CIS Upgrade

The Corporate Information System provides access to vital administrative functions at the University. Although it is doing a fine job, it is built on obsolete technology and so is earmarked for an upgrade from its current Oracle Forms 6i to the latest Oracle Forms 10g. However, while the CIS is being rebuilt behind the scenes, Tim Snow and Jonathan Whitehead have taken the opportunity to gather user feedback in order to make changes to the interface and greatly reduce the complexity of the CIS for the occasional user.

There are two categories of CIS users: power users who use CIS for a large part of their job, have the CIS open for most of each day, and interact with the CIS via a complex sequence of well remembered keyboard shortcuts; and casual users who use the CIS for a small part of their job, use the CIS occasionally and interact with the CIS using buttons on the toolbar after reading the popup tooltip and crossing their fingers with each click.

The redesign of the CIS interface has been driven by the needs of the casual users, involving staff from several departments, focus groups and voting systems. A series of modest but significant changes has been made to the clickable realm of the CIS interface but with great care taking place that the keyboard shortcut route is left unaltered.

The new look CIS is being tested and is due to go live early May 2010. You can expect the following changes to the design of the clickable interface.

Branding

The CIS includes the Student System, the Departmental Administrative System, the Housing System, Management Information, URMS and Computer Registration. To ensure that users of these systems understand that they are using part of the CIS, clear and consistent branding is being introduced across all services based on the CIS.

Screen Size

The current CIS screen is displayed in a fixed size window, 800x600 pixels, established in the days of 14 inch CRT monitors. After the upgrade all the CIS form controls will still be contained in the 800x600 space but within a window of 1024x768. The unused space will be reserved for changes suggested over time by the CIS user base. It may be used to house additional controls, or the existing form controls may be spread out more, or it may be used to increase the font size of the displayed text, for example.

Macintosh and Linux Screen Size

The current CIS displays in a small window on a PC. On a Mac however, the display window is so small it is unusable. This is due to a technical issue affecting the ‘rendered dpi’ size. The upgrade to the CIS will address this issue, making CIS finally available to users of Macintosh and Linux computers.

Dual Displays

People lucky enough to have a PC with dual monitors were unable to use this to their advantage when using the CIS. It was possible to drag the CIS window from the primary display to the
secondary display, but in doing so some menus would stop working. This fault did not always happen
in a consistent way so it was especially difficult to understand what was wrong and people would be
stuck in limbo until they dragged the CIS window back to the primary display. Following the upgrade
CIS now works correctly with dual displays.

**Button Design**

The most visually striking improvement to CIS is in the development of the buttons. Superficially, the
buttons are bigger, more colourful and use established icons for common functions such as cut copy
and paste.

In addition, when a button function is not available during a particular operation or within a
particular screen, the button becomes greyed out as a visual sign to the casual user that the
particular function is unavailable.

**Navigation Buttons**

A more substantial improvement, however, is in the use and labelling of the navigation buttons. The
CIS has always had two components of the screen when displaying records, and two corresponding
pairs of navigation buttons. One pair of navigation button is used to move between components of
the record and the other pair of navigation buttons is used to move between records. This is true if
you are searching through records or if you are entering data in an existing record. As a result the
two pairs of negation buttons do very different jobs in different circumstances, but in the old CIS the
buttons never changed.

Following the upgrade the CIS buttons have context-sensitive tooltips. The tooltip is the descriptive
text that appears when you position the cursor above a button. As you perform different functions
within the CIS, the descriptive text in the tooltip will now change to describe the exact function of
each navigation button. For example in the Applications view the left and right buttons are labelled
Next and Previous Application. If you click the down button labelled Application Entries you enter
application entry view. The down button is now labelled Menu Options, the left and right buttons
become labelled Next and Previous Application Entry and the up button becomes labelled
Applications.

The navigation buttons now offer a clearly signposted route through the CIS making it a lot easier to
keep to familiar paths and find your way out of dead ends.
Search Design

Another substantial improvement to the CIS is redesigning the way in which records are searched and queries are entered. The CIS has a data entry mode and a query mode. To enter query mode you currently click the first of three query buttons labelled Enter Query, you are then able to supply values on which to query the data and then you perform the search by clicking the second query button labelled Execute Query. When you have finished you click the third button labelled Cancel Query one notorious feature of CIS is that you are unable to exit the CIS until you had clicked the Cancel Query button.

The roles of the Enter Query and Execute Query buttons have always caused confusion amongst casual CIS users. This was compounded by the fact that when you entered query mode you were presented with a full screen of blank fields, but you could only type query data into a small subset of these fields and there was no obvious indication of where you could and couldn’t enter query data.

Following the upgrade there is now a single search button featuring a standard magnifying glass icon. In data entry mode the search button has the tooltip Perform a Search. Clicking the button will take you into query mode and will present you with the screen of blank fields. However, those fields that you are permitted to use in your query are shaded in red making it easy to see which fields may be used in the query.

Once you have entered your query text you click the search button again to perform the search and the results are displayed. From here you can browse the results, perform additional searches or return to data entry mode. You can even exit the CIS directly without having to cancel query mode first.
**Test Environment**

The CIS has always come with its own test environment in which the CIS users test any changes to the system and practise their skills. The previous test environment was known as the demo system, CIS users would all log into this using the same username and password and would perform tests on a collection of artificial data.

Following the upgrade we have a brand new test environment called QA (quality assurance). The CIS developers test any changes in the development system and if successful the changes are implemented in the QA environment. CIS users can then log in to QA using their own username and passwords and can perform tests on a snapshot of the live data, which is copied across at the beginning of each academic session. Testing on live data, which is accessed and protected by individual login details can offer a far superior test environment. In order to easily distinguish when people are in QA and when they are using the live system all fields in QA are coloured in shades of green whereas the live systems is coloured blue.

If changes have been tested and approved in the QA system they are ultimately migrated onto the live system.

**Java Compatibility**

A final technical benefit of the upgrade is Java compatibility. The current CIS uses and is compatible with Java version 1.5. However, most applications now use Java 1.6. We can control the Managed Desktop and ensure that only Java 1.5 is installed but people using their own PCs can easily download Java version 1.6 even without realising it. If you are running Java 1.6 on your PC the CIS may freeze or crash depending on which screens you are accessing.

The new CIS is compatible with both Java 1.5 and 1.6 which means not only that CIS will not crash on individually managed PCs but also that we can install Java 1.6 on the Managed Desktop, which allows the other applications to get the benefits of additional functionality and faster speeds.