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# Global System Manager Windows option (GUI)

## INTRODUCTION

Global Business Systems, has for some time been developing a Graphical User Interface (GUI) for the Global 3000 range of products. We are pleased to announce that the initial development is now nearing its completion and will be launched at the Global Reseller Conference on 5th-6th October.

The GUI software brings standard Windows presentation standards to the entire Global 3000 product range. Due to the unique Global System Manager development environment we have two unique advantages over other software houses producing GUI-like software:

- Applications developed using the Global 3000 middleware do not have to be modified in order to be accessible via the GUI interface.

- The same programs can be used to drive both GUI screens and the more conventional serial screens, such as Wyse 60's.

Therefore Global software developers, resellers and users can take comfort from the fact that a program only needs to be written once to work immediately on the full range of Global supported screens, including GUI screens.

## PRICING AND POLICIES

These will be announced at the Reseller Conference.

## OVERVIEW

The GSM Windows Option is a Windows program that controls the screen on a PC running GSM (possibly with Novell) and translates the screens of Global 3000 programs into Microsoft Windows presentation standards. This opens up various options for increased integration with Windows products, and it is likely that future applications developments will exploit this.

The interpretation assumes that programs are written to Global 3000 standards and using the published Global 3000 middleware. However, some other standard Speedbase frames have been tried and work. It is planned to extend the product to translate the GSM menus into Windows formats.

### PLANNED RELEASES

**V1.1.** A release to be demonstrable for the reseller conference (5th and 6th

October). Due to time constraints there may be some desirable features omitted from this release, such as concurrency.

**V1.2.** A full release incorporating bug fixes and other facilities that failed to make 1.1.

**PC Workstation Version.** A version of PC Workstation that incorporates the GUI screen presentation will be developed at a later stage, timescales to be announced.

## USING THE GUI

The appearance of the screen is obviously very different, but exactly the same keystrokes can be used as on a character terminal. However, the mouse can be used as an alternative to the keyboard in many circumstances:

- You can use the mouse to select an item from a pop menu or the help display of valid functions by a double left click.

- You can move to another line within the scrolled area by a single left click.

- You can click above or below the `thumb bar' on the scroll bar to move up or down a page. Note: you cannot drag the thumb bar.

- You can click on the arrows at the top and bottom of the scroll bar to move a single line up or down.

- If the input field has a yellow background you can click the right mouse button to get a search.

- You can drag a window to another position by positioning on the title (provided the window has one!) and dragging it with the left mouse button. The re-positioning is not permanent but only for the current invocation of the window.

Note that you cannot at present use the mouse to select between different input fields.

## HARDWARE REQUIRED

The GUI requires a PC running Windows version 3.1 or Windows for Workgroups version 3.11. The software will only be distributed on 3½" diskettes.

# FUTURE ENHANCEMENTS – EXTENSIONS PLANNED FOR VERSIONS 1.1 AND 1.2

## MENUS

GUI will be extended to recognise GSM menus so that they appear as windows and the mouse can be used for selection. We may later extend the handling with a "Quick Menu" of programs that can also be run by clicking with the mouse. Quick menu entries can be customised into the menu by "drag and drop" from the main menu and are then permanent for that PC.

## FUNCTION BUTTONS

A row of buttons will be displayed at the bottom of the window corresponding to the Speedbase function keys, with buttons greyed out according to frame mode (enq, add etc).

## CUT AND PASTE

Support for cut and paste between GSM and Windows programs.

## CONCURRENCY

A version of GSM's concurrency within the GUI will be missing from the initial release. It is desirable for the GUI to look like concurrent users to GSM, but for each partition to be an independent window under Windows so that the user can, for example, select them with the mouse and minimise them.

Note that this new concurrency will not be limited to Speedbase and provides Global 2000 users with the same ability to have several partitions as separate windows.

## SYSTEM REQUESTS

System requests create a problem because they are, in effect, non-Speedbase programs that can run as part of a Speedbase application. Notepad and Organiser are the most important for Global 3000 users. Many others can be replaced by Windows functions mapped to toolbar icons, e.g. screen print, calculator.

## CUSTOMISED FRAMES

An extra button is to be displayed causing the current window (ignoring pop-up menus and help) to be dumped to a file and a named Windows program to be run, e.g. to produce a chart from the information.

# NOTES FOR SOFTWARE DEVELOPERS

This section describes how the Global System Manager Windows driver interprets Speedbase frames, i.e. the assumptions it makes about the various fields in the frame. Hence it acts as a set of rules which should be used by anyone developing a Speedbase program which will then work with the Windows driver.

## BASIC INTERPRETATION

The Windows driver requires a simple key to determine whether it should interpret the current screen as a set of Speedbase frames and how to differentiate the fields within a frame. This is achieved by setting the 18 Speedbase colour types to distinct colours (ensuring the 18 field types can be differentiated) which do not clash with the 8 defined by $CUS for GSM screens and the 14 defined for a menu by the menu maintenance program. Therefore the first restriction on any Speedbase program is that it should only use standard Speedbase colours for its displays, i.e. COLOR$ should not be used to select a non-Speedbase colour to highlight a field, and it should not use the ATTRIBUTE facility to ease Speedbase colours for non-standard purposes.

The 18 colour types are interpreted as follows:-

1. **Data fields within current record**

   Current record fields must only occur in the scrolled area and are highlighted by displaying them using white characters on a blue background. A fixed pitch font is used since these fields can be modified. See the discussion of the scrolled area below for more details.

2. **Data fields within other records**

   Other record fields should only occur in the scrolled area and are the counterparts of the current record fields, hence they are displayed in a similar way but are not highlighted.

3. **Emphasised labels**

   Emphasised labels are fixed fields and so are displayed in a proportional font. They should always be positioned towards the top of the frame, above the scrolled area. See the discussion of the scrolled area below for more details.

4. **De-emphasised labels**

   De-emphasised labels are similar to emphasised labels, i.e. fixed fields displayed in a proportional font, but should always be positioned towards the bottom of the frame, below the scrolled area. De-emphasised labels are used to construct Global 3000 pop-up menus so are sometimes treated specially; see the section on pop-

up menus on page 9 for more details.

5. **Speedbase title line**

   The Speedbase title line consists of five separate fields:

   a) The current frame/program name
   b) The current Speedbase display mode (DSP, MNT, etc.)
   c) The current frame/program title
   d) User OPID
   e) Date

   The title line is stored in its entirety but is split by the Windows driver. The frame/program title is displayed as the multiple document interface (MDI) frame's caption bar title and the Speedbase display mode is placed in a special pane on the status bar at the bottom of the MDI frame. The other three fields are ignored, although ideally the frame/program name should be displayed somewhere for debug purposes.

6. **Help text**

   Help text fields are used to flag that the current frame is a help frame, which is treated specially by the Windows driver. See the section about help frames below for more details.

7. **Baseline messages**

   Baseline messages are stored separately since they are not part of a frame and are displayed in the status bar at the bottom of the MDI frame.

8. **Error messages**

   All error messages appear on the baseline and are treated in the same way as baseline messages, see above.

9. **Boxes and lines**

   This type is only used when drawing the surrounding box for a frame. The Windows driver uses the top left and bottom right characters to size and position the frame and creates the corresponding child window using these parameters.

10. **Non-scrolled data field**

    A non-scrolled data field is a modifiable field (so is displayed in a fixed font) and usually lies below the scrolled area of the frame. The Windows driver will still display such fields properly if they lie above the scrolled area.

11. **Horizontal lines within boxes**

    Horizontal lines are normally used to mark the limits of the scrolled area of a frame. The Windows driver highlights the scrolled area by using a white background and draws a black line top and bottom to mark the boundary of this area. In such cases horizontal lines are ignored, i.e. are not drawn. For frames without a scrolled area, e.g. Global 3000 parameter screens, a line is drawn to join the sides of the child window.

12. **Reserved 1**

    Global 3000 uses this colour type for its frame titles which the Windows driver adds to the child window to form a caption bar, which has the benefit of allowing the resulting window to be moved. Note that the Windows driver does not take the field position into account, hence the last field using this colour type which is displayed when the frame is being constructed will become the caption bar title. This colour type must be used for frame titles only.

13. **Reserved 2**

    Not interpreted by the Windows driver.

14. **Reserved 3**

    Not interpreted by the Windows driver.

15. **Default: same as type 1**

    Default fields are displayed in a fixed font with normal colours.

16. **Currently accepted field**

    The currently accepted field is displayed using a fixed font since it will always be used to display a modifiable field.

17. **Screen background**

    The screen background colour is used as the initial signal to the Windows driver that it should enter its Speedbase mode. At all other times, i.e. if it is already in Speedbase mode, then this colour type is ignored.

18. **Window background**

    The window background colour is used to clear a frame when it is first opened in order to overwrite other windows. This colour type is ignored.

## FRAME RECOGNITION AND SIZING

Frames can only be recognised properly by the Windows driver if they are opened and closed using the standard Speedbase functions supplied to do this. The Windows driver will not recognise frame borders constructed using the BOX$ routine even if they are made up using the correct boxes and lines colour type.

The Windows driver uses the top left and bottom right graphics characters to size and position the corresponding child window. The MDI frame window used to enclose the child window is set up to use the full extent of a VGA screen which allows a 79 character child window to be created before it is clipped. Hence frames should be restricted to 79 columns (at least one Global 3000 screen uses 80 columns which results in the scroll bar being clipped by the frame window).

## FRAME TYPES

The Windows driver recognises three types of frame:

a) Standard Speedbase frame
b) Help frame
c) Pop-up menu frame

A standard Speedbase frame is constructed and displayed if it does not "look" like a help frame or a pop-up menu.

### STANDARD SPEEDBASE FRAME

The Windows driver will interpret a standard Speedbase frame provided its contents are built up as follows:

| Frame title in colour type 12<br>Line(s) containing emphasised labels |
|---|
| Current and other records forming the scrolled area |
| De-emphasised labels and associated non-scrolled data |

Field positioning is important to ensure that the scrolled area can be determined correctly. See below for the conditions the Windows driver uses to enable and position the scrolled area.

## HELP FRAME

Help frames are built from lines using the help text colour type and no other colour type is used. The Windows driver uses this information to flag its internal representation of the frame as a help frame, which then allows the frame to be treated specially. There are two levels of help: the first displays the special commands available for the current frame together with the function key which selects this command, and the second displays help associated with the particular frame.

These frames have to be treated differently, e.g. the first allows mouse selection of a particular command which is not relevant for the second, and so have to be differentiated from one another. This is achieved by assuming that all second level help frames will be more than 27 characters wide.

Note that all help text lines are displayed using a proportional font. This used to cause the secondary help displays to be concentrated on the left hand side of the window with a large gap on the right; the Windows driver now calculates the longest help text line (based on the proportional font) and sizes the enclosing window accordingly. This technique works well for most frames, but some have a single line of upper-case text, which does not compress as much as lower-case and produces an unusual looking frame. In general it is best not to use pure upper-case strings for any field which is displayed using a proportional font, i.e. emphasised labels, de-emphasised labels and help text.

## POP-UP MENUS

Pop-up menus are constructed from a frame title, several lines of de-emphasised labels (one for each menu entry) and finally a current accept line overwriting one of the de-emphasised labels (which are always displayed from the same x-coordinate), and the fact that the third character in the label is a "-".

## THE SCROLLED AREA

Most Speedbase frames contain a scrolled area which is handled specially by the Windows driver, i.e. using a different background colour, adding a scroll bar and allowing mouse selection of a particular record. It is important that the Windows driver is able to recognise a scrolled area on initial construction of the frame because it is impossible to add a scroll bar to an existing child window. A scrolled area is added in the following conditions:

a) If and only if a current record line exists
b) Between two horizontal lines (if the first horizontal line follows immediately after an emphasised label line)
c) Between a horizontal line and the bottom of the frame (if the horizontal line follows immediately after an emphasised label line)
d) Between the last emphasised label line and a horizontal line
e) Between the last emphasised label line and the bottom of the frame
f) Between the current record line and the bottom of the frame

Note that the last emphasised line is the last consecutive emphasised line, which should ensure that only emphasised labels at the top of the frame are counted.

After determining that a frame has a scrolled area a scroll bar is added to the window on its right hand side. In order to make room for the scroll bar the fields in the scrolled area are shifted left and a normal size scroll bar is used. This is only possible because most Speedbase frames leave a one character border between fields and the surrounding box. However, if the SBOX statement is used for a frame then this border does not exist and the Windows driver must use a narrower scroll bar.