

**MINUTES of the 1st POMSEBES Workshop meeting,
Minneapolis, Minnesota, June 14-15, 2007
Meeting Room: Symphony 4, Hilton Minneapolis**

Chair: *Mostaghimi Saied, (Virginia), USA Coordinator*
Wolfe Mary Leigh, USA (Virginia), Facilitator

Present - POMSEBES Members (or their representatives):

Briassoulis Demetres, EU Coordinator
Ayuga Francisco, Spain
Comparetti Antonio, Italy
Dooley Jim, ASABE President-Elect
Douzals Jean Paul, France
Fehrmann Jens, Germany
Kanwar Ramesh, USA (Iowa)
Nikopoulos Effie, Greece
Panagakis Panos, Greece
Riskowski Gary, USA (Texas)
Scarascia-Mugnozza Giacomo, Italy
Ting K.C., USA (Illinois)

Absent:

Ramon Herman, Belgium
Wulfson Dvorlai, Denmark

June 14th, 2007

1. Welcome and roll call of participants

The USA project coordinator, Prof. S. Mostaghimi, opened the Workshop and welcomed the participants. Prof. M. L. Wolfe presented, in her turn, the items of the agenda to be followed during the two-day meeting.

2. Approval of the Agenda

The participants unanimously approved the agenda (Annex 1).

3. Information on the status and prospective of the project

Prof. S. Mostaghimi presented POMSEBES goals and objectives and all activities to be followed during the whole lifetime of the project. He underlined that all actions undertaken till now have to be finalised as soon as possible in order to meet the deadline of the USA Interim's report submission (the USA side has the obligation to submit their Interim report by the middle of July 2007). It was agreed that the two parts of the annual report should be common for both sides (*Part 1*: Confirmation of the basic data on the project and the partnership and *Part 2*: A description of the project activities, products and results during the reporting period and schedule for the remaining period), differentiating only in the Financial Part (*Part 3*).

Hereupon, Prof. D. Briassoulis presented the most recent developments in Higher Education Area (HEA) in Europe, more explicitly the major structural changes resulted from the Bologna Process and the Lisbon Strategy and the European Higher Education and Research Areas. He underlined that those reforms and decisions have also impinged the classical Agricultural Engineering studies in Europe and described in brief the rationale and outcomes of the previous USAEE-Thematic Network. He especially referred to the major outcomes achieved by USAEE-TN, namely regarding the approved by FEANI Core Curriculum and the draft Recognition Implementation Plan submitted to EurAgEng and described the recent developments going on nowadays in Europe with regards to the Quality Assurance Schemes and European Register and Quality Labels of the Engineering Discipline (under the umbrella of the EUR-ACE project and ENAEE network¹).

This session was concluded with J. Dooley's presentation on the "*Evolution of Agriculture to Biosystems Engineering*". Key points of his speech were the latest USA structural developments and the emergence of the Biological Engineering (professional) discipline, the description of the confusion of the plethora of names/brands & niches as well as of the numerous viewpoints on the discipline's definition used nowadays by the American institutes/universities, in addition to the puzzlement that this situation has brought in all directions.

4. Case studies and summary presentations

The second part of the morning session went on with partner's presentations with regards to the first four Objectives, as discussed and developed during the Project's Coordinators meeting that took place in March 2007 in Brussels.

It was agreed that draft papers on each objective will be circulated again among the project's consortium in order to receive new feedback (and especially from the ones that were absent). This should be done before long, in order to complete the Interim report of the American side in time.

June 15th 2007

The morning session of the second's day meeting topped off all Objective's presentations with the case study and the summary presentation on Objective 5.

The key conclusions raised from the all presentations were the following:

- The impact from changes in bio-type names in most USA cases had a positive impact on student's enrolment
- In the majority of cases the traditional Agricultural/Agronomy programme of studies are not anymore appealing to the new candidates (both in two sides)
- Europe should learn much, especially, from the USA gaps and mistakes in order to develop a more unified vision for the evolving discipline; this project is a good opportunity of setting-up the right boundaries, guidelines and lead to an impact statement?
- Finding a common and rational definition of the evolving discipline will serve the purpose of establishing a better communication and collaboration basis between Europe and USA in this field; the list of bio-types should not be exhaustive but an "abstraction" scheme should be developed
- Changes in the discipline must be faced in a more flexible, global customer-centred, multidisciplinary and lifelong learning way because this change is inevitable and necessary and

¹ A network for ensuring quality and accredit engineering programmes of European Universities

is taking place in an on-going and large scale. Despite the fact that it has caused a great deal of confusion it has also created new opportunities and challenges

- The best way of dealing with this new reality is to find ways of better understanding and managing the evolving societal needs, namely to identify the leaders and players that interest the field of Biosystems Engineering most, to understand and communicate the situation (e.g. SWOT analysis), to determine resources and constraints, to develop road map/infrastructure, to communicate the ideas, to monitor quality and communications, to update strategies and actions, etc
- It was also stressed out that we should focus on the necessity of developing research activities that will especially benefit third world and under-developed countries (e.g. Africa)

5. Work Sessions

During this session members of each Objective met together, forming working groups, in order to develop and summarize discussions and provide draft conclusions/recommendations.

The task of each work group was to:

- List two or three findings/conclusions **specific** to their objective
- List two or three action steps to be undertaken relative to each **specific** objective

Prof. Mary Leigh Wolfe undertook the task to unify the draft recommendations and propositions in one report, which will also be one of the project's deliverables. This will be circulated to the consortium members for possible revisions and/or additions.

In continuation, Prof. Mary Leigh Wolfe presenting the ABET Accreditation System² (established in the 1930s as the Engineers Council for Professional Development), explained that this federation was formed as an "assurance body" providing evidence that a college or university program meets the quality standards established by the profession for which it prepares its students. Subject to her viewpoint, there is a clear distinction between accreditation systems in "Agricultural Engineering" and "Biological Engineering" programme of studies, given that in the first case it is a competence in the application of engineering to agriculture, aquaculture, forestry, human and/or natural resources whereas in the second case it is a competence in the application of engineering to biological systems.

6. Project Evaluation and Planning

During this session, discussions on the project's internal evaluation strategy as well as a present and future planning of activities on various issues took place. More explicitly, the following topics were discussed:

- Briefing on task assignment & activities undertaken (feedback by the whole consortium to all project's deliverables will be requested by posting drafts reports on the project's website).
- Prof. Saied Mostaghimi and his team at the Virginia Tech, will undertake the initiative of developing the project's website (this will be linked to his institution's web-site and also

² **ABET, Inc.**, the recognized accreditor for college and university programs in applied science, computing, engineering, and technology, is a federation of 28 professional and technical societies representing these fields in US (www.abet.org).

include a forum of communication using a specific authorisation). He promised before long to put this initiative into action (before 13.07.2007).

- Actions Plans for POMSEBES post-Workshop 1 were discussed, namely all partner's contribution on deliverables will be requested again through the project's website, time schedule regarding the Interim Report of the USA side has to be met (13.07.2007) and all project's deliverables ought to be finalized by that time.
- An evaluation report will be prepared by an external evaluator (J. Dooley, President of ASABE President-Elect accepted the invitation to assume this responsibility).
- Dissemination strategy: It was discussed that two papers could be submitted to the International Conference on Agricultural Engineering & Industry Exhibition; AgEng2008 (to be held in between 23-25.06.2008 in Crete, Greece³) and presented within an "Education session".
- Planning of activities for POMSEBES Workshop 2:
 - ✓ Finalisation of possible dates and venue: It was agreed that the next workshop to take place between the 20th and 21st in Crete, Greece, forerunning the AgEng 2008 Conference.
 - ✓ Preparation of draft Workshop's Objectives under the following sub-topics:
 - Obj 1: Educational goals and learning outcomes.*
 - Obj 2: Curricula, ABET Requirements.*
 - Obj 3: Preparing a survey to be used both in USA and EU: identify needs of industry in the area of Biosystems Engineering (the possibility of using the already developed by USA questionnaires partners was discussed)*
 - Obj 4: Case studies paired comparisons and teamwork*
 - Obj 5: Teaching philosophy, paradigms and educational approaches*

The reports on these five Objectives will constitute the main Deliverable of the 2nd year.

7. Closure

The 1st POMSEBES Workshop was closed in late afternoon and all partners promised to meet again next summer in Greece.

³ www.ageng2008.com

Annex 1 – Agenda of the meeting

POMSEBES: Policy Oriented Measures in Support of the Evolving Biosystems Engineering
Studies in USA – EU
1st Workshop, Minneapolis, Minnesota, June 14-15, 2007

Meeting Room: Symphony 4, Hilton Minneapolis

Final Agenda

*“Developing policy measures in support of the structural development of the new emerging discipline
of Biosystems Engineering”*

Thursday, June 14

- 7:30 a.m. Optional - Breakfast, Skywater Restaurant, Hilton Minneapolis
(Breakfast reservation is under name “Mostaghimi”)
- 9:15 a.m. Welcome and introductions, Symphony 4 Meeting Room, Hilton Minneapolis
Approve Agenda
Objectives of Project/Objectives of Workshop
Saied Mostaghimi, USA Coordinator
- 9:30 a.m. “Higher Education in Europe – Biosystems Engineering”
Demetres Briassoulis, EU Coordinator
- 10:15 a.m. Break
- 10:45 a.m. “Evolution of Agricultural to Biosystems Engineering”
Jim Dooley, ASABE President-Elect
- Noon Lunch
- 1:30 – 5:00 p.m. Objective and Case Study Presentations and Discussion
Mary Leigh Wolfe, USA (Virginia), facilitator

Format for each objective: Case study and summary presentations should last 10 minutes each. Discussion will be 25 minutes on each objective.

- 1:30 p.m. Objective 1. Define the new discipline of Biosystems Engineering
Case Study: Prepared by *Herman Ramon, Belgium*
Presented by *Panos Panagakis, Greece*
Summary presentation: *Saied Mostaghimi, USA (Virginia)*

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2:15 p.m. Objective 2. Identify current/future employers
Summary presentation: *Francisco Ayuga, Spain*

3:00 p.m. Break

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3:30 p.m. Objective 3. Identify areas of expertise in the discipline
Case Study: *Dvoralai Wulfson, Denmark*
Summary presentation: *Gary Riskowski, US (Texas)*

4:15 p.m. Objective 4. Identify research needs/opportunities
Case Study: *Antonio Comparetti, Italy*
Summary presentation: *Giacomo Scarascia-Mugnozza, Italy*
K.C. Ting, USA (Illinois)

5:00 p.m. Adjourn

6:30 p.m. Dinner

Friday, June 15

7:30 a.m. Optional - Breakfast, Skywater Restaurant, Hilton Minneapolis
(Breakfast reservation is under name "Mostaghimi")

8:30 a.m. Objective 5. Accreditation and professional licensing issues; recognition of discipline
Case Study: *Jens Fehrmann, Germany*
Summary Presentation: *Jean Paul Douzals, France*

9:15 a.m. Work Session: Each working group will meet to summarize discussion and provide draft conclusions/recommendations.

10:15 a.m. Break

10:45 a.m. Presentations and discussion of summary and conclusions/recommendations for each objective
Mary Leigh Wolfe, facilitator

12:15 p.m. Lunch

1:30 p.m. Project Evaluation and Planning, Demetres Briassoulis and Saied Mostaghimi
Planning for post-Workshop 1 work
Evaluation/discussion of Workshop 1
Project website
Planning for Workshop 2 in Europe

3:30 p.m. Tour (tentative)

5:00 p.m. Adjourn

6:30 p.m. Dinner

Saturday, June 16

Mall of America (optional)