

1096-VE-1939 **Sarah Mall Hanusch*** (sh1609@txstate.edu), 601 University Drive, San Marcos, TX 78666.
Using smart-pen technology to study problem solving.

To analyze students' thought processes when solving novel problems, task-based interviews are often utilized. Often the field notes of task-based interviews are supplemented by audio or video recordings and the written work of the students being interviewed. An alternate to this is utilizing smart-pen technology which dynamically records written text and audio in the vicinity of the pen. As such, the smart-pen produces a document, called a pencast, which links what the student writes to what the student says at any moment.

Smart-pen technology was utilized in task-based interviews conducted in small groups of students from a large university. These students were asked to solve a problem that is typically solved using graph theory. However, the students selected were not introduced to graph theory definitions or concepts before being given the task.

This talk will address how smart-pen technology was implemented in order to document the task-based interviews and observations gleaned from the students' approaches to this problem. (Received September 16, 2013)