Your Efficiency Game

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Your Efficiency Game (with Peripherals)
How do we interact with computers better?
Lots of theory (which I love)
Goals
Increase: $$, ROI, QOL
Decrease: error, interaction cost
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Increase: $$, ROI, QOL
Decrease: error, interaction cost
28 Years of Video Game Experience
How do we interact with computers better?
How do we *interact* with computers?
All this.
How do we interact with computers better?
All this.
1: USB Cables and Hubs
One Set of Peripherals, Multiple Computers

Computer 1

Computer 2

Computer 3

Phone Charger

Keyboard

Mouse

Printer
2: Monitors + Monitor Arms
Landscape vs. Portrait at 150% Zoom
Monitor Arms ➔ Quick reposition
3: Uninterruptable Power Supply

No power?
No problem ...for a while
4: Separate Numberpad
Best (and first) peripheral change in my career?
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My mouse
Changes multibutton inputs to one convenient button
Word permits assigning keyboard shortcuts
MMO Mouse executes multiple keystrokes with one button.
Getting Started

• Phase 1: Pick ONE common task
• Phase 2: Give the task a keyboard command
• Phase 3: Bind that keyboard command to the mouse
Phase 1: Pick a Common Task

- Copy, Paste, Redo
- Styles
- Sub/Superscript
- Symbols
- Backspace

xkcd, “Is it worth the time”
https://xkcd.com/1205
Phase 2: Assign Keyboard Command

File → Options → Customize Ribbon
Phase 2: Assign Keyboard Command

Locate task.
Assign a unique shortcut key
Phase 2: Assign Keyboard Command

EXCEPT Symbols on their own menu
Phase 3: Bind Command to Mouse

FOR LOGITECH

Logitech Gaming Software ➔ Customize Buttons->
Phase 3: Bind Command to Mouse

FOR LOGITECH

Click on Target Button ➔
Assign New Command ➔
Type the Keyboard Command
Word Controls MEANING

Mouse Controls EXECUTION
5 Years Later . . .
Secondary (and southpaw) option: a keypad.
Bonus Tip
Autocorrecting for Fun and Profit: Abbreviations

File → Options → Proofing → Autocorrect Options
Questions?
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5 Places to Interact with Computers Better

1. USB
   - USB extension cords
     - Allow locating computer away from workstation or slack for sit/stand desks
     - Compatible with docks
     - Can carry multiple USB-based signals (e.g., keyboard, printer, and mouse) over a single cable
     - Moves wear from switching USB to a cheap part that is easy to replace
   - USB hubs
     - For users with multiple computers, facilitates rapid switching
       - Connect all USB peripherals to hub
       - Connect one USB extension to each computer
       - Secure the hub and female ends of extension cables in easily assessable location
       - Plug USB hub into the desired computer
     - For all users, can expand the number of USB inputs a computer has
     - Compatible with laptop docks
   - Newer Option: USB-C
     - USB-C is a newer standard getting rapidly adopted that transmits many kinds of data on one cable (e.g., power, audio, video, Ethernet, USB-A
     - USB-C Docks are becoming a more common
     - Can be combined with USB-C extension cords to quickly switch among multiple computers
     - Warning: Not all USB-C computer hardware is the same! (the “S” is for “standard.”)
       Example: not all laptops accept USB-C Power. Is that important, or is a second cable okay?

2. Monitor
   - Monitor orientation: the case for portrait mode
     - Reading and writing are facilitated by seeing more text
     - Shifting to portrait mode increases the amount of text on the screen
     - A test at 150% zoom showed a nearly 2-fold increase in words on screen
     - Requires no additional software, and many monitor stands allow rotation
   - Monitor Arms
     - Allow for quick repositioning of monitors (e.g., shifting to landscape mode)
     - Typically designed to either clamp to desk or screw into wall or desk
     - Allows for easy adjustments to viewing angle
     - Some provide basic cable management for monitor cables

3. Power: Uninterruptable power supply (UPS)
   - Provides power during a power outage
     - Can drive a router for hours, giving internet access during a power outage
     - Can drive a workstation for a much shorter time with the same amount of battery (still enough time to save)
     - Laptop users: most economical use UPS + laptop battery
   - Provides a smoother power output, which can be good for data backups

4. Keyboard
   - Consider a keyboard without a built-in numberpad
     - Reduces keyboard-to-mouse distance, which is ergonomically important
     - A separate USB numberpad is a cheap way to add that function when it’s needed but keep it out of the way when it is not
5. Mouse
   • Overview
     o An MMO mouse has ~12 programmable buttons on the mouse.
     o This changes a multibutton input to a single mouse button
     o Word has a built-in ability to assign keyboard shortcuts to any function
     o Combined, this allows any Word function to be a single button at the thumb of your mouse and drives down interaction cost of common tasks
     o Word controls the MEANING, the mouse controls EXECUTION
   • Getting Started
     o **Phase 1:** Pick 1-3 common task(s)
       ▪ Small, extremely frequent
       ▪ Easily undone—don’t pick macros that are irreversible!
       ▪ Visible feedback you’ve done it
       ▪ Possible Examples
         • Copy, paste, redo
         • Commonly used styles
         • Insert a common symbol
         • Toggle track changes or nonprinting characters
         • Commonly used keys: comma, backspace, space
     o **Phase 2:** In Word, assign a keyboard command to a command
       ▪ File→Options→Customize Ribbon→Keyboard Shortcuts: Customize
       ▪ Scroll through the command categories on the left, and then select the specific command on the right
       ▪ Any existing commands it will show under “Current Keys”
       ▪ Press the desired shortcut keys. They can be very complicated—they are NOT designed for typing
       ▪ For commands with “Alt,” you can press and hold Alt while pressing a series of buttons.
         Word will show the following as Alt + H,1
         ▪ Press Alt
         ▪ Press and release H
         ▪ Press and release 1
         ▪ Release Alt
       ▪ If you select a command that already exists, the conflict will show up (eg, Control + P will show that it is assigned to Print); try a different combination
         o Select the desired template: some advice
           ▪ Save shortcuts to **built-in** Word functions to the Normal template
           ▪ Save shortcuts to **template-specific** functions to their respective templates
           ▪ Advanced issue for people with many templates: If you have styles with the exact same name in many templates (eg, “Heading 1”), it can be more efficient to save these shortcuts to the Normal template. The shortcut will correctly apply same name in the active template, even if the style **appearance** varies across templates.
         • Symbols are under Insert→Symbols→More Symbols→Shortcut key
     o **Phase 3:** In **mouse software**, assign keyboard command to button
       ▪ Note: This example is based on the Logitech software that drives the mouse I happen to use. There are several companies that make these types of products, each with their own software. Other software will have analogous functions, but different layouts and names.
       ▪ Documentation tends to be excellent and often includes videos.
To assign a new command

- Logitech Gaming Software → Home → Toggle to “Automatic Game Detection”
- Logitech Gaming Software → Customize Buttons
- Click on the desired button → Assign New Command
- For single keys (e.g., backspace, comma) or single keys with modifiers (control + P):
  - Type the desired command into the command box
  - Assign a name to the command
- For multiple keystrokes (e.g., Alt + H,1):
  - Multikey
  - Click “Start recording”
  - Type the command (it will show the key being depressed and released as separate events)
  - Click “Stop Recording”
  - Assign a name to the command

- Tips
  - Organize conceptually! Consider the grouping in the below examples:

Mouse schematic:

<table>
<thead>
<tr>
<th>Mouse button layout</th>
<th>3</th>
<th>6</th>
<th>9</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2</td>
<td>5</td>
<td>8</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>4</td>
<td>7</td>
<td>10</td>
</tr>
</tbody>
</table>

Sample layouts:

<table>
<thead>
<tr>
<th>Applying Styles</th>
<th>Tables</th>
<th>Symbols</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Body Text</td>
<td>1. Column Head Left</td>
<td>1. NBS + NBS</td>
</tr>
<tr>
<td>2. List Intro</td>
<td>2. Column Head Center</td>
<td>2. NBS - NBS</td>
</tr>
<tr>
<td><strong>3. Toggle Nonprint</strong></td>
<td><strong>3. Toggle Nonprint</strong></td>
<td><strong>3. Toggle Nonprint</strong></td>
</tr>
<tr>
<td>4. Subscript</td>
<td>4. Table Cell Left</td>
<td>4. NBS × NBS</td>
</tr>
<tr>
<td>5. List Bullet</td>
<td>5. Table Cell Center</td>
<td>5. NBS / NBS</td>
</tr>
<tr>
<td>7. H1</td>
<td>7. Table Cell Note</td>
<td>7. NBS &gt; NBS</td>
</tr>
<tr>
<td>8. H2</td>
<td>8. Table Cell Footnote</td>
<td>8. NBS &lt; NBS</td>
</tr>
<tr>
<td>10. H4</td>
<td>10.</td>
<td>10. NBS ≥ NBS</td>
</tr>
<tr>
<td>11. H5</td>
<td>11.</td>
<td>11. NBS ≤ NBS</td>
</tr>
<tr>
<td>12. H6</td>
<td>12.</td>
<td>12. NBS ± NBS</td>
</tr>
</tbody>
</table>

- In the “Applying styles” example, the style for introducing a list, “List intro”, is immediately adjacent to the bullet that will follow it. Headings are grouped in order. In the “Tables” example, the layout mirrors the layout of the styles used in a table (rotated match the mouse). In the “Symbols” example, the > and ≥ have the same spatial relationship as do < and ≤. And common buttons are in the same place across all.

  - Remove commands from buttons that aren’t being used. It’s okay to have empty space.
  - Learn one row at a time, just like when learning to type
  - Back up your profile once you like it!
  - If your mouse supports more than one set of meanings per button (Logitech allows toggling among three “modes”), color code them so it’s easy to tell which one you’re on
• Caveats
  o The software to run it requires administrator access. If you don’t have that, talk to your IT department about what they would accept installing. This may narrow down which brand you use. Logitech and Razer are well-known brands.
  o Not everyone uses a standard right-handed mouse
    ▪ There are no longer left-handed versions on the market.
    ▪ There are no trackball versions
    ▪ However, your computer will take input from multiple mice. If a brief task (eg, formatting several tables) would greatly benefit from a mouse, you can use the MMO mouse for a that task and then go back to your normal setup.
    ▪ There are also gaming pads that have ~20 buttons behave similarly, but are not on the mouse itself
  o The mouse takes software, which can misbehave. It isn’t often, but it happens. Most of the time, restarting the program will fix the problem. If this will overwhelm you, this might not be a good fit.