注意加上

WINVER=0x0501

\_WIN32\_WINNT=0x0501

\_WIN32\_WINDOWS=0x0501

\_WIN32\_IE=0x0501

負責會導致編譯錯誤。

1：COM\_INTERFACE\_ENTRY(IColumnProvider)

struct \_\_declspec(uuid("E8025004-1C42-11d2-BE2C-00A0C9A83DA1")) IColumnProvider; 申明否則會報錯 因為在comdef中沒有關於IColumnProvider的申明。

2：{&IID\_IColumnProvider,((DWORD\_PTR)(static\_cast<IColumnProvider\*>((\_ComMapClass\*)8))-8), (\_ATL\_CREATORARGFUNC\*)1},

3：COM\_INTERFACE\_ENTRY\_IID(IID\_IColumnProvider,IColumnProvider)

顯示的指定 IID

HRESULT STDMETHODCALLTYPE Initialize(LPCSHCOLUMNINIT psci);

HRESULT STDMETHODCALLTYPE GetColumnInfo(DWORD dwIndex, SHCOLUMNINFO \*psci);

HRESULT STDMETHODCALLTYPE GetItemData(LPCSHCOLUMNID pscid, LPCSHCOLUMNDATA pscd, VARIANT \*pvarData);

**SHCOLUMNINIT structure**

Passes initialization information to [**IColumnProvider::Initialize**](http://msdn.microsoft.com/en-us/library/windows/desktop/bb776148%28v=vs.85%29.aspx).

**Syntax**

C++

typedef struct {

ULONG dwFlags;

ULONG dwReserved;

WCHAR wszFolder[MAX\_PATH];

} SHCOLUMNINIT, \*LPSHCOLUMNINFO;

**Members**

**dwFlags**

Type: **ULONG**

Initialization flags. Reserved. Set to **NULL**

**dwReserved**

Type: **ULONG**

Reserved. Set to **NULL**.

**wszFolder**

Type: **WCHAR[MAX\_PATH]**

A pointer to a null-terminated Unicode string with a fully qualified folder path. The string will be empty if multiple folders are specified.

**IColumnProvider::GetColumnInfo method**

Requests information about a column.

**Syntax**

C++

HRESULT GetColumnInfo(

DWORD dwIndex,

[out]  SHCOLUMNINFO \*psci

);

**Parameters**

*dwIndex*

Type: **DWORD**

The column's zero-based index. It is an arbitrary value that is used to enumerate columns.

*psci* [out]

Type: [**SHCOLUMNINFO**](http://msdn.microsoft.com/en-us/library/windows/desktop/bb759751%28v=vs.85%29.aspx)**\***

A pointer to an [**SHCOLUMNINFO**](http://msdn.microsoft.com/en-us/library/windows/desktop/bb759751%28v=vs.85%29.aspx) structure to hold the column information.

**Return value**

Type: **HRESULT**

Returns a COM error value to indicate that the request was unsuccessful or one of the following values.

**IColumnProvider::GetItemData method**

Requests column data for a specified file.

**Syntax**

C++

HRESULT GetItemData(

[in]   LPCSHCOLUMNID pscid,

[in]   LPCSHCOLUMNDATA pscd,

[out]  VARIANT \*pvarData

);

**Parameters**

*pscid* [in]

Type: **LPCSHCOLUMNID**

An [**SHCOLUMNID**](http://msdn.microsoft.com/en-us/library/windows/desktop/bb759748%28v=vs.85%29.aspx) structure that identifies the column.

*pscd* [in]

Type: **LPCSHCOLUMNDATA**

An [**SHCOLUMNDATA**](http://msdn.microsoft.com/en-us/library/windows/desktop/bb759747%28v=vs.85%29.aspx) structure that specifies the file.

*pvarData* [out]

Type: **VARIANT\***

A pointer to a **VARIANT** with the data for the file specified by *pscd* that belongs in the column specified by *pscid*. Set this value if the file is a member of the class supported by the column provider.

**Return value**

Type: **HRESULT**

Returns S\_OK if file data is returned, S\_FALSE if the file is not supported by the column provider and no data is returned, or a COM error value otherwise.

**SHCOLUMNINFO structure**

Contains information about the properties of a column. It is used by [**IColumnProvider::GetColumnInfo**](http://msdn.microsoft.com/en-us/library/windows/desktop/bb776145%28v=vs.85%29.aspx).

**Syntax**

C++

typedef struct {

SHCOLUMNID scid;

VARTYPE    vt;

DWORD      fmt;

UINT       cChars;

DWORD      csFlags;

WCHAR      wszTitle[MAX\_COLUMN\_NAME\_LEN];

WCHAR      wszDescription[MAX\_COLUMN\_DESC\_LEN];

} SHCOLUMNINFO, \*LPSHCOLUMNINFO;

**Members**

**scid**

Type: [**SHCOLUMNID**](http://msdn.microsoft.com/en-us/library/windows/desktop/bb759748%28v=vs.85%29.aspx)

A [**SHCOLUMNID**](http://msdn.microsoft.com/en-us/library/windows/desktop/bb759748%28v=vs.85%29.aspx) structure that uniquely identifies the column.

**vt**

Type: [**VARTYPE**](http://msdn.microsoft.com/en-us/library/windows/desktop/ms221127%28v=vs.85%29.aspx)

The native [**VARIANT**](http://msdn.microsoft.com/en-us/library/windows/desktop/ms221127%28v=vs.85%29.aspx) type of the column's data.

**fmt**

Type: **DWORD**

[List view format](http://msdn.microsoft.com/en-us/library/windows/desktop/bb774743%28v=vs.85%29.aspx). This member is normally set to LVCFMT\_LEFT.

**cChars**

Type: **UINT**

The default width of the column, in characters.

**csFlags**

Type: **DWORD**

Flags indicating the default column state. It can be a combination of the following flags.

**SHCOLSTATE\_TYPE\_STR**

A string.

**SHCOLSTATE\_TYPE\_INT**

An integer.

**SHCOLSTATE\_TYPE\_DATE**

A date.

**SHCOLSTATE\_ONBYDEFAULT**

Shown by default in Windows Explorer Details view, even if the user has not selected the column. If this flag is set, the column will be displayed for all folders. There is no way to force a column to be displayed on a per-folder basis.

**SHCOLSTATE\_SLOW**

Slow to compute. Windows Explorer should retrieve the data asynchronously and do the computation on a background thread.

**SHCOLSTATE\_EXTENDED**

Provided by a handler, not the folder object.

**SHCOLSTATE\_SECONDARYUI**

Not displayed in the shortcut menu, but listed in the **More...** dialog box.

**SHCOLSTATE\_HIDDEN**

Not displayed in the user interface.

**wszTitle**

Type: **WCHAR[MAX\_COLUMN\_NAME\_LEN]**

A null-terminated Unicode string with the column's title. It must contain no more than MAX\_COLUMN\_NAME\_LEN characters, including the terminating **NULL**.

**wszDescription**

Type: **WCHAR[MAX\_COLUMN\_DESC\_LEN]**

A null-terminated Unicode string with the column's description. It must contain no more than MAX\_COLUMN\_DESC\_LEN characters, including the terminating **NULL**.

**SHCOLUMNID structure**

Specifies the FMTID/PID identifier of a column that will be displayed by the Windows Explorer Details view.

**Note**  As of Windows Vista, **SHCOLUMNID** is considered a legacy form and should not be used. In its place, use the [**PROPERTYKEY**](http://msdn.microsoft.com/en-us/library/windows/desktop/bb773381%28v=vs.85%29.aspx) structure.

**Syntax**

C++

typedef struct {

GUID  fmtid;

DWORD pid;

} SHCOLUMNID, \*LPSHCOLUMNID;

**Members**

**fmtid**

Type: **GUID**

A property set format identifier or FMTID (a GUID). The Shell supports the storage, Shell details, and summary information property sets. Other property sets can be supported by particular folders.

({B725F130-47EF-101A-A5F1-02608C9EEBAC})

Storage property set. Defined in Ntquery.h.

({28636AA6-953D-11D2-B5D6-00C04FD918D0})

Shell details property set. Defined in Shlguid.h.

({9B174B33-40FF-11D2-A27E-00C04FC30871})

Displaced property set. Defined in Shlguid.h.

({9B174B34-40FF-11D2-A27E-00C04FC30871})

Miscellaneous property set. Defined in Shlguid.h.

({9B174B35-40FF-11D2-A27E-00C04FC30871})

Volume property set. Defined in Shlguid.h.

({49691C90-7E17-101A-A91C-08002B2ECDA9})

Query property set. Defined in Shlguid.h.

({F29F85E0-4FF9-1068-AB91-08002B27B3D9})

Summary information property set. Defined in Ntquery.h.

**pid**

Type: **DWORD**

The column's property identifier (PID).

The storage property set supports the five PIDs, defined in Ntquery.h.

|  |  |  |  |
| --- | --- | --- | --- |
| **PID** | **Value** | **Description** | **Type** |
| PID\_STG\_NAME | 10 | The object's display name | VT\_BSTR |
| PID\_STG\_STORAGETYPE | 4 | The object's type | VT\_BSTR |
| PID\_STG\_SIZE | 12 | The object's size | VT\_BSTR |
| PID\_STG\_WRITETIME | 14 | The object's modified attribute | VT\_BSTR |
| PID\_STG\_ATTRIBUTES | 13 | The object's attributes | VT\_BSTR |

The Shell details property set supports three PIDs, defined in Shlguid.h. Note that PID\_FINDDATA supports only the Unicode version of the [**WIN32\_FIND\_DATA**](http://msdn.microsoft.com/en-us/library/windows/desktop/aa365740%28v=vs.85%29.aspx) structure.

**Note** These PIDs extract only information that is present in the object's PIDL. Since the content of a PIDL depends on the folder object that created the PIDL, there is no guarantee that all requested information will be available. In addition, the information that is returned reflects the state of the object at the time the PIDL was created. The current state of the object might be different. To retrieve complete current information on a file system file or folder, use standard file system functions such as [**GetFileTime**](http://msdn.microsoft.com/en-us/library/windows/desktop/ms724320%28v=vs.85%29.aspx) or [**FindFirstFile**](http://msdn.microsoft.com/en-us/library/windows/desktop/aa364418%28v=vs.85%29.aspx).

|  |  |  |  |
| --- | --- | --- | --- |
| **PID** | **Value** | **Description** | **Type** |
| PID\_DESCRIPTIONID | 2 | A [**SHDESCRIPTIONID**](http://msdn.microsoft.com/en-us/library/windows/desktop/bb759775%28v=vs.85%29.aspx) structure. | VT\_ARRAY | VT\_UI1 |
| PID\_FINDDATA | 0 | A [**WIN32\_FIND\_DATAW**](http://msdn.microsoft.com/en-us/library/windows/desktop/aa365740%28v=vs.85%29.aspx) structure. | VT\_ARRAY | VT\_UI1 |
| PID\_NETRESOURCE | 1 | A [**NETRESOURCE**](http://msdn.microsoft.com/en-us/library/windows/desktop/aa385353%28v=vs.85%29.aspx) structure. | VT\_ARRAY | VT\_UI1 |

The displaced property set supports files that have been deleted and moved to the Recycle Bin. There are two PIDs, defined in Shlguid.h.

|  |  |  |
| --- | --- | --- |
| **PID** | **Value** | **Description** |
| PID\_DISPLACED\_FROM | 2 | Location that file was deleted from. |
| PID\_DISPLACED\_DATE | 3 | Date that the file was deleted. |

The miscellaneous property set is used to support synchronization of briefcases or offline files. It has three PIDs, defined in Shlguid.h.

|  |  |  |
| --- | --- | --- |
| **PID** | **Value** | **Description** |
| PID\_MISC\_ACCESSCOUNT | 3 | Not used. |
| PID\_MISC\_OWNER | 4 | Ownership of the file (for the NTFS file system). |
| PID\_MISC\_STATUS | 2 | The synchronization status. |

The query property set is used to support file searches. It has one PID, defined in Shlguid.h.

|  |  |  |
| --- | --- | --- |
| **PID** | **Value** | **Description** |
| PID\_QUERY\_RANK | 2 | The rank of the file. |

The volume property set provides volume information. It has one PID, defined in Shlguid.h.

|  |  |  |
| --- | --- | --- |
| **PID** | **Value** | **Description** |
| PID\_VOLUME\_FREE | 2 | The amount of free space. |

The summary information property set is a standard OLE property set that supports the following PIDs.

|  |  |  |
| --- | --- | --- |
| **PID** | **Property name** | **Type** |
| 2 | Title | VT\_LPSTR |
| 3 | Subject | VT\_LPSTR |
| 4 | Author | VT\_LPSTR |
| 5 | Keywords | VT\_LPSTR |
| 6 | Comments | VT\_LPSTR |
| 7 | Template | VT\_LPSTR |
| 8 | Last Saved By | VT\_LPSTR |
| 9 | Revision Number | VT\_LPSTR |
| 10 | Total Editing Time | VT\_FILETIME |
| 11 | Last Printed | VT\_FILETIME |
| 12 | Create Time/Date | VT\_FILETIME |
| 13 | Last Saved Time/Date | VT\_FILETIME |
| 14 | Number of Pages | VT\_I4 |
| 15 | Number of Words | VT\_I4 |
| 16 | Number of Characters | VT\_I4 |
| 17 | Thumbnail | VT\_CF |
| 18 | Name of Creating Application | VT\_LPSTR |
| 19 | Security | VT\_I4 |

**Remarks**

As of Windows Vista, this structure was removed from the public headers and replaced by the [**PROPERTYKEY**](http://msdn.microsoft.com/en-us/library/windows/desktop/bb773381%28v=vs.85%29.aspx) structure. **SHCOLUMNID** is now defined in Shtypes.h as follows.

typedef PROPERTYKEY SHCOLUMNID;

typedef const SHCOLUMNID\* LPCSHCOLUMNID;