Addressing the Needs of Globally Oriented Engineering Deans

Introduction

Inspired by the growing complexities and associated challenges for engineering education in an increasingly interconnected global economy, Frank Huband, former Executive Director of the American Society for Engineering Education (ASEE) and Seeram Ramakrishna, former Dean of the Faculty of Engineering at the National University of Singapore, worked together to develop the vision of an international platform for engineering deans. Tom Petersen, then Vice-Chair of the ASEE Engineering Deans Council (EDC) and Hans J. Hoyer have assisted in creating a model for a council on a global scale. In 2007, engineering deans from all continents gathered in Turkey, during the annual Summit of the International Federation of Engineering Education Societies (IFEES) to create the Global Engineering Deans Council (GEDC). To this day, the GEDC is one of the most successful programs to come out of IFEES. In May 2008, Dassault Systems hosted, at the L’Aero Club de France, leaders of engineering education in both academia and industry who created the GEDC’s first Executive Committee, a subgroup of members that continues to play an important role in the direction and activities of the GEDC. At that meeting, the role of corporations in the GEDC would begin to take shape, with Dassault Systems and Hewlett-Packard providing valuable input and support.

At that meeting in France, twenty leaders in global engineering education signed the Paris Declaration of the GEDC, a document acknowledging the commitment to nurturing the development of “global engineers” and to a better collaboration on a global scale. Currently the GEDC serves as the only global network of engineering deans that leverages the collective strengths of those deans for the advancement of engineering education, research and service to the global community of engineering schools. Through annual conferences and other meetings, the GEDC provides a venue for engineering deans to discuss emerging issues and challenges, and to share best practices pertaining to leading an engineering school. From a small meeting of twenty-
ty, the GEDC membership has grown to include over 100 individual members from almost forty countries, four regional chapters with a global network of approximately 300 deans. The GEDC membership also includes ten corporate members, who have continually supported the work and mission of the Council.

The GEDC has grown significantly in the past five years, thanks to dedicated volunteer leaders and members. We look forward to furthering the mission of the Council, for the betterment of engineers worldwide.

Accomplishments of the GEDC

Evolution of Membership
One of the GEDC’s greatest achievements has been continually growing the global network of engineering deans. GEDC has facilitated, connected deans which have visited each other’s colleges to explore concrete collaborations, numerous examples are in the making.

In 2010, in order to encourage local GEDC activity and include more deans in the conversation on the global challenges of engineering education, GEDC leadership discussed the idea of creating the membership option of GEDC Chapters. This idea has resulted in the establishment of formal GEDC chapters in Australia, Canada, India, and Latin America, with emerging chapters in Africa, Russia, the United Arab Emirates and East Asia. GEDC executive leadership works closely with formal chapter members to identify leaders for these potential new chapters. European engineering deans formed their regional Deans Council in 2011, while deans throughout East Asia have had three successful regional meetings. The GEDC is in discussion with both groups about the potential of their future chapter memberships.

In late 2012, the GEDC officers added two additional membership categories: Former Deans and Organization members. The Former Deans membership option has allowed those who have all the qualifications and experience of an engineering dean, but may have missed the opportunity previously to join this network. It also allows retired deans who have previously contributed greatly to the mission of the GEDC to continue their good work. The Organization members category allows for organizations who have an interest in the mission of GEDC to become Council members.

Creating an Online Presence for Deans Worldwide
With the support of Michigan State University, the GEDC was able to launch its own website in 2010, which has been a central place for deans to read about developments in engineering education around the world. The website has also been crucial in keeping members up to date on conferences and other GEDC activity. It has been an important tool in recruiting new members, and enabling existing members to keep in touch long in between conferences. The GEDC has worked closely with Quanser Consulting, a GEDC Corporate member, in recent years to mature the Council’s online presence in the years to come. They hope to help create a powerful tool and resource to foster international collaborations.

Regular Meeting of Minds
The annual GEDC Conference plays an important role in the GEDC’s major objectives of providing a world-wide forum for exchanging information, presenting opportunities for engineering deans to partner with one another, and building a network of leaders to develop policies that will advance societies at the local and national levels. The Conference is an important opportunity for members to gather once again, and for deans interested in becoming part of the Council to learn more about its work. It also represents an valuable opportunity for corporate GEDC members to network with deans worldwide. GEDC meetings, official as well as unofficial, have taken place all over the globe, from Boston to Beijing to Buenos Aires. The changing locations of GEDC Conferences has been instrumental in encouraging local dean involvement and introducing them to the work of the GEDC. It has also enabled local deans to interact with engineering education leaders from the world over, discussing experiences and challenges, and sharing best practices in leading an engineering institution. From positive feedback from conference attendees, the GEDC has identified mentoring for new deans, research and engineering education, collaboration between industry and academia and digital, on-line learning and accreditation as topics of high interest to the global community, and thus have made a point to include discussion sessions and panels on these topics at regional meetings and annual conferences.

GEDC Airbus Diversity Award
In October 2012, GEDC and Airbus together created an award for diversity in engineering education to recognize individuals who have been proactive in bringing more diversity into engineering classrooms. The first prize award of 10,000 USD to support the recipient in continuing their work in this field, aims to give visibility to and reward initiatives which encourage professors and students of all profiles and backgrounds to study and to succeed in engineering.

The long term aim of this award is to ensure that industry reflects the diversity of the communities it supports. This means more balance between men and women, more diversity in social and cultural backgrounds, and equal opportunities for
comparable skills for disabled people. The strong demand for engineers globally means that industry must attract and secure an increasingly diverse talent pool to continue to innovate and build the world of tomorrow.

Looking Ahead
The GEDC formed a committee to create a Strategic Plan, which identifies specific actions for volunteer members to carry out the Council’s mission and objectives. This Plan will help to guide GEDC members in accomplishing short term goals. GEDC strategic plan will be reviewed in GEDC 2013 Chicago Conference.

Additionally, in 2011 and 2012, the GEDC Conference Planning Committee has employed conference evaluations to judge the effectiveness of meetings, as well as to determine topics of interest in future meetings. These helps keep meetings relevant, and to ensure that the Planning Committees will invite leaders at the forefront of developments in engineering education to facilitate relevant discussion. Many of the GEDC participants at the 2012 Conference indicated interest in topics on diversity, collaboration, environmental issues, e-learning, and industry collaboration, the future of Information Technology, Online Education and Labs. In response to these evaluations, the GEDC 2013 Chicago Conference Planning Committee has chosen the theme of “Online Digital Education and Transformed Faculty Roles,” where Seeram Ramakrishna and Clayton Daniel Mote will be the keynote speakers.

Alaa Ashmawy (UAE). Former GEDC Secretary Treasurer and Host of WEEF 2014 Dubai. Dean, College of Engineering, American University in Dubai.
GEDC Timeline:
May 8-9, 2008 — Signing of Paris Declaration and Founding of GEDC; GEDC’s role and leadership position within IFEES; Aero Club de France.


May 7-8, 2013, Seoul, South Korea - Yonsei University hosted the regional Summit of East Asian Engineering Deans.

June 2-4, 2013, Quito, Ecuador - Polytechnic School of Military Forces (La Escuela Politécnica del Ejército-ESPE) hosted the Third Annual Meeting of Global Engineering Deans Council in Latin America.


October 20-22, 2013 – Notre Dame University will host GEDC Fourth Annual Conference; “Online Digital Education and Transformed Faculty Roles.” Chicago, USA.

This report is compiled by GEDC Secretariat, Hans J. Hoyer, Peter Tase; project consultants Stephanie Cheng and Aldo Tase. The Secretariat is hosted by Robert Bishop, OPUS Dean of the College of Engineering, Marquette University, USA.
GEDC MISSION
Serve as a global network of engineering deans, and to leverage on the collective strengths, for the advancement of engineering education and research.

GEDC VISION
Empower deans in advancing their college or school’s mission in preparing the next generation of engineers to successfully tackle the challenges of the 21st century and serve society more effectively.

CORE VALUES: Global View, Collaboration, Excellence Contribution and Integrity.

Objectives of Strategic Direction: Institutional Leadership, Curriculum Leadership, Policy Leadership and Accreditation Leadership.

Peter Kilpatrick, GEDC Executive Committee member, Host of GEDC 2013 Chicago Conference, Dean, College of Engineering, Notre Dame University, USA.

Claudio Borri, IFEES Founding President and GEDC 2008 Paris Inaugural Conference Participant

Group photo taken at WEEF 2010 Singapore