Meeting Date: January 16th, 2008

Location: Walker Building Conference Room

I. Meeting Purpose: Monthly meeting
II. Present:

Members

- Judy Houston
- Senator Molly Kelly
- Daniel Caron
- Rep. Norman Major
- Robert Henry, Chair
- Lynn Kilchenstein
- Paul Leather
- Michelle Munson
- Val Zanchuk
- Bruce Smith
- Dan McGuire
- Jennifer Ng
- Thomas Brennan

Ex Officio Members

- Charles Clough
- James Gorman
- Kim Runion
- Karen White
- Bob Arredondo
- Lynn Darnell

Guests

- Neil Rosenberg
- Chuck Annal

III. Agenda

1. Upcoming PETAC meeting dates
2. Progress status of tasks committees:
   A. Promotion and marketing of pre-engineering programs – R. Henry, K Shyne
   B. Program review and quality reviews – J. Houston, D. Caron
   C. Legislation – P. Leather, N. Major
   D. Annual Report – J. Houston, R. Henry and K. Shyne
   E. Data Access and Web support – J. Ng, K. Shyne

3. WIE conference discussion
4. PETAC logo contest – final steps
5. Other
   - US First Presentation (Neil Rosenberg)
   - UNH Tech Camp (Summer 2008, 2-week day camp)

Chairman Robert Henry called the meeting to order at 8:32 a.m.

**Topic 1:**

The following are the next 3 meeting schedule dates:

Wednesday, March 5th, 2008 – Walker Building, Room 333

Wednesday, May 7th, 2008 – Walker Building

Wednesday, June 11th, 2008 – UNH, Kingsbury Hall, Room W290

**Topic 2:**

A. Kevin Shyne distributed the new promotional material in folder packets from PLTW and Ebd. The folder also contains the Pre-Engineering New Hampshire Mission, and the PETAC role. Kevin reported that the materials are really basic, easy to understand and to remember. The ‘US First’ booklets from Neil Rosenberg will be added to the packet.

Kevin Shyne reported that the tabletop booth model is now available to be used at upcoming job fairs, engineering banquets, and other promotional events to market engineering programs to the general public. Bob Henry noted that the Engineering Banquet will be held on February 21st and the UNH Job Fair for Engineering on February 27th.

Any comments on these promotional materials should be e-mailed to Kevin.

B. Bob Henry reported that he had no updates on program reviews or quality reviews.
C. The Council reviewed the Amendment to HB 1282 regarding the Pre-Engineering Technology Curriculum and Advisory Council, filed by Representative Norman Major. The Council decided on two changes; to line 19, add “in coordination with the regional technical centers”; and to line 34, add “to advise on the evaluation of program sites”. Rep. Norman reported that the bill will be introduced on February 5th, 2008, at 11:15 a.m., in room 207, at the Legislative Office Building. The Council was invited to attend.

D. Bob Henry will e-mail the report to Nancy Fall who will, in turn, e-mail the report to the Council.

Bob Henry reported that Dan McGuire’s 501 Charitable Organization, “Engineering Education of NH” will be on the March Agenda.

E. Jennifer Ng showed the Council the revised prototype web site and how to navigate it. The web site has a new design and is re-organized with updated data. It will be on-line at the end of the week. Jen reported that the site is easy to use. Any comments please forward to Jennifer. Bob noted that the web site looks great.

**Topic 3:**

Bob Henry reported that the WIE conference is not going to happen in March. It will be moved to April or the beginning of May. Bob will e-mail the Council to get opinions.

**Topic 4:**

Jennifer Ng will update the Council on the PETAC logo contest by e-mail.

**Topic 5:**

Neil Rosenberg showed a presentation and distributed information on ‘US First’, For Inspirations Recognition of Science Technology. Based in Manchester, NH, the 501(C3) not-for-profit organization designs accessible innovative programs to build self-confidence, knowledge and life skills while motivating young people to pursue opportunities in science, technology, engineering, and mathematics. Neil reported that ‘US First’ at its root is not a provider of education, more of a provider of demand. ‘US First’ consists of 4 programs; First Robotics Competition (FRC), First Tech Challenge (FTC), First Lego League (FLL), and the Junior First Lego League (JFLL). Kids who join ‘US First’ are more likely to go into engineering and receive scholarships. PETAC will promote ‘US First’ to make it more visible. Bob Henry noted that PETAC will foster a meeting with ‘US First’ Members.

Michelle Munson reported that there will be a ‘UNH Technical Day Camp’ this coming summer. The camp will be held during the day for two weeks, July 28th - August 1st, and August 4th - August 8th, for 7th through 10th graders. The camp will focus on computer science, electrical engineering, etc. It will be open to thirty students. Applications are based on a set of criteria, and students are asked to register. The cost is $250.00 for the 2 weeks, and financial assistance is on a case by case basis.

Michelle Munson reported that the next New Hampshire Association for Gifted Children will be held in October 2009. She will e-mail more information to the Council.

Dan McGuire reported that the next NH Student (?) will be held at the Beacon Resort in Lincoln.

The next meeting of the PETAC will be held at the Walker Building in Concord on March 5th, 2008 at 8:30 a.m.

A motion was made to adjourn at 10:35 a.m. The vote was unanimous.

Respectfully submitted,
Nancy Fall
PETAC MEETING

http://www.preengineeringnh.org

WHEN/WHAT/WHO/WHY

MEETING DATE: Wednesday, March 5th 2008 @ 8:30 am
LOCATION: Walker Building - Room 100
MEETING LEADER: Robert Henry (PETAC Chair 2007/2008)
ATTENDEES: See Attachment1
DOCUMENTED BY: Jennifer Ng - PETAC Secretary 2007/2008

NEXT MEETING: FRIDAY May 9th 2008 @ 8:30 am, NHCTC (MacRury Hall Conference Room 145) - Concord NH

AGENDA

Agenda

– Women in Engineering Conference
– 2008/2009 PETAC Officers nominations
– Update on Foundation
– Update on revised legislation
– Advanced Manufacturing
– Other

HIGHLIGHTS

SUMMARY OF DISCUSSION (INCLUDING ISSUES/CONCERNS DISCUSSED):

☐ Chair B. Henry called the meeting to order at 8:40 am

☐ The last meeting minutes were approved with no changes.

A. Update on Foundation - D. McGuire
Dan presented articles of agreement that he completed for the Foundation “Engineering Education of NH”. They included pre-bylaws and 501c3 information as well as Board of Directors. A board
meeting is planned for March 2008. PETAC people on the board include D. McGuire and J. Houston. A copy of the agreement will be sent to the PETAC members by the next meeting.

B. Update on revised Legislation - N. Major
HB1282 is the amendment to RSA 188:14-17, the Pre-Engineering Technology Curriculum and Advisory Council, filed by Representative N. Major on behalf of PETAC. He reported that the amendment was voted on March 5, 2008 (earlier in the morning).

HB1282 will have a Public Hearing before the Senate Education Committee in May 2008. During the hearing, PETAC members will be able to present your testimony in support of the bill by signing the “blue sheet”. You can indicate you wish to speak or to show your support for the bill by checking the appropriate box on the “blue sheet”. The “blue sheet” will be available to sign prior to the hearing in the committee room. If there are any questions, N. Major will be there to help.

Reminder that: Attending and indicating support of this bill is very important.

[Ed: The Public Hearing will be on Tuesday, May 13, 2008 in Room 103 of the State House at 8:30 A.M.]

C. Advanced Manufacturing - P. Leather
P. Leather reported on a new piece of legislature that will be present in the next couple of months. The last Governor’s Summit on Manufacturing generated awareness about manufacturing workforce (especially training) issues in NH. Manufacturing productivity increased due to increased in advanced technology but it is noted that it resulted also in a reduction of workforce. Hence there will be a new council created to discuss these issues. The focus will be on adult training and educational activities.

R. Henry suggested that Mike V (DRED) should be invited to one of the next meetings so as to get more familiar with PETAC.

It was also suggested that PETAC members would be encouraged to serve on the new council or both councils (overlap). Some discussion items resulting from this agenda item:

– There is a need for better marketing of Manufacturing to schools, parents and guidance counselors. Not enough information out there to interest the next generation.
– There is a shortage of US born technical students across the board (universities, colleges, etc.) and this trend will continue unless there are some major changes.
– Very big difference between fundamentals teaching versus applications based teaching
– There needs to be more efforts from community colleges - with support from local companies. Currently community colleges are lacking resources, funding, etc.
– Educational funding is very different in NH compared to other states.
– M. Munson mentioned how the BAE Systems internship program is very good: it offers very powerful message to interns as well as parents and also gave new awareness to guidance counselors on choosing careers in engineering and manufacturing.
– CT Public Radio constantly advertises Manufacturing careers.
– R. Henry mentioned a new program involving UNH, Keene State University and community colleges working on a joint effort to provide general classes (Math, Sciences, etc.) throughout the different venues but ending with similar degree at the end.

D. 2008/2009 PETAC officers nominations - R. Henry
R. Henry encouraged the attendees to send him names of interested parties for nominations of the next group (2008/2009) of PETAC officers.
It was noted that T. Brennan was chosen to be the next superintendent of Manchester (formerly the superintendent of Kearsarge). It will be important for PETAC to have T. Brennan to continue to be part of the council in that capacity.

There was discussion about a spring meeting with the K-12 DoE people who might be interested to participate/know more in PETAC activities. Suggestions included

- Possible dinner event @ UNH with speaker?
- P. Leather to ask S.E. School of Administrators on when next meetings will occur and maybe coordinate an event/meeting. It was mentioned that the Commissioner quarterly meetings are on Fridays (next one on March 28th 2008) and this is when all superintendents meet. Potentially PETAC Chair could try to get on the agenda to meet all the different players.

[Ed: J. Ng will be moving to Canada in April/May and will resign as PETAC member by the end of her term. A replacement is needed.]

E. WIE Conference - R. Henry

R. Henry suggested moving the annual WIE conference to a Saturday (either May 3 or May 10). He asked K. Runion to contact the schools and see if there is more interest.

Suggestions/ideas discussed:

- Whether to have daycare provided if younger siblings were to also attend the conference.
- Have workshops on professions/careers as well as the average salary ranges for engineering jobs.
- Will need website and flyer for advertising as usual
- J. Ng will contact IEEE NH Section pre-engineering committee for their support to an event.
- R. Henry will create the outline and send draft to PETAC members
- J. Houston will contact PLTW for representation at the conference

[Ed: R. Henry reported that UNH does not have to capacity at this time to do the conference in the spring at UNH and proposes to postpone it to become a fall event].

F. Other

β K. Runion reported that there will be a drastic decrease in funding for Tech Prep in the next fiscal year. Details on impacts/cuts will be sent to PETAC members. J. Ng will discuss with IEEE NH Section and mention it on the monthly IEEE NH newsletter so that IEEE members can contact the right people in congress for questions and to get involved.

β K. Shyne brought the promotional display for PETAC. It is very configurable (with pictures and panels) as needed for different events. Suggestions: include the names of NH schools shown on the pictures as well as the activities being performed. The idea of the display is for PETAC members to bring along during events where PETAC can have more exposure (conferences, seminars, outreach activities, etc.).

β J. Houston asked on a status report on PLTW activities in the past year (e.g. which schools need accreditation, which ones are still on, what are their needs, etc.). K. Shyne to provide at the next meeting.

The next PETAC meeting will be held at the NHCTC (MacRury Hall Conference Room 145), in Concord, NH on May 9th 2008 at 8:30 a.m.

A motion was made to adjourn at 10:40 a.m. The vote was unanimous.
### ACTION ITEMS: 05 – MAR – 2008 UPDATE

#### Updates in Blue

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<td>05-Mar-2008</td>
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<td>4</td>
<td>12-Sep-2007</td>
<td>Setup meeting w/ DRED representative(s) and R. Henry</td>
<td>P. Leather</td>
<td>19-Oct-2007</td>
<td>Closed</td>
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<tr>
<td>5</td>
<td>12-Sep-2007</td>
<td>Create new subcommittee to explore opportunities in middle schools</td>
<td>R. Henry</td>
<td>19-Oct-2007</td>
<td>Open</td>
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<td>8</td>
<td>12-Sep-2007</td>
<td>Approach NHTI for WIE fall 2008 conference</td>
<td>B. Arredondo</td>
<td>14-Nov-2007 09-Jan-2008</td>
<td>Closed. Only one WIE conference for 2008 and it will be at UNH in the fall.</td>
</tr>
<tr>
<td>9</td>
<td>12-Sep-2007</td>
<td>Send email to gather ideas for website</td>
<td>J. Ng</td>
<td>19-Oct-2007</td>
<td>Closed on 28-Sep-2007</td>
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<tr>
<td>14</td>
<td>14-Nov-2007</td>
<td>Send Council members information on when they need to be present for the hearing of the amendment</td>
<td>N. Major</td>
<td>09-Jan-2008, 05-Mar-2008, 09-May-2008</td>
<td>Closed. Tuesday May 13th @ 8:30 am</td>
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<td>16</td>
<td>14-Nov-2007</td>
<td>Contact FIRST to see if they would like to be ex-officio on PETAC</td>
<td>D. McGuire</td>
<td>09-Jan-2008</td>
<td>Closed. FIRST rep attended January 2008 meeting and will continue to attend, if possible.</td>
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http://www.preengineeringnh.org                                      |
| 18  | 14-Nov-2007 | Create draft schedule for March 2008 WIE conference                | B. Henry | 09-Jan-2008  
05-Mar-2008  
09-May-2008 | Open                                                                   |
| 19  | 14-Nov-2007 | Create “Save the Date” announcement/webpage                        | J. Ng  | 09-Jan-2008  
05-Mar-2008  
09-May-2008 | Open?                                                                  |
| 20  | 14-Nov-2007 | See if Apple would be interested to have a full demo during 2008 WIE Conference | B. Henry | 09-Jan-2008  
05-Mar-2008  
09-May-2008 | Open                                                                   |
| 21  | 14-Nov-2007 | Send Ideas/contributions to PETAC logo contest                    | M. Munson | TBD          | On hold. R. Henry to determine the prizes and timing for contest.        |
| 22  | 16-Jan-2008 | Send comments to K. Shyne about the promotional booklet kits        | ALL    | 05-Mar-2008  
09-May-2008 | Open                                                                   |
| 24  | 05-Mar-2008 | Write article about Tech Prep funding cuts on IEEE NH Section newsletter | J. Ng   | April 2008   | Done. See  
<p>| 25  | 05-Mar-2008 | Email R. Henry the names of potential candidates for PETAC officers 2008/2009 | ALL    | 09-May-2008 | Open                                                                   |</p>
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<td>26</td>
<td>05-Mar-2008</td>
<td>Email P. Leather if you are interested in serving on new Manufacturing council</td>
<td>ALL</td>
<td>09-May-2008</td>
<td>Open</td>
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<td>27</td>
<td>05-Mar-2008</td>
<td>Email Mike V (DRED) to attend next PETAC meeting</td>
<td>R. Henry</td>
<td>09-May-2008</td>
<td>Open</td>
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<td>28</td>
<td>05-Mar-2008</td>
<td>Status on EbD and PLTW schools in NH</td>
<td>K. Shyne</td>
<td>09-May-2008</td>
<td>Open</td>
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ATTACHMENT 1: ATTENDEES

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<thead>
<tr>
<th>Appointed Members (14)</th>
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<tbody>
<tr>
<td>Robert Henry</td>
<td>Chair</td>
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<tr>
<td>Michele Munson</td>
<td>Vice Chair</td>
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<tr>
<td>Jennifer Ng</td>
<td>Secretary &amp; Business Rep.</td>
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<tr>
<td>Judith Houston</td>
<td>Past Chair &amp; Business Rep.</td>
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<td>Paul Leather</td>
<td>Dept. of Education</td>
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<td>Lynn Kilchenstein</td>
<td>President, NHTI</td>
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<td>Thomas Brennan</td>
<td>Not official yet. Kearsage Superintendent</td>
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<td>Bruce D. Smith</td>
<td>Public Member</td>
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<td>Daniel McGuire</td>
<td>Public Member</td>
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<td>Daniel Caron</td>
<td>Public Member</td>
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<td>Sen. Molly Kelly</td>
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<td>Rep. Norman L. Major</td>
<td>House Member</td>
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<td>Kim Runion</td>
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<th>Guests/Staff</th>
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<tbody>
<tr>
<td>Kevin Shyne</td>
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<td>Nancy Fall</td>
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PETAC MINUTES 8/20/08

Thanks to all for all that you do.

In attendance: Michele Munson, Jim Gorman, Bob Henry, Kim Runion, Norman Major, Kevin Shyne, Dan Caron and Dan Maguire

MEETING DATES (1st Wed of each month):
9/3; 10/19; 1/7; 3/4; 5/6; June TBD

NON-PROFIT STATUS (Dan):
• Established number is 600247 and we have incorporation papers.
• By-laws need to be established and will protect connection w/PETAC.
• 5 members now and Dan is working on more:
  * Norman suggested that Jim Rouche & Dave Jobet could link the committee w/TIA.
  * Bob will contact former State Senator Dick Green formerly of Pease Development.

HB1282 (Norman)
• Norman was pleased w/ attendance @ the signing.
• Norman will send out pictures to be posted on the web site and suggested someone do a short article for a few of the newspapers; Bob suggested adding something about non-profit status; Kim thought we might add a word or two about matching funds status from the state.
• Pre-engineering Grant side-note: $400K is in the next biennium; Kevin has had intent-to-apply from a number of schools and, if all apply, there won’t be enough to go around; Kim explained application process and gave an accounting of grant allocations to date.
• On the topic of new schools, have we flattened out? Bob wonders if we’re doing enough to break down barrier between tech & college prep; Mass. has engineering standards that must be met by all high school students; cost also seems to be a barrier.
• Kim showed samples of career Pathway Plans of Study developed for certain schools with help from the state; this can be done for other schools, too.

PETAC GOALS
Discussion:
• Bob submitted that we focus on middle schools to create a broader base of awareness; perhaps establish a traveling road show; DOE will help structure the presentation.
• Bob said that 90% of PLTW grads finish their UNH degree in engineering compared to some 50% of non-PLTW students.
• Kim feels schools could benefit from a tool kit; Kevin will shepherd its creation.

Goal #1: Middle Schools will gain a greater understanding of pre-engineering studies as a result of an increased PETAC focus on these grade levels.
Activities:
• Create a toolkit to aid middle schools in understanding and adopting pre-engineering curriculum.
• Explore a partnership w/ the New England League of Middle School and possibly
the NH Science Teacher's Association to encourage middle schools to adopt.
• Establish a "road show" approach to selling pre-engineering to middle schools.

Goal #2: Address the tech-ed teacher shortage through activism aimed at expanding training opportunities.
Activities:
• Evaluate current training opportunity status.
• Lobby for expanded teacher training programs.
MINUTES OF THE 9-3-2008 PETAC MEETING – Held at the NHDOE, Room 100.

Thanks to all for all that you do.

In attendance: Michele Munson, Norman Major, Bob Henry, Kim Runion, Dean Cascadden, Judy Houston, Val Zanchuck, Dan Caron and Kevin Shyne

1. MEETING DATES (1st Wed of each month): 11/19; 1/7; 3/4; 5/6; June TBD

2. Introductions:
   - Dr. Dean Cascadden is our newest Supt. member. He is the Supt. in Bow.

3. Website:
   - Jennifer NG emailed Michelle about website updates. If there are any changes or additions to people’s information, please email Jennifer or Kevin.

4. Minutes:
   - Review of 8-20-2008 Planning Meeting Minutes. Minutes were discussed and approved.

5. Preengineering in Middle Schools:
   - “How do we support Middle Schools in Pre Engineering, as well as help Tech Ed Teachers to incorporate Pre Engineering into their existing programs?”
   - Dan Caron talked about some type of training for Tech Ed Teachers to talk about the advanced EbD courses. This would review the material involved, and how it can relate to them.
   - What is needed to continue Tech Ed in Middle School? “Allied Arts” have the least amount of hours required by the state.
   - Use the schools that have successfully made the transition as models for schools that need to “upgrade”. Target schools that might be interested in this type of change.
   - Talk to Supts. And put together some form of regional road show for them.
   - Dean Cascadden talked about the need to look at state minimum standards and what the competencies are for middle schools. Do they need to be updated to include Pre Engineering? Should we use Tech Ed. As a way to teach problem solving, or bring up a districts math score? Approaching it this way could be a definite win. Dean will look into getting copies of the state standards.
   - Bob Henry talked about different ways that his UNH Engineering program has worked with NH Middle Schools.
   - Michele M. talked about putting this kind of information into a “Toolkit”
   - We need to find out if schools are interested in developing Pilot Programs.
   - Dean suggested that representatives of the group attend the Regional Supts meetings to find out what issues might be stopping districts from developing Pre Engineering Programs. The high school issue is very different and is based much more on schedules. Need to put a plan in place.

6. Future meeting dates:
   - Future meeting dates are, Nov. 19, Jan 7, march 4, and May 6.
7. Kevin’s Report:
   - Kevin gave a report of his activities of the past two months. He stated that the majority of his efforts in the coming months will be devoted to working with schools to apply for the $400,000 in state match dollars.

8. NHSPE:
   - Judy Huston gave an update of the NH Society of Professional Engineers Outreach program. They have 4 scholarships of $1,000 each for NH High School Students. She also talked about the Athletes Program at Plymouth State. This is a good source of potential industry contacts.

9. Governors Advanced Manufacturing Summit
   - Val gave the group an update on the Governors Summit will be held on Oct 7th at the Grappone Center in Concord.

   The next PETAC Meeting will be held on Nov. 19th at the NHDOE, Room 100.