

layers

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WRITTEN BY		March 28, 2025	

REVISION HISTORY

NUMBER	DATE	DESCRIPTION	NAME

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Chapter 1

layers

1.1 layers.doc

BeginUpdate ()	LockLayers ()
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LockLayerInfo ()	

1.2 layers.library/BeginUpdate

NAME

BeginUpdate -- Prepare to repair damaged layer.

SYNOPSIS

```
result = BeginUpdate( l )
d0                      a0
```

```
LONG BeginUpdate( struct Layer *);
```

FUNCTION

Convert damage list to ClipRect list and swap in for programmer to redraw through. This routine simulates the ROM library environment. The idea is to only render in the "damaged" areas, saving time over redrawing all of the layer. The layer is locked against changes made by the layer library.

INPUTS

l - pointer to a layer

RESULTS

result - TRUE if damage list converted to ClipRect list sucessfully.
FALSE if list conversion aborted. (probably out of memory)

BUGS

If BeginUpdate returns FALSE, programmer must abort the attempt to refresh this layer and instead call EndUpdate(l, FALSE) to restore original ClipRect and damage list.

SEE ALSO

EndUpdate, graphics/layers.h, graphics/clip.h

1.3 layers.library/BehindLayer

NAME

BehindLayer -- Put layer behind other layers.

SYNOPSIS

```
result = BehindLayer( dummy, l )  
d0          a0      a1
```

```
LONG BehindLayer( LONG, struct Layer *);
```

FUNCTION

Move this layer to the most behind position swapping bits in and out of the display with other layers.
If other layers are REFRESH then collect their damage lists and set the LAYERREFRESH bit in the Flags fields of those layers that may be revealed. If this layer is a backdrop layer then put this layer behind all other backdrop layers.
If this layer is NOT a backdrop layer then put in front of the top backdrop layer and behind all other layers.

Note: this operation may generate refresh events in other layers associated with this layer's Layer_Info structure.

INPUTS

dummy - unused
l - pointer to a layer

RESULTS

result - TRUE if operation successful
FALSE if operation unsuccessful (probably out of memory)

BUGS

SEE ALSO

graphics/layers.h, graphics/clip.h

1.4 layers.library/CreateBehindHookLayer

NAME (V36)
 CreateBehindHookLayer -- Create a new layer behind all existing layers,
 using supplied callback BackFill hook.

SYNOPSIS

```
result = CreateBehindHookLayer(li,bm,x0,y0,x1,y1,flags,hook,[,bm2])
d0                                a0 a1 d0 d1 d2 d3 d4      a3    [ a2 ]
```

```
struct Layer *CreateBehindHookLayer(struct Layer_Info *,
                                     struct BitMap *, LONG, LONG, LONG,
                                     LONG, LONG, struct Hook *, ... );
```

FUNCTION

Create a new Layer of position and size (x0,y0)-(x1,y1)
 Make this layer of type found in flags.
 Install Layer->BackFill callback Hook.
 If SuperBitMap, use bm2 as pointer to real SuperBitMap,
 and copy contents of Superbitmap into display layer.
 If this layer is a backdrop layer then place it behind all
 other layers including other backdrop layers. If this is
 not a backdrop layer then place it behind all nonbackdrop
 layers.

Note: when using SUPERBITMAP, you should also set LAYERSMART flag.

INPUTS

li - pointer to LayerInfo structure
 bm - pointer to common BitMap used by all Layers
 x0,y0 - upper left hand corner of layer
 x1,y1 - lower right hand corner of layer
 flags - various types of layers supported as bit sets.
 (for bit definitions, see graphics/layers.h)
 hook - Layer->BackFill callback Hook which will be called
 with object == (struct RastPort *) result->RastPort
 and message == [(Layer *) layer, (struct Rectangle) bounds,
 (WORD) offsetx, (WORD) offsety]
 bm2 - pointer to optional Super BitMap

RESULTS

result - pointer to Layer structure if successful
 NULL if not successful

BUGS

SEE ALSO

DeleteLayer, graphics/layers.h, graphics/clip.h, graphics/gfx.h
 utility/hooks.h

1.5 layers.library/CreateBehindLayer

NAME
 CreateBehindLayer -- Create a new layer behind all existing layers.

SYNOPSIS

```

result = CreateBehindLayer(li,bm,x0,y0,x1,y1,flags [,bm2])
d0          a0 a1 d0 d1 d2 d3    d4    [ a2 ]

struct Layer *CreateBehindLayer(struct Layer_Info *, struct BitMap *,
    LONG, LONG, LONG, LONG, LONG, ... );

```

FUNCTION

Create a new Layer of position and size (x0,y0)->(x1,y1)
 Make this layer of type found in flags.
 If SuperBitMap, use bm2 as pointer to real SuperBitMap,
 and copy contents of Superbitmap into display layer.
 If this layer is a backdrop layer then place it behind all
 other layers including other backdrop layers. If this is
 not a backdrop layer then place it behind all nonbackdrop
 layers.

Note: when using SUPERBITMAP, you should also set LAYERSMART flag.

INPUTS

li - pointer to LayerInfo structure
 bm - pointer to common BitMap used by all Layers
 x0,y0 - upper left hand corner of layer
 x1,y1 - lower right hand corner of layer
 flags - various types of layers supported as bit sets.
 (for bit definitions, see graphics/layers.h)
 bm2 - pointer to optional Super BitMap

RESULTS

result - pointer to Layer structure if successful
 NULL if not successful

BUGS

SEE ALSO

DeleteLayer, graphics/layers.h, graphics/clip.h, graphics/gfx.h

1.6 layers.library/CreateUpfrontHookLayer

NAME

(V36)

CreateUpfrontHookLayer -- Create a new layer on top of existing layers,
 using supplied callback BackFill hook.

SYNOPSIS

```

result = CreateUpfrontHookLayer(li,bm,x0,y0,x1,y1,flags,hook,[,bm2])
d0          a0 a1 d0 d1 d2 d3    d4    a3    [ a2 ]

struct Layer *CreateUpfrontHookLayer(struct Layer_Info *,
    struct BitMap *, LONG, LONG, LONG,
    LONG, LONG, struct Hook *, ... );

```

FUNCTION

Create a new Layer of position and size (x0,y0)->(x1,y1)
 and place it on top of all other layers.
 Make this layer of type found in flags
 Install Layer->BackFill callback hook.

if SuperBitMap, use bm2 as pointer to real SuperBitMap.
and copy contents of Superbitmap into display layer.

Note: when using SUPERBITMAP, you should also set LAYERSMART flag.

INPUTS

li - pointer to LayerInfo structure
bm - pointer to common BitMap used by all Layers
x0,y0 - upper left hand corner of layer
x1,y1 - lower right hand corner of layer
flags - various types of layers supported as bit sets.
hook - Layer->BackFill callback Hook which will be called
with object == (struct RastPort *) result->RastPort
and message == [(Layer *) layer, (struct Rectangle) bounds,
(WORD) offsetx, (WORD) offsety]
bm2 - pointer to optional Super BitMap

RESULTS

result - pointer to Layer structure if successful
NULL if not successful

BUGS

SEE ALSO

DeleteLayer, graphics/layers.h, graphics/clip.h, graphics/gfx.h
utility/hooks.h

1.7 layers.library/CreateUpfrontLayer

NAME

CreateUpfrontLayer -- Create a new layer on top of existing layers.

SYNOPSIS

```
result = CreateUpfrontLayer(li,bm,x0,y0,x1,y1,flags [,bm2])
d0          a0 a1 d0 d1 d2 d3    d4  [ a2 ]

struct Layer *CreateUpfrontLayer(struct Layer_Info *, struct BitMap *,
    LONG, LONG, LONG, LONG, LONG, ... );
```

FUNCTION

Create a new Layer of position and size (x0,y0)->(x1,y1)
and place it on top of all other layers.
Make this layer of type found in flags
if SuperBitMap, use bm2 as pointer to real SuperBitMap.
and copy contents of Superbitmap into display layer.

Note: when using SUPERBITMAP, you should also set LAYERSMART flag.

INPUTS

li - pointer to LayerInfo structure
bm - pointer to common BitMap used by all Layers
x0,y0 - upper left hand corner of layer
x1,y1 - lower right hand corner of layer
flags - various types of layers supported as bit sets.
bm2 - pointer to optional Super BitMap

RESULTS

result - pointer to Layer structure if successful
NULL if not successful

BUGS

SEE ALSO

DeleteLayer, graphics/layers.h, graphics/clip.h, graphics/gfx.h

1.8 layers.library/DeleteLayer

NAME

DeleteLayer -- delete layer from layer list.

SYNOPSIS

```
result = DeleteLayer( dummy, l )
d0          a0,      a1

LONG DeleteLayer( LONG, struct Layer *);
```

FUNCTION

Remove this layer from the list of layers. Release memory associated with it. Restore other layers that may have been obscured by it. Trigger refresh in those that may need it. If this is a superbitmap layer make sure SuperBitMap is current. The SuperBitMap is not removed from the system but is available for program use even though the rest of the layer information has been deallocated.

INPUTS

dummy - unused
l - pointer to a layer

RESULTS

result - TRUE if this layer successfully deleted from the system
FALSE if layer not deleted. (probably out of memory)

BUGS

SEE ALSO

graphics/layers.h, graphics/clip.h

1.9 layers.library/DisposeLayerInfo

NAME

DisposeLayerInfo -- Return all memory for LayerInfo to memory pool

SYNOPSIS

```
DisposeLayerInfo( li )
                  a0
```

```
void DisposeLayerInfo( struct Layer_Info *);
```

FUNCTION

return LayerInfo and any other memory attached to this LayerInfo to memory allocator.

Note: if you wish to delete the layers associated with this Layer_Info structure, remember to call DeleteLayer() for each of the layers before calling DisposeLayerInfo().

INPUTS

li - pointer to LayerInfo structure

EXAMPLE

```
--delete the layers associated this Layer_Info structure--

DeleteLayer(li,simple_layer);
DeleteLayer(li,smart_layer);

--see documentation on DeleteLayer about deleting SuperBitMap layers--
my_super_bitmap_ptr = super_layer->SuperBitMap;
DeleteLayer(li,super_layer);

--now dispose of the Layer_Info structure itself--
DisposeLayerInfo(li);
```

BUGS

SEE ALSO

DeleteLayer, graphics/layers.h

1.10 layers.library/EndUpdate

NAME

EndUpdate -- remove damage list and restore state of layer to normal.

SYNOPSIS

```
EndUpdate( l, flag )
          a0  d0
```

```
void EndUpdate( struct Layer *, UWORD);
```

FUNCTION

After the programmer has redrawn his picture he calls this routine to restore the ClipRects to point to his standard layer tiling. The layer is then unlocked for access by the layer library.

Note: use flag = FALSE if you are only making a partial update. You may use the other region functions (graphics functions such as OrRectRegion, AndRectRegion, and XorRectRegion) to clip adjust the DamageList to reflect a partial update.

INPUTS

l - pointer to a layer
 flag - use TRUE if update was completed. The damage list is cleared.
 use FALSE if update not complete. The damage list is retained.

EXAMPLE

```
-- begin update for first part of two-part refresh --
BeginUpdate(my_layer);

-- do some refresh, but not all --
my_partial_refresh_routine(my_layer);

-- end update, false (not completely done refreshing yet) --
EndUpdate(my_layer, FALSE);

-- begin update for last part of refresh --
BeginUpdate(my_layer);

-- do rest of refresh --
my_complete_refresh_routine(my_layer);

-- end update, true (completely done refreshing now) --
EndUpdate(my_layer, TRUE);
```

BUGS

SEE ALSO

BeginUpdate, graphics/layers.h, graphics/clip.h

1.11 layers.library/FattenLayerInfo

NAME

FattenLayerInfo -- convert 1.0 LayerInfo to 1.1 LayerInfo
 OBSOLETE OBSOLETE OBSOLETE OBSOLETE OBSOLETE

SYNOPSIS

```
OBSOLETE OBSOLETE OBSOLETE OBSOLETE OBSOLETE
FattenLayerInfo( li )
                a0
```

```
LONG FattenLayerInfo( struct Layer_Info *);
OBSOLETE OBSOLETE OBSOLETE OBSOLETE OBSOLETE
```

FUNCTION

V1.1 software and any later releases need to have more info in the Layer_Info structure. To do this in a 1.0 supportable manner requires allocation and deallocation of the memory whenever most layer library functions are called. To prevent unnecessary allocation/deallocation FattenLayerInfo will preallocate the necessary data structures and fake out the layer library into thinking it has a LayerInfo gotten from NewLayerInfo. NewLayerInfo is the approved method for getting this structure. When a program needs to give up the LayerInfo structure it must call ThinLayerInfo before freeing the memory. ThinLayerInfo

is not necessary if New/DisposeLayerInfo are used however.

INPUTS

li - pointer to LayerInfo structure

BUGS

SEE ALSO

NewLayerInfo, ThinLayerInfo, DisposeLayerInfo, graphics/layers.h

1.12 layers.library/InitLayers

NAME

InitLayers -- Initialize Layer_Info structure
OBSOLETE OBSOLETE OBSOLETE OBSOLETE OBSOLETE

SYNOPSIS

OBSOLETE OBSOLETE OBSOLETE OBSOLETE OBSOLETE
InitLayers(li)
 a0

void InitLayers(struct Layer_Info *);
OBSOLETE OBSOLETE OBSOLETE OBSOLETE OBSOLETE

FUNCTION

Initialize Layer_Info structure in preparation to use
other layer operations on this list of layers.
Make the Layers unlocked (open), available to layer operations.

INPUTS

li - pointer to LayerInfo structure

BUGS

SEE ALSO

NewLayerInfo, DisposeLayerInfo, graphics/layers.h

1.13 layers.library/InstallClipRegion

NAME

InstallClipRegion -- Install clip region in layer

SYNOPSIS

oldclipregion = InstallClipRegion(l, region)
d0 a0 a1

struct Region *InstallClipRegion(struct Layer *, struct Region *);

FUNCTION

Installs a transparent Clip region in the layer. All
subsequent graphics calls will be clipped to this region.

You MUST remember to call `InstallClipRegion(l,NULL)` before calling `DeleteLayer(l)` or the Intuition function `CloseWindow()` if you have installed a non-NULL `ClipRegion` in `l`.

INPUTS

`l` - pointer to a layer
`region` - pointer to a region

RESULTS

`oldclipregion` - The pointer to the previous `ClipRegion` that was installed. Returns `NULL` if no previous `ClipRegion` installed.

Note: If the system runs out of memory while computing the resulting `ClipRects` the `LAYERS_CLIPRECTS_LOST` bit will be set in `l->Flags`.

BUGS

If the system runs out of memory during normal layer operations, the `ClipRect` list may get swept away and not restored. As soon as there is enough memory and the layer library gets called again the `ClipRect` list will be rebuilt.

SEE ALSO

`BeginUpdate` `EndUpdate`,
`graphics/layers.h`, `graphics/clip.h`, `graphics/regions.h`

1.14 layers.library/InstallLayerHook

NAME (V36)

`InstallLayerHook` -- safely install a new `Layer->BackFill` hook.

SYNOPSIS

```
oldhook = InstallLayerHook( layer, hook )
d0          a0          a1
```

```
struct Hook *InstallLayerHook( struct Layer *, struct Hook *);
```

FUNCTION

Installs a new `Layer->Backfill` Hook, waiting until it is safe to do so. Locks the layer while substituting the new Hook and removing the old one. If a new Hook is not provided, will install the default layer `BackFill` Hook.

INPUTS

`layer` - pointer to the layer in which to install the `Backfill` Hook.
`hook` - pointer to layer callback Hook which will be called with object == `(struct RastPort *) result->RastPort` and message == `[(Layer *) layer, (struct Rectangle) bounds, (WORD) offsetx, (WORD) offsety]`

This hook should fill the `Rectangle` in the `RastPort` with the `BackFill` pattern appropriate for offset `x/y`.

If this hook pointer is `NULL`, the function installs the "default" Layers `BackFill` Hook into this Layer.

RESULTS

oldhook - pointer to the Layer->BackFill Hook that was previously active.

BUGS

SEE ALSO

graphics/clip.h utility/hooks.h

1.15 layers.library/LockLayer

NAME

LockLayer -- Lock layer to make changes to ClipRects.

SYNOPSIS

```
LockLayer( dummy, l )
           a0      a1
```

```
void LockLayer( LONG, struct Layer *);
```

FUNCTION

Make this layer unavailable for other tasks to use.
If another task is already using this layer then wait for it to complete and then reserve the layer for your own use.
(this function does the same thing as graphics.library/LockLayerRom)

Note: if you wish to lock MORE THAN ONE layer at a time, you must call LockLayerInfo() before locking those layers and then call UnlockLayerInfo() when you have finished. This is to prevent system "deadlocks".

Further Note: while you hold the lock on a layer, Intuition will block on operations such as windowsizing, dragging, menus, and depth arranging windows in this layer's screen. It is recommended that YOU do not make Intuition function calls while the layer is locked.

INPUTS

dummy - unused
l - pointer to a layer

BUGS

SEE ALSO

UnlockLayer, LockLayerInfo, UnlockLayerInfo,
graphics.library/LockLayerRom, graphics/layers.h, graphics/clip.h

1.16 layers.library/LockLayerInfo

NAME

LockLayerInfo -- Lock the LayerInfo structure.

SYNOPSIS

```
LockLayerInfo( li )
               a0
```

```
void LockLayerInfo( struct Layer_Info *);
```

FUNCTION

Before doing an operation that requires the LayerInfo structure, make sure that no other task is also using the LayerInfo structure. LockLayerInfo() returns when the LayerInfo belongs to this task. There should be an UnlockLayerInfo for every LockLayerInfo.

Note: All layer routines presently LockLayerInfo() when they start up and UnlockLayerInfo() as they exit. Programmers will need to use these Lock/Unlock routines if they wish to do something with the LayerStructure that is not supported by the layer library.

INPUTS

li - pointer to Layer_Info structure

BUGS

SEE ALSO

UnlockLayerInfo, graphics/layers.h

1.17 layers.library/LockLayers

NAME

LockLayers -- lock all layers from graphics output.

SYNOPSIS

```
LockLayers( li )
           a0
```

```
void LockLayers( struct Layer_Info *);
```

FUNCTION

First calls LockLayerInfo()
Make all layers in this layer list locked.

INPUTS

li - pointer to Layer_Info structure

BUGS

SEE ALSO

LockLayer, LockLayerInfo, graphics/layers.h

1.18 layers.library/MoveLayer

NAME

MoveLayer -- Move layer to new position in BitMap.

SYNOPSIS

```
result = MoveLayer( dummy, l, dx, dy )
d0          a0      a1 d0 d1

LONG MoveLayer( LONG, struct Layer *, LONG, LONG);
```

FUNCTION

Move this layer to new position in shared BitMap.
If any refresh layers become revealed, collect damage and set REFRESH bit in layer Flags.

INPUTS

dummy - unused
l - pointer to a nonbackdrop layer
dx - delta to add to current x position
dy - delta to add to current y position

RETURNS

result - TRUE if operation successful
 FALSE if failed (out of memory)

BUGS

May not handle (dx,dy) which attempts to move the layer outside the layer's RastPort->BitMap bounds .

SEE ALSO

graphics/layers.h, graphics/clip.h

1.19 layers.library/MoveLayerInFrontOf

NAME

MoveLayerInFrontOf -- Put layer in front of another layer.

SYNOPSIS

```
result = MoveLayerInFrontOf( layertomove, targetlayer )
a0          a1

LONG MoveLayerInFrontOf( struct Layer *, struct Layer *);
```

FUNCTION

Move this layer in front of target layer, swapping bits in and out of the display with other layers.
If this is a refresh layer then collect damage list and set the LAYERREFRESH bit in layer->Flags if redraw required.

Note: this operation may generate refresh events in other layers associated with this layer's Layer_Info structure.

INPUTS

layertomove - pointer to layer which should be moved
targetlayer - pointer to target layer in front of which to move layer

RESULTS

```
result = TRUE      if operation successful
        FALSE      if operation unsuccessful (probably out of memory)
```

BUGS

SEE ALSO

graphics/layers.h

1.20 layers.library/MoveSizeLayer

NAME

(V36)

MoveSizeLayer -- Position/Size layer

SYNOPSIS

```
result = MoveSizeLayer( layer, dx, dy, dw, dh )
d0                a0      d0  d1  d2  d3

LONG MoveSizeLayer( struct Layer *, LONG, LONG, LONG, LONG);
```

FUNCTION

Change upperleft and lower right position of Layer.

INPUTS

dummy - unused
l - pointer to a nonbackdrop layer
dx,dy - change upper left corner by (dx,dy)
dw,dh - change size by (dw,dh)

RETURNS

result - TRUE if operation successful
 FALSE if failed (due to out of memory)
 FALSE if failed (due to illegal layer->bounds)

BUGS

SEE ALSO

graphics/layers.h, graphics/clip.h

1.21 layers.library/NewLayerInfo

NAME

NewLayerInfo -- Allocate and Initialize full Layer_Info structure.

SYNOPSIS

```
result = NewLayerInfo()
d0

struct Layer_Info *NewLayerInfo( void );
```

FUNCTION

Allocate memory required for full Layer_Info structure.
Initialize Layer_Info structure in preparation to use
other layer operations on this list of layers.
Make the Layer_Info unlocked (open).

INPUTS

None

RESULT

result- pointer to Layer_Info structure if successful
NULL if not enough memory

BUGS**SEE ALSO**

graphics/layers.h

1.22 layers.library/ScrollLayer

NAME

ScrollLayer -- Scroll around in a superbitmap, translate coordinates
in non-superbitmap layer.

SYNOPSIS

```
ScrollLayer( dummy, l, dx, dy )
            a0      a1 d0 d1
```

```
void ScrollLayer( LONG, struct Layer *, LONG, LONG);
```

FUNCTION

For a SuperBitMap Layer:

Update the SuperBitMap from the layer display, then copy bits
between Layer and SuperBitMap to reposition layer over different
portion of SuperBitMap.

For nonSuperBitMap layers, all (x,y) pairs are adjusted by
the scroll(x,y) value in the layer. To cause (0,0) to actually
be drawn at (3,10) use ScrollLayer(-3,-10). This can be useful
along with InstallClipRegion to simulate Intuition GZZWindows
without the overhead of an extra layer.

INPUTS

dummy - unused
l - pointer to a layer
dx - delta to add to current x scroll value
dy - delta to add to current y scroll value

BUGS

May not handle (dx,dy) which attempts to move the layer outside the
layer's SuperBitMap bounds.

SEE ALSO

graphics/layers.h

1.23 layers.library/SizeLayer

NAME

SizeLayer -- Change the size of this nonbackdrop layer.

SYNOPSIS

```
result = SizeLayer( dummy, l, dx, dy )
d0          a0      a1 d0  d1

LONG SizeLayer( LONG, struct Layer *, LONG, LONG);
```

FUNCTION

Change the size of this layer by (dx,dy). The lower right hand corner is extended to make room for the larger layer. If there is SuperBitMap for this layer then copy pixels into or out of the layer depending on whether the layer increases or decreases in size. Collect damage list for those layers that may need to be refreshed if damage occurred.

INPUTS

dummy - unused
l - pointer to a nonbackdrop layer
dx - delta to add to current x size
dy - delta to add to current y size

RESULTS

result - TRUE if operation successful
FALSE if failed (out of memory)

BUGS

SEE ALSO

graphics/layers.h, graphics/clip.h

1.24 layers.library/SwapBitsRastPortClipRect

NAME

SwapBitsRastPortClipRect -- Swap bits between common bitmap and obscured ClipRect

SYNOPSIS

```
SwapBitsRastPortClipRect( rp, cr )
a0  a1

void SwapBitsRastPortClipRect( struct RastPort *, struct ClipRect *);
```

FUNCTION

Support routine useful for those that need to do some operations not done by the layer library. Allows programmer to swap the contents of a small BitMap with a subsection of the display. This is accomplished without using extra memory. The bits in the display RastPort are exchanged with the bits in the ClipRect's BitMap.

Note: the ClipRect structures which the layer library allocates are actually a little bigger than those described in the graphics/clip.h include file. So be warned that it is not a good idea to have instances of cliprects in your code.

INPUTS

rp - pointer to rastport
cr - pointer to cliprect to swap bits with

NOTE

Because the blit operation started by this function is done asynchronously, it is imperative that a WaitBlit() be performed before releasing or using the processor to modify any of the associated structures.

BUGS

SEE ALSO

graphics/clip.h, graphics/rastport.h, graphics/clip.h

1.25 layers.library/ThinLayerInfo

NAME

ThinLayerInfo -- convert 1.1 LayerInfo to 1.0 LayerInfo.
OBSOLETE OBSOLETE OBSOLETE OBSOLETE OBSOLETE

SYNOPSIS

OBSOLETE OBSOLETE OBSOLETE OBSOLETE OBSOLETE
ThinLayerInfo(li)
 a0

void ThinLayerInfo(struct Layer_Info *);
OBSOLETE OBSOLETE OBSOLETE OBSOLETE OBSOLETE

FUNCTION

return the extra memory needed that was allocated with FattenLayerInfo. This is must be done prior to freeing the Layer_Info structure itself. V1.1 software should be using DisposeLayerInfo.

INPUTS

li - pointer to LayerInfo structure

BUGS

SEE ALSO

DisposeLayerInfo, FattenLayerInfo, graphics/layers.h

1.26 layers.library/UnlockLayer

NAME

UnlockLayer -- Unlock layer and allow graphics routines to use it.

SYNOPSIS

```
UnlockLayer( l )
            a0
```

```
void UnlockLayer( struct Layer *);
```

FUNCTION

When finished changing the ClipRects or whatever you were doing with this layer you must call UnlockLayer() to allow other tasks to proceed with graphic output to the layer.

INPUTS

l - pointer to a layer

BUGS

SEE ALSO

graphics/layers.h, graphics/clip.h

1.27 layers.library/UnlockLayerInfo

NAME

UnlockLayerInfo -- Unlock the LayerInfo structure.

SYNOPSIS

```
UnlockLayerInfo( li )
                a0
```

```
void UnlockLayerInfo( struct Layer_Info *);
```

FUNCTION

After the operation is complete that required a LockLayerInfo, unlock the LayerInfo structure so that other tasks may affect the layers.

INPUTS

li - pointer to the Layer_Info structure

BUGS

SEE ALSO

LockLayerInfo, graphics/layers.h

1.28 layers.library/UnlockLayers

NAME

UnlockLayers -- Unlock all layers from graphics output.
Restart graphics output to layers that have been waiting

SYNOPSIS

```
UnlockLayers( li )
             a0
```

```
void UnlockLayers( struct Layer_Info *);
```

FUNCTION

Make all layers in this layer list unlocked.
Then call UnlockLayerInfo

INPUTS

li - pointer to the Layer_Info structure

BUGS

SEE ALSO

LockLayers, UnlockLayer, graphics/layers.h

1.29 layers.library/UpfrontLayer

NAME

UpfrontLayer -- Put layer in front of all other layers.

SYNOPSIS

```
result = UpfrontLayer( dummy, l )
d0                      a0      a1
```

```
LONG UpfrontLayer( LONG, struct Layer *);
```

FUNCTION

Move this layer to the most upfront position swapping bits in and out of the display with other layers.
If this is a refresh layer then collect damage list and set the LAYERREFRESH bit in layer->Flags if redraw required.
By clearing the BACKDROP bit in the layers Flags you may bring a Backdrop layer up to the front of all other layers.

Note: this operation may generate refresh events in other layers associated with this layer's Layer_Info structure.

INPUTS

dummy - unused
l - pointer to a nonbackdrop layer

RESULTS

result - TRUE if operation successful
FALSE if operation unsuccessful (probably out of memory)

BUGS

SEE ALSO

graphics/layers.h

1.30 layers.library/WhichLayer

NAME

WhichLayer -- Which Layer is this point in?

SYNOPSIS

```
layer = WhichLayer( li, x, y )  
d0          a0  d0 d1
```

```
struct Layer *WhichLayer(struct Layer_Info*, WORD, WORD);
```

FUNCTION

Starting at the topmost layer check to see if this point (x,y) occurs in this layer. If it does return the pointer to this layer. Return NULL if there is no layer at this point.

INPUTS

li = pointer to LayerInfo structure
(x,y) = coordinate in the BitMap

RESULTS

layer - pointer to the topmost layer that this point is in
NULL if this point is not in a layer

SEE ALSO

graphics/layers.h
