



OPAS Steering Committee

Meeting Record

#34 – June 20, 2008

Attendees: Eda Davis-Lowe (OSU/ SMILE), Tom Thompson (ODE), Bruce Schafer (OUS), Jo Oshiro (OUS/ OPAS), Dick Knight (Saturday Academy), Steffen Moller (Clackamas CC), Jay Bockelman (OIT), Don Domes (HilHi)

3:30 - 3:35	Introductions, opening remarks
3:35 - 4:00	Recent work by workgroups & committees <ul style="list-style-type: none"> • Motivate • Prepare • Success • Pathways • ETIC Student Marketing Committee • ETIC Computer Science Task Force
4:00 - 4:15	Probable Joint CS Teacher Workshop <ul style="list-style-type: none"> • Sponsored by Prepare and Succeed with help from TechStart • Goals: <ul style="list-style-type: none"> ○ Help teachers develop plans for increasing diversity ○ Gather insight on "missing pieces" for creating new HS CS programs
4:15 - 4:45	Possible collaborations <ul style="list-style-type: none"> • Motivate and ORTOP FTC re: Improving and scaling up FTC in Oregon • Pathways and ETIC CS Task Force re: CS Pathway • ETIC CSTF, TechStart, and OPAS Motivate re: scaling up OGPC • OPAS and ETIC Student Marketing Committee <ul style="list-style-type: none"> ○ Brochure ○ Web site ○ CTY Event
4:45 - 4:55	Other business (members should suggest topics before or during meeting) <ul style="list-style-type: none"> •
4:55 – 5:00	Schedule next meeting - Tuesday July 22, 2008 (July 15 pre-opted by Motivate)

Summary as Emailed and Posted June 26

Eight committee members attended the June 20 Steering Committee meeting. Updates on workgroup and other related activity:

- Tom Thompson reports the successful conclusion of Oregon's 3rd **Math in CTE** conference. This national effort, now headquartered in Louisville, Kentucky has math and CTE teachers attend as partners. Teachers exchange technical and theoretical pedagogy,

content, and vocabulary so that the mathematical content of CTE courses is made explicit to teachers and students.

- This year's teachers were mostly CAD and drafting; therefore much geometry was discussed.
- Don Domes also attended and enthusiastically endorsed the program. Despite his years of experience, he was surprised at how much geometry he has been teaching, and how much terminology he learned.
- "Math teachers have given up teaching fractions" but CTE teachers haven't.
- **Motivate Workgroup's** recent session resulted in tuning the "Engineering Team Challenge" to focus on a club model over a team model. Clubs would serve as bases from which to field teams. We want to be sure that club advisors do get connected to resources and a limited number of models so that we are allocating funds in ways that address our issues.
 - Cathy Swider of ORTOP recently returned from a FIRST partner's meeting for FIRST Tech Challenge (the high school program that connects most tightly to FIRST LEGO League) and reports they are open to our ideas.
- **Prepare Workgroup's** upcoming meetings will focus on the CS side of our proposed in-class programs and will be led by Chris Brooks. We hope to identify the highest leverage points in case of budget cuts.
- **Pathways:** Tom recently met with Debbie Moller; CCWD may be moving to taking the lead on doing more of the statewide articulation work now that we have provided the Manufacturing Engineering Technology articulation agreement as a model for doing so.
- **ETIC Student Marketing:** Although carrying an ETIC title, the OPAS committees and workgroups should feel free to offer comments and guidance as the mission overlap, and in some cases people overlap, is so great.
 - Target: A February 2009/ National Engineer's Month roll-out of getreal 3.0 website with engineering content added to the current CS content.
 - The website is only part of a communication plan that includes "push" marketing driving traffic to the site.
 - Has been brainstorming on social networking.
 - Discussed the Johns Hopkins CTY opportunity, and is moving closer to consensus that we (OPAS, ETIC, OUS) want to participate. Discussion with Johns Hopkins shows they are open to allowing us methods to achieve greater inclusivity, and perhaps learning from that.
- **ETIC CSTF:**
 - Opened the topic "Should more OUS institutions broaden offerings to include more software engineering, informatics, and business computing?"
 - Clackamas recently signed an articulation agreement with OIT in health informatics.
 - Dick: Be sure the message communicates the need for a rich, broad-based education, not just vocational need.
 - Started checking out Carnegie Mellon's cs4hs materials/programs, which could complement or be adopted by SuperQuest. Cs4hs has been adopted by Washington.
 - Summer workshops are not a complete answer; trying to define a more complete answer.
 - <http://www.cs.cmu.edu/cs4hs/>

- **Succeed Workgroup** has been working on a method to build on Don Kirkwood's recruiting success to his CS program in North Salem. This has evolved into a collaboration with the Prepare Workgroup, ETIC CS Taskforce, and Techstart Education Foundation. A summer one-day teacher workshop is being planned, at which teachers will share best practices, identify barriers, develop plans to address barriers, and begin applications for Techstart minigrants for recruitment/retention events and activities focused on inclusivity. Efforts to date were praised.
- **Open Question:** returning veterans are traditionally a rich recruiting ground for the technical workforce; do we know what is being done and/or who is paying attention to this issue?
 - Some community college activity was noted.

Next Meeting: Tuesday, July 22, 3:30 – 5:00

Action Items

Jo:

- Information to Ken Cone for getreal 3.0: Celeste Baine's engineering books, Lumina Foundation, website traffic query. (*done 6/25*)
- Follow up: Veteran's programs, InvenTeam report, Carnegie Mellon cs4hs website (*done*)

Eda: come up with a name for the CS Teacher's Summer Meeting (*done* – "A Community Conversation: Diversity in the CS Classroom")

Additional Items Discussed and Referenced

Math-in-CTE pairs CTE teachers (e.g., CAD, electronics) with math teacher partners to elucidate and trade vocabulary for common concepts and methods.

- National Research Center in Career & Technical Education home: <http://nccte.org/>
- Math-in-CTE home: <http://cehd.umn.edu/NRCCTE/Math-In/>
- National Research Center for Career & Technical Education Projects & Abstracts, 2007-2008 -- <http://nccte.org/project-abstracts.pdf> -- many interesting and topical foci of research, notably "Science-in-CTE: Is the Math-in-CTE Model Applicable to Other Academic Content?", Tom Tretter, University of Louisville.
- University of Louisville, Kentucky: <http://louisville.edu/education/research/centers/> -- web evidence is skimpy for the Center for CTE here, but Professor James Stone of the Department of Leadership, Foundations, and Human Resource Education is a key CTE and Math-in-CTE researcher who has relatively recently relocated from the University of Minnesota to the University of Louisville.

Engineering Team Challenges morphing into Engineering OST:

- (Bruce) A proxy for level of success in sports league play is how many teams go to a tournament – how are you going to know how successful you are at delivering a quality OST experience for the kids, and demonstrate fiduciary responsibility for the funds paying the coach?
- (Tom, Bruce) We need to connect these people [coaches] to resources such as engineering for the other 90%, competitions, training or resources; that list should be fairly short, at

least in the early years. Get these people to pick or choose something to structure their students' experience.

- Collaboration note: OGPC has some overlap with Motivate; OGPC is on Motivate's list of probable approved programs for coaches to offer/implement.

Pathways Update:

- Tom's meetings with Debbie Moller at CCWD show more movement to do these statewide pathways (e.g., the Manufacturing Engineering Technology statewide articulation agreement) from CCWD viewpoint, and an underlying sense that this is something that needs to get done. There may be some things emerging that OPAS can collaborate with or turn over. They are holding up the Manufacturing Engineering Technology model as a well-executed exemplar. Bruce will be at Pathways steering committee and will keep an eye on it.

ETIC Student Marketing (Bruce):

- Eventually, Bruce hopes a business plan for the biennium is forthcoming. In the meantime there is a strong bias for action.
- Website: getreal version 3.0 uses the current architecture and adds engineering content; will probably not get complete coverage of all engineering disciplines. Target February 2009, National Engineer's Month.
- Brainstorming the next generation -- some of the delivery ideas are major investments -- e.g., diagnostic tools for which discipline suits an individual. Jeff Hardison is a huge advocate for social marketing; there is an informal subcommittee addressing that, which had a very productive brainstorming session for which Jeff transcribed notes. That meeting tentatively concluded that we use a variation on social marketing to create near-peer marketing; initial experiment should focus on CS -- get college students to do digital videos on "What Do Computer Scientists Do?" for a contest -- put the good ones on myspace, youtube, getreal. He will be bringing this idea to the ETIC CSTF.
 - (Eda) Lumina Foundation is supporting social networking around college access -- provide peer-to-peer connection through PSAs and some other social marketing -- <http://www.luminafoundation.org/> - the information Jo was able to find on cursory websearch centered around College Access Networks and connecting to community social networks such as rural churches, not virtual social networks such as myspace. The Lumina Foundation is involved KnowHow2Go college access social marketing campaign. I have included that link and some others around college access marketing.
 - <http://www.collegeaccessmarketing.org/>
 - http://www.collegeaccessmarketing.org/defaultinterior_ektid112.aspx
 - http://www.pathwaystocollege.net/pdf/CAM_Community-Engagement.pdf
 - <http://www.collegegoalsundayusa.org/support/presentations.asp>
 - A good primer of preparing a PR campaign to change people's behavior: <http://cam.catalystnet.com/WorkArea/showcontent.aspx?id=2002>
- Website is in essence the long form of the Oregon engineering brochure and traffic will be driven in part by admissions personnel at career fairs, Engineering Ambassadors; this is a way to help colleges cover for each other at these events.. Details on traffic from Ken Cone, distributed 6/24 & 25/08:

- We are using a free google analytics tool, which shows us a moving 30 day window. More functionality than that costs.
- The current 30 day window report is attached ... because school is out, it shows traffic as pretty flat.
- Page 3 of the report shows “top traffic sources”. The direct source is probably Ken working on the site. But the other sources are interesting, including the key search words. We average about 4 real hits per day. We also instrument www.ous.edu and www.ortop.org , the OUS site consistently runs about 1800 hits per day during the week, probably news readers looking for Di’s daily news digests. GetReal is linked off the OUS and technosciencesupersite sites.
- Ken has monitored traffic associated with “push” events such as post card mailings and class visits. Hits do indeed spike after such events.
- Recent changes to the getreal website, i.e., a news section and an rss feed, encourage return visits. Let us know of any computer science and engineering news items that would be of interest to high school students.
- ETIC has asked us to expand GetReal to include all engineering on OUS campuses. We are looking for candidates to interview in areas of Civil, Mechanical, Electrical Engineering. Students and recent grads would be best to leverage “near peer” relationship to high school students.
- Ken and I try to share news between getreal and the “In the OPASsphere” e-newsletter.

ETIC CSTF(Bruce): Historically, genitor of getreal website and co-genitor of the Oregon Game Project Challenge (OGPC). Recently they’ve been looking at whether Oregon universities should broaden their offerings to include more software engineering, informatics, and business in addition to “pure” CS.

- Steffen: Clackamas has just signed an articulation agreement for OIT health informatics.
- Ellen Momsen at OSU has applied for an NSF GK-12 grant focusing on CS.
- CSTF has been investigating Carnegie-Mellon’s summer program for teaching high school teachers cs4hs -- <http://www.cs.cmu.edu/cs4hs/> -- as an enhancement or addition to SuperQuest. Washington is doing cs4hs.
- Summer workshops are not a complete solution.
- (Dick) Be sure the message is not overly vocationally focused – communicate the need for a rich broad-based education.
- (Bruce) CSTF may take on a piece of the Pathways methodology for its own purposes.

CS Teacher Meeting planning (aka “The Propagator”, and subsequent to the meeting, “A Community Conversation: Diversity in the CS classroom”):

- (Dick) Be very intentional about saying these are the best practices, and here is Don showing you an exemplar. Don’t have the exemplar set theory. May want to have someone besides Don talk about best practices. Structure this around the integrity of Succeed’s goals, but while you have these teachers right there, we can pull out some things.
- (Bruce/Dick) Be careful how you filter the opportunity: limit the invitation to teachers who are or anticipate teaching computer science in the next year; have an application process? Careful how you advertise, even for SQ – are couple of questions on the registration

enough? Ask if teach now, if plan to teach within one year, minority percent in school, in existing tech classes.

- Dick & Bruce commend on the planning for this event so far.

Veterans: are we tapping this group, historically a rich resource for technical trades?

Next Meeting: July 22, 2008 3:30 – 5:00; Jo to invite Don Kirkwood