# Managing the Display Tiles

An Experiment Frame is a window for managing both the experimental data and the visual presentation of the results. The right-hand-side of an Experiment Frame shows the logical structure of the data with respect to an experimental variable such as etch-time, while the left-hand-side provides the means of presenting the spectra using, so called, Display Tiles. These Display Tiles sub-divide the graphical section of the Experiment Frame so that one or more spectra can be viewed at the same time (Figure 1).
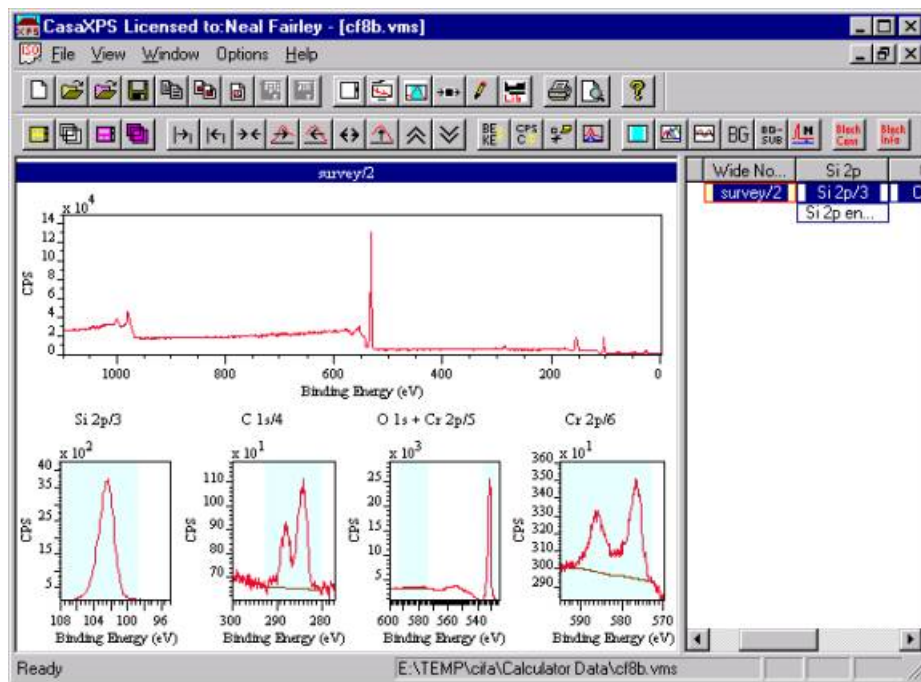


**Figure 1: A maximized Experiment Frame, where spectra are displayed using a regular set of five Display Tiles [1].**

## Regular Sets of Display Tiles

The Page Layout [icon] dialog window (Figure 2) manages the format for regular arrays of Display Tiles. The display area is divided into rows of tiles and each row can be allocated a number of tiles. The display in Figure 1 corresponds to the settings shown in Figure 2. Here, the number of rows has been chosen to be two, as seen by the radio buttons entitled **Number of Rows/Columns**. The first row has one tile-per-row while the second has four tiles-per-row. These settings are indicated by the array of radio buttons entitled **Tiles per Row/Column**. Note that only the top two rows of radio buttons are used to define the format for the two rows in use.
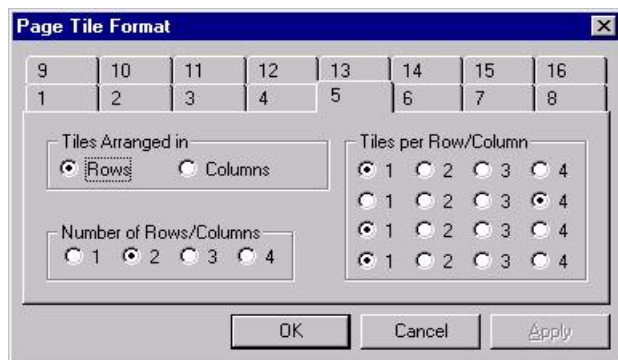
**Figure 2: Page Layout  dialog window**

## Inset Tiles

Often a survey spectrum includes a combination of intense and weak peaks for which a single intensity scale fails to visually convey the information found in the data. Although regular arrays of Display Tiles offers a means of plotting multiple views of the same spectrum, it is sometimes more appropriate to show features inset into the global view of the data (Figure 3).
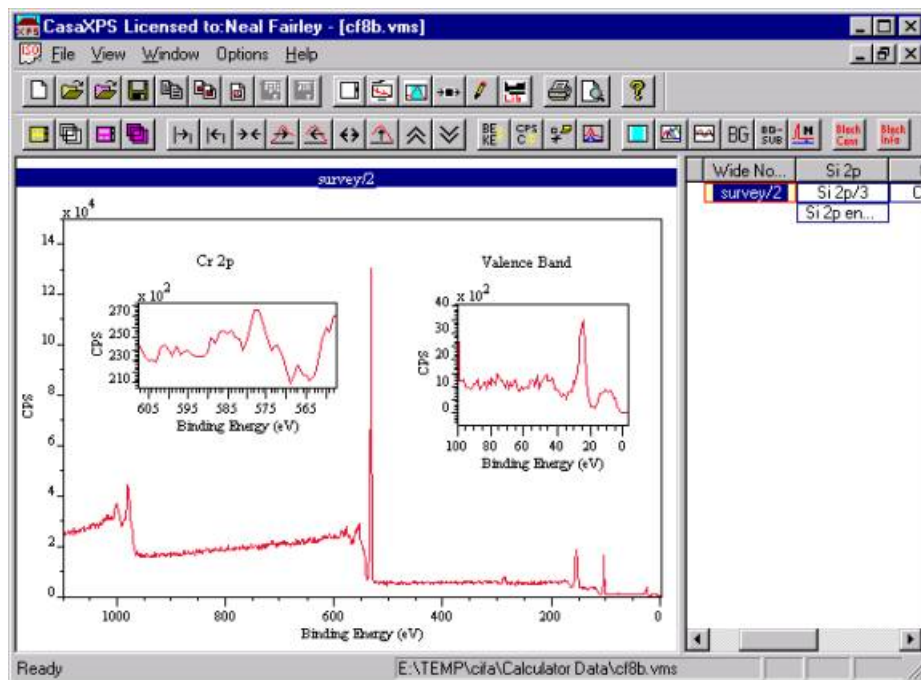


**Figure 3: Survey spectrum displayed using two inset views of the data, but zoomed to show regions of interest.**

## To Create an Inset Tile

An inset tile is created as follows:

1. Display the spectrum using one of the regular page layout options.
2. Mark a zoom box where the inset should appear.
3. Press the **Insert Key** on the keyboard or select the **Insert Tile** option under the Options Menu on the CasaXPS program frame.
4. Use the normal zoom and display adjustment mechanisms to show the data of interest.

Note: Inset tiles are identical to regular tiles. The spectra can be selected and displayed in an Inset Tile in an identical way to the regularly formatted Display Tiles.

## Deleting Display and Inset Tiles

To remove a tile, select the tile (using the left mouse button) so that it is the active tile and press the **Delete**

**Key** on the keyboard. The Option menu includes a **Delete Tile** option and this will also delete the active Display Tile in an identical fashion to the keyboard **Delete Key.**

## Peak Fitting Using Inset Tiles

Figure 4 shows a situation where significant structure to the higher binding energy side of a C 1s spectrum is visually dominated by the major peaks in the data envelope. An Inset Tile allows both the minor and major structure in the spectrum to be visualized at the same time and because both Display Tiles are equivalent, the fitting steps may be performed from either of the tiles shown in Figure 4. Simply select the Inset Tile when adjustments to the minor peaks require mouse interactions and revert back to the Display Tile when working with the larger peaks.
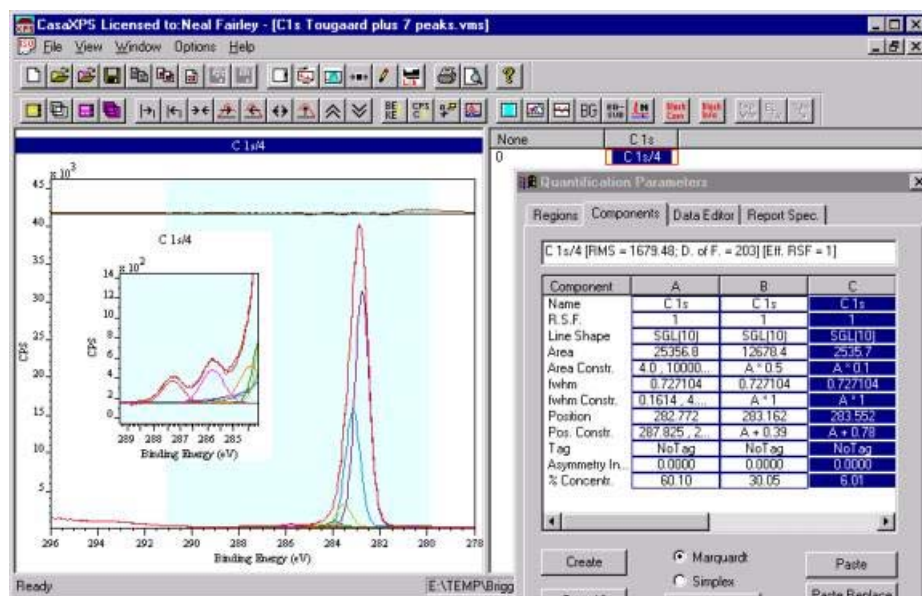


**Figure 4 C 1s spectrum where small and large peaks require fitting to synthetic models [2].**

[1] Genet M. (private communication).
[2] Briggs D.  (private communication).