Newsletter of YunTech

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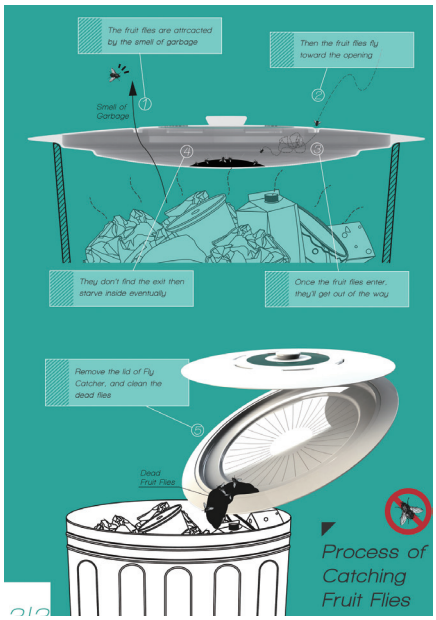
Awards and Commendation



Fly Catcher-invented by Graduate School of Design and Department of Creative Design

Congratulations! YunTech is Honored with 3 Awards at Red Dot Design Awards

The winning entries were released recently by the 2013 Red Dot Design Award, the Oscars in the design field. The College of Design of YunTech was honored with 1 award in the category of Product Design and 2 awards in the category of Design Concept.

As one of the 4 most important design competitions in the world, the 2013 Red Dot Design Award attracted 4,662 entries from 1,865 designers and companies of 54 countries/regions. The winning rate was only 5.7 %. Although the rate of 2013 was the lowest ever, the students of College of Design from YunTech still stood out and were awarded in this competition. The design strength of YunTech students is something that cannot be denied.

The awarded products are listed below:

“i-ADDICTION,” honored with an award in the category of Visual Communication Design, was invented by students Ching-an Zong and Chun-kai Lin of the Department of Visual Design under the instruction of Associated Professor Jung Tsao, Assistant Professor Shih-mou Kuo and part-time Lecturer Chang-chin Lin.

“Fly Catcher,” honored with an award in the category of Product Design, was invented by students Rei-yuan Hong of the Graduate School of Design and Shih-shun Chang of the Department of Creative Design under the instruction of Associated Professor Ching-liang Wang.

“Bamboo Cloud,” honored with an award in the category of Product Design, was invented by students Ping-chie Wu, Min-tsu Huang, You-wei Chen and Pei-yu Yen of the Department of Creative Design under the instruction of Associated Professor Tsen-yao Chang, Associated Professor Ching-liang Wang and Assistant Professor Tzyy-liang Hsieh.

The design concept of “i-ADDICTION” was from the hot button issue “phubbing”. It intends to convey the phenomena of Internet Addiction Disorder (IAD) in the Information Age, a time during which people face problems in communicating and interacting with others and also a loss of trust. The terminology “i-ADDICTION” is derived from “i-phone” and seeks to convey the concept “I am already addicted.” With the image of living in prisons, the inventors hope people will reflect on their interpersonal relationship issues and their inability of communication in this sci-tech civilization.

“Fly Catcher” is a cover for a trash and is designed to make fruit flies disappear from your kitchen. As fruit flies are sensitive to food smell, Fly Catcher uses this characteristic to attract them into the inner can. In this way, fruit flies won’t be able to fly out of trash cans and people won’t see fruit flies fly in their kitchens anymore.

As for “Bamboo Cloud,” it was created due to the creative and great craft strength of the bamboo industry in Taiwan. The bamboo craft industry in Taiwan has prospered in these years. In Taiwan, bamboo has been used to replace wooden materials and is considered as an organic material protecting our environment. In making a “Bamboo Cloud,” instead of using bamboo pipes, the inventors use the gentlest part of each bamboo to make a chair for people to sit comfortably and relax in. The special part of a “Bamboo Cloud” is in its design which uses the curved characteristic of each bamboo to make people able to relax their bodies while sitting in the chair. With this special characteristic, the chair can be placed in places people can sit and relax, such as coffee shops, libraries, and so forth.

YunTech Snares a Gold Medal worth a Bonus of NT. 120,000 at the Yacht Design Competition-YDC Awards

The Yacht Design Competition-YDC Awards, with a higher bonus this year, took place again in 2014. This competition attracted 75 entries from designers and students in Taiwan. There were 2 stages of judgment, and 10 experts comprised the judging panel. Yachts honored with one gold medal, silver medal, bronze medal and a great award were selected. The entry “Laridae Yacht,” invented by graduate students Zai-ming Chen, Chia-chen Cen and Tzi-shian Chou of the Department of Industrial Design under the instruction of Adjunct Associated Professor Po-shiung Yeh, was honored with a gold medal. The awarding ceremony will take place on November 12th at the Ship and Ocean Industries R&D Center in Taipei.

Description of “Laridae Yacht”

The main design idea of the yacht was from an animal, laridae. The appearance of a laridae is a little different from sea gulls; however, they are in the same family.

They share most of the physiological structures which evolved with the sea.

The appearance of the yacht is based on the moment when a laridae is starting to fly. The design of the yacht also imitates the feathers and bones of laridaes. For example, the feathers flying against the wind present the speed while flying upward. The cavity of bones of laridaes represents the cavity of the yacht. By switching air outlets, the wind can flow through the whole yacht. The natural wind is definitely more comfortable and healthier for riders.

The Y-style hull does lessen the effect of gravity. The power was set on the end of the hull, which intends to show that feathers are the main power of the yacht. The concept of layers of feathers is used for the design of stairs. Moreover, the hull was installed with flexible solar thin films which can absorb sunlight. The sunlight can be used for electrochromic glasses. When inside the hull, you can choose the transparent level by switching the cover. It is a place where you can enjoy the warm sunlight, and keep your privacy as well.

Teams Grouped by Different Departments are Honored with 4 Medals for their Intelligent Electronic Design Aesthetics Performance

The cooperation of different departments created a new stage for YunTech and the teams were honored by the Ministry of Education (R.O.C.) with 1 gold and 1 copper medal and 2 excellent awards for their intelligent electronic aesthetics design performance. Under the instruction of Professor Ching Yang of the Department of Industrial Design, Professor Shih-chang Hsia of Electronic Engineering and Associated Professor Chao-ching Ho of the Department of Mechanical Engineering, the 4 teams invented robots based on 4 issues. They are homecare for the old, remote disaster survey, interactive robots and home interactive gadgets.

The competition of intelligent electronic aesthetics design was hosted by the Department of Information and Technology Education of the Ministry of Education (R.O.C.) and organized by the Department of Industrial and Communication Design of National Taiwan University of Science and Technology (Taiwan Tech). The competition took place at the International Building of Taiwan Tech. The entries not only had to show their teaching and learning results, but also follow the intelligent electronic design courses stipulated by a specific association under the MOE. The intelligent electronic design courses of YunTech were hosted by Professor Yang and Professor Hsia. The robot, Mori, invented by students Zi-shian Chou of the Department of Industrial Design and Wei-shian Fu, Yu-ching Su, Bo-chi Chen and others of the Department of Electronic Engineering, was awarded with a gold medal in this competition. The other awarded products were “Remote Monitoring Image Disaster Survey Robot,” “Ostrich-Like Interactive Pet-Robot” and “Warming Castle.”

The gold-medal winner “Mori” was based on “MORI Care,” the first generation of the homecare robot. “MORI Care” was the winner at the 2010 Robot Competition. The inventors Yi-chun Chen and Wei-yuan Ting of the Department of Industrial Design invented the product based on the image of a granddaughter. Besides the appearance, , the team grouped by the Department of Electronic Engineering and Department of Mechanical Engineering equipped the robot with the functions of motion control, speech and image recognition, drive IC, wireless embedded real time system operation, and so forth from 2011 to 2012. The functions enable the robot to walk and interact. The second generation was invented by graduate student Chi-shian Chou of the Department of Industrial Design. The second generation uses the image of a boy scout, creating a new life for the robot.

Home care robot-Mori (the second generation)

YunTech Signed an Articulation Agreement with the University of Wisconsin-La Crosse, U.S.A.

Director Martina J. Skobics of MBA and International Programs, Chairman Kuang-Wei Weng of the Department of Information Science and other faculty members from the University of Wisconsin-La Crosse (UW-L), U.S.A, visited YunTech on January 8th, 2014. The main purpose of this visit was to sign an articulation agreement, including dual degree, double degree, and joint degree programs, with the Department of Information Management of YunTech.

Established in 1909, UW-L is a member university under the UW system. UW-L signed a memorandum of agreement with YunTech on May 2013. By doing this, the two universities moved to a new level of cooperation with each other. Moreover, Director Skobics and Chairman Weng delivered speeches related to American Education to students of the Department of Information Management. With visits and cooperation between the the two universities, it is believed that both universities will contribute more to the academic field in the future.

President Chun-kan Hou presented a souvenir to Director Martina J. Skobics

The 15th Conference on Current Research in Geotechnical Engineering in Taiwan

The 15th Conference on Current Research in Geotechnical Engineering in Taiwan (Geotech 2013) is the most historical and important conference in the civil engineering field and a platform for related academics, government, and industry.

The main topic of this conference was “The Advances and Challenges in Geotechnical Engineering” and was categorized into 12 sub-topics. They were landslides in slope lands, land subsidence and soil liquefaction, basement excavation and retaining infrastructures, base design and construction, erosion, rock mechanics and tunnel construction, properties and phases of soil, the application of geosynthetics, disaster survey and monitoring techniques, risk evaluation and design, environment protection and sustainable development, and civil engineering education and ethics.

Chair Za-chieh Moh of MOH and Associates Inc. presented a certificate to Distinguished Professor James K. Mitchell from Virginia Polytechnic Institute and State University, Virginia, USA

Outstanding Performance

YunTech is Honored with a Guineness World Record for its Compass

The 152 cm-wide I-Ching compass, the Chinese compass, was awarded with a Guineness World Record for its size as the biggest compass in the world. The compass is composed of 134,172 words and symbols in total, the most numerous in the world. It is displayed in the Art Center of YunTech.

YunTech held a witness ceremony for the biggest compass on September 23rd, 2013. The witness group included President Chun-kan Hou, Chiar Chi-shoung Tseng of the Art Center, Professor Wan-fu Lien of the Department of Cultural Heritage Conservation, Professor Yi-shoung Chou of the Department of Creative Design, Nai-wen Chiang of Yunlin Court, Police Officer Chia-hui Dai of Yunlin County Police Bureau, the founder of an association for the I Ching compass, and so forth. In order to be issued with the notary certificate, President Hou took the certificate to the court in person to have it inked. The other documents were then sent to the Guineness World Records to be judged.

On March 6th, 2013, the certificate was sent to YunTech by the Guineness World Records, and was posted on the website of the Guineness World Records. The record is truly a great event in the history of Chinese cultural heritage.

Reporters visited YunYech in person for further reports

The I-Ching compass was passed on by the ancients, and is one of the world cultural heritages. In 2008, the association for the I-Ching compass was invited to YunTech to display the secrets of the I-Ching compass. During the exhibition, the Chair of ICOMOS of the United Nations Educational, Scientific and Cultural Organization came to YunTech to see the compass in person. In the end, the association donated the compass to YunTech.

YunTech Snares 5 Gold and 3 Silver Medals at the 2013 International Warsaw Invention Show!

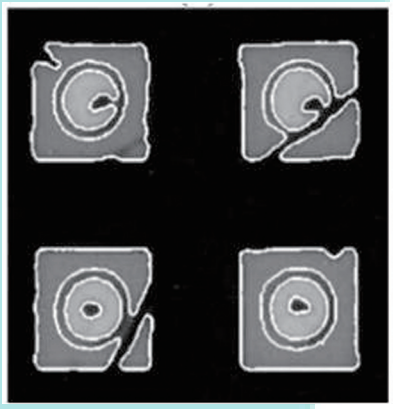
The 2013 International Warsaw Invention Show took place from October 8th to 10th. There were 8 entries from YunTech. The entries were honored with 5 gold and 3 silver medals, which showed the research and development power of YunTech in international invention fairs.

The invention show attracted more than 600 entries from nearly 20 countries. The gold award was honored to “A Healthy, Innovative, Smart, and Green E-bike (HIS-Green E-Bike)” an invention by the team of students Min-chang Tsai, Fong-jen Chu, Chia-wei Yeh and Chien-man chang under the instruction of Professor Terng-jou Wan of the Department of Safety Health and Environmental Engineering. The power resources of the e-bikes vary. They can be stored from the kinetic energy from the shock absorber of the seat, the kinetic energy absorbed while riding down, from the sun, from the motions of pedals, the household power system and brakes. Moreover, the e-bikes can promote your products which help you to save your money in buying advertising and renting electric vehicles.

The purpose of the invention “Automatic Post-Sawing LED Wafer Defect Inspection” by student Chun-shi Chang instructed by Professor Chuan-yu Chang of the Department of Information Engineering is to provide an automatic inspection method. The automatic inspection method reduces the amount of inspectors and the risk of a missed judgment being made due to the fatigue of inspectors. It is believed that the inspection method is a more efficient method. The other invention, “Bubble Defects Inspection on LED Sealing Glue Images,” was invented by student Yi-fong Lin under the instruction of

Professor Chan as well. The bubble defects inspection can inspect LED sealing glue images automatically, reducing personnel costs and the possibility of missed judgments.

The invention, “The Detecting and Recognition System for Scores on Target Sheets,” was invented by students Wei-chun Chen and Fu-shen Tseng instructed by Professor Shih-chang Hsia of the Department of Electronic Engineering. The system captures images on target sheets and calculates the last scores and the accumulated scores of blowgun games automatically by using 2 cameras with image processing technology. With the system, human error in the form of missed judgments can be lessened. The system can be used for calculations in blowgun games, archery competitions, target practices, and so forth.

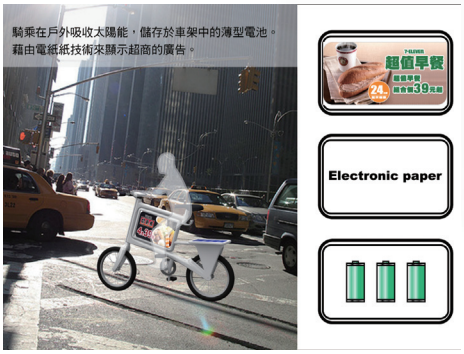


The gold-awarded invention, Automatic Post-Sawing LED Wafer Defect Inspection

The invention “Structure of Solar Cell with Single-Crystalline Silicon Substrate and Amorphous Silicon-Germanium Thin Film and Method for Performing the Same” was invented by students Bai-yu Chang and Zong-shuei Wu under the instruction of Associated Professor Jian-yang Lin of the Department of Electronic Engineering. The method increases solar cell conversion efficiency. Furthermore, it doesn't need any pricey and highly dangerous air and the manufacturing process is easy. If solar cells with single-crystalline silicon substrates on the market use this system, the efficiency of power generation and the values of solar cells can be added.

The silver-awarded invention, “Herbal Seed,” was invented by students Shia-wen Su, Zi-wei Su and Chiou-lin Huang under the instruction of Professor Chen-yao Chang of the Department of Creative Design. The inner pack, including soil and some seeds, uses non-woven materials which hold the characteristic of dissolution. While dissolving, water penetrates into the pack, and then the seeds can grow. Moreover, there is a name tag on the outer pack. Growing processes become easier and cleaner due to the design. With the name tag, people can easily distinguish each plant and grow them in a proper way. The other silver-awarded invention is the walker, “Walking in Air,” by students Chien-hui Liao, Yi-ping Lin and Chie Huang under the instruction of Professor Chen-yao Chang of the Department of Creative Design. The main purpose of the walker is to provide a better and more comfortable walker for the old. The walker is lighter and simpler. Also, the rotating brake is more effort-saving and safer. The front side is equipped with a hovering projection design with Google Maps showing the views in the past which helps the old to find their memories back to the time when they were young.

“Prognostic System for Laser Ablation” was invented by students Chin-chen hsu, Yuan-chen Chang, Chia-lung Kuo and Chun-chia Ho under the instruction of Associated Professor Choa-ching Ho from the Department of Mechanical Engineering. The invention is not only a prognostic system, but also can detect punches by the manufacturing process, the depths of punches, and places of laser focus. With this invention, the problems that happened in the past won’t happen



The gold-awarded invention, A Healthy, Innovative, Smart, and Green E-bike (HIS-Green E-Bike)

again, for example, inaccuracies related to the depths of punches. The adjustable laser technique and feedback by the prognostic system are the two main keys for the changes.

The International Warsaw Invention Show is considered an important invention competition by the Intellectual Property Office, Ministry of Economic Affairs (R.O.C.). YunTech showed its creativity and learning results in this invention show. Moreover, YunTech encouraged all faculty members and students to work on and improve their research and development power. It is hoped they can have their products and inventions commercialized in the future.

YunTech Wins 2 Gold and 1 Silver Medals at the Nuremberg International Invention Exhibition in 2013!

The 65th Nuremberg International Invention Exhibition took place from October 31st to November 3rd in Germany. The entries of YunTech were honored with 2 gold and 1 silver medal.

The gold-medal product “Solar-Powered Multimedia Glasses” was invented by students Chong-fu Haung and Ya-ling Hsu under the instruction of Professor Terng-jou Wang of the Department of Safety Health and Environmental Engineering. The power of the glasses is mainly from the sun, so users don’t have to worry about supplementing the cells. With the simultaneous guide in several languages you can choose from, you will feel like you are having a personal tour guide on your trip. Also, your carbon footprint will be recorded by the glasses, helping you to bring back your memories.

The gold-medal product , Solar-Powered Multimedia Glasses

The invention “Multilayer-Doped Organic Light Emitting Diode Structure” was invented by student Pei-wei Hung, who was instructed by Associate Professor Jian-yang Lin of the Department of Electronic Engineering. The invention holds the advantages of lightweight and flexible plastic substrates, wider viewing angles, improved brightness, power efficiency, flexibility, faster response time, better image resolution, and so forth. The invention is definitely an important technique for flat panel displays and a newer green lighting technique.

The silver-medal winner was “Multilayer-Doped Organic Light Emitting Diode Structure” invented by student Hung-chan Chen under the instruction of Associate Professor Yu-hsun Nien of the Department of Chemical and Materials Engineering. Different from other light emitting diodes (LED) on the market which eliminates germs with ultraviolet rays, the invention eliminates germs by means of visible light. The invention can be widely a used as an air purifier and water filter for hazardous germs, bad smells, and waste water made by factories.

The teams from YunTech have been taking part in domestic and international competitions, and had outstanding performances. The inventions from YunTech are not only practical, but also make people’s lives more comfortable.

YunTech is Honored with 2 Gold and 2 Silver Awards at the 2013 Tokyo International Innovation.

YunTech wins 2 gold and 2 silver medals at the 2013 Tokyo International Innovation held in Japan on November 13th.

The gold-medal winner was the invention “Audio Linked Gooseneck Conference System” by Professor Chuan-yu Chang of the Department of Information Engineering and CHIAYO Electronics Co., Ltd. The invention allows the chair of a meeting to talk first with the functions of Talk key and Mute key. Due to the functions, the chair can easily control the process of the meeting. Moreover, the corona on the microphone helps the chair to know who is talking in the meeting. Besides talking, the CPU saves energy by turning off the microphone which has not been used for more than 5 minutes. This invention can be used in meeting rooms, conference rooms, churches and so forth. The other gold-medal winner was the invention “Anti-Reflection Coating to Promote the Energy Conversion Efficiency of a Solar Cell”. The invention was completed by students Hou-chn Chang and Wei-ting Lin under the instruction of Professor Shing-dar Wang of the Graduate School of Materials Science. The invention made the manufacturing process of glasses easier. If you would like to use the technique, what you should have are several plastic containers and one simple heat treating machine. The invention is believed to be able to be manufactured.

The silver-medal winner was “Plum Deer Growth Furniture” by Professor Chi-hsiung Cheng of the Department of Creative Design and King Yueh Cheng Company. The growth desk is adjustable for kids as they grow. Furthermore, the kids and the growth desk create their own stories. The best part of the invention is the design and application of rising and lowering of the furniture. The rising and lowering section of the furniture are made of steel and cooper. With the combination of steel and copper, the strength of the furniture is enhanced, ensuring safety and comfort for kids.

The invention “Integrated-Type LED and Manufacturing Method Thereof” was invented by the team grouped by Chiou-chong and Bo-wen Chen under the instruction of Assistant Professor Chien-sheng Huang of the Department of Electronic Engineering. The invention provides a manufacturing method for integrated-type LED. The invention holds the advantages of low cost, better heat radiation, longer lifetime, and so on.

The gold-medal winner, Anti-Reflection Coating to Promote the Energy Conversion Efficiency of a Solar Cell

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