The New York Times (by Neal Boenzi)

Dr. Billy Klüver, electronics engineer specializing in laser research, arranges helium-filled pillows.

In a sound-drenched Lower Manhattan loft building that was enlivened by revolving painted disks, film projections, floating pillows and miniskirted girls in paper smocks, representatives of industry and labor joined a number of artists and scientists yesterday to proclaim a "working alliance" between art and technology.

This modest and uncertain merger seeks to bridge the gap between the two worlds. It is intended to bring modern technological tools to the artist for creating new art forms and fresh insights and viewpoints to the engineer for creating a "people-oriented" technology.

The event was celebrated at a news conference "happening" in the six-story loft building at 381 Lafayette Street used for studio purposes by Robert Rauschenberg, the avant-garde artist. Kheel's 'Biggest Mediation'

Mr. Rauschenberg, along with Dr. Billy Klüver, an electronics engineer who is specializing in laser research at the Bell Laboratories, and Theodore W. Kheel, the lawyer-labor mediator, are prime movers in the art-technology

"For me," said Mr. Kheel, "this is the biggest mediation I've ever undertaken."

Among the art objects on display was a large drawing of a nude generated by a computer. Masterminded by two engineers, L. D. Harmon and K. C. Knowlton, this project involved the making of a transparency from a photograph and scanning it



Senator Jacob K. Javits speaking yesterday at gathering at 381 Lafayette Street. A traditionalist, the New York Republican nevertheless finds merit in modern art.

By HENRY R. LIEBERMAN

with a device operating like a television camera. The information on the

transparency was then stored on magnetic tape in the form of pulses standing for digits, with the brightness level of the picture elements represented by numbers ranging from 0 to 7. After processing all the numbers, the computer printed a drawing of micropatterns formed by clusters of symbols used in electronic design.

Visitors at the studios were intrigued by a sculptural representation of a woman taking a shower. As droplets of water dripped from the shower-head in a white stall, moving-picture images of the woman were registered by a projector behind the stall on a sand-blasted Plexiglass panel.

Rauschenberg's 'Oracle'

Another sculptural construction was a sound-emitting assembly consisting of a tire, truck door, window frame, bathtub and air vent. This is Mr. Rauschenberg's "Oracle."

Five radios are used, with the tuning dial of each being rotated by motor. Thus, each radio picks up snatches of the broadcasts of all the local radio stations. To eliminate wiring from assembly components to the central pickup point, signals from the radios are relayed to the components by small FM transmitters.

Last year an artist-engineer collaboration called "Nine Evenings: Theater and Engineering" left the art critics bewildered. A few visitors at the Lafayette Street show also looked with puzzlement on "Oracle." But the show sponsors emphasized that it was the idea of collaboration, and not a specific art work, that counts most.

Contributions Are Listed

While 20 helium-filled pillows floated eerily in a twostory room called "the Chapel," the need for bringing artist and technologist together was stressed in speeches by Senator Jacob K. Javits, a traditionalist who sees merit in modern art; Ralph C. Gross, president of the Commerce and Industry Association; Edwin Langsam, film projection supervisor of the American Telephone and Telegraph Company; Herman D. Kenin, head of the A.F.L.-C.I.O.'s new Scientific, Professional and Cultural Employes Council, and Dr. Warren Brodey, a psychiatrist, of the Massachusetts Institute of Technology.

A.T. & T., the International Business Machines Company, the Atlantic Richfield Corporation and various labor groups are among the organizations that have made \$1,-000 contributions for furthering the cooperation between artists and engineers. But Mr. Gross urged industry to enlarge "the less than 3 cents of each corporation-



Drawing of nude above was generated by a computer under direction of L. D. Harmon and K. C. Knowlton, engineers. Black square encloses the detail shown.

contribution dollar that goes to the arts."

"Along with its obligation to be a profit-maker for its owners, the modern business corporation has an obligation to be a good citizen in the community," he said. "As a basic part of this obligation, the corporation must examine carefully its responsibility to support the arts."

In explaining the unions' interest in art and engineering, Mr. Kenin, who is head of the musicians' union, said that union members were concerned about a "growing chasm" between disciplines, the "growing impersonalization" of work and the frustrations faced by many individuals in seeking to make "valuable contributions."

He noted that union members were also consumers, members of audiences and citizens concerned with the quality of society.

The event served to dramatize a drive to win organizational support for the arttechnology merger and to mark the transfer of Experiments in Art and Technology. Inc., a nonprofit organization of artists and engineers, to the new Automation House being prepared at 49 East 69th Street.

Automation House will be the center of the American Foundation on Automation and Employment, headed by Mr. Kheel and concerned with human problems caused by automation—notably the problem of individual "isola-

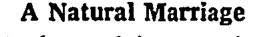
Dr. Brodey, who heads M.I.T.'s science camp for underprivileged youngsters, noted that new technologies had opened large new areas of creativity. While the industrial revolution "averaged the people," he said, the great strides made in science and engineering had opened "a new potential for living in a personalized environment if we merely can think our way out of the old massproduction mentality."

"It is the artist who has the capacity to make personalized products that grow in meaning as they become more familiar. The artist has

He added:

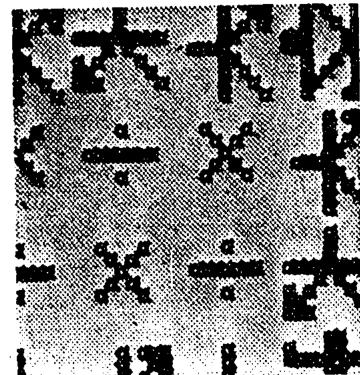
learned to use as his material the familiar that is outside the 'accepted system.' By his slight shifts, relevance and meaning emerge from the hackneyed."

Dr. Klüver, the laser specialist, stressed his belief that the art-technology merger should primarily aimed at "catalyzing the individual's responsibility for the shaping of the new technology." In pursuing this end, the 40-year-old scientist, a thin, blond man who came here from Sweden in 1954, has long assisted artists in developing new modes of expression.



He has advised sculptors on how to build self-exploding contraptions, helped painters add neon lights and motors to their works, and provided them with amplioscillators, speech synthesizers, image producers and various kinds of electronic detectors to extend their range. To Dr. Klüver, it is a natural marriage.

Technology supplies new materials, new techniques and new imagery to the artist. In return, technology gets from the artist new out-



looks that make it "more human, more reasonable, more varied, more lifelike, if you wish."

Robert Rauschenberg, the 41-year-old soft-spoken ex-Texan who has been called an artistic enfant terrible, agrees that technology has bountiful gifts to offer the artist. Far from fearing it, he finds it an "exciting chal-

'No Place Is Safe'

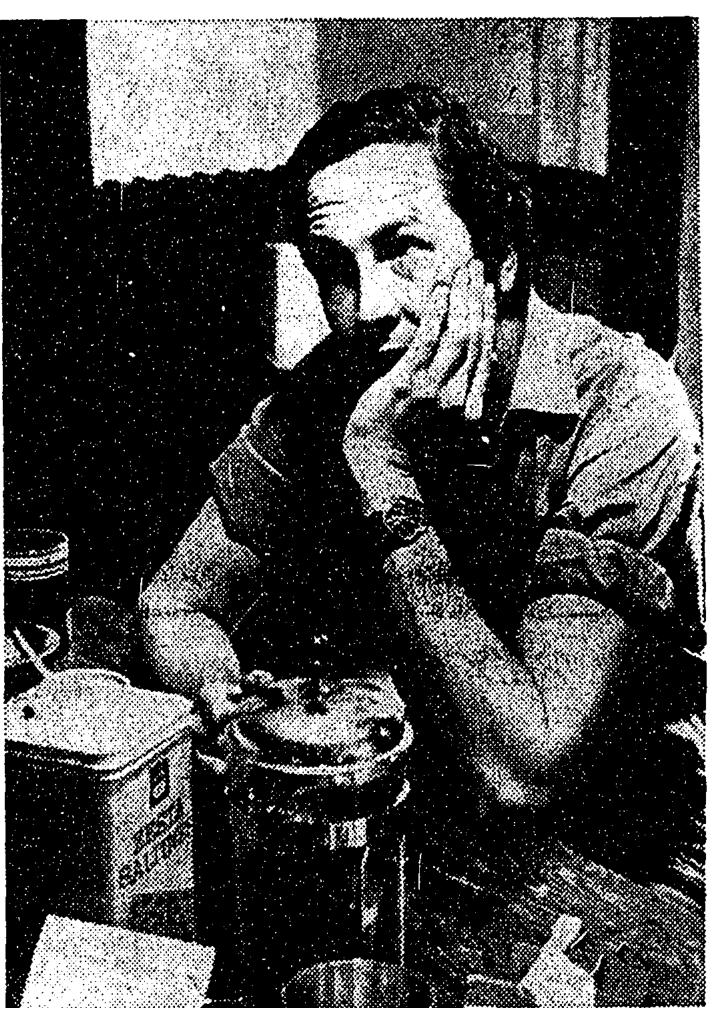
"If you don't accept technology you better go to another place because no place here is safe," he said. Asked what made technology so exciting for him, he replied: "Nobody knows the kind-of art that will be created if two or three men in diverse fields become collaborators."

About 370 artists already have written to Dr. Klüver and Mr. Rauschenberg seeking technical assistance for projects they have in mind. The letters include requests for information on synthetic fabrics, pigments, enamel finishes, translucent spheres, micro-organisms, electromagnetics, "slow chemical destruction of objects," "extending the range of sensory perception" and an "efficient way" to make paintings appear and disappear.

Mr. Rauschenberg himself has a project in mind with problems that he has not yet been able to solve technically. He envisages a room "that would be responsive to weather, to people viewing it, to traffic, noise and light."

This he sees as the art of the future.

"Nobody wants to paint rotten oranges anymore," he



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