

It should be noted that parameter cells are handled in the same manner as data cells. An example of this is illustrated in form 450 of FIG. 10. A DRIPS group 469 has been added which contains a tile 463 for a Dobutamine drip. By selecting cell 463B and activating the show detail option, a window of a form 470 is provided which contains the details of the Dobutamine parameter. As shown, the data of a medication field 471 of form 470 is placed in a field 481 of cell 463B; the data of an initial dose field 472 is placed in a field 483; and the data of an initial rate field 473 is placed in a field 482.

Referring now to FIGS. 11, 12A, and 12B, graphical representations of flow charts embodying the present invention are illustrated. The flow chart of FIG. 11, generally designated 600, illustrates the "Show Detail" option of the present invention. A copy of pseudo code for this process is illustrated in Appendix A.

The process is a continual loop which executes upon the occurrence of the "Show Detail" option being selected. The process commences with determining which objects have attributes to be displayed, step 601. Next, in step 602, the form definition for the form to be displayed and object definitions of the kinds of objects to be displayed are retrieved.

Once the form and object structures are identified, the form is built, step 603. This is described in more detail in FIGS. 12A and 12B. Once built, the form is displayed, step 604.

After the form is displayed, the process checks to see if another "Show Detail" option has been selected, decision step 605. If a "Show Detail" option has not been selected, the process moves on to handle other events, step 606. If the "Show Detail" option has been selected, the process loops back to step 601.

In FIGS. 12A and 12B, a flow chart, generally designated 650, detailing build form step 603 of FIG. 11 is illustrated. A copy of pseudo code for this process is illustrated in Appendix B. This process commences by obtaining the first field definition from the form definition, step 651. Next, in step 652, the attributes of the object instance to be displayed are determined.

In a decision step 653, the process then determines if the field is required to be displayed. If the field is required to be displayed, the process moves to decision step 654 and determines if the attribute has a value. If the attribute does have a value, the value is put into the field, step 655. If the attribute does not have a value, blanks are put into the field, step 656.

If the field is not required, step 653, the process moves to decision step 657 and determines if the field is optional or notational. If the field is optional or notational, the process moves to decision step 658 and determines if the attribute has a value. If the attribute does have a value, it is put into the field 659.

Following steps 655, 656, or 659, the process moves to decision block 660 and determines if this is the first filled-in field or line in the row. If this is the first filled-in field or line, a new line is added, step 661.

Following step 661, or if this is not the first filled-in field or line (step 660); if the field is not optional or notational (step 657); or if the optional or notational field does not have a value, the process moves to decision step 662. In step 662, the process determines if there are fields remaining in the form definition. If there are fields remaining, the next field is read and the process loops back to step 652. If there are no more fields remaining, the process returns, step 664.

Therefore, an apparatus has been shown which accomplishes the objectives of providing a cell having multiple data fields. This invention further provides a cell whose physical dimensions may be adjusted to meet the requirements of the fields to be displayed.

Thus, it will be apparent to one skilled in the art that there has been provided in accordance with the invention, a data cell that fully satisfies the objects, aims, and advantages set forth above.

While the invention has been described in conjunction with specific embodiments thereof, it is evident that many alterations, modifications, and variations will be apparent to those skilled in the art in light of the foregoing description. Accordingly, it is intended to embrace all such alterations, modifications, and variations in the appended claims.

APPENDIX A SHOW DETAIL

Loop, await event
 Case Event "Show Detail"
 Get a database row descriptor for the object instances that have attributes to be displayed on the form.
 Given the row descriptor and a form name, retrieve the form definition and object structures from the database.
 Use the form definition to determine which of the objects' attributes to display in which fields of the form.
 Build the form.
 Display the form.
 End of loop.

APPENDIX B BUILD FORM

For each field in the form definition do:
 Based on the form definition for the field, determine which attribute of which object instance to display in the field.
 If the field is required:
 If the attribute has a value:
 Put the value into the field.
 Else:
 Put blanks into the field.
 If the new field is the first field to be filled-in on a line:
 Add a line to the row.
 If the field is optional:
 If the attribute has a value:
 Put the value in the field.
 If the new field is the first field to be filled-in on a line:
 Add a line to the row.

We claim:

1. A computer system for displaying a spreadsheet, said spreadsheet comprising a plurality of display cells, each of said display cells comprising a plurality of mandatory and optional display fields, said computer system comprising:

storage means for storing spreadsheet information including optional information associated with a plurality of information fields from a plurality of forms;

designation means for designating said mandatory and optionally display fields for each of said display cells from said information fields of said forms;

retrieval means for retrieving said spreadsheet information from said storage means corresponding to