

CF Newsletter

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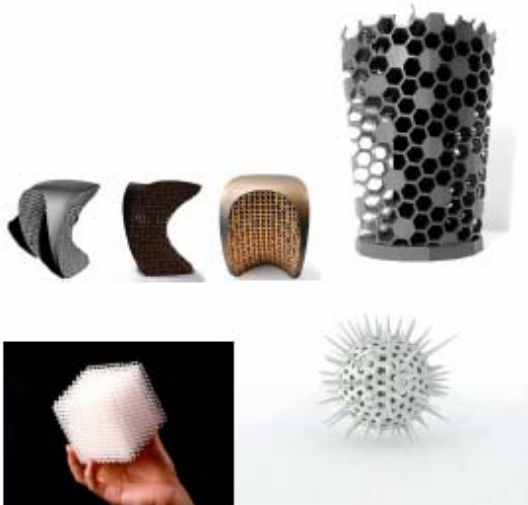
Welcome to the tenth issue of the Custom-Fit newsletter.

This newsletter will introduce you to the customisation process for a new product conceived by the winner of the CF Product Design Competition Robert Struyf who won with the 'Customised Speaker Housings'. Then there is a review on bio-Compatible materials and we will finish by presenting the exploitation unit which is going to take the baton after the end of the Research Project. As always, we will finish with the upcoming events regarding Custom-Fit and subjects of interest.

We do expect you enjoy reading this.

New Cases of Customisation: Speaker Housing

As you know, during the month of September, the First International Custom-Fit Summer School was held, in the frame of ICAT 2008. Four finalists of the Product Student Competition presented their innovative ideas. In this newsletter, we will show you the idea conceived by the winner, student Robert Struyf, who was inspired by Nature.



Why Speakers?

Music in general is very sensitive for emotion and design is one important elements that affects that emotion. Music is something you find everywhere in de world and always you feel emotion. People pay for this and the market is big. People want to pay for quality and design and always looking for the perfect mix.

Custom design

To sell a product with such a emotional side you need a personal approach. A book full of designs that represents different persons. Old, young , sportive, alternative, classic... Do you like art deco or a clean surface look it does not matter at all, you choose the housing that fits you. It is possible to make every design a little different without affecting the sound quality so you product becomes very personal.

Where to start?

In the high-end market there is room for these technology, people want exclusive speakers who can perform at a high level. The manufactures of this speakers spend lots of time on building these things because the structure is complex and made by hand because there is no way to automate these process. Layer by layer technology can take advantages out of this by reducing the labor work of a employee and reduce the error rate during the very precise assembly.

FOLLOW NATURE SPEAKERS DESIGN



WITH RAPID
MANUFACTURING
WE CAN FOLLOW THE
SHAPE OF SOUND

LAYER BY LAYER

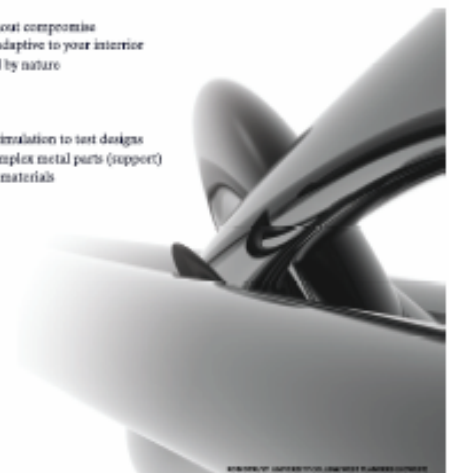


OPPORTUNITIES

- Internal structures without compromise
- State of the art design, adaptive to your interior
- High end audio inspired by nature

THREATS

- Complicated acoustic simulation to test designs
- Difficult to produce complex metal parts (support)
- Expensive research new materials



Biocompatible Materials for Rapid Prototyping

The implantation of integrated biomedical devices into the human body provides challenges for engineering materials science and biology. The demand for metallic and polymeric biomaterials is increasing greatly because of the rapid growth of the world's population, the increasing proportion of older people and the high functional requirements of younger people.

A Custom-Fit partner, DSM from the Netherlands, has been developing new bio-compatible materials which can be printed using manufacturing techniques developed within the project framework. These newly developed techniques can manufacture pieces using graded materials. DSM has achieved the development of photo-curable resins, based on either bio-stable or biodegradable oligomers. These materials can be readily processed on commercial RP machines, yielding high quality, biocompatible polymers, and they demonstrate the versatility and prospects of RP as the method of choice for the fabrication of biomedical devices.

The bio-stable resins comprised of polyester/polyether oligomers have acrylate or methacrylate functions while the biodegradable composites have been prepared from methacrylate-functionalised, biocompatible polyesters. The chemical composition, purity and molecular weight distribution of these synthesized oligomers were all proven.

This finding is also supported by the toxicological studies on the cured material where no harmful extracts were found. The tested material meets the requirements of the Intracutaneous Test according to ISO 10993-10 guidelines.

What's going on after Custom-Fit Research Project? The Exploitation Unit Objectives

The Custom-Fit project is a flagship project in the European Community that has established the research lines to follow for Rapid Manufacturing and Mass Customisation issues. Thus an exploitation unit, Custom-Fit Ltd, has been created by DMU and Delcam, and several other partners are participating. Its main goals are the following:

- Training efforts to transfer the knowledge to approximately 100 key staff a year, in which industries and Universities will be the main focus points.
- This company will be supported at the very beginning by the partners. The goal is that it will be self supportive in a maximum period of two years.
- The importance of the developments achieved must convert Custom-Fit Ltd into an active lead generation player in the field of Rapid Manufacturing & Prototyping and Mass Customisation.
- This new unit will be in charge of disseminating new applications developed in this and other related research projects.

Do you need any additional information, look out for our last event which will take place in July!!!!

Upcoming Events

-  Plas2009, Milan, Italy, 24th – 28th March.
-  TNO Rapid Manufacturing Workshop, Eindhoven, The Netherlands, March, 10th & 31st & April, 21st.
-  National Conference on Rapid Manufacturing and Prototyping, Banglador, India, 13th – 14th April.
-  RAPID 2009 Conference & Exposition, Schaumburg , IL, USA, 12th – 14th May.
-  More: <http://www.custom-fit.org/index.php/events/>

