We claim:

1. A graphical user interface embodied in ~~for~~ a computer system including a display providing a visual representation of analyses of data sets resulting from cytometric interrogation of particle containing samples having a spatial arrangement, where the visual representation enables identification of relationships among the data sets, the interface comprising:

a spatial arrangement of icons on a display of a computer system similar to the spatial arrangement of the particle containing samples such that each of the icons is visually associated with two or more samples on two or more sample plates; and

at least one of the icons is divided into at least a first region and a second region, the first region of the icon displaying information regarding an analysis of a data set resulting from cytometric interrogation of a first particle containing sample on a first sample plate visually associated with the icon, and the second region of the icon displaying information regarding an analysis of a data set resulting from cytometric interrogation of a second particle containing sample on a second sample plate visually associated with the icon.

~~from interrogation of an arrangement of samples , where the visual representation enables identification of relationships among the data sets, the interface comprising:~~

~~an arrangement of icons similar to the arrangement of samples such that each of the icons is visually associated with at least one of the samples; and~~

~~at least one of the icons divided into regions, each region of the icon providing information regarding an analysis of a data set, where the data set includes data resulting from interrogation of the sample visually associated with the icon.~~

2. The graphical user interface of claim 1 wherein all of the icons are divided into regions, with each region representing an analysis of a data set including data from the sample visually associated with the icon.

3. The graphical user interface of claim 1 wherein the spatial arrangements of samples and icons are the same.

~~4. The graphical user interface of claim 1 wherein each data set comprises data resulting from interrogation of two or more samples.~~

~~5. The graphical user interface of claim 1 wherein each icon includes a number of regions equal to a number of analyzed data sets that include data resulting from interrogation of the sample visually associated with the icon.~~

~~6~~4. The graphical user interface of claim 1 wherein the samples are particle-containing biological samples.

~~7~~5. The graphical user interface of claim 1 wherein the samples are interrogated using one of a flow cytometer and a scanning cytometer.

~~8~~6. The graphical user interface of claim 1 wherein the visual representation of the information is a variation of one of color and visual tone.

~~9~~7. The graphical user interface of claim ~~8~~ 6 in which a hatched pattern is superimposed over the visual representation.

~~10~~8. The graphical user interface of claim ~~8~~ 6 in which the visual representation is logarithmically related to the information.

~~11. The graphical user interface of claim 1 further comprising a representation of each of the data sets such that the information regarding the analysis of each of the data sets is assigned to a region by a user associating each of the representations with one of the regions.~~

~~12~~9. The graphical user interface of claim 1 wherein the icons are shaped to appear visually to have substantially the same shape as the samples.

~~13. A graphical user interface for a computer for defining analyses of data sets resulting from interrogating samples in an arrangement of samples and visually representing results of the analyses, where the visual representation enables identification of relationships among different data sets, the interface comprising:~~

~~a graphical presentation of an analysis that is applied to a data set to produce a~~

~~set of results, the analysis having at least one parameter that a user controls by interacting with the graphical presentation; and~~

~~a location specific, multiplexed heat map comprising a visual presentation of the set of results and at least one additional set of results, whereby the user determines the effects of changing the parameter on the relationships among the data sets by viewing the heat map.~~

~~14. The graphical user interface of claim 13 wherein the samples are particle-containing biological samples.~~

~~15. The graphical user interface of claim 13 wherein the samples are interrogated using one of a flow cytometer and a scanning cytometer.~~

~~16. The graphical user interface of claim 13 wherein the visual presentation of the set of results tracks the changes in variable analysis parameter.~~

~~17. The graphical user interface of claim 13 wherein the variable analysis parameter is changed by adjusting the shape of a figure in a graph.~~

~~18. The graphical user interface of claim 17 wherein the geometric figure and graph have one, two or three dimensions.~~

~~19. The graphical user interface of claim 13 wherein the variable analysis parameter is selected by activating buttons on a screen.~~

~~20~~10. A method of interacting with a graphical interface of a computer displaying two or more data sets, ~~where the graphical interface comprises an arrangement of icons that is similar to an arrangement of samples such that each of the icons is visually associated with at least one of the samples and the icons are divided into regions, each region of the icons visually representing results of an analysis of one of the data sets resulting from interrogating the arrangement of samples,~~ the method comprising the steps of:

providing a graphical interface including a spatial arrangement of icons that is similar to a spatial arrangement of particle containing samples such that each of the icons is visually associated with at least one of the samples, each of the icon is divided into at least a first region and a second region, the first regions of the icons displaying information regarding a first analysis of data sets resulting from cytometric interrogation of the particle containing samples visually associated with the icons, and the second regions of the icons displaying cytometric information regarding a second

analysis of the data sets resulting from interrogation of the particle containing samples visually associated with the icons;

defining at least one cytometric analysis;

specifying units of measurement for the cytometric analysis;

applying the cytometric analysis to a data set to generate results and

representing the results in a region of the icons.

~~21~~11. The method of claim ~~20~~ 10 wherein the samples are particle-containing biological samples.

~~22~~12. The method of claim ~~20~~ 10 wherein the samples are interrogated using a flow cytometer or scanning cytometer.

13. The graphical user interface of claim 1 wherein the at least one of the icons is further divided into at least a third region displaying information regarding a further analysis of the data set resulting from cytometric interrogation of the first particle containing sample on the first sample plate visually associated with the icon, or displaying information regarding a further analysis of the data set resulting from cytometric interrogation of the second particle containing sample on the second sample plate visually associated with the icon.

~~23. A method of presenting two or more data sets on a computer display for visual comparison by a user, the data sets resulting from the analysis of an interrogation of an arrangement of samples, the method comprising the steps of:~~

~~mapping the arrangement of samples with visual icons in the display so that each icon is associated with at least one sample and the spatial relationship of each visual icon to the other icons is similar to the spatial relationship of the sample associated with the visual icon to the other samples;~~

~~subdividing the icons into regions; and~~

~~visually representing each data set in a unique region of the icons.~~

~~24. The method of claim 23 wherein the samples are particle-containing biological samples.~~

~~25. The method of claim 23 wherein the samples are interrogated using one of a flow cytometer and a scanning cytometer.~~