SYNOPSIS OF SEPTEMBER SUMMIT

East West Center Conference Center September 10, 2008

By Peter E. Crouch Dean, College of Engineering University of Hawai'i at Manoa

It was agreed that focusing on engineering, engineering technology and technology (ETT) programs and courses across the entire UH system made a lot of sense.

It was agreed that expanding to include the entire STEM offerings across UH was far too large a task, although it was agreed that STEM courses play a vitally important role as prerequisites to all ETT courses.

It was agreed and that delegates and officers that they represented gathered at the Summit were interested in supporting such an effort.

A dialogue between delegates was fostered and comments and ideas solicited. The following is a listing of these comments and ideas as registered by the facilitator and cleaned up by me. The votes registered by delegates are approximate given the lack of clarity of the recording and some rationalization of the ideas and comments that I performed.

Comments and Ideas in ranked order

24 votes

- Develop on-line courses available across the islands that satisfy the requirements for admission into UHM College of Engineering
 - o Focus on courses that typically have too few students on outer islands to run
 - Work toward making STEM prerequisites for ETT available to all students on all islands
 - o Maximize the ability for distance learning to serve student needs by employing student assistance programs across the UH system

23 votes

- Develop a strategic plan for ETT education across the entire UH system
 - Work to ensure the provision of ETT education efficiently and effectively with limited resources
 - o Effect strategic coordination of courses between campuses of the entire UH system
 - Leverage socioeconomic resources and opportunities available to campuses to meet local needs

23 votes

• Improve student retention

 Better support students who are finding STEM courses challenging in order to increase the flow of STEM students into ETT programs

22 votes

- Improve the attitude of UHM faculty and administrators to the CCs
 - Facilitate better sharing of courses materials, textbooks and syllabi between CCs and UHM
 - o Increase UHM faculty understanding of the need to build pipelines of students from the CCs to UHM
 - o Develop a richer supply of student counselors
 - o Develop strong articulation agreements and align UHM courses with CC courses

18 votes

- Provide a better understanding of what ETT courses and programs and prerequisites are offered, where they are offered, and understanding of internship opportunities
 - Share best practices
 - Develop a Program Coordination Council to handle the gathering and dissemination of information

11 votes

- Help students early in their engagement with UH identify clear curriculum pathways to meet their needs and interests
 - o Utilize peer advisors

10 votes

• Gather legislative support for this initiative

10 votes

- Develop mechanisms for faculty compensation and incentives for a system-wide distance learning effort
 - o All parties need to come together to discuss and solve this
 - o Define the problems and issues

8 votes

- Engage the faculty in adapting curriculum specifically for distance learning
 - o What's the strategy for making this happen?

7 votes

• Ensure that STEM major courses are available to all students on all islands

5 votes

• Improve articulation of requirements for entry into the UHM engineering program

4 votes

• Examine how to meet the needs of practical hands-on experience in ETT if some components of the course is offered by distance learning

- o Example: internships, authentic real life experiences
- o Combine resources with private sector industry and education

4 votes

 Determine priorities for focus on industry needs based on resources, faculty leadership, and institutional priorities

4 votes

• Determine the levels of ETT that CCs can provide

3 votes

- Balance the coordination of the ETT offerings across the UH systems with the niches developed and being developed between campuses
 - o Niches meet local island and campus needs

3 votes

- Utilize and enlist the support of the private sector and industry
 - o Examples: internships, authentic real life experiences, laboratory equipment

2 votes

• Increase the support for distance learning by student services

2 votes

• Rationalize course materials offered with different titles at different campuses

1 vote

Develop tools and support mechanisms for teachers to implement STEM programs

1 vote

- Review UHM College of Engineering requirements for entry into their engineering programs
 - o Are they relevant today?

1 vote

- Determine the foci for the engineering field in Hawaii?
 - o Determine where is Hawaii is headed technology-wise?
 - The study by Hawaii Science Technology Institute will be available in October 08
 Re: Innovation Sectors in Hawaii by County
- Employ the models already in place at Kapiolani and Leeward Community Colleges
 - o These two CCs offer provide complete pathways for students
 - o They offer a broad range of courses for student exploration
 - They offer basic engineering level courses in STEM areas with Liberal Arts course requirements focused on the specific AA Degree, so that not all Liberal Arts requirements needed
- The role of teachers as lifelong learners should not be ignored

- Success depends to some extent on exciting students below the post-secondary level
- The Kea Holoa STEM program for native Hawaiians at Hilo Campus was cited as a good example of a STEM program
- Science resources should also be utilized as well as those in Engineering
- Examine the possibility for the Engineering Technology program pathway as a preliminary to an Engineering degree or stopping at the Engineering Tech. level (AA degree, as opposed to an AS degree)

Given the input I have created a slightly revised vision statement:

Vision: Development and Delivery of a Common ETT Curriculum for Hawai'i

A system of UH community Colleges and Universities, high schools, economic development entities and industry cooperating to:

- Offer a rich curriculum of widely co-listed, appropriately articulated courses and programs serving engineering, engineering technology and technology (ETT) at a variety of levels (AS, AA, BS, Masters, Professional Ed)
- Deliver these courses and programs through a variety of mechanisms including distance delivery and distributed laboratory and classroom centers, within a coordinated institutional framework
- Fulfill the workforce needs of Hawaii across the islands in economically responsible fashion by leveraging the common and distinguishing socioeconomic resources and opportunities on each of the islands

Proposed Next Steps

- Crouch asks UH Chancellors and Community College Chancellors, other pertinent UH and UHM offices and other appropriate stakeholders to assign representatives to join him in a coordinating committee
- Obtain consensus agreement by stakeholders represented at the September Summit of a Vision for the *Development and Delivery of a Common ETT Curriculum for Hawai'i*
- Press for a UH system-wide adoption of the Vision
- Begin the process of identifying and organizing the distance delivery of critical ETT courses and prerequisites
- Develop a deep understanding the ETT curriculum across the entire UH system, as a first step toward developing a strategic plan to accomplish the Vision:

- o Gather data of what courses and programs exist and where
- o Include data on high school capabilities and offerings where appropriate
- o Make decisions based upon best available data the long-term imperatives for ETT foci, re: long term workforce development needs
- o Clarify as best as possible corresponding capacity needs
- o Make recommendations of what types of ETT programs should be on what campuses and the delivery mode of these programs
- o Identify articulation issues