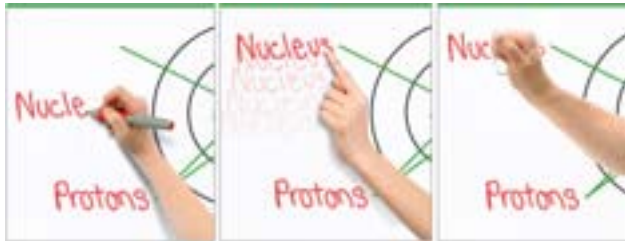


Appreciating Touch Recognition

by Nancy Knowlton

The resistive technology that is the basis for SMART's 600-series interactive whiteboards is not only highly reliable, but also presents real opportunities for intuitive operation. At the most basic, the interactive whiteboards are controlled by a simple touch of a finger or any other object on the board. No special tools are required. The pen tray that is part of the interactive whiteboard has the selection of tools coded within the system software. This means that any object can fill the pen tray slot and its selection will invoke the operation of the corresponding tool – simple and intuitive for users to understand and start to use.

With a little bit of thought and creativity, SMART has made that same dependable resistive technology operate at a whole new level of intuitiveness. The SMART Board 600 series interactive whiteboards can distinguish between different types of touch to invoke an operation that is natural and intuitive.



Intuitive Use

We got the idea for a new level of intuitive functionality by working closely with our customers, observing how they use our interactive whiteboards as well as how they work with regular whiteboards. We saw that people often end up with a number of pens in their hands, and that they would use a finger to erase a small amount of information.

We wanted to make our 600 series interactive whiteboards as simple and easy to use as regular whiteboards, and thought that these simple functions would greatly enhance the experience.

Decoding Touch

The recognition of three different types of touch is a simple proposition. The area that you touch when writing with the tip of a stylus on the SMART Board 600 series is quite small. Touching with the end of a finger is a larger touch, coded within the system software to represent a mouse event. The touch with a palm, spread fingers or side of a clenched fist is a large touch and has been coded to represent the eraser function.

Touch recognition is a selectable function available within the system software. The SMART Board 600 series interactive whiteboards are shipped from the factory with this function turned off, so the user can choose whether to use it.

Here's how touch recognition works.

Writing on the Interactive Whiteboard

The writing function works the same in both the touch recognition and the basic system software. A user can pick up a pen out of the pen tray and write on the SMART Board 600 series interactive whiteboard. The color of the pen is a function of the slot from which the pen is selected.

Moving an Object

With the stylus still in hand, a user can touch on the handwritten material and move the object around the interactive whiteboard. In the basic system software, the user must replace the pen in the pen tray in order to move an object.

Erasing Writing

With the pen still in hand, the user can touch with the palm or the side of a fist to erase the writing. In the basic system, a user would return the pen to the pen tray and then select the eraser tool from the pen tray or eraser icon to erase an object.

Comparing to Pen-Based Systems

No pen-based system (one that requires a special pen tool to operate) currently delivers the same intuitive operation. The key to the pen-operated systems is that the pen is the mouse and it is used to activate a function by touching on a menu item or icon within an application. Some special pen systems have buttons on them to invoke the right-mouse function, but that is as close as they typically get to intuitive operation of the hardware.

Enabled Technology

While resistive technology is long-established and reliable, some new thinking has allowed us to add intuitive functionality to make our SMART Board 600 series interactive whiteboards more useful and usable in both classrooms and meeting rooms. Thinking about what users want to accomplish and how they work provides clues to us about how to develop new features and functionality.

Touch recognition is elegant in its implementation and an obvious added value for our customers.

Nancy Knowlton is the co-founder and CEO of SMART Technologies, the world's leading supplier of interactive whiteboards. Nancy's husband and SMART co-founder, David Martin, is the inventor of the interactive whiteboard product category. Together they have built a company that is focused on delivering easy-to-use, yet feature-rich collaboration tools, including the SMART Board interactive whiteboard. Nancy can be reached at CEO@smarttech.com.