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Razman Ramli, Bakri Bakar, Rizal Rahman & Rahinah Ibrahim

Source:  
Rahinah Ibrahim

## Ergonomic Fundamentals

Muhammad Faiz Yahaya & Hasri Yunardi Hassan

A series of related projects were assigned to students in a learning process and exposure involving ergonomics and human emotions. The project titled 'Ergonomotion' requires students to express their senses and feelings by producing 2-and 3-dimensional objects. Through this project, the students were involved in understanding the human emotion and attempted to relate this human feeling through the process of producing design artefacts which optimised the design fundamentals. The outcomes of this project allowed students to gain experience and knowledge about design principles; the relation between the influence of human emotion and the design process; and the integration of ergonomics, creative thinking and styling process.

This project required students to use nature as their source of reference. The elements of nature such as colours, shapes, forms, textures or even functions were the students' main emphasis. Based on their analyses, students would select a specific product to be developed using a proper design process. It included form ideation, form evolution, idea generation, idea development and the final idea selection. During this process, students were free of any constraint and limitation.

## Jury Review

Azali Abdul Rahim

It is imperative to indulge into an innovative interpretation to what appears as the quotidian or to what is seemingly widely practiced in order to lead and in tangent with the new economic evolution. The year one 'Ergonomotion' is impressive since ergonomics is no longer being perceived as the static equation of man-machine relationship but rather an expanding relation into the horizon of 'expressive-emotion' between man and machine.

Products, due to global market penetration, are flooding consumers with abundance of choices. Manufacturing technology has allowed products to achieve equal quality and standards thus subjecting them to equal competitiveness. Capitalising on this equal footing, a product with an 'expressive-emotion' will stand out to be picked from amongst the mass.

The 'Ergonomotion' brings closer to what D.H. Pink (2005) implied that high technology alone is insufficient hence requires coupling with a high concept. High concept involves the ability to create artistic and emotional beauty. Therefore, a student's early exposure in translating the subjective design elements into a tangible object would in time develop future industrial designers who have strong philosophical stand and personality.

Finally, the humble cry of 'Back to Basic' is fundamentally important. Experimenting with the basic design elements anew whilst adhering to the evolving economic base will enhance design relevancies. It is important to know that practice has evolved from agricultural to industrial to information and now to knowledge economy. However, the 21st century brings yet another economic phenomenon which Pink addresses as the 'conceptual age'. It means bringing new interpretation of basic elements not limited to line, colour, form and texture but also the senses of movement, smell and sound to become additional essential to industrial design knowledge.

## Nature-based Concepts

Muhammad Faiz Yahaya & Bakri Bakar

A new form of products requires novel idea which would influence the product market segmentation. Nevertheless, in order to produce an extraordinary idea, designers must have substantial references. Nature has proven to be abundant with them. Velcro, shark suit (swimming suit) and even VW beetles are some of the finest examples of nature-inspired products.

Symbolically, during the second semester, the first year students in IND 3101 Creative Design Studio 1 course were given the 'Nature to Products' theme in order to execute their final project. The main objective of this project is to use nature as an inspiration for their design processes. Students are required to produce an artefact that is categorised as a portable home appliance device. The project emphasises understanding the most reliable natural element which can be adapted in a design development process. Elements such as colours, textures, shapes, forms or event functions are some useful references from nature studies.

The ability to creatively transform natural element to become a product is one of the important criteria to be assessed in this project. Here, students are free to choose and express their ideas without any constraints on productions. In summary, the fusion of creativity with technology has helped students to improve their awareness about a product's function and practicality.



■ Dyno Dryer  
Nik Azlan Nik Abdul Aziz

■ King Fisher Hair Dryer  
Masnee Sabari

■ Goose Toothbrush  
Masnee Sabari

# Pineapple Slicer

Razman Ramli & Bakri Bakar

Human engineering, design simplicity and practicality are among key factors for a successful product design. The theme for this artefact was developed based on localised culture for peeling a pineapple. Wan Nadiya Syuhada has successfully develop a product that is functionally working and practical for the end users.

This pineapple slicer employs a boring technique where turning and cutting are required. A downward vertical force and turning torque from the hand will cause the blade to slice through the pineapple flesh downwards. The concepts' simplicity has eliminated about twenty percent knife usage during the peeling process. The slicer does not require any special skill or previous experience to operate the device hence reducing the operation time.



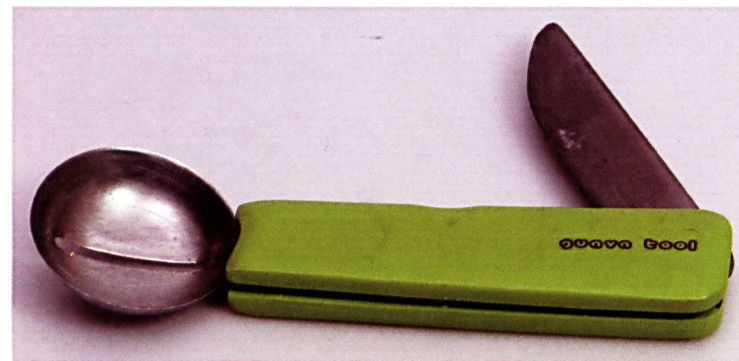
■ Wan Nadiya Syuhada Wan Ngah  
Award: Gold PRPI 2008  
Co-inventors: Arnis Aziz, Nik Aizan Nik Abdullah, Muhammad Faizal Che Leh & Hassan Alli

## E-co Guava Peeler

Razman Ramli & Rizal Rahman

Imagination and logical thinking during the design exercise inspired Aziera to develop improvements on existing tools and propose an innovative product design solution.

E-co Guava Peeler is a multi-tool that combines two different kitchen tools: knife and skin peeler. The common method of peeling a guava skin with a knife is replaced by this novel design idea. The cutting blade is stored inside the handle of the knife through a pivot point mechanism. The peeler also doubles up as a scoop for the rounded seed in the fruit. A touch of apple green hue to the ergonomically designed handle adds attractiveness to the design.



■ Aziera Barni  
Award: Silver PRPI 2008  
Co-inventors: Arnis Aziz, Nik Aizan Nik Abdullah, Muhammad Faizal Che Leh & Hassan Alli



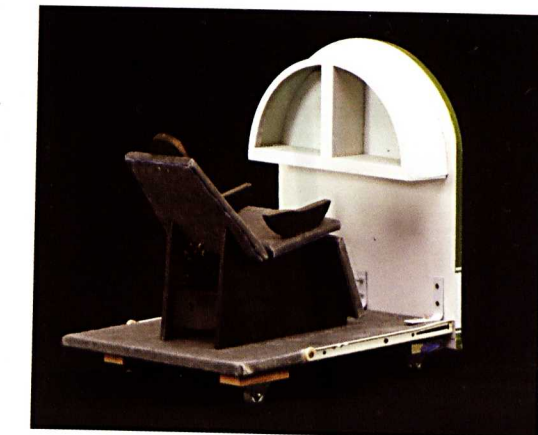
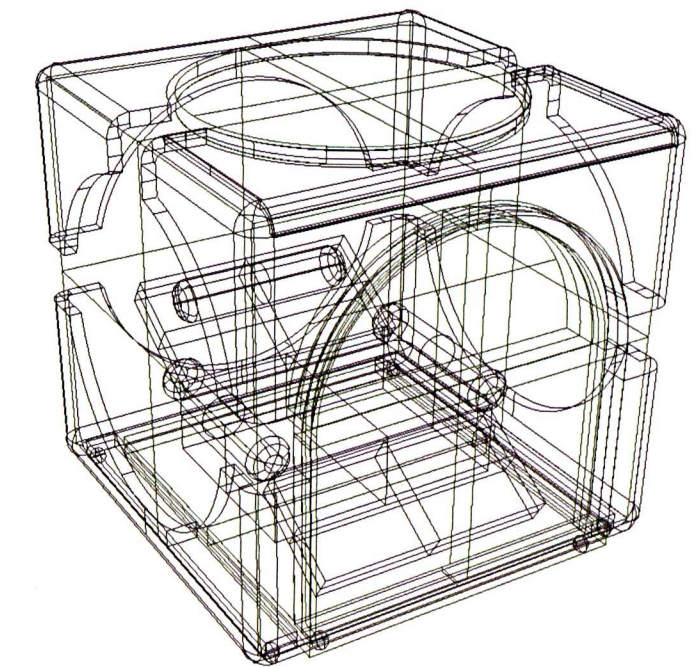
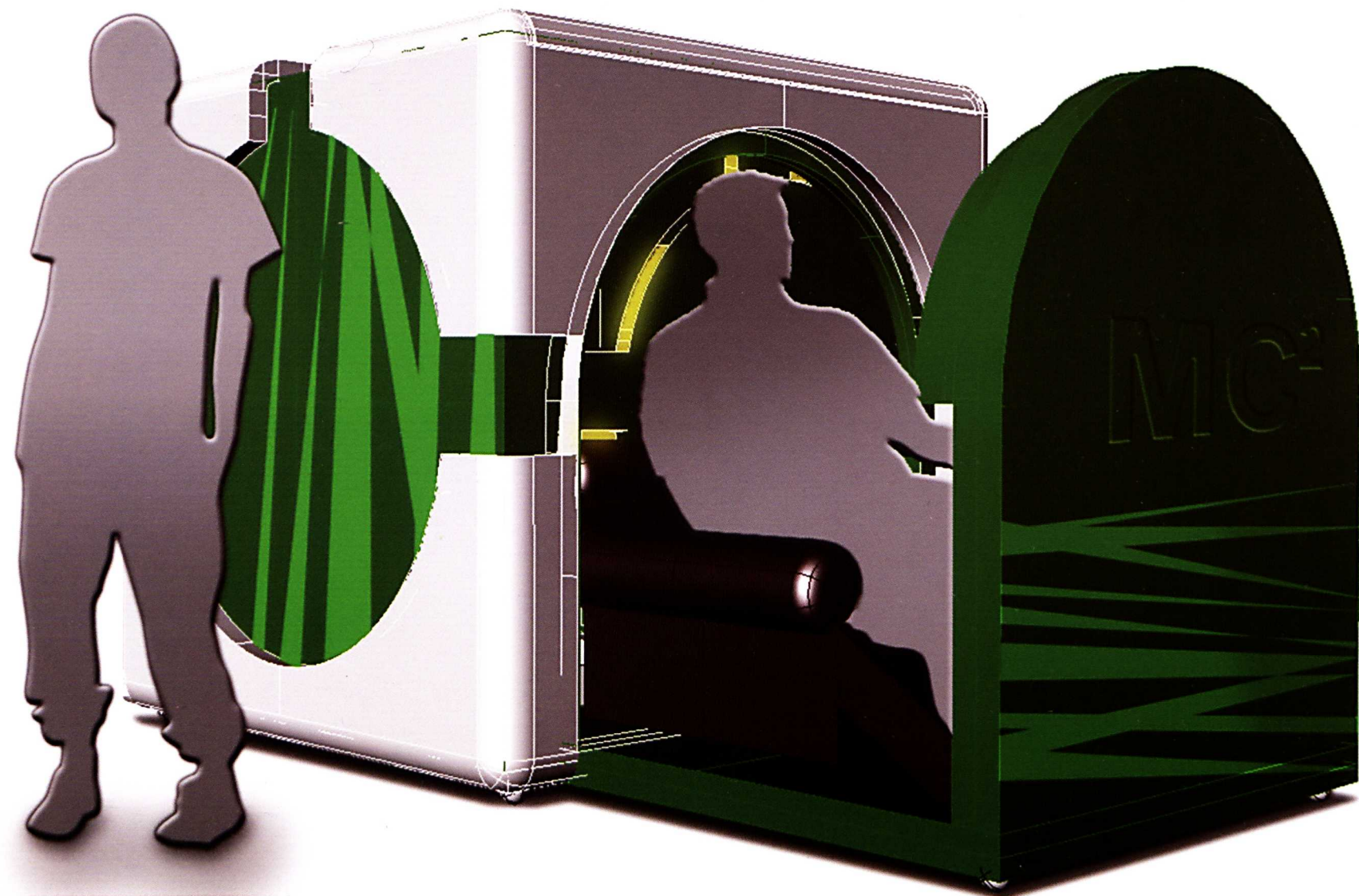
# Mobile Cubicle Cell (MC<sup>2</sup>)

Razman Ramli, Rizal Rahman, Bakri Bakar & Rahinah Ibrahim

The design is a response to provide urban users an appropriate space for taking a short nap or resting in public spaces. The design of the Mobile Cubicle Cell (MC<sup>2</sup>) was proposed which idea for its design concept originated from Japan's famous capsule hotel. It is uniquely mobile and simple to operate.

Basically, MC<sup>2</sup> aims to provide a convenient instant sleeping space. It is designed for people who need instant rest or short nap before continuing their chores. The design research had focused on places often visited by people during festive seasons. For example, in waiting areas (airport, train or bus station) or in shopping malls. It is a cost effective design solution for various public spaces and are easy to store.

Ergonomic elements are also incorporated into this design concept to provide comfort and safety for the users. A rounded boxy shape design optimises space usage. Ample flat sections also provide multitude ways for advertising. The correlated integration between form and function has been utilised throughout the design development process for the MC<sup>2</sup>.



■ Rosalam Che Me  
ID registration: MY 09-01151-0101  
Award: Silver PRPI 2010  
Co-inventors: Bakri Bakar, Mohd Shahrizal Dolah, Shahrul Azman Shahbudin,  
Mohd Faiz Yahaya, Sazrinee Zainal Abidin, Nik Aizan Nik Abdullah,  
Muhammad Faizal Che Leh & Rahinah Ibrahim