G.EN.ESI NEWSLETTER

December 2014

Integrated Software Platform for Green Engineering Design and Product Sustainability

G.EN.ESI at Going Green - CARE Innovation 2014

The G.EN.ESI team presented the results of the project at the CARE 2014 event in Vienna, from 17th to 20th November.

Lucie Domingo from the University of Bath, Marco Mengarelli from ENEA and Denis Sanchez from Sibuet took part in the environmental exhibition, displaying a poster describing the project, and providing business cards for the software developers and software demonstrations to interested visitors. Lucie presented a paper on user centred eco-design, and Marco presented a paper on environmental assessment. The conference was attended by 372 experts in green electronics from around the globe.

Feedback from the participants was very positive, demonstrating that the G.EN.ESI platform is meeting the needs of industry, by supporting designers as well as managers. Discussions were held with a variety of potential users, including consultants who could apply G.EN.ESI as a toolbox to meet specific client needs.

Read more about the event here: http://www.care-electronics.net/

Join G.EN.ESI at the project Webinar on 12th January 2015

The G.EN.ESI team are holding a project webinar on the 12th January 2015 at 11am CET (10am GMT). The webinar is for any industrialist interested in integrating environmental considerations into design tools: from engineers through to environmental managers. The webinar will provide an overview of the Green Engineering Design methodology, and provide a detailed demonstration of each of the software tools. This demonstration will show how all the G.EN.ESI tools are fully interoperable within the software platform, and with CAD and PLM software. The presentation will last for 45 minutes followed by the opportunity for questions and discussion.

Details are available on the project website and to register for the event please visit http://goo.gl/forms/H4YxiNQDAk

The future of G.EN.ESI

The G.EN.ESI project is coming to a successful conclusion, and the following results will be delivered by January 2015:

- The G.EN.ESI Education Centre on the project website will continue to provide free resources for self-training on eco-design and the G.EN.ESI methodology and software tools
- The GRANTA platform will be available, comprising:
  GRANTA MI: enterprise database for materials and life cycle information, MI:BoMAnalyzer - Web Interface, MI:Materials Gateway, notably for PLM (specifically Teamcenter in G.EN.ESI, but also Windchill), and CAD (NX, Creo, ProE, Catia, Autodesk)
- The eVerdEE tool will be available, provided by ENEA
- LeanDfD, DfEE and CBR tools will be available, provided by Universita Politecnica delle Marche
- An eco-designed cooker hood will be provided by Faber
- An eco-designed motor range will be provided by Bonfiglioli Vectron

Further information on the software solutions available and the contact details of the software developers can be found on the G.EN.ESI website.

Latest News in Brief

→ A successful seminar was held with the European Committee of Domestic Equipment Manufacturers (CECED) in Brussels on the 16th October 2014. Representatives from the University of Bath and the Universita Politecnica delle Marche (UNIVPM) presented the G.EN.ESI methodology and gave an overview of the software tools through the inter-operable software platform. Around thirty members of CECED attended the seminar and provided useful feedback on the project developments. Read more about CECED here: http://www.ceced.eu/

→ The second G.EN.ESI Research Showcase took place in September 2014 in Bath, UK. Three presentations were delivered on usage-oriented eco-design, three dimensional concurrent engineering, and the LeanDFD EoL (end of life) module. These were followed by a question and answer session. Recordings of the presentations can be accessed via the G.EN.ESI website.

→ Project partners Faber and Vectron are now testing the software tools within an industrial setting for a final usability evaluation of the G.EN.ESI platform.

This project has received funding from the European Union's Seventh Framework Programme for research, technological development and demonstration under grant agreement no 280371

Meet the Team

In each newsletter we will include a brief introduction to two members of the G.EN.ESI team; one academic and one industrial. In this instalment we introduce The University of Bath, and our industrial partner Sibuet.

University of Bath

Department of Mechanical Engineering


Elies Dekoninck


Lucie Domingo


Mendy Mombeshora


Helen Cornwell

The Department of Mechanical Engineering at the University of Bath is one of the UK's leading Mechanical Engineering departments with a reputation for outstanding teaching, innovative research and strong links with industry. The department has a research portfolio spanning all engineering disciplines and one research theme specialising in Design Information and Knowledge covering research in computer-aided design (CAD), and in product lifecycle management (PLM). Bath's G.EN.ESI team have skills and expertise in product design, eco-design and eco-innovation, and have worked with domestic equipment manufacturers on sustainable design issues. The team also have links with researchers in the Sustainable Energy Research Team (SERT) who have many years' experience in Life Cycle Assessment.

The University of Bath is responsible for project dissemination activities within the G.EN.ESI project. This includes the publication and promotion of the results of the G.EN.ESI project in journals, conferences, workshops and symposia. The team also provide and deliver training materials for the project partners and the general public.

For further information please visit:

http://www.bath.ac.uk/mech-eng/

Sibuet Environnement


Denis Sanchez


Laurent Dupon

Sibuet Environnement is a French SME which utilises the most up-to-date plant in order to recover, recycle and regenerate many types of material from non-hazardous domestic and industrial waste, as well as household appliances. Sibuet process materials such as plastics, metals and wood, and treat waste from waste reception centres and industry. The company was formed in 1971, and has continuously integrated new environmental activities into the recycling of different kind of waste, whilst also improving the collecting, sorting and recycling processes. Facilities and processes have been developed for the WEEE and household appliances product range, and for energy recovery for the cement industry.

Within the G.EN.ESI project, Sibuet provide the necessary expertise and experience in recycling and material recovery to define the specifications for the disassembly software tool (*LeanDFD*) developed by UNIVPM. The technical department of Sibuet is contributing to testing of the resulting system. Finally, the company is collaborating with Faber in order to measure benefits on practical case studies.

For further information please contact:

info@sibuet.fr

Recent Publications

The G.EN.ESI project the team have now produced 21 conference papers for 15 different conferences. The following four have been presented recently:

→ **Eco-design platform within an extended enterprise: How to implement it?** M.Germani, M.Mandolini, M.Marconi, A.Morbidoni, M.Rossi (2014), ASME 2014 International Design Engineering Technical Conferences & Computers and Information in Engineering Conference IDETC/CIE 2014, August 17-20, 2014, Buffalo, New York, USA

→ **Supporting eco-design implementation within small and large companies.** M. Buckingham, D.C.A. Pigosso, E.A. Dekoninck, T.C. McAloone (2014), DESIGN'14, (19-22 May 2014) Dubrovnik, Croatia

→ **Simplification Strategies for Mechatronic Products: The Case Study of a Cooker Hood.** M. Mengarelli, A. Zamagni, P. Buttol, S. Cortesi (2014), 8 SAM (Society and materials) Conference, (20-21 May 2014) Liege, Belgium

→ **How to enhance the life cycle concept among small and medium sized enterprises: a proposal for a simplified LCA for household appliances.** M. Mengarelli, A. Zamagni, P. Buttol, S. Cortesi, Pier Luigi Porta, Simona Scalbi, CARE, Nov 2014, Vienna

Please visit the project website for a full list of publications and links to the papers http://www.genesi-fp7.eu/

This project has received funding from the European Union's Seventh Framework Programme for research, technological development and demonstration under grant agreement no 280371