

# The Pen Tray – A Usability Gem

by Nancy Knowlton

The idea behind the SMART Board™ interactive whiteboard is very simple – take what is normally a personal application and turn it into a group application on a large interactive whiteboard that can be controlled through touch. What a person sees on the monitor is exactly what is displayed on the interactive whiteboard. But it is a more complicated proposition than just that – there is an inherent difference between a personal application and a group application. Paying attention to the details makes the difference between a product that is simply owned and one that is used.

The more intuitive a product is to use, the more likely it is that people will understand its functionality and start to use it with confidence. When we were creating the very first SMART Board interactive whiteboard, we thought about how people would transition from a regular dry-erase board to our device, which offered so much more. The key, we thought, lay in giving people a strong visual cue about its use. Out of that thinking came the Pen Tray.



The current version of the Pen Tray is configured as follows:

- Four slots to hold red, green, blue and black styluses
- A slot to hold an eraser
- A button for the right-click function
- A button for the On-Screen Keyboard
- A button for the help function

## No Special Tools

Perhaps the most important aspect of the Pen Tray is that it means no special tools are required to operate the SMART Board interactive whiteboard. Optical sensors in the bottom of each slot detect the lifting of a tool out of the slot. An LED above the slot indicates the selected tool.

Because the intelligence is built into the pen-tray slot, the specific tool itself is just a visual cue about functionality. If a stylus is lost or misplaced, then any appropriately sized replacement object can be put into the slot to block the optical sensor – a used dry-erase pen or a business card will work. Lifting the tool initiates the function, and the subsequent touch on the board with the tool or a finger will perform that function.

## Doing Everything at the Interactive Whiteboard

Making an application a group application that really works at an interactive whiteboard takes more than just enlarging it through projection. It means deeply understanding what people want and need to do. Having to move back and forth from computer to interactive whiteboard can be aggravating and disruptive to the flow of the session.

One of the most common activities is entering small amounts of text, such as file name or website address. There is a large button in the center of the Pen Tray that opens the On-Screen Keyboard, which allows the easy injection of small amounts of text as needed.

Another function that the Pen Tray supports is a right mouse click. There is a large button in the center of the Pen Tray that, when pressed, causes the next touch on the interactive whiteboard to be a right mouse click.

Both the On-Screen Keyboard button and the right-click button pop up the orientation function. This function prompts the user to touch preset points projected on the SMART Board interactive whiteboard to teach the computer where the projected image is and allows for precise touch control of applications.

Help for SMART Notebook™ collaborative learning software is easily accessed by pressing the Help button that is located near the center of the Pen Tray.

## The Bottom Line

The SMART Board interactive whiteboard is an interesting transitional product that bridges the gap between the traditional dry-erase whiteboard and the digital world. It offers all of the simplicity of a whiteboard and the power of a computer in a compelling, easy-to-use package.

The Pen Tray makes it easy for users to understand the basic functionality, adopt the product initially and use it well through time. Thinking about customer use scenarios and putting customer needs first and foremost enable us to design products with unparalleled ease of use. Customers get what they need, and we delight our customers with products they love and use.

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](mailto:CEO@smarttech.com)