Design Hall of Fame? Not for me: CombiMouse(Keyboard+Mouse)

Artifact

In these days I am looking for new wireless keyboard for my desktop. When I searched new keyboard in the internet, I found very ridiculous and odd one. As it can be seen in the picture and as we can notice the use from its name, the CombiMouse combines the function of a keyboard and a mouse into one device. It consists of two parts, where the left side is just a keyboard that are used by left hand, while the right side is a device with keys used by right hand but also is used as a mouse. User can change the keyboard mode to mouse mode by touching contact switch in the right side. Someone may think that this design is innovative, efficient and simple. Surprisingly, this product was selected as a winner in the Australian IT Secrets competition in 2003. However, I doubt why judges in the competition gave award to it because I think that its design should be in the hall of shame. Let's evaluate it in terms of affordance, mapping and feedback.

**Affordance**

When users first look at CombiMouse without any pictures, label, or manual, they can be confused about how to change keyboard mode to mouse mode. Norman says that affordance should provide clues that determine how things could be used. Aside from affordance problem, this product emphasizes its efficiency. According to inventor, user can save the wasted time made by moving right hand from keyboard to mouse. However, user still need to some extra task to switch keyboard to mouse mode when they use CombiMouse. Is it really efficient?

**Mapping and visibility**

Which key should be pressed if user wants to click? Can user find that which key is for left mouse button or right mouse button at a glance? After users read instruction in the picture on right side or find descriptions from bottom of buttons, they can
understand "I, O, K, J, L and _" are mouse click buttons. Norman says that "a device is easy to use when there is visibility to the set of possible actions, where the controls and displays exploit natural mappings". In this kind of view, we can say that the mapping of this design is poor. Where is right alt key and backspace key? When user carefully check each button, they can notice that there is no right alt key and backspace key is between "<" and "up" key. For traditional typists, it is not easy to find and use backspace key.

Feedback

the feedback of this keyboard is also poor. Suppose user press the caps lock key several times, can user identify that caps lock is on or off without any typing on the screen or seeing the windows toggle keys? There is no caps lock light in CombiMouse; it means there is no feedback for it. This could be problem for some users.

Suggestion

- Scroll wheel should be on the right side and not on the left side. Scroll wheel is usually used when we use mouse.
- Make right alt key and shift backspace key's location as traditional keyboard.
- Enter key is too small, Enter key need to be bigger than current size
- Make small light for caps and number lock key for feedback

Conclusion

Although the concept of CombiMouse is useful to some users, for me it belongs in wall of shame in terms of affordance, mapping and feedback. Not only that, it also has serious problems for left-handed users and gamers. Left-handed users cannot use this product well because it only focused for right-handed users. When playing computer games, gamers usually use both keyboard and mouse at the same time. Probably, inventor who made CombiMouse have never played game and considered how to play games with his invention. With CombiMouse, playing game is almost impossible and it cannot be solved. Now, you know the reason why I was surprised how this product got award. The idea that combines keyboard and mouse in one device is somewhat original but it has many problems compared to traditional keyboard and mouse. That's why it does not commercially release yet. I am skeptical about its success.

Following video demonstrates usage of CombiMouse.
http://www.youtube.com/watch?v=-kclwRrJUbc&feature=related