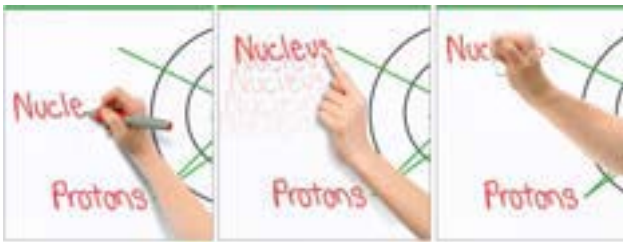


Appreciating Touch Recognition

by Nancy Knowlton

The resistive technology embedded in SMART Board™ 600 series interactive whiteboards is not only highly reliable, but also presents real opportunities for intuitive operation. At its most basic level of use, the interactive whiteboard is controlled by a simple touch of a finger or any other object. 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.

With a little bit of thought and creativity, SMART 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.



Intuitive Use

We got the idea for a new level of intuitive functionality by working closely with customers, and comparing how they used our interactive whiteboards and regular whiteboards. We saw that people using regular whiteboards often end up with a number of pens in their hand, and they use their finger to erase small amounts of information.

We wanted to make our 600 series interactive whiteboards just as simple and easy to use, so we began exploring how to distinguish three simple functions – pen, mouse and eraser – through touch.

Decoding Touch

Recognizing three different kinds of touch is now a simple proposition. The area touched by the tip of a pen on the 600 series is quite small and is recognized as pen activity. The area touched by the end of a finger is larger and is coded to represent a mouse event. The area touched by a palm, spread fingers or the side of your clenched hand is larger still and is 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.

Writing on the Interactive Whiteboard

The writing function works the same in both the touch recognition and the basic modes. A user can pick up a pen out of the Pen Tray and write on a 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 this functionality included in all 600 series interactive whiteboards, users can have a pen in hand while selecting handwritten material and moving the object around the interactive whiteboard. In basic mode, users must replace the pen in the Pen Tray in order to move an object.

Erasing Writing

With the pen still in hand, users can also touch with the palm or the side of a closed hand to erase the writing. In basic mode, 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 acts as 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 enabled 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.

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