

**Assumption University**  
**ABAC School of Architecture and Design**  
**Vertical Studio 01/09**

**Course Number:** 4203 Architectural Design V 6 (2 – 8) + AR 5203 Architectural Design VII 6 (2 – 8)  
**Studio 4i:** Monday 12:30 – 17:30  
Thursday 12:30 – 17:30

**Instructor:** A. Nattapol Suphawong

**Office & Phone:** Lecturer Office, 2<sup>nd</sup> Floor, School of Architecture and Design

**Email:** [joexpo \[at\] parsons.edu](mailto:joexpo[at]parsons.edu)

**Studio URL:** <http://studio4i.wordpress.com>

**Project Title:** **Bangkok Futurelab: Media Art + Technology Center**

**Studio Description:** Studio 4i (Interaction | Information | Interface | Innovation) is an experiment in new media art + technology and interactive architecture. This studio focuses on the study of human interactivity and architecture in the digital age. Student will be asked to explore human and environmental interaction, embedded computational infrastructures, and the architectural implications of emerging technologies of sensing, reprocessing and displaying information.

**Prerequisite:** AR 3207 Architectural Design IV

**Office hours:** 11:00-19:00 Monday on Thursday or by appointment  
These hours provide students with time outside of the classroom for discussion of matters related to course work, as well as academic and career advising.

**Course Outline (June 2009 – September 2009):**

Week # 1:	Project Design Assignment	Lecture
Week # 2:	Philosophy Research & Case Study Analysis	Lecture / Group discussion
Week # 3:	Design Proposal	Group discussion / Pin-up
Week # 4:	Technology Research & Exploration	Desk critic / Pin-up
Week # 5:	Schematic Design Presentation	Midterm Review
Week # 6:	Site Selection & Analysis	Pin-up
Week # 7:	Design Development	Desk critic
Week # 8:	Design Presentation	Final Review (Part I)
Week # 9-15:	Building the Installation	Workshop
Final week:	Installation Presentation	Final Review (Part II)

## Project Introduction

*"What if physical environment could understand your mood and adjust itself to serve your needs right away?"*

*"What if information technology influences everything (social, politic, economic, lifestyle, art, design)?"*

*"What if your cloth and furniture could feed you personal messages?"*

*"What if you couldn't live without google?"*

*"What if your skin could charge your mobile device's battery?"*

*"What if your dream could be programmed from your PC?"*

*"People need to develop an understanding that it can escape its virtual identity and develop physical presence. Technology can recognize people's behavior, activity, and movement--and it can change the way people communicate, interact, and inhabit a space."*

**Beatrice Witzgall, MIT Media Lab**

*Energy and Materials are expensive, but technology is relatively cheap. We are looking at the increasing influence of those information technologies on the actual fabric of the building, meaning that they are becoming as integral part of architecture, not just devices that are put inside a building!*

### **Project: Bangkok Futurelab: Media Art + Technology Center**

Facility: Depending on the individual's proposal

The first part will start with the brief introduction of an emerging field of experimental interaction design, new media art, society, and architecture by studying, analyzing, and designing Bangkok Futurelab: Media Art + Technology Center. The architectural typology and facility will be similar to Ars Electronica, Linz, Austria—yet, it is located in the different context—Bangkok.

Bangkok Futurelab: Media Art + Technology Center provides a fertile context and state-of-the-art tools for digital research and experimentation. It is a lively incubator of creativity and thought, where artists and technologists actively engage with culture, addressing the issues and concerns of our time. Bangkok Futurelab challenges convention, celebrates the hack, educates the next generation, encourages collaboration, freely offers its contributions to the community, and invites the public to share in a spirit of openness: open source, open content and open distribution. Bangkok Futurelab has constantly focused on the future emerging in the present.

**Keywords:** Interactive Architecture, Immersive Environment, Human-Computer Interaction, Ubiquitous Computing, New Media Art, Real/Virtual Mixed Reality, Global Web Culture, Surveillance system, Open Source + Free Culture.

The specific goals of this project are:

- To raise the student's understanding of contemporary ideologies of interaction design, new media architecture and precedent overview.
- To increase the student's understanding of contextual situations for applications of dynamic spatial environments.
- To develop the student's ability to apply and integrate the digital/information technology into the architectural and spatial design.

**Method (T - F - C)**

**Part 1: Architectural Proposal**

**Part 1.1: Analysis**

*Duration: 3 weeks*

This first 3 weeks of semester students are required to research & analyze parallel in both directions that are

1. Design & Media Arts
2. Interactive Architecture and Technology Integration

**Design & Media Arts**

This topic will be a survey of art and architectural projects in the digital/interactive media fields from past to present. The lecture also discusses how those projects are implemented. Students will be examining the contemporary landscape of artists/architects/practitioners through many images, movies and websites.

**Interactive Architecture and Technology Integration**

This topic will be discussed on the idea of the emerging field of interactive architecture and also the notion of using technology for the built environments. It is critical that each student penetrates into his or her own investigation and develops a thesis that based on an above idea.

This topic will be also discussed through an analysis of existing facility. It is critical that each student has to investigate through main 4 aspects of art + technology center, which are:

- Programmed & Activity
- Display & Façade
- User Experiences & Interactivity
- Digital Technology integration

**Part 1.2: Experimentation & Conceptual Design**

*Duration: 2 weeks*

In this part, student will explore a small art + technology project for a better understanding of the activity and facility in order to develop his/her conceptual design for the final project.

**Part 1.3: Site selection & surrounding analysis**

*Duration: 1 week*

In this part of studio students will move their own project into the actual site and be involved with city and urban context & regulation. The site surrounding, contexts also city zoning and city code regulation will be discussed in this part. After this site analysis the program requirement will be handed to students.

**Part 1.4: Design Development & Finalization**

*Duration: 2 weeks*

In this design development part, the concentration will be on how each individual student translates and develop their own concept into architecture, with forms that satisfy the functional needs. The 4 aspects of analysis from part A will be carefully considered that how the new requirement of program, circulation, display and space can be collaborated well with each other within a boundary of the new site. The design concept, data analysis also design criteria will be carefully discussed in this part. The students should learn to solve design problems and respond to design situations in the architectural intention, meaning and knowledge. Finally, students are expected to deliver the ultimate architectural conclusion for their project. The design finalization will be proved by the extensive drawings (plans, sections, elevations, perspectives, etc.) and models construction (interior, exterior, etc.) to best describe and support both of student's hypothesis and building requirements.

## Part 2: Media Installation

*Duration: 6 weeks*

In this presentation part, the concentration will be on how each individual student translates and develop their own architectural proposal from part1 into media installation. The students will learn how to build a small installation with various techniques for multimedia exhibition such as the technical problems that might occur during exhibiting, projection screen, and spatial design, and so fourth.

### Texts:

1. Required:
  - **4dspace: Interactive Architecture (Architectural Design)** by Lucy Bullivant
  - **Digital Art** by Christiane Paul
  - Additional reading assignments come from handouts and materials placed on reserve in the library
  
2. The following texts are also suggested:
  - **Disappearing Architecture: From Real to Virtual to Quantum (In Detail)** by Georg Flachbart, Peter Weibel, Aaron Betsky, and Ole Bouman
  - **Beyond Form: Architecture And Art In The Space Of Media (Lusitania)** by Omar Calderon, Christine Calderon, and Peter Dorsey
  - **Smart Materials and Technologies in Architecture** by Michelle Addington and Daniel L. Schodek.
  - **Digital Ground: Architecture, Pervasive Computing, and Environmental Knowing** by Malcolm McCullough.
  - **CTRL Space Rhetorics of Surveillance from Bentham to Big Brother** by Thomas Y. Levin, Ursula Frohne, and Peter Weibel
  - **Responsive Environments: Architecture, Art and Design** by Lucy Bullivant
  - **Ars Electronica** by Hannes Leopoldseder, Christine Schopf, Gerfried Stocker

### URLs:

<http://www.interactivearchitecture.org/>  
<http://turbulence.org/blog/>  
<http://www.dillerscofidio.com>  
<http://ffff.at/>

### Grading

Mid Review (30%) and Studio Participation (10%)	40 %
Final Presentation	40 %
Assignments	20 %
<b>Total</b>	<b>100 %</b>

### Studio Participation

#### *Attendance*

The Studio is scheduled on Monday and Thursday from 11:00-17:00. Being on time is considered extremely critical. You are required to be in studio during all regularly scheduled studio hours. Whether or not there is a class activity (lecture, discussion, etc.) or a desk critique, you are expected to be using that time to work on your project in studio.

*Preparation*

A sign-up list will be maintained for desk critiques. During each design project, you will be given progress assignments. You are expected to complete the assignment(s) for your desk critic. Your instructors may alter the order of the sign-up list if assignments are not complete when arriving at your desk.

*Project Review*

Attendance at all reviews is required to pass studio. You are expected to be in the review room from beginning to end. If a serious emergency prevents you from attending a review, Please calls architecture department or us and asks someone to let us know prior to class time.

*Assignment*

During the course of studio, there will be assignments to help students develop alertness and wit in decision-making and sketching, presentation skills.

*Final Requirement*

In this course, on each of the problems, students must be willing to maintain a very high level of productivity. This commitment will require participation, writing, drawing, and modeling. The architectural drawings and physical models must reveal the essence of the individual logic and imagination. Specific requirements for each pin-up and review will be announced prior to each presentation. There may be different requirements for each group, consult your studio critic for further details.

***Last day to withdraw with "W": Friday August 28, 2009***