

BME IDEA Meeting – Fall 2005
Workshop on Resources for Teaching Design
Report from Subgroup Discussion on Industry Involvement
Matt O'Donnell, University of Michigan

Participants:

Matt O'Donnell, University of Michigan (UM)
Bill Tang, University of California, Irvine (UCI)
Gerry Cote, Texas A&M (A&M)
King Yang, Wayne State University (WSU)
Other observers – transient

Summary:

This subgroup discussed ways to increase industry involvement in BME design projects. We first summarized how industry is currently involved in design classes at different schools. At UCI, many projects are obtained from members of their industrial advisory board. Almost all members of the board are local, so this is a way to draw these industries closer to the UCI program. Projects are also closely linked to internships and specific product development tasks. The UCI design course also heavily leverages alumni working in local industry. All agreed that this strategy was well matched to Irvine, where there is a larger number of very strong biotech and medical device companies. WSU also leverages local industries, but almost all projects are linked to automotive industries. However, they are able to construct detailed prototypes in their projects by leveraging the fabrication resources of local industry.

At both A&M and UM, there are a number of design projects sponsored by industry. However, industry sponsored projects represent less than 25% of the total. Also, when the number of local bioengineering companies is very small, it's hard to get them to participate term after term. Since the vast majority of projects at these two institutions are not sponsored by industry, they have developed strategies to obtain projects from outside the BME Department that leverage local strengths.

This discussion led to a more general discussion about alternate sources of design projects and sponsorship. Listed below are a number of potential sources.

- Local Med School/Teaching Hospital – this is especially true at universities with large Medical Schools (e.g., approximately 50% of design projects at UM are sponsored by Medical or Dental School labs).
- Local Vet School – several universities have large Vet Schools. Just like a hospital, this is a great source of recurring projects (A&M taps this resource regularly).
- National Labs – many universities have national labs either on or close to campus. NASA has sponsored design projects both at A&M and UM.
- VA & Rehab Centers – there are many rehab centers around the country linked with the VA system.

- Charity organizations (Easter Seals, Lighthouse ...) – they cannot provide specific projects, but they can help broker projects with local organizations in need.
- World Health Organization, Gates Foundation... – leverage resources of organizations promoting world health and improved health care in the 3rd world.
- Angels – angels come in all ranks, from cashed-out executive officers of large corporations to recent graduates working in a start-up. Keeping in touch with graduates is a great way to keep them current with the department (e.g., UCI) and maximize the opportunities for design projects with their companies. Finally, a potentially great source of angels is the local chapter of the Society of Retired Engineers.

The final topic was intellectual property (IP) rights in senior design projects and how they can affect industry sponsorship. After some discussion, we all agreed that IP rights were usually more of an issue with faculty members than for most companies. Companies usually have well defined IP policies and can negotiate quickly on a standard agreement to cover a specific design project. Faculty members sponsoring a project do not have an equivalent infrastructure. We agreed that it would be helpful to discuss IP issues with faculty sponsoring projects and even move toward standardized policies within a department.