Esprit 94: The Process

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Esprit 94: The Process
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3/1/95
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I. Introduction

My intention with this paper is to provide insight into the process of the production I engaged in. I think the highest value I can offer in this paper is to provide clear, keen insights into the process from my personal point of view. In essence, process was the thrust of my thesis work. As I write this paper, I am constantly reminding myself of the fact that throughout the production of Esprit '94, I felt that we were breaking new ground. We would have benefited greatly from a paper that detailed the process of exactly the kind of project we were undertaking. Thus, it is my aim in this paper to focus on the process.

Statement and Significance of the Problem

When it came time for me to choose a thesis topic early in the Fall of 1993, I knew just what I wanted to do, but I wasn't sure if it was possible. The idea was to create a large-scale multimedia project, one that would draw on the diverse talents of the individuals within the College of Imaging Arts and Sciences (CIAS) at RIT. I knew that the whole would be greater than the sum of its parts- that a group of students working as a team over a long haul could produce a CD-ROM project that could rival if not surpass the level of those that are available commercially. The talent pool was all right there in building 7, and the beauty of the university project would be that we could take into account commercial forces on an application (i.e., minimum system requirements, deadlines) but at the same time we would not have to be constrained by them. We would have academic freedom.

Herein was an essential problem: work within our College is based on individual development. The individual student completes assignments and projects by and for himself or herself. The work is geared toward individual achievement to the detriment of group efforts. This is true of most of Western education today, and it stands in contrast to the group dynamics of the professional working environment. This problem is pervasive, and it would take
nothing less than a radically different approach from the norm to achieve our goals with the Esprit project.

Early Issues

There were a couple of issues to tackle right off the bat. There was a great big train coming down the tracks, but who and what were going to be on it? The cargo turned out to be a natural choice. There already existed within CIAS a print publication called E.S.P.R.I.T* magazine. E.S.P.R.I.T. (Electronic Still Photography at RIT) had been published since 1989. It was now a mature, slick, 32-page glossy magazine produced by students under the guidance of Professor Douglas Ford Rea of the School of Photography. As a visual arts magazine showcasing student artwork, E.S.P.R.I.T. was a natural for the interactive multimedia format.

I sent my first e-mail message to Doug Rea in August, suggesting the idea that E.S.P.R.I.T. '94 could be an electronic magazine. That was the first of thousands of E.S.P.R.I.T. e-mail messages. To my pleasant surprise, Doug's response was very positive. He said that he had considered making an electronic version of the magazine in the past, but the timing hadn't been right yet. This year though, the time had come! Now my task was to do some brainstorming about what E.S.P.R.I.T. '94 could be, and to sell this vision to Doug. I came up with a one-page proposal which included a vision, the benefits, and the issues. Please refer to an original copy of this proposal in Appendix A.

Early Progress

After more brainstorming and planning between me and my advisors, the concept and content of E.S.P.R.I.T. '94 was shaping up. The following paragraphs are facsimiles of the ideas we had refined for the vision, concept, and content by the end of the Fall quarter.

---

* The traditional spelling of E.S.P.R.I.T. (spelled as an acronym) came under revision in this year of radical change. The spelling evolved along with the magazine, and its various forms included ESPRIT (no dots!), Esprit, and esprit. Each team member had their own preferred version.
CD-E.S.P.R.I.T. : Concept and Content

Concept

- Create a synergy between the printed magazine and the electronic publication. Establish a working relationship for each form that complements the other.
- Explore new areas of still imaging and information dissemination (e.g. delve into electronic publishing as a new means of reading/viewing images)
- Engage the new era of electronic publishing (CD-ROM multimedia publishing has become a vital new form of sharing information, and ESPRIT desires to remain on the cutting edge by embracing this technology)
- Expand the content of ESPRIT (This new form enables ESPRIT to provide a wealth of enhanced material in the form of a multitude of imagery combined with audio, graphics, and video)
- Provide images and information to users in a form that can be used in different ways than traditional print media (e.g. content can be manipulated, printed, transmitted, annotated)

Content

- Student portfolios: a more extensive look at student work than the traditional ESPRIT magazine. I.E. Look through an artist’s portfolio while optionally listening to them discuss their process and purpose
- Student articles concerning trends in technology and their impact on image makers (e.g. the state of desktop imaging; electronic publishing vs. print publishing; future careers and lifestyles; ethics of image manipulation and appropriation; the expanding role of the photographer)
- Interviews with prominent figures in relevant fields providing the pulse of the industry and insights into new trends
- Instructional and entertaining segments (e.g. 'the sounds of the photographer'-what a professional listens for; how to use digital cameras; digital imaging processes (input, manipulation, output-how it works); how ESPRIT magazine is made; how CD-ESPRIT is made; the history and future of ESPRIT; ESP '93 Teleconference excerpts; tour of electronic publishing facilities at RIT; tips and techniques (e.g. best Photoshop tricks))
- Imagery and articles enhanced with sound (e.g. image creator narrates ideas behind work as user views images; photographic portfolios accompanied by musical compositions;
salient quotes from articles made audible when selected; video clips providing additional insight or related information

- Entire contents of new ESPRIT magazine (no need to search for that single copy of the magazine, now the CD can be accessed on a network)
- Past issues of ESPRIT (images and articles)
- Alumni work including imagery and articles addressing current issues in desktop publishing and digital imaging

At the end of the Fall quarter, I wrote the following progress report:

Throughout the Fall quarter, I have been researching my thesis, CD-ESPRIT, and developing ideas for its concept as well as for content. I have looked at previous theses both as examples of electronic magazine design as well as for interface design. I have also looked at a number of existing commercial multimedia titles (e.g. Nautilus CD, From Alice to Ocean, I Photograph to Remember, Multimedia Power Tools, etc.) as examples of design and content. I have also been consistently reading pertinent periodicals like Wired, CD-ROM World, and Mac World, to stay abreast of current trends in multimedia and the computer industry. These materials coupled with discussions with my advisors have provided the framework for the development of the concept and content of the CD-ESPRIT project.

As we move into the Winter quarter, the CD-ESPRIT Project is ready to move the research into full swing as the Picture Page Research Class gets underway. In this class, I will oversee research by several students in specific areas of production for the CD. For example, sound is only one element of the disc that will need specific research. We need to weigh the quality of sound versus storage requirements. In addition to technical questions concerning sound, image, and text, the dynamics of combining these forms needs to be weighed from an aesthetic point of view. The goal for the Winter quarter is to be ready to go into production full steam ahead when the Spring quarter whistle sounds.

At this point, the issue of what the content would be for the large project was taking shape nicely. CD-ESPRIT '94 would be a new beast, but it had as its foundation the 6-year-old E.S.P.R.I.T. print publication. E.S.P.R.I.T. has followed a production sequence consisting of two classes: Picture Page Research in Winter quarter, and E.S.P.R.I.T. Production in the Spring quarter. This structure
would provide a nice preliminary foundation for the CD project, but in the end the CD project would go well beyond these bounds.

The second big issue mentioned above was the question of who the passengers on the E.S.P.R.I.T. train would be. Who would comprise the team? Again, the history of the printed magazine would provide very strong pointers toward how the team would be selected, with the Picture Page class in the Winter providing the basis for the team players. In the past, E.S.P.R.I.T. (especially Doug Rea) had selected a small group of participants (8-12) to fill the requisite roles for the printed magazine. However, interactive multimedia was not Doug's primary area of expertise. In the end, the task of selecting team members was done by Doug and the senior editors (myself and Derek Torrey), but the task of defining what the roles would be for the CD project was left largely up to me.

A big part of the research I conducted for my thesis involved determining the dynamics of a large-scale multimedia project. I was well-versed in all of the software applications like all of my peers in the Computer Graphics Design program, but no one in sight had experience in planning and executing a full-fledged project. For this knowledge, I turned to literature, informational interviews, and conferences. The next section comprises a review of this process.
II. Research

The Fall Quarter- Individual Inquiry

There were two major issues that I was grappling with in the Fall: the technical issues involved in producing a large-scale project in a CD-ROM format, and the practical issues revolving around building a production team and planning the production. Both issues would be addressed in the Picture Page Research class in the Winter quarter, but I had to do some preliminary groundwork to get a jump on the requisite knowledge for myself.

I turned to any source I could find to gain knowledge, including attending a CD-ROM Expo in Boston in October, speaking to experienced individuals (usually in the form of informational phone calls), and reading related literature. The most informative of all of these sources was the literature. Of all of the books and periodicals I read to gain an understanding of the process, there were two that were especially strong on technical issues, and two that were exceptional on practical planning issues.

On technical issues, two very informative books were Publish Yourself on CD-ROM by Fabrizio Caffarelli, and CD-ROM: Facilitating Electronic Publishing by Linda Helgerson. These books were particularly useful in providing a brief history of CD-ROM publishing, the pros and cons of the CD format, the physical process of creating a CD, and in enumerating the CD family (i.e. Red Book, Yellow Book, Green Book, White Book, and Orange Book formats). Caffarelli's book is the better general reference, while Helgerson's book provides a good marketing perspective. These books were most useful to me in providing background information on CD-ROM publishing. While the information was not necessarily directly applicable to the Esprit production process, it was helpful to feel that, as a CD-ROM Producer, I was fairly knowledgeable about CD-ROM production!
The information gleaned in reference to practical issues involved in developing a CD-ROM multimedia project proved to be very useful. The two most useful books I encountered in this area were the Apple CD-ROM Handbook by Apple Computer, and Multimedia Powertools by Peter Jerram and Michael Gosney. Both books provide good insight into the development process, but they differ in their overall content. The Apple handbook is an excellent general reference for CD specific information, like specifications and types of packaging. For example, in determining the limitations of space on a CD-ROM, the handbook provides figures that break down the limits according to each type of media. In 24-bit color, 45 images at 640x480 pixels fill one tenth of a CD. At 8-bit resolution, 22kHz sampling rate, 30 minutes of sound equals 15 percent of the disc. These are useful figures when your content might push the storage capacity limits of your medium (Esprit ended up filling 644.3MB out of 648MB, or 99.4%, of available space on the CD). Multimedia Powertools is an excellent reference for multimedia development, covering everything from specific software and hardware tools, to case studies, to general development issues. This book also includes a CD-ROM, which contains many sample projects (from the case studies), as well as clip art and sounds for public usage (a couple of these sounds made it into Esprit).

Both of these books guided me in the right direction in terms of developing a plan for establishing the team and for laying the foundation for the production. The Apple handbook outlined the roles that make up a typical project team. These roles, according to this book, include project management, production, content, design and performance, and programming. The project management should manage the team, develop the schedule, mind the budget, guide the work, and have final approval at each stage. Production includes data conversion, data organization, packaging, and coordination of services. Roles of management and production may be blurred. Content includes content expertise in subject matter and market, writing and editing, research, legal assistance and testing knowledge. Design and performance includes graphics, human interface design, audio and video production, and talent (i.e. narrators, actors, musicians, etc.). Programming includes individuals who specialize in particular tools used to specify or write code (i.e. multimedia scripting in the authoring tool being used). The Apple CD-ROM Handbook also got me thinking along the lines of our objective. The book poses questions to focus objective
like: What do you have? Who wants it? How will it work? How much value can you add to it by placing it in a CD format?

*Multimedia Powertools* provided more detail in explaining the function of various roles and production steps. This book makes it clear that some initial planning is required before selecting a production team. The first steps in the process involve creating an overview of the project, which profiles the message of your project, your audience, and your overall objective (Professional productions would also consider budget at this stage, but for Esprit budget was a secondary consideration because our resources were basically fixed. The real question was whether it would get published in the end, and for that we would be relying on donations.). Once the overview is established, a team can be selected based on the needs of the project. A typical team consists of a project manager, a programmer, an artist, a writer, and video and sound specialists. For smaller projects, individuals may perform more than one function. We referred to this as wearing many hats. For larger projects, several people may work in each area. There is a balance to be found here. Too small a team, and the work will not get done in anything less than a frenzied manner. Too large a team, and the tasks of supervising, directing, and coordinating become beasts. I think this aspect of a project can undergo flux. At certain times, the Esprit team felt too big, and at other times it felt too small. I guess it was just right.

**The Winter Quarter- Picture/Page Class**

The Picture Page research class in the Winter quarter was a lecture/research class. In the lecture portion of the class, Professor Doug Rea identified the various issues that face contemporary print and electronic publications. For print publications, issues identified include the production environment, tools (high-end vs. desktop), personnel, input/output devices, transforms (RGB-->CMYK), screening technologies (AM/FM), proofing devices, printing methods, and client expectations. For electronic publications, issues identified include advertising,
text/fine detail problems, mobility, speed, access, infrastructure (i.e. familiarity), and cost.

In the research portion of the Picture Page class, the class split into two groups to do separate research for print and electronic publication. Our primary research tasks for the electronic side of the publication were to determine which authoring software would be used, and to do some prototyping of projected sections of content.

Initially, we considered all authoring environments, comparing their respective strengths and weaknesses. We discussed HyperCard, SuperCard, Director, Apple's new Apple Media Tool, and Kodak's new Create-It and Arrange-It. After an unrestricted discussion of all of the authoring tools, we came back to reality and started working with the only software package that had been donated to the project to this point. The four of us who were working on the CD side quickly learned Kodak's easy to use Create-It software. I developed a prototype of the projected History of Esprit section using Create-It. This software has a nice development environment that is based on the screen and map metaphor. Unfortunately, the other side of the application, the runtime environment, is totally thin on features. This program is essentially presentation software. It is limited to screen to screen linear navigation, and the only event that can be responded to is a mouse click. Moving into the last several weeks of the quarter, I started to seriously worry that the project might be constrained if we were forced to use this software. Derek Torrey, the Editor-in-Chief of the entire publication, had started working with new authoring software called Apple Media Tool(AMT). AMT offers QuickTime capability, media resource management, handy mapping tools, and, most importantly, dynamic linking and commands. For example, screens can be labeled and subsequently referenced as links by their label. This provides simple and powerful linking. In terms of commands, actions can take place in response to the full range of mouse events (including enter/leave, up/down, drag). Events can occur in response to actions involving any object on a screen at any time the screen is showing. A limitation here is that only the active screen and its respective objects can be affected at one time. There is no dynamic interaction between screens. I believed that Media Tool would be a better choice for us than the more popular Macromedia Director for a couple of reasons. Most importantly, a simple, easy-
to-use development environment would prove crucial for us. With three or four people needing to be involved with authoring, and with the need to make changes often (moving media, replacing media, etc.), ease of use would be critical.

Ultimately, we chose to use Apple Media Tool. In retrospect, I think this was a good decision, if a risky one. Version 1.0 of Media Tool was released in January 1994. The first rev of the program was funky if not buggy. It had the unknown factor of something new, but then again, so did Esprit.

At the end of the Winter quarter, I wrote the following document for the Picture Page research class:

**CD and Print: New Production Issues**

**Question:** What are the management and production issues that face a work group when they decide to produce a magazine and a CD as a tandem piece?

The creation of a magazine along with a related cd piece raise new issues for production and management. In terms of production, if the print piece and cd share any of the same material, then attention should be paid to consistently reproducing that material on both sides. When the two pieces refer back and forth to one another, leading the viewer from one to the other and back again, that segue should be smooth and seamless. It should make sense, for example, to leave the magazine to see additional information on the disc, and an easy transition back to the magazine should also be provided.

The separate pieces should do what their respective media do well, and not try to do more. For example, the printed piece should take advantage of the lushness of the printed page with full page images, as well as it's superiority for providing written pieces. The CD should be more exploratory in nature, offering a wide array of information, available for the finding. Both pieces should engage the viewer, but that may occur in different places and in different ways depending on which piece the viewer is utilizing.

The new production issues raised with the dual publication format create related new issues for the management team. Focus should be kept on aligning
both pieces with a common sensibility, both stylistically and thematically. A continual effort should be made to drive the publication toward a unified vision, ensuring that both the print piece and the CD fulfill that vision and at the same time complement one another. With these issues in mind, it becomes apparent that production teams should exist independently yet jointly at the same time. To fulfill these needs, there should be two distinct production groups, with several key management positions that form a bridge between the two sides. For instance, in terms of editorial management, there ought to exist one editor-in-chief and two managing editors (one for print, one for CD). The managing editors ensure the smooth progress of their respective sides, while the editor-in-chief continually pulls the two sides together in an effort to maintain the all-important coherence. A similar triangular arrangement ought to exist between a single art director and designers for both sides.
III. Procedure

The Winter Quarter- Final Preparation

Moving toward the end of the Winter quarter, planning was coming to an end and we were getting ready to engage in the production process. Before production could get into full swing in the Spring quarter, there were a few key tasks left to accomplish. First, I had to come up with a preliminary schedule.

I drafted up the first preliminary schedule at the beginning of the New Year. It looked like this:

CD-ESPRIT Preliminary Schedule

JANUARY

- finalize software plans
- develop stories/features
- test Create-It portfolios
1/10  CALL FOR IMAGES
1/21  COMPLETE INITIAL PORTFOLIO PROJECTS
- test and evaluate burned portfolio discs
- define key technical issues, apply research
- evaluate new software (Apple Media Tool)
1/25  INITIAL FLOWCHART/OUTLINE
  - flowchart provides structure of overall proj.,
    and navigation options
  - outline provides proposed content elements,
    interactivity, technical & aesthetic requirements
1/31  DEFINE/RECRUIT CD PRODUCTION TEAM
DEVELOP PROTOTYPE

FEBRUARY

2/11  DEFINE CD/PAPER RELATIONSHIP
2/18  CLASSES END-FINAL CALL FOR CONTENT, ALL IMAGES DUE
  - finalize stories/features, collect content, add to prototype

MARCH

3/7  CLASSES BEGIN
3/14 PROTOTYPE BUILT
-prototype provides final decisions on overall screen
design, required # and types of still images,
required types and lengths of audio and video
clips, color depth, animation, interactivity options

3/14 STORYBOARD COMPLETED
-this final preliminary design stage provides a screen
by screen sketch (paper/software) of all the
elements in the project including scripts of
narration and sound, images and graphics and
linking options

3/14 COLLECT ALL CONTENT
-assemble content and interface

APRIL

4/7 COMPLETE PROJECT-FINALIZE CONTENT AND INTERFACE
(LEAVES 3 WEEKS TO TEST AND EVALUATE AND MAKE ANY FINAL
FINAL CHANGES)
-burn test discs
-test and evaluate project, include outside test sites
-make changes
-test and evaluate, last minute changes

MAY

5/1 BURN DISCS!
5/13 CLASSES END
-stuff envelopes and ship

At the same time I was drafting up a preliminary schedule, I needed to flesh out
the overview for CD-Esprit. The overview got started with the outlines of concept
and content, but now it was time to write out the objective in the form of title, idea
(message), goals, and audience.

Title: CD-Esprit '94
Idea (message): Provide the user with a rich environment of
information and imagery in the form of still images, feature
stories, and tutorial pieces- a visual arts publication.
Goals: to inform, to evoke feeling and thought, to entertain
Audience: digital imaging professionals, photographers,
visual artists, general audience
The next step was to create a flowchart that would define the organization and flow of content. The flowchart was the backbone of the project, and it eventually grew to provide the structure for the entire publication (CD and print). The final flowchart was included on the final disc as a separate Quark Xpress file, so that the user could print it out and have a hard copy map of the disc. See Appendix B for a copy of the final flowchart.

Now the stage was set for the critical task of choosing the team. For the print side of the production, the roles were clearly defined by past years. The particular people to fill the print team roles were also readily apparent. Most of them had taken the Picture Page research class. The CD production, on the other hand, was up in the air. At this point, Derek had been established as the Editor-in-Chief to oversee the entire publication. I was established as the Production Manager for the CD. Beyond that, it was basically up to me to define the roles for the CD production. Doug held an informational meeting for Esprit to attract students to the project. By the time this meeting transpired, however, there was already a significant buzz surrounding Esprit resulting from word of mouth. One could feel the energy surrounding Esprit start to build to exciting levels.

In the days following the Esprit informational meeting, Doug, Derek, and I started interviewing people to fill specific roles. We agreed that we ought to fill the following positions for the CD production: art director (for the entire publication), screen designers (2), graphics technicians (2), writers (3-for the entire publication), video specialist, sound specialist, photographer (for the entire publication). These are the positions that we filled, which we saw as a good balance between large and small. Most of the positions were filled readily, and we were excited with the prospects. The only gaps appeared to be in art director, and video/sound specialists. We were most concerned about the art director, because years past showed that the art director can make or break the entire publication. Fortunately, Keith Watson stepped up from his role as screen designer with a determination to take on the role of art director. This was surely a defining moment. In the area of video and sound production, Professor Tom Zigon offered to get involved. As a professor not actually taking the Esprit Production class, Tom's involvement was uncertain. In the area of sound production, we recruited a student named John Mitchel, who also could not
commit to the Esprit Production class. Ultimately, a student named Michael O'Boyle took the helm of the video production, and he completed the overwhelming majority of videography and desktop editing. (See Appendix C for the Esprit '94 Production Team chart).

Amidst all of this work, we started having editorial meetings to focus the publication. The editors (Derek, Kristl, and I) discussed the nature of the project as well as the potential relationship between print and electronic media. We offered the following collective vision to the team:

**Esprit '94 - medium under mind**

*Esprit: liveliness of mind and expression; spirit; vigor*
*Esprit de corps: a common spirit of devotion and enthusiasm among the members of a group*

Derek Scott Torrey
Editor-in-Chief, Esprit '94

**Focus**

If I had one word to describe my aspirations for Esprit '94, 'focused' would be the one. It is a word used by my father to describe some people and their drive to succeed, and in this respect I feel that we as a production team need to be focused on our specific tasks as well as the overall production of our publication. There will be no room for half-way efforts in our production, only for open channels of communication and organized hard work which will give us the results we all desire from our publication.

When I use the word focused I am not only describing the necessary attitude of the production team, I am also referring to the publication itself. Our publication is going to be one of the few of its kind, and as we are attempting something that has not been achieved with great success to date, it is of utmost importance that our efforts are elegant while innovative. The concept and ensuing design should be experimental yet tight, with everything done for a purpose.

Procedure
Kristl Honda
Print Production Editor, Esprit ‘94

Communication

Effective communication results in heightened awareness, increased understanding, or satisfied curiosity.

As human beings, we find comfort in the tangible essence of a print reproduction as the medium through which we desire to communicate. The experience is real; we can feel the physical texture of the substrate, smell the chemical properties of the inks, and view the imagery and aesthetics of design. The experience results in a visual and intellectual sensation (stimulating both sides of the brain)!

The mission of the Esprit ‘94 print reproduction is to deliver a “coffee-table proud” publication vs. a product that becomes “shelf material.” We will achieve optimum quality of still imagery by maintaining color integrity throughout the desktop color reproduction process. The integration of still imagery, graphics and text will be aesthetically appealing, resulting as a smashing “stand-alone” publication design; it will also provoke the curiosity or energy to seek more information as a complementary or connected entity with CD-Esprit. The articles will express original thinking on applications of technology and present our perspective on current issues impacting the publishing community.

Mark Liflander
CD Production Editor, Esprit ‘94

synergy

Esprit has progressed over the past seven years from a newsprint publication to a full-color professional quality magazine. Esprit has always strived to push the bounds of imaging. In keeping with their forward thinking philosophy, Esprit is ready to engage the new era of electronic publishing. The goals for Esprit ‘94 are clear: to utilize new technologies as a forum to display a broad range of student and alumni work, to chronicle Esprit’s voyage, and to chart the future of digital imaging.

Procedure
These are the same goals that Esprit has always had; however, this year represents a giant leap forward for the publication in terms of scope. With the addition of an electronic version, Esprit more than doubles in scope. We intend to create a synergy between the printed magazine and the CD. Namely, a cooperative interaction between two forces whose combined effect is greater than the sum of their individual impacts. A successful Esprit '94 will be a rich source of informative and evocative imagery, sound and text, intriguingly intertwined between a magazine and a computer screen.

focus + communication + synergy = a heightened, satisfying experience

If the collective vision of the Esprit '94 editors comes together through the hard work and cooperative efforts of the entire Esprit Production Team, then we will produce a fascinating, energetic, progressive dual publication that pushes the fringe of our current conventions of communication. Our ultimate goal is for the reader/user of Esprit '94 to come away from the experience feeling satisfied and heightened, like riding a roller coaster through an art museum!

The final task to be accomplished before the production rolled into high gear in the Spring Quarter was to solicit artwork for the magazine. This was obviously a big deal because the artwork selected would set the tone of the publication. We wanted to broaden the scope of the artwork displayed in the magazine. In the past, the artwork was almost exclusively digital photography. We were interested in any and all kinds of photography, as well as any other type of artwork that was created at RIT. Why limit it to photography? Within one college (CIAS) we have students working in film, painting, design, wood, sculpture, computers, glass, jewelry, metal, textiles, fabrics, etc. Our main efforts to solicit work focused on the imaging arts, but I thought why not feature all of these types of work. I made a concerted effort to solicit work from students, including posting hundreds of flyers, and speaking to as many classes as possible. At the peak, I got up in front of the entire sophomore class of photography students (approximately 200 people). Ultimately, we were happy with the response. We had a tremendously high quality lot of images to choose from, and fortunately, we could showcase many of them on the CD. (See Appendix D for one of the Call For Work flyers).
We had a big team meeting in RIT’s Fireside Lounge in the Student Alumni Union just before Spring Break. This was sort of the ice breaker meeting. We wanted everyone to get acquainted, we wanted to bring everyone up to speed on the progress to date, and we wanted to set a tone of high enthusiasm and high expectations for the Spring Quarter. The meeting was a success. Esprit Production ended the Winter quarter well prepared to tackle the massive production that lie on the other side of Spring Break.

It should be noted that one thing the editorial staff tried to stress as highly as possible was the idea of effective teamwork through a common goal and open communication. One of the most valuable aspects of the Esprit learning experience was the group process. The common channel that we used to communicate most frequently was e-mail. Everyone had an RIT Vax account, and most of us became savvy e-mail users, setting up distribution lists for various subgroups within Esprit. A distribution list allows the user to put any number of e-mail addresses under one address. So when I send to CDteam for example, a copy of my mail message goes out to everyone in my distribution list for CDteam. I had a list for the entire team, one for editors, and one for CD staff. An archive of my RIT Vax mail from January to November 1994 is included with this paper on a floppy disc. The majority of official Esprit communication went through this medium. One could get a good sense of the day to day operations by browsing this document.

The Spring Quarter- The Heart of the Matter

The structure of the production was based on the Spring Quarter class entitled Esprit Production, taught by Professor Rea. The class met once a week, Tuesday from 8am-12pm. We would usually meet in a classroom for the first hour as a whole group. For the first few weeks, Doug lectured during this hour on general issues relating to the production of a publication. As in Picture Page class, he kept us focused on the important issues. Todd Salerno brought a home-baked loaf of bread each week of the quarter. His gesture was appreciated by everyone. Though this may seem like an insignificant occurrence, it was symbolic of, and contributed to, the team spirit. After the first
few weeks, Doug would take the first hour on Tuesday morning to help focus the hands-on production. We would break into several huddles, each group tackling their respective tasks. The remainder of the day on Tuesday was always intense. In fact, Tuesday mornings and the night shift before prototype deadlines were the two times when Esprit production was full tilt boogie, absolutely 100% adrenaline fueled, concentrated chaos. Some time around 1pm on Tuesdays someone would say, "Hey, it's lunch time. Let's take a break and get something to eat." The survivors would come up for air, gain their bearings, and collectively chime, "Yes. Food good." A lot of work happened outside the studios throughout the week, but Tuesday was the day to regroup and refocus.

Meetings quickly became important functions. Consistently throughout the quarter, we had editorial staff meetings once a week. We settled into the routine of editorial breakfast meetings before class began on Tuesday. These meetings were attended by Derek, Kristl, Keith, Doug, and me. We generally held one other meeting toward the end of the week. For the first few weeks, this was a CD Team meeting (the Print Team had their meeting). After the first few weeks, this end of week function splintered into smaller, more specific work oriented meetings. In other words, the screen designers and graphics technicians might have held a meeting, while a video production team held a separate CD production meeting. As the CD Production Editor, it was my job to lasso and organize the blossoming number of details on the project.

The weekly structure that we set up was a big help in providing an orderly flow for the production. We would start the week with a broad picture and a plan of attack. Toward the end of the week, we would have our CD and Print meetings, and take stock of our activities. Some time Sunday or Monday, Kristl and I would summarize the week's work for our respective production teams, and forward the information to Derek. Derek would capsulize the information into a single progress report, and e-mail it out to the entire team early Monday. Tuesday morning the editors would have their pre-class breakfast meeting, and go over the coming week's tasks. In class, everyone was up to speed after reading the week's summary and forecast, and we were ready to go around again!
**At the start of the quarter,** the editors came up with the following revised production schedule:

### ESPRIT ’94 "medium undermind"

**Production schedule**

<table>
<thead>
<tr>
<th>Week</th>
<th>3/7-3/13</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Print production team (PPT)/CD production team (EPT)</strong></td>
<td>Begin work on the following:</td>
</tr>
<tr>
<td><strong>A.</strong></td>
<td>page/screen design: i.e. &quot;common elements&quot; and foundation for the &quot;grid&quot;, font choices, etc.</td>
</tr>
<tr>
<td><strong>B.</strong></td>
<td>start storyboarding ideas</td>
</tr>
<tr>
<td><strong>PPT - prepress group</strong></td>
<td>continue testing CMYK transforms and software, also schedule a meeting w/ Kris Greenizen in T &amp; E (6878), begin monitoring calibration Paper Selection?</td>
</tr>
<tr>
<td><strong>EPT - software familiarization, and addressing of the &quot;how to do text&quot; question</strong></td>
<td>begin working on asset management strategy (file naming procedure, formats, storage, and progressive archiving) graphics tech. become familiar w/necessary software for image processing, begin work on prototype CD</td>
</tr>
<tr>
<td><strong>Writers</strong></td>
<td>meet w/editors and continue work on articles, contact appropriate people to set up &quot;media appropriation&quot; when necessary (sound files, video, still images)</td>
</tr>
</tbody>
</table>

**By Weeks End:**

Writers assignments given - return drafts Week 2 3/14-3/20

Entire Production Staff: Initial selection and judging of submitted work -> Tues. Afternoon

Design staff: show preliminary page/screen design - begin separate storyboards and work on production - specific mediums

PPT - continue transform tests, finish monitor calibration w...
EPT - finish prototype, begin storyboard, share asset mgmt. strategy w/PPT GT’s begin calibrating monitor(s) for on screen reproduction, begin scanning

Writers - continue work, submit drafts: rough word count, and begin media appropriation (contact editors w/lists of needed material)

By weeks end:
Final Selections made regarding submitted work,
EPT: Asset Mngt. Strategy and prototype disk , PPT: Monitor calibration from pre-press group , Design staff: page and screen design elements or grid/screen design elements

Week 3  3/21 - 3/27

PPT - page design/production: finish storyboard and rough drafts of page layout, and font selection, pre-press: begin work scanning media (coordinate w/ EPT to provide Low res for screen & scanner familiarization), decision made regarding CMYK transform software,

EPT - finish storyboard, begin work on final map/screen interface,

Coordinate w/sound and video personnel for media appropriation, GT’s coordinate w/ pre-press group to facilitate rapid appropriation of necessary visual media, begin supplying low res files for screen designers

Writers - submit 2nd drafts of articles, and begin contacting and working w/contributing artists to acquire narratives, interviews, comments, etc.

By Weeks End:
PPT/EPT Design staff: finish storyboards, Pre-press: decision on transform software, Writers: 2nd drafts and rough word count

Week 4  3/28 - 4/3

PPT - page design/prod.: final page layouts and begin building pages, pre-press: continue scanning and begin color separations and adjustments, begin monitor to press calibration

EPT - continue screen/map interface and design, GT’s continue image conversion and processing for on-screen reproduction

Writers - Final articles submitted, continue work w/staff on media approp.

By Weeks End:
Writers- Final articles submitted, shift focus to ESPRIT on-line

Week 5  
4/4 - 4/10

PPT - page design/prod. continue building pages, pre-press: continue color separations/corrections/etc. float proofs of appropriate images, work w/staff to facilitate the "contributing artists approval" on monitor in Studio 18

EPT - continue building project, begin outside and internal testing of final interface, burn "dummy" disk - and test

Writers - final revisions and copy editing, get on-line!, help anyone who needs it!

By Weeks End:  
Pre-press: float proofs of images, Artists approval?, EPT: dummy disk to to show progress and interface

Week 6  
4/11 - 4/17  "EEEk, time grows short"

PPT - page design/prod. finish building pages, and hand off to prepress group to begin final films - produce initial page proofs

EPT - continue building project, while performing necessary revisions i.e. - post dummy-disk testing, finalize content decisions

By Weeks End:  
PPT: pages handed off to be proofed

Week 7  
4/18 - 4/24

PPT - final revisions and corrections, finish proofing final films and give to Kris G. downstairs (T & E) by the Friday the 22nd

EPT - finish project and begin massive interface testing, burn test disc

By Weeks End:  
PPT: final films given to Kris G. (T & E), EPT: project finished, test disc burned

Week 8  
4/25 - 5/1

PPT - reflections, and god help us ........ any final, final, final corrections.

EPT - feedback, revisions, and write FINAL disk, and test
Week 9  5/2 - 5/8
PPT - Press date, Friday May 6
EPT - test disk,

Week 10 5/9 - 5/15

last day of classes is the Friday 13, post - production meeting to
discuss/reflect upon our production process.

TBA - Stuffing/mailing party!!!!
  Distribution by Graduation, May 21st.

The following are the minutes from a couple of CD Team meetings, and the
Weekly Review/Forecast messages that were sent out electronically. These
documents give a good sense of the dynamics of the production. By reading
through them, one can get a feel for the numerous tasks involved, the people
needed to accomplish those tasks, and the approach we took to the work.

CD Team Meeting
3/12/94
10 AM

Minutes:

1. Scheduling
   • this week’s tasks (prototype, software/hardware/studio orientation)
     - will go over software for both SDs and GTs on Tues. including
       Debablizer, AMT, Specular Collage
     - develop AMT proto w/Bill
     - get studio 100% up and running
   • each week’s tasks (via e-mail from me to you)
   • reporting progress (via e-mail from you to me)
     - Derek, I will forward this stuff to you each week

2. Asset Management
   • filenaming (dos legal, logical system)
     - developed conventions for all filenames to be used in final AMT
       project, Todd will come up with names for other work files using
       same conventions, final conventions will be posted
   • file saving (labeling, location, etc.)
-touched on ideas of using system labels for file status, and a folder system for organization
-backups every week on CD (Derek, this can be done at AGT, right??)

3. Other things covered
   • text formatting
     - discussed the issues, came up w/several potential solutions, including EPS files exported from Quark to Illustrator to PhotoSp, or GhostScript
     - Bill, Ged, and Dave are currently testing these
   • system management
     - Todd and Jamie will assume roles of computer systems management in studio 18

EPT
Week 2 Review,
Week 3 Forecast

Week 2 Review

Design-
Bill & Ged: Prototype shell finished. Icons, buttons, other screen elements developed. 6 buttons on bottom of screen for navigation: prev scr, next scr, prev menu, main menu, help, & quit. Icons up right hand column for hyperlinks: e.g., internet related, tutorial link. Progress bar across top to indicate depth in section, includes a hidden message that slowly materializes with progress.

Content-
Writing- Dave: Outlined New Media Story, organized story into hyperweb consisting of 6 areas.
Margaret: Shot Sounds of Harvey Stein. Passed video tape to Mike O'Boyle for digitizing & editing. Writing intro to this piece.
2. Developing New Photography Tools story w/Derek.
Paula: Outlined & rewrote Creative Process story.

Video Production- Mike: shot Ambrosia software Wednesday. Mark, B, and Todd assisted. 2. shot Brandon Stone for Extended Port. on Thurs. Mark and B assisted.
   *Note: video shoots done with VHS camcorder, no Hi-8 available.
Checking w/Tom Z. for Hi-8.

Miscellaneous-
Studio #18 prepared for arrival of equipment. Boxes and lights moved down to B-series studios, 3rd floor. This space should be available for come&go throughout quarter. Phone to studio #18 spec-ed out. Need 100ft. of phone cord. Mark will acquire. Modem and Mac available for e-mail -may conflict with phone usage, which is already shared by 2 studios.
Week 3 Forecast

Meeting in #18 on Wednesday of entire cd team to feel out studio and bring all up to speed and set weeks tasks. Tentatively AM.

Design- Bill & Ged: use prototype to rough out storyboard. Get it up on the walls. Develop interface, continue design work on screen elements. Get up to speed on all software. 2. Coordinate w/GTs and w/Mike to set up standards for still images and video clips.

Content-
Image Acquisition- Todd and Jamie: contact artists, acquire originals & source material including statement. Look into scanning images. Coordinate w/pre-press. By weeks end, start to ready files on machine in #18 for Designers. Coordinate w/Designers. Get up to speed on all software.

Video Acquisition- Mike: New shoot w/Ambrosia to get Andrew Welch (maybe I should make a racquetball date w/this guy!). 2. DIGITIZE AND EDIT!!! Coordinate w/Designers.

Sound Acquisition- GTs and writers: begin to schedule Sound Recording sessions w/artists. Mark: Talk to Tom re: recording techniques.

Writers-Dave, Margaret, Paula: finish stories in progress. 2. Inquire about new tasks, i.e. artist interviews for source material.

Weeks end: Design-finish rough storyboard.
GTs-heavily into process of contacting artists and scanning
Writers-finish stories, assist in media acquisition

EPT
Week 3 Review,
Week 4 Forecast

Week 3 Review

Design-
Bill & Ged: Prototype ‘Sounds of the Photographer’ finished. Icons, buttons, progress indicator, other screen elements developed. 3 buttons on bottom of screen for navigation: main menu, help, & quit. Icons up right hand column for hyperlinks: e.g., internet related, tutorial link, next screen(also tells media type, i.e. QT, through icon usage). Progress bar across top to indicate depth in section, includes a hidden message that slowly materializes with progress.
Prototype makes use of video grabs for basis of backgrounds. This could be carried over to print.

Content-
Writing- Dave: New Media Story organized into hyperweb consisting of 6 areas, approx. 1/2 stories written, others will be short. Finished w/word count by end of week.
Margaret: Wrote intro to Harvey Stein. 2. Finishing ‘Evolution of the Photog’ w/Derek.
Paula: Creative Process piece is 6-section poem, about 18-24 lines (poetic and Zen-y). Possibly dispersed throughout gallery pages to provide sense of flow. 2. Completing ‘Sounds of the Photog’ intro for CD&Print. Word count by week’s end.

Video Production- Mike: Shot ‘Sounds’ w/B doing the mountain bike thing on Sat. B has good existing footage too. Mark assisted. 2. Acquired ‘Teleconference 2000’ for CD History section from Derek.
*Note: Played w/Tom’s Hi-8, but battery problems prompted us to switch over to VHS.

Miscellaneous-
Studio #18 - Computer set up w/16” monitor. Q840av, 230HD, 24MB RAM.
Still need: more HD space (1GB please), Syquest drive, 2nd monitor, Super Mac Digital Film Board. Couch and rug brought in.

Week 4 Forecast
Meeting of CD group Tues. 9:15am to regroup and set weeks’ tasks.
Meet w/Doug as group at 9:45.

Design-
Keith: B&W copies of all artwork up on walls in #18.
Bill & Ged: use prototype to rough out storyboard. Get it up on the walls. Develop interface, continue design work on screen elements. Get up to speed on all software. 2. Coordinate w/GTs and w/Mike to set up standards for still images and video clips, and ACQUIRE imagery from them (i.e., have it left on #18).

Content-
Image Acquisition- Todd and Jamie: contact artists, acquire originals & source material including statement. Scan images. Coordinate w/pre-press. By weeks end, ready files on machine #18 for Designers. Coordinate w/Designers. Get up to speed on all software.

Video Acquisition- Mike: New shoot w/Ambrosia to get Andrew Welch. 2. Shoot ‘History of ESPRIT’ w/ Doug.
Sound Acquisition- GTs and writers: begin to schedule Sound Recording sessions w/artists. Get assistance from John Mitchell (sound producer-check team list), Tom Zigon, and Mark L. Bring studio up to sound specs (i.e., dampening techniques).

Writers-Dave-finish ‘new media’ writing. Create interactivity and navigation for this story.
Margaret - Possibly conduct phone interview w/Harvey? Finish ‘Evolution’ w/word count. Talk to Dave re: ‘This Text is Hyperactive’. Can this fit into Dave’s section anywhere? It needs to be edited or tailored for our purposes.
Paula - finalize ‘Process’ piece w/Mark. Word count. Imagery? How to display this piece? 2. Finish ‘Sounds’ intro for print and CD.

Weeks end: Design-finish rough storyboard. Crank on backgrounds and completing design elements. Begin to place newly acquired imagery and video.

Mark: meet w/Kristl Monday night to finalize Print/CD placement of stories. Ready for handout on Tues. AM.
Derek, Kristl, Mark: finalize Manifesto by next Tues.

CD Team Meeting
Sat. 4/9
Studio 18
11 AM

Agenda:

*1. Content Integration & Assembly
   a. Work together toward completion
      -communicate outside the vacuum
      -initiative: SIPDEE
      -desire: you gotta want it
   b. Storyboard NOW!
      -section by section
      -this is the kind of communication we need

2. System management
   a. Todd’s plan
   b. Shoebox or not Shoebox?
   c. Security-be on the alert
d. Calibration of monitor- Monday, machine stays on

e. Neatness of studio- computer and room

f. Check-in - sign book, be careful

3. Beta Disk by 4/19 (Tues. of week 7)

a. Set your sights
   -gives us a tangible goal
   -gives Derek something to bring to conference

b. 2 weeks to finalize

EPT
Week 4 Review,
Week 5 Forecast

Week 4 review

Design-
   Keith: B&W copies of artwork & layouts up on walls in #18.
   Bill & Ged: Developed interface, continued design work on screen elements.

Content-
   Content Acquisition- Todd, Jamie, Paula, Margaret, Matthew (the agents):
   contacted artists, acquired originals & source material including statement.

   Video Acquisition- Mike: logged tapes/edited.

Writers-Dave-finished main ‘new media’ writing.
Margaret - worked on ‘evolution’.
Paula - worked on ‘Process’ piece w/Mark.

Week 5 forecast

Design-
   Keith:B&W copies of all artwork up on walls in #18. finalize design decisions
   for designers.
   Bill & Ged: start to work in studio 18. assemble content that is placed on #18
   this week. communicate w/GTs & Mike regarding capture of sound and video
   (i.e. How will it be integrated into design?). storyboard up on walls.

Content-
Writing- Dave: finish new media section text including short snippets. work w/designers to develop navigation and multimedia for section.
Margaret: 1. finish ‘evolution’ piece. place on #18. 2. record phone interview w/ Harvey Stein on Wednesday 9:30am. 3. collect all content from your artists including originals, sources, and sound.
Paula: 1. work w/designers to lay out ‘creative process’ piece. 2. collect all content from your artists including originals, sources, and sound.

All ‘agents’: will acquire all content other than ‘extended cd portfolio’ section. this includes originals, sources, and narration recording.

Video Production- Mike: 1. log all tapes to date. 2. communicate w/designers to plan placement of video in final CD. 3. start placing final clips on #18.
B.: 1. shoot Ambrosia w/ Mark. 2. shoot Rachel for ‘Sounds’ story. 3. get interviewed by Mark for ‘Sounds’.

Sound Production- John Mitchell: 1. meet w/ agents to familiarize them w/sound concepts. 2. work w/agents to help them acquire sound narratives from artists. 3. begin editing final sounds (w/ Mark?) and placing them on #18 for the designers.

Extended Portfolios- Derek and Mark: work w/artists to develop their extended portfolio pieces for cd. acquire source materials and plan video and sound production. talk w/ Bill and Ged during this process.

Miscellaneous-
Studio #18 - finalize way cool custom setup including rugs, couch, fridge, music (stereo anyone?), etc. bring in any extra rugs, curtains, burlap, canvas, foam, etc. for sound dampening. yes, this means you! everyone, if you have stuff like this, please bring it in.

Meetings:
Sound orientation: Monday 9am in #18 to go over sound system and recording process w/our sound technician John Mitchell.

By week’s end: have large majority of content placed onto machine #18 (anyone got a name for this bugger yet???) so designers can start rockin’ away at screen creation.

EPT
Week 5 Review,
Week 6 Forecast

Week 5 review
Design-
Bill & Ged: title screens developed.
Content-
Writing- Dave: hacked away at new media section.
   Margaret: finished ‘evolution’ article
   Paula: finished creative process article.

All ‘agents’: acquired content other than ‘extended cd portfolio’ section. this includes originals, sources, and narration recording.

Video Production- Mike: logged and edited till the sun came up.
B.: shot Ambrosia w/Mark. still photos for cover, icons.

Sound Production- John Mitchell: set up sound production.

Extended Portfolios- Derek-->started working w/Kwaku
   Bill-->worked w/Susan
   Ged-->worked w/Tim K.

Miscellaneous-
Studio #18 - the importance of maintaining an organized and efficient system management scheme became all too obvious. Saturday’s meeting did a good job of clarifying System Management.

Week 6 forecast-individuals’ tasks breakdown

AGENTS: GET ALL ASSETS ON #18(*) BY FRIDAY
(*)I'm offering a free lunch to anyone who comes up with a name for our computer (better late than never)

Mark:
- extended portfolio w/Margaret (work w/Paula?)
- SIPs : on-line questions to editors of zines & such
- new media section: work w/Dave & Bill to create interface, write fiction
- History interview w/Doug (can Doug write abstract for print?)
- Multidisciplinary experience (print article by editors)
- Sounds abstract for print

Bill:
- base grids for Todd & Jami by Tues.
- work toward prototype 4/19
- Susan U.'s extended portfolio -deadline?
- Photoshop insights - deadline?
- Typography insights - deadline?
- New Media w/Dave and Mark

Ged:
- base grids for Todd & Jami by Tues.
- work toward prototype 4/19
- Tim Krablin’s extended portfolio - deadline?  
- Media Tool screen design/navigation insights?

Jami:  
- agent work by Friday  
- scan artwork  
- set up system to return artwork (flyer-pick up work in ESP lab?)  
- build short portfolio  
- system management assistance to Todd  
- esprit prod. process piece: assist Todd?

Todd:  
- agent work by Friday  
- scan artwork  
- esprit production process piece (outline by Tues)  
- esprit today and tomorrow piece (because this may work hand in hand w/production piece)  
- system management (backups, post important messages)  
- build short portfolio w/Jami  
- Sounds piece w/Willie?

John Mitchel:  
- edit sound (contact Mark-we can do this in 2 or 3 sessions probably)

Matthew:  
- agent work by Friday  
- set up return of work w/Jami  
- get involved w/any of several stories: History, Production, Today&Tom.

Paula:  
- agent work by Friday  
- Sounds abstract w/Mark by Fri.  
- extended portfolios: Kwaku & Margaret (coordinate w/Derek & Mark to pick up these two portfolios)

Margaret:  
- agent work by Friday  
- step in on any of a number of projects in the works

B:  
- still work: cover, icons, ...  
- Sounds section: shoot piece w/Rachel, edit Rachel and yourself

Meg:  
- Page Layout insights piece

Susan:  
- extended portfolio w/Bill
This list is amorphous: it can grow, change, mutate, etc. Please review your tasks and those of others’ and give me feedback as to how it sits with you. We should all discuss what needs to be done for specific tasks, and there is lots of room for your own interpretation to how to achieve your tasks. You need to set some deadlines for yourself, but consult editors, etc, to get a sense of what is reasonable.

As things get done, we need to keep each other informed. Please have a conversation with me (and others, too) regarding what you have to do, when it can be done, and how you want to do it. As you work on tasks, please give me progress updates. Call me or e-mail me, etc. The best would be to e-mail the entire group with progress updates.

If you have any concerns, complaints, rants, etc., please call me or pull me aside when you see me and discuss it with me. I’m very open minded, and I promise you I will respond positively to anything you have to say to me. I might appear to have a hard shell at times, but I come out very easily. Try me!

EPT
Week 7 Review/Forecast

Prototype efforts: We worked through the night Tuesday to hash out the next generation prototype. We did good work, and solidified many screens and much of the layout. Todd and Jami got a good start on the short port., creating the MT map and laying in images. We’ve distilled a chunk w/about 7 images for demo purposes. Bill created most of the title and main menu screens, and plugged them into a skeleton MT map. Ged cranked on the Sounds section, and created all backgrounds, mapped out Harvey. Harvey is close to a wrap. B is completing video editing for himself and Rachel. Dave did some GhostScripting and was generally a pillar of support.

Difficulty came in the wee hours. Hardware was kicking our butts, and the beast of managing the media reared its head and roared. We had trouble linking everything in one place in media tool. The file referencing seems to have gotten jumbled. This situation raised the key issue of managing media. We must systematize this process, and all work the same way in order to be able to most easily connect the dots later on.

To this end, we will have two meetings/week in addition to Tues class meeting. We will shoot for Thurs at 3 and Sat at 10am. These meetings will be necessary so that we can be in close contact as we share our final work.

Next prototype deadline: Monday, April 25. We will send the latest and greatest to Mike Spindler himself!!! The CEO of Apple must see our work!

A summary of tasks at hand:

Mark:
-new media section: work w/Dave & Bill to create interface, write fiction
-History interview w/Doug (can Doug write abstract for print?)

Procedure
DONE:- Multidisciplinary experience (print article by editors)
DONE:- Sounds abstract for print

Bill:
- next prototype 4/25
- Susan U.'s extended portfolio - deadline?
- Photoshop insights - deadline?
- Typography insights - deadline?
- New Media w/Dave and Mark
DONE:- base grids for Todd & Jami

Ged:
- work toward prototype 4/25
- Tim Krablin's extended portfolio - deadline?
- Media Tool screen design/navigation insights?
DONE:- base grids for Todd & Jami

Jami:
- build short portfolio
- system management assistance to Todd
- esprit prod. process piece: assist Todd?
- return artwork (flyer-pick up work in ESP lab?)

Todd:
- system management (backups, post important messages)
- build short portfolio w/Jami
- esprit production process piece (outline by Tues)
- esprit today and tomorrow piece (because this may work hand in hand w/production piece)

John Mitchel:
- edit sound (contact Mark-we can do this in 2 or 3 sessions probably)

Matthew:
- return of work w/Jami
- get involved w/any of several stories: History, Production, Today&Tom.

Paula:
- extended portfolios: Kwaku & Margaret (coordinate w/Derek & Mark to create these two portfolios)
DONE:- Sounds abstract w/Mark by Fri.

Margaret:
- agent work by Friday
- step in on any of a number of projects in the works

B:
- still work: keep on shootin'
- Sounds section: edit video: Rachel and yourself, help design these sections
Meg:
-Page Layout insights piece

Susan:
-extended portfolio w/Bill

A prominent issue in the early development of Esprit was the look of the printed page and the screen, and their interaction with one another. We tried to set a tone for page and screen design through preliminary meetings. Keith, the Art Director, was instrumental in bringing the designers together. There was certainly tension between designers, editors, and the Art Director, but I would consider it a healthy degree of tension. I was wary of the idea that Keith might be looking for too conservative a design aesthetic, but we worked through such friction to a point of common ground. Keith's patience was a blessing. Professor Doug Rea's mentoring helped set the tone for the publication. Doug advised, "Our goal is not to confirm, but to explore new areas in imaging."

Bill Colgrove took the lead in devising conventions for screen design and navigation, but its important to note that all such elements were discussed and decided upon through a group process. Navigation was kept simple, partly in response to the large scope of the project, and partly in keeping with the basic navigational features afforded by AMT. Three navigational buttons (return to main menu, return to previous menu, and quit) were placed in the lower left hand corner of the screen. These three buttons appear consistently in the same place on all active screens. A help button was foregone here because it ended up as a choice off the main menu. Icons were placed along the far right column of the screen to move to previous and next screens, and to initiate events like playing digital videos. Finally, a progress bar was placed along the top of the screen. In addition to being an attractive design element, the progress bar indicates the current screen's depth in a section. This is accomplished by increasing the density of pixel blocks in the progress bar as screens get deeper and deeper in a section.

The beauty of the screen design is that it reflects the work of several different individuals and the influence of an entire team. The style of the magazine took form
through the screen design, influenced by the work of many team members. We were after an experimental yet legible look. We were concerned with making the CD accessible on many levels, from straightforward communication to more exploratory interaction. While Bill Colgrove and Gedeon Maheux created the majority of the background designs, many screens and many elements on screens were the work of others. Todd Salerno and Jamie Gingerelli implemented the clean, simple look of the gallery. Todd, Michael O'Boyle, and I created many screens over the summer in our role of completing the project. Gedeon worked closely with Dave Seah to create the Dconstruct section. All in all, the large scope of the project forced us to enlist the creative energy of several individuals in creating visual elements. This situation was a boon to the project, because it ended up diversifying the look of the disc and keeping the extensive content fresh.

The Esprit Production Team had exclusive use of two studios on the fourth floor of the Gannett Building. Each studio had one workstation. Studio 23, the print studio, had a Centris 650 with a large hard drive, a Syquest drive, and a SuperMatch 21" PressView monitor. SuperMatch was one of a number of companies that either loaned or donated equipment for the project. I personally loaned the Print production a 16MB SIMM. They had only 8MB without my card, and that would have made the RGB-->CMYK transforms and certain Photoshop filters painfully slow. Studio 23 was set up to be a totally calibrated environment, included neutral gray painted walls, and very exacting lighting conditions. Studio 18 was more reflective of the novel, undefined style of multimedia. Print production is more of a known entity, but multimedia combines such a breadth of disciplines that it ends up being a patch-work. We had a Quadra 840AV with 24MB RAM, 230MB internal HD, a 700MB external HD, Syquest drive, dual monitors (16" & 14"), and the computer's 3 NuBus slots saw heavy traffic with various audio/visual boards. The studio looked almost like a dormitory lounge because we needed it to function as a sound studio among other things. So we brought in anything we could find to help dampen the acoustics of the small noisy room. We had a couch, a big burlap sheet of fabric forming a tent around the computer, photographers flats, a rug, a piece of foam here and a chair there....People would walk by and look in the studio with a quizzical gaze that said, "What the heck is going on in there? That doesn't look like a photography studio!". Tom Zigon and John Mitchel helped us arrange the room for better acoustics.
While we enjoyed the exclusivity of our own labs, we were constrained at the same time. First of all, we didn't actually have the computer in studio 18 fully functional until about week 4. Remembering that Esprit was a pioneering journey each year, we were relying on the promise of a loaned computer from someone in the printing school who was still waiting to receive the shipment of computers that would supposedly contain our machine. Eventually, the shipment came, and we got our computer, but we couldn't afford to wait for it. Another constraint was security on the computers in our studios. Software security was quite tight, and we were restricted from operating freely on our computer. Basically, the system prevented copying of applications, but that included the fact that you couldn't put your own application on the machine and run it. Due to these constraints and the normal constraints of everyday living, people got their computer work done in a number of places. The labs used included the Computer Graphics Design Lab, the IEPL (School of Printing) Lab, and the ESP (School of Photography) Lab. Most team members owned computers, and got some work done at home. This spreading out of work raised issues both logistically and technically. Logistically, this meant that people were physically working in different places, separate from one another. This made communication more difficult. It meant extra phone calls, hampered work, and people getting out of step with one another. Technically, working on a variety of machines was a potential sticking point for color calibration. We calibrated the monitor in studio 18 according to SuperMac's recommendations for multimedia playback. Creating graphics and optimizing images in other locations would upset the standard that we created on one machine.

For a long time it was difficult to see all of our work coming together. Basically, it was difficult to see the forest for the trees. We were accomplishing tasks which seemed to amount to mountains worth, but the end result was slow in coming together. Everyone likes to see a final product, but in this case we needed to be patient in light of the fact that there was a tremendous amount of groundwork to be done in preparation for final assembly. This perception of the production moving along slowly remained, for me at least, until the end of the quarter. The one saving grace was prototypes. Three or four times throughout the quarter, we pushed hard to produce a working prototype. These prototypes were used for publicity, but for the internal production they served an equally significant role. Prototype deadlines, as mentioned above, were the time when production moved into top gear. The deadlines were soft in the sense that if we missed them, there were no grave
consequences. However, I think we all knew that they served to push the production along in incremental strides. Pushing hard for prototype deadlines was like the Esprit mountain climbers reaching a new plateau after a seemingly indefinite climb, where the climbers could stand on firm ground and look back over their recent achievements. We were still far from the top, but it was important to recognize the benefits of such respites.

The prototypes snowballed to the point that they started to resemble the big one- the final product. This didn't happen until about the eighth week of the quarter. With 2-3 weeks remaining before many students would graduate and move far away, the end of the quarter became like the grand final prototype. It was the final push, and it couldn't have come at a more difficult time. Mercury was breaking glass as stress levels reached the all-time high. The normal procedural process of our production which seemed to have recently found its groove now fell by the wayside. Meetings, weekly reviews/forecasts, class sessions, etc., all flew out the window as we set up shop in my humble abode. We needed a lab that we could have 100 percent control over, day and night. No restrictions. No locks on doors. No distractions.

The Lif Lab, as it came to be called, consisted of four computers, and at least that many warm bodies at any given point. We pushed harder than hard, with Michael O'Boyle, Todd Salerno, Derek, and me as the main mouse-pushers. Mike was already my roommate, and Derek and Todd became de facto roommates for the week (and beyond....). We were working toward our firmest deadline to date- the final Esprit class meeting and critique. That final week went well. We accomplished a lot of work, had no major setbacks, and were able to successfully compile a runtime in the final hours. What a great feeling! There's none other like it. You burn the midnight oil to finish your project by the deadline, and then sit back exhausted but relieved.

With computer projects like Esprit, you're not done when you're done. You still have to worry about the computer holding up its end. AMT had started giving us problems when it came time to compile our runtime files. We found out right around the time of the end of quarter CD burn that the Runtime Maker application that comes with AMT starts to bog down with large projects. We uncovered some tricks to make the Runtime Maker work with large projects, but ultimately we had to discard Runtime Maker in favor of the more robust Macintosh Programmers Workshop (MPW). AMT
had presented us with technical hurdles all along. Of all the programs we worked with, AMT was the least stable application, and it was also the least familiar to us. As we starting moving into more advanced stages with the project, we needed technical assistance on AMT. We developed a reliable contact at Apple. A woman named Kate Adams was Apple's Technical Representative for AMT. She helped us directly, and also recommended an internet newsgroup that focused on AMT. Both Kate and the newsgroup were invaluable assets.

So Todd and I burned the end of quarter CD at AGT (note that I didn't say "final" CD), and we dragged into school. I felt overwhelmed that day. The project was not done, but it was a culmination point nonetheless. We showed the disc to the whole Esprit team, and they were happy with it. The work on the disc represented roughly 60% of the final product. I told the group that they should keep the faith in the several torchbearers that would take a week or two to finish the project. Derek was going on a one week vacation, and I told him my goal was to hand him the completed project when he returned. Four months later, that final exchange took place.

The Summer- Raising the Level

I entered the month of June thinking, "Get it done. Get it done. Get it done." I was in the mindset of fast completion, and it took two dedicated Esprters to break me free of that hasty outlook, and to move into a tempered, meticulous approach to finishing the project. I was thinking that as the manager of the CD production, it was my responsibility to see to it that CD-Esprit got finished. In time, it got finished, and the final product met my highest expectations. I owe my gratitude to Michael O'Boyle and Todd Salerno for having the dedication, perseverance, and foresight to set a tone of excellence at any expense in completing our project. Once I was shaken from my haste, a new environment was established in which the three of us took what was the large but loose semblance of a final product and melded, molded, and massaged it into a polished publication.
This effort represented a new phase in the production. In reality, it was the second half of the production. This estimate is based on the fact that the Summer production was an endeavor involving three workers over a period of four months, in comparison with the Spring production which was comprised of six to eight people laboring for ten weeks. Entering into it, none of us expected it to go on for so long. It's not that we were being controlled by the project - in fact, we were like an experienced crew sailing our vessel to its destination. We were in for the trek, and the thing to do was to get there in the best style possible.

The workspace for the duration of the project became my apartment, the aforementioned Lif Lab. This was also Michael O'Boyle's apartment (the Mike Lab?), and Todd Salerno moved in initially thinking he would be there for a couple of weeks. Four months later, the couch still made a good bed for Todd. Each of us had a computer, and for a couple of months we had Derek's computer too. So, for the technical record the new lab consisted of a Quadra 840AV(16MB/1GB), a Centris 660AV(24/500), a Centris 650(24/1GB), and a Quadra 700(20/230). Various external drives (on loan from school and AGT) came and went depending on the traffic. AGT, with Derek as our liaison, remained our source for backups and high-end work (e.g. when we needed more RAM!!).

It didn't take long to come to the conclusion that the project was not actually 60% completed. To clarify, 60% of the content assets were completed. They were assembled too, but both the assembly, and to a lesser extent the actual media, were in need of revision. If we think of the entire project as a clay sculpture, the basic form had been molded, but now it was time to refine the work to the point of perfection. Surely anyone can appreciate the notion that it takes a disproportionate amount of time in comparison to the total effort to refine a piece of work to the point of completion. Doug and Derek showed their faith by being patient and lending support, but I know that it was difficult for others to wait in the wings while we did our work. Doug was particularly commendable for his efforts to stay involved and keep up our morale.

We plugged away, day-in and day-out. Sometimes it approached the surreal as it felt like there was no existence outside of the oppressively hot cave-like confines of the apartment. Twelve hour days were the norm as we cranked
away diligently. Refine. Polish. Perfect. Clarify. Organize. Complete. We became the embodiment of the publication, attending to every discernible detail and pushing things to new heights. From screen design to video and sound production to programming, we were wearing all the hats through this stage. Every step of the way we felt a tangible increase in the value of the project as we hammered it out at a slow but steady pace. We knew we were raising the level of the publication, and that knowledge gave us the drive to see it through.

Doug was an indispensable player throughout the summer. I admired the fact that a professor was making the effort to call us, ask when he could come over, and consistently come to our apartment ready to provide expertise, testing, proofing, or moral support in general. Others contributed as well. Derek provided support, and continued work on such sections as the Cover Design Tidbit. Jenny Sanders worked on the Color Repro Tidbit, and provided voice talent and proofing. Keith would come to the Lif Lab without hesitation to provide Art Direction or highly developed graphic design skills as in the case of the Manifesto text.

June and July were arduous months. As we neared completion of content authoring in Media Tool, it became painfully apparent that our runtime file would be a memory hog. The only question was how much of a hog it would be in the end. In the heat of the battle we ascertained that our project, like any large AMT project, would require code optimization to bring down the RAM requirements. This was a daunting fact, considering that it would require us to get our hands dirty with Macintosh Programmers Workshop (MPW). Fortunately, we were able to enlist the unfailing support of Kate Adams, Apple Technical Rep for the Apple Media Tool Language.

The time came to get a hands-on tutorial in AMT code optimization with MPW. The first week in August we went to MacWorld with Todd's computer. We were on a mission to meet with Kate. The meeting was a success. The only drawback was timing. We didn't actually start to optimize our code until the beginning of October because optimization is the final step to be completed only after the project is completed. After extending ourselves through August and September we were enervated. Moving into optimization was the final phase, and the shift in gears gave us the drive we needed to do the final work.

Procedure
Into the Fall- Wrap-up

Essentially, optimization involves removing the redundancies in the programming language of the project file. When compiled, the runtime version of the project requires a certain amount of RAM in order to load each media element as each screen runs throughout the project. The individual screen requirements are tacked on to a certain base requirement which is determined by the total number of media elements in the project. When the project runs, each media element is accounted for, and contributes a few kilobytes to the base memory requirement. The single screen with the steepest requirement sets the minimum RAM requirement for the runtime application. That number is determined by the base (overall requirement), plus the particular requirements of that screen.

There are two key techniques used in optimizing an AMT project. One is to eliminate redundant elements, such as a quit button that is repeated on every screen in the project. A program like HyperCard has a background feature which automatically eliminates this redundancy, treating any background object as one element regardless of the number of screens it appears on. Unfortunately, AMT requires a post-fix for this scenario. Eliminating redundancies brings down RAM requirements on the overall base number discussed above. It reduces requirements by about 2-3k per each instance of the element. That may not seem like much, but it adds up. If you have 400 screens (like Esprit) with the same element, reducing that to one element brings down your overall RAM requirement by roughly 1MB. The second technique is to minimize the expensive screens, or the ones with the steepest requirements, thereby minimizing the individual screen "tax" that you pay on these screens. For example, if a screen is a memory hog because it has several large 24-bit graphics and several long 8-bit 22kHz sounds, we can shave the requirements of this screen by reducing the resolution of these elements, or by reducing the physical size or length of the object in question. The graphics can go to 8-bit, and the sounds to 11kHz. By cropping the media elements, you reduce the file size, which in turn reduces the total RAM requirement for this screen.

Procedure
With Esprit, most screens fell in the range of requiring 8-12MB of RAM. The expensive screens required as much as 17MB. As we started to remove redundancies, we realized that we would be able to bring the RAM requirement down by 4-8MB. After removing almost all redundancies (certainly the overwhelming majority), the base requirement was around 8MB. This meant that there would be no way to get the final requirement under 8MB, let alone down to around the 5MB limit in order to run on an 8MB system. The next cutoff is a 12MB system, but in the end Esprit would require 12MB itself, meaning that the system would have to be at least 16MB in order to allow RAM for the operating system to run. We shaved off over 5MB, bringing the final RAM requirement down to 12MB from a peak of about 17MB. To chisel it down to the bony minimum, we ended up compromising the most expensive screens by cutting the resolution of graphics and sounds. The bulk of the savings came from eliminating the redundancies in the omnipresent navigational buttons on the lower left-hand corner of the screen. A printout of the final map was used as a schematic to plot out the redundant elements by color (See Appendix E).

In the final week, something happened that astonished me and at the same time drove home the notion that great things can happen when people focus their energy. We were in the position of having about ten days to get the final disc to Metatec Corporation for the disc stamping as promised. By this point, two prior deadlines had come and past in which we told Metatec we would be ready for duplication. This deadline became firm because we were informed by Metatec that by mid-October their production schedule would rev up, so early October would be the ideal time to process Esprit. So with ten days to get things done, we had the entire optimization ahead of us. There were two other peripheral tasks that could have been accomplished, but they were not critical. One was to create an Esprit version of Maelstrom, the award-winning shareware game that we put on the final disc. That would entail creating graphics and sounds directly from our Esprit work, and substituting them for the original sprites and sounds in the game. This was a popular and legal practice. The second peripheral task, and the more important one, was to remap links throughout the entire project to implement a map. The map was something that Todd devised in the eleventh hour, and we figured we would throw it in as an Easter Egg because implementing it would essentially break down the functionality of the return to Procedure
previous menu button. That is, unless the entire project were rewired to connect each screen with a hard link instead of a soft link. Suffice it to say, this would entail a great deal of work. So my take on the situation was that we could finish the optimization and the game, but not the map. Mike thought the map was possible. Todd proved that it was possible.

When Todd showed me that he wired the map, I shook his hand and told him that his work was ingenious. This amazing achievement punctuated the completion of the larger amazing achievement. In the parking lot of Federal Express after handing the final disc over the counter seconds earlier, the Three Musketeers joined hands and belted out a triumphant yell. Esprit was finished!
IV. Conclusion

Results

We did it! Everyone on the Esprit Team is ecstatic with the final product, and equally pleased with the tremendous learning process that was Esprit. 25,000 issues of the magazine (with CD) were produced. About half of them will be mailed out to professionals in the imaging, printing and multimedia industries. The rest will be available for team members, featured artists, students, faculty, and anyone else who requests one.

Esprit seems to be a unique title in the world of multimedia and print publications. There aren’t many projects in existence that have attempted the 'dual publication' at the level that we have with Esprit. There are several dual publications that come to mind (most notably Rick Smolan’s *From Alice to Oceans* and *Passage to Vietnam*), but Esprit’s singularity stems from its interesting mix of student artwork and editorial pieces, its experimental yet cadenced tone, and its esprit de corps. I don’t know if we answered any questions about the future of media communication, but we surely framed some germane questions. What is the best approach to communicating through new media? How will traditional media like print converge with new electronic media? How will the new media affect our lives?

Summary

Esprit has been a long journey. For me, it started at the end of the Summer of ‘93 with, appropriately enough, an e-mail message to Doug Rea. Doug’s immediate positive response to my query into the possibility of CD-Esprit marked the start of a year of brainstorming, careful planning, and intense production.
We spent the fall quarter discussing the possibilities for CD-Esprit. We explored potential content for the electronic publication, as well as the integration of the CD with the printed magazine. In Picture/Page class in Winter quarter, we firmed up some of the team members as well as the plans for the production in the Spring. We tested several software packages including Kodak’s Create-It, and we came to the conclusion that Apple Media Tool would be a good solution to our needs. At the end of the quarter, we very carefully selected the team for the Spring production. Enthusiasm for Esprit was reflected in a strong student turnout for the team selection process, but we wavered on the position of Art Director. Fortunately, Keith Watson stepped up from his position as Screen Designer to take on the role of Art Director. We felt very positive moving into the Spring quarter with our content mapped out, our schedule tentatively projected, and our team geared up and ready to go.

High gear production was slow coming in the Spring quarter. This seemed to be a result of the difficult transition from planning and story boarding to rockin’ and rollin’. This slow transition affected team morale, and it wasn’t until later in the quarter that the momentum of the project was great enough to draw everyone in. We raced toward the finish line. We did not finish by Graduation, but this date passed with no great significance. The Spring Production presented great challenges in coordinating work efforts and developing the basic shape of the project.

The Summer was when it all came together. The dynamics of three people working closely together enabled Esprit to synergize with coherence and attention to detail. The Summer challenged our endurance as we strove to attain perfection. We underestimated the amount of work left to be done after May, but we took it in stride and rode it out. Ultimately, the Summer was Esprit’s second life, its evolution to full development.

While we overcame many difficulties including technical challenges and unending work, the single major shortcoming of the final product is the fact that the CD is Macintosh compatible only. We had hoped to produce a cross-platform title on one disc, but we basically ran short on resources in the end.

Conclusion
My personal roles in Esprit have been myriad. I feel that I played an instrumental role in putting the project on track and guiding it through completion. My role was titled ‘Production Editor’, and while I think that is an appropriate title, it may not suggest the full extent of my tasks. By the same token, every other team member’s effort is shortchanged by their respective titles. We nurtured a philosophy of true team play, encouraging all members of the staff to take initiative and get involved in any aspect of production they desired. That was part of our manifesto, and I think it was a key element in our process. We worked exceptionally well together as a team, which is a reflection of everyone’s abilities.

If it weren’t for our mutual respect and camaraderie, we would have fallen apart at the seams. One of the greatest challenges for Esprit this year was to achieve a highly ambitious goal in a fractured working environment. Ten weeks would have been a reasonable amount of time to complete the project if everyone came to the same physical locale every day and worked five paces from one another. We worked on twenty different computers in twenty different places. This made it hard to communicate, hard to manage media, hard to standardize images, etc. But at the same time, we expected to be flying by the seat of our pants, getting Esprit done any way possible. With that attitude, we were unstoppable!

While we were a cohesive team, we faced resistance to our momentum on several levels from the outside. A big problem was that the curriculum was not set up to foster a project like Esprit. CIAS has four schools with four separate budgets, separate professors, separate courses, etc. The natural result of this organization is separation. We need convergence, not separation.

I hope that Esprit continues in the future. It will be difficult to repeat what we have done under the same constraints. This is a good argument for changing the constraints. Hopefully RIT will realize the incredibly high value of a project like Esprit (for the students, faculty, administration, and school), and make a concerted effort to include this kind of project in the curricula. All of the elements are in place. It’s just a question of inspiration.
V. Bibliography

Due to the volatile and massive nature of the information related to a project such as Esprit, it is impractical to attempt to put together a comprehensive bibliography of sources. However, I think it is useful to provide a bibliography for two reasons. First, this bibliography should help the reader understand the approach I took to gathering information, which should strengthen the focus of this paper- the process. Second, I tried to cull out the more valuable sources of information among the ocean of choices.

Journals

ACM Transactions on Computer-Human Interaction
Leonardo

Magazines

CD-ROM World
MacWeek
MacWorld
Mondo 2000
New Media
RayGun
Wired

Books


Software Mart Inc. is a CD-ROM development support company that put out a CD-ROM which covers all aspects of producing an electronic project. This CD did a nice job of breaking down a project into its component parts, and describing each role involved in the creation of a disc.
Appendix A

Initial Proposal
ESPRIT Interactive: Digital photography at RIT utilizes CD-ROM technology as a forum to display a broad range of student and alumni work. Traditional ESPRIT magazine is expanded to include student portfolios, tour of the ESP facilities, and select segments of ESP teleconference series.

Users of the CD will get the opportunity to explore the work being done at RIT in an exciting multimedia format. RIT will break new ground with the concept of this project, in the process creating relationships with influential organizations in the industry.

Who will use CD-ESPRIT? What will people do with it? Is it a part of the magazine or a piece that is shipped independently? Should past issues of ESPRIT be put onto disc? Can a sufficient budget be raised in the first year to enable CD-ESPRIT to be produced in volume?
Appendix B

Final Flowchart
Appendix C

The Esprit Team
ESPRIT 94 PRODUCTION TEAM

Project Coordinator
Professor Douglas Ford Rea

Editor-in-Chief
Derek Torrey

Art Director
Keith Watson

CD Production Editor
Mark Liflander

Print Production Editor
Kristi Honda

Production Engineer
Todd Salerno

Page Production Manager
Susan Unger

Video Editor
Michael O'Boyle

Page Designer
Meg Galetta

Screen Designer
Bill Colgrove

Prepress Coordinator
Jenny Sanders

Screen Designer
Gedeon Maheux

Prepress Assistant
Sandor Hopenwasser

Graphics Technician
Jamie Gingerelli

Production Assistant
Matthew Wynd

Photographer/Videographer
B Ferraro

Writer
Dave Seah

Writer
Margaret Evans

Writer
Pauline Bagley
Appendix D

Call For Work Flyer
call for work

“Mind Over Medium”

ESPRIT ‘94 will be both a print magazine as well as an electronic publication (interactive CD). We don’t care what tools you’re using. ESPRIT ‘94 is about communication. Communicate with us: show us your work.

Submit work to E.S.P. lab by February 18.

Work can be in any form (ie c-prints, fiber paper, chromes, negatives, etc.). If digital, hardcopy is preferred, files should be left raw (ie unsharpened and uncompressed).
Appendix E

Final Project Map
(in Apple Media Tool)
Supplementary Items
Technology, art merge in multimedia magazine

Esprit '94 a learning experience for RIT students

By JILL A. ZELICKSON STAFF WRITER

Esprit '94 is a magazine for the multimedia age; a marriage of an art magazine and a multimedia CD-ROM.

But you won't find it at any newsstand.

Esprit, which started as a tabloid newspaper in 1989, is a noncommercial student magazine produced each year by a class at Rochester Institute of Technology's College of Imaging Arts and Sciences to demonstrate the use of new technology.

"It's grown to be a yearly publication that experiments with new technology and how it might be used in the marketplace," said Douglas Ford Rea, an RIT associate professor whose class of 17 seniors and graduate students produced Esprit during the 1994 spring and fall trimesters.

This year for the first time, the traditional magazine format has been combined with a CD-ROM for Macintosh computers.

The staff also had wanted to produce a CD-ROM for PC platforms, but "ran out of time," Rea said.

Next year's edition, he added, will have a CD-ROM that will be compatible with both.

The two are packaged in a fold-over sleeve which, Rea said, is an attractive and cost-effective design solution for businesses that want to send similar types of packages through the mail.

Esprit is not for sale and there is no advertising. About 25,000 copies are being mailed this week to a list of corporate sponsors, photographers, graphic designers, donors, prospective students and subscribers to Shareware magazine.

RIT also is considering putting some copies on display for public viewing, Rea said.

"We're not in the business of publishing for sale," Rea said. "We feel the Shareware list is the easiest way to get it into people's hands."

The magazine and CD-ROM formats are designed to complement, not compete with or duplicate each other, Rea explained.

The stylish coffee-table magazine is filled with photographic images of the urban scene, ballerinas, and mythical creatures.

The companion CD-ROM takes the viewer — click by click — through layers and layers of art photography, verse, multi-media tutorials, and entertaining short movies, games and Easter eggs.

"We offer you a dual publication: One that doesn't just color outside the lines of convention, but in fact erases them," its manifesto says.

The magazine, Rea said, appeals mostly to an adult audience and showcases photographs of RIT students.

The CD-ROM contains different sets of photographs designed for computer viewing and combined with verse and commentaries to take advantage of various forms of media.

One feature, Sounds of the Photographer, combines still photographs, commentaries, moving pictures and sound effects.

It includes a series of still photographs of a bicyclist by B. Ferraro.

"I try to capture the experience of cycling. You can hear the screaming. You can hear the branches smacking into the trees," Ferraro says as one of the photographs turns into a short movie of a cyclist racing down the highway with appropriate sound effects.

"The point of this piece was essentially how this photographer used his or her ears to cover the picture process," Rea explained. "How do you write about how someone uses their ears, how sound affects how a photographer works."

Esprit is financed by in-kind and cash donations from corporations and individuals.

Rea wouldn't say how much it cost to produce, but he estimated the value of the CD-ROMs alone — donated by Metatec Corp. of Dublin, Ohio — at about $25,000.

Other major sponsors are Eastman Kodak, which provided digital photography equipment, and Applied Graphics Technologies, a Rochester company which printed the magazine cover bound its pages.

In addition to demonstrating technology, Esprit '94 also gives its staff valuable preparation for the job market, Rea said.

Applied Graphics, for example, hired six of the 17 students in the 1994 Esprit class, including editor-in-chief Derek S. Torrey.

The experience, Rea said, is "better than a resume. It addresses the artistic side very well and it addresses the technical side very well."
Interactive RIT Magazine Displays Real E.s.p.r.i.t. de Corps

ROCHESTER, NY—A band of graduate and undergraduate students at Rochester Institute of Technology (RIT) has taken the 1994 issue of E.s.p.r.i.t.—reportedly the first digital, totally electronically produced magazine—to a whole new level: CD-ROM integrated into a printed publication.

The multimedia masterpiece, a compilation of still images, words, video and sound, allows “readers” to look at the magazine pages while simultaneously watching and hearing the CD.

Professor Douglas Ford Rea, project mentor, and the 18 students involved feel that E.s.p.r.i.t. is leading the way to a future in which multimedia publications are the norm. “It’s quite an amazing creation,” Rea declares of the hybrid publication.

The new E.s.p.r.i.t. poses the premise of interchangeable “mind over medium, medium undermined,” explains Editor-in-chief Derek Torrey. A recent graduate of RIT’s applied photography program, Torrey now works for Scott Brownstein (one of the developers of Kodak’s Photo CD) at Applied Graphics Technologies.

Attention-grabbing opening graphics preface a menu of items including a gallery of photographic work, feature stories like “Sounds of the Photographer,” a critique of digital media and the history of E.s.p.r.i.t. “We worked consciously to make the Macintosh CD accessible on many levels, from straightforward communication to more exploratory interaction,” explains Mark Liflan-
der, the project’s CD production editor.

Torrey estimates production to have taken slightly more than six months, most of which was spent “completing information in the CD...as well as producing the cover.”

Total costs came to approximately $100,000, most of which was covered by sponsored donations of resources, manpower and time. Sponsors included: Applied Graphics Technologies, Metatec Corp., S.D. Warren, International Paper and Agfa Graphic Systems, a division of Miles Inc.

The 25,000 issues produced will go to communication professionals worldwide.
Typography with Attitude
David Carson Sets the Style For a New Generation

CD Artwork: A New Spin on Creativity
E.s.p.r.i.t. Goes Interactive
Making Waves with CD-ROM
FE A T U R E S

1 More than Meets the Ear: Graphic Designers Add a Visual Touch to the Recording Industry

The singers and songwriters who create the sounds on your favorite CDs are just one part of the creative picture in the recording industry. It takes another group of talented artists to provide the eye-catching accompaniment to the music: the artwork for CD covers, lyric booklets, and the discs themselves.

By Tom Petronio

DEPA R T M E N T S

5 College Close-Up ... Arkansas State University

ASU's printing management program combines hands-on training on the most up-to-date equipment with plenty of individualized instruction. And that translates into strong career potential for ASU printing graduates.

6 Inside ... E.s.p.r.i.t.

Students at Rochester Institute of Technology have ventured into the realm of multimedia with the 1994 issue of E.s.p.r.i.t., a ground-breaking publication created completely electronically. The newest E.s.p.r.i.t. includes a CD-ROM that adds an exciting sensory component — complete with sound and moving images — to the magazine.

10 Profile ... David Carson

His controversial style has been labeled everything from "unreadable" to the new wave of typographic design. But one thing's certain: David Carson has struck a chord with young audiences, and there's no doubt that he has become one of the most influential type designers in the world.

ABOUT THE COVER:

David Carson’s typography speaks the language of youth in no uncertain terms. His controversial style, which gathered an initial following in the alternative music magazine Ray Gun, is now making its way into the mainstream through ads for big-name clients such as Nike and Pepsi. Supporters and critics can agree on one thing: Carson's work has made an impact that won't soon disappear. Photo courtesy of David Carson.

Executive Editor
Sandy Richardson

Art Director
Jean Nunes

Printing Production Coordinator
Barbara Giordano

IMAGE WORLD FOLLOWS ELECTRONIC PRODUCTION PATH!

This is the fourth issue of Image World to be produced completely electronically! In addition to designing the magazine on the computer, we are scanning all images on a high-end scanner, then color correcting and retouching them on a Scitex system. Complete page films, into which all images have been electronically placed, are output on a Dolev drum imagesetter. All scans and films are generated courtesy of Rochester Empire Graphics. Image World is printed at RIT's Technical and Education Center of the Graphic Arts on a Harris M-1000B web press by the T&E Center press crew.

Image World (ISSN 8756-6664) is published by Rochester Institute of Technology with a grant from the Graphic Arts Education and Research Foundation. All correspondence, subscription requests, and address changes should be directed to Image World, RIT, 66 Lomb Memorial Drive, Frank E. Gannett Building, Rochester, NY 14623-5604

This issue of Image World is printed on 60-lb. Expression, produced by Boise Cascade in Rumford, Maine.
MORE THAN MEETS THE EAR

Graphic Designers Add a Visual Touch to the Recording Industry

By Tom Petronio

When you think of the creative people involved in making your favorite compact disc, chances are you think of the singers, songwriters, and musicians who create the sounds you love to listen to.

Creativity on the audio portion of a CD, however, is just one part of the larger picture. The visual component involves another group of talented artists altogether. They’re the people who provide the eye-catching accompaniment to the music: the artwork for CD covers, lyric booklets, and the discs themselves.

Entire books and museum exhibits have been dedicated to the artwork created for rock and pop music albums. Some of those images, such as the covers to the Beatles’ Sgt. Pepper album and Pink Floyd’s Dark Side of the Moon, remain familiar cultural icons decades after the albums were first released.

With the arrival of computer software for graphic design in the 1980s, the techniques used to create album art today are far different from those used for the classic albums of the ’60s and ’70s. But one thing remains unchanged: the need for talented, creative artists.

A JOB THAT ROCKS

Margo Chase has been in the graphic design business for 12 years. Her firm, Margo Chase Design in Los Angeles, has produced CD artwork for a variety of artists including Melissa Etheridge, Cher, and Crowded House. It also designs movie posters (the firm did the promotional poster for Francis Ford Coppola’s “Dracula”) and packaging for consumer products, among other design work.

“For a long time — my first six years in the business — I worked as a free-lancer,” Chase says. “Then, as the amount of work increased, I began getting other artists involved. Today, we’re a full-fledged design firm.”

Years ago when she was attending college at California Polytechnic State University, Chase had no idea that one day she’d be working on art projects for rock stars and celebrities. She started out as a biology major, but a medical illustration class in graduate school led her into the art field, and she decided a career in biology wasn’t what she wanted.

“I began by taking on whatever jobs I could,” she says. “Eventually, I began picking up work in the music business.”

Those jobs included logo design and album cover lettering for major labels such as Warner Bros. Records. From there, Chase says, the work “snowballed.”

“I kept getting more and more music projects through referrals,” she says. “That’s how I still get most of my work, as do others in the industry. You keep working for the same people for a while, and eventually you get known and begin picking up jobs from others.”
Having a computer has really changed the rules. Before, we were designers. Now, we’re retouchers, typographers, computer illustrators — we handle a lot more work.

**DESIGN GOES DIGITAL**

Just as digital audio is the state-of-the-art in recorded sound, digital imaging is the primary means by which graphic artists produce CD artwork. Chase does almost all of her work on a Macintosh computer.

"It makes it possible to do a lot of work you couldn’t do before," she says. "You can create imagery in-house that before would have required the use of outside vendors. And most jobs don’t have the budget for that."

Through the use of software programs such as Photoshop, QuarkXPress, and Digital Darkroom, images can be manipulated, enhanced, and combined with typography and other images right on the artist’s computer. Such ease of image manipulation enables the artist to get just the right look for a specific musician and to match the theme or style of a particular album.

For example, when Island Records wanted to establish a grittier, on-the-road image for rocker Melissa Etheridge, it turned to Margo Chase Design. Chase’s firm was able to meet the challenge with the latest electronic imaging techniques.

“Our designer used photos of different wall textures, like brick and peeling paint, and photos of old posters peeling off walls and scanned them into the computer,” Chase says. “Then she collaged them and added Melissa’s image.”

The resulting artwork — featured on the singer’s latest album *Yes I Am* — delivered the rough-edged rock-and-roll look the record company wanted.

Chase also was recently hired to create the artwork for a new CD by Loreena McKennitt, a popular Canadian folk artist on the Warner Bros. label. McKennitt and her management company wanted an album design that would complement the singer’s eclectic style.

“She incorporates musical motifs from around the world and uses international and historical imagery in many of her songs,” Chase says. “The company wanted the CD cover and booklet to have that same feel.”

Chase began by studying the singer’s lyrics and travel diaries. She then searched libraries and bookstores for ancient and mystical imagery that would help her convey the look she wanted.

Using an Agfa Arcus Plus scanner, she input the images into the Mac. Working on the computer, she then selected specific details from each image and assembled them into a montage.

“Without the scanner and the computer, I would have had to make color copies of the images I wanted to use, then cut and paste them by hand into the finished piece,” Chase says. Any changes requested by the client would have required time-consuming alterations by hand.
"The computer makes it so much easier, and it doesn't look like it was done on a computer," Chase says.

Song lyrics, production credits, and other typography for the CD are provided on a computer disk for the artist to merge with the artwork.

"That eliminates the worry over copy proofing because when it comes to me on disk, it's already been proofed by the record company," Chase says.

The computer also makes it easy to retouch and manipulate photos. Parts of different photos can be combined to create new images that appear to be original photos; black-and-white photos can be colored in creative ways; and whole new images can be made by combining photos and other artwork.

Another advantage of assembling art and type on the computer is that it enables the artist to provide the client with a review "comp" that looks very much like the finished piece will appear. The computer comp is more accurate than a rough sketch, which may not as closely represent what the artist has in mind, Chase says. Chase outputs laser prints of her work for both the client and record company to review. Any changes are then made on the Mac, and the revised laser prints are returned for approval.

HIGH-POWERED PRINTING

Even the printing process has been streamlined by computer technology. In most cases, artwork is provided to the color separator and the printer on a disk rather than as a traditional mechanical.

Warner Bros. has an in-house graphic arts production department that works with the color separator and printer. Approval of the color proofs — which show how the job will look when it's printed — is handled by the graphic artist, such as Chase, or by an art director from the company's art department, which also creates original album art for clients.

"Having a computer has really changed the rules," says Linda Cobb, associate art director at Warner Bros. "Before, we were designers. Now, we're retouchers, typographers, computer illustrators — we handle a lot more work."

If there's no time for the artist to go back and manipulate the image, retouching can still be done by what Cobb refers to as the "archaic" way — having the color separator make the changes on a high-end color electronic prepress system. But most retouching is handled up front by the artist, she notes.

Warner Bros. owns three printing plants that handle production of the company's CD materials. Covers and lyric booklets are printed on web presses, usually on coated paper. The CDs themselves are printed using other technologies (see article, page 4).

Because Warner Bros.' three printing plants are located in different cities across the country, doing press checks can be difficult for the company's L.A.-based art directors. But they do make the trip, particularly if a job involves a complex design that could be difficult to print. When it comes to final approval, there's no substitute for the artist's eye.
Cobb recalls a job when scheduling problems forced the company to forego its policy of requiring the art director to see a color proof before the job goes to the printer.

"It was the Tribute to Curtis Mayfield album, and we were in such a rush that the production schedule, including the approval time for the art department, was thrown out," she says. "A proof was given to me after the job had already gone to press, and the color on it was not working. You couldn't read the type."

Cobb went to the printer, who was able to improve the job somewhat on the press.

"But there wasn't much we could do at that point," she says. "Whenever a designer uses a specific color combination, you need to make sure that the color being printed is what you envisioned."

CREATIVITY PLUS

When it comes to creativity, both Cobb and Chase agree that few jobs can rival being a graphic designer for the music business.

"You get to work with the recording artist from the very outset of the project to determine what the look and feel of the artwork should be," Cobb says. "Is it going to be an image-building piece, is it going to be about the music, or will it go in some other direction? Determining that can help you decide whether to schedule a photo session, commission an illustrator to do the artwork, or use computer imaging."

Variety is another plus in designing for the recording industry, Chase adds.

"Every project is different," she says. "When I'm designing product packaging, the same look is used on everything once it's created. The computer is used more as an assembly tool than as a means to create something new. The music business, on the other hand, is more open to messing around and being creative."

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Tom Petronio is a freelance writer in Rochester, New York.

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CD Label Art:

How Do They Get Those Discs through a Press?

The answer: They don’t! Just imagine your favorite CD smashed to smithereens between the rollers of a high-speed web press.

It takes some creative printing technologies to put artistic imagery onto the discs themselves. The way it happens, from start to finish, is this:

The art for the CD label (it's not really a label — the image is printed directly on the CD — but that's what recording industry people call it) is created by the same artist who designs the cover and lyric booklet for the album. Two-color artwork is the standard choice for most CD labels, although more complex designs may involve three or more colors, according to Kim Van Ausdal, traffic coordinator in the graphic art production department at Warner Bros. Records.

The artist may produce the label art either on a computer or as a conventional mechanical, although van Ausdal says the vast majority of art is computer generated. Films are created by the color separator, and from there the job goes to the disc manufacturer.

Weka Manufacturing in Olyphant, Pennsylvania, makes the actual discs for Warner Bros. The process begins by taking small pellets of polycarbonate and melting them down to an almost-liquid form. This melted substance is then "pressed" into discs by an injection molding machine — a huge piece of equipment that can turn out up to 15,000 discs a day. It works by injecting the polycarbonate between the top and bottom halves of a mold, which squeeze together to form the disc.

So how does the music get on there? Inside the mold is a raised stamp that imprints a series of tiny pits of varying depths all over the surface of the disc. These pits are "read" by the laser of a CD player and translated into digitally perfect music.

After the disc is pressed, it's sprayed with aluminum — that's what gives it a shiny, silver look. But the aluminum coating does more than make the disc look nice. Without it, you'd hear none of the music on the CD. That's because the polycarbonate discs are transparent, and unless they receive a reflective coating, the CD laser would pass right through them, unable to read the coded pits.

As a finishing touch, a clear lacquer is applied to create a smooth surface and protect the pits. Now, the discs are ready to be labeled.

'Round and 'Round

The artwork for two-color labels is applied by a pad-printing system. Two rubbery pads, each holding a different color of ink, stamp the artwork onto the discs as they come off the manufacturing line.

For three-color labels, a silk-screening process is used. Each color is imprinted at a separate silk-screening station. These stations are part of a huge, automated machine set up in a circular configuration — just like a giant CD!

As the disc comes to the first station, a fine-meshed screen of the artwork is placed on the disc's surface and a squeegee rolls over it, forcing ink through the mesh. The disc is then zapped with ultraviolet light, which dries the ink instantly. The disc then proceeds to the second station where it picks up more ink, gets zapped again by UV light, and proceeds to the third station for the final color. This whole process happens in rapid-fire succession.

So, the next time you take a CD from its case, take a minute to admire the work of the talented artists and printers who make sure your favorite music has a great look as well as a great sound.
Arkansas State University

If you're looking for a printing program that combines hands-on training on the most up-to-date equipment with plenty of individualized instruction, Arkansas State University could be just the place to launch your future.

ASU is the only state university in Arkansas to offer a four-year Bachelor of Science degree in printing management. Students can select from three areas of specialization — management, technology, or education — depending on their interests and career goals.

The ASU printing program exposes students to a diverse learning atmosphere that includes both classroom and laboratory instruction. With a student-teacher ratio of about 10-to-1, ASU printing students get lots of personal attention.

ASU's College of Communications is housed in a multi-million dollar building that includes 12,600 square feet of space devoted to modern printing technologies. On the ground level, students gain practical experience in a printing plant that features press, bindery, and camera departments.

The upper level of the building includes classrooms as well as imagesetting and prepress laboratories. Two Macintosh labs contain computer models ranging from SE 30s to the latest Quadras. The Macintosh system is networked to a printing composition lab which houses a Linotype Linotronic 200 imagesetter. Students also have access to color scanners and a color proofing unit, plus an array of supporting software.

ASU is committed to the growth of the printing program and recently budgeted an additional $68,000 for new equipment and other improvements, notes Rich Bundsgaard, director of printing.

Learn by Doing

The web printing process is a cornerstone of the ASU degree program, Bundsgaard says. Students gain experience in the use of a three-unit cold web press as well as a variety of large-format sheetfed presses. Other equipment available to students includes duplicators, a perfect binder, an eight-bin collator, and other finishing equipment.

"The hand-on experience gives our students a distinct advantage in printing management education," Bundsgaard says. "It's an excellent résumé builder."

Students are able to "earn while they learn" by holding paid internships in the ASU printing laboratory, where they produce in-house publications for the university. Internships and practicum studies are also available with a number of large printing companies in the south-central United States. In addition, printing students work in cooperation with the ASU journalism program to produce a semi-weekly newspaper.

"Having a 'live' job to work on gives the students that much more incentive to excel," Bundsgaard says.

Printing students at ASU take 50 percent of their credit hours in the printing area. To complement their printing studies, they select a minor, usually in general business or management. The rest of the curriculum is made up of general studies in English, math, and science to provide a well-rounded education.

The combination of solid classroom instruction and hands-on experience translates into strong career potential for ASU printing graduates. The ASU printing program has placed 100 percent of its graduates for at least the past 10 years, Bundsgaard says. Graduates are employed at printing facilities around the country. Of all the graduates of the College of Communications, those in printing have the highest beginning salaries, he adds.

Ten scholarships are available to ASU printing students. Financial assistance also is available through the Southern Regional Education Board for qualified students who live in one of 14 designated Southern states. In addition, in-state tuition rates are extended to out-of-state students living in any county whose border is within 75 miles of Jonesboro, the home of ASU's main campus.

Situated just several miles from the foothills of the Ozark Mountains, Jonesboro is about one hour from Memphis and two-and-a-half hours from Little Rock — an ideal location for students who want to experience a small town atmosphere without being too far from the excitement of larger cities.

Individuals and groups are invited to visit ASU and tour its printing facilities at any time. For more information, write to Rich Bundsgaard, Director of Printing, Arkansas State University, P.O. Box 1930, State University, AR 72467, or call (501) 972-2072.

Information for this article was provided by Arkansas State University.
When students at Rochester Institute of Technology produced the premiere issue of *E.s.p.r.i.t.* in 1989, they launched one of the first publications to be created completely electronically. Digital photography was just emerging as an innovative technology, and *E.s.p.r.i.t.* provided a vehicle for experimenting with the new electronic tools that promised to change the future of publishing. “The one thing these students had in common was that they didn’t always live by the rules. For that matter, there often were no rules to follow,” says Doug Rea, director and founder of the *E.s.p.r.i.t.* project. “The challenge of producing a totally electronic publication formed the meeting ground we call *E.s.p.r.i.t.*”

Today, *E.s.p.r.i.t.* is making new waves by venturing into the realm of multimedia. The 1994 issue of *E.s.p.r.i.t.* includes a CD-ROM that adds an exciting new sensory component — complete with sound and moving images — to the magazine.

“This year is almost like the first year in that we’re taking a great leap forward with the electronic end. It’s an ambitious goal,” says Mark Liflander, CD production editor for the 1994 *E.s.p.r.i.t.* “Multimedia is exciting because it’s a new form of communication, and it’s undefined at this point, which is a rare opportunity. It’s uncharted territory where we can experiment with the possibilities.”

*CD-ESPRIT*, as the electronic component is called, is not just an add-on to the magazine, Liflander emphasizes. The CD-ROM and the print version of *E.s.p.r.i.t.* form an integrated package that merges print and interactive in a complementary way. “We’re trying to create a true dual publication: print and CD, each drawing on its own strengths,” Liflander says. “The CD is not an afterthought or a duplication.”

**THE BEST OF BOTH WORLDS**

Pop *CD-ESPRIT* into a computer (it’s formatted for both Macintosh and IBM), and you’ll see an opening graphic that depicts the melding of the worlds of interactive electronics and print. From there, you can choose from menu items that include a gallery of photographic work, features on individual photographers, discoveries about interactive technology, and the history of *E.s.p.r.i.t.*
Click on features, for instance, and you can experience "Sounds of the Photographer," a series of videos that provides a firsthand look at how working photographers interact with their environments. Choose the video on New York photographer Harvey Stein, and you'll watch him make his way through the subways and crowded streets leading to Coney Island, photographing the people he meets along the way.

On this day, Stein, who is known for his photographs of unusual people, aims his lens at a variety of subjects, including a fast-talking street vendor who quickly protests "No photographs!" and a man who sweeps a metal detector through the sand of the deserted beach searching for tiny, forgotten treasures.

The stories selected for the CD don't work well in print," Rea says. "For example, 'Sounds of the Photographer' lets you actually see and hear what the photographer experiences while he's working. You can't do that in print, but we can do it in interactive. On the other hand, print allows us to show the rich tones of photographs, and you can't achieve that in interactive.

"We're not trying to fight the battle about which technology is best. We want the electronic component to do what it does best, and let print do what it does best. You get the whole story by seeing both together."

TEAM SYNERGY

E.s.p.r.i.t. is fueled by the collective creativity of students from four schools within RIT's College of Imaging Arts and Sciences: the School of Photographic Arts and Sciences, School of Art and Design, School of Printing Management and Sciences, and Center for Imaging Science. Working as a team, the students each contribute their unique talents and expertise: strong images, innovative design, prepress knowledge, and multimedia and print support.

"What Doug does is very progressive," Liflander says. "He brings together students from throughout RIT, so we can get creative in our problem-solving. The project is exhilarating because of the team process — everyone draws and builds on each other's energy."

The team approach helps knock down the barriers that exist in traditional work processes, adds Derek Torrey, editor-in-chief for the 1994 E.s.p.r.i.t.

"Without the normal walls and red tape you find in universities and other organizations, we can work together toward a common cause," Torrey says. "We have to be accountable only to ourselves, and we're our toughest critics. I got wrapped up in the swing of it and forgot about things like eating and sleeping — it's such an incredible experience."

The entire project involves about 18 students, half working on the print magazine and half working on the CD-ROM component. The bulk of the activity takes place in two labs — one for print production and one for the interactive component. A third lab, filled with Macs and digital cameras, is used for electronic still photography.

Equipment for the labs in which E.s.p.r.i.t. is created has been gathered as support for the project has grown. Much to his credit, Rea has amassed an extensive assortment of computer electronics that includes on-loan equipment from manufacturers, donations, purchased items, even equipment borrowed from students.

Getting donated paper and other supplies to take E.s.p.r.i.t. from an idea to reality is another challenge that Rea faces every year. So far, he's been successful.
“It’s tough to ask these kids to pour their hearts into a project when you know it may not make it to press,” Rea says. “But industry has been supportive — they want to get involved.”

Thanks to that support, E.s.p.r.i.t.’s annual press run has grown from 6,000 copies in 1989 to more than 25,000 copies, accompanied by the CD-ROM, in 1994. The publication is mailed to communications professionals throughout the United States.

**PUTTING IT TOGETHER**

The print production lab — painted gray throughout to provide optimum color viewing conditions — is the site of most activities related to the print end of the E.s.p.r.i.t. project.

The document is built on Macintosh Quadras using QuarkXPress for page layout and Adobe Photoshop for image enhancement and color correction. Drum and flatbed scanners are used to convert flat artwork to digital form. The magazine also uses digital files of images captured by electronic still photography.

For soft proofing, students use a Pressview Supremac monitor that is calibrated to RIT’s web press, on which E.s.p.r.i.t. is printed.

“The color we see on the screen should match what we get on press,” says Kristi Honda, print production editor for the 1994 E.s.p.r.i.t. “This lets you trust the monitor.”

Final pages are output on an Agfa Selectset 5000 imagesetter. Prepress work and printing are handled by RIT’s Technical and Education Center of the Graphic Arts, which shares the same building with the E.s.p.r.i.t. labs.

Just down the hall from the print production lab, students in the interactive lab put together CD-ESPRIT. On a table in the center of the room is a Mac and a separate playback screen for running the CD-ROM. A variety of multimedia software is used to combine text, images, video clips, and sound. The run-time publication is compiled in Apple MediaTool.

At the far end of the room is a design area where students have created storyboards and taped them to the walls to guide the production of the interactive presentation.

The print and interactive components of E.s.p.r.i.t. are not developed in isolation, Torrey emphasizes.

“One thing we are very careful about is keeping the people on the print side informed about what is happening on the CD,” he says. “The design staff works on both platforms, and that’s unique.”

**WHAT’S AHEAD**

As E.s.p.r.i.t. continues to push the envelope on digital technologies, what challenges and opportunities lie ahead?

For one thing, Rea says, digital photography is getting better and better. The higher quality output will mean big improvements in electronically produced publications.

But the most exciting thing for Rea is not the latest technology on the block, but how it can be used to communicate in a meaningful way.

“I am always amazed by young people’s willingness to work with new technologies and do magical things with them, not only from an artistic standpoint, but from a technical communications standpoint. They are preparing to go out into the world and make these applications work in a business environment,” he says.

The sense of experimentation that goes into each issue of E.s.p.r.i.t. boosts the excitement surrounding the project, Rea adds.

“Our goal is not to confirm, but to explore new areas in imaging,” he says. “We’re driven by student ideas and energy.”

Sandy Richolson is editor of Image World.
His typography makes some designers cringe, while others hail his work as brilliant. But one thing’s for sure: David Carson has struck a chord with young audiences, and there’s no doubt that he has become one of the most influential type designers in the world. From its beginnings in an obscure Los Angeles skateboarding magazine, Carson’s work has gone on to set trends in the alternative music magazine *Ray Gun* and, most recently, in print and television ads for big-name clients such as Nike and Pepsi. Here, Carson discusses his controversial style, which has been labeled everything from “unreadable” to the new wave of typographic design.

*By Mark Fitzgerald*
How did your style evolve?

Wow, that’s a tough first question. It’s largely intuitive. I just did what felt right to me. My style developed from my own sense of what looked right or solved a problem, as opposed to looking around and saying, “Oh, I like that style; I’ll do that.” I think the best work has to come from within and from what you are as a person.

Your style caught on first with young audiences. How do you account for that?

Some of it has to do with the fact that people’s visual orientation is changing, whether it’s from video games or MTV, which has been around for 12 years now. People are seeing visual information differently, and I’m trying to address that in print. I think that’s part of the reason it’s been successful. Obviously, I’m also doing work for clients whose audience is older.

Yes, you are doing more corporate work — ads for Pepsi, Nike, and Hallmark, to name just a few. How did you pick up those clients?

They came to me just as a result of seeing Ray Gun and some of my other work. And I think their interest is driven by the fact that people, regardless of their age, are seeing better graphics on television. Advertisers are becoming aware that if they don’t address those changes design-wise, they will probably lose some of their audience.

Do you ever worry that your corporate work might make your style become too mainstream?

Well, I like to think that my work has more of an attitude than a style. My approach is to be open to experimentation, open to mistakes and the unexpected — and not being locked into rules that were set up a million years ago. I think that attitude of experimentation should have a very good life. Specific styles — like putting a letter in an oval — may come and go, but I think the attitude has longevity.

Carson’s unmistakable style sets the tone for this Nike ad (top) and spreads from Ray Gun.

Nike ad courtesy of David Carson.
Let's talk about how you got into design work. What specific steps did you take?

This is actually a second career for me. I was a high school sociology teacher for five years before I discovered graphic design. I took a summer workshop, and that's what did it. I said, "Wow, that's what I want to do." So I enrolled in a commercial art school and got an internship, and I've been in the business ever since. I think it's really important that you do some combination of school and on-the-job training.

Do you have any other advice for young people who'd like to get into design?

Young people who want a career in design need to be doing work for friends, for free, just to get the experience. They could do business cards for their parents and their parents' friends — anything to get printed. In this field, more than any other, you have to get into it because you love it and there's a passion. There are too many people in design for those reasons, and if you don't have that passion, you're probably not going to do very well. I always remember hearing that you can define a good job by answering the following question: If you could afford to, would you do the job for free? If you would, you've got a good job. If you wouldn't — well, what the heck are you doing?

You mentioned a skateboard magazine. Was that your first job?

Yeah — Transworld Skateboarding. It's still around today.

How did you get involved with Ray Gun?

I did a magazine called Beach Culture, which was produced by Surfer Publications. The person who started Ray Gun liked Beach Culture, and he contacted me to do the design.

How do you respond to critics who say your work is unreadable and cluttered?

Almost every traditional typeface, when it was first introduced, was criticized for being hard to read. Then it became commonplace and no big deal, and now those typefaces are considered the most conservative. Ray Gun started out at 50,000 copies and, within its first year, it more than doubled its circulation to 120,000. So I have to think that if it was unreadable and too cluttered, it wouldn't have survived, and it wouldn't have brought in subscribers and advertisers. USA Today did an article that said Ray Gun may actually get more young people to read because they find the design interesting and are drawn into it. And there's another theory that says the things you have to spend a little more time with are the things that you remember.

So you don't try to be deliberately obscure.

The starting point is never to make something hard to read. The starting point is to interpret an article and give it a feeling or attitude that is consistent with its tone. The point is never to do something weird or difficult to read.

Clockwise from above: Corporate clients here and abroad are using Carson's work to connect with a new generation of consumers. The style that originated in alternative music magazine Ray Gun is now gaining mass exposure through print and TV ads. Pepsi and Nike ads courtesy of David Carson.
You've said that this is a good time to be a designer. With all the competition from electronics and new media, why do you think this is a good time to be a designer, particularly in print?

Well, for the very reason you just mentioned — the fact that things are changing quickly and there are lots of new opportunities developing in multimedia and interactive media. Students today are probably more ready to jump into things like that than I would have been at their age, since I grew up without those technologies. So there's a lot of change that's exciting. Also, the kind of work I've been doing for rock-and-roll and surfing magazines I am now being asked to do for major corporations such as Pepsi, Nike, and Aldus. There are more avenues for design work, and people want it to be more expressive than they did in the past. So I think the opportunities are opening up — and you don't have to work just for some strange underground 'zine to do good work anymore.

Mark Fitzgerald is Midwest editor at Editor & Publisher, a weekly journal for the newspaper industry.
in the next issue of Image World

Signed, Sealed, and Delivered: The Making of Postage Stamps

HiFi Color: Printing that 'Pops'

Green Printing: Environmental Update

Thanks to the work of skilled artists, designers, engravers, and printers, postage stamps have visual appeal that really sticks. Take a behind-the-scenes look at the making of postage stamps in the next issue of Image World. Artwork courtesy of U.S. Postal Service.
We feel that it would be unproductive and irresponsible for Esprit magazine to blindly perpetuate the conventions of contemporary publication media. E.s.p.r.i.t. has always been at the edge of what can be done in the digital arena, but we realize that the novelty of digital publishing has evaporated. It is no longer acceptable to work digitally just for the sake of being digital. With the conviction that each form of communication has its own inherent strengths, we feel that an intelligent approach is to choose a voice, a medium, that is best tuned to the message. We choose to put our mind over the medium, or better yet, to have the medium undermined.

manifesto

In this vein, we offer you a dual publication—one that doesn’t just color outside the lines of convention, but in fact, erases them. There is a dialog that has been created between the two sides of this new Esprit, and to experience it, you will have to move back and forth between them. With your willing engagement in this interplay, you will add a second, uniquely personalized dialog to the first. Your active participation will lift this magazine above the proliferation of mundane interpassive media and move it toward a level of communication which is far more stimulating and keen.
E.s.p.r.i.t., started back in 1989, was one of the first electronic publications in print. It was an eight-page newspaper created by ambitious students who were free-thinking individualists. The one thing these students shared in common was that they didn't always live by the rules. For that matter, often there were no rules to follow. The challenge of producing a totally electronic publication formed the meeting ground we call E.s.p.r.i.t.

Since then, we have grown from a small newspaper to an annual magazine with a direct mailing of over 25,000 issues. Our readership includes persons in the fields of photography, printing, design, electronic imaging, and interactive media. E.s.p.r.i.t. has always been a non-commercial research project with our focus on creativity and the use of emerging technologies. It continues to work in that spirit.

We have tested a host of electronic cameras, scanners and desktop publishing technologies. We have also investigated the emerging role of the artist, photographer, graphic designer and printer in the age of electronic communication. Each year, new students pose for the opportunity to participate in this project. Their commonality is manifest in a healthy degree of curiosity and determination. What more could a teacher ask for?

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To learn about Espirit or for information on how to receive a copy, please fax your request to Espirit at 716.475.5804, or Internet: DFRPH@RITVAX.ISC.RIT.EDU

For information about RIT's College of Imaging Arts and Sciences programs, please call 716.475.6631, or fax 716.475.7424.

For information about seminars and services at RIT's Technical and Education Center, please call 716.475.5000, or fax 716.475.7052.

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Preparation
I wake up at 4AM, stuff my pack, and head to the base of the mountain. I find a quiet room and pull out my sketch pad and crayons. I relax and clear all distracting thoughts from my head. This is essential to preparation.
The Appearance Is Complete.

Comprehending These Instances Of Immensity.

At The Arrival Of Each New Situation,

I Am Embraced By True Splendor.

Such An Enigma That Can Only Create Wonder.

For Centuries Have Given Serenity, Yet,

Overwhelming Endurance For These Creations Evident In Italy.

Timothy Krablin
This is a simple portrait. The stare is what makes this image strong. When I photograph someone I try to get as much of their personality to come out as possible. In this process, a large part of my personality is in every image.

Safia Fatimi
The Wall was inspired by abandoned urban landscapes found in our cities today. I tried to create a sense of union between the two elements, a sense of man versus manmade. The Wall represents man’s triumph over Nature.

Kwaku Alston
Photography has allowed me to explain feelings and emotions that seem impossible to describe with words. Like the musician who lives through the element of personal style in his music, the instrument is his tool. Photographs have become an evocation of inner self for me, and the camera is my tool.

Judy Rutz
This image is part of a series dealing with childhood. Playing with my food has always fascinated me, so I decided that it would be visually interesting to illustrate eating something that you actually play with.

Kit Cowan
Standing here I get the sensation of a cool, refreshing breeze blowing off the waterfall.

Warm-up
I choose a path, and I start at a slow pace.
I sketch freely with the crayons to get a sense of the patterns.
I sense my environment. I can start my journey.
...all my senses are alive! Gee, Doug, did you just eat a Peppermint Pattie? No, Derek, really. The sound of the waterfall is so powerful, wouldn’t it be interesting to capture it on film? But Doug, I’m capturing more than just light. I’ll create a final print from these shots, but if you really think about it, all these sounds around us—the rushing waterfall, the blowing wind, the camera’s shutter—will all have an impact on the final images. Yeah, and when someone looks at your image of the waterfall, they might imagine sounds of their own.

Each block of time holds its own unique signature. People move through life within the continuous buzz of sound. Photography is a visual medium, but try to imagine making photographs without the influence of sound, or try to imagine viewing images without even the memories of sound. A person can shut her or his eyes and turn off the sights around them, but when one tries to close their ears to sound, they are reminded of the constant power of noise as soon as the air vibrates.

In CD-ESPRIT, the electronic companion to this magazine, we explore the impact of sound through the vision of three photographers. Each photographer asked themselves an important question: “How does sound affect my photography?” And we reflect on the work they created asking ourselves, “What sounds do these photographers evoke?”

Head to Coney Island, NY, with a photographer named Harvey Stein. Harvey often photographs people that he directly encounters and engages. His environmental portraits demonstrate a sensitivity to his surroundings in which sound plays a very important role.

Charge through the woods with an extreme mountain biker. B Ferraro’s passions are mountain biking and photography. Hear the photographs as B draws out the intense emotions of his riding companions. The primary objective is serious fun!

Enter a world in which intrigue is created through portrait. Rachel Jerome’s subjects provide the entryway into beautifully mysterious and stark characters. Looking at Rachel’s photographs, one may conjure their own musical accompaniment.
A fashion piece such as this becomes more of an interpretation of the designed work than art in and of itself. Fashion rarely lacks a message and I gravitate toward pieces that are more expressive rather than those which are mundane.

Rachel Jerome
mood n. A pervading impression of an observer. We are all the observer. The observer does not have to remain inactive. The observation will lead to awareness and action. Are you aware of your observation?

Mark Liflander
It’s all about balance and extremes. There’s never a middle ground for me. If I’m doing something pure or elegant, simultaneously I’m doing work that’s rough or violent. That’s where the balance comes in; it’s all parallel to my emotional state.

Beeba Christopolos
I produced a series of images relating to women in renaissance art. Some were direct photo-reinterpretations of actual paintings. This image embodies the visual flavor of the time yet does not specifically reenact any particular painting.

Jennifer Retter
I was working with women’s images in the media. I wanted to deal with the images that I thought dictated who we are as women. I believe the woman portrayed by the media as “superwoman” is unachievable. This image was one of many that showed me a different attitude in the media than the one I was told existed.

Sondra Amspacher
DIGITAL PHOTOGRAPHY IS HOT.
Some proponents say that digital image processing will soon replace silver-based photography. On the other hand, digital photography can be viewed as an extension of film-based photography. It is just a new set of tools. The concepts behind image-making have not changed. Or have they? Perhaps we should consider the evolution of this new photography as a unique marriage between several classic forms of artistic expression: painting, sculpture, photography, typography, and illustration. Never before have all these elements been so seamlessly combined. Yet, before we can label or define digital photography, we must first understand its language, its relationship to the existing photographic community, and its ties to emerging forms of media. One thing is certain about digital photography: it is new. Being in its infancy, digital photography has consequently taken on the stigmas associated with anything that breaks with tradition.

DEREK. Just over a year ago, I began a serious relationship with digital photography. With the guidance of a close friend involved with ESPRIT ’93, I was offered the chance to work with a digital camera system. I had little previous experience with either the camera or the computer by which it was controlled. Looking to duplicate the results of a study previously done with film, my initial experiences were frustrating. I attempted to reshot a still life image I had made in the studio with silver-halide film. I wanted to find out, first hand, if this cutting-edge technology could justifyably challenge the more familiar photographic conventions of film-based imaging.

As it turned out, the inherent weaknesses of the digital system prevented it from reproducing the rich tonal qualities of the original. Nevertheless, I submitted the digital version to ESPRIT without hesitation. I knew the editors wanted electronically-produced photographic work for the publication, and I was interested in having an image published. Reflecting on my experience, I began to understand some of the negative attitudes about electronic photography. The process can be slow, the equipment may be unfamiliar, and the results are often unpredictable.

Rather than explore the creative possibilities of a new system, my initial attempts drew upon my film-based photographic mindset and vocabulary. This seemed a logical place to begin. Nevertheless, moving forward from this point was a critical step in the learning process. My early tests showed that the dynamic range of the digital camera could not come close to current film standards. I wanted to keep my film-based expectations and vision. I discovered, however, that I needed to investigate concepts specific to digital imaging in order to solve the problems at hand.

After familiarizing myself with the components of the system by actually logging some extended time with the camera, I began to make photographs for which the choice of digital equipment was an integral part of the creative process. The digital camera records light and movement in a unique fashion. It became clear that what I had previously viewed as limitations could actually serve my needs. Still, I was unwilling to leave behind earlier lessons in the technical disciplinary approach to image-making I associated with film-based
photography. I found that digital imaging requires the same dedication to technical skill.

The camera I worked with used a tricolor filter wheel to take three separate photographs: a red, a green, and a blue. Each record of the subject is subsequently combined digitally to create a final full color image. Because three separate exposures are necessary, the cameras are primarily used in the studio for still lifes. I thought it would be interesting to photograph a subject with energy and motion. I decided to take the digital camera out into the natural world. The project evolved into a study of the natural elements (air, water, earth, and fire) as seen through the digital camera. The image-capturing system, while electronic, resembles that of early color photography. Because three separate exposures are needed to create a full-color image, movement within the frame will create some interesting effects. I began to see subjects, previously captured instantaneously on film, through a different process. Early studio tests revealed how the digital camera would react to variables in lighting and motion. However, the natural world possessed characteristics unlike any studio setting. I experienced an energetic anxiety upon the return of each location session. The expectations of what might appear on the monitor were similar to that of the traditional photographer awaiting the return of his or her processed film.

My experience taught me that the long-practiced technical discipline of traditional photography is still important in the digital world. I am still learning the tools and exploring new territory. I am learning to "see" in the digital realm, and I think and make decisions that are based on an open-minded familiarity with digital imaging systems.

MARGARET I feel that historic context plays a considerable role in the creative process. As an artist, I feel free to traverse time. In my own work, this may involve the appropriation of both the language and visual conventions of my creative predecessors.

I began to work with digital photography recently. As a photographer, I realized that to become fluent with the latest technological tools, I would have to enter a world where my images remain physically "abstract" throughout the creative process. That was a little problematic. I am used to putting my hands on the object as I work, especially when altering a photographically representative image. The sensation of paint on my hands and under my fingernails makes me feel like an artist. In the digital world, I cannot handle the image in the process of creation. I can handle the final output just as I can handle finished work in any other medium, but while a work is in process, the computer intervenes between myself and the image.

My first digitally produced body of work has grown out of a project begun during a summer artist’s residency. The original montages were created by hand, using 19th century approaches to the photographic process. I hand applied emulsions and exposed them in sunlight. The final images are large and painterly, a result of spreading the liquid emulsion along with various pigments onto paper with large brush strokes. The emerging softness creates ghostly black and white figures and a muted color palette.

I decided to explore reproduction of these same images utilizing digital tools. New to the digital imaging world, I chose familiar themes (the earlier montages) with which to begin. Not only was the process of creating the images transformed, but my sensibilities and expectations regarding the final outcome also changed. The new montages had to be scaled down considerably from the original size (16” x 20”) to a more manageable size (6” x 10”), because of the limits of storage space and processing time. The new images appeared sharper, more brilliantly colored, and more complex. They had significantly increased dynamic range.

I cannot say that I prefer one technique or one set of images over the other. Each set of tools calls forth its own vocabulary for critical discussion. The two approaches produced two different sets of images. For the original montages, I borrowed techniques from an earlier era but employed a late 20th
Failure Without Defeat

Disoriented from fatigue, I bang my head rising through a narrow rock path. Frustration. Exhaustion. I stab my finger with the needle. Dejection. Sadness. Motivation dives, yet a glimmer of hope can provide the inspiration to reach higher.
Does the mere mention of the word information make you whimper with anxiety? Mountains of raw, untreated data spill into your mental space, filling your mind with noise and washing away any sense of control you might have had. As knowledge consumers, we must become highly discriminatory of what we read if we are to make any sense of the information glut.

Subsequently, there is a growing demand for services that abstract and distill information into more succinct forms. As information becomes highly specialized, the publication industry has begun to target narrower audiences. We’ve always had Special Interest Publications (SIPs) for industry. Now we can find SIPs for all intents and purposes, including philosophy, religion, hobby, etc.

New forms of media provide additional vehicles for the transport of SIPs. However, the printed piece has not been untouched in our communications evolution. Fast-paced, non-linear, and highly specialized publications known as “Zines” (such as Raygun and Rochester’s Refrigerator) are redefining some of the conventions of the printed page. The new breed of publications—interactive CD ROM, on-line “electronic” publications, and interactive television—have also entered the specialized market, if they weren’t born there. Local BBSs (Bulletin Board Systems) put information on-line and often deal with concentrated local area information. Another example is public access television, which, upon the alleged arrival of the information superhighway, should encompass at least twenty-five percent of the programming available. CD ROM is enjoying popularity nowadays. Offering convenient data access, search-and-retrieval, and plenty of space for information storage; interactive CD ROM titles and publications are on the rise. One can find just about anything on CD ROM—from your favorite music (accompanied by digital video and graphics), to an encyclopedia or book on indoor gardening.

The key here is that all of these are part of a delivery system for information. The forms of technology will perpetually change, but our quest for specific knowledge and information will not.

There are benefits as well as drawbacks in store for the society that becomes information specific. One of the most obvious advantages is that the public will be able to choose their own specific brand of information. This will save the individual time, and put an end to lowest-common-denominator reporting and delivery of information. At the same time, there are serious disadvantages—possibly even dangerous outcomes—for the information savvy individual and society. The loss of interest in whatever lies outside of the chosen information parameters could lead to a splintered, narrow-minded culture.

The mass delivery of information has always been a shared experience. While the lowest common denominator factor is troubling, at least massively shared information forms a common ground amongst members of a society.
My work deals with issues of myth and ritual. I understand myth as a collection of symbols that act as motivators in culture. I understand the active symbol as having diffuse meaning: a meaning that is not specific enough to be understood on the conscious level, but evokes an emotional tonality in the subconscious. A symbol is dead, no longer functional, when it can be understood by the conscious.

Bonnie Coen
Birth
Life
Death
Transformation
Rebirth.

William Colgrove
The chance meeting of imaging technology and the rhythm of the nature. Upon reflection it appears to be so obvious.

Derek Scott Torrey
The introduction of stochastic screening into the electronic prepress market promises revolutionary possibilities in an area that has been dominated by conventional halftone screening for the past 100 years. Unlike previous methods which use variable dot sizes on a fixed grid, stochastic screening uses fixed dot sizes that are randomly placed to create tonal values. This technology is still in its developmental stages and needs additional industry testing.

Stochastic screening has many benefits, and the ability to render fine detail is indisputably one of its greatest advantages. Because of the fine micro-dot that it implements, stochastic images have much more detail and fidelity than those rendered conventionally. No longer are there fixed dot patterns, rosettes or other halftone artifacts that can degrade the detail quality of the image.

Because stochastic screening is capable of such fine detail rendering, lower input resolution scans can be used to achieve quality reproduction. This is important because scanning resolution has been limited by the halftone screen. Stochastic techniques have been shown to produce results from a 150 pixels per inch (ppi) image that are visually similar to a 300 ppi image halftoned at 150 lines per inch (lpi).

Another major advantage of stochastic screening is the elimination of moiré patterns because there are no screen angles or screen rulings. The rosette, which is considered acceptable in halfoning, no longer exists. Because of the random dot pattern, multiple plates can be laid on top of each other without interference patterns. Even images containing high frequency subjects (such as herringbones and other clothing patterns) that normally create image moiré, are no longer problematic with stochastic screening.

Because there are no screen angles, adding extra spot colors and bump plates is possible. This factor makes stochastic the leading screening technique in HiFi Color research. Companies like Davis Inc. are doing extensive research with 5, 6, and 7-color printing that takes advantage of this screening technology. Some printed samples that take advantage of extra plates have reported ink densities on paper approaching 3.0, which is very close to that of original photographs.

On the press, stochastic allows a quicker makeready due to less sensitivity to ink/water balance. The dot edge perimeter is greater than halftones, so ink changes have a less proportional effect on the dot coverage. This also allows greater latitude in ink density on the press.

Plugging of shadows and misregistration is less of a problem with stochastic screening. The lack of screen angles and interference patterns allows stochastic to have greater registration latitude. The only real effect that misregistration will have is a less sharp image. When this happens, the plates are moving the micro-dots away from their optimum placement, causing a slight degeneration in image information.

These benefits have earned this technology high marks. However, there are still serious concerns which need to be addressed. One of the greatest difficulties with the technology is dealing with its inherently small dot size which makes traditional proofing and plate-making difficult.

Many printers consider a 3 percent halftone dot on a 150 lpi screen to be a minimum printing dot, which is approximately 30 microns in diameter. Stochastic’s dots are even smaller than this, so it becomes evident that a dot smaller than 30 microns will be difficult to hold on press. Stochastic would
be like printing an image composed entirely of 1 or 2 percent halftone dots. Very strict controls need to be implemented when proofing and platemaking.

A problem that is associated with the small micron dot size is proofing. Critical exposure settings are necessary in order to reproduce a small dot size. There is very little latitude with a proofing system that utilizes the stochastic method. Toner-based proofing systems do not work well because the toner particles are too large for the fine detail.

The complex algorithms used to create stochastic images can also be a drawback. Even with a powerful RIP (raster image processor) users may experience slower RIP times due to the extra computation necessary. Some service providers have reported RIP times that are as much as 30 percent longer with stochastic screening methods as compared with conventional. Potentially, these slower times could be compensated for if lower input resolution images are used.

On press, one of the biggest issues is dot gain (i.e. a non-proportional increase in dot size). Dot gain is higher than conventional halftones because of the nature of the stochastic dot. With conventional screening, dot gain always increases as the screen frequency increases. The small micron dots that stochastic uses are similar to the small dots of high frequency screens. Dot gain for traditional screens on coated stock is, on average, about 18 percent. Comparative tests showed stochastic having 19 percent dot gain, with greater deviations reported in the midtone and shadow areas. Waterless printing, which has a very low dot gain to begin with, seems to be a good alternative for printing stochastic in situations where dot gain is critical.

It is obvious that stochastic screening offers some significant advantages. But how viable is it for printers to offer stochastic screening today? The real answer to these questions depends on the need for quality and the willingness to pay for it. The print quality surpasses conventional screening technologies in so many instances that it will be the natural route for some people to choose.

Photographers in particular should be excited about this new alternative. It is an opportunity to create reproductions of their original images with a continuous tone quality, while using lower input resolutions. Thus, huge image files will no longer be necessary, allowing greater efficiency in storage and image manipulation.

For many common applications, stochastic may be deemed unnecessary. The added attention to control that needs to take place for stochastic to work consistently may not be practical for an industry that has existed almost solely on the halftone. The initial cost and testing factors that are necessary to start using stochastic may not be appropriate for a business that is already doing well with halftoning. The difficulties of proofing and platemaking can easily outweigh stochastic's advantages in a market that does not require its quality. Critics argue that stochastic will not become the end-all solution. It will become one of a few new screening technologies that can be used as "the right tool for the right job." With so much to offer, stochastic screening may become the preferred tool of choice.


Agfa CristalRaster Technology (Agfa Corporation of America, 1993)
Revolution is inevitable to society. In modern history, each turn of the century has brought fundamental change to our lifestyles and working environments. With the twenty-first century fast approaching, we find ourselves in the midst of an information explosion that is sparking the transition to a very new age. In the professional world, the fields of telecommunications, information technology, printing, publishing, design, art and photography are redefining the visual communications industry—an industry that is increasingly dominant and influential in our media-based society. Businesses both compete and collaborate for a leadership position in this new age of information exchange.

Historically, photographers, designers, publishers and computer experts have worked in distinct subcultures. There was little reason to do otherwise because the tasks at hand and the skills necessary to accomplish them were, for the most part, mutually exclusive. Today, technology has changed the communications workplace such that these divisions cannot exist. We share language, tools, and environment with people outside our own area of expertise. Not only do we have to be proficient in our specialty, but we must also cross boundaries into other disciplines within the production environment. Individuals, companies and corporations that do not respond to this trend of convergence will find it difficult to survive.

To reflect these changing needs in industry, educational environments need to restructure their curricula. In order to prosper in our increasingly eclectic environment, we must be armed with the tools of a multidisciplinary education. This requires active, open-door communications amongst once compartmentalized disciplines. Implementing this approach to education is paramount in shaping individuals who will be valued in industry for their specific knowledge and general versatility; specialists will always be valued, but generalists will be most able to rapidly adapt to changing environments.

Many students come to the Rochester Institute of Technology to interact with people from various disciplines. Students gain a broad understanding of how technology is applied outside their respective field of study. The ESPRIT '94 project is a collaboration of students from all schools within R.I.T.'s College of Imaging Arts and Sciences. This college is composed of the Schools of Photography, Printing, Art and Design, Imaging Science, and American Crafts. Educational institutions with vision will restructure their curricula to provide multidisciplinary opportunities like the ESPRIT '94 production class. This exposure to diverse perspectives expands the scope of the educational experience. Industry will harvest well-prepared individuals from these visionary environments that don't build walls between disciplines.