

New Data-Management Tool to Facilitate ABET Assessment Activities

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The CACHE ABET Resources Task Force was formed in response to our 2014 visioning process, which identified a need felt by our affiliate departments that could be addressed as a CACHE initiative. Specifically, the Task Force is focused on developing tools that can help departments in the data-gathering and analysis activities needed to conduct an effective assessment of their program activities. We are happy to report that we have made substantial progress on this initiative in 2015.

To maintain accreditation by ABET, engineering departments are required to perform and document certain tasks that foster a cycle of continuous improvement. The process is designed to focus the educational program and maintain its quality. Compliance requires collecting, organizing, and analyzing information from many people. Cooperation from the faculty is essential to an effective process, and this is assured only to the extent that the process is made simple and efficient. This is clearly a problem that can be addressed by a thoughtful application of modern information technology. Indeed, many departments have developed *ad hoc* solutions through application of off-the-shelf computer-based tools, such as spreadsheets, that really aren't that well suited for the task. The ABET Resources Task Force is instead developing a tool from scratch that is tailor-made to address the data-management requirements of the assessment process.

The planned system operates through a web interface, which enables distributed access for uploading of data and management of the process. Behind the interface is a tightly integrated database, which stores many pieces of information relating to the program, its goals, its performance in meeting those goals, and documentation thereof. All of this information can be contributed and viewed by faculty, and managed by faculty and staff who oversee the process. The collected data can subsequently be analyzed using integrated tools, which facilitate the process of identifying and addressing shortcomings in the program, or conversely, identifying elements that are effective.

Development of the system is driven by a group of faculty at the University at Buffalo (UB), with Andrew Schultz as lead software architect and developer (Andrew also developed CACHE's job-posting web site, *cachet*). It is expected to be tested across the Engineering School at UB in Spring 2016, while simultaneously being introduced on a limited pilot basis to chemical engineering departments at Notre Dame and Rutgers. Broader testing will be performed in Fall 2016, and we hope to have it available to departments for wider distribution in Spring 2017. Pricing is to be determined, and will depend on anticipated requirements for maintenance and support.

Further information about this activity can be obtained by writing the authors (kofke@buffalo.edu or jerring@buffalo.edu).