HMI - MODULE 6 - CHAPTER 6
Interaction Style & Communication

Windows
- complete display or visible area of the screen

Windows Characteristics
- has its own specific name & identity
- has size, height & width which can vary

Components of Window
- Frame
- Title Bar
- Title Bar Icon
- Window Sizing Button
- Menu Bar
- Status Bar
- Scroll Bar
- Split Box
- Tool Bar

Window Presentation Style
- Tiled Window

Window 1	Window 2
Window 3	Window 4

- 2D system
- height & width can be adjusted as per requirement

Advantages
- Better performance
- less management op^n required
- less complex
- All windows are completely visible so that no information is hidden

Disadvantages:
- limited number of windows can be displayed on available screen area
- as number of windows displayed increases, each window can become very tiny
- changes in size & location made by system → it is difficult to predict

- Cascading Windows
- special type of overlapping window in which # windows are automatically arranged in a regular progression in a pattern each window is slightly offset from others

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- Overlapping Windows
- appears to be placed on top of one another
- 3D & appear visually such that each window is placed on # plane
- user have complete control on location of window
- user can change sizes of some types of windows.

Advantages
- visually it is 3D & convenient
- complete control to organize window as requirement
- easy to maintain large size window
- consistent size window can be kept
- consistent positioning of window can be done

Disadvantages
- op^n is more complex
- require more attention of user
- information is hidden

Types of Windows
1) Primary Window
2) Secondary Window

Choosing the proper Words use
1) Abbreviation or Acronyms
2) Contraction or short forms
3) Short, familiar words
4) Standard Alphabetic Characters

Sentences & Messages
- sentences & messages must be
  - concise & simple
  - straight & directly usable
  - constructing parallel sentences
  - should have positive or affirmative stmt
  - paragraph shouldn't be > 6 sentences
  - sequence of event should be linked
- sentences & messages must be of the proper tone
  → non demanding
  → non aggressive
  → non demeaning
  → non punishing
  → humor should be cautiously used

Guidelines for fast & correct message interpretation
- concise & simple
- directly & readily usable
- positive or affirmative tone
- use of active voice is generally recommended

Icons
- image used to reflect the idea about objects

Characteristics of Icons
1) Syntactic → physical structures
2) Semantic → meaning
3) Pragmatic → how icons are made & depicted.

These 3 determine icon efficiency & usefulness

Influence on icon usability
Icons should be :
- Known & familiar
- clear and understandable
- easy & simple
- straight & direct
- constant throughout
- efficient

Choosing icon images
- existent icons should be used when available
- images → noun
- successful icons:
  - must be different
  - should be significant
  - easily identifiable even in smallest size
  - should look good

Size:
- 16 × 16
- 24 × 24
- 26 × 26 } pixels
- 32 × 32

Odd Nb of pixels can be used on both sides

Design Process of Icon
1) Define icon's purpose
2) Gather, evaluate & draft # ideas
3) Draw Icon in B/W
4) Drawing pkg can be used for designing
5) Test for users:
  - expectations
  - identification
  - learning
  - clarity

Multimedia
1) Images
2) Use Jpeg format
3) Diagrams
4) Animation
5) Audio
6) Combining medium

Colors
- choose proper colors to assist in formatting
  - grouping related elements
  - separating # groups of information
  - stressing or drawing attention to important information
- use right color to identify
  - screen caption & data
  - info derived from # sources
  - denoting status of information

Possible pbs with colors
- capacity of getting high attention
- improper use of colour can cause interference with use of other screens
- varying sensitivity to the eye to different colors
- Color viewing deficiency may also have an impact.
- cross disciplinary & cross cultural differences
- Different colors have # significance in # cultures
- Ex:
  Blue:
  Financial manager → reliability
  Health Care Pro → death
  Nuclear reactor monitor → water