Involving Participation:
CRISP at the University of Michigan, 1972-1999
exhibit manual

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virtual museum project
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the university of
MICHIGAN
MUSEUM
PROJECT
histories of information
technology

VIRTUAL

EXHIBIT CONTENT

Module Vision

The exhibit structure of the Virtual Museum was designed according to three thematic modules, which establish the main focus areas of the museum. *Involving Participation* fits into the module entitled, "Mechanisms of Learning." "Mechanisms of Learning" features exhibits about information technologies that have contributed to the University of Michigan as a place of teaching and learning. A primary motivation of exhibits within this module will be to investigate the relationship between the development of information technology and the educational activities of the University. The module will take up instances where new systems, ideas, and tools have have resulted from collaborations between students and faculty or staff, or have had a particular impact on student experiences of the university. The focus of the module will not be on the technologies themselves, but rather on the culture of their design, implementation, and use with special emphasis on resulting changes in the learning and teaching environment at Michigan.

The target audiences for this module will be current University students, both in IT and other fields, and University alumni. In addition to student alumni, the exhibits in this module should have relevance to former staff and faculty participants in the topics on display.

Exhibit Topic: CRISP

Ask a Michigan alumnus who graduated between 1975 and 1999 about CRISP, and you will most likely see a twinkle of remembrance flash across their face. What exactly this twinkle represents—horrific memories of eternal lines and malfunctioning terminals, or fond nostalgia for the series of routines that became rites of passage for all Michigan students across departments and class years—depends on who you ask. Nonetheless, there is a discernable spark of recognition, often followed by a story about a system which became a unique, if quirky, facet of Michigan students' experiences for over 25 years.

The reasons for choosing CRISP for a first exhibit topic extend beyond its nostalgia value. While the energy it tends to elicit from alumni will hopefully generate enthusiasm for the exhibit, CRISP also fits well into the goals of the Mechanisms of Learning module. As one of the first initiatives which required the active involvement of students, staff, and faculty in the automation of the university's administrative functions, CRISP provides a lens through which to examine responses to new technology across different parts of the Michigan community. In addition, it's long tenure allows us to look at the university's changing expectations and uses for computerized systems, and to chronicle the development of the IT

environment at Michigan over a thirty year period.

Virtual Media

The most fascinating and lively information about CRISP comes from accounts by people who interacted with the system in different ways and who can reflect on the social contexts in which it was designed and used. The exhibit will therefore employ digital audio in the form of short oral histories contributed by alumni, staff, and faculty as its focal point. The exhibit will be web-based, and will feature visual records of CRISP from the Bentley Historical Library, as well as text to provide narrative structure to the audio components of the site. Although the exhibit is web-based, it contains elements such as tours and annotated archival research guides which promote a connection with the physical resources available for learning about CRISP at Michigan.

Exhibit Title

The working title for the exhibit is *Involving Participation*, a reference to the official meaning of the CRISP acronym: Computerized Registration Involving Student Participation. *Involving Participation* emphasizes the important fact that CRISP's design, implementation, and use required the participation of individuals from all areas of the University, and highlights the exhibit's focus on the stories of these participants.

Exhibit Structure

The CRISP exhibit is structured according to three major themes. For now, these themes are called "galleries". Galleries can be thought of as either single web pages, or a series of pages within a single application or frame. The galleries each investigate a distinct theme, providing visitors with a rounded sense of what CRISP was, how it worked within the university community, and its significance today. The themes are:

      1. TEACHING: CRISP resulted from a particular approach to teaching, in which students had the opportunity to engage with challenges that affected their university.

      2. LEARNING: CRISP required the active participation of a wide range of individuals, involving students, faculty, and staff in the introduction of information technology to the university environment.

      3. REMEMBERING: CRISP became a unique cultural icon for the University of Michigan, and a source of identification for alumni across multiple generations.

Galleries are contained within a main framing site which provides access to each,

as well as general resources and a timeline (also accessible through individual galleries). Each gallery should be visually distinct and discernibly unite all of its respective content, such that they may be visited out of sequence and make sense as an independent units within the larger exhibit.

GALLERY ONE

Content Essay

In 1971 University of Michigan administrators began thinking about the possibilities for automating the processes by which students enrolled in classes.[1] The system in place at the time involved massive pre-classification events at the Waterman Gymnasium, where tables for each department were set up, and students stood in line to collect punch cards for each course they wanted. After collecting the requisite cards, students would hand them over to the Registrar's Office, which processed the cards and generated schedules. An average of 25% of all of these schedules had to be returned to students due to overfilled courses and time changes.[2] The University Record wrote of the ritual, "Prior to the advent of CRISP, [a] student would have vanished into the corridors and chambers of Waterman Gymnasium, emerging in (hopefully) two hours, penciled tentative schedule in hand, confused, and knowing the building as well as the architect who designed it."[3]

Bernard Galler, a professor in the Computer and Communication Studies Department, saw in this problem an excellent assignment for his graduate programming course, CCS 673. The idea for 673-- a class that focused on real-world problem-solving-- had already been developed by Galler, along with his colleagues Arden and Flanigan, in a presentation for the International Federation of Information Processing in Ljubljana in 1971. Their paper, "An Advanced System Programming Course"—published in *Information Processing* in 1972—describes a model for graduate instruction which simulates the environment of an industrial programming project, where a partially defined problem is given, and students both manage and participate in the design process.[4] Student registration provided an

1   "CRISP: An Interactive Student Registration System" by Galler, R. Wagman, J. Bravatto, G. Lift, G. Kern, V. Berstis, and E. Munn (January 24, 1973). Bernard Galler Papers, "CRISP 1971-73 (3 of 3), Box 23, Bentley Historical Library.

2   "On-Line Classification: Report by the Computer Registration Committee" (March 1973) Bernard Galler Papers, "CRISP 1973 (3 of 3)", Box 24, Bentley Historical Library.

3   Edward C. Loyer, "Model for other systems nationwide; CRISP marks decade of 'easy' registration" *The University Record* 40.26 (April 8, 1985).

4   An Interview with Bernard A. Galler, conducted by Enid H Galler, August 16,

interesting challenge for students according to Galler: "the system currently in use reflects the historical pattern of growth in which small changes are superimposed on each other in response to demands from many different sources. Changes are difficult to implement, and their consequences difficult to predict."[5] Working on CRISP would give students programming experience, but also engage them with the inner workings of the university environment. Galler ensured that CRISP would be a collaborative effort by inviting representatives from the Data Systems Center (the unit responsible for student information databases) and the Counseling Office to be part of the design team, and to help acheive compatibility with the existing infrastructure.

First indications that computerized registration would become a unique symbol for Michigan can be seen in its name. The unlikely acronym, "CRISP" was coined by Galler in his 1971 proposal for the course, and originally stood for "Computerized Registration In Spite of Problems".[6] Galler remembered that during the course, students came up with the alternate title, "CRISIS", though what it stood for is unknown. Some reports tell that the finalized meaning for CRISP—Computerized Registration Involving Student Participation—was brought on by complaints from the Data Systems Center, which found "In Spite of Problems" too silly a title for the University's official registration system.[7] However, it seems that Galler himself may have called for the change. In a 1972 letter to Lyle Baack at DSC he writes, "I suggest that henceforth we adopt the interpretation of CRISP to be: Computerized Registration Involving Student Participation. The previous interpretation (…in spite of problems) is too informal for the serious effort we are now undertaking."[8] Despite the attempt at seriousness, the name "CRISP" provided the platform for many years of puns and spoofs, including Galler's 1975 quip, "Maybe eventually we can claim that it Can Really Inspire Students to Perform!"[9]

1991, pg. 44. Charles Babbage Institute. http://www.cbi.umn.edu/oh/pdf.phtml?id=126/

5   "CRISP: An Interactive Student Registration System" by Galler, R. Wagman, J. Bravatto, G. Lift, G. Kern, V. Berstis, and E. Munn (January 24, 1973). "CRISP 1971-73 (3 of 3)", Box 23, Bernard Galler Papers, Bentley Historical Library.

6   "Proposal for CCS 673 Project CRISP" (December 23, 1971) in "CRISP: 1971-73 (1 of 3)", Box 23, Bernard Galler Papers, Bentley Historical Library.

7   Richard W. Bailey, "Talking About Words: A CRISP Acronym" Michigan Today (date unknown). http://www.umich.edu/news/MT/NewsE/101503/bailey.html/

8   Bernard Galler to Lyle Baack (June 12, 1972) in "CRISP: 1971-73 (2 of 3)", Box 23, Bernard Galler Papers, Bentley Historical Library.

9   Barnard Galler to Douglas Wooley (Jan. 8, 1975) in "CRISP 1973-75 (1 of 3), Box

Gallery Structure
Fig. 1

The first gallery looks at the initial design process of CRISP in CCS673, and the opportunity it provided for students to be strategists for one of the university's first big IT challenges. Content will include recorded audio, photographs, and digitized documents. The audio content should focus on the course itself, whether from a student or faculty perspective. Potential contributors include:

1. Gail Lift, BS '70, MS '73, Computer and Communication Studies (student in CCS673, also hired to work on CRISP in summer '72): ghl@umich.edu *contacted*
2. Viktors Berstis, BS '71, MS '74, Computer Engineering (student in CCS673, now research scientist at IBM? exact status unknown): viktors@berstis.com
3. Dr. Bruce Arden, Professor of Computer and Communication Sciences, resigned 1973 (co-author of 1971 paper on graduate programming course, head of committee which officially recommended CRISP for campus use): CSE Division may have contact.
4. Lyle Baack, MS '75, Computer Engineering (student project manager for CRISP in CCS673, also worked for Data Systems Center): contact through Alumni Association.
5. Dr. Bernard Galler, Professor of Computer and Communication Sciences. (Professor Galler died in 2006, however he recorded several oral histories which include discussions of the CRISP project. Of particular interest is the recording held by the Charles Babbage Institute (OH236). Permissions for reproduction of the files online can be obtained from CBI at a cost of $20/second). Contact Enid Galler through Bentley Historical Library.
6. Current CSE faculty member who can comment on the tradition of practical engagement type courses in the field.

Digitized documents should be drawn from the series "CRISP 1971-73" in Bernard Galler Papers, Box 23, Bentley Historical Library. These may include course notes, project descriptions, and relevant correspondence. Access restrictions will apply to any student work in the collection. Preliminary choices for digitization may include:

1. Packet related to student group objectives, Jan. 20 1972 ("CRISP 1971-73 (1 of 3)", Box 23, Bernard Galler papers, Bentley Historical Library)
2. Notes on the formation of groups for 673, undated ("CRISP 1971-73 (1 of 3)", Box 23, Bernard Galler papers, Bentley

24, Bernard Galler Papers, Bentley Historical Library.

Historical Library)

3. "Proposal for CCS 673 Project CRISP", Dec. 23, 1971 ("CRISP 1971-73 (1 of 3)", Box 23, Bernard Galler papers, Bentley Historical Library)

4. Course meeting minutes, various dates ("CRISP 1971-73 (2 of 3)", Box 23, Bernard Galler papers, Bentley Historical Library)

5. "CRISP Functions," March 22, 1972 ("CRISP 1971-73 (2 of 3)", Box 23, Bernard Galler papers, Bentley Historical Library)

6. Transaction Flow Diagram, Narratives, undated ("CRISP 1971-73 (2 of 3)", Box 23, Bernard Galler papers, Bentley Historical Library)

There are currently no photographs which document the CRISP course or early design process. Contributors of audio content may be solicited for these materials. Additionally, contemporary photos of sites relevant to the course or early design process. Another possibility would be to include photographs of audio contributors.

From these three formats (photos, documents, audio files), visitors can choose an item in a scrolling gallery. The item appears in the appropriate content area according to its format, along with two items from the remaining format groups that have been tagged as related to the chosen item. For example, choosing an audio selection of Bernard Galler remembering the course might also bring up a photo of Galler, along with a scanned image of some of his course notes. Although the main content information will be contained within the audio items, these will be contextualized with the archival resources available. The idea is to create a similar experience to the museum case, where curators can show visitors a set of relationships between objects that enriches their individual meanings.

GALLERY TWO

Content Essay

When the students of CCS673 finished their semester, they had developed plans for the primary functions of CRISP, but significant work remained to be done. First, university administrators needed to agree that CRISP was the best solution to the registration problem. Bids from outside vendors were solicited, and the newly-formed Computer Registration Committee analyzed a variety of possible solutions, including from the Systems and Computer Technology Corporation, now Sungard.[10] In 1973 the Committee formally recommended that CRISP be adopted

10   "Draft Agreement Between the University of Michigan and Systems and Computer Technology Corporation (SCT) to Furnish, Install and Use an SCT Student Scheduling and Fees Assessment System" (February 9, 1973) in "CRISP 1973-75 (2 of 3), Box 24, Bernard Galler Papers, Bentley Historical Library.

as the new computerized registration system.[11] A two-year period of development ensued, in which students, faculty, and staff worked on tailoring CRISP to meet the University's requirements and ensuring that the financial, personnel, and technological resources would be in place to power the new system. Two committees were formed to provide administrative oversight to both the design process, as well as to the system's integration: the CRISP Review Committee[12], and the CRISP Implementation Group.[13] In addition to work on CRISP, the existing methods of storing student information needed to be updated. The Data Systems Center embarked on a massive database restructuring program, the extent of which contributed to the late roll-out of CRISP, originally scheduled for 1974.[14]

Three years after Professor Galler's class took on the challenge of developing a computerized solution to the problem of course registration, students first used CRISP to register for classes in April, 1975. In the few months before, the CRISP committees began the process of initiating the University community to the new system. The CRISP Bulletin, started in December 1974 by the Registrar's Office, provided lists of answers to CRISP questions, aimed at helping departments integrate the system into their advising and scheduling processes.[15] The College of Literature, Science and the Arts began publishing *Checkpoint,* a newsletter that provided students with guidance on registration and other academic services.[16] University publications also released several features on CRISP. The University Record's March 31, 1975 edition contained several articles on CRISP, including a step-by-step guide on "How to be CRISPed".[17]

11   "Report of the Computer Registration Committee" (February 19, 1973) in "CRISP 1973-75 (1 of 3), Box 24, Bernard Galler Papers, Bentley Historical Library.

12   "Final Report of the CRISP Review Committee" (December 10, 1975) in "CRISP 1975/76", Box 17, Office of the Registrar records, Bentley Historical Library.

13   CRISP Implementation Group Meeting Minutes in "CRISP Implementation Group 1974/75", Box 17, Office of the Registrar records, Bentley Historical Library.

14   "Project Definition CRISP" (Distributed to Acad. Services Board in December, 1973) in "CRISP 1973-75 (2 of 3), Box 24, Bernard Galler Papers, Bentley Historical Library.

15   CRISP Bulletin, Issues 1-5 in "CRISP", Box 59, Provost and Executive Vice President for Academic Affairs Central Files, Bentley Historical Library.

16   LSA Checkpoint in "Unit Publications", Box 7, College of Literature, Science and the Arts publications, Bentley Historical Library.

17   The University Record March 31, 1975.

In addition to training students and faculty on how to use CRISP, the Registrar's Office and Data Systems Center trained the terminal operators who would enter student information and course selections during the registration process. Training involved lectures on the operations of the system, hands on experience during system testing, a computer assisted training course designed by DSC, as well as an operator's guide which listed CRISP commands.[18] For many operators, CRISP was a first experience of communicating with a database through a terminal interface. The operator's guides reflect this. An early draft from 1973 advises operators, "Remember you are carrying on a conversation. Whenever a question mark or an asterisk appears at the leftmost margin on the paper, the computer is waiting for a command from you...Ask your supervisor what to do if you think the computer has stopped talking with you."[19]

A key consideration in planning for CRISP's roll-out in April 1975 was the location for registration sessions. As Waterman Gym had been the trademark background for arena registration in the decades before, administrators recognized that the setting for CRISP would be an important feature of student's experiences of it. The Registrar's Office, along with the Vice-President settled on the Old Architecture and Design Building, left empty by the 1974 move of the School of Art and Architecture to North Campus. Lorch Hall, as it is now known, Room 215 was the precise location where terminal operators would register students through CRISP. Lorch Hall was the venue for CRISP until it moved to Chrysler Arena.

Functionally, the April '75 roll-out was a success. CRISP processed approximately 15,000 students into courses for the spring and summer half-terms, as well as for the Fall term of that year.[20] However, assessments of student reactions were mixed. In a letter to Vice President Pierpont, Associate Dean of LSA, Charles Morris, described the scene: "Monday was terrible, Tuesday was good, and on Wednesday and Thursday it "worked like a charm." According to Morris, students showed enthusiasm for the new system: "One student on Wednesday studied his printed schedule, then looked back at the terminal area and, grinning, said to me: "Man, this is far out, really far out," whooped, and bounded off to who knows where.

18   "CRISP: Computer Registration Involving Student Participation," Data Systems Center, 1975, Data Systems Center Brochures, Box 4, Information Technology Division Publications, Bentley Historical Library.

19   "User's Instructions for CRISP," March 2, 1973 in "CRISP 1973-75 (1 of 3), Box 24, Bernard Galler papers, Bentley Historical Library.

20   "CRISP Review Committee Interim Report" (October, 1975) in "CRISP 1973-75 (2 of 3), Box 24, Bernard Galler Papers, Bentley Historical Library.

Now that's progress (I think)."[21] The Michigan Daily reported on the disgruntlement felt by many students after the first day's long lines.[22] Despite the lines, CRISP functioned properly, and by the end of the summer an estimated 24,000 students had been processed for fall courses.[23]

The next major CRISP implementation occurred in September 1975, when remaining students were to register for fall courses. Registrar officials had planned for approximately 4,000 students who had yet to register. However, these estimates proved to be too low, as over 6,000 students showed up during the two allotted CRISP days on September 3rd and 4th. CRISP was unequipped to handle the volume of students, and the unexpectedly high number of drop/add requests put a further burden on the system.[24] During this period, lines got very long and frustration ran very high. The inefficiency experienced during September sparked many community members to express their concerns over computerized registration, including the Senate Advisory Committee on University Affairs (SACUA), which wrote a public letter in which they called for a review of the merits of CRISP. "If marked improvements are not achieved in the program," SACUA members wrote, "it is our intention to recommend that it be abandoned."[25]

It is interesting to note that much of the chagrin voiced in letters and campus publications over the first few years of CRISP stems from glitches in its implementation, and not in problems with the technology itself. Long lines seem to have been the most prevalent problem, prompting students to wonder whether the old arena registration had been a better way to get the job done. Bernard Galler warned of the danger of lines to the community's assessment of CRISP in his prescient letter to Associate Registrar Douglas Wooley in 1974. He writes, "I am moved to write one more plea for facing up to a real problem....Given the uncertain

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21   Charles G. Morris to V-P Pierpont and Rhodes, April 10, 1975 in "Central Files", Box 59, Provost and Executive Vice President for Academic Affairs records, Bentley Historical Library.

22   Jeff Ristine, "CRISP debuts; long lines greet students," *The Michigan Daily* 85.150 (April 8, 1975).

23   "CRISP Review Committee Interim Report" (October, 1975) in "CRISP 1973-75 (2 of 3), Box 24, Bernard Galler Papers, Bentley Historical Library.

24   "CRISP Review Committee Interim Report" (October, 1975) in "CRISP 1973-75 (2 of 3), Box 24, Bernard Galler Papers, Bentley Historical Library.

25   "'Sense of indignation' from faculty over CRISP" *The University Record,* September 29, 1975.

session time for terminal processing, I urge as strongly as I can that an efficient way be found to bring students to the registration area at approximately the time when they will be serviced...I don't care if students are scheduled by class year, by college, by the length of the left thumb, or by any other algorithm, but they must be scheduled..."[26] The documentation from these early years proves Galler's point: the length of the wait time became the primary method for assessing the utility of the system. At the same time, however, the assumption that computerized registration should eliminate the waiting and confusion of Waterman Gym registration indicates the high expectations community members held for the potentials for technology to change the university. From the beginning, people had high hopes for CRISP. And as some have pointed out, as Waterman Gym registration faded further and further into the past, expectations for computerized systems grew and grew.[27]

An immediate effect of CRISP was to incite thinking about how further university administrative functions could be automated. CRISP marked the beginning of a series of initiatives to electronically manage the university's massive stores of data. In 1974 Robert Simpson wrote in a message to Gerard Wideman, "The projects under development today are but the beginning to move us to a new environment in the data systems arena." Simpson pointed to the financial aid system, the student characteristics database, grade processing, the admissions system, and classroom scheduling as just a few of the possible targets for CRISP-like systems.[28] CRISP was a first initiative in an ongoing project to bring university functions up to date with the latest technological capabilities which continued with projects such as M-Pathways, and Wolverine Access, and continues today.

Gallery Structure
Figs. 2 & 3

Because the university experienced much of the newness of CRISP in terms of space-- both physical space (standing in lines, entering new buildings, etc.) and virtual space (information flowing in new directions, and to different people)-- the design of the second gallery will emphasize the new spatial relationships that emerged out of registration procedures after 1975. The intent is to communicate that CRISP changed the flow of information through the university, at the same time as it changed the flow of students with respect to the campus, and with respect to each other. This emphasis on space will also help visitors to understand a period of time in which computerization of processes still involved moblizing people in groups through spaces, correcting our contemporary notion of computerization

26   Bernard Galler to Douglas Wooley (March 20, 1974) in "CRISP 1973-75 (2 of 3), Box 24, Bernard Galler Papers, Bentley Historical Library.

27   Notes from Interview with Mary Byrkit, June 10, 2008.
28   Robert Simpson to Gerard Wideman, March 14, 1974. "CRISP 1974 (1 of 2)", Box 17, Office of the Registrar records, Bentley Historical Library.

where individuals accomplish tasks on their own, in the places of their choosing. CRISP was a distinctive social phenomenon, and the goal is to investigate that phenomenon through maps and audio stories which relate the individual experiences of CRISP to the places that were important to its functioning.

The second gallery begins with a brief text that introduces the important details of CRISP's implementation in 1975. The main part of the gallery features a series of maps. These might include aerial photographs of the campus, street maps, building plans, as well as flow charts or diagrams which show the flow of information through CRISP. By selecting a map, visitors activate a separate screen which allows for detailed examination of the map, provides a citation, and contains an audio panel. Brief audio stories are accessible by clicking on parts of the map which have relevance to the content of the audio. When visitors click on a story, a brief text about the speaker and some contextual information appears. Each map contains distinct audio stories, and depending on the kind of map a visitor access, they may get different types of stories. For example, a flow chart of how student information proceeds through CRISP might contain stories contributed by system designers, or those on the technical end of CRISP's implementation. A building plan of Lorch Hall might contain stories from students who remember standing in line, or terminal operators discussing their experiences manning the CRISP process.

Contributors of audio content for this gallery:
1. Mary Byrkits (Mary worked in the LSA counseling office after graduating from Michigan in 1975. She became the unit registrar for LSA. She currently works as Application Manager for MAIS): marybyrk@umich.edu
2. Paul Robinson (Current University Registrar. Arrived after CRISP fade-out, but is a source for contacts with people who worked with CRISP in the Registrar's Office): probins@umich.edu
3. Sheila Feld (Professor emerita of Social Work, member of CRISP Committee convened in Fall 1975): sfeld@umich.edu
4. IT Commons members who know people who were CRISP operators: contact through Kati Bauer: kati@umich.edu

GALLERY THREE

Content Essay

In spite of, or perhaps because of the initial difficulties in adjusting to computerized registration, CRISP quickly became a sort of cultural artifact-- something uniquely Michigan. It was homegrown-- its successes prompted pride in the University's abilities to find creative solutions for its own problems, while its breakdowns prompted reflections on the University's abilities to create its own problems. For better or for worse, CRISP was an icon for innovation at Michigan across generations.

An often cited example of the way CRISP achieved its cult status is through its distinctive name. Although the acronym was updated from Computer Registration In Spite of Problems to the more serious Computer Registration Involving Student Participation before it was rolled out in 1975, "CRISP" stuck, and quickly became part of the campus vernacular. Some were confused, or even enraged by the whimsical and obtruse name. One professor went so far as to write a letter to Vice-President Frank Rhodes: "Why should faculty be expected to remember every damned acronym made up in every damned office on campus? Conversely, why shouldn't the chap whom we pay to keep us informed be responsible for doing it competently? Is it a matter of pleasing lots of idiosyncratic tastes, or is it a matter of intelligent communication?"[29] Still, CRISP was quickly adapted, not only in reference to the system itself, but also as a verb to describe registration procedures. Professor of English, Richard Bailey, wrote a brief article describing the linguistic phenomenon around CRISP: ""How do I CRISP?" This arresting question appears in a dialogue created under the heading FAQ at a University of Michigan Web site. Like 'Diag,' 'CRISP' is one of those words that lets alumni of a certain era know they went to school in Ann Arbor."[30] Along with its distinctively pun-able name, CRISP ushered in a slew of lingo that made its way into campus parlance: "student verification form", "entry restriction", "override"...[31]

A major change to CRISP came in 1994, when the terminal interface was abandoned, and replaced with a touch-tone phone-in system. In a report from the Registrar's Office, Tom MacElvain described how touch-tone CRISP would

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29   J. David Singer to Frank Rhodes (March 31, 1975) in "Central Files", Box 59, Provost and Executive Vice President for Academic Affairs records, Bentley Historical Library.

30   Richard Bailey, ""Talking About Words: A CRISP Acronym" *Michigan Today Alumni Magazine*.

31   "CRISP: Crunch-free?" *The Michigan Daily* (September 4, 1975).

work: "These systems function as automated terminal operators connected to an independently existing software program that retrieves and/or updates database records in a host computer. In response to touch-tone input that a caller provides in response to specific voiced instruction, the voice response system (VPS) sends commands to the software program (CRISP), reads the screen output of that software and speaks reports and additional instructions to the caller. This process continues using selection menus and processing loops until the caller is satisfied with the reported results, i.e., completes registration."[32] The touch-tone system was bought through a vendor, Periphonics, and included all the components needed to connect interactively with the existing Data Systems Center databases by means of a campus telephone.[33]

Gallery Structure
Figs. 4 & 5

The thematic focus of the third and final gallery is on CRISP as an icon of people's experiences of Michigan, whether alumni, former faculty, or staff. In addition, the gallery takes up the transition to touch-tone CRISP, ending the era of arena registration, and making way for the introduction of online registration in 2000. In keeping with these themes, the gallery features two major components. The first is a recreation of the audio-interface of touch-tone CRISP. Visitors to the gallery are confronted with a phone-like key pad, and a brief text introducing the system and alerting them that they should register for Computer and Communication Studies 673 with Professor Bernard Galler. By activating the application, audio instructions for registration play, modeled on the original touch-tone CRISP interface. The visitor enters the appropriate commands on the keypad, and is alerted when he or she has successfully registered for the class.

The second major component is an open audio gallery of recorded stories about CRISP. These stories need not be focused on any of the established themes for the exhibit. A prearranged number of stories will be collected and featured, but visitors are also able to record their own memories of CRISP on their computers and upload them to the gallery. Audio files can be tagged according to subject, and any visitor is able to tag files. Additional descriptions may be added by contributors. Guidelines on format and recording procedures will be available. Recordings that meet format and metadata standards will be selected by curators for preservation in Deep Blue. However, all recorded content which is properly uploaded will be accessible to visitors, without curatorial oversight. Periodic checks of uploaded content by curators will remove any audio files which are irrelevant to the topics of the exhibit.

32   Tom McElvain, "Touch-Tone CRISP" *For the Record: Projects in the Registrar's Office* (November 7, 1994).

33   Tom McElvain, "Touch-Tone CRISP" *For the Record: Projects in the Registrar's Office* (November 7, 1994).

Figure 1

crisp >> gallery I mockup

This array of frames contains thumbnails of audio files, photographs, and digitized documents. As visitors scroll through the content, they can select an item and it will be displayed below, along with two other formats which relate to its content. (See below)

introductory text in linked terms call up related audio or visual documents in the frames on the right.

photo

audio

document

In 1971 University of Michigan administrators began thinking about the possibilities for automating the processes by which students chose their classes. One professor, Bernard Galler, saw in this quandry a perfect project for his graduate programming class in the Department of Computer and Communication Sciences. In the winter semester of 1972, Galler and his team of 18 students started work on a prototype system, which they called CRISP: Computer Registration In Spite of Problems. Representatives from the Data Systems Center, and the Registrar's Office-- units who would be most involved in the implementation of the system-- participated in the class in order to ensure that the design would be compatible with the existing infrastructures. The result of the student work in Galler's class, and in the following year, set the foundation for the registration system that would be in place at the University of Michigan for the next 25 years.
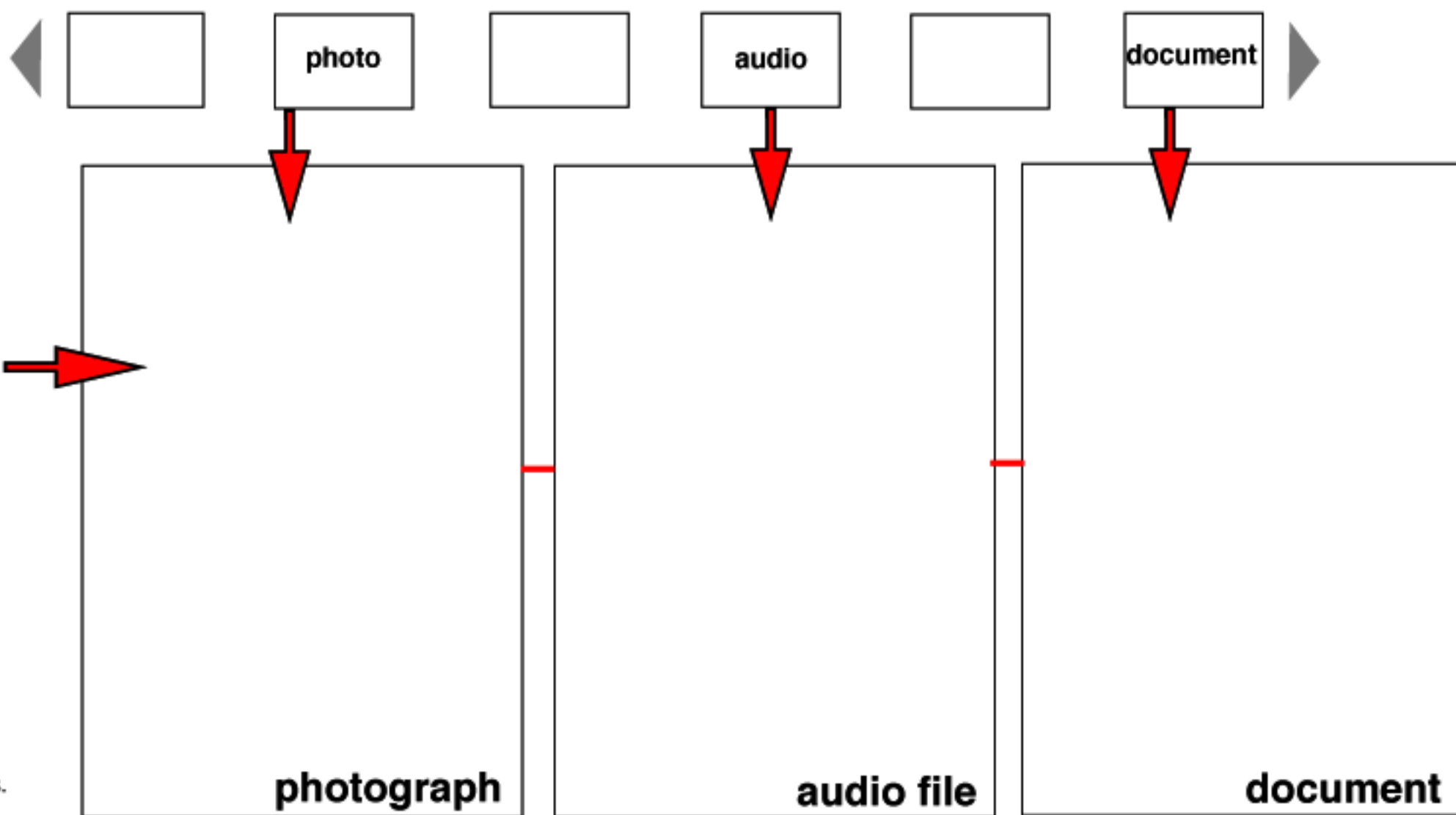
photograph

audio file

document

links to centralized timeline and to a resources page of digitized documents or links to finding aids should be present in all galleries.

timeline

resources

These three frames display items selected from the array above (see above). Depending on its format, the item appears in one of the frames, along with two items of formats that weren't selected, but which relate to the document selected. For example, selecting an audio file of a student from Galler's class will also call up a photograph of the classroom, and a digitized page of notes from the class. Visitors can also click on the frame to select the next item in the format sequence.

Figure 2

crisp >> gallery II mockup

INTRODUCTION text describes the roll-out of CRISP, location, details, dates, numbers, factoids.
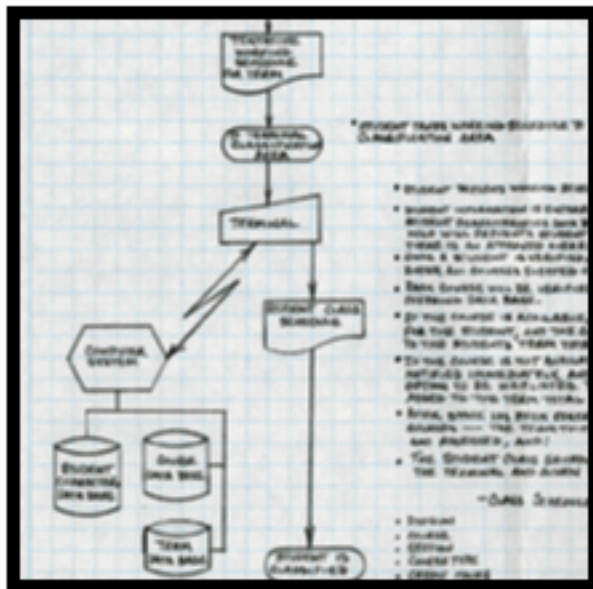
CRISP Flow Chart, 1973:
New flows of information.

Aerial Map of campus:
Moving through CRISP

Street map of Central Campus:
Orienting new students

visitors can scroll through maps, which enlarge to show audio content (seen next graphic). audio can be grouped according to the topic of the map (ie. stories about changes in information flow layered over the '73 flow chart).

links to centralized timeline and to a resources page of digitized documents or links to finding aids should be present in all galleries.

timeline

resources

Done

Figure 3

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crisp >> gallery II mockup

INTRODUCTION text

portions of map have active links to audio files which appear at right.

CRISP F
New flow

links to centralized timeline a
a resources page of digitized
documents or links to finding
should be present in all galle

story title >>

00:00:27

speaker:
date:
copyright:

text that includes speaker, and any background info as needed to provide context to the sound file.

also possible comment function which allows visitors to respond to individual stories.

oll through maps, which enlarge to show audio content (seen
udio can be grouped according to the topic of the map (ie.
anges in information flow layered over the '73 flow chart).

Depending on the scale of the map, zooming and scrolling capabilities are available.

Crisp flow chart, 1973. Bernard Galler Papers, Bentley Historical Library.

Done

Figure 4

crisp >> gallery III mockup

In spite of, or perhaps because of the initial difficulties in adjusting to computerized registration, CRISP quickly became a sort of cultural artifact-- something uniquely Michigan. It was homegrown-- its successes prompted pride in the University's abilities to find creative solutions for its own problems, while its breakdowns prompted reflections on the University's abilities to create its own problems. For better or for worse, CRISP was an icon for innovation at Michigan across generations.

TOUCH-TONE CRISP
register for classes with the touch-tone interface

links to touch-tone interface, where visitors can register for a course using the telephone, and hear a reproduction of the infamous "CRISP Lady" automated voice.

REMEMBERING CRISP
listen and share your memories of CRISP

links to audio gallery, where users can upload audio recordings of their CRISP memories, and listen to others share stories of their CRISP experiences.

resources   timeline

Done

Figure 5

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crisp >> gallery II mockup   ✕

Intro text

cursor

Welcome to touch-tone CRISP, the phone-in version of the previous CRISP system, introduced to the University of Michigan in 1994.

Give touch-tone CRISP a try! To register for Bernard Galler's Advanced Computer Programming course, CCS673, dial 'CRISP' (27479) on the campus phone on the left and follow the voice instructions!

possibility to include CRISP worksheet

In a report from the Registrar's Office, Tom MacElvain described how touch-tone CRISP would work: "These systems function as automated terminal operators connected to an independently existing software program that retrieves and/or updates database records in a host computer. In response to touch-tone input that a caller provides in response to specific voiced instruction, the voice response system (VPS) sends commands to the software program (CRISP), reads the screen output of that software and speaks reports and additional instructions to the caller. This process continues using selection menus and processing loops until the caller is satisfied with the reported results, i.e., completes registration." The touch-tone system was bought through a vendor, Periphonics, and included all the components needed to connect interactively with the existing Data Systems Center databases by means of a campus telephone.

Done