Software License Agreement

HTML to Image Converter

For Win32/64

Vesion 17

2025

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Getting Started

This chapter describes the contents of the software diskettes and provides a step by step process of incorporating HTML to Image Converter into your application.

In This Chapter

Files
License Key
Incorporating the DLL into Your Application
Sample Conversion Code

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Files

The package contains the DLL and header files. The package also includes a set of files to construct a demo program. The demo program shows by example the process of linking the DLL to your program.

DLL Demo Files:

The following demo files are included in the c_demo.zip file.

DEMO.C	Source code for the demo program

DEMO.H	Include file for the demo program
DEMO.RC	Resource source file for the demo program
DEMO.DEF	Definition file for linking the demo program
DEMO.EXE	Executable demo program
DEMO_DLG.H	Dialog Identifiers for the demo program
DEMO_DLG.DLG	Dialog templates for the demo program
DEMO_DLG.RES	Compiled dialogs for the demo program
HIC.H	The *include* file to include into a C/C++ application module that calls the HIC routine. It contains the constant definitions and the prototypes for the API functions.
His32.DLL	The DLL file and other DLLs
His32.LIB	Import library for the His32 DLL
HICC.DLL	Wrapper DLL to used with an ASP page

Visual Basic Interface and Demo Files:

HIC.BAS	Function declaration file.
DMO_VB.FRM	Demo form file.
DMO_VB.BAS	Demo variable declaration file.
DMO_VB.VPB	Demo project file.

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License Key

Your License Key and License number are e-mailed to you after your order is processed. You would set the license information using the HisSetLicenseInfo static function. This should be preferably done before creating the converter session to avoid pop-up nag screens.

int HisSetLicnseInfo(LPBYTE LicenseKey, LPBYTE LicenseNumber, LPBYTE

CompanyName);

LicenseKey: Your license key is available in the product delivery email sent to you upon the purchase of the product. It consists of a string in the form of "xxxxx-yyyyy-zzzzz".

LicenseNumber: Your license number is also available in the product delivery email. The license number string starts with a "srab" or "smo" prefix.

CompanyName: Your company name as specified in your order.

Return Value: This method returns 0 when successful. A non-zero return value indicates an error condition. Here are the possible return values:

0 License application successful.

1 Invalid License Key.

2 Invalid License Number.

3 Ran out of available licenses. Please consider purchasing additional licenses.

Example:

result=HisSetLicenseInfo("xxxxx-yyyyy-zzzzz","srabnnnnn-n","Your Company Name")

Replace the 'xxxxx-yyyyy-zzzzz' by your license key, replace "srabnnnnn-n" with your license number, and "Your Company Name" with your company name as specified in your order.

Note: *HisSetLicenseInfo method should be called only once at the beginning of your application. Calling this method for each conversion would degrade the conversion performance.*

Also, you can use the HisGetLicenseStatus function at anytime to retrieve the license status.

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Incorporating the DLL into Your Application

A C/C++ application should include the HIC.h file into the application module that needs to call the His32 dll. It also should include the His32.LIB as the linker library. Please refer to the demo application for an example.

A Visual Basic application needs to include the HIC.BAS file in the project. Please refer to the DMO_VB project for an example.

Please also make sure that the His32.dll and other DLLs from the distribution zip file are copied to a directory available at run-time.

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Sample Conversion Code

First you would create a new conversion session:

```
 dim id as long
```

Set the product license key and create a session id:

```
  result=HisSetLicenseInfo("xxxxx-yyyyy-zzzzz",
                    "srabnnnnn-n","Your Company Name")

  id = HisNewSession()
```

You would use the session id to call other conversion functions.

Here are sample code examples to convert HTML to Image format.

1. Convert an HTML file to an image file.

```
PageCount = HisLoadFile(id, "test.htm")
If (PageCount > 0) Then
   PageNo = 1  'Get image for the first page of the document
   result = HisImageToFile(id, "test.jpg", PageNo)
End If
```

2. Convert an HtmlString to a string containing image data:

```
Dim hMem as long
Dim PageCount as long
Dim ImageType as long
Dim OutString as string
Dim HtmlString as string

'load the document and return the number of pages
'in the document
PageCount = HisLoadBuffer(id, HtmlString, Len(HtmlString))

If (PageCount > 0) Then
   ' get the output image type from a file name
```

```
    ImageType = HisGetImageType(id, "test.jpg")

    ' set the output image type
    call HisSetNumProp(id, HIPROP_IMAGE_TYPE, ImageType)

    ' return the page image in global memory handle
    hMem = HisImageToBuffer(id, OutSize, PageNo)
    If (hMem > 0) Then
     ' allocate space for the output string
     OutString = Space$(OutSize + 1)
     Call HisHandleToStr(OutString, OutSize, hMem)
    End If
  End if
```

After the conversion process, end the session by calling the HisEndSession function. This frees up the memory used by the session.

```
HisEndSession(id)
```

Note: HTML to Image converter makes use of Windows' GdiPlus API. GdiPlus must be installed on a system to use HTML to Image Converter.

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Application Interface functions

These API functions allow you to convert from HTML to Image format. Your application must include the HIC.H file (c/c++), or HIC.BAS (VB) files. These files declare these functions.

The following is a description of the HIC API functions in an alphabetic order:

In This Chapter

HisEndSession
HisGetImageType
HisGetLastMessage
HisGetLicnseStatus
HisGetPageImage

HisLoadBuffer
HisImageToBuffer
HisImageToFile
HisHandleToStr
HisLoadFile
HisNewSession
HisResetLastMessage
HisSetFlags
HisSetBoolProp
HisSetHdrFtrText
HisSetNumProp
HisSetPageMargin
HisSetPaperOrient
HisSetPaperSize
HisSetTextProp

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HisEndSession

End a conversion session.

BOOL HisEndSession(id)

DWORD id;	Session id.

Description: This function is called at the end of the conversion process to free up the session related resources.

Return Value: The function returns TRUE when successful.

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HisGetImageType

Get the image type constant for to the requested file name.

int HisGetImageType(id, ImageFile)

DWORD id;	// Session id
LPBYTE ImageFile;	// image file name

Return value: This method returns Image-type constant corresponding to the extension of the given file.

Examples:

```
' get the image type for a file name
```

```
ImageType = HisGetImageType(id, "test.jpg")

' set the output image type
HisSetNumProp(id, HIPROP_IMAGE_TYPE, ImageType)
```

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HisGetLastMessage

Get the last message.

int HisGetLastMessage(id, HICMessage, DebugMessage);

DWORD id;	Session id.
LPBYTE HICMessage;	Returns the default user message text in English
LPBYTE DebugMsg;	Returns any debug message associated with the last message. The debug message need not be displayed to the user.

Return Value: This function returns the last message generated by the editor. This value is valid only if saving of the messages is enabled by setting the HPFLAG_RETURN_MSG_ID flag. This flag is set using the HisSetFlags function.

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HisGetLicnseStatus

Get the license status.

int HisGetLicnseStatus()

Return Value:

0	License application successful.
1	Invalid License Key.
2	Invalid License Number.
3	Ran out of available licenses. Please consider purchasing additional licenses.

4 The evaluation period has expired.

You can use the HisGetLicenseStatus function at anytime to retrieve the license status.

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HisGetPageImage

Return the image for the requested page number for the currently loaded HTML document.

HANDLE HisGetPageImage(PageNo)

DWORD id;	Session id.
int PageNo;	// Page number. This value should be between 1 and the PageCount for the currently loaded HTML document.

Return value: This function returns a metafile handle for a metafile image, or a bitmap handle for other type of images. A null value indicates an error condition.

This function is useful if you wish to retrieve the image handle for further processing before saving to a disk file.

Examples:

```
PageCount=HisLoadFile(id,"test.htm");

HisSetNumProp(id, HIPROP_IMAGE_TYPE, PICT_JPG)

handle=HisGetPageImage(id, 1);
```

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HisLoadBuffer

Load html string and determine the number of pages in the html document..

int HisLoadBuffer(id, InString, InStringLen)

DWORD id;	Session id.
LPBYTE InString;	Input string containing HTML document.

int InStringLen;	length of the input document string.

Return value: This function returns the number of pages in the html document. A value of zero indicates an error condition.

Examples:

```
Dim HtmlString as string

PageCount = HisLoadBuffer(id,HtmlString, Len(HtmlString))
```

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HisImageToBuffer

Save the current image in a memory handle.

HGLOBAL HisImageToFile(id, OutFile, PageNo)

DWORD id;	// Session id
LPLONG OutSize;	// (output) size of the global memory block returned by this function.
int PageNo;	// Page number. This value should be between 1 and the PageCount for the currently loaded HTML document.

Return value: This method returns TRUE when successful.

Examples:

```
PageCount = HisLoadBuffer(id, HtmlString, Len(HtmlString))

If (PageCount > 0) Then
   ' set the output image type to Jpeg
   call HisSetNumProp(id, HIPROP_IMAGE_TYPE, PICT_JPG)

   ' return the page image in global memory handle
   hMem = HisImageToBuffer(id, OutSize, PageNo)
   If (hMem > 0) Then
     ' allocate space for the output string
     OutString = Space$(OutSize + 1)
     Call HisHandleToStr(OutString, OutSize, hMem)
   End If
End if
```

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HisImageToFile

Save the current image to the requested file name.

BOOL HisImageToFile(id, OutFile, PageNo)

DWORD id;	// Session id
LPBYTE OutFile;	// Output image file name
int PageNo;	// Page number. This value should be between 1 and the PageCount for the currently loaded HTML document.

Return value: This method returns TRUE when successful.

Examples:

```
PageCount = HisLoadFile(id, "test.htm")
If (PageCount > 0) Then
   PageNo = 1  'Get image for the first page of
               'the document
   result = HisImageToFile(id, "test.jpg", PageNo)
End If
```

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HisHandleToStr

Convert a global memory handle to a Visual Basic string.

BOOL HisHandleToStr(string, length, hMem)

LPBYTE string;	pointer to a visual basic string

long length	length of the string
HGLOBAL hMem;	Global memory handle

Description: This function can be used to copy the contents of a global memory handle to a given visual basic string. The calling routine must expand the string to appropriate length before calling this function.

Example:

```
string=space(length)
HandleToStr(string,length,hMem)
```

The input global memory handle is freed up after copying its contents to the string.

Return Value: This function returns TRUE if successful.

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HisLoadFile

Load html file and determine the number of pages in the html document..

int HisLoadFile(id, InString, InStringLen)

DWORD id;	Session id.
LPBYTE InFile;	Input file containing HTML document.
int InStringLen;	length of the input document string.

Return value: This function returns the number of pages in the html document. A value of zero indicates an error condition.

Examples:

```
Dim HtmlString as string

PageCount = HisLoadFile(id,"test.htm")
```

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HisNewSession

Create a new conversion session.

DWORD HisNewSession()

Description: This function needs to be called before calling any other conversion function. This function creates a new conversion session.

The HisEndSession must be called at the end to free up the session resources. All other conversion functions are called between the calls to the HisNewSession and HisEndSession functions.

Return Value: The function returns a non-zero session-id when successful. A zero value indicates a fail return.

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HisResetLastMessage

Reset the last editor message.

BOOL HisResetLastMessage(id)

DWORD id;   Session id.

Description: This function can be called before calling any other function to reset the last error message.

Return Value: The function returns TRUE when successful.

See Also
HisGetLastMessage
HisSetFlags

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HisSetFlags

Set certain flags or retrieve the values of the flags.

DWORD HisSetFlags(id, set, flags)

DWORD id;   Session id.

BOOL set;   TRUE to set the given flags, FALSE to reset the given flags

DWORD flags;   Flags (bits) to set or reset. Currently, the following flag values are available:

HPFLAG_RETURN_MSG_ID   Do not display the error messages. Save the error code to be later retrieved using the HisGetLastMessage function.

Return value: This function returns the new value of all the flags. Call this function with the 'flags' parameter set to zero to retrieve flag values without modifying it.

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HisSetBoolProp

Set a boolean property for the conversion.

BOOL HisSetBoolProp(id, prop, val)

DWORD id; Session id.

int prop; One of the following property type to set:

HIPROP_USE_WEB_BROWSER Use this property to instruct the converter to use the Internet Explorer control to render the html page to convert to image. This option results in images similar to as displayed by IE.

When this property is not set, the converter uses a built-in html renderer which might be suitable for html files that use simpler html formatting.

This property is set to TRUE by default.

HIPROP_SHRINK_TO_FIT Set to TRUE to eliminate the ending white spaces to shrink the image height. This property is only effective for one page html documents.

LPBYTE val; The text value of the selected property.

Return value: This function returns TRUE when successful.

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HisSetHdrFtrText

Set header or footer text.

BOOL HisSetHdrFtrText(id, HdrFtrType, TextType, text)

DWORD id; Session id.

int HdrFtrType; Select header or footer to set:

HF_FIRST_HDR Header text to print on the first page.

HF_FIRST_FTR Footer text to print on the first page..

HF_HDR Regular header for all pages. When the first page header is also set, then the regular header text is printed on all pages except the first page.

HF_FTR Regular footer for all pages. When the first page footer is also set, then the regular footer text is printed on all pages except the first page.

int TextType; Text type:

HFTYPE_TEXT Plain text.

HFTYPE_RTF RTF text.

HFTYPE_HTML Html text.

LPBYTE text; Header or footer text. The header/footer text must be specified as plain text or RTF text depending upon the value passed for the 'TextType' parameter.

Comment: The function should be called before calling the conversion functions to set the header or footer text. You can call this function multiple times to set various types of header or footer.

Return value: This function returns TRUE when successful.

Examples:

```
HisSetHdrFtrText(id, HF_FIRST_HDR, HFTYPE_TEXT,
                 "This is first page header.");
HisSetHdrFtrText(id, HF_FIRST_FTR, HFTYPE_TEXT,
                 "This is first page footer.");
HisSetHdrFtrText(id,HF_HDR, HFTYPE_TEXT,
                 "This is regular page header.");
HisSetHdrFtrText(id,HF_FTR, HFTYPE_RTF,"{\\rtf1 \\qc
    Page: {\\field{\\fldinst PAGE}{\\fldrslt 12}} of
    {\\field{\\fldinst NUMPAGES}{\\fldrslt 12}}
    \\par}" );  // rtf example to insert page: n of m string
```

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HisSetNumProp

Set a numeric property for the conversion.

BOOL HisSetNumProp(id, prop, val)

DWORD id; Session id.

int prop; One of the following property type to set:

HIPROP_IMAGE_RES Use this property to specify the resolution of an image. The default value is 96 dpi.

HIPROP_META_RES Use this property to specify the resolution of a metafile image. The default value is 300

HIPROP_SIZE_PERCENT Use this property to change the size of the output image. The default value for this property is 100. You can specify a value small than 100 to obtain a smaller image. Similarly you can specify a value greater than 100 to obtain a larger image.

HIPROP_IMAGE_TYPE Use this property to request a particular type of image (default is Bitmap file):

PICT_BMP	Bitmap image
PICT_EMF	Enhanced metafile
PICT_TIF	Tiff image
PICT_JPG	Jpeg image
PICT_PNG	PNG image
PICT_GIF	GIF image

int val; The numeric value of the selected property.

Return value: This function returns TRUE when successful.

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HisSetPageMargin

Set the page margins for PDF output.

BOOL HisSetPageMargin(id, left, right, top, bottom)

DWORD id;	Session id.
int left;	Left margin in twip units (1440 twips = 1 inch)
int right;	Right margin in twip units
int top;	Top margin in twip units
int bottom	Bottom margin in twip units

Return Value: The function returns TRUE when successful.

Comment: This function is used to override the default page margins when converting an HTML document to the PDF format. This function should be called before calling the HisConvertFile or HisConvertBuffer if you wish override the page margin values.

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HisSetPaperOrient

Set the page orientation for PDF output.

BOOL HisSetPaperOrient(id, orient)

DWORD id;	Session id.
int orient;	Orientation: DMORIENT_PORTRAIT or DMORIENT_LANDSCAPE

Return Value: The function returns TRUE when successful.

Comment: This function is used to override the default portrait orientation when converting an HTML document to the PDF format. This function should be called before calling the HisConvertFile or HisConvertBuffer if you wish override the paper orientation.

HisSetPaperSize

Set the page size for PDF output.

BOOL HisSetPaperSize(id, PageSize, PageWidth, PageHeight)

DWORD id; Session id.

int PageSize; Use one of the following Windows SDK defined constants:

Constant	Value
DMPAPER_LETTER	1
DMPAPER_LEGAL	5
DMPAPER_LEDGER	4
DMPAPER_TABLOID	3
DMPAPER_STATEMENT	6
DMPAPER_EXECUTIVE	7
DMPAPER_A3	8
DMPAPER_A4	9
DMPAPER_A5	11
DMPAPER_B4	12
DMPAPER_B5	13

If you need to use a paper size not listed above, please set the PageSize argument to zero and specify the page width and height using the next two arguments.

int PageWidth; The page width in twips units (1440 twips = 1 inch). This argument is ignored if the PageSize is set to one of the defined page sizes listed above.

int PageHeight; The page height in twips units (1440 twips = 1 inch). This argument is ignored if the PageSize is set to one of the defined page sizes listed above

Return Value: The function returns TRUE when successful.

Comment: This function is used to override the default letter size paper when converting an HTML document to the PDF format. This function should be called before calling the HisConvertFile or HisConvertBuffer if you wish override the paper size.

HisSetTextProp

Set a text property for the conversion.

BOOL HisSetTextProp(id, prop, val)

DWORD id; Session id.

int prop; One of the following property type to set:

HIPROP_DOWNLOAD_DIR Folder to store temporary html pictures files during conversion.

LPBYTE val; The text value of the selected property.

Return value: This function returns TRUE when successful.

ASP Interface

This chapter describes the usage of the HTML to Image Converter within an ASP page. The product includes an additional wrapper DLL called HICC.DLL which is used to access the converter within an ASP page. Please follow the following steps:

Copy His32.dll,HICC.dll, and other DLLs from the distribution zip file to the Windows system directory, or any other directory available at the run-time. Now register HICC.dll using the regsvr32 system utility. The other dlls do not need registration. Now you are ready to use this product within an ASP page.

Here is an example ASP page to show a conversion of Html string into an image:

```
<%@ LANGUAGE = "VBSCRIPT"%>
<%
Option Explicit

Dim sHTML
Dim obj
Dim PageCount
Dim result
Dim ErrorMessage

Set obj = Server.CreateObject("hicc.converter")
result=obj.SetTextProp(obj.VAL_HIPROP_DOWNLOAD_DIR,
                "c:\inetpub\wwwroot\MyProjectFolder")

sHTML = "<html><body> This <b> is </b> a test of <i> HTML </i>
        to <i> Image </i> Conversion. This sample would
        convert this html to a jpeg file and save it as
        test.jpg file.</body></html>"

PageCount = 0
if len(sHTML) > 0 then
  PageCount = obj.LoadBuffer(CStr(sHTML))
  result =
obj.ImageToFile("c:\inetpub\wwwroot\dmohic\test.jpg",1)
End If

if PageCount = 0 then
  ErrorMessage = obj.GetLastMessage
  response.write(ErrorMessage)
end if


Set obj = Nothing
%>

<html>
<head>
</head>

<body>

<img border=1 src="test.jpg">

</body>
</html>
```

When the above asp file is loaded, IE displays the generated image.

The method names used by the HICC.dll are the same as the functions mentioned in the Application Interface functions. However the 'His' prefix is not used by the HICC method names. For example, the HisConvertFile function is named as ConvertFile within the HICC.dll file.

Also, the constants values are prefixed with an 'VAL_' prefix. For example, the constant HIPROP_IMAGE_TYPE becomes VAL_HIPROP_IMAGE_TYPE.