where digital media is currently being fully exploited is in the Media Relations Office. Michael Schoenfeld, its director, welcomes the opportunity for formal associations with the Digital Media Center. The Media Relations Office will be able to offer internships for expert undergraduates both in its own shop and through sponsorship of those students in the Nashville software community. Media relations is well underway in its plans to produce an online magazine featuring faculty research. Mr. Schoenfeld has embraced the idea of also featuring graduate and undergraduate research. Faculty and students who have conducted research in the Digital Media Center and who take advantage of this outlet would not only be representing the fruits of their research, but conducting research in order to devise the most appropriate and powerful means to represent their research. Digital applications of research are

distinguished by a recursive form: digital applications of research alter the very conditions by which research is conducted and the audience which that research can reach.

The Center for Teaching

The focus of the Media Studies Program is academic. Its teaching will be content driven: its assignments will include the designing of a research project, the successful realization of which requires devising a multimedia application and the use of electronic tools. The concern of the Teaching Center is service. It focuses on the process of teaching, how technology can assist any teacher to improve classroom pedagogy. These are complementary goals. The line is there, but it is permeable. Crossings will and should occur. Allison Pingree, the Director of the Teaching Center, has enthusiastically embraced the idea of a Media Studies Program and has offered to use the resources of her organization to build a network for campus wide dissemination of information regarding digital projects.

Conclusion

There is an important curricular payoff to the introduction of laboratory courses into arts and humanities courses. Working on such projects would provide the kind of intense, hands-on creative experience that is rare for students. Because that experience would be in film and other digital media, it will have special value for those students who aspire to careers in the entertainment and communications internet industries---prominent sectors in today's economy. A program that prepares students of the arts and humanities for success in the world of business while dramatically elevating the quality and creativity of their research into cultural topics has no precedent. We are convinced that such a Media Studies Program would be greeted enthusiastically by outside funding agencies as well as individual donors committed to enhancing Vanderbilt's influence and prestige.

Considerable free national publicity will attend the creation of this program. More important are the changes that will occur in the classroom, in the laboratory, and in the culture of research and teaching at Vanderbilt. Faculty will find new areas of research and creative solutions to old problems. Multiple forms of publication, from formal and peer-reviewed to informal but influential, will arise among researchers. Vanderbilt would have the opportunity to become a preferred publisher for the increasingly electronic scholarship of faculty elsewhere. Innovative coalitions of faculty and students can be expected to form, as the relationship between student and researcher alters: students will have classroom experiences closer to an apprenticeship than to rote learning. Undergraduates who participate will enter either graduate school or the media fields with a competitive advantage. Wholly new opportunities for partnerships and outreach will arise; new academic degree programs may arise as well. In sum, by putting itself in the position to introduce innovations rather than respond to the innovations of others Vanderbilt will become an academic leader in film and other digital media.

APPENDIX A

STUDIO ART TRACK (submitted by Marilyn Murphy)

We would like to establish a Studio track on the Fine Arts major. The Fine Arts major in Studio would build on the existing minor in Studio art and would parallel similar major requirements in Art History for a total of 36 credit hours in our department in addition to the core requirements of all students in the College of Arts and Science.

Proposed Student Requirements for the Studio Major:

FA 111 History of Western Art: Renaissance to Modern Art (3 hours) FA 110 History of Western Art: Ancient and Medieval or FA 200 Asian Art Survey (3 hours) A Twentieth Century art history course or seminar (3 hours)

Options:

FA 241 Twentieth Cent. American Art FA 231 Twentieth Cent. European Art FA 234 Twentieth Cent. Latin Am. Lit, Film and Art Selected FA 294 (Impressionism, Surrealism, Harlem Renaissance, etc.) or FA 232 Modern Architecture

FA 103 Introduction to Studio (formerly Design and Color) (3 hours) FA 102, FA 202 Drawing and Composition or FA 135 Life Drawing (6 hours) Senior Thesis (3 hours)

(15 Hours) of studio electives which must include at least:

One 2-D course (FA 107 Printmaking, or 150 Painting) and One 3-D course (FA 160 Sculpture, 161 Assemblage, 165A Ceramics)

Senior Exhibition. Students graduating with the track in Studio Art would be expected to participate in and to take the responsibility for hanging an exhibit of their best work during their senior year. This show could dovetail nicely with the Hamblet exhibit which is currently held during the Spring semester. The student would also have the option to hold his or her exhibition in an alternative space.

The Senior Thesis in studio would be a new course taken during the student's senior year. Possibly team-taught by the Studio faculty, this class would include both the theoretical and practical concerns faced by artists. Slide lectures by the faculty, readings in contemporary theory, and lectures by guest artists and art professionals would be presented as well as professional instruction in how to take slides of artwork, develop a vita, build an exhibition record, the nuances of hanging and lighting an art exhibit and the process of applying to graduate school.

The Department of Art and Art History sees our studio art component as an excellent tool for many students to enhance or develop a creative approach to problems in any field. Our discipline is also a fine means to find one's voice in an increasingly visual culture.

To better serve the student demand and to establish the Studio major, we recommend the following:

1. The upgrading of the three-year position for which the art department is conducting a search to a full-time tenure-track position. Because of the tremendous student interest in the subject, our department has received permission to hire an artist who utilizes the computer as a tool for art and who is also well-versed in either printmaking or photography. This young professor would also assist with our foundation classes in drawing and design (Intro to Studio).
2. A two-year rotating position of any studio discipline. This non-tenure-track junior appointment could teach Life Drawing, additional courses in his or her field and help with the administration of the Hamlet Award and exhibition.
3. A new facility for the Studio art classes. (See appended description.)
4. The establishment of small studio spaces for senior art majors.

APPENDIX B

EXPRESSIONISM 101

A multidisciplinary approach to be used as a model for additional explorations of artistic movements in the arts, humanities, and social sciences at Vanderbilt University.

Numerous opportunities exist for interdisciplinary (or, at the least, multidisciplinary) courses among the arts, humanities, and social science at Vanderbilt University. To cite merely one example, the Theatre Department, Department of Fine Arts, Department of Psychology, and the Blair School of Music might collaborate on a course in Expressionism, which could include the study of expressionist works and artists, such musical monuments as Arnold Schoenberg's "Pierrot Lunaire" and Alban Berg's "Wozzeck," landmark plays by Georg Kaiser and Ernst Toller, and the artwork of Grosz, Kollwitz, and Kokoschka.

An exploration of important influences upon the Expressionist Movement might include, in drama, Buchner's *Wozzeck* and Strindberg's *A Dream Play*; in painting, Cezanne and Van Gogh; and in music, late-Romantic works and early works of Schoenberg, as well as operas of Richard Strauss. Certainly the psychology of Carl Jung is enormously significant to the movement and happily further extends the possibility in this course for interdisciplinary involvement. Jung's fascination with primitive man would provide an interesting intersection with the visual arts. His interest fueled the period's budding delight in "primitive" art and African sculpture, which influenced the work of painters such as Gauguin.

Since German Expressionism's influence figures significantly in some of the plays of celebrated American playwright Eugene O'Neill, he too might be included in such a study, perhaps including the staging of a one act. The same influence can be traced to such composers as Roger Sessions and to American expressionist painters such as Pollock and Rothko.

An O'Neill one-act play could be part of an end of term program which celebrates the early 20th century American response to Expressionism in all of the creative arts. Better yet, in a second semester undergraduates could create their own response in expressionistic experiments of poetry, visual art, musical composition and performance. This extension of the course over a year holds appeal in the time it allows for the study of an artistic movement in the first semester and then an informal and inspired creative response in the second.

In order to facilitate an idea such as this, factors of implementation would have to be worked out between the collaborating departments and their deans. Release time is a major consideration for those participating professors from small departments in order to ensure that their regular classes were covered with temporary replacements. A place in which to meet the class and work on projects is a major consideration as well since at present there is no place available or suitable for this sort of venture. Ideally an arts center with classrooms, a rehearsal space, and other support/studio space would be ideal.

APPENDIX C

CORNERSTONE Past Issues

Summer 1999

By Victor Judge

In [Garland Hall's microcomputer laboratory](#), where English Professor [Jay Clayton](#) and 15 freshmen are discussing the [hypertext](#) novel [Patchwork Girl](#) by feminist and gender theorist [Shelley Jackson](#), the room becomes the setting for a postmodern literary salon.

The students skillfully draw correlations between [Mary Shelley's](#) literary portrait of [Victor Frankenstein's](#) monster and the title character from [Frank Baum's](#) book [The Patchwork Girl of Oz](#). As they explore the books' variations on the themes of fragmentation and dispersal of identity, Clayton asks them to consider why the medical term "suturing" is an appropriate metaphor for the act of writing on-line. When one freshman discerns the relationship between hypertext and sewing, another asks if the pun on "text" and "textile" is related to the current movement in feminism that revalues such arts as quilting that traditionally stereotyped and segregated women from men.

A visitor to Room 117 would be impressed not only by the depth of the students' perceptions and their ability to interweave ideas from the disciplines of literary theory, history, medicine, and computer science, but also by the lack of traditional sounds associated with an English class. The responses to Clayton's questions aren't punctuated by the rustling pages of paperback novels, the intermittent squeak from yellow highlighters underlining passages, or the scrawling of notes across legal pads. Instead one hears typing from keyboards and the clicking of mouses as the students open Netscape 4.5 and navigate their way to the Web site for their class -- [English 115W: Reading and Writing On-line](#).

When Clayton asks Kelly Deel to defend her answer to a question, she doesn't refer her peers to a page number in a textbook; the freshman economics major from Joplin, Missouri, suggests the class members click on a hypertext link as she begins reading from the text or "lexia" that appears on their monitors.

\$

These freshmen listening to Deel's defense have been participants in a successful experiment conducted this past spring. By enrolling in [Vanderbilt's](#) first course in reading and writing on-line, they satisfied the A&S requirement of completing a freshman seminar before qualifying for sophomore standing, but they also tested a new service that [Academic Computing and Information Services](#) (ACIS) will provide this fall for all undergraduates and classes taught in the University's curricula -- free Web space, or VU Space.

"We're the first generation of Vanderbilt students to read and compose in hypertext," observes [Kush Shah](#) who collaborated with the other freshmen writers and created two literary Web sites for their seminar. Because the young authors are on the verge of turning 21 years old, they first designed [Virtually 21](#), a collection of their writings from the first-person

Known as the "Design Team" for English 115, [Eddison Lin](#), [Michael Buendia](#), [Mike](#)

Glass, and Sylvia Aparicio shared responsibilities for designing the graphics and determining the hyperlinks for the Virtually 21 and Arcadia Web sites.

perspective on five subjects they considered important -- technology, alcohol, family, sex, and culture. And based on their intensive study and research of Tom Stopper's 1993 drama about chaos theory, they developed Arcadia, a series of critical essays on facials, interrelated algorithms, and non-Aristotelian geometry.

The students primarily decided to take the course in hypertext because they wanted to learn how to create their own Web pages -- a task they accomplished as early as the second class meeting when they presented themselves to the world through cyberspace. As participants in this experimental course, they also explored hypertext as the emerging literature of the World Wide Web by reading hypertext fiction, investigating the ways hypertext challenges the established notions of literary form, and debating the effects of electronic writing on research, editing, critical theory, and literacy.

"People who write hypertext are interested in the ways in which we are connected with computers and the Internet and how entry into an information order affects our identities," explains Clayton. "We become hybrid beings formed by our natural subjectivity and this artificial, virtual world -- so people who use the computer become linked to the electronic device in the same way the Patchwork Girl and Frankenstein's monster are linked by several parts of other beings."

Cyberspace, contends Clayton, is not destroying but transforming and supplementing book culture. "With hypertext as an alternative model, we now see that books are not the only way to receive information.

While studying the history of printed technology, I have discovered that no mode of information has ever been lost; each mode becomes supplemented. Oral poetry was not eradicated by the printing press; movies did not destroy the novel as was once believed, and photography did not bring an end to realistic painting."

Reflecting upon his own freshman year at Yale, Clayton never anticipated that computer technology would be an integral part of his scholarship and teaching. "The most pressing demand on my attention as an undergraduate and as a graduate student at the University of Virginia was wrapping my mind around the alien discourse of literary theory; all the accepted notions of what constituted a text and how meaning arose were challenged by the poststructuralists who encouraged us to see that a text has no fixed boundary."

Clayton's interest in technology, however, is a natural extension of his studies in literary theory. "Computer technology is the literary theory of the '90s because hyperlinks also challenge the integrity, autonomy, and boundaries of an individual text -- the associative character of hypertext may be the technological realization of a literary vision that was present in the early twentieth century in the style of James Joyce or Virginia Woolf."

Whether he is teaching a freshman seminar or a class on the nineteenth-century English novel, Clayton, who serves as the director of graduate studies for the English department, integrates computer technology into his teaching. His students are required to submit all their papers as attachment files to e-mail messages.

"When I announced at the beginning of the semester that I would refuse to accept any essays on paper, the seniors had a panic attack, but the freshmen were less intimidated by the requirement," says Clayton, for whom this experiment in grading proved to be a much more interactive way of evaluating a student's work. "I open the attachment files, write comments and make recommendations for revisions, highlight all my remarks in red, and return the assignments instantaneously by e-mail."

Although the use of computer technology is prevalent in composition instruction throughout American higher education, Clayton says that Vanderbilt is on the cutting edge of this movement as a result of the foresight of [Mark Wollaeger](#), director of the college writing program. Wollaeger has incorporated computer technology into all the English classes taught by teaching assistants and has made the technology available to every professor in A&S whose courses are coded by the letter "W" -- the designation for classes that meet the writing requirement for undergraduates.

Via technology, students can participate in brainstorming modules for assignments, serve as peer editors, and revise according to suggestions from their professors and peers.

Having taught Vanderbilt's premiere course in hypertext, Clayton states that the most immediate benefit from the seminar has been the enthusiasm of the freshmen. "For the first time in teaching a 'W' course in my 11 years at Vanderbilt, I have found students whose predominant interests are in mathematics and science to be as excited and as engaged with the literature as students in the humanities. They've written autobiographical narratives and analytical arguments for the Virtually 21 site, and for the Arcadia project they've researched historical figures from the English poets [Lord Byron](#) and [Thomas Peacock](#) to [Ada](#)

[Lovelace](#) and [Charles Babbage](#), precursors of the modern computer," explains Clayton, "but the course also has provided a model for understanding the importance of revision. Whether writing a five-page linear essay or a gloss for the Web sites, they understand that writers have to prepare their compositions for different audiences in different rhetorical occasions -- a single lexia could be revised four times before being posted on the Web."

A possible consequence of writing on-line that Clayton intends to research involves the effects of hypertext on a student's attention span. "Does the temptation to read and write brief snippets encourage the shortening of a student's attention span -- a phenomenon we have already witnessed in our society because of television culture? Will hypertext as a method of thinking and writing that is becoming increasingly prominent respond to an existing shortened attention span?" he asks. Until research addresses these questions, Clayton believes that universities must continue to offer opportunities for training students in longer compositional projects.

Five minutes before the freshman seminar concludes, Clayton asks the class to contemplate how everyone is like the Patchwork Girl -- how each individual's identity is quilted from multiple influences and voices, and how a person is really a collaboration of experiences. "Frankenstein's monster, Patchwork Girl, and hypertext are assembled from body parts stitched together," he reminds the class. "If literature is a body of text, can we then extrapolate that our physical bodies also are texts or vehicles for writing?"

The inquisitive look on Dustin Laverick's countenance changes to a grin when Clayton suggests the student consider the writing on his pullover shirt -- "Seaside [Abercrombie](#)." "What message are you conveying with that brand name?" asks Clayton.

Before Laverick can respond, his peers realize the implications of Clayton's question and begin interjecting comments about hair colors, tattoos, and other ways the human body could be considered a text.

As they log off their computers, Clayton tells them they'll resume this dialogue next class, but Luxmi Rajanayagam decides that's not soon enough for her question. Pulling her backpack over her shoulder, she tells Clayton, "I'll send you an e-mail." Learn more about Vanderbilt's premiere course in hypertext and the collaborative writing projects, Virtually 2I and Arcadia, by visiting Professor Jay Clayton's Web site at <http://www.vanderbilt.edu/AnS/english/Clayton/>

APPENDIX D

Engineering Capability Brief Browse Capability Brief Library Entertainment Robotics

Kazuhiko Kawamura, Professor - Electrical Engineering and Computer Science
Richard Alan Peters II, Associate Professor - Electrical Engineering and Computer Science
D. Mitchell Wilkes, Associate Professor - Electrical Engineering and Computer Science
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Overview: Education and entertainment are important applications for humanoid robots. Dual arms, vision, audition (audio input), and compliant control make these robots capable of musical and artistic performance. Theremin-Playing Robot: The theremin is one of the only musical instruments which is played without being touched. In addition, it is the oldest electronic musical instrument. Both the pitch and volume of the theremin are controlled by waving one's hands in the proximity of two metal antennas. Playing the theremin is difficult. Because the nonlinear response of the pitch antenna means that notes higher in pitch are located closer together spatially. Moreover, unlike conventional instruments such as the piano or guitar, there is no physical reference between any note and its location relative to the instrument.

A humanoid robot has been developed which overcomes these problems and performs music with the theremin. In order to produce perfect musical notes, the robot plays "by ear," as opposed to memorizing the locations of notes relative to the antenna. Pitch detection software allows the robot to detect any error between a desired note and the note currently being played. Soft pneumatic arms facilitate the production of human-like effects such as vibrato and tremolo. Additional software allows the robot to be controlled via any MIDI (Musical Instrument Digital Interface) device, such as a synthesizer or guitar.

Notes played on such devices are translated into commands for the robot, which quickly moves to play the note on the therein.

Example Application:

OTHMAR-Drawing Robot: OTHMAR is a new soft arm robot under development, which explores the limits between man's creativity and automation in the field of visual art. OTHMAR has the ability to observe a person and to precisely mimic the motions of that person. By observing an artist in the process of drawing and by recording the motions, the robot can then reproduce the drawing itself at a later time. Because of the compliance of its soft arms, OTHMAR is unlikely to reproduce the drawing exactly. Each time it reproduces the artist's actions the robot will add its own subtle variations. Through experimentation with the robot, the artist can learn how to manipulate it so that the robot's added variations occur within the artist's plans for his work. Moreover, since the robot reproduces the artist's physical motions in creating the drawing, the robot's motions are a performance in themselves.

Potential Applications: Musical education, entertainment, and performance art.

References:

Kawamura, K., Wilkes, M.W., Pack, R.T., Bishay, M., and Barile, J.B., "Humanoids: Future Robots for Home and Factory," Proceedings of the First International Symposium on Humanoid Robots, Waseda University, Tokyo, Japan, October, 1996, pp. 53-62.

Creative Arts Center - Budget Summary

	Proposed Amount	\$ Raised	Capital/ Endowment Needed
<u>Shared Space & Expenses</u>			
Space	\$2,507,836		\$2,507,836
Salaries	\$279,675		\$6,214,999
Equipment	\$314,692		\$314,692
Other	\$22,500		\$499,999
TOTAL SHARED SPACE & EXPENSES:			\$9,537,526
<u>Studio Art</u>			
Space	\$11,857,560	\$4,000,000	\$7,857,560
Salaries	\$56,250		\$1,250,000
TOTAL STUDIO ARTS:			\$9,107,560
<u>Media Studies</u>			
Space	\$431,184		\$431,184
Salaries	\$198,000		\$4,399,999
Equipment	\$101,450		\$101,450
Other	\$225,000		\$225,000
TOTAL MEDIA STUDIES:			\$5,157,633
GRAND TOTAL:			\$23,802,719

CREATIVE ARTS CENTER/SHARED SPACE AND EXPENSES

	No. of Sq Cost Ft or Items		Projected Amount	Yearly Expenses
Shared Space				
Seminar Room (1)	350	\$195.00	\$68,250.00	
Copy Center	150	\$195.00	\$29,250.00	
Director's Office	150	\$195.00	\$29,250.00	
Reception Area/Coffee House	1000	\$195.00	\$195,000.00	
Executive Asst's Space	150	\$195.00	\$29,250.00	
Black Box	2000	\$195.00	\$390,000.00	
- Storage	400	\$195.00	\$78,000.00	
Media Lab Space - one 28 x 28 area and one 24 x 24 area	1360	\$195.00	\$265,200.00	
Media Lab Reception Area	192	\$195.00	\$37,440.00	
Media Lab Storage	144	\$195.00	\$28,080.00	
6 sound-proof edition studios	300	\$195.00	\$58,500.00	
Office for Media Lab Director	150	\$195.00	\$29,250.00	
Screening Room/Classroom/Room for Readings (80 person capacity) with projection booth - 53' x 23'	1219	\$195.00	\$237,705.00	
Hallways, stairways, restrooms (total sq.ft x 1.7%) = TOTAL SQ FT.	12860	\$195.00	\$2,507,700.00	
Furnishings (Usable space x .18)			\$136.17	
SPACE TOTAL:			\$2,507,836.17	
Shared Staff Salaries				
Center Director (12 mo/Full Time)				\$75,000.00
Benefits				\$18,750.00
Exec. Asst (12 mo/Full Time)				\$30,000.00
Benefits				\$7,500.00
Administration Workstudy Receptionist (120 Hours @ \$6.25/hr x 36 wks - Center will be open 9AM until 1AM)				\$27,000.00
Lab Director (Half-time Lecturer)				\$19,000.00
Benefits				\$4,750.00
Lab Tech (Full time - 12 months)				\$43,000.00
Benefits				\$10,750.00
Lab Work Study (98 hours @ \$6.25/hr x 36 wks - Center will be open Noon - 1 AM)				\$22,050.00
Theatre Tech (Half Time - 9 months)				\$17,500.00
Benefits				\$4,375.00
SALARIES TOTAL:				\$279,675.00

CREATIVE ARTS CENTER/STUDIO ART

	No. of Sq Ft or Items	Cost	Projected Amount	Yearly Expenses
Space Needs				
Sculpture	2600	195.00	\$507,000.00	
Sculpture Storage:	300	195.00	\$58,500.00	
Sculpture Tool Room:	300	195.00	\$58,500.00	
Common Shop (between Ceramics and Sculpture)	1000	195.00	\$195,000.00	
Ceramics:	2600	195.00	\$507,000.00	
Ceramics Storage	300	195.00	\$58,500.00	
Ceramics Wet Room	300	195.00	\$58,500.00	
Kiln Room:	300	195.00	\$58,500.00	
Painting:	1500	195.00	\$292,500.00	
Advanced Painting:	1000	195.00	\$195,000.00	
Storage for both rooms:	350	195.00	\$68,250.00	
Drawing (with natural light)	1000	195.00	\$195,000.00	
Drawing (without windows)	1000	195.00	\$195,000.00	
Design	1000	195.00	\$195,000.00	
Storage for Drawing, Design:	300	195.00	\$58,500.00	
Multi-Media:	2000	195.00	\$390,000.00	
Storage for Multi-Media	400	195.00	\$78,000.00	
Critique Classroom/Gallery:	1200	195.00	\$234,000.00	
Classroom for lectures	1000	195.00	\$195,000.00	
Gallery	1500	195.00	\$292,500.00	
Storage/prep room for gallery	500	195.00	\$97,500.00	
Seminar Room	450	195.00	\$87,750.00	
Printmaking	2600	195.00	\$507,000.00	
Storage for Printmaking	300	195.00	\$58,500.00	
Photography Classroom	400	195.00	\$78,000.00	
Teaching Darkrooms for Black and white, Color:	1200	195.00	\$234,000.00	
Faculty Studios and Offices				
5 Faculty at 750 sq ft each	3750	195.00	\$731,250.00	
Sculptor Office	1200	195.00	\$234,000.00	
Faculty Offices at 100 sq ft x 6	600	195.00	\$117,000.00	
Part-time faculty offices (shared)	350	195.00	\$68,250.00	
Administrative Asst.m work area, and photocopying	400	195.00	\$78,000.00	
Technician's office	150	195.00	\$29,250.00	
Vending/Lounge area	300	195.00	\$58,500.00	

Senior Studios: (shared space) Sculpture - 1000, Photo - 500, Ceramics - 800, Printmaking - 500, and Painting - 800	3600	195.00	\$702,000.00
Hallways, stairways, restrooms (total sq. ft. x 1.7%) = TOT. SQ. FT.	60,775	195.00	\$11,851,125.00
Furnishings (Usable space x 18)			\$6,435.00
SPACE TOTAL:			\$11,857,560.00

Salaries		
Senior Lecturer		\$39,000
Benefits		\$9,750
Upgrade for Computer Artist		\$6,000
Benefits		\$1,500

SALARIES TOTAL: \$56,250

TOTAL: \$56,250

CREATIVE ARTS CENTER/MEDIA STUDIES

	No. of Sq Cost Ft or Items		Projected Amount	Yearly Expenses
Space				
Storage space for film and videos	400	\$195.00	\$78,000.00	
6 offices at 150 sq. ft.	900	\$195.00	\$175,500.00	
Hallways, stairways, restrooms (total sq ft. x 1.7%) = TOTAL SQ. FEET	2210	\$195.00	\$430,950.00	
Furnishings (Usable space x .18)			\$234.00	
TOTAL SPACE:			\$431,184.00	
Salaries				
Faculty Director - 1/9 of \$80,000				\$7,200.00
Benefits				\$1,800.00
Screenwriter (2 half-time at \$20,000)				\$40,000.00
Benefits				\$10,000.00
Film production (2 half-time at \$20,000)				\$40,000.00
Benefits				\$10,000.00
Film tech (half-time)				\$20,000.00
Benefits				\$5,000.00
Faculty Research Fellows (2 at \$16,000)				\$32,000.00
Teaching Fellows (2 at \$8,000)				\$16,000.00
Student Fellowships				\$16,000.00
SALARIES TOTAL:				\$198,000.00
Equipment				
Projection			\$5,500.00	
Switching			\$7,000.00	
Screen, 12 foot, electric installed			\$5,000.00	
LCD Projector, installed			\$10,000.00	
DVD/ed and VHS			\$600.00	
Rack, cables, remote volume, laptop/external computer input and internal connection			\$3,000.00	
Basic sound for DVD, CD, VHS, 16mm, and computer – Surround sound, speakers and subwoofer – Voice amplification, wireless microphone and acoustical panels			\$14,000.00	
NPR			\$5,000.00	
Matte box			\$400.00	
Tripod			\$1,000.00	
Charging Bag			\$50.00	
Slate			\$50.00	
Light Meter			\$300.00	
Nagra 4.2			\$2,500.00	
Senn Heiser shotgun			\$350.00	
Mike holder			\$40.00	

Boom			\$50.00
Windscreen			\$60.00
Headphones			\$50.00
Omni-Action Kit			\$1,000.00
Diffusion, gels			\$200.00
Video T. Door (B/W)			\$1,900.00
Smal B/W Monitor			\$400.00
6-Head Film Editing Table			\$3,000.00
Avid Digital Editor			\$40,000.00

EQUIPMENT TOTAL: \$101,450.00

Other			
External Fellowships	5 year	\$40,000.00	\$200,000.00
Vanderbilt Document Project	5 years	\$5,000.00	\$25,000.00

OTHER TOTAL: \$225,000.00

TOTAL: \$198,000.00