Gesture Technology: An Innovative "Leap" for Workflow

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Abstract - This research (in progress) aims to examine the use of gesture technology for business processes, more specifically how this technology improves workflow and productivity. The key questions we raise for this research are as follows: 1) What could gesture technology be used for in the business world? 2) What are practical uses for gesture technology? and 3) How could workers use gesture technology to improve workflow and productivity? In order to tackle these questions, we study an organization using gesture technology for its business operations and examine how the technology improves workflow and productivity. Research in this aspect of technology could reveal some interesting and useful insights for the use of gesture technology for business processes and the way it can bring operational benefits to businesses.

Keywords: Gesture technology, business process, workflow, productivity

1 Introduction

Gesture technology has lately made significant advancements in recent years and increased its potentials for the business world as well as the practical world. Companies, such as Microsoft, Leap, and Sony, have created systems, which allow people to use gestures or movements in order to perform various functions. As this technology continues to evolve, it will allow users to do their jobs despite physical disabilities or increased distances. Architects would be able to use their hands to create blueprints in massive 3D models, giving a better image as to how buildings would look like with a capability to alter the plans with a simple movement of the wrist. The newcomer into the market is the "Leap Motion". This is a little device connecting to a computer, which allows fingers to perform the same functions as the keyboard and mouse. This particular device can be used to streamline business processes by allowing people to work more efficiently.

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2 Gesture Technology

Worker productivity in the modern age has many factors to account for in addition to human capacity to work. Businesses have to account for technology used for daily business operations and how easy it is to use; if technology is complicated to navigate and use, employees’ inputs and energy for productivity could be wasted since they would try to get it to work in their favor or figure out a way to make it easier to use. A majority of work can now be done from behind a computer screen, but even so, it is not as if technology has been completely optimized to suit ease of access and work. The keyboard and mouse has made an effect on workers and how quickly and effectively workers can accomplish their work. As you can imagine from the use of a laptop, however, it will require you to completely alter your posture to accommodate typing quicker, while sacrificing comfort and energy [1].

Gesture technology makes daily lives of workers easier by changing the way they control computers with semi-natural movement, allowing them to use basic gestures with their hands in order to perform certain functions. This technology has been implemented with touchpads and touchscreens in recent years, but even those mediums require some sort of physical connection with the technology to make them work. A device such as Leap Motion, however, (http://www.leapmotion.com) would allow someone to create a 3D model on a computer using their hands, manipulating the model as if it were clay in their hands, only without the mess (see Figure 1).

The device (about the size of iPod—see Figure 2) uses infrared cameras on the surface in order to detect and monitor 8 cubic feet of space around the camera. This allows people to control their computers without being subjected to having bad posture in using a keyboard and a mouse. This device is of course not meant to replace the keyboard and mouse by any means; it is meant to supplement the devices for those who feel uncomfortable using a keyboard and mouse due to posture or arthritis, or for those who just want to use a system.
that flows better with natural hand movement. This could be an improvement to workflow in many businesses because it would allow people to perform their tasks in a manner that will make them feel less tired due to the movement less artificial. If a function has a natural workflow to it, it will work a lot better than a forced attempt at the workflow. Computerized tasks using a keyboard and mouse could be done easier if you were just using your hands. Worker fatigue and morale are directly connected to how quickly and efficiently workers accomplish their work. If workers were given an alternative to a cramped workstation, by which they can accomplish their tasks easier based on a sort of free flow movement, they would work more efficiently and have a more positive work outlook and output [2].

Figure 1: Leap Motion Gesture Technology

4 References


3 Impact of Gesture Technology on Workflow and Productivity

The Leap Motion device implementing gesture technology is new to the market. This device, however, has already been making strides in the business world. This device is clamored for a latest innovation in gesture control technology. Microsoft Kinect was one of many attempts to streamline workflow by gesture control for not only entertainment purposes but business purposes as well. Speculating that gesture technology makes a significant impact on workflow, this research (in progress) attempts to examine the potential of the technology for improvement in workflow: how gesture technology improves workflow and enables workers to perform better, e.g., increase productivity. We will study one or two organization(s) in depth to illustrate the way gesture technology can bring operational benefits to businesses.