
TWO

—
Building the UDK*i*
—

Prologue

Browsing the planet via Mosaic

Click.

You are at the University of Arizona, scanning pictures of the far side of the moon snapped by the lunar orbital probe Clementine.

Click.

Now you're in the files of the Securities and Exchange Commission browsing through recently submitted financial documents from dozens of public companies.

Click once more.

Welcome to a break room at Cambridge University in England, where you are looking at the status of the computer science department's coffee pot.

With each click of a computer mouse, you're somewhere else on the planet, being alternately informed, educated or entertained. Your vehicle is NCSA Mosaic, a free piece of software developed with U.S. tax dollars, that renders the notoriously labyrinthine collection of computers called the Internet infinitely more navigable.

Houston Chronicle
April 6, 1994

My experience with the Internet began in November, 1993, when a psychology classmate and I attempted to obtain stimuli for a visual search experiment for a class project. We needed the stimuli from Irving Biederman's Recognition-By-Component experiments in a matter of days and we needed it in a format we could edit. Scans and photocopies would not work. Within a day, we had tracked down Biederman's assistant at Stanford on the Internet and messaged him for the stimuli. He responded in a day or two and, after negotiating a price, sent 60 files of stimuli attached to a message, via e-mail. My classmate happened to be a consultant at the computer center and was more than fluent on the Internet — he was an artist. He loaded two disks with public domain software, spent a couple of hours setting up my Mac at home, taught me the basics, and helped me get accounts set up on the KU system. The first days experimenting with the 'net captured my imagination. I was intrigued by the power of instantaneous information and data delivery. I know using the Internet had a powerful effect on our grade. Today, file transfer is a mundane task only noticed when formats or compression don't work. Less than six months after my first experience in this "new frontier" I have become immersed in the electronic community, fluent with "netiquette" and even acquired the title of "Internet surfer" among my professional colleagues in the Society of Newspaper Design.

The point is, fluency on the Internet does not take as long as normal language acquisition, despite what non-users may think. By the time I began a winter internship at Knight-Ridder's Information Design Laboratory (IDL) in Boulder, I had three accounts on servers at the University of Kansas computer center and had begun to explore an information browser called Mosaic developed by NCSA at

The Internet, which connects over 20 million users, is growing exponentially and has captured the hearts and minds of the romantic and capitalistic alike since being anointed the "information superhighway."

HTML (Hypertext Meta-language) Documents to be viewed in Mosaic are written in a simple text editor using a language called HTML.

This simple scripting language allows links to be established between the viewed document and documents on the server, or on a remote server elsewhere on the Internet.

the University of Illinois for Macintosh, Windows and Unix platforms. Mosaic looked like it could support the requirements of an on-line newspaper that would intrigue typical readers. It allowed the designer to structure and organize information and, to a limited degree, develop a consistent look to the product while allowing the user freedom to tailor the look to his or her liking. It was also free.



The House Metaphor

This chapter emphasizes the parallels between building an information structure and building a home by titling sections in construction terminology:

1. Partnerships and Planning
2. Blueprints and Foundation
3. The Walls Go Up!
4. Wired
5. Details, Details, Details
6. Testing and Analysis

Introduction

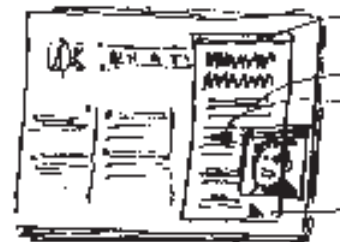
From January 3 to 7, I designed screen interfaces for a proposed electronic newspaper at IDL. The first two days were spent listing all of the components and discussing the information structure. A flow chart was developed to illustrate each component's position relative to others. The chart revealed how a user would navigate from one part of the paper to another. The structure retained the flavor of a traditional paper (front page, sections and stories.) Grids were developed in Aldus Freehand and prototype screens were begun. As each screen was developed, shortcomings in our blueprint became apparent, so the design process included a continuous tweaking of the information architecture. By Friday, I had completed 14 prototype pages including a front page, a section front, a complete story with all of its links and "inside pages" with advertising.

Working with IDL director Roger Fidler on the designs was inspirational and I gained confidence. One day, during a break, I made some sketches of screens for an on-line *Kansan* crudely based on what I was learning. I realized it wouldn't be hard to create a model of the student newspaper, *The University Daily Kansan*, for on-line delivery based on the principles I learned at the IDL. Moreover, I received an invitation to return to the IDL permanently upon completion of my degree. Motivated to finish my project by May, I met with my advisory committee for my master's project and laid out plans to produce an electronic edition of the *University Daily Kansan*.

My first impressions of the Internet:

- 1) It seemed to be a natural place for a college newspaper because it is free to university students and, if the WWW grew in popularity as expected, Mosaic would become the ubiquitous browser for surfers like me.
- 2) It had an enormous viewing audience with a potentially endless source or demand for information.
- 3) It could become a vast information wasteland if people couldn't find what they were looking for quickly. People would need help navigating through the infinite information.

Early sketches for electronic Kansan



TOP: stories in columnar format is a descension from the IDL prototypes. **BOTTOM:** bold hyperlinks and full-motion video; multiple layers of information.

Part 1: Partnerships and Planning

Some college newspapers on the Internet:

On Mosaic

The Tech,
M.I.T
<http://the-tech.mit.edu/>

Nadine Magazine
Yale
http://www.cis.yale.edu/~donham/nadine/home_page.html

The Oak Leaf
Santa Rosa Junior College
<http://quercas.santarosa.edu/>

On Gopher (partial list)

Minnesota Daily Newspaper
University of Minnesota
gopher://gopher.tc.umn.edu/11/News/Minnesota%20Daily

Daily Illini Newspaper
University of Illinois
gopher://harpoon.cso.uiuc.edu/11/UI/DI

The Bucknellian
Bucknell University
gopher://gopher.bucknell.edu/11/departments/Bucknellian

Wisconsin Week
University of Wisc., Madison
gopher://gopher.adp.wisc.edu/11/.news/.week

Daily Texan - University of Texas
[gopher://bongo.cc.utexas.edu/11/ut-info/texan](http://bongo.cc.utexas.edu/11/ut-info/texan)

Other Newspapers on Mosaic

Palo Alto (Calif.) Weekly
<http://www.service.com/PAW/home.html>

Industrial Design student Matt Zellmer appeared at my office door at the start of the spring semester. We shared a common advisor, Professor Richard Branham, who told him of my plans to develop an electronic newspaper. He had proposed an almost identical project for his degree. We discussed the goals of the project and concluded that we had similar visions of the product and that the task easily justified two people. For the next month, we met at least once a week and attempted to define the problem, draw up a timetable, and plot a course for completion of the project. We agreed that to really understand the implications of an electronic newspaper we would need to build a working model first. In order to do that, we would need some help from the computer center.

I met with Charles Rezac at the computer center during the first week of classes and explained my plan. As a founder of *KU Facts*, the on-line Campus-Wide Information Service (CWIS), he had experience in information services on the Internet and expressed some enthusiasm for the project. After our discussion, he said the *Kansan* could probably be on-line by spring break. He also suggested I become familiar with other college newspapers on the Internet. Almost all were based on Gopher servers, a hyper-text system devoid of any control over presentation. Most were sporadic in publication, probably because of the difficulty of inputting newspaper stories into a properly coded format.

I wanted to use Mosaic and not gopher because Mosaic was easier to use and allowed images, video and sound to be integrated into hyperlinked text. Rezac said that Mosaic was a good choice because it used a simple, universal document scripting language called HTML that could be read by Mosaic as well as other text-based browsers such as Telnet.

Zellmer bio

Born: 12/14/68

B.F.A. Industrial Design, Univ. of Kansas, 1994

Student member:

Industrial Design Society of America, 1991-present

Background:

Liberal arts, Architecture, photography and design.

Interests:

Information design, human factors, research and testing.

Although it was easy to program for Mosaic, the challenge would be the development of conversion scripts to convert Kansan stories from Quark XPress into HTML documents. I delivered a full issue of the Kansan on disk to him a few days later and some prototype pages I had created in Freehand so he could see how I wanted the product to look. We discussed aesthetics and structure of information with respect to the limitations of Mosaic software. A number of limitations were brought to my knowledge.

For instance, one of the most important features of Mosaic is also a tremendous constraint for designers — user-defined typography. Users can customize Mosaic's look by choosing typefaces and type sizes. The designer can still assign portions of text to different levels (i.e. headers) to achieve hierarchy. So, normal text may be "normal," a headline may be "header2" and a deck may be "header3," which indicates that the headline should be slightly larger than the deck which should be larger than the normal type. However, there is no guarantee that the user will set the HTML style tags the way the designer expects. It is possible for a user to set all type to the same face and same size so headlines and body type all look alike.

Mosaic's limitations also affect the grid structure of the display. Columns of text are impossible and designers have only crude control of juxtaposition of text and graphics. Our early prototypes were based on multi-columnar grids because they seemed more akin to traditional newspapers, it seemed to make the text more legible, and allowed more flexibility in positioning of elements.

Also, images can take a long time to download when they are large. For that reason, I made certain that inset images were never larger than 50K (kilobytes). At that size, images would download in about 15 seconds using a 14,400 baud modem. Sounds take even longer and full-motion video is excruciatingly time-consuming to download (6 minutes for 30 seconds.) For this reason, sound and video are rarely

A grand mistake

In February, Zellmer and I thought that we would create the interactive model of the newspaper using MacroMedia Authorware. The program, which retailed for more than \$6,000 was discounted for students and we each purchased a copy for \$1,000. Authorware was touted as an easy-to-use, super-powerful information architecture program.

While it may have been easy to use, I started working in HTML for Mosaic and found it easier. And the advantage was clear: Many people were using mosaic (free) on the Internet already; few people were using Authorware (not free) and it was just a modeling program. At best, it would have only simulated an interactive newspaper.

Mosaic setup

“Out of the box,” Mosaic defaults to Helvetica and Times for displaying text which yeilds hard-to-read, boring screens. Users may redefine the typefaces.

The UDKi grid on Mosaic

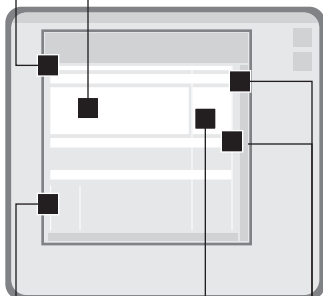
Screens, like pages in a real newspaper, must adhere to a grid for consistency. The UDKi screens feature the following features in approximately the same locations.

UDKi plate

This signature folio appears at the top of every UDKi document.

Flag

Each service and section has a flag that may be linked (as in pg 1).



Advertising

Space for sponsors' "window" to the right of the flag on service and section fronts.

Service- and Sectionbar

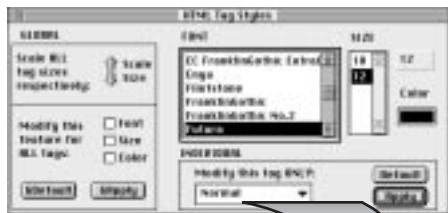
Horizontal bar of icons that provide a link to services and sections by clicking on the icon.

Photographs

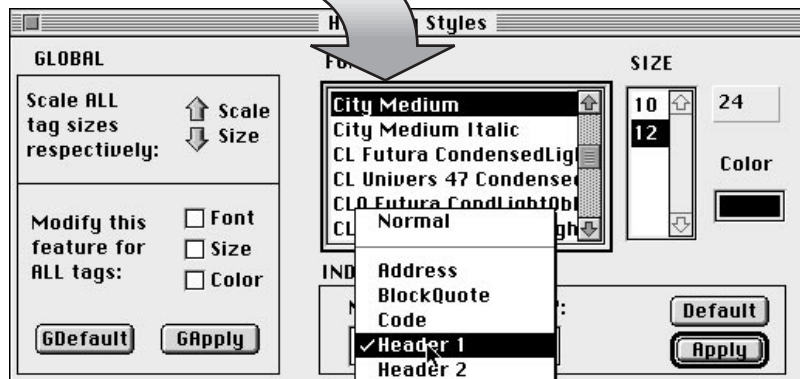
Every photograph is one inch wide to insure consistent physical and file size.

Suggested style selections for Mosaic

The user has the power to make text display in Mosaic exciting and legible, or bland and illegible. Of course, it can be bland and legible too... but why? The captured screen images displayed in this document are from my computer with Mosaic customized for good legibility and contrast. The decisions were not governed by research — only my personal tastes.



The fonts, colors and sizes for text display are selected from this window in Mosaic.



Text settings

level	font	size
normal	futura	12
block quote	chicago	10
code	monaco	10
header1	city medium	24
header2	impressum	18
header3	futura	12
header4	impressum	10
header5	futura	10
header6	futura	10
keyboard	Orator	18
list	futura	12
preformatted	monaco	9
sample	monaco	9
typewriter	monaco	9

Of all of these possible levels, only a few are commonly used. They are normal, header1, header2, list and maybe typewriter.

Header1: usually reserved for introductory text on service pages (see KU Home.)

Header2: headlines

Normal: Body type

Typewriter: used at the end of files for technical information including intellectual ownership.



used and, when they are, they are edited tightly. They will be incorporated into the UDKi with more frequency as faster modems become affordable.

Through discussions about these issues, the newspaper took shape and I got a better idea of how the Kansan could fit into the university information structure. Rezac and I walked down the hall and prepared the Kansan account for experimentation.

Zellmer and I met with Rezac about once a week for the first five weeks of the semester. We were interested in his progress because we knew we needed a working model before we could test user performance on the interface and structure. We were both under the impression that Rezac was going to do the programming and create the model according to my prototypes. And so we waited and diddled with the prototypes, making adjustments and refinements which were really just alterations in the look and arrangement of items.

Our plan, which was documented in discussions and post-it notes but never thoroughly defined, went something like this: 1) build a model of the newspaper, 2) test user performance and refine, 3) document the development process and develop a strategy for producing the product daily and marketing and promoting the service to students and alumni.

First prototypes



The first mock up of the Kansan online created in Freehand;



First revisions moved away from columns of text to more of a list because of Mosaic's limits.

Part 2: Blueprints and Foundation

In early February, my schedule tightened. Meetings were often interrupted or canceled because of problems at the *Kansan* such as February 2 when the *Kansan's* biggest file server experienced “melt-down.” The crash was cataclysmic, destroying 600mb of data and required round-the-clock resuscitation for several days to keep the paper publishing. Rezac still had not created any Mosaic documents and we were getting concerned. I wanted to give him more time and decided to provide more accurate interface prototypes.

First generation



1) prototype in Mosaic shell.



2) flag refined; includes ads.



3) Section front : brief of story, links to related information.



4) Story: embedded photos, links.

Using the Macintosh’s built-in screen capture feature, I captured a screen while Mosaic was running, stripped out the original contents in Adobe Photoshop and replaced it with the text and graphics in Aldus Freehand. Within two days, I produced a front page, a sports page, a story screen, and a graphic. In addition, these designs removed features not possible in Mosaic such as columns of text. I delivered the new prototypes to Rezac and tried to make sure he had everything he needed. At the same time I was getting more familiar with Mosaic and some of the services available on the Internet. Zellmer and I explored probably more than one hundred different WWW sites in February and I saved interesting ones in my hotlist.

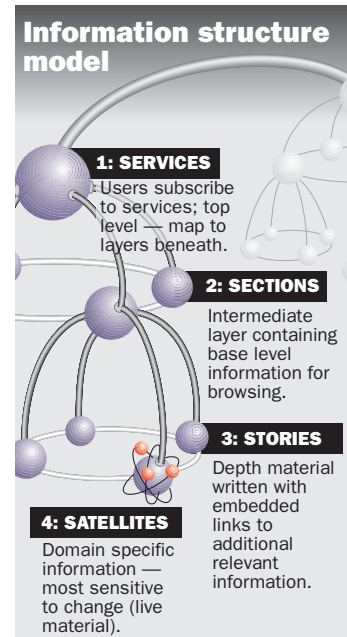
Through the grapevine, I learned the address (URL) where Sun Microsystems had set up an experimental Web server for Winter Olympics results. Everyone I showed was intrigued by this service. I wanted to save the address in a HTML document so I wouldn’t have to type the lengthy address each time I wanted to check results. I snooped around the Mosaic folder and found a file called “my home page” which was a starter HTML document with slots to add more material. I opened the document in teachtext, examined the coding and tried to figure out the syntax. I boldly changed the title to “Bill’s Rockin’ Home Page,”

saved it under a different name and promptly tried it out. It worked. After about an hour of experimentation, I successfully added the address to the Lilihammer Olympics server. After that night, Mosaic never seemed as mysterious. I understood how links worked and the coding behind them. With more practice, I figured I could do it myself.

While I was dissecting HTML files through the wee hours of the morning, Zellmer was getting restless. We weren't making much visible progress. Constant interruptions broke my concentration and I was working in spurts, usually without him, on diagrams of the information structure. They weren't very good. Rezac still hadn't made any progress on the model. It became clear that Zellmer and I needed to have a summit to discuss progress—or, the lack thereof — and possibly redirect the project.

About 5 p.m. February 19, Zellmer and I sneaked off to Watson library where there was no phone and we could spread out everything and work through the problems uninterrupted. We never really addressed the progress problem and, instead, began to discuss my fruitless weeks of uninspired and flawed information structures. Our discussion culminated in an information structure that really worked. The simple three-dimensional, three-layered structure for information was a real breakthrough. The structure is hierarchical, yet allows smooth navigation both vertically (depth) and horizontally (lateral). It resembles proposed diagrams of the human semantic network. In our model, services are the top level, then sections and finally stories. Satellite documents may be attached to stories. This was an evolutionary leap from my previous model which was based on a backbone and appendages. Suddenly, with the new model, I could move forward on the interface design.

During the last week of February, I made yet another revision to the prototypes. I was not satisfied with the look of the flag or the buttons to move from section to section. I



Overview

The model, loosely based on semantic network models, is hierarchically structured, but does not limit access by level. Information must be linked to a document at least one level above. However, users can skip levels as much as the designer allows.

For instance, a satellite may be accessible from the service, section as well as story level. Usually, only the most important stories or satellites are allowed to jump levels.

The start of a new generation



The flag is larger, surrounded by icons to direct the user to services and sections. One ad is fixed at the top of the page.

decided that an icon system might seem more friendly. Mosaic supported a “map” feature which allowed the developer to designate areas of an image to be linked to different locations. The user could click on different parts of an image (service- or sectionbar) and go to different loca-

The next generation



Service: The Kansan front page



Section: Sports page with ad



Story: Access to the story via either section or service (pg 1).



Satellite: supplementary info.



The “sectionbar” of the UDKi.

tions. The new prototypes also included a “sponsor” or advertisement on each of the section fronts and the front page. At the time I included it in the design, I only knew that advertising would be an issue that I should confront. I certainly had not resolved it and left the problem for the model. The new designs also established an identity and a consistent look. A logo for *The University Daily Kansan Interactive* (UDKi) was designed and used at the end of each document. Finally, I refined the use of section dividers, headlines and briefs on section fronts and the links to satellite files.

Part 3: The Walls Go Up!

By the first week of March, I was beginning to get pretty fluent on the Internet. I had been conversing with friends around the country who were also on the ‘net and even getting good at exploring File Transfer Protocol (FTP) sites around the world. What had started in late December as trial and error was now becoming a graceful gavotte through myriad government and educational services. I started downloading interesting Mosaic files from Web servers and dissected them to see how they worked.

Rezac had run into a snag converting Quark XPress files to Microsoft Word the week earlier and still had not made any progress when I met with him. I told him what I had been doing and he directed me to several on-line help files and manuals on HTML and invited me to a two-hour session on “Preparing Info for the CWIS.” I never used the on-line

About FTPs
 FTPs are repositories of software on the Internet.

Programs, such as Fetch and Mosaic, make it easy for users to log onto a FTP site and browse through directories for useful utilities, games, fonts, graphics and updates for system software or commercial programs.

manuals. It was not and is not the way I work. I did, however, attend the two-hour session that he taught on Tuesday, March 8 from 10 a.m. to noon and took good notes. I went home that evening and wrote the first HTML documents for the UDKi. I tested them using Mosaic on my local drive and they worked. I was able to open photos by clicking on linked items in Mosaic and even jump from one page to another and back again. It was a simple start. By 2 a.m. I had created about a dozen linked pages, but I could not save Freehand graphics into the GIF format that Mosaic could read. I sent a note to a friend at the IDL asking if he knew of any way to convert graphics to GIF format. The next morning he had the answer for me: a public domain program called GIF Converter.

Later that afternoon, I decided to go home early and keep building on the base that I had started the night before. I added the graphic files and more stories and photos. In ten short hours, I had built links to all of the news stories and photos from the February 3 issue of the *Kansan*. Thursday, I demonstrated the prototype to Zellmer and anyone else who would watch. I told everyone that it was easy to do and bragged that I would have Friday's entire paper done by Monday. I worked until 4 a.m. Friday night, got up early Saturday, and finished the paper by noon. I showed it off again on Monday and set up a meeting with Rezac for later in the week.

I think Rezac was surprised to see so much done. He set up a directory in the *Kansan* account and uploaded my files to the system where they were available on-line for testing. I tested it from home that night and then sent a message to my friends in Boulder with the address and asked for their comments. They liked it.

Spring break was approaching, and we finally had a working model.

Designing for Mosaic: Limitations of HTML

I was already designing with Mosaic's limits in mind when I created the Freehand prototypes.

But, when I started coding, I had to work completely within the constraints of HTML, the document scripting language.



Some of the changes:

Photo placement,

Columns:

allows only one, **Typography:** allows users to change typeface or size, but designer can design text to be displayed at different levels.

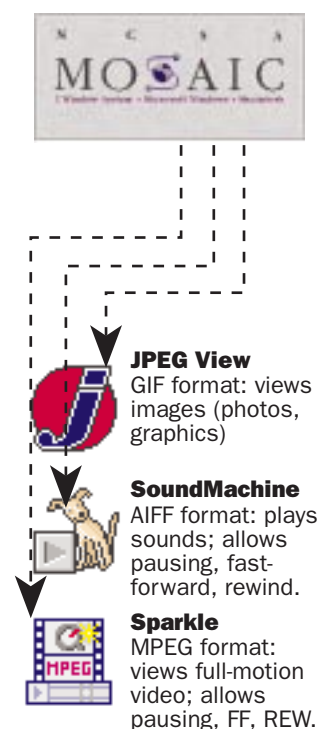
Color: User controls link color; screen resolution varies from terminal to terminal so 256 colors was the lowest common denominator.

Screen size: a 13-inch monitor was assumed to be the base, but it appears fine on a power-book screen.

Part 4: Wired.

Mosaic and external viewers

Mosaic works in combination with three other programs to provide a multimedia presentation.



How it works

An HTML document may contain links to images, sounds or full-motion video. When a link is activated to one of these files, another program (external viewer) is automatically launched so the contents of the file may be observed.

Even though the stories, photos and graphics were linked and working, there were still some unresolved issues. The paper was at the alpha stage; the basic features were working but the bells and whistles still eluded me. For instance, no matter how I tried, I could not figure out how to get the map feature working. And I wanted to include sound and video. Eventually I figured out the format for sound, but converting a quicktime movie to MPEG format took longer. However, by the end of April, a new version of Sparkle, a video viewing program that works with Mosaic, allowed Quicktime movies to be saved as MPEG (a cross-platform format) movies.

Zellmer and I escaped to Clinton Lake one sunny afternoon in Mid-March to have a few uninterrupted minutes of thought. We agreed that the map feature that allowed users to click on the icon and be transported to the appropriate page was critical. Testing could not begin until that was resolved. And so I entered spring break believing that I would fix that first and then move on to some smaller issues. Unfortunately, it turned out that the map feature did not work on a local terminal, which was how I was testing it. It has to be on a UNIX server and refer to a special configuration file in order to work. So spring break, which held such promise to be a boom period for the project, became a bust. During the week, I added more pages including a personal page for myself, a home page for the school of journalism and sound files. I also created the Weather Service home page.

Monday, after break, I contacted Rezac and set up a meeting to get the map fixed. He uploaded the new files and, by watching him work, I started to learn how to edit files on the server using Telnet. We talked about the prospect of generating revenue from a product such as this. When the

project started in January, we had discussed the possibilities of classified advertising and on-line menus. But I was beginning to formulate some specific ideas for advertising in the UDKi. For instance, I envisioned users browsing through products in a “virtual store” as they would topics on a page. The user could click on a picture of a product, acquire information about it and order the product by filling out a form on screen. For stores to take advantage of this service, they would need either a computer or a fax machine to receive the order and a procedure for sending merchandise to consumers.

Rezac said it was possible to send a fax to a business directly from Mosaic if a fax server was set up to spool and send. Also, we could ensure that only people on campus saw food advertising to avoid faxes such as pizza deliveries to Purdue or Oxford University. However, businesses like Kief’s Audio/Visual that already have an established mail order business, would like to have a global audience. I met with John Kiefer, owner of Kief’s, because I thought his store would provide a good test for the UDKi. He was extremely enthusiastic and said he was already getting orders from people who had read about Kief’s on lists on the Internet. Although Kief’s customers base is unique, I believe most of the services and features are transferrable to other clients.

I was ready to start fixing bugs and adding features to the UDKi when I discovered my account did not give me permission to write to the folder. On April 1, I met with Rezac again and we had the Kansan account modified so I could upload and edit files. Then we went to work on the map configuration file and by the time we were done that evening, the map was working and I was able to add files without his help. I mentioned that it was a shame that our University didn’t have a home page like many other schools. It seemed like a valuable contribution since home pages provide the first impression of a university for Internet travelers and organize the campus services. Charles told me if I made one, he would give me credit. Sunday night, I built

The University Daily Kansan Interactive

The front page of the *Kansan* as seen in Mosaic online.



Address:

<http://kuhttp.cc.ukans.edu/cwis/UDK/UDKpg1.html>

The University of Kansas Home Page

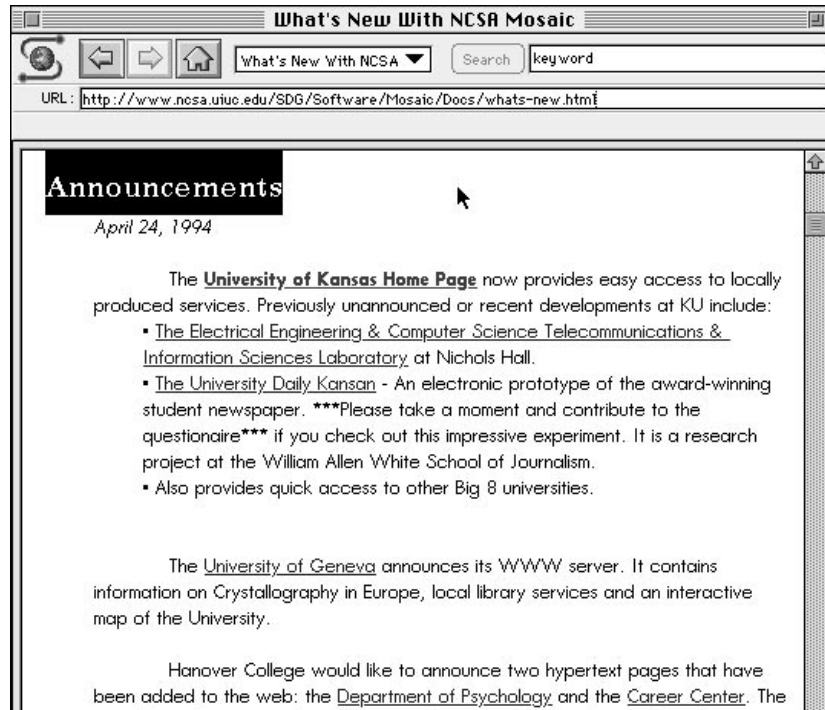
When users start up Mosaic for the first time, the preference is set to go to this home page which offers easy access to services at KU as well as other Big 8 schools and NCSA/WWW servers.



Address:

<http://kuhttp.cc.ukans.edu/cwis/UDK/KUhome/KUHome.html>

The photographic tour of campus came from a video I made late in March by walking around campus and filming various buildings with my parents' videocamera. I used Fusion-Recorder to capture the video and ScreenPlay to grab single "still" frames.



the home page for the University of Kansas in about two hours.

I put the KU Home on-line Monday and added more information during the next day or two. Friday, April 8, I sent a message to NCSA asking to be included in the index and "what's new" list.

5. Details, Details, Details

I spent the next week refining and adding features such as a live link to the National Weather Service forecast on the weather page. On Monday, April 25, the KU Home Page and *University Daily Kansan Interactive* were announced on the "what's new" list on Mosaic. Immediately I began to get feedback. I received messages about the UDKi and the University's home page including praise and suggestions. I even made some changes as a result of these suggestions.

There were an number of loose ends that had not been finished during the regular production of the online product. So, the last week of April, I added documents to the services with orphan links. The classified, archive and ad direc-

tory service pages were designed at the same time and have a common look. Service pages created by others, such as KU Facts, would look a bit different, but I decided that consistency was important among the pages I developed. A new ad was placed on Page One with a link to Kief's home page. A link to our survey was placed at the top of Page One. The "contribute," "tomorrow," and "search" buttons were moved to the bottom of the page and another section bar was added for access to sections without scrolling to the top of the page. I also changed the graphics for the section links to make them more consistent.

Development of the interactive form was delayed as was the fax feature and our forum page for the opinion page. These features are still planned but not available at the time of this writing. The main reason for the delay is that the "forms" feature for Mosaic is only available on the Windows and Unix versions. A new version for the Mac is due around the first of May, 1994, and will include the forms feature which will allow the survey and forum pages to become interactive. The fax feature is more complex and will require a dedicated server running Mac HTTP with a fax/modem connected to the system to allow an order to be filled out on screen and faxed with the click of a button.

Also delayed were scripts to automate the online publication process, which are crucial to implementation of the project. At completion of this report, Rezac and I were working in AppleScript to create routines that will perform tedious and burdensome tasks such as conversion of stories in XPress or Word into HTML documents. The automation is simple as long as XPress documents conform to strict standards.

One of the main goals of the project was to take the technology out of the way of the journalists and allow them to focus on editorial decisions. Another goal is to take full advantage of the immediate nature of this medium. The scripts should simplify the process so students can easily

First feedback about UDKi

Date: Mon, 25 Apr 1994 17:54:49 -0400
From: Jeremy Hylton <jeremy@tech.mit.edu>
To: KANSAN@ukanaix.cc.ukans.edu
Subject: Nice to see you on-line

I run a college newspaper server at MIT, and just wanted to say hello. It's nice to see another paper on the Web. You've got some very nice graphics.

I also have a suggestion for your server. I think you should make that date of the material you're looking at clearer. The single line at the top that says March 11 is easy to miss. I assume you're intending to provide the most current issue as the home page, but I'm curious to see what a back issue would look like; I don't see a way to read them now, but I understand that you're just getting started.

regards,
jeremy

create and publish information as it becomes available.

The survey

The following questions were used to survey users.
(See appendix for full survey)

Your age:

Your sex: Male Female

Your major:

1. How experienced are you with computers?
2. Have you read any other electronic newspapers/publications?
3. Was it easy to find information that you wanted in the UDKi?
4. Do you think that newspapers should be pursuing this approach to information delivery?
5. If the UDKi were available every day, would you read it more or less often than the traditional newspaper?

Please mark the circle between the word pairs that best describes the UDKi.

easy to read	difficult to read
enjoyable	frustrating
clear	confusing
attractive	unattractive
inviting	intimidating
organized	disorganized
valuable	worthless
credible	not credible

What did you like or dislike about the UDKi?

Is there anything you would add or change?

Other comments or suggestions: (Use the back if necessary)

