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The Diagrams of 9 evenings

Clarisse Bardiot

Translated from the French by Claire Grace

The cover of the program¹ distributed to audience members at 9 Evenings shows a tangle of lines, a complex interweaving comprised of barely recognizable electronic symbols and scenographic notes. Like a palimpsest, the image consists of superimposed prints of each of the technical diagrams made for the event's ten performances.² These drawings reappear within the program, where each performance is accorded a full-page description, half of which is devoted to an exquisite reproduction of the corresponding diagram. Also included are the title of the work, the names of the artist and principal engineer, credits, a brief text by the artist, and a photograph or sketch. The very design of the program suggests the crucial significance of the diagrams. Yet, it is in fact quite unusual to present documents of this kind in a theater program: spectators are more accustomed to seeing photographs, or even sketches relating to costuming or stage design. Produced by Bell Labs engineer Herb Schneider between the end of September and the beginning of October 1966, the diagrams³ elucidate the important role of technology in the performances of *9 Evenings*, even while they include no legend or explanatory texts that would explicate the exact functioning of the technological devices suggested.⁴ Above all, the diagrams offer strong visual confirmation of the festival's principal subject, an unusual encounter between artists and engineers. Completed barely a month before the date of the first performance, the diagrams document a long process of collaboration and exchange, begun in January 1966, between ten artists and thirty-odd engineers led by Billy Klüver.⁵

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- 1 *9 Evenings: Theatre and Engineering*. Edited by Pontus Hultén and Frank Königsberg. (New York: Experiments in Art and Technology: The Foundation for Contemporary Performance Arts, 1966).
 - 2 As a researcher in residence at the Fondation Daniel Langlois (2005), I conducted an extensive analysis of each of these diagrams. My findings are presented on the foundation website: <http://www.fondationlanglois.org/flash/e/index.php?NumPage=571>
 - 3 The original diagrams are housed in the archives of Robert Rauschenberg.
 - 4 In this regard, the diagrams are emblematic of the general lack of explication about the technical procedures employed in *9 Evenings*. This absence was deliberate on Billy Klüver's part, and led to heated debates among the artists and engineers involved in the project. Cf. Sylvie Lacerte, *9 Evenings and Experiments in Art and Technology: A Gap to Fill in Art History's Recent Chronicles*. 2006. <http://www.fondation-langlois.org/>
 - 5 For a summary of the different stages of project development and of the reactions and relationships among participants, cf. Simone Whitman "Theatre and Engineering: an Experiment 1. Notes by a participant," *Artforum* 5, no. 6 (February 1967): 26-30. Billy Klüver also wrote a number of texts on this subject, most notably: "Theatre and Engineering: an Experiment 2. Notes by an engineer," *Artforum* 5, no. 6 (Feb. 1967): 31-33; Billy Klüver. "The Great Northeastern Power Failure." College Art Association: Annual Meeting, New York, 1966. Republished in *Multimedia: From Wagner to Virtual Reality*. Edited by Randall Packer and Ken Jordan. (New York: W. W. Norton; Washington: Zakros InterArts, 2001): 33-3. Numerous accounts are also held in the *Experiments in Art and Technology*. Records, 1966-1993, Getty Research

With few exceptions, all the engineers involved were employed by Bell Labs at its Murray Hill, New Jersey, campus. Among them were several computer specialists: Bela Julesz, Director of the Sensory and Perceptual Processes Department, who was working on computer pictorial data processing; Cecil Coker, a member of the team working on a synthetic speech computer; and Max Matthews, Director of the Behavioral Research Laboratory, who had authored the very first computer programs for the direct digital synthesis of sound, as well as a number of computer assisted musical compositions. Other research specialties included sound processing and acoustics (Pete Cumminski, Ken Harsell, Peter Hirsch, Manfred Schroeder); lasers (Larry Heilos, Harold Hodges); mobile telephone research (Robby Robinson); radio systems (Herb Schneider, Bill Kaminski); communications systems (Fred Waldhauer); chemistry (Stretch Winslow, Tony Trozzolo); electronics (Witt Wittnebert, Per Biorn, Dick Wolff); and holograms (Jim McGee).

Along with Billy Klüver, several engineers involved in *9 Evenings* had already participated in artistic projects⁶: Max Matthews and Cecil Coker collaborated with John Cage on his *Variations V* (1965)⁷, and Harold Hodges was involved in the making of Robert Rauschenberg's Oracle (1962-1965). Most, however, were not well versed in contemporary art, and their collaborations in *9 Evenings* represented their first experience with artists. Billy Klüver had also been called to the rescue as technical consultant on several occasions, including Yvonne Rainer's choreographed work, *At My Body's House* (1964), for which he developed the device that amplified the sound of Rainer's breath.⁸

The converse was just as true for the artists, with the exception of Rauschenberg, Cage, and David Tudor, who, or many years, had been thinking and developing work about the impact of technology on their creative practices. Apart from these three, in most cases, and especially for the artists affiliated with Judson Dance Theater (Yvonne Rainer, Lucinda Childs, Steve Paxton, Deborah Hay, and Alex Hay), the artists' previous experience with technology was limited to the incorporation of film projections, the use of microphones, and the creation of audio montages in their performances.

During the first planning meetings for *9 Evenings*, the artists voiced their ideas, imagining a multitude of situations and objects: a “doppler sonar to pick up ordinary motion by the body,” “Many (50? 11.00?) speakers of low power placed on walls or around the room, or outside. Each

Institute, Research Library, Accession no. 940003, and in the *9 Evenings: Theatre and Engineering* fonds, The Daniel Langlois Foundation for Art, Science, and Technology.

6 For a detailed account of the collaboration between Billy Klüver and Robert Rauschenberg, cf. Billy Klüver and ulie Marint, “Woring With Rauschenberg.” In *Robert Rauschenberg: A Retrospective* (New York: Guggenheim Museum Publications, 1998): 310-327. For an analysis of collaborations between artists and engineers before *9 Evenings*, cf. Norma Loewen, *Experiments in Art and Technology: A Descriptive History of the Organization* New York: New York University, 1975). Doctoral dissertation.

7 William Fetterman, *John Cage's Theatre Pieces* (Contemporary Music Studies) (Amsterdam: Harwood Academic Publishers, 1966).

8 Cf. Yvonne Rainer, *Radical Juxtapositions: 1961-2002* (Philadelphia: The University of the Arts, 2003); Yvonne Rainer, *Work 1961-73* (Halifax: Press of Nova Scotia College of Art and Design, 1974).

speaker giving a different sound,” “airwall,”⁹ “changing colors,” “snowfall that doesn't fall,”¹⁰ “the possibility of making use of Telstar, Early Bird or some transatlantic TV communication,”¹¹ etc. Weighing the feasibility of these ideas, engineers made counter-proposals, offering suggestions about preexisting technical equipment and directions for new research. For example, Jim McGee proposed that “impulses from flexing of muscles can be used to trigger switches (in connection with proposed wireless system for instance).”¹² As the projects became more clearly defined, some of the engineers began working more closely with specific artists, forming duos like Tudor/Waldhauer, Rainer/Biorn, Cage/Coker, etc. Some dedicated themselves to perfecting the project's overall command system, while others acted as consultants for specific aspects of works, such as the amplification system in Alex Hay's performance and the design of Lucinda Childs' sonar.

The various texts and testimonials that document *9 Evenings* demonstrate the extent to which dialogue between artists and engineers was not simply a matter of course. Artists frequently had the impression that the engineers had assumed too much control over the artwork and that their preoccupation with technical matters threatened to constrain the aesthetic impact of the performances. For their part, engineers found that the artists did not have a realistic understanding of the technical resolved when, in September, they regrouped for three successive work weekends at a gymnasium of the Berkeley Heights School in New Jersey. These weekend sessions allowed participants to gain a better understanding of the concerns and objectives of their collaborators as they worked together to test various technical models and finalize initial proposals. The real challenge was not so much in developing new working practices, but in finding a common language that would allow the artists and engineers to communicate effectively. Ultimately the diagrams allowed them to establish that common ground, as has been explained by Herb Schneider, who created them:

What really appalled me was that on September 15th no one really knew what we were going to do on October 13th except in a very general way. Then we talked for six hours with each of the artists and then made up the drawings/diagrams of the different combinations of equipment that the different artists were going to require. David Tudor was asking for functions I couldn't visualize. Then I made the drawing. We talked back and forth making corrections till we finally beat it into shape. I couldn't understand what he wanted until I could visualize it and he

9 Official minutes from the meeting on February 13, 1966, in “Projects for Stockholm Festival.” In *E.A.T. News* 1, no. 2 (1 June 1967). New York: Experiments in Art and Technology, 1967: 12-14.

10 Official minutes from the meeting on March 1, 1966, in “Projects for Stockholm Festival”: 15-16.

11 Billy Klüver, [Letter to J.R. Pierce]. 8 April 1966. *Collection of Documents Published by Experiments in Art and Technology*. The Daniel Langlois Foundation for Art, Science, and Technology. EAT C1-15; 15.

12 Official minutes from meeting of March 1, 1966, *op. cit.*: 15.

couldn't communicate it to me in those terms because he's not used to visualizing functions.¹³

The diagrams not only helped delineate each artist's individual project, enabling communication between artists and engineers, but they allowed them to better coordinate the many technical aspects of the performances. With the exception of Yvonne Rainer's *Carriage Discreteness*, the diagrams made it possible for participants to step back from dramaturgical details and gain a certain critical distance. As the mid-point between two worlds of knowledge, the diagrams served as a tool not only for articulating and distinguishing between the visions of individual participants, but also for developing an overarching framework. This explains why the diagrams are not technically precise: drawings of electronic components include no or very little detail. In fact, the diagrams function like an assemblage of interconnected "black boxes,"¹⁴ which, when matched with other archival documents, allow us to identify their contents, more or less precisely. For instance, in the diagram for Tudor's *Bandoneon ! (a combine)*, the Proportional Control System (an interface that allows for the remote control of visual and auditory elements) is precisely described in a document at the Daniel Langlois Foundation;¹⁵ Robert Kieronski's Vochrome is still intact; and the system used by Lowell Cross to convert sound into image is very clearly described in his writings.¹⁶ On the other hand, we know almost nothing about the mixers, not to mention the objects developed by Tudor, which are initialed "D," the first letter of his first name. In other words, it is impossible to precisely describe the operating principle of most of the electronic artifacts used in *9 Evenings*, and it is therefore impossible to identify the exact technical system specific to each performance. This is especially true because, often enough, the diagrams do not detail each and every aspect of the corresponding performance. For example, the walkie-talkie connection between Yvonne Rainer and her dancers is not mentioned in the diagram for *Carriage Discreteness*.¹⁷

13 Simone Whitman "Theater and Engineering: An Experiment: Notes by a participant": 29.

14 A "Black Box" is a custom made "device or theoretical construct, esp. an electric circuit, with known or specified performance characteristics but unknown or unspecified constituents or means of operation." *The American Heritage Dictionary*, 2nd College Edition, s.v. "black box."

15 *Proportional Control System For the Festival of Art and Engineering*, 1966. Includes a memorandum, schematics, and handwritten notes by Fred Waldhauer describing the operating modes of the Proportional Control System and other electronic components used during *9 Evenings: Theatre and Engineering*. 9 Evenings: Theatre and Engineering fonds. The Daniel Langlois Foundation for Art, Science, and Technology. 9 EVE 00032686.

16 Lowell Cross, "Musica Instrumentalis, Video II (B), Video II (C), Video II (L)". In *SOURCE, Music of The Avant Garde* no. 9. (1971): 3-10; Lowell Cross, "Remembering David Tudor: A 75th Anniversary Memoir." In *Frankfurter Zeitschrift für Musikwissenschaft*. TM1. (2001): 1-35; Lowell Cross *Memories of Two Works Performed at "9 Evenings: Theatre and Engineering," 25th Street Armory, New York, NY, 1966*. Unpublished text, personal archives of Lowell Cross. 1966 (revised in 2005). Some of these texts are available on the internet: <http://www.LowellCross.com>.

17 During the second performance (October 21), Yvonne Rainer was sick and Robert Morris took her place, using the walkie-talkie to give directions to the dancers.

Nonetheless, an analysis of the diagrams, combined with other visual documents (notably, the film footage shot by Alfons Schilling¹⁸) testimonials, and archival documents,¹⁹ allows us understand the architecture (which is to say, the entrances, exits, and the black box itself), the principal components, their distribution in space (between the central control panel, the stage, and the balconies) and the overall design of each performance. Furthermore, the relationship between the overall architecture and the placement of objects in the performance space allows us to determine whether the technical devices were visible on stage, or, on the other hand, were hidden from spectator's field of vision. Electing to show the technical apparatus, as do Cage, Tudor, and Alex Hay, and choosing to conceal it from view, as do Rauschenberg and Öyvind Fahlström, implies a markedly different aesthetic significance. The first approach reveals and deconstructs the mechanism, and reaffirms the link between objects and their effects, thus giving the spectator a certain critical perspective on the action taking place on stage. In the second approach, technology becomes something magical and mysterious, the effects of which the spectator experiences in an almost visceral sense. Rauschenberg's piece exemplifies this latter approach: all the effort is focused on the effects—that is, the impact of the balls on the rackets causes the projectors to turn off – and not on the complex means by which these effects are achieved. This is why the audience did not perceive a significant difference between the two performances of Rauschenberg's piece, the first on October 14 and the second on October 23, even though two radically different technical methods were employed. In the first, because the technical device had not yet been perfected, lighting changes were done manually (an engineer unplugged the projectors when given a signal by the stage manager). In the second performance, however, the same effect was accomplished automatically by the complex electronic system shown in the diagram. Comparing the two methods employed here points to the question of theatrical illusion, which resurfaces throughout *9 Evenings*.

Because the artists were individually involved in the production of the diagrams – drawings that are at once sketch and blueprint – one can discern the traces of the artists' personal understanding of the

18 *9 Evenings: Theatre and Engineering*, factual footage, produced by Billy Klüver; camera operators: Alfons Schilling and engineers of Bell Laboratory. Shot between the 13 and 23 of October, 1966. 24 film reels (ca 9 hr.): original, b & w; 16 and 35 mm + negatives. *9 Evenings: Theatre and Engineering* fonds. The Daniel Langlois Foundation for Art, Science and Technology. 9 EVE 00031602.

The factual footage was edited by Alfons Schilling in his unreleased film entitled: *9 Evenings of Theatre and Engineering*. *9 Evenings: Theatre and Engineering* fonds. The Daniel Langlois Foundation for Art, Science and Technology. 9 EVE VID00032223. And in Barbro Schultz Lundestam's series of documentaries on each of the ten performances (production started in 1996, to be released). *9 Evenings: Theatre and Engineering* fonds. The Daniel Langlois Foundation for Art, Science and Technology. 9 EVE 00031602.

19 The following unpublished documents are particularly useful: Herb Schneider, "A Glimpse or More at Some Technical Aspects Not Seen by the Third Partner of Nine Evenings – The Public." "A View from Central." Robby Robinson, "What Really Happened at the Armory." *Experiments in Art and Technology*. Records, 1966-1993, Getty Research Institute, Research Library, Accession no. 940003; Interview with Per Biorn, produced by the Daniel Langlois Foundation for Art, Science and Technology; interviewers: Vincent Bonin, Eric Legendre, Julie Martin. 4 videocassettes (3 hr., 45 min.): master, col., sound, Mini-DV. Interview conducted August 25, 2004 in Berkeley Heights, New Jersey. Interview recorded simultaneously on audiotape (3 Minidisks). *9 Evenings: Theatre and Engineering* fonds. The Daniel Langlois Foundation for Art, Science, and Technology. 9 EVE 00032223.

technology employed in their performances. For John Cage and Alex Hay, technology permitted the amplification of phenomenon that cannot be heard under normal circumstances. Whether capturing the sounds of brainwaves or the sound waves of the flexing of muscles (Hay) or “all the sounds which are in the air at the moment of performance”²⁰ (Cage), technology served to augment the spectator’s overall perceptual experience. This was also the case in Rauschenberg’s performance, in which the use of cameras and infrared lights made it possible to see the crowd of performers on the unlit, entirely darkened stage. In Tudor’s case, the technical device employed not only served as a tool but also produced a musical arrangement during the performance. In that instance, technology defined the boundaries of the performance, and yet also provided its point of departure. The shift between various media was another recurring theme: in Rauschenberg’s piece, rackets triggered changes in lighting; in Childs’ performance, movement became sound while sound became image; in Tudor’s, sound triggered variations in light and image. In the choreography of Deborah Hay, a remote control system allowed shifts in light and sound to trigger movement. Lucinda Childs, John Cage, and David Tudor focused on the possibility of bestowing objects with a spontaneous, random quality. Yvonne Rainer was more concerned with the notion of preprogramming a fixed sequence of events, which, as the diagram makes evident, were set in motion by the black box used in her piece. In the example of Paxton, whose diagram shows the spectator’s path through the performance space, technology allowed for the tentative integration of the spectator in the performance itself: only by physically moving through the space could spectators experience Paxton’s various sensory immersion situations (bodily, visual, and auditory). For Whitman, technology allowed him to interweave multiple layers of sound and video footage. Finally, Fahlström’s use of technology was clearly the most traditional: hidden from the audience’s view, all the technical equipment is grouped together at the central control panel.

In light of this analysis, it becomes apparent that a single device does not always produce the same effects and need not always be used in the same manner. This remains without a doubt the greatest discovery of *9 Evenings*, and certainly its most important message for artistic initiatives that would follow.

As the diagrams make clear, this achievement is due to the development of a highly flexible system of basic electronic elements, which were tailored to the specific needs of each artist. Thus, what in fact was offered to the artists was a kind of combinatorics²¹ of primary components, which were then augmented with additional materials according to the demands of individual projects. In many

20 Cit. in *9 Evenings: Theatre and Engineering*. Edited by Pontus Hultén and Frank Königsberg. (New York: Experiments in Art and Technology: The Foundation for Contemporary Performance Arts, 1966).

21 One of the chapters of a text by Herb Schneider is entitled “Nine Evenings / Ten Artists / 300 Boxes / 9 Combinations – The Performance Problem and a System Solution.” In Herb Schneider, “A Glimpse or More at Some Technical Aspects Not Seen by the Third Partner of Nine Evenings – The Public.” Experiments in Art and Technology. Records, 1966-1993, Getty Research Institute, Research Library, Accession no. 940003.

cases, the added technical elements were the most visible and most significant aspects of the performance, like the rackets in *Open Score*, for example, or the carts in *Solo*, the Ground Effect Machine and the Sonar in *Vehicle*, or the foam sculptures in *Kisses Sweeter Than Wine*. However, as remarkable and technologically challenging as these mechanical feats proved to be, they in fact were not more than accessories or props to the larger, underlying framework of the performances: the TEEM (Theater Electronic Environmental Module), also called the THEME (Theater Environmental Modular Electronic), about whose innovative character Klüver rightly boasted.

The TEEM was composed of between 250 to 300 elements according to stipulations made in advance and throughout the creative process: decoders, encoders, power amplifiers, power relays, tone control units, Speaker Distribution Matrix, Proportional Control System, FM receivers, FM transmitters, photocells, speakers, program drums, preamplifiers, most of which were made available by Klüver's Experiments in Art and Technology (E.A.T). In *9 Evenings*, most of the electronic equipment was placed at the central control panel, which was thought of as a “black box” by the engineers. This system allowed for the remote control of the elements on the stage (lights, loud speakers, cameras, microphones, projectors, motors, and so on), which were linked to the control panel either by cables, or by a wireless system. Wireless technology was developed very early on: a document entitled “Description of Wireless System,”²² made available March 1, 1966, described a novel system involving transmitters and FM receptors. It had thus become possible to use microphones, photocells, push button units, tape recorders, and radios to operate loud speakers and to trigger chains of command that could set in motion a whole range of different devices. This wireless system effectively prefigured the foundational principles of TEEM, even if it was not yet labeled as such. In *9 Evenings*, then, it was less a matter of stage design than of creating an overarching electronic environment, a network that would connect the technical devices involved in the performances, an interface between the technical apparatus and the performers and engineers.

By allowing participants to visualize a combination of TEEM elements unique to each performance, the diagrams unearthed yet another complication, which ultimately led the engineers to refigure the entire event: “Just looking at the 10 diagrams made it clear that shifts between artists once each night might take hours.”²³ To simplify the problem, Herb Schneider suggested using equipment donated by AMP Inc. of Harrisburg, Pennsylvania, to build a command center that would establish a connection between all of the electrical instruments. The central control panel made it possible to program commands required for each performance, and to store that information indefinitely: a

22 Description of Wireless System. March 1, 1966. Text and technical drawings. Collection of Documents Published by Experiments in Art and Technology. The Daniel Langlois Foundation for Art, Science, and Technology. EAT C1-7/5; 7.

23 Herb Schneider, “A Glimpse or More at Some Technical Aspects Not Seen by the Third Partner of Nine Evenings – The Public.” Experiments in Art and Technology. Records, 1966-1993, Getty Research Institute, Research Library, Accession no. 940003.

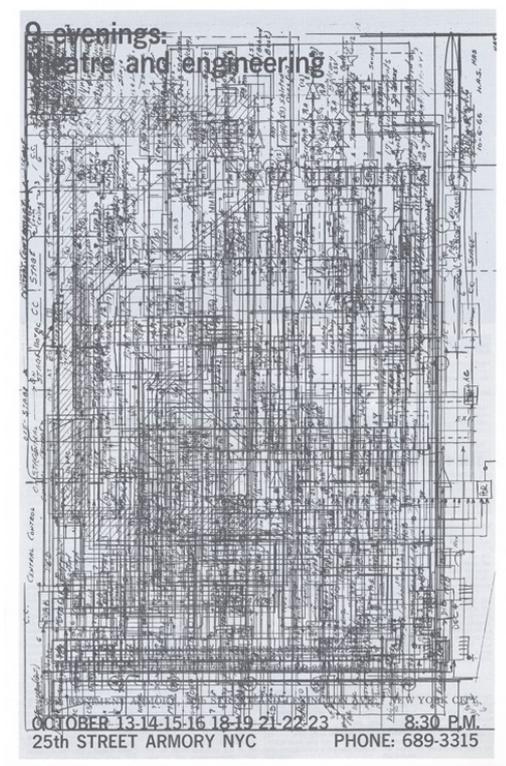
program card or patch board was inserted into a decoding device that was in turn connected to all the TEEM elements. This invention was in the end criticized by participants because errors in the cable connections ultimately jeopardized a number of the performances, especially during the first several days of the festival. These errors were essentially due to the fact that there had not been enough time to verify and test all the equipment.

The diagrams of the performances of *9 Evenings* were a turning point in the development of the festival. They were first and foremost the tool that allowed artists and engineers to communicate with one another. The diagrams were, moreover, the source of a radical technological innovation. In fact, even if computer technology is not an appropriate term here, these diagrams, and the use of AMP equipment that they required, demonstrate that the engineers and artists involved in *9 Evenings* utilized some of the fundamental principles and logic of computer science: programming, data storing, shifts between one media form and another, random logic, combinatorics, etc. In this sense, the event anticipated the impact of computer technology on performance art²⁴. The interdisciplinary collaboration between artists and engineers, the wireless remote control system, and the generation of sound by choreographed movement continue to be developed in current performance art, especially that which incorporates digital technology. *9 Evenings* thus represents one of the most important precursors to this movement.

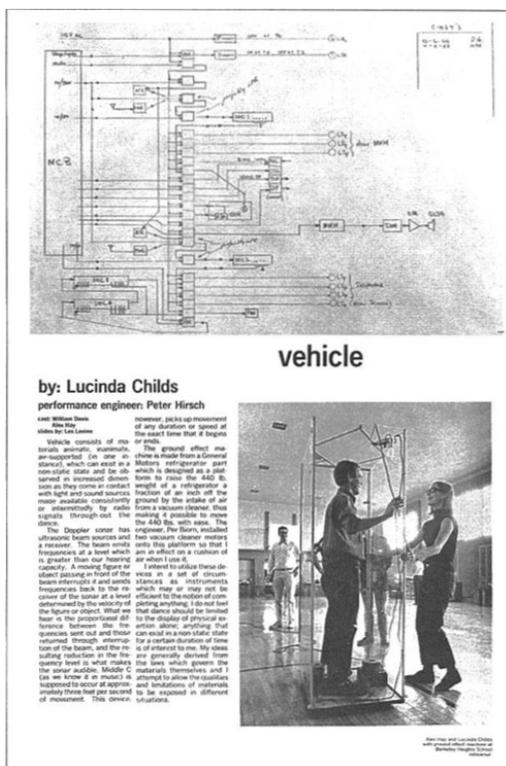
This research was conducted in 2005 as part of the researcher in residence program of The Daniel Langlois Foundation for Art, Science, and Technology. I would like to thank all of the members of the Foundation, particularly archivists Eric Legendre and Vincent Bonin, who were instrumental to this research. I would also like to thank Ludovic Carpentier, who created the website and animated the diagrams. I am also grateful to Jean Gagnon, Jacques Perron, Sylvie Lacerte, Julie Martin, Lowell Cross, Robert Kieronski, Yvonne Rainer, Deborah Hay, Robert Whitman, and Alexi Hervé.

24 The first computerized operating board was installed at Vivian Beaumont Theater, Lincoln Center, 1965.

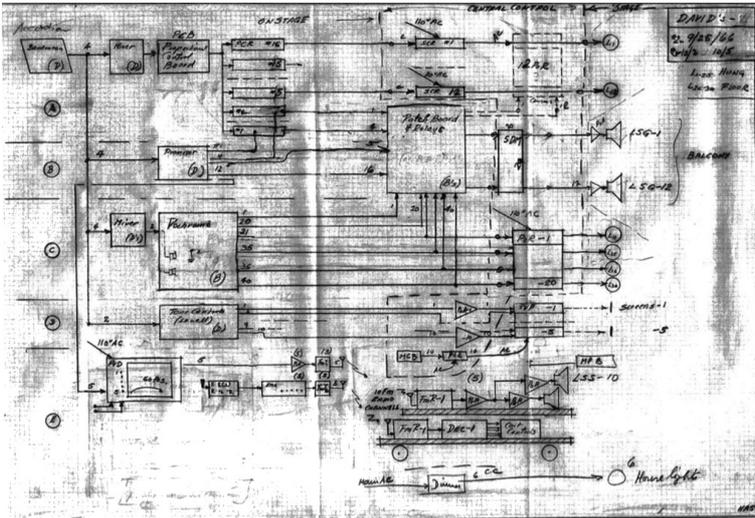
Illustrations



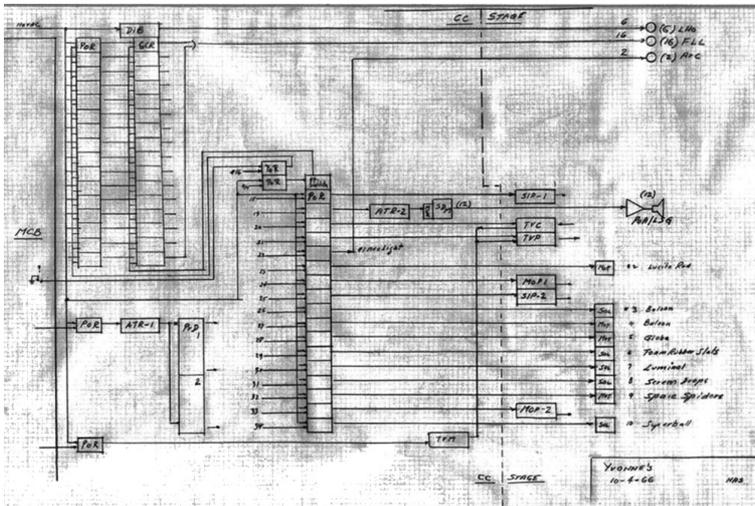
Experiments in Art and Technology, Program Cover, “9 Evenings: Theatre and Engineering”, 1966, designed by Pontus Hultén, offset on paper, 16 pages.



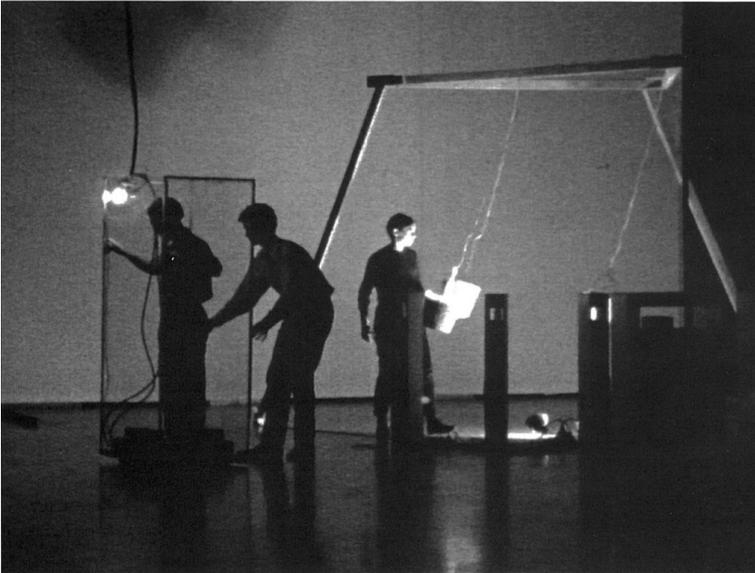
Experiments in Art and Technology. Program for “9 Evenings: Theatre and Engineering”, 1966, designed by Pontus Hultén, page five, offset on paper, 16 pages.



Herb Schneider, "9 Evenings" Engineer Drawing (David's), [David Tudor, "Bandoneon ! (A Combine)"], 1966. graphite on graph paper. Courtesy of Robert Rauschenberg.



Herb Schneider. "9 Evenings" Engineer Drawing (Yvonne's), [Yvonne Rainer, "Carriage Discreteness"]. 1966, graphite on graph paper. Courtesy of Robert Rauschenberg.



Frame capture, *9 Evenings: Theatre and Engineering* (Lucinda Childs, "Vehicle"), 1966, camera: Alfons Schilling and Bell Labs Engineers, produced by Billy Klüver, 16 mm black-and-white film, The Daniel Langlois Foundation for Art, Science and Technology, 9 Evening Theatre and Engineering funds.



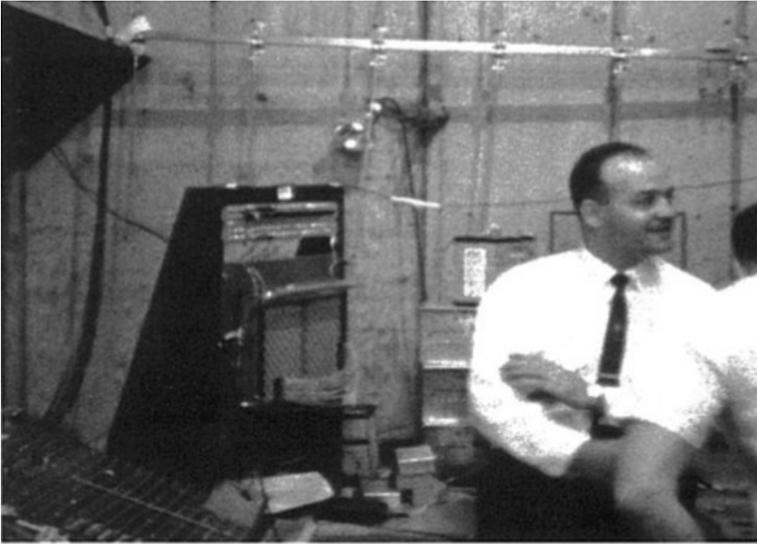
Frame capture, *9 Evenings: Theatre and Engineering* (Berkeley School), 1966, camera: Alfons Schilling and Bell Labs Engineers, produced by Billy Klüver, 16 mm black-and-white film, The Daniel Langlois Foundation for Art, Science and Technology, 9 Evening Theatre and Engineering funds.



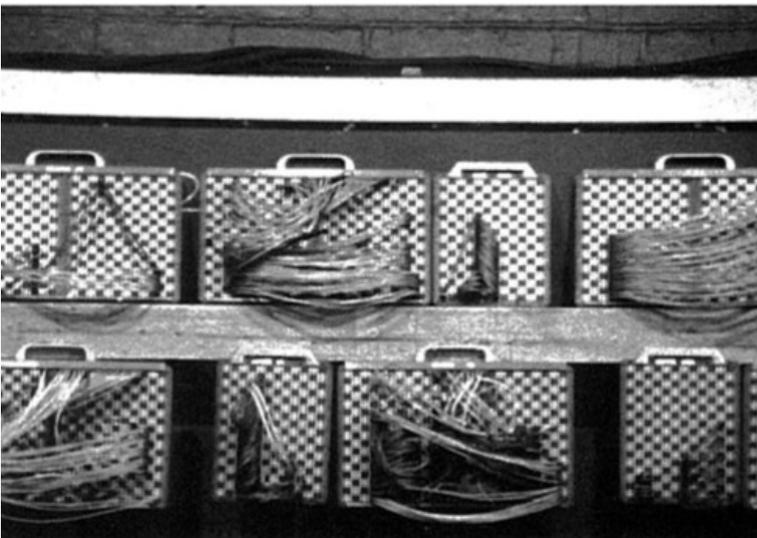
Frame capture, *9 Evenings: Theatre and Engineering* (David Tudor, “*Bandoneon! (a combine)*”), 1966, camera: Alfons Schilling and Bell Labs Engineers, produced by Billy Klüver, 16 mm black-and-white film, The Daniel Langlois Foundation for Art, Science and Technology, 9 Evening Theatre and Engineering fonds.



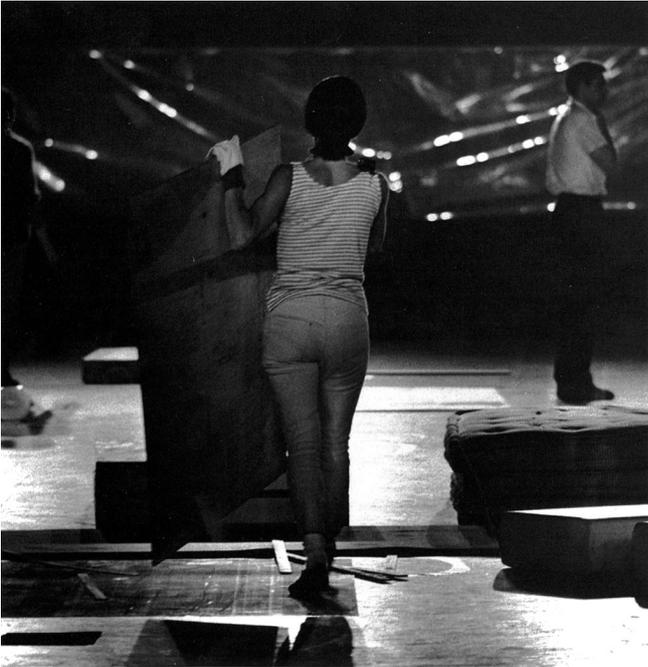
Frame capture, *9 Evenings: Theatre and Engineering* (Central Control Area), 1966, camera: Alfons Schilling and Bell Labs Engineers, produced by Billy Klüver, 16 mm black-and-white film, The Daniel Langlois Foundation for Art, Science and Technology, 9 Evening Theatre and Engineering fonds.



Frame capture, *9 Evenings: Theatre and Engineering (Amp Equipment)*, 1966, camera: Alfons Schilling and Bell Labs Engineers, produced by Billy Klüver, 16 mm black-and-white film, The Daniel Langlois Foundation for Art, Science and Technology, 9 Evening Theatre and Engineering fonds.



Frame capture, *9 Evenings: Theatre and Engineering (Central Control Area)*, 1966, camera: Alfons Schilling and Bell Labs Engineers, produced by Billy Klüver, 16 mm black-and-white film, The Daniel Langlois Foundation for Art, Science and Technology, 9 Evening Theatre and Engineering fonds.



Peter Moore, *Untitled* (Yvonne Rainer, "Carriage Discreteness," second performance), 1966, black-and-white photograph.