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An Interview with the Dean of Academic Affairs

Dean Hou Chun-Kan

Preface

Whoever visits NYUST's Administration Center will be attracted by an intense aroma of coffee. Today, by tracing the aroma,we finally found the owner of the "coffee house", Dean of Academic Affairs, Hou Chun-kan who treated us to delicious cake and coffee while being interviewed, we also learned that visitors to the Office could enjoy free coffee there. Thus, under a warm atmosphere, Dean Hou gave us his viewpoints about NYUST:

1. After Taiwan's entry into the WTO, NYUST will definitely face fierce competition in enrollment. How will NYUST equip itself to woo excellent students into enrolling? In other words, are there any strategies or rewards you plan to employ in order to attract good students?

Yes, it certainly will affect our recruiting policy. Since we have been trying to recruit excellent students, we not only adopt effective marketing strategies, but also help students grow in NYUST. To that end, we concentrate on promoting our vision, reputation, characteristics, academic research and service. Dealing with different targets like students, parents, industries, and society, we have come out with various marketing strategies, such as:

- Utilize propaganda CD-ROMS to broadcast our university's features and information to the whole country.
- Participate in expositions held by technological institutes and universities to introduce the features and advantages of NYUST.
- Conducted by the Administrative Center, our students will campaign at the high schools, 5-year-colleges and 2-year-institutues from which they graduated, hoping to recruit new students to join them at NYUST.
- Invite VIPs to our University's Anniversaries and lawn parties to learn about NYUST's merits.
- Plan exhibitions to display faculty and students' accomplishments.
- Host campus-wise activities such as Camp of Edison Growth, Fu-zhi Camp, and the Competition of Robots. The purpose is to get more exposure to the whole nation through nation-wide activities.
- Through social activities, students will extend their contact to the community and to the whole society to let the public feel the liveliness of NYUST.
- Participate in academic seminars to promote our school's academic reputation.
- Host academic seminars so as to expose NYUST students and faculty members to other academic organizations as well as universities.

Personally speaking, I prefer rewarding excellent students who have enrolled in NYUST to recruiting new students. For example, we have scholarships set for highly academic achievers as well as for excellent performers in other fields. Therefore, good marketing strategy rather than scholarships can recruit good students. So far, several talented students from NYUST have won international competitions in the technological field.

2. Since it's the world's trend to promote "recurrent education"and to realize life learning, is NYUST working in the same direction?

It has always been NYUST's mission and responsibility to promote backwash education and realize life-learning. Nevertheless, due to its inferior location, backwash students are not as many as we expected. Therefore, NYUST is trying to find out the real needs of adult students and explore a niche market. In addition, the university is planning to establish an extension center in Taichung.

Dean Hou (front, second from left) at the NYUST Archive, making a brief introduction

3. In his Visions of NYUST's development, President's "4 + 2 School System" is under revision. Can you tell us what it is?

The "4+2 School System" is one of President Lin's visions of NYUST's development. However, due to present national laws, graduate schools are open to all, not only to our own graduating students who want to enroll directly. Therefore, the program is under revision. Regardless, its most distinguished feature will not change: to give students credit if they win in various kinds of contests.

4. After taking his office, President Lin has developed his "Student 3 +1 Program" (Note:"3"refers to professional certificate, language certificate and the certificate of club participation.) How does the Office of Academic Affairs help students to achieve their professional and language certificates? What's the timetable?

The "Student 3+1 Program" is an excellent program that can upgrade students' professionalism, communication skills, and leadership, as well as language ability. We have solicited evaluation systems from each department. In terms of the English proficiency test, in addition to the General English Proficiency Test (or GEPT, an English test used in Taiwan for measuring people's English level), we also use TOEFL with 500 as the minimum score. We also require cooperation from our faculty and curriculum. So far, we have invested US$250,000 on our Language Center (located in room DH 206) hoping to provide students an English learning environment.

As for the timetable, we hope that all students can be equipped with the "3+1" ability by the time they graduate. Thereby, they not only will be competitive in the job market but also become NYUST's valuable asset to show the world its accomplishments.

5. Since cultivating human capacity is one of President's Lin's visions for NYUST, how will the Office of Academic Affairs to achieve his goal to upgrade students' human capacities?

In order to upgrade students' human capacity, President Lin established an art center that has promoted many art exhibitions. One cannot reach the goal in one step and it needs the proper environment to realize his wish. Thus, both the Office of Academic Affairs and our school's faculty members are fully prepared. In addition to general knowl-

edge and special courses, the university constantly holds forums to strengthen faculty's teaching ability in human capacity. Moreover, the university is planning a Hall of Fame, hoping to educate students about how to serve our society by knowing the hard work of the historical people enrolled therein.

6. In addition to its student counseling and rewarding, NYUST has also introduced the Double Warning System and Individual Counseling, which are highly praised. Can you tell us if there was any plight when they were first introduced? What about any improvement?

Basically, the Double Warning System expects all students to graduate. Since its implement, it best suits the handicapped students. Regardless, there were still failures. In order to realize the system, I think we need teamwork from the Office of Academic Affairs, the Office of Academic Affairs, the Undergraduate and Graduate Schools, Tutors, and the Student Counseling Center. It is our goal to strive for solidification of teamwork among these groups.

7. Since you took the office, we noticed that with the same personnel, the number of students has grown from three hundred to six thousand plus. How did you do that? Moreover, we also know that the staff from Office of Academic Affairs is satisfied there. Can you tell us how you maintain such an amiable working environment?

First of all, I guess I was lucky enough to take the job at a time when everything was settled down. I also think the credit should go to Vice President You Manlai, who was the former Dean. In addition, I always treat colleagues as my friends and encourage them to enhance their professional capabilities and that's why so many colleagues have been promoted and pursued further study. Finally, through scientific methods, I have simplified their work procedures to relieve their burden.

Remarks:
Unlike just friendly greetings before, Dean Hou has made us aware of his efforts for faculty, staff and students this time through a long interview. We not only learned about the work of Office of Academic Affairs but also known the latest progress of NYUST toward pedagogy. We hope that this interview will help everyone understand the Office of Academic Affairs. Meanwhile, Dean Hou also made some suggestions in the Newsletter of NYUST. He proposed that faculty members who conduct research or present papers abroad during summer and winter vacations should share their precious experiences on our own campus as well, so as to upgrade NYUST's academic status.

Call for Ideas

In order to effectively promote university affairs and help the university grow and develop, President Lin asked the Office of Academic Affairs, the Computer Center, and the Center for Development to implement a "Plan to innovate and improve NYUST" and "Monthly Call for Ideas". We hope that

suggestions arisen from monthly discussions on special issues will provide a reference for the administrative, teaching, as well as service units. The purpose is to eliminate any blind spots.

The "plan to innovate and improve NYUST" is a solution to help each working unit to promote its school affairs. The "Call for Ideas" is one issue a month that solicits suggestions from the faculty and students. The November subject is "How to deal with the Long Tan Road Issue" The Academic Center provided background and asked the Computer Center to post the front page of our school website.

Everyone can surf the website and key in ideas and itemize concrete suggestions. Please leave your name and your contact information.

New Research Area about to Start:
Graduate School of Computational Design

With the help of a grant from Taiwan's Ministry of Education, NYUST established its Graduate School of Computational Design in the college of management, aiming at the application of digital technology to design theory, design application, and design knowledge, as well as design integrated areas, and the like. This graduate school, the first of its Kind in Taiwan, began its recruitment in 2002.

I.Overview

With rapid progress being made in computer technology and information communication, the computer revolution will be the second industrial revolution in the 21st century. As a matter of fact, both the academic circle and industrial circles agree that the integration of design and computer technology is essential and an inevitable trend. The application of digital technology to research and application of design will be one of the mainstreams in the 21st century. Therefore, this program is concerned primarily with the practice of design and in research of the application of digital technology toward design theory and practice. Establishing the department not only helps to develop new technology, but also enhances our industry's ability to compete internationally, as well as to cultivate lots of design, of a sort that is expected to be especially demanded by domestic and overseas design industries in the future. At the same time, the Graduate School of Computational Design will be the integration of excellent faculty members and equipment for design and information technology.

Concerning the application of computer technology to research in design theory, Computer Aided Design, CAD, is a generally acceptable term. In fact, CAD programs have been put forward since 1960s, and CAD has always been linked with Computer Aided Manufacture, or CAM. In the 1970s, when experts in the field of design began exploring the application of computer technology, the same term, CAD, has been adopted. However, western researchers found that such a term might be misleading and couldn't

represent its characteristics in the research of design areas. Therefore, many overseas researchers and academic institutes began referring to the field as computational design or design computing, in an attempt to use this kind of concept to describe the relationship between computer technology and design. When entering the 21st century, an "e-generation" era, computer technology is indispensable to the breakthrough of the design profession. On the contrary, the relationship between them will be tied more deeply.

1.Design is the foundation for upgrading Taiwan's competitiveness.

The rapid growth of domestic industry and business boosted Taiwan's economic development, created an economic miracle attracting the attention of the whole world, and made Taiwan into one of the Four Asian Tigers. For many years, Taiwan built up a poor reputation for itself, mostly on account of the cheaply-made, low-quality products and name-brand rip-offs that had been flowing from Taiwan's factories into the homes of foreigners. This led to a negative impact upon Taiwan industrial upgrade.
The key obstacle for Taiwan's industrial upgrade was the

Claudia"s Cafe (A coffee and gift shop which is subsidized by the Design College)

industry's ignorance of the importance of design and its reluctance to introduce promotion plans for Research and Development (R&D) as well as overseeing the high values added brought by design. In recent years, our government made every endeavor to enhance our country's competitiveness. For example, the Republic of China's efforts in this direction resulted in Taiwan's entry into the World Trade Organization (WTO). It has also attempted to build Taiwan into an Asian-Pacific regional operations center. However, if we go over the question of how to achieve the preset objective of national plan and policy carefully, it won't be too hard to find out that only through designing, can we build up our own brands. And only through designing can we enhance our product competitiveness as well as get rid of the notoriety of imitation and rough products, and enhance our nation's competitiveness so as to realize our collective dream of building Taiwan into an Asia Pacific regional operations center.

2. Computer Technology is needed to a breakthrough in the modern design problem.

With the development of digital information, computer technology has brought an enormous effect on human life and thought. Moreover, while facing many modern design problems, only if we rely on computer technology, can a

breakthrough be possible. Therefore, how to apply the computer technology to solving design problems has become an important task for design research--both practically and academically, as well as becoming a required skill for every modern design engineer. Consequently, the application of computer technology will revolutionize the way we design.

(a) Change in design process
If the traditional design process organizes well and needs no further improvement, then introducing computer technology to design engineering or teaching will be redundant. However, computers have been necessary tools for the design process in industrial circle and academic circle. Meanwhile, if we examine the use of computer and traditional design process, it isn't too hard to discover that computers have gone through a thorough change, which permits computers to play a more important role in modern design process.

(b) Reduction in design cycle
Owing to the rapid development of information, a reduction in design cycle has just started to become apparent. To weed through the old product to bring forth the new one and provide a product with better competitiveness, engineers' design ability must be upgraded rapidly. The only way to reduce the design cycle is current computer technology.

(c) Complicated design problems
The rapid development of information and an increase in diversified function demand have brought forth complicated design problems. However, human ability is apparently limited to a certain level. On the contrary, a computer provides many functions such as quick operation, storage and memory in high capability, which makes up for the insufficiency in human ability.

(d) Transition in maturity of design works
Due to the development of computer technology, design work is not always an existing reality, but sometimes virtual works. For example, through the application of computers, a computer can easily do repetition processes. Furthermore, with continuous development in virtual reality (VR), computational design has revolutionized the way humans experience in three dimensions. Through computer simulation, we can experience our designs in virtual space and conduct various simulation and evaluation.

(e) Change in environmental design
The 21st century is a "teamwork" era rather than a "struggling individuals" one. As a matter of fact, design mode in modern society has already been carried out by teamwork. Moreover, engineers in a design group share their techniques by crossing boundaries among different geographical locations. Through rapid development of computers and the Internet, different design groups are enabled to exchange opinions by crossing boundaries of time and space.

3. Computational Design is not only an integrated research, but also one direction of the Design College's development in NYUST.
The research and applications concerning applying computer technology to design field (computational design) are

still in a preliminary stage. However, graduate schools, which aim at relevant areas of computational design, have been already established (including master's programs and doctoral programs) in many prestigious universities in foreign countries, and have conducted related researches in fundamental theories and its application. Hence, these universities have become leading institutes and played a decisive role in this field.

For instance, in the United States, Carnegie-Mellon University, MIT, Georgia Institute of Technology, and The University of California-Los Angeles (UCLA), the Illinois Institute of Technology, the University of Michigan-Ann Arbor; in Australia, University of Sydney and University of Adelaide; and in Europe, the Swiss Federal Institute of Technology in Zurich; and in Hong Kong, the Chinese University are all excellent representatives of the leaders among foreign institutes of higher learning. These universities are the leading institutes in the integration of computer technology and traditional design field.

Before establishing these graduate schools relating to computational design, these universities had departments of engineering, management on the foundation of its research. More importantly, design related fields are well developed in these universities. The integration of computer technology and design are also among their emphases. At the NYUST, all engineering, management, art fields are based on solid foundations, which enable them to support resources for computational design-related research projects. As for the College of Design, the "Digital media design program" was to open under the grant of Ministry of Education as a selective course for undergraduate students in the College of Design; therefore, not only do we have plenty of teachers whose specialties are in the Computer Aided Design field, but also we have a majority of teachers with specialty in application of computer technology to design, which meet the needs of design. If we can integrate this resource properly, the development of computational design will be full of potential.

II. Research and teaching objectives
1. Providing effective integrated environment of design

A corner of the Design Center

resource.
2. Exploring related theories in computer technology and design.

3. Developing a digital application system needed for design behavior and message communication.

4. Enhancing design education quality through the research of computational design.

III. Research areas

1. Research in user interface design

The research in user interface design, in fact, is one area of Human Computer Interaction, HCI, but it focuses on the issues in computer graphic interaction. Moreover, "user interface design" also provides protocol analysis on design product, which reduces both manpower and the consumption of material resources. The research of "user interface design" includes fundamental researches in cognitive psychology, criminology, human factors, etc. In Japan, the research of user interface design is becoming highly developed. There, it's called Kansei Engineering. During the period between 1990 and 1998, Japan's Ministry of Communication demonstrated its faith in the field by putting more than 20 billion yen into it. Of course, only by a full understanding of "user interface design" can we design a package of computer aided design software needed for future use. Research results in this field will be the foundation for other related researches.

2. Research in multimedia systems

With the rapid development of sound, image, animation technology, multimedia software, and application programs, with the integration of several media technology, have already been available everywhere on the market. Nevertheless, most of them are not quite satisfying. Moreover, with the rapid development of the Internet and the World Wide Web, homepages-design techniques, which integrate the technology of multimedia and hypermedia, have together become a popular emerging area, and extended the research of multimedia system. In terms of the research of multimedia system, except for exploring how to make good use of sound, image, animation-related techniques, the integration of user interface design and emerging virtual reality (VR) technology are all needed. The research areas of this graduate school will not only focus on multimedia, but also explore the application on its techniques to design simulations, teaching, and research.

3. Research of generative design

Productive design is the core problem that concerns computer-aided design. Therefore, the research in productive design hopes to integrate the above various kinds of research to develop all kinds of CAD software and achieve the purpose of combination of computer technology and design.

4. Research in information design system

Case-base reasoning has been one part of design education, and has also been adopted in design practice. Nevertheless, how to find an appropriate case has been an annoying task for teachers, students, and design engineers in the industrial sector. Hence, the establishment of information design system will benefit the promotion of design knowledge and the designers' understanding of the diversity of design cases. The integration of the research in information design system and teaching and design practice is feasible.

5. Research in collaborative design

The existence of the Internet has gradually changed the time and space concept in human perception. How to make good use of the convenience brought by computer technology, how to form design groups which cross the boundaries of time and space, and how to use design language to communicate with others, have been the most important tasks of the combination of computer technology and design research.
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6. Research in design knowledge

Achieving an understanding and a categorization of traditional design knowledge, and exploring how to translate design knowledge into computer-recognizable digital codes will be fundamental tasks for the combination of exploring computer technology and design. The research in design knowledge not only is the foundation relating to design, but also enables to clarify what role computer should play in the design field.

7. Research in design language

Design language provides similar functions as formal language provides. Hence, design language researches and the analysis of design language structure and establishment of design grammars will be closely linked with the design producing system.

At present, this graduate school has established a cooperation network with international prestigious academic institutions such as Carnegie-Mellon University, the University of Washington, both in the United States; Australia's Melbourne University, the University of Sydney, and Adelaide University; Delft University of Technology, Delft, The Netherlands; as well as the United Kingdom's Bartlett University, in London, England. Excellent professors in these universities form an international consultation committee to bridge cooperation in teaching and research.

For further information about this graduate school, please refer to http://www.comdesign.yuntech.edu.tw.

Design works exhibited in the design college

Major International Cooperation and Educational Exchanges (from April 2002 to October 2002)

Time	Visitor	Guests	Content	Reception Personnel
2002/04/17	Swinburne University of Technology, Melbourne, Australia	Prof Alan Whitfield	Prof. Whitfield visited NYUST and talked with the Center Director Ho, Supervisor Pan and Supervisor Chen about signing an agreement of academic exchange and cooperation.	Center for University Development
2002/05/27-2002/05/28	Center for Archaeological Operations Nara National Cultural Properties Research Institute	Masaaki Sawada	Speech topic: The Scientific Techniques of the Preservation of Ruins	Graduate School of Cultural Asset Conservation
	Nara National cultural Properties Research Institute	Takase Youichi	Speech topic: Basic concept about the Preservation of Ruins of Japan	
2002/06/14	University of Central Florida	Prof. J. J. Liou	Visited the Department of Electronic Engineering and attended graduate students' oral defenses.	Department of Electronic Engineering
2002/06/26 2002/07/02-2002/07/05	University of Arizona	Tian Chyi J. Yeh	The Fifth Conference of Groundwater Resource Management and Groundwater Quality Protection The Study Group of Soil and Groundwater Theory	Research Center of Soil & Water Resources and Natural Disaster Prevention
2002/07/02-2002/07/05	Department of Geoscience University of Nebraska-incoln	Vitaly A. Zlotnik	The Study Group of Soil and Groundwater Theory	
2002/07/10-2002/07/11	Minerals and Civil Engineering at the University of South Australia	Dr. Anthony W. Minns	Proceedings of the 13th Hydraulic Engineering Conference	
	Department of Geosciences University of Nebraska-Lincoln	Vitaly A. Zlotnik		
2002/07/18-2002/07/23	University Autonoma de Puebla	Dr. Valentin Garcia Vázquez	Conducted are search on super conductor and magnetic physics	Department of General Education
2002/08/20	Department of Architecture and Civil Engineering, Fukui University(Japan)	Prof. Yasuhiro Sakurai	Visited the Department of Space Design and discussed students' study-in-Japan issues.	Department of Space Design
2002/10/19-2002/10/21	Michelsen Christian Institute (Norway)	Dr.Jan Roar Bakke Mr. Ole Jacob TARALDSET Mrs Birthe Taraldset	CMR/GexCon from Norway and Dept. of Environment and Safety Engineering of NYUST worked on an international cooperation; held an environment and safety seminar on October 23 and 24 and visited NYUST.	Department of Environment and vSafety Engineering