



International
Specialised
Skills Institute

We can already rapid prototype, now we can....

Rapid Manufacture Metal and Polymers

Fri, 19 September 2008, 1.00 to 2pm.

Through a one hour Powerpoint presentation and a live demonstration followed by Q&A, learn how to intelligently utilise, integrate and co-ordinate the range of dynamic functionality that the new Rapid Manufacturing Systems afford, such as **Selected Laser Sintering** and **Direct Metal Laser Sintering** components can be manufactured that were previously either impossible or impractical due the constraints of holding delicate and unique shapes.

Ken Barnett, Program Manager, Automotive and Engineering was awarded a '07 ISS Institute/TAFE Fellowship, sponsored by OTTE, Victorian Government to undertake an overseas study to gain skills and a comprehensive understanding in the field of Rapid Manufacture • Types of rapid manufacture for specific products.

Ken was accompanied by **John Cawley**, '03 ISS Fellow's overseas program • new and emerging technologies such as micro and nanotechnology, mechatronics and virtual reality design and simulation). John is Associate Director, Information and Infrastructure, Faculty of Technical and Trades Innovation, Victoria University.

Both will share their findings from their international study tour with workshop participants.

a different way of thinking, creating and working Design Masterclass

Matteo Ingaramo Italy

ISS Institute/Victorian Government Design Fellow



Matteo graduated in Architecture with a thesis in Industrial Design • Awarded his diploma in Strategic Design Master and PhD in Industrial Design at the Politecnico di Milano. Professor of Industrial Design at the Faculty of

Industrial Design, he is vice-coordinator and professor for the Master Degree in "Design and Engineering" and Master in "Design for Product Development" Politecnico di Milano and lecturer at the Politecnico di Torino • Responsible for **research/design practice** on product design with partners like Hawort, ESA, Ferrero, IBM, Whirlpool to name a few • Winner of **competitions** in design and architecture, Matteo is also involved in scientific research activities at national and international level by participating as a speaker and researcher in EU funded projects • **business** He is responsible for the Italian participation to the Sino-European Design Management Network.

Matteo is the recipient of a prestigious, ISS Institute/Victorian Government Design Fellowship sponsored by the Victorian Government, OTTE

Suitable for...

- Industrial and product designers
- Creative designers
- Automotive/components
- Manufacturers
- Packaging firms
- Product designers
- Trades people
- Entrepreneurs
- Educators.

Those who design and/or manufacture products for

- Automotive/components
- Homewares
- Furniture
- Jewellery
- Fashion accessories
- Footwear
- Packaging eg food
- to name a few applications.

Photographs

Courtesy of Matteo Ingaramo

a different way of thinking, creating and working

Design Masterclass

Fellowship Sponsor
Victorian Government
ISS Institute/Victorian
Government (Design) Fellowship



Host Sponsor
Victoria University
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points are available



Venue

The Masterclass workshops will be held where the equipment is located for the live demonstration of rapid manufacturing and for prototyping - Victoria University's, Sunshine Campus.

Masterclass Format

This is a hands-on workshop including an illustrated lecture, demonstrations, group and individual discussion and a design project. Participants work in 'Creative Teams' of two people.

Design....

This two-day workshop focuses on using analogy as a catalyst for generating new ideas. There are two kinds of analogy:

- the analogy to create, that is using analogical references to build the functions and the efficiency of a product.
- the analogy to communicate, that is using the analogy to set a designed vision able to be interpreted by clients and consumers.

The Project

'Creative Teams' will select one area and generate ideas and a design solution suitable for manufacture.

Areas:

- Automotive/components
- Homewares
- IT products
- Furniture
- Jewellery
- Fashion accessories
- Footwear
- Packaging eg food.

Concepts are to be created using 'analogy' - to design a product inspired or derived from by an existing form - from nature, or from an existing manufactured form eg a beer can into a copier cartridge.

Date Time

September 2008

TWO-DAY WORKSHOP

- Fri 19 Sept, 9.30am to 5.00pm
- Sat 20 Sept, 9.00am to 5.00pm

Fee

~~\$430 which includes tuition, use of equipment, materials, morning and afternoon refreshments on both days. ISS Institute has sponsorship support - we are passing on these savings to all workshop participants.~~

Bring lunch with you to use the time to work on your project and network with others in the workshop.

“ Case Study

A very good, and well known, example of technological innovation inspired by an analogy is the case of the **Mini-Copier printer by Canon**, reported by Nonaka and Takeuchi... The objective of Canon was to produce a low-cost printer for personal and domestic use.

The more difficult problem to solve was finding a solution to produce at a reasonable cost a "replaceable all-in-one cartridge" that would eliminate the need for maintenance of traditional printers. The solution arrived thanks to an analogical cue taken from a can of beer (source analog): the project team focused on the possibility to apply the manufacturing process of beer cans to the production of drum cylinder using the same material, the aluminium.

The clearing up of both the analogies and differences in manufacturing led to the definition of a new process technology for manufacturing aluminium drum cylinders at a reduced cost; as a consequence, the possibility of developing a disposable all-in-one cartridge become real.

Today Canon keeps manufacturing "all-in-one cartridges" that contain all the essential print elements that wear out with use: toner and drum. In this way, changing the cartridge, the copier is, in the company's words: "virtually as good as new".

Extract: *Enhancing Creativity...:analogy as a tool for brainstorming. Creativity or Conformity? Building Cultures of Creativity...Conference. January 8-10 2007*



Registration Form



Design Masterclass

I am registering for [tick your choice please]:

TWO-DAY WORKSHOP

- Fri 19 Sept, 9.30am to 5.00pm
- Sat 20 Sept, 9.00am to 5.00pm

Fee Tick appropriate box please

- [] \$430 **Workshop**
[] ~~\$380~~ **Special Early Bird rate**

Post, email or fax

ISS Institute, Suite 101, 685 Burke Road, Camberwell 3124
T 03 9882 0055 F 03 9882 9866 E issi.ceo@pacific.net.au

Payment Method:

- Cash (Pay directly at ISS office or by arrangement)
- Cheque (Make payable to 'ISS Institute')
- Postal Order (Make payable to 'ISS Institute')
- Credit Card (Diners and American Express are not accepted)
- Bankcard Mastercard Visa

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Name on Card _____

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If you have not received an email or fax of confirmation, please contact the ISS Institute office on 9882 0055 to find out the status of your application - do not assume that because you have sent an application you are automatically enrolled in the workshop

PRINT CLEARLY PLEASE

Where did you hear about this workshop? _____

Your purpose for doing this course? _____

Name _____

Organisation _____

Title/Position/Occupation _____

Address _____

Postcode _____

Phone: Work/Home _____

Fax _____

Mobile _____

Email _____

Conditions of Registration

I hereby agree to abide by the regulations of the ISS Institute

Your Signature _____ Date _____

PLEASE READ

Enrolment • Entry Requirements In general no formal entrance requirements are necessary.

• Conditions of Registration Complete the registration form attached. Registration can be made by email, post or fax. Cash must be paid at the ISS office - do not mail. An email or fax of confirmation will be sent after full payment of fee. Note: A position in the workshop will not be reserved without payment being received by this office. Enrolment is on a first-come-first-served basis based on time of receipt of fees. If you have not received an email or fax of confirmation, please contact the ISS Institute office on 9882 0055 to find out the status of your application. Do not assume that because you have sent an application you are automatically enrolled in the workshop **• Refunds** Please check your enrolment carefully. We regret that a refund will only be given if the workshop does not proceed. If you withdraw from the workshop after registration is received by ISS Institute, a \$50 administration fee is payable. Refunds will not be given to those who withdraw three days or less prior to the workshop

• Cancellation ISS Institute reserves the right to cancel the workshop if minimum enrolment numbers are not attained. In the event of cancellation due to insufficient enrolments or other, all fees will be fully refunded. Two or more working days notice will be given should the workshop be cancelled **• Disclaimer** ISS Institute reserves the right to amend or cancel any or all sessions listed herein without notice or prejudice. ISS Institute takes reasonable steps to obtain and give information about the workshop from appropriate sources, including materials used and the safety of the environment, but accepts no responsibility for inadequate or incorrect information given to it, or in the course notes, by the workshop presenters, supplier of materials or other third party **• Privacy** ISS Institute may photograph or video record workshop participants activities for use in promotion of the work of ISS Institute. Please let ISS Institute know if you object to use of pictures of yourself in this way. April 2008