Preliminary Development of a Tool to Enhance Persistence of Commissioning Savings

David Claridge, Malcolm Verdict, Frank Painter
Energy Systems Laboratory, Texas A&M University

Mingsheng Liu and Gang Wang
Energy Systems Laboratory, University of Nebraska, Lincoln

Seung Uk Lee
ADM Associates, Inc.

An automated tool intended to enhance the persistence of commissioning measures in buildings that have been commissioned is being developed. This tool, called an Automated Building Commissioning Analysis Tool (ABCAT) is a relatively simple prototype tool that will analyze measured whole building consumption data, and a limited set of EMCS data to detect significant changes in whole building energy use and AHU level comfort problems. It will also provide limited fault diagnosis, based on analysis of the patterns of deviations between measured consumption and expected consumption.

Used to simulate and analyze more than a year of heating, cooling, and electricity consumption data retrospectively for one building, this analysis succeeded in identifying significant changes during the retrospective period and also identified a significant change during 3 months of real time application. This talk will describe the progress to date of the development of ABCAT as an on-line tool which will be used to develop and test the fault diagnostic capabilities.