



# Benefits from both Physical & Virtual Keyboards



One size rarely fits all and when it comes to deciding between a physical and virtual keyboard, it could be one option or both that wins the day

By Kioware

Self-service kiosks, interactive digital signage, and customer facing devices serve a variety of purposes. One such goal of interactive kiosks is to collect user information. Sometimes the kiosk interaction is as basic as choosing between two options or touching the screen to proceed in one direction or another. Some applications require end users to enter a limited amount of information – filling in a few numbers, a name, or an email address. Other interactions require a substantial volume of data entry.

The amount of information being gathered will directly determine the best and most user-friendly method for entering information. The primary two options for entering information on a self-service kiosk or customer facing device are touchscreen virtual keyboards, and physical keyboards mounted on the kiosk enclosure.

#### Touchscreen virtual keyboards

Virtual keyboards are largely dependent upon the quality and sensitivity of the touchscreen. Touchscreen technology has advanced significantly in the past 15 years, going from older capacitive, resistive, and surface acoustic wave touch to the easily manipulated, sensitive, accuracy of today's projected capacitive touch standard on even low cost touchscreens available in the current marketplace. While touchscreen responsiveness was once a limiting factor to the effectiveness and viability

of virtual keyboards, this factor has been mitigated through improvements in technology. In addition, users are now much more familiar with the touchscreen process and functionality than in previous iterations. Smart phones and tablets have created unprecedented end user familiarity with touchscreen keyboards.

Some of the most serious initial downsides to the use of virtual keyboards are so irrelevant now, that previous concerns with touchscreen responsiveness & lack of familiarity have been addressed.

#### Physical keyboards

Like the quality of virtual touchscreens, physical keyboard user experience is also subject to the quality of the keyboard being used. Industrial keyboards constructed of metal with non-removable keys, and limited

keyboard functions, are the best of today's physical keyboard options. Once quality has been addressed, there are other benefits to the physical keyboard over a virtual one.

Physical keyboards have the advantage of allowing users to quickly and easily enter a large amount of information. They also have the advantage in situations where multiple lines of text are needed and/or the goal of the kiosk includes obtaining lengthy descriptions or encouraging robust explanations.

For Frank O'Lea, CEO of kiosk manufacturer Olea Kiosks, selecting between a virtual and physical keyboard



"Users are now much more familiar with the touchscreen process and functionality thanks to smartphones and tablets"

is primarily a question of volume of information. "Is the information being submitted limited to a few lines or is it more extensive? One rule of thumb is – if entering a full address for a purchase or filling out a job application on an HR kiosk, then a keyboard is needed." ➤



"One size does not fit all, and only you can decide which keyboard option to employ for your kiosk project"

### Advantage of virtual keyboards

A benefit of virtual keyboards is the ability to customise the look and feel of the keyboard to emulate and reflect the desired brand.

Virtual keyboards can be further customised and locked down by removing the keys and keystroke combinations that are not desired. For example, showing only a numeric keyboard for entering a phone number.

Multiple language virtual keyboards are also available, and easily selected by users and deployers of kiosks. This availability is instant and incurs no additional cost to the kiosk deployer.

### Advantage of physical keyboards

Physical keyboards take up no screen space, allowing for full screen view of the kiosk application or website. Virtual keyboards block part of the kiosk screen when they're actively available.

Some on-screen applications are optimal with large screen displays and virtual keyboards obscure that view, so physical keyboards have the advantage.

Differently abled kiosk users may benefit from physical keyboards with alternative keys, trackball accessories, raised lettering, and/or modifiable height.

Physical keyboards can be customised

for various languages or combined languages, with raised fonts to improve tactile recognition of lettering.

Industrial physical keyboards currently hold up better than electronic sensors and wires in extreme weather conditions such as outdoor heat or cold.

Sometimes it makes the most sense for kiosk deployers to provide both a virtual keyboard and a physical keyboard option. Users may then select the method that is the most usable for their own particular needs and situation. According to Gregory von Schiller from keyboard manufacturer Zupera, "although a user can adequately input texts with a virtual keyboard, even awkwardly on a large display, one can comfortably enter



lengthy entries with a physical keyboard without displaying such therein a public place.” When privacy matters, both von Schiller and Olea agree, physical keyboards have the advantage.

Both physical keyboards and virtual keyboards can be customised. The custom virtual keyboard built into KioWare for Windows, for instance, can be modified to accommodate various themes and languages or can be replaced with a fully customised html keyboard. On a physical keyboard, Zupera similarly fully customises the layout, keys, and options in their manufactured keyboards, increasing the size of keys, the layout, and/or the number, for example.

While virtual keyboards were once a less attractive option due to the reliability and complexity of drives

and calibration, along with inherent limitations in accuracy and lower technical capabilities of touchscreens, they have come a long way in more recent years. Still, there are some instances in which a physical keyboard makes the best choice for a kiosk deployment. Ed Crowley of URway Holdings agrees, “The improved functionality and sensitivity of today’s Projected Capacitive touchscreen means that virtual keyboards are a viable option for many, if not most, kiosk deployments wherein years past they were a lesser option. Even with these improvements, in some situations, only a physical keyboard will do.” Kiosks meant to serve the visually impaired, differently abled, and those collecting extensive or sensitive information are currently better served with a physical keyboard.”

On the plus side of virtual keyboards would be the more streamlined enclosure and with a lower profile kiosk look and feel. A kiosk hosting a physical keyboard has the look of a more traditional kiosk with an attached, secured physical keyboard typically built into (or accommodated by) the display. Ultimately the customer experience is the primary determining factor between virtual and physical when it comes to keyboard.

Most kiosk manufacturers will agree, at the end of the day what matters most is user experience. Select the option that best works for the kiosk application and function at hand. One size does not fit all, and only you can decide which keyboard option to employ for your kiosk project.

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