



VISITOR ART GUIDE



The Boston University
photonics
center



WELCOME TO THE PHOTONICS CENTER

welcome

The Boston University Photonics Center is known for being an innovative leader in the field of photonics research. The center has a world-renowned group of faculty and research members, a state of the art facility and has built a strong reputation for research and technology development.

In this guide you will find information about each Photonics Center art installation as well as maps to help locate each piece. Some of the work in this guide was created by outside artists, however, Boston University students created a majority of the pieces as part of a unique art competition. The connection between the Photonics Center, its faculty and students and the greater Boston University community has lead to the creation of the *Art is Light Design Challenge*. This annual competition, sponsored by the Photonics Center and the Boston University School for the Arts (SFA), has lead to the installation of several student designed and built art pieces. This challenge encourages any Boston University art student to collaborate with students from the Photonics Center and the College of Engineering to create unique site-specific pieces of art.

Enjoy this self-guided tour and thank you for visiting the Boston University Photonics Center.

THE PHOTONICS MAST

the photonics mast

The 80-foot Photonics Mast, designed by the architects at Cannon, is an extended source of uniform light. The mast is divided into three vertical sections, each of which is illuminated by high-intensity light sources at their ends. The sections consist of leaky cylindrical waveguides that vertically channel the majority of the light while continuously distributing portions of the light energy outward along its length.

The mast's location at the southwest corner of the center positions it at the boundary between Boston and Brookline, serving as both a beacon and a gateway to the City of Boston as you approach it from the West.

Artist: Cannon Architects
Location: Southwest Facade
(1)



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TIME

This sculpture is comprised of two columns of light creating a kaleidoscope of changing color. Clusters of LED lights are connected to a processor that implements nonlinear fueling algorithms, establishing the colors of the columns, as well as color transitions.

Robert Smart, a former sculpture graduate student at Boston University's School for the Arts was a winner of the 1998 *Art is Light Design Challenge*.

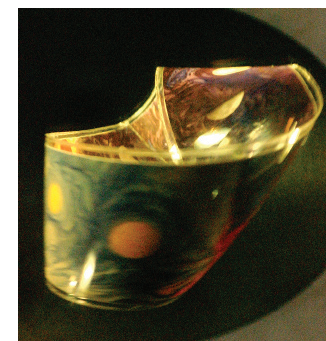
Artist: Robert Smart (SFA '99)
Location: 1st Floor Atrium Stairway
(2)

IN TANGIBLE INFINITY

in tangible infinity

The Holograph machine uses one parabolic mirror to form the image of a Möbius Strip. This strip originated as a painting on six 22" x 40" watercolor panels. After digital enhancements and resizing, the final piece is 16.357" x 2" when flat. The rays of light reflect at the image's points of incidence, intersecting and converging, ultimately illuminating the image beyond the glass. The image seems to float weightlessly. This piece was the winner of the 2004 *Art is Light Design Challenge*.

Augustus Möbius, a German astronomer and mathematician, discovered the Möbius Strip in 1858. Discovery of the strip has led to innovations in chemistry, nanotechnology, electrical engineering and physics. This piece symbolizes the mission of the Photonics Center to be an innovative pioneer in the field of photonics.



Artist: Sarah Niedzwiecki (CAS'04)
Location: 1st Floor Corridor
(3)

FIRST LIGHT

This installation is part of a collection of digital images inspired by the poetry of Dylan Thomas. This collection, created by Hugh O'Donnell, parallels a series of paintings on canvas based on a singular theme. "First Light" is particularly related to Thomas' poem, *The Force That Through The Green Fuse Drives the Flower*. This piece illustrates the same theme found in Thomas' poem, the need of the artist to explore ways to visit those places in which light breaks where no sun shines.

The image was created on computer and deliberately reveals units of light and color as the building blocks of the image. It is similar to pointillist painting in that the units of

color, in this case pixels, can be clearly seen up close, but when the viewer steps back the points fuse, to create an impressionistic image, fusing light and color.

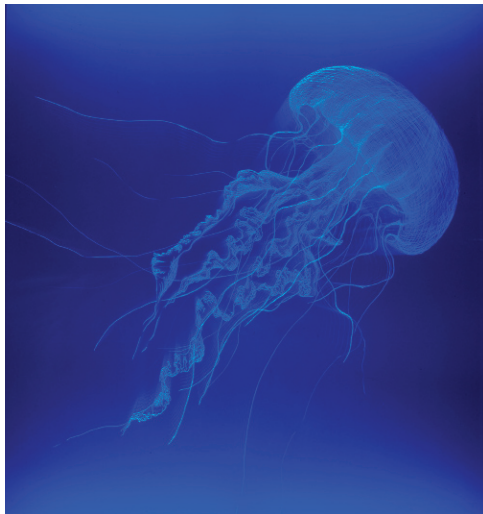
To create the final 12' x 14' image, the computer file was transferred to Ilfochrome transparency film. The film is positioned behind glass and illuminated from behind by fluorescent lights.

Hugh O'Donnell is professor of painting in the visual arts division of the School for the Arts at Boston University. He has had solo exhibitions at numerous galleries and his work has been exhibited and collected by museums including the Metropolitan Mu-

seum of Art, The Museum of Modern Art, the Solomon R. Guggenheim Museum, the National Gallery of Art, and the Museum of Contemporary Art, Tokyo. A selection of O'Donnell's work from the Thomas series was exhibited at The Cooper Union in New York City in 1997. Two major works from the series were part of a tour entitled "Founders and Heirs of the New York School," which toured to the Tokyo Museum and other museums in Japan during 1997. O'Donnell is a part of the selection committee for the *Art is Light Design Challenge*.



Artist: Hugh O'Donnell
Location: Saint Mary's St. Lobby
(4)



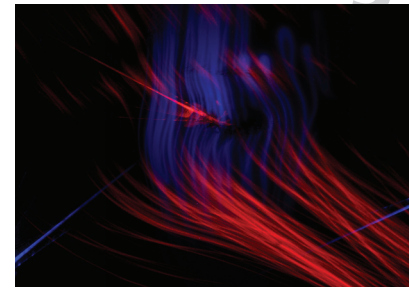
Artist: Heather Richards
Location: 2nd Floor Corridor
(5)

NOCTILUCA

Noctiluca is a multilayered series of acrylic sheets with embedded fluorescent dyes. These dyes convert black light illumination into tracings of blue light which follow lines etched in the plastic layers, creating a three-dimensional image. This piece was the winner of the 2000 *Art is Light Design Challenge*.

The Pelagia Noctiluca, a jellyfish discovered in 1775 by Petrus Forsskal, is the inspiration for this piece. Forsskal, a Swedish native, studied Latin and Greek philosophy. The name is derived from Greek *Pelagia* meaning "of the sea", *nocti* standing for night and *luca* for light. As its name implies the Noctiluca has luminescent power. Light is given in the form of flashes when the medusa is stimulated by turbulence created by a ship's motion or by waves.

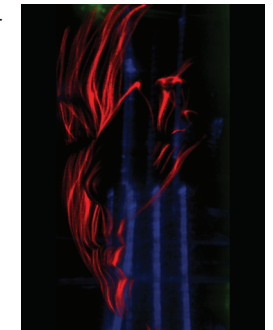
DRAWING WITH LIGHT: A COLLABORATION OF ART AND SCIENCE



This project was the winner of the 2006 *Art is Light Design Challenge*.

Artists: Adamo Maisan (CFA '08)
Laura Marotta (CFA '08)
Location: 2nd Floor Atrium
(7)

These photographs utilize laser technology to extend traditional drawing methods. Using a laser as a drawing tool, the movement of light is captured with long-exposure film. This unique method enabled the recognition of both figurative and abstract imagery.



ON THE SHOULDERS OF GIANTS

This installation creates a subliminal light painting, that moves across the screen. To reveal the images, the viewer's eyes need to follow the columns of light as they move across the screen. These paintings include names and faces, events, equations, and other images related to the field of Photonics. The images are created with LED lights controlled by an Apple computer.

Guests can call up additional images by speaking specific phrases into the microphone mounted on the wall. These include: *Show me the time*, *Famous names in Photonics*, and *Maxwell's equations*. *Keep it real simple*, elicits images that are easy to see. On

The Shoulders of Giants is one of the most popular art installations at the Photonics Center because it combines many research interests of the Photonics Center faculty and students. The installation also highlights the relationship between photonics research, electrical and computer engineering and the arts.

Bill Bell is a retired engineer, living in Brookline, Massachusetts, who has created light-based art for the past 18 years. His work can be seen at the Museum of Science in Boston, the Exploratorium in San Francisco, and Union Station in Los Angeles, California as well as other locations around the world.



Artist: Bill Bell
Location: 2nd Floor Elevator Lobby (6)



SNOWFLAKE

snowflake



Artist: Alyson Smith (SFA)
Location: 2nd Floor Corridor
(8)

The book, *Snow Crystals*, inspired this piece. The book, published in 1931, features some 5,000 images of snowflakes captured by the Vermont farmer, Wilson Bentley. Bentley was the first to develop the methodology needed to photograph snow crystals. Using a glass slide and a microscope, Bentley showed for the first time, the hexagonal shape of a snowflake. This piece was the winner of the 2002 *Art is Light Design Challenge*.

Smith translated the *Snow Crystal* images into an illuminated and magnified snowflake. The snowflake has been synthetically simplified for the viewer to observe its geometric forms, its symmetry and structure. Bentley's determination and vision have given him the legacy of being an innovative scientific pioneer. This piece not only symbolizes Bentley's spirit but the mission of the Photonics Center.

ATHANOR

athanor

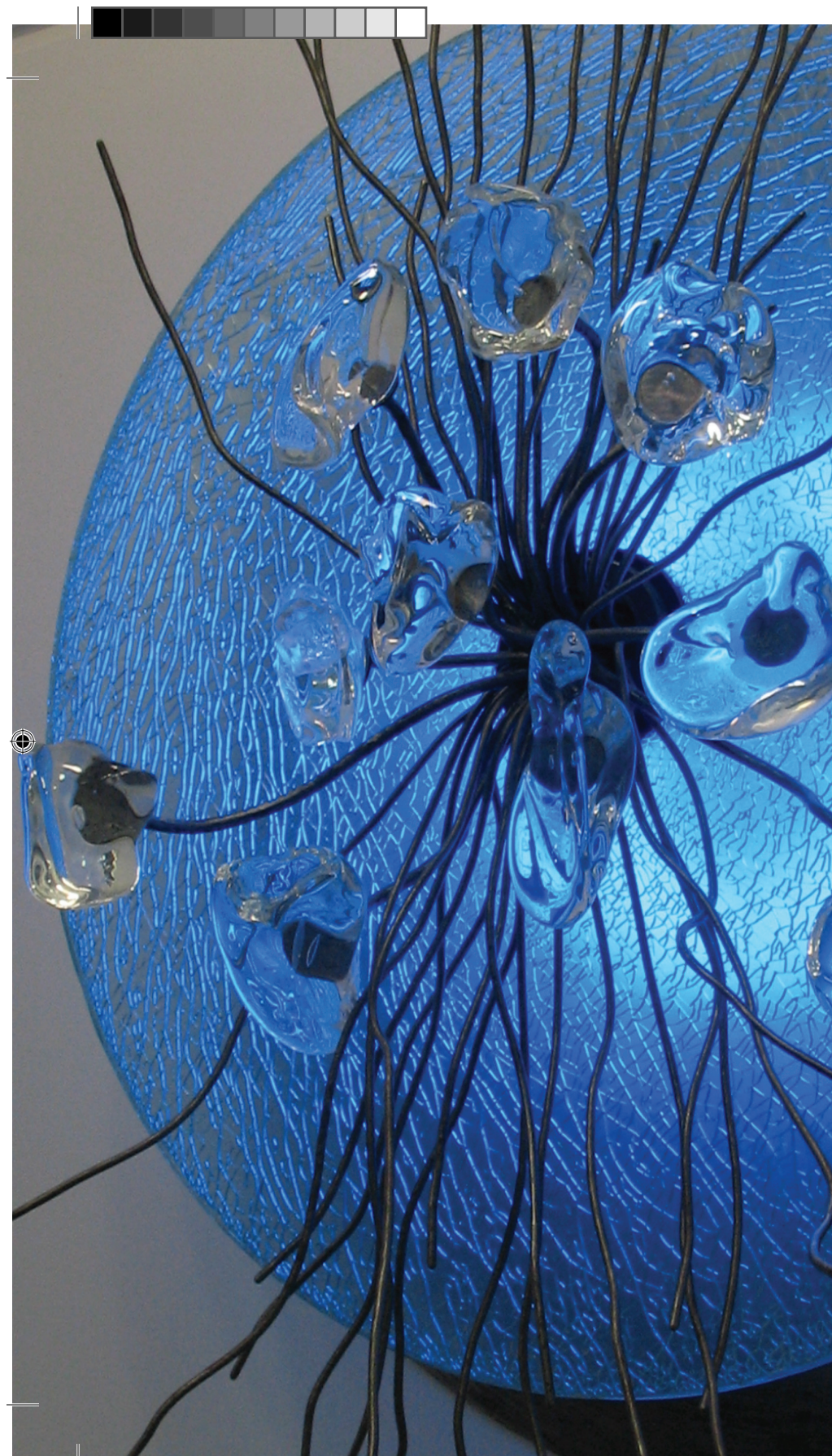
This installation projects a "sun drawing" on the walls of the atrium. Boston University Astronomy Professor Kenneth Janes designed the essential heliostat, a device designed to track the movement of the sun, for Saad-Cook's Sculpture. The heliostat is mounted atop the building and focuses the sun's light onto the installation via relay mirrors. The image of the sun's light slowly and subtly changes as sunlight moves across mirrored metals and optically coated glass. The installation is specially shaped and assembled to break light into its color components.

Saad-Cook's work has also been installed at the American Astronomical Society, Washington, D.C., the National Radio Astronomy Observatory, Socorro, New Mexico, the Smithsonian



Artist: Janet Saad-Cook
Location: 7th Floor Atrium (9)



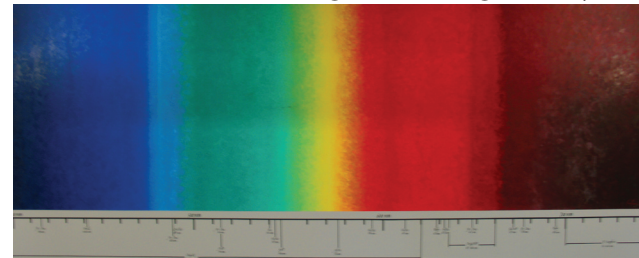


SPECTRUM

spectrum

This piece functions both as a work of art and as a scientific reference. The colors and their spacing are accurately depicted. The mural includes the notations of color wavelengths (in nanometers), as well as those of common lasers, including those being

developed at the Photonics Center. The clarity of the colors and the lively brushstrokes used by the artist give the mural a brilliance and life that symbolizes how the study of art is also the study of light.



(13)

Artist: Lee Kasai (SFA '98)

Location: Administration Lobby (936)

BOOK OF HOURS

book of hours

An illuminated manuscript is a document in which the text is supplemented by the addition of decoration, such as decorated initials, borders and miniature illustrations. A book of hours, a family specific reference for Christian worship, is the most common type of surviving medieval illuminated manuscript.

This installation is based on an illuminated manuscript from the 14th century that describes the creation of light and the hemispheres. The theme of this manuscript is essentially a celebration of light. Typically an illuminated manuscript refers

only to manuscripts decorated with gold or silver. The artist used a variety of materials that incorporate the qualities of traditional book of hours and light. The sculpture has a various levels of transparency, luminosity, and silver accents.

Originally only royalty, nobility, and the rich could afford their own book of hours. However, during the 15th century, the advancement of printing made the books more affordable. A part of the Photonics Center's mission is to improve society's quality of life. This installation symbolizes that goal of bringing the benefits of photonics research to the greater public.

Artist: Alice Orleman (SFA'99)

Location: 7th Floor Elevator Lobby
(10)

Alice Orleman was a winner of the 1998 *Art is Light Design Challenge*.



NATURE POEM I

nature poem I



These pinhole photographs were constantly exposed from sunrise to sunset on December 24, 2006. The white arches in the sky display the movement of the Sun. They represent the poetic beauty of nature.

Location: Administration Lobby (936)
(14)

NATURE POEM II

nature poem II



About the Artist

Jun Gao is a graduate of Boston University with an MFA in Art Education. Gao designed and developed the pinhole camera used in creating these installations. Jun Gao currently teaches in Massachusetts and his other works can be seen on display at the Hasbro Children's Hospital in Providence Rhode Island.

Jun Gao and his four pieces won the 2007 *Art is Light Design Challenge*.

SUNSET OVER BROOKLINE AND BOSTON

sunset over brookline and boston

This pinhole photograph was constantly exposed from April 05, 2007 through April 26, 2007. The long-term exposure photograph allows audiences to experience the passage of time in an unfamiliar and poetic way. The white stripes show the movement of the Sun. They are not only a unique and unusual representation of the Sun but they also tell a story. The white stripes indicate the weather during this period of time.



Located outside the Colloquium Room, 906
(11/12)



This photograph highlights the laser in use sign found within many research laboratories at the Photonics Center, and the vibrant lights of the BU campus on a single image. The colorful combination of the dynamic lights and the laser in use sign represents the fusion of science and art.

the power of light

THE POWER OF LIGHT:
LASER IN USE AT THE PHOTONICS CENTER



CAMPUS PHOTOGRAPH

campus photograph

This 22' long photograph of the Boston University campus was taken from a camera developed by the Itek Corporation, an early spin-off company from Boston University. The photograph was developed on a single piece of film and incorporates the surrounding areas of Allston, Cambridge, Back Bay, downtown Boston and the harbor.

Artist: Itek Corporation

Location: Administrative Offices (936)

(15)



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Boston Panorama

boston panorama

This piece is a site-specific oil painting that represents a window-like view of the Boston landscape as from seen from the Photonics Center. Painting directly on location from three corner windows of the Photonics Center building, the artist coordinated many paintings into a unique panorama that sweeps broadly from Cambridge to Brookline.

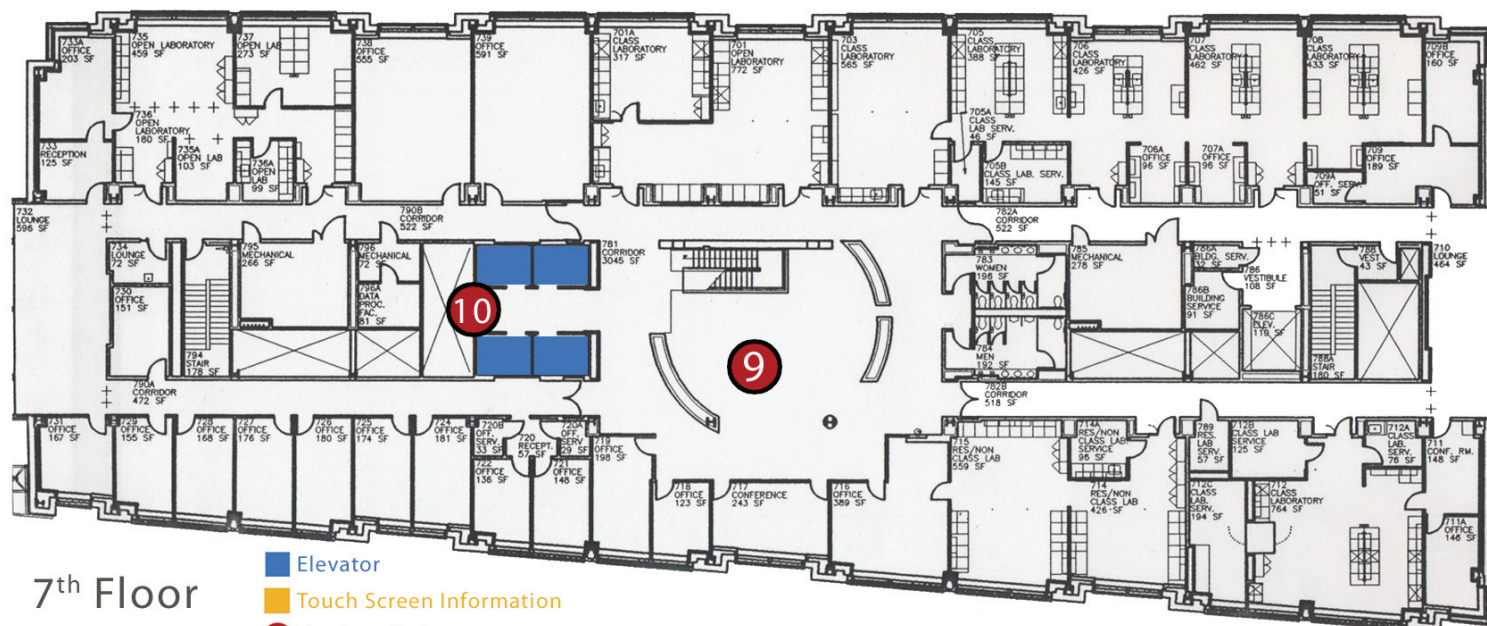
When one looks at the painting, the play of light through autumn clouds should be noted. The painting highlights familiar Boston landmarks seen from the Photonics Center labs and offices, and creates a musical rhythm of color notes across the long horizon.

Richard Raiselis is an Associate Professor of Art at Boston University's School for the Arts. His landscape paintings may be seen in many corporate art collections, including those of Fidelity Investments, Wellington Management, Mass Mutual, Chemical Bank and the Exxon Corporation. Gallery NAGA, located at 67 Newbury Street, represents him in Boston.

Artist: Richard Raiselis
Location: Director's Office (936)

(16)



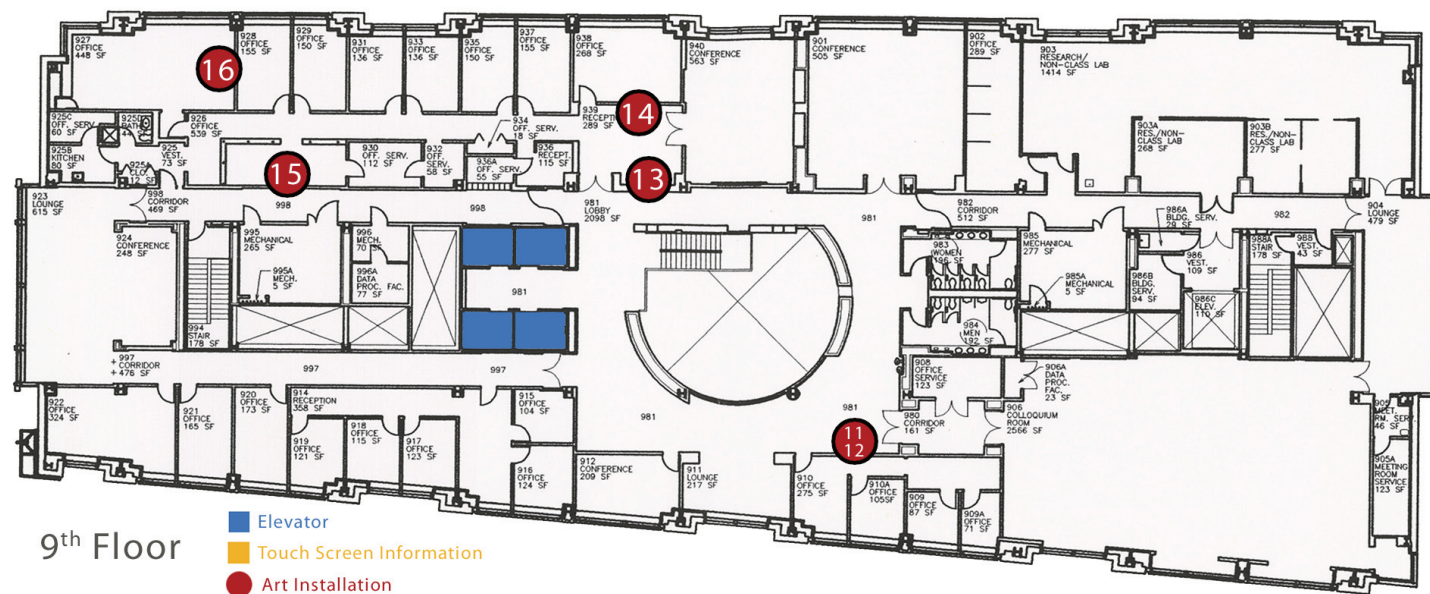


7th Floor

Elevator

Touch Screen Information

Art Installation



9th Floor

Elevator

Touch Screen Information

Art Installation

WAS



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