

## Windows 3.x resource allocation and cleanup reference

(from ftp.cica.indiana.edu:/pub/pc/win3/programr/cleanup.zip)

### **Resource    Allocation Routine    Cleanup Routine    Cleanup Required?**

|               |                           |                    |                  |                  |
|---------------|---------------------------|--------------------|------------------|------------------|
| Accelerators  | LoadAccelerators          | N/A                | No               |                  |
| Atoms         | GlobalAddAtom             | GlobalFreeAtom     |                  | Yes              |
| Bitmaps       | CreateBitmap              | DeleteObject       |                  | Yes <sup>1</sup> |
|               | CreateBitmapIndirect      | DeleteObject       |                  | Yes <sup>1</sup> |
|               | CreateCompatibleBitmap    | DeleteObject       |                  | Yes <sup>1</sup> |
|               | CreateDIBitmap            | DeleteObject       | Yes <sup>1</sup> |                  |
|               | CreateDiscardableBitmap   | DeleteObject       |                  | Yes <sup>1</sup> |
| Brushes       | LoadBitmap                | DeleteObject       | Yes <sup>1</sup> |                  |
|               | CreateBrushIndirect       | DeleteObject       |                  | Yes              |
|               | CreateDIBPatternBrush     | DeleteObject       | Yes              |                  |
|               | CreateHatchBrush          | DeleteObject       | Yes              |                  |
|               | CreatePatternBrush        | DeleteObject       | Yes              |                  |
|               | CreateSolidBrush          | DeleteObject       | Yes              |                  |
| Carets        | CreateCaret               | DestroyCaret       | No <sup>4</sup>  |                  |
| Clipboard     | OpenClipboard             | CloseClipboard     |                  | Yes              |
| Comms Ports   | OpenComm                  | CloseComm          | Yes              |                  |
| Cursor        | CreateCursor              | DestroyCursor      |                  | Yes              |
|               | LoadCursor                | N/A                | No               |                  |
| DC            | CreateDC                  | DeleteDC           | Yes              |                  |
|               | CreateCompatibleDC        | DeleteDC           | Yes <sup>3</sup> |                  |
|               | GetDC                     | ReleaseDC          | Yes              |                  |
|               | GetWindowDC               | ReleaseDC          | Yes              |                  |
|               | BeginPaint                | EndPaint           | Yes              |                  |
| Dialog Box    | CreateDialog              | DestroyWindow      | No               |                  |
|               | CreateDialogIndirect      | DestroyWindow      | No               |                  |
|               | CreateDialogIndirectParam | DestroyWindow      | No               | No               |
|               | CreateDialogParam         | DestroyWindow      | No               |                  |
| File          | OpenFile                  | _lclose            | No               |                  |
| Fonts         | CreateFont                | DeleteObject       | Yes              |                  |
|               | CreateFontIndirect        | DeleteObject       | Yes              |                  |
|               | AddFontResource           | RemoveFontResource |                  | Yes              |
| GDI Stock Obj | GetStockObject            | N/A                | No <sup>5</sup>  |                  |

|          |                           |                   |                 |
|----------|---------------------------|-------------------|-----------------|
| Hook     | SetWindowsHook            | UnhookWindowsHook | Yes             |
| IC       | CreateIC                  | DeleteDC          | Yes             |
| Icon     | CreateIcon                | DestroyIcon       | Yes             |
|          | LoadIcon                  | N/A               | No              |
| Library  | LoadLibrary               | FreeLibrary       | Yes             |
| Memory   | AllocDStoCSAlias          | FreeSelector      | Yes             |
|          | AllocSelector             | FreeSelector      | Yes             |
|          | GlobalAlloc               | GlobalFree        | No              |
|          | GlobalDOSAlloc            | GlobalDOSFr       | No              |
|          | GlobalFix                 | GlobalUnfix       | No              |
|          | GlobalLock                | GlobalUnlock      | No              |
|          | GlobalPageLock            | GlobalPageUnlock  | No              |
|          | GlobalRealloc             | GlobalFree        | No              |
|          | GlobalWire                | GlobalUnwire      | No              |
|          | LocalAlloc                | LocalFree         | No              |
|          | LocalLock                 | LocalUnlock       | No              |
|          | LocalRealloc              | LocalFree         | No              |
| Menu     | CreateMenu                | DestroyMenu       | No <sup>2</sup> |
|          | CreatePopupMenu           | DestroyMenu       | No <sup>2</sup> |
|          | LoadMenu                  | DestroyMenu       | No <sup>2</sup> |
|          | LoadMenuIndirect          | DestroyMenu       | No <sup>2</sup> |
|          | GetSystemMenu             | N/A               | No              |
| MetaFile | CreateMetaFile            | DeleteMetaFile    | Yes             |
| Palette  | CreatePalette             | DeleteObject      | Yes             |
| Pen      | CreatePen                 | DeleteObject      | Yes             |
|          | CreatePenIndirect         | DeleteObject      | Yes             |
| Regions  | CreateEllipticRgn         | DeleteObject      | Yes             |
|          | CreateEllipticRgnIndirect | DeleteObject      | Yes             |
|          | CreatePolygonRgn          | DeleteObject      | Yes             |
|          | CreatePolyPolygonRgn      | DeleteObject      | Yes             |
|          | CreateRectRgn             | DeleteObject      | Yes             |
|          | CreateRectRgnIndirect     | DeleteObject      | Yes             |
|          | CreateRoundRectRgn        | DeleteObject      | Yes             |
| Resource | AllocResource             | FreeResource      | No              |
|          | FindResource              | N/A               | No              |
|          | LoadResource              | FreeResource      | No              |
|          | LockResource              | UnlockResource    | No              |
| Sound    | OpenSound                 | CloseSound        | Yes             |

String LoadString N/A No

Thunk MakeProInstance FreeProInstance No

Timer SetTimer KillTimer No

Window CreateWindow DestroyWindow No  
CreateWindowEx DestroyWindow No