

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 whiteboard that can be controlled through touch. What a person sees on his 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 that 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 design of 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-mouse function
- A button for the on-screen keyboard
- A button for Help

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 be that function.

Working Fully at the SMART Board

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 – a file name to save a file or a website address. There is a large button in the center of the Pen Tray that opens an on-screen keyboard that 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 board to be a right mouse click.

Pressing both the onscreen keyboard button and the right mouse button pops up the orientation function. This function prompts the touching of some pre-set 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 the SMART Notebook application 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 and 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 allow us to design products with unparalleled ease of use. Customers get what they need, and we delight our customers with products that they love and use to make a difference.

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