

UNITED STATES PATENT APPLICATION NUMBER 18,527,330

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TITLE OF THE INVENTION

Sector-Based Programmable Touchpad for Computer Devices

SUBJECT MATTER

**A Computerized Method to Electronically Designate Sectors within a Touchpad's Surface Area
for the Purpose of Executing Software-Driven User-Programmed Commands**

By

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Introduction

A computerized method to electronically designate sectors within the touchpad's surface area for the purpose of executing software-driven user-programmed commands. To execute a command, the method requires the user to touch a specific sector within the touchpad area simultaneously with the pressing of a specific programmed key within the computer's keyboard. Once the command is entered by the user, the computer device executes the programmed instructions. As an example, a user could program a sector of the touchpad to instruct the computer device to provide the user with user-selected websites in various tabs, organized by topics, while programming another sector to activate various work-related software applications or to operate the functions of a specific application.

Description of the Invention

The invention consists of a computer-driven method to electronically designate sectors within the touchpad's surface area based on the Cartesian Coordinate System for the purpose of executing user-programmed computer commands based on the sector of the touchpad utilized/touched by the computer user. As a result, the touchpad is transformed into a customized input device programmed to execute user-specific computer commands.

To provide the touchpad with electronically designated sectors, a software program is created and installed into the user's computing device to electronically subdivide and designate the command input sectors within the surface of the touchpad to process the computer user's commands. Once the command input sectors are designated, a set of computer-programmed commands is created by the user (i.e. the user's command menu) to be utilized by the user when operating his/her computer device.

To operate the functions of the method, the software program executes the method's instructions and process the computer-programmed user commands. To enter the computer-programmed user commands, the touchpad is utilized by the user in combination and coordination with the keyboard connected to the user's computing device. For example, to perform the entry of a specific computer-programmed command, the computer user could program his/her computer to execute the command by first touching and maintaining contact with a specific sector (press and hold) of the touchpad and next entering a specific key from the keyboard, thus executing the user-specific computer-programmed command.

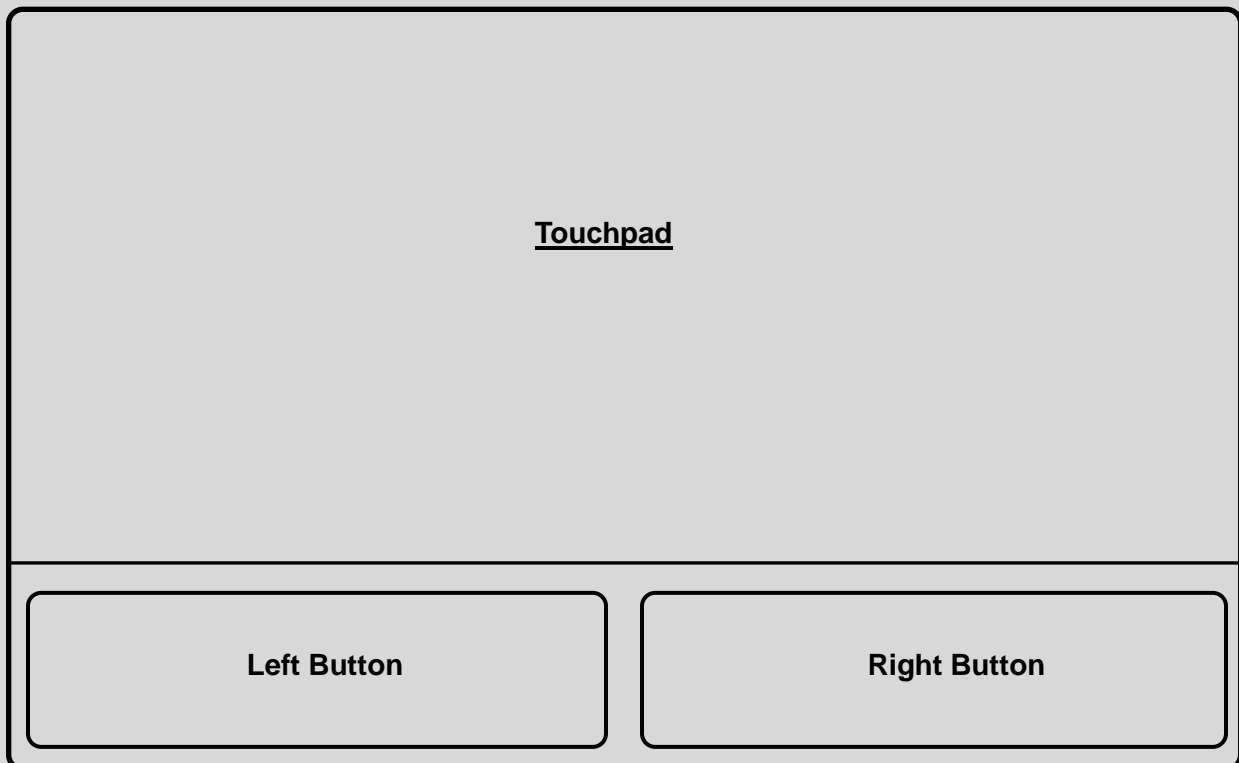
Moreover, the user can assign numerous computer-programmed commands to a specific sector of the touchpad as multiple combinations of a specific sector and keyboard keys are possible. For example, a specific sector of the touchpad could be assigned the "A", "D", "K", and "W" keys to perform four (4) different computer-programmed commands, while another sector of the touchpad is assigned the "B", "C", "S", "F", "H", and "T" keys to perform an additional six (6) computer-programmed commands.

As any computer-savvy user could realize, the method is capable of considerable flexibility and can be utilized in numerous computer applications and computing devices.

Examples/Illustrations

Figure 1

A Touchpad (Computer Input Device)



1) Touchpad - An input device utilized by computer devices and keyboards. A touchpad allows the user to move a cursor with their finger. It can be used in place of an external mouse. A touchpad allows you to scroll, select and click without ever plugging in a mouse. It will allow you to navigate with your fingers instead of your entire hand.

2) Left Button - To click, select, drag to highlight a word and/or object and used as a pointer.

3) Right Button - To see the Menu (options/features available). The right button on a mouse is typically used to provide additional information and/or properties of an item selected.

Figure 2

A Computer's Touchpad depicting the Cartesian Coordinated System, the basis to create programmed sectors. Four sectors are depicted in Figure 2, which were designated and assigned by a user to perform several commands. The method allows the user to subdivide the Touchpad's surface area into various configurations and combinations to create several sectors and subsectors (e.g., 4 sectors, and each sector containing 4 subsectors, or 6 sectors, and each sector containing 2 subsectors, etc.).

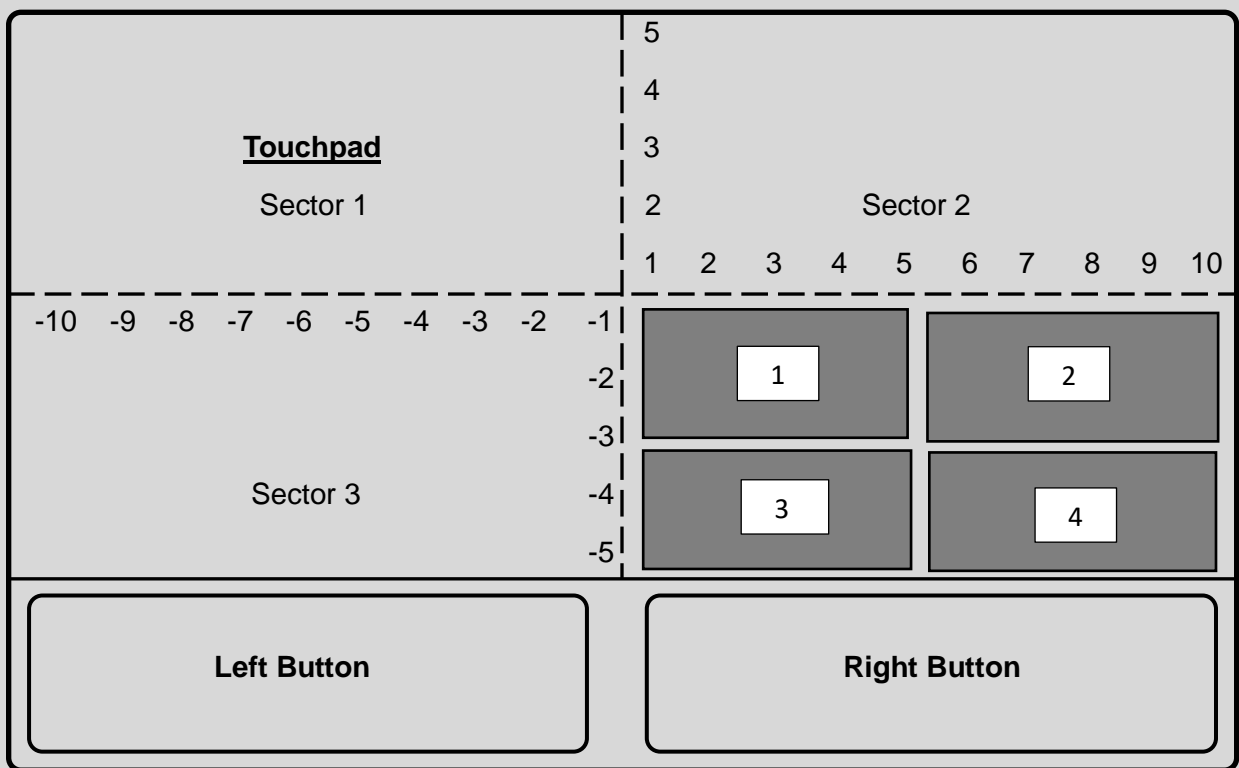


Figure 3

In this figure, the Computer's Touchpad is programmed to assign and utilize 10 sectors. The 10 sectors represent the user's **Command Menu** assigned for a software application (e.g., MS Power Point). Each sector is programmed to execute a specific action when the user touches one of these assigned sectors within the touchpad surface area in conjunction with another electronic entry (e.g., Pressing on the CTRL key).

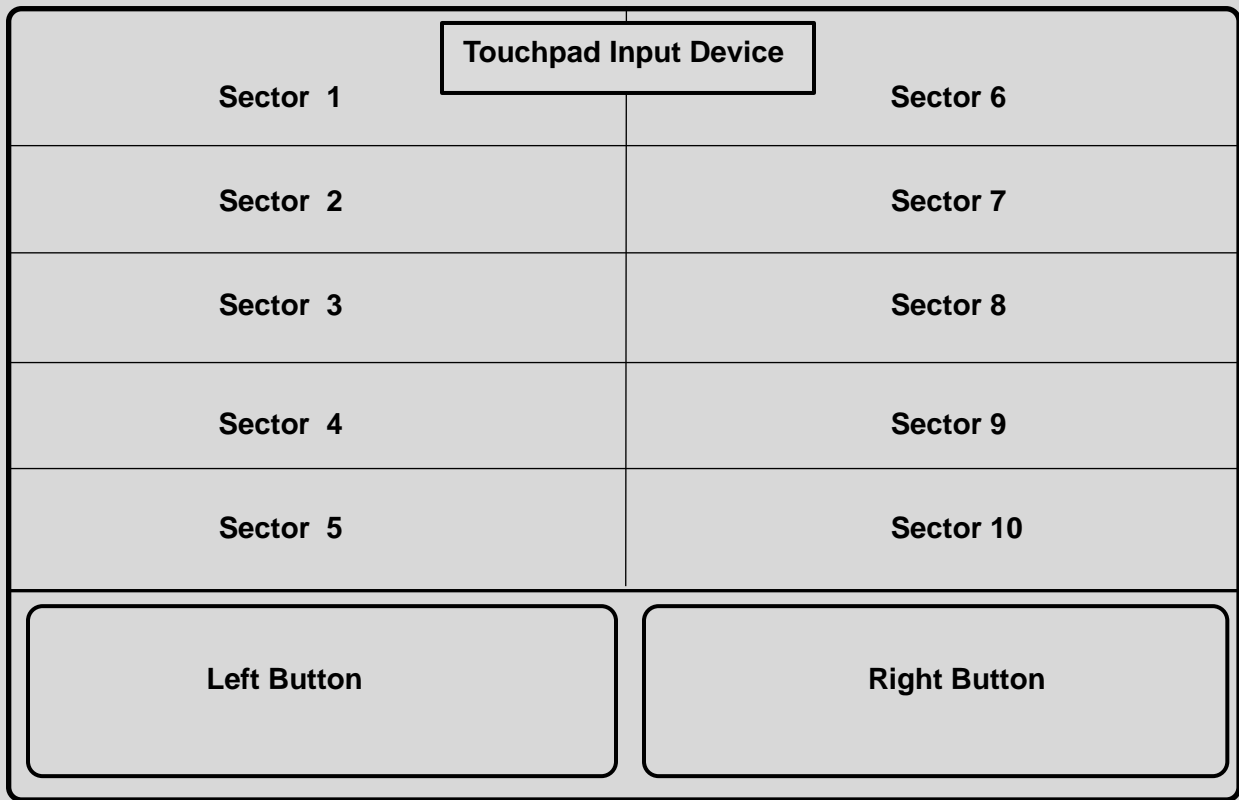


Figure 4

Computer Touchpad Legend depicting 10 sectors within the touchpad surface. The Touchpad is user-programmed to open 10 Tabs containing department, staff, and project locations data.

Sector 1: Accounting Department Group Jay K (Tab 1), Mark T (Tab 2), Jane L (Tab 3), Karen Y (Tab 4), Fred V (Tab 5)	Sector 6: Projects in California Project X242 (Tab 1), Project D828 (Tab 2), Project D978 (Tab 3), Project C537 (Tab 4)
Sector 2: Finance Department Group Fiona C (Tab 1), Peter L (Tab 2), Carl H (Tab 3), Hugh G (Tab 4)	Sector 7: Projects in Oregon Project X242 (Tab 1), Project C286 (Tab 2), Project D838 (Tab 3)
Sector 3: Marketing Department Group Nick I (Tab 1), Vern C (Tab 2), Bob J (Tab 3)	Sector 8: Projects in Washington Project X338 (Tab 1), Project C547 (Tab 2), Project D917 (Tab 3)
Sector 4: Engineering Department Group Gus D (Tab 1), Bill Z (Tab 2), Jake W (Tab 3), Richard S (Tab 4), Sam F (Tab 5)	Sector 9: Projects in New York Project B238 (Tab 1), Project D767 (Tab 2), Project T231 (Tab 3), Project G881 (Tab 4)
Sector 5: Program Department Group Lora Y (Tab 1), Jerry I (Tab 2), Sam I (Tab 3), Greg H (Tab 4), Terry H (Tab 5)	Sector 10: Projects in Michigan Project B238 (Tab 1), Project D767 (Tab 2), Project T231 (Tab 3), Project G881 (Tab 4)

Left Button	Right Button
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As an example of functionality, if the user wants to access the list of projects located in Michigan (see Figure 3), the user simply clicks on **CTRL** (at keyboard) and touches **Sector 10** of the Touchpad **simultaneously**. However, If the user wants to access an engineer's file (e.g. Jake W), the user simply clicks on **CTRL** (at keyboard) and touches **Sector 4** of the Touchpad **simultaneously** to gain access to the Engineering Department and select the engineer (Jake).

Figure 5

Computer Touchpad Legend depicting **8 Sectors** within the touchpad surface. The Touchpad is user-programmed for work and organized by departments and project locations **to provide the last 20 documents created or last visited.**

Sector 1: Accounting Department Last 20 MS Word Documents Visited/Created	Sector 5: Projects in California Last 20 MS Project Docs. Visited/Created And Last 20 Days MS Project Docs.
Sector 2: Finance Department Last 20 MS Word Documents Visited/Created	Sector 6: Projects in Oregon Last 20 MS Project Docs. Visited/Created And Last 20 Days MS Project Docs.
Sector 3: Marketing Department Last 20 MS Word Documents Visited/Created	Sector 7: Projects in Washington Last 20 MS Project Docs. Visited/Created And Last 20 Days MS Project Docs.
Sector 4: Engineering Department Last 20 MS Project Docs. Visited/Created And Last 20 Days MS Project Docs.	Sector 8: Projects in New York Last 20 MS Project Docs. Visited/Created And Last 20 Days MS Project Docs.

Left Button	Right Button
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Figure 6

Computer Touchpad Legend depicting **10 Sectors** within the touchpad surface to operate 10 MS Excel functions.

Sector 1: Expand Highlighted Column Width Execution Type: Command Progression	Sector 6: Inside - Format Cells (Borders)
Sector 2: Reduce Highlighted Column Width Execution Type: Command Progression	Sector 7: Delete Column (Highlighted)
Sector 3: Expand Highlighted Row Height Execution Type: Command Progression	Sector 8: Insert Column (Next to Highlighted Column)
Sector 4: Reduce Highlighted Row Height Execution Type: Command Progression	Sector 9: Increase Font Execution Type: Command Progression
Sector 5: Outline - Format Cells (Borders)	Sector 10: Decrease Font Execution Type: Command Progression

Left Button	Right Button
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Figure 7

Computer Touchpad Legend depicting **16 Sectors** within the touchpad surface to operate 16 MS Excel Functions.

Sector 1: Expand Highlighted Column Width	Sector 5: Delete Column (Highlighted)	Sector 9: Increase Margins	Sector 13: Sort A to Z
Sector 2: Reduce Highlighted Column Width	Sector 6: Insert Column (Next to Highlighted Column)	Sector 10: Decrease Margins	Sector 14: Sort Z to A
Sector 3: Expand Highlighted Row Height	Sector 7: Increase Font	Sector 11: Zoom In	Sector 15: Safe Document
Sector 4: Reduce Highlighted Row Height	Sector 8: Decrease Font	Sector 12: Zoom Out	Sector 16: Print Document

Left Button	Right Button
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Figure 8

Computer Touchpad Legend depicting **6 Sectors** programmed by the user for work related functions and personal activities.

Sector 1: Work - Employer's Webpage Marketing (Tab 1), Budget (Tab 2), Engineering (Tab 3), Accounting (Tab 4), Finance (Tab 1), Project Data (Tab 2), HR (Tab 3), Training (Tab 4), Schedule (Tab 5)	Sector 4: Work Suppliers/Retailers Office Depot (Tab 1), Office Max (Tab 2), Target (Tab 3), Walmart (Tab 4), Apple Stores (Tab 5), Best Buy (Tab 6)
Sector 2: Search Engines Google (Tab 1), BING (Tab 2), Yahoo (Tab 3), Baidu (Tab 4)	Sector 5: Restaurants in the Denver Area KFC (Tab 1), Thai Food (Tab 2), BK (Tab 3), Vegetarian (Tab 4), Salads (Tab 5)
Sector 3: Social Websites Facebook (Tab 1), Instagram, X (Tweeter, Tab 3), LinkedIn (Tab 4)	Sector 6: Travel/Maps Travelocity (Tab 1), Expedia (Tab 2), Utah Map (Tab 3), Colorado Map (Tab 4)

Left Button	Right Button
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U.S. PATENT APPLICATION 18,527,330 INFORMATION (FILED: DECEMBER 03, 2023)

For the complete description and information pertaining this U.S. Utility Patent, please visit the website of the United States Patent & Trademark Office.

You can obtain a copy of this U.S. Patent by taking the following steps:

- 1) Go to WWW.USPTO.GOV
- 2) Look for “**Find it Fast**” (see the right side of the webpage)
- 3) Click on “**Patents Public Search**”
- 4) Click on “**Basic Search**”
- 5) Enter Patent Application Number 18,527,330 in section titled “**Quick Lookup**”
- 6) Click “**Search**”, then read the patent information.

You can also access the patent information via <https://patents.google.com/> (Google’s Patent Research Tool), and via <https://www.wipo.int/patentscope/en/> (United Nations’ World Intellectual Property Organization = WIPO).

OTHER PATENTED METHODS

Furthermore, for information on other granted patents, please search the USPTO’s website utilizing the following U.S. Patents Numbers (do not use commas):

- 1) 12,021,801 - Patent **Granted** in 2024
- 2) 11,238,149 - Patent **Granted** in 2022
- 3) 10,951,610 - Patent **Granted** in 2021
- 4) 10,949,855 - Patent **Granted** in 2021
- 5) 10,664,617 - Patent **Granted** in 2020

“People don’t know what they want until you show it to them”

Quote from Steve Jobs, Founder of Apple Computers

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(54) **SECTOR-BASED PROGRAMMABLE TOUCHPAD FOR COMPUTER DEVICES**

(52) **U.S. CL.**
CPC *G06F 3/04166* (2019.05); *G06F 3/03547* (2013.01); *G06F 3/038* (2013.01)

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(57) **ABSTRACT**

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A computerized method to electronically designate sectors within a touchpad's surface area for the purpose of executing software-driven user-programmed commands. To execute a command, the method requires the user to be in contact with a specific sector within the touchpad area and the pressing of a specific programmed key within the computer's keyboard. Once the command is entered by the user, the computer device executes the programmed instructions. For example, a user could program a sector of the touchpad to instruct the computer device to provide the user with user-selected websites in various tabs, organized by topics, while programming another sector to activate various software applications or to operate the functions of an application. To allow the user to identify the designated sectors, markings could be printed and/or stamped on the surface and/or perimeter of the touchpad and/or depicted on a computer screen.

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