Lecture 14 – Other COTS Software and Software Customisation

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Objectives

- **Review COTS software covered**
- **To define COTS more precisely**
- **To discuss other types of COTS software**
  - **Especially graphics packages**
- **To offer some options for choosing software**
  - **You may find this useful for your assignment**
- **To introduce software customisation**

- **Today's practical**
  - **Database forms and reports. Make sure you really understand the task, not just recognise the words!**

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COTS Software Covered

- **So far, we have looked at:**

  - **Operating Systems**
  - **Web Browsers**
  - **E-mail clients**
  - **Typical Office Suite components**
    - **Word Processors**
    - **Spreadsheets**
    - **Presentation Tools**
    - **Databases**

COTS Definition

- **Commercial Off The Shelf**

  – *Commercial*, originally "bought for money" i.e. sold

  – Buying a "right to use" (a licence)

  – *Off The Shelf*, a product, "shrink wrapped"

  – Original meaning also implied sold by an intermediary

  – Typically supported by original developer

  – Only bug fixes available "freely"

Recent Trends

- **Demo software**
  - **Time and/or function limited software**
  - **Not usually truly useful**
- **Shareware**
  - **Direct from author**
  - **Usually limited time and/or functionality until purchased**
  - **Often purchasers gets upgrades included**
- **Freeware**
  - **Usually small utilities**
  - **Often "teasers" for the full product**
- **Adware**
  - **Supported by (possibly intrusive) advertising**

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Open Source Software

- **Source code available (if required)**

- **Compiled versions also available**

- **Largely unrestricted "end use"**

- **Changes to source code must also be placed under the same "open source" licence**

- **Support, training etc. can be purchased**

(Have you considered these options in your assignment?)

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Another COTS Definition

- **The software is available in a "package"**
  - All necessary components are included

- **The product performs a useful "function" as soon as it is installed**
  - End user needs only minimal "domain knowledge" and training to carry out basic tasks e.g.
    - Word Processor – write a letter
    - Spreadsheet – add a column of figures

- **The product can carry out further functions**
  - May need further domain knowledge & training

COTS Software – Graphics 1

- **Drawing Programs**
  - **Vector / Object based**
  - **For creation of images / diagrams**

- **Photographic Manipulation**
  - **Bitmap based (may have vector overlays)**
  - **Modifying existing images**

- **Painting Programs**
  - **Simulate traditional (or imaginary) tools**
  - **Creation of original artworks**

COTS Software – Graphics 2

- **2D CAD Packages**
  - **Vector / Object based**
  - **Designed for traditional drafting**

- **3D Visualisation Programs**
  - **Object (mesh) and texture based**
  - **For creation of 3D images or 3D "worlds"**

- **Animation Packages**
  - **Based on interacting objects (mesh & texture)**
  - **For creation of animations, moving visualisations**

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Example Graphics Packages

- **Vector Drawing**
  - **Corel Draw, Adobe Illustrator**
- **Photographic Manipulation**
  - **Adobe Photoshop, Paintshop Pro, GIMP**
- **Drawing**
  - **Meta Creations Painter**
- **2D CAD**
  - **AutoCAD**
- **3D Visualisation**
  - **Maya, Bryce**
- **3D Animation**
  - **Lightwave**

Choosing Graphics Software - 1

- **The previous categories are not exclusive**
  - Photoshop has some support for vector objects
  - It also supports "natural" painting tools
- **The previous list of software is not exhaustive**
  - Most categories have many competing products
  - Particularly for "second place"
  - It is still an evolving market
- **Most packages need training to use them to their full extent**
  - Not to mention some artistic skill(!)
- **How would you advise an end user who wanted a graphics package?**

Sources of Information

- **Vendor literature**

- **Demonstration / trial versions**

- **Comparative reviews (magazines, websites)**

- **Site visits, user interviews**

- **Consultants / outside experts**

Questions To Ask

- **(See also Lecture 11)**

- *Exactly* **what does the user want the graphics package for?**

- **What level of skill will they require to achieve it?**

- **Is this (i.e. providing a graphics package to the user) the best way to achieve the aim?**

Other COTS Software Types

- **Games & recreation**
- **Utilities & system tools**
- **Reference & Information**
- **Generic business applications**
  – **Accounts, invoicing**
- **Specialist publishing tasks**
  – **Desktop publishing, card creation**
- **Personal productivity**
  – **Diary, note-taking, personal finance etc.**
- **Specialist applications**
  – **Project planning, instant messaging**
  – **+ (too!) many others**

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Software Customisation Levels

- **Used "out of the box" (default settings)**
- **Operating System (User Interface) settings**
- **Application preferences**
- **User Interface (menu / button) modifications**
- **Extensions / Plug-ins**
- **Macro based automation**
- **Program / script based automation**

Software Customisation Examples

- **(No changes)**
- **Colour scheme, menu fonts**
- **Tools… options**
- **Choice of menu bars, button arrangements**
- **Photoshop plug-ins for special purposes**
- **Repetitive tasks**
- **Task specific forms**

} *These two next week*

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Why Customise?

- **Automating repetitive tasks**
- **Assisting with repeated, labour-intensive tasks**
- **Automatic creation of files & reports**
- **Automating tasks for less skilled workers**
- **Creating "front end" menu programs (wizards)**
- **Ensuring consistency**
- **Avoiding errors**
- **Sharing with others (showing off!)**

- *When is it worth customising a task?*

Next Week

- **We will look at practical software customisation**
- **Taking Microsoft Office as an example**
  - **Command and toolbar customisation**
  - **Macro recording**
  - **Visual Basic for applications (VBA)**
- **Book – "Mastering VBA 6", Guy Hart-Davis, SYBEX, 0-7821-2636-7**
- **Do <u>NOT</u> confuse with books on VB !**

Today's Practical

- **Word Mastery Challenge!**

- **<u>REMEMBER TO SIGN OFF ON THE REGISTRATION SHEET!</u>**