Boldon School
INNOVATE: FOCUS: ACHIEVE

Knowledge Organiser

COMPONENT 1 - Exploring User Interfaces

- **Learning Aim A Exploring User Interface Design Principles**

What is a User Interface?

The user interface, or the human/computer interface is what the user sees, and includes:

- **The physical controls - buttons, etc.**
- **What the system looks like how the system accepts input from the user**
- **How the system responds to user input**
- **How the system outputs the results of processing**

What to consider when designing the user interface?

Who will be using the system?

- Will there be a range of users?
- What is their level of skill and knowledge?
- Are there any special physical requirements?

What does the system actually do?

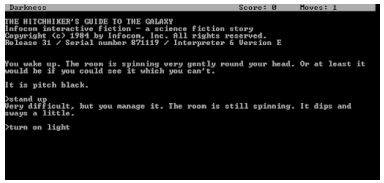
- How many options are there?
- How accessible does it need to be?

The environment in which it will be used

e.g. military use, temperature, noise, motion, moisture

The technology available

e.g. iris recognition, voice, etc.



Command Line Interfaces

- Often very flexible
- Good for expert users who know the commands – not hunting through menus for the option you require
- Usually require fewest computer resources

- Requires users to learn commands
- Things you don't know about are invisible
- Not very good for novices or people who can't type

Menu-Driven Interfaces

- All of the options are visible – no hidden features
- No obscure commands and syntax to learn – therefore the it will be easier for new users and less training will be required

- Can be frustrating for experienced users who want to do something buried behind 10 menus!
- The user interface may be limited – e.g. by the size of the screen and the number of options you can fit on

Natural Language Interfaces

- No training required – you just tell it what you want!
- They could potentially be as powerful and flexible as CLIs
- No menus to negotiate
- Makes the computer look intelligent to naïve users

- Some sentences are ambiguous – "Let him have it!"
- It would be difficult to recognise all the different ways of saying things (and regional dialects)
- Artificial languages are often more precise
- Not yet popular

Forms and Dialogue Boxes

Issues when designing forms and dialogue boxes, all of these could be seen as a pro or con:

- Good and easy to use simple Layout – not too cluttered
- Navigation – order of fields, tabbing, etc.
- Field sizes - appropriate to data expected which helps with data validation

- Whether forms and dialogue boxes are *modal* – i.e. can the user access anything else while they are displayed?
- Use of appropriate controls and validation – combo-boxes, radio buttons, checkboxes, etc.