This newsletter is the 2010 “End of the Year” update on the ChemWiki development

**Goal:** The ChemWiki project is a collaborative approach toward chemistry education where an Open Access textbook environment is constantly being written and re-written partly by students and partly by faculty members resulting in a free Chemistry textbook to supplement conventional paper-based books. Success of the project will be gauged by the number of students that consult the ChemWiki and the number of Chemistry courses that eventually adopt the ChemWiki as the sole textbook for class needs.

**Progress:** Since Nov. 1<sup>st</sup>, 2008, the ChemWiki had 1,550,420 pageviews, 772,010 visits and a total of 22,946 hours of online student reading and writing (not counting the six months of activity when the ChemWiki was hosted by an internal UCD system with no access from off-campus users). Currently, over 170 hours of confirmed reading occurs (a very conservative estimate) each day of the ChemWiki’s 4,009 existing Modules. In the last week prior to the Winter break, the ChemWiki had an average rate of 2.2 M visits per year. If the 15-fold increase from the first to the second year continues to the third year of development, then we expect a rate of 33 M visits/year traffic rate at the end of 2011. For comparison, MIT’s Open CourseWare (OCW) system had 15 M visits in 2009 for all departments and courses at MIT.

**Publicity:** The ChemWiki (and others) made the front page of the Sacramento Bee on Dec. 6<sup>th</sup>, (http://www.sacbee.com/2010/12/06/3235665/internetcost-spur-textbook-revolt.html), which was syndicated to other news services. This is a significant step up in publicity compared to the other local University and Davis articles (http://chemwiki.ucdavis.edu/pr) that were written this past quarter. Furthermore, a Journal of Chemical Education technical report was recently (tentatively) accepted, which also strongly aids the dissemination efforts. Clearly the ChemWiki project is catching people’s attention and it is time to move its development to the next level, which requires external financial support.

**Financial Support:** The ChemWiki to date, has been supported with a limited amount of funds ($8 k) from UC Davis internal grants. Our progress, given our limited resources, is remarkable. However, proper funding sufficient to complete the project is being sought. A few months ago, we narrowly missed the Dept. of Education FIPSE grant (#40 out of 417 submitted proposals and #38 and up were funded). We were strongly encouraged to submit again in 2011. We also have a currently pending proposal to the TUES program at the NSF DUE and a outstanding pre-proposal for the EDUCAUSE grant. Our fingers are crossed.
Advisory Board: A local advisory board was setup in part to aid in the development of the ChemWiki. The board currently consists of: Prof. Steve Farmer (Sonoma State University), Prof. Ana de Bettencourt-Dias (University of Nevada, Reno), Prof. Sési M. McCullough (University of Nevada, Reno), Prof. Kent M. Ervin (the University of Nevada, Reno), Prof. Susan Crawford (Sacramento State University), Dr. Rhiannon Porter (Folsom Lake and Sierra Colleges), Dr. Andy Jones (UC Davis), Prof. Sean Casey, Associate Professor (University of Nevada, Reno). The board has not convened yet, but will probably do so this year.

Contributes/Developers: The development team is very thankful for the many contributors to the ChemWiki over the past quarter. We are working on a more appropriate page to outline these important people’s contributions to the ChemWiki development, so please stay tuned for more details in this matter. In the last week of December, we were approached by Profs. Hilton Weiss (Bard U.) and Maria Nagan (Truman State U.) as potential contributors and we are hopeful for future collaborations with both. Given our limited resources at this time, most of the content is still being integrated into the database by our volunteer student army.

Columbia University: This quarter, Ron Rusay introduced a significant extension to the ChemWiki effort. He was able to get Prof. Nick Turro (http://turroserver.chem.columbia.edu/) on board for adapting Bill Reusch’s organic content (also a ChemWiki contributor) and his already extensive organic chemistry materials for his honor’s organic chemistry class next Fall at Columbia University. In coordination with his graduate student, Judy Chen, and several undergraduate students at UC Davis, this is bound to be an interesting and potentially powerful step in the ChemWiki development.

The “Dynamic Textbook Project”: The ChemWiki approach is distinguished from other “depository” or “new content” open access textbook sites for several reasons. The most important include its (1) active student participation in construction, (2) the dynamic Core/Wikitext approach and (3) the construction of an accompanied homework system (SARIS) to handle the important homework requirements for the textbook. We are leveraging the ChemWiki as a pilot case for this approach to be applied to other science education fields. You may notice that five other “Complete Textbooks” have been generated and are hosted on the ChemWiki server. These new wikis include: MathWiki.ucdavis.edu, StatWiki.ucdavis.edu, PhysWiki.ucdavis.edu, GeoWiki.ucdavis.edu and BioWiki.ucdavis.edu and constitute a starting suite of STEMwikis that are unified under the banner of the “Dynamic Textbook Project.” Although our efforts is still dedicated largely to the success of the ChemWiki, we are also preparing the platform for others to develop these STEMwikis by motivated students and faculty. This effort has been spearheaded by Liz Walz, a motivated ASUCD senator with an interest in reducing textbook costs across all fields at UCD and abroad.

Student Government: Recently, Liz Walz got the ASUCD Senate to pass a formal resolution to endorse the ChemWiki Project. We hope this will be the first step in expanding greater student participation in the project, not only at UCD, but from the rest of the UC system and even abroad. We hope her existing contacts with CalPIRG will further aid in this effort.

SARIS: We were working on integrating the Moodle system into the platform of choice for the SARIS homework system. However, it didn’t provide the flexibility that SARIS required and we have setup an arrangement with Prof. Charles Wight at the U. of Utah (http://www.chem.utah.edu/faculty/wight/) for his PracticeZone.org homework system. This is near perfect for our goals and once fully operational on our server, we intend to start the process of uploading questions. This is a major step forward in our goals and I encourage all to check out his impressive site.