

Aim: - Study of Device Based Control on Web Based Application.

Theory

Application Selected: - Instagram

Instagram is an American photo/video-sharing website headquartered in San Francisco, California.

Three former PayPal employees—Chad Hurley, Steve Chen, and Jawed Karim—created the service in February 2005. Google bought the site in November 2006 for US\$1.65 billion; Instagram now operates as one of Facebook's subsidiaries.

Instagram allows users to upload, view, rate, share, add to favourites, report, comment on videos/ photos, and follow other users. It offers a wide variety of user-generated and corporate media videos. Available content includes video clips, Travel photos show clips, music videos, short films, various blogs, fashion, foods, movie trailers, live streams, and other content such as video blogging. Most of the content on Instagram is uploaded by individuals, but other corporations including Google, Instagram, Amazon and other companies and post their advertisement. Unregistered users can only view pictures on the site, while registered users are permitted to upload an unlimited number of videos and images and comments.

Device Based Controls

Trackball

- Description

- A ball that rotates freely in all directions in its socket

- Advantages

- Direct relationship between hand and pointer movement in terms of direction and speed

- Does not obscure vision of screen

- Does not require additional desk space (if mounted on keyboard)

- Disadvantage

- Movement indirect, in plane different from screen

- Requires hand to be removed from keyboard keys

- Requires different hand movements

- May be difficult to control

- May be fatiguing to use over extended time

Joystick

- Advantages

- Direct relationship between hand and pointer movement in terms of direction and speed

- Does not obscure vision of screen

- Does not require additional desk space (if mounted on keyboard)

- Disadvantage

- Movement indirect, in plane different from screen
- Requires hand to be removed from keyboard keys
- Requires different hand movements
- May be difficult to control
- May be fatiguing to use over extended time
- May be slow and inaccurate

Graphic (Touch) Tablet

- Description
 - Pressure-, heat-, light-, or light-blockage-sensitive horizontal surfaces that lie on the desktop or keyboard
 - May be operated with fingers, light pen, or objects like pencil
- Advantages
 - Direct relationship between hand and pointer movement in terms of direction and speed
 - Does not obscure vision of screen
 - More comfortable horizontal operating plane
- Disadvantage
 - Movement is indirect, in a plane different from screen
 - Requires hand to be removed from keyboard
 - Requires different hand movements to use
 - Finger may be too large for accuracy with small objects

Touch Screen

- Advantages
 - Direct relationship between hand and pointer movement in terms of direction and speed
 - Movement is direct, in the same plane as screen
 - Requires no additional desk space
- Disadvantage
 - Finger may obscure part of screen
 - Finger may be too large for accuracy with small objects
 - Requires moving the hand far from the keyboard to use
 - Very fatiguing to use for extended period of time
 - May Damage the screen

Light Pen

- Description
 - A special surface on a screen sensitive to the touch of a special stylus or pen
- Advantage
 - Direct relationship between hand and pointer movement in terms of direction, distance, and speed

- Movement is direct, in the same plane as screen
- Requires minimal additional desk space
- Stands up well in high-use environments
- More accurate than finger touching
- Disadvantage
 - Hand may obscure part of screen
 - Requires picking it to use
 - Requires moving the hand far from the keyboard to use
 - Very fatiguing to use for extended period of time

Voice

- Description
 - Automatic speech recognition by the computer
- Advantage
 - Simple and direct
 - Useful for people who cannot use a keyboard
 - Useful when the user's hands are occupied
- Disadvantage
 - High error rates due to difficulties in
 - Recognizing boundaries between spoken words
 - Blurred word boundaries due to normal speech patterns
 - Slower throughput than with typing
 - Difficult to use in noisy environment
 - Impractical to use in quiet environment

Mouse

- Advantage
 - Direct relationship between hand and pointer movement in terms of direction, distance, and speed.
 - Permit a comfortable hand resting position
 - Selection mechanisms are included on mouse
 - Does not obscure vision of the screen
- Disadvantage
 - Movement is indirect, in a plane different from screen
 - Requires hand to be removed from keyboard
 - Requires additional desk space
 - May require long movement distances
 - Requires a degree of eye-hand co ordination

Keyboard

- Advantage
 - Familiar

- Accurate
- Does not take up additional desk space
- Very useful for
 - Entering text and alphanumeric data
 - Inserting in text and alphanumeric data
 - Keyed shortcuts accelerators
 - Keyboard mnemonics equivalents
- DisadvantageYouTube
 - Slow for non-touch-typists
 - Slower than other devices in pointing
 - Requires discrete actions to operate
 - No direct relationship between finger or hand movement

Device based controls used in Instagram
 In case of Mobile Application, controls like
 Touch Screen, Stylus and Voice

Conclusion

In this experiment we studied device based controls and which device based controls do we use for Instagram app. We also learned how different devices are used for Mobile Application.