

Dear MODEX colleagues:

During our recent discussions on a NSERC Research Network, we decided that the requirements for industrial support were very demanding. Therefore, we decided to form an industrial consortium that would have no fees initially for the first year. The goal is to learn what would be attractive for companies and to ultimately attract companies to support our research activities.

Let's remember what our goals are in forming this network.

1. Keep the research quality high
2. Improve our impact in applied optimization
3. Learn from our colleagues in industry
4. Generate income for new positions (grad students, PDF, and faculty)
5. Build the reputation of our institutions

We seek industrial partners who understand and respect our goals and have compatible goals.

1. Benefit from leading-edge research through successful early applications
2. Apply optimization successfully and widely within their companies
3. Improve the skills in their company through training and hiring
4. Encourage state-of-the-art developments in optimization

Based primarily on scheduling and the availability of people to organize an initial meeting, we propose an initial meeting on the day before MOPTA 2003; this will be July 29, 2003.

A proposed agenda is attached. It is designed to allow us to display our expertise and to encourage the attendees to participate and provide feedback in key areas. We emphasize that every topic should pose clear, specific questions, solicit responses and provide time for discussion.

In addition to good preparation, the success of this event requires recruiting attendees from companies! As you will see, we propose that

- ? Each technology area includes a 15-minute talk from one company on "the state of the art" or "What we need critically" in applied optimization.
- ? Every person make every effort to bring 1-2 companies (or governmental organizations) to the workshop

Finally, we ask that everyone review this proposal and reply to Tamas (i) confirming your attendance, (ii) confirming your ability to participate, (iii) providing feedback on this plan and suggestions for improvements.

Sincerely,

**Tamás**

Tamás Terlaky

**Tom**

Tom Marlin

## OPTIMIZATION NETWORK WORKSHOP AGENDA

Time	Topic (presenters)	Presentation	Key Questions to industry
7:45 – 8:15	<b>Coffee</b>		
8:15 – 8:30	<b>Introductions</b> (T. Terlaky)	Goals of the Workshop	
8:30 – 9:15	<b>CANEOS</b> (T. Terlaky, & O. Romanko & T.B.A)	? Basic capabilities ? User interface ? Current user support ? Types of problems best suited ? Limitations	What would be required to maximize the value? ? Links to optimization support on WEB ? New, tailored WEB support ? Personal support for my problem ? Additional software ? Training
9:15 - 10:00	<b>Training company personnel</b> (T. Vanelli & T. Marlin)	? Typical optimization topics ? Distance learning opportunities ? Various diploma options ? Integration with company training (Black-Belt)	What would be of maximum value to you? ? Industrial short courses ? Graduate-level courses ? Course-based degrees ? Typical Masters ? Distance vs on-site (how much face-to-face?)
10:00 - 10:30	<b>Break</b>		
10:30 - 11:30	<b>Technology Survey - Product Design</b> (T.B.A.)		
11:30 – 12:30	<b>Technology Survey – Micro-Electronics</b> (T.B.A.)		
12:30 – 1:30	<b>Lunch</b>		
1:30 – 2:30	<b>Technology Survey – Process Systems Eng.</b> (C. Swartz, & T. Marlin)		
2:30 – 3:30	<b>Technology Survey – Networks</b> (T.B.A. )		
3:30 – 4:00	<b>Break</b>		
4:00 4:45	<b>Technology Base – Optimization</b> (T.B.A. )		
4:45 – 5:30	<b>MODEX Consortium</b> (T. Terlaky, & R. Caron, & T.B.A.)	? Keep the research quality high ? Improve our impact in applied optimization ? Learn from our colleagues in industry ? Generate income for new positions (grad students, PDF, and faculty) and facilities ? Graduate internships	What would be of the greatest value to you? ? Annual visit by faculty member ? Conferences: MOPTA, MODEX Annual Research ? Meeting/Recruiting graduates ? Annual Research Summary ? Collaborative research project ? CANEOS

Each **Technology survey** would contain the following.

1. Overview of Current research team,
  - a. Members
  - b. Capabilities
  - c. Industrial interactions
  - d. Typical research results, stressing usefulness in applications
2. A focussed technical presentation of one project
3. A discussion by an *invited industrial speaker* on
  - a. What is the state of the art
  - b. What can we achieve/not achieve
  - c. What are key missing technologies
4. Opportunity for group discussion, with special emphasis on the points defined by the session leader.

## **MODEX**

We need to address the sensitive but central questions near the end of the day or in a follow-up communication.

1. Does this proposal appear attractive?
  - a. What additional capabilities are (i) essential, (ii) highly desired, and (iii) suggested?
  - b. Would your company provide financial support at the ??? level per year?
  - c. Could you suggest other companies that might be interested in participating?

What is **missing** in this proposal

1. Indication of our specific technology strengths
2. Indication of our organizational abilities
3. Indication of track record of working together (which is limited)
4. CFI – Computational Resources