Subject: Human Machine Interaction
B.E Sem VIII

Module 6

Interaction Styles and Communication

Select the Proper Kinds of Windows!!!!!!!!

Window??

A window is an area of the screen, usually rectangular in shape, defined by a border that contains a particular view of some area of the computer or some portion of a person's dialog with the computer. It can be moved and rendered independently on the screen. A window may be small, containing a short message or a single field, or it may be large, consuming most or all of the available display space. A display may contain one, two, or more windows within its boundaries.

Let us Study:

- A window's characteristics
- A window's components

Windows Characteristics

- A name or title, allowing it to be identified.
- A size in height and width (which can vary).
- A state, accessible or active, or not accessible. (Only active windows can have their contents altered.)

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- Visibility—the portion that can be seen. (A window may be partially or fully hidden behind another window, or the information within a window may extend beyond the window's display area.)

- A location, relative to the display boundary.

- Presentation, that is, its arrangement in relation to other windows. It may be tiled, overlapping, or cascading.

Conti..

- Management capabilities, methods for manipulation of the window on the screen.
- Its highlight, that is, the part that is selected.
- The function, task, or application to which it is dedicated.

Constraints in Window System Design

Windowing systems, in spite of their appeal and obvious benefits, have failed to completely live up to their expectations. In the past, a windows user interface has been described as “chaotic” because of the great amount of time users must spend doing such things as pointing at tiny boxes in window borders, resizing windows, moving windows, closing windows, and so forth. The problems with windowing systems can be attributed to three factors: historical considerations, hardware limitations, and human limitations.

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- Historical Considerations

There has been very little research addressing design issues and their impact on the usability of window systems. Therefore, there are few concrete window design guidelines to aid designers. 340 Step 5 This lack of guidelines makes it difficult to develop acceptable and agreeable window standards. While many companies have developed style guides, they are very general and limited in scope to their products. Standardization is also made more difficult by the complexity and range of alternatives available to the designer. Without user performance data, it is difficult to compare realistically the different alternatives, and design choices become a matter of preference.

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- Hardware Limitations

Many of today's screens are not large enough to take full advantage of windowing capabilities. As a result, many windows are still of "Post-It" dimensions. As already mentioned, there is some evidence that many users of personal computers expand their windows to cover a full screen. Either seeing all the contents of one window is preferable to seeing small parts of many windows or the operational and visual complexity of multiple windows is not wanted. Also, the slower processing speeds and smaller memory sizes of some computers may inhibit the use of windows. A drain on the computer's resources may limit feedback and animation capabilities, thereby reducing the system's usability. Poor screen resolution and graphics capability may also deter effective use of windows by not permitting sharp and realistic drawings and shapes

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- Human Limitations

A windowing system, because it is more complex, requires the learning and using of more operations. Much practice is needed to master them. These window management operations are placed on top of other system operations, and window management can become an end in itself. This can severely detract from the task at hand. In one study comparing full screens with screens containing overlapping windows, task completion times were longer with the window screens, but the non-window screens generated more user errors. After eliminating screen arrangement time, however, task solution times were shorter with windows. The results suggest that advantages for windows do exist, but they can be negated by excessive window manipulation requirements.

Components of a Window

- Frame

Border, usually rectangular in shape, to define its boundaries and distinguish it from other windows, can be resizable using control points.

- Title Bar

Top edge of the window, inside its border and extending its entire width, also referred as caption, caption bar, or title area, contains a descriptive title identifying the purpose or content of the window

- Title Bar Icon

Located at the left corner of the title bar in a primary window, used in Windows to retrieve a pull-down menu of commands that apply to the object in the window

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- Window Sizing Buttons

Located at the right corner of the title bar, these buttons are used to manipulate the size of a window. Sizing buttons are included on primary windows only.

- Menu Bar

Located horizontally at the top of the window, just below the title bar, contains a list of topics or items, are displayed on a pull-down menu beneath the choice.

- Status Bar

Information of use to the user can be displayed in a designated screen area, i.e displays current state of what is being viewed in window.

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- Scroll Bars

Elongated rectangular container consisting of a scroll area, to support scrolling

Vertical scrolling: Right end

Horizontal scrolling: Bottom end

- Split Box A window can

A window can be split into two or more separate viewing areas that are called panes, permits multiple views of an object.

- Toolbar

Permanently displayed panels or arrays of choices or commands that must be accessed quickly, window dependant.

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- Command Area

Needed in specific situation, located at the bottom of the window, just below horizontal scroll bar.

- Size Grip

Microsoft Windows special component to resize the window, at right side of the status bar.

- Work Area

Portion of the screen where the user performs tasks, consist of an open area for typing, or it may contain controls (such as text boxes and list boxes) or customized forms.