# Windows Shell Item format specification

*Analysis of the Windows Shell Item format*

By Joachim Metz <jbmetz@users.sourceforge.net>

# Summary

The Windows Shell uses Shell Items to identify items within the Windows Folder Hierarchy. A Shell Item is much like a filename, and is unique to its parent folder. The format of the Shell Item is undocumented and varies between Windows versions. This specification is based on earlier work on the format and was complimented by reverse engineering.

This document is intended as a working document for the Windows Shell Items format specification. Which should allow existing Open Source forensic tooling to be able to process this file type.

# Document information

**Author(s):**  Joachim Metz <jbmetz@users.sourceforge.net>

**Abstract:**  This document contains information about the Windows Shell Item format.

**Classification:** Public

**Keywords:**  Windows Shell Item

# License

# Version

| Version | Author | Date | Comments |
| --- | --- | --- | --- |
| 0.0.1 | J.B. Metz | July 2010 | Initial version based on earlier work. |
| 0.0.2 | J.B. Metz | August 2010 | Additional Windows 7 information. |
| 0.0.3 | J.B. Metz | August 2010 | Additional known folder identifiers |
| 0.0.4 | J.B. Metz | August 2010 | Additional shell item information, control panel shell item information, folder type and Windows 7 shell library information. |
| 0.0.5 | J.B. Metz | August 2010 | Additional shell column property information. |
| 0.0.6 | J.B. Metz | September 2010 | Merged directory name and filename shell items into file entry shell item.<br>Added information about NTFS file reference.<br>Corrected references. |
| 0.0.7 | J.B. Metz | January 2011 | License version update<br>Additional Windows 2000 and Server 2003 information. |

# Table of Contents

# 1. Overview

The Windows Shell uses Shell Items to identify items within the Windows Folder Hierarchy. A Shell Item is much like a filename, and is unique to its parent folder. The format of the Shell Item is undocumented and varies between Windows versions.

| Characteristics | Description |
|---|---|
| Byte order | little-endian |
| Date and time values | in UTC |
| Character string | ASCII strings are stored in extended ASCII with a codepage. Unicode strings are stored in UTF-16 little-endian without the byte order mark (BOM). |

## 1.1. Test versions

The following version of programs were used to test the information within this document:
- TODO Windows NT4
- Windows 2000 (SP4)
- Windows XP (SP3)
- Windows Server 2003
- Windows Vista (SP0)
- TODO Windows 2008 server
- Windows 7 (SP0)

# 2. Shell Item list

The Shell Item list (ITEMIDLIST) is variable of size and consists of:

| offset | size | value | description |
|---|---|---|---|
| 0 | ... | | The Shell Item |
| ... | 2 | 0 | Terminal identifier Signifies the end of the Shell Item list |

The shell items identifiers list consists of Shell Item terminated by the terminal identifier (an empty Shell Item).

# 3. Shell Item

The Shell Item (SHITEMID) is variable of size and consists of:

| offset | size | value | description |
|---|---|---|---|
| 0 | 2 | | The size of the shell item including the 2 bytes of the size itself |
| 2 | ... | | Shell Item data |

## 3.1. Shell Item data

The first byte in the Shell Item data contains a type indicator.

| Value | Identifier | Description |
|---|---|---|
| 0x00 | | Unknown |
| 0x01 | | Unknown |
| | | |
| 0x1f | | Folder identifier |
| | | |
| 0x2e | | Unknown identifier |
| 0x2f | | Volume name |
| | | |
| 0x31 | | File entry |
| 0x32 | | File entry |
| | | |
| 0x41 | | Network volume name |
| 0x42 | | Network volume name |
| | | |
| 0x46 | | Network volume name |
| 0x47 | | Network volume name |
| | | |
| 0x61 | | URI |
| | | |
| 0x71 | | Control Panel |
| | | |
| 0xb1 | | File entry |
| | | |
| 0xc3 | | Network share |
| | | |

Note that the indicator could also could be a combination of flags.

## 3.2. 0x00 Shell Item data

The 0x00 Shell Item data is variable of size and consists of the following values:

| offset | size | value | description |
|---|---|---|---|
| 0 | 1 | 0x00 | Type indicator |
| 1 | 1 | | Flags<br>Empty value |

| offset | size | value | description |
|---|---|---|---|
| 2 | 2 | | Data size<br>The size of the following data, the additional data blocks not included |
| 4 | 4 | | Unknown<br>Data type or flags? |
| 8 | 2 | | Shell column property list size<br>0 if not present |
| 10 | 2 | | Identifier size |
| 12 | ... | | Identifier data |
| *If size of shell column property list size > 0* | | | |
| ... | ... | | Shell column property list |
| *Common* | | | |
| ... | 2 | | Unknown<br>Empty bytes |
| *Additional data blocks*<br>*(found in relation to Win7 shell library: Documents)*<br>*Multiple data block that continue as long there is data available* | | | |
| ... | 2 | | Size of following data block |
| ... | ... | | Unknown data block |

Identifier?

Preceded by shell item item type 0x1f flags 0x44

```
00000000: 00 00 1a 00 ee bb fe 23  00 00 10 00 90 e2 4d 37   .......# ......M7
00000010: 3f 12 65 45 91 64 39 c4  92 5e 46 7b 00 00         ?.eE.d9. .^F{..
```

| Unknown (Data type?) | Size | Description |
|---|---|---|
| 0x23febbee | 16 | Folder identifier<br>Contains a GUID<br>See section: 4.2 Known folder identifiers |
| 0x3b93afbb | 4 | Contains a 32-bit value |
| 0xbeebee00 | 4 | Contains a 32-bit value |

## 3.2.1. Shell column property list

Found in Vista BagMRU

```
shell item size                    : 259
shell item data:
00000000: 00 00 fd 00 00 ee eb be  ef 00 04 00 01 00 00 00   ....... ........

00000010: 55 00 00 00 31 53 50 53  30 f1 25 b7 ef 47 1a 10   U...1SPS 0.%..G..
00000020: a5 f1 02 60 8c 9e eb ac  39 00 00 00 0a 00 00 00   ...`.... 9.......
00000030: 00 1f 00 00 00 13 00 00  00 44 00 65 00 73 00 6b   ........ .D.e.s.k
```
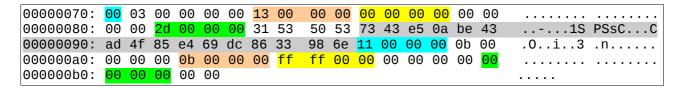
```
00000040: 00 74 00 6f 00 70 00 20  00 42 00 61 00 63 00 6b   .t.o.p.  .B.a.c.k
00000050: 00 67 00 72 00 6f 00 75  00 6e 00 64 00 00 00 00   .g.r.o.u .n.d....
00000060: 00 00 00 00 00 4d 00 00  00 31 53 50 53 87 27 bf   .....M.. .1SPS.'.
00000070: 5c cf 48 08 42 b9 0e ee  5e 5d 42 02 94 31 00 00   \.H.B... ^]B..1..
00000080: 00 19 00 00 00 00 1f 00  00 00 10 00 00 00 74 00   ........ ......t.
00000090: 68 00 65 00 6d 00 65 00  63 00 70 00 6c 00 2e 00   h.e.m.e. c.p.l...
000000a0: 64 00 6c 00 6c 00 2c 00  2d 00 31 00 00 00 00 00   d.l.l.,. -.1.....
000000b0: 00 00 49 00 00 00 31 53  50 53 53 7d ef 0c 64 fa   ..I...1S PSS}..d.
000000c0: d1 11 a2 03 00 00 f8 1f  ed ee 2d 00 00 00 05 00   ........ ..-.....
000000d0: 00 00 00 1f 00 00 00 0e  00 00 00 70 00 61 00 67   ........ ...p.a.g
000000e0: 00 65 00 57 00 61 00 6c  00 6c 00 70 00 61 00 70   .e.W.a.l .l.p.a.p
000000f0: 00 65 00 72 00 00 00 00  00 00 00 00 00 00 00 00   .e.r.... ........
00000100: 00                                                 .
```

number of characters

```
shell item type              : 0x00
shell item flags             : 0x00
shell item list size         : 253
```

```
shell item size              : 251
libfwsi_item_copy_from_byte_stream: shell item data:
00000000: 00 00 f5 00 00 ee eb be  e7 00 04 00 01 00 00 00   ........ ........

00000010: 4d 00 00 00 31 53 50 53  30 f1 25 b7 ef 47 1a 10   M...1SPS 0.%..G..
00000020: a5 f1 02 60 8c 9e eb ac  31 00 00 00 0a 00 00 00   ...`.... 1.......
00000030: 00 1f 00 00 00 10 00 00  00 43 00 68 00 61 00 6e   ........ .C.h.a.n
00000040: 00 67 00 65 00 20 00 73  00 65 00 74 00 74 00 69   .g.e. .s .e.t.t.i
00000050: 00 6e 00 67 00 73 00 00  00 00 00 00 00            .n.g.s.. .....M..
```

Variant type
Number of characters

```
00000050:                                   4d 00 00         .n.g.s.. .....M..
00000060: 00 31 53 50 53 87 27 bf  5c cf 48 08 42 b9 0e ee   .1SPS.'. \.H.B...
00000070: 5e 5d 42 02 94 31 00 00  00 19 00 00 00 00 1f 00   ^]B..1.. ........
00000080: 00 00 0f 00 00 00 77 00  75 00 63 00 6c 00 74 00   ......w. u.c.l.t.
00000090: 75 00 78 00 2e 00 64 00  6c 00 6c 00 2c 00 2d 00   u.x...d. l.l.,.-.
000000a0: 31 00 00 00 00 00 00 00  00 00                     1....... ..I...1S

000000a0:                                   49 00 00 00 31 53   1....... ..I...1S
000000b0: 50 53 53 7d ef 0c 64 fa  d1 11 a2 03 00 00 f8 1f   PSS}..d. ........
000000c0: ed ee 2d 00 00 00 05 00  00 00 00 1f 00 00 00 0d   ..-..... ........
000000d0: 00 00 00 70 00 61 00 67  00 65 00 53 00 65 00 74   ...p.a.g .e.S.e.t
000000e0: 00 74 00 69 00 6e 00 67  00 73 00 00 00 00 00 00   .t.i.n.g .s......
000000f0: 00 00 00 00 00 00 00 00  00                        ........ .
```

```
shell item type              : 0x00
shell item flags             : 0x00
shell item list size         : 245
```

```
00000000: 00 00 b1 00 bb af 93 3b  a3 00 04 00 00 00 00 00   .......; ........

00000010: 45 00 00 00 31 53 50 53  30 f1 25 b7 ef 47 1a 10   E...1SPS 0.%..G..
00000020: a5 f1 02 60 8c 9e eb ac  29 00 00 00 0a 00 00 00   ...`.... ).......
00000030: 00 1f 00 00 00 0c 00 00  00 31 00 30 00 2e 00 31   ........ .1.0...1
00000040: 00 30 00 2e 00 31 00 30  00 2e 00 35 00 35 00 00   .0...1.0 ...5.5..
00000050: 00 00 00 00 00 2d 00 00  00 31 53 50 53 3a a4 bd   .....-.. .1SPS:..
00000060: de b3 37 83 43 91 e7 44  98 da 29 95 ab 11 00 00   ..7.C..D ..).....
```

```
00000070: 00 03 00 00 00 00 13 00  00 00 00 00 00 00 00 00   ........ ........
00000080: 00 00 2d 00 00 00 31 53  50 53 73 43 e5 0a be 43   ..-...1S PSsC...C
00000090: ad 4f 85 e4 69 dc 86 33  98 6e 11 00 00 00 0b 00   .O..i..3 .n......
000000a0: 00 00 00 0b 00 00 00 ff  ff 00 00 00 00 00 00 00   ........ ........
000000b0: 00 00 00 00 00                                     .....
```

Related to details list view?
IColumnProvider?
*Shell Column information (SHCOLUMNINFO)*
*Windows System Property key (PROPERTYKEY) or Shell Column identifier (SHCOLUMNID)*

The Shell column property list is variable of size and consists of:

| offset | size | value | description |
|--------|------|-------|-------------|
| 0 | ... | | The shell column property |
| ... | 4 | 0 | Terminal identifier Signifies the end of the shell column property list |

## 3.2.2. Shell column property

The Shell column property is variable of size and consists of:

| offset | size | value | description |
|--------|------|-------|-------------|
| 0 | 4 | | The size of the shell column property including the 4 bytes of the size itself |
| 4 | 4 | | Unknown or 2 x 16-bit values |
| 8 | 16 | | Property key format identifier GUID |
| 24 | 4 | | Size of the property key data |
| *Property key data* | | | |
| 28 | 5 | | Unknown |
| 33 | 4 | | Property variant type |
| 37 | ... | | Property data It size is determined by the variant type |
| ... | 4 | | Unknown Empty bytes |

## 3.2.3. Property variant type

(PROPVARIANT)

## 3.2.4. Additional data block

Found in Win7 BagMRU

```
indicates the type?
```

```
00000000: 00 00 1a 00 ee bb fe 23  00 00 10 00 7d b1 0d 7b    .......# ....}..{
00000010: d2 9c 93 4a 97 33 46 cc  89 02 2e 7c 00 00          ...J.3F. ...|..*.
```

known folder id

Specific to win7 shell library (IShellLibrary), e.g. child folders?

```
00000010:                                            2a 00    ...J.3F. ...|..*.
00000020: 00 00 00 00 ef be 00 00  00 20 00 00 00 00 00 00    ........ . ......
00000030: 00 00 00 00 00 00 00 00  00 00 00 00 00 00 00 00    ........ ........
00000040: 00 00 01 00 00 00 20 00  2a 00 00 00 00 00 ef be    ...... . *.......
00000050: 7e 47 b3 fb e4 c9 3b 4b  a2 ba d3 f5 d3 cd 46 f9    ~G....;K ......F.
00000060: 82 07 ba 82 7a 5b 69 45  b5 d7 ec 83 08 5f 08 cc    ....z[iE ....._..
00000070: 20 00 2a 00 00 00 00 00  ef be 00 00 00 20 00 00     .*..... ..... ..
00000080: 00 00 00 00 00 00 00 00  00 00 00 00 00 00 00 00    ........ ........
00000090: 00 00 00 00 00 00 01 00  00 00 20 00                ........ .. .
```

empty folder type?
Empty unknown GUID?

IShellLibrary data block?

| offset | size | value | description |
|---|---|---|---|
| 0 | 2 | 0x002a | The size of the data<br>including the 2 bytes of the size itself |
| 2 | 4 | | Unknown<br>Empty bytes |
| 6 | 2 | 0xbeef | Unknown<br>Probably remnant of uninitialized memory |
| 8 | 16 | | Folder type<br>GUID |
| 24 | 16 | | Unknown<br>GUID |
| 40 | 2 | | Unknown<br>0x0020 |

## 3.2.5. Notes

Preceded by shell item type 0x1f flags 0x80 ?

Found in Windows 7 Chess.lnk
```
00000000: 00 00 47 46 53 49 e5 86  52 20 f2 f5 06 43 bd b1    ..GFSI.. R ...C..
00000010: 86 42 45 e3 32 27 00 00  00 00 00 00 00 00          .BE.2'.. ......
```

Found in Windows 7 FreeCell.lnk
```
00000000: 00 00 47 46 53 49 96 55  81 6c 1f 82 b3 40 8a 84    ..GFSI.U .l...@..
00000010: 64 3b 73 a8 eb 16 00 00  00 00 00 00 00 00          d;s..... ......
```

For now these do not correspond to the other 0x00 shell item data

| offset | size | value | description |
|--------|------|-------|-------------|
| 0 | 1 | 0x00 | Type indicator |
| 1 | 1 | | Flags<br>Empty value |
| 2 | 4 | | Unknown |
| 6 | 16 | | GUID<br>GameExplorer related |
| 22 | 8 | | Unknown<br>Empty bytes |

### 3.3. 0x01 Shell Item data

The 0x01 Shell Item data is 10 bytes of size and consists of the following values:

| offset | size | value | description |
|--------|------|-------|-------------|
| 0 | 1 | 0x01 | Type indicator |
| 1 | 1 | | Flags<br>Empty value |
| 2 | 8 | | Unknown<br>Some kind of numeric identifier the actual values do not variate much<br>Or 2x 32-bit value |

Found in Windows 7 BagMRU

```
shell item size                   : 12
shell item data:
00000000: 01 00 84 21 de 39 00 00  00 00                     ...!.9.. ..

shell item type                   : 0x01
```

### 3.4. Folder identifier Shell Item data

The folder identifier Shell Item data is 18 bytes of size and consists of the following values:

| offset | size | value | description |
|--------|------|-------|-------------|
| 0 | 1 | 0x1f | Type indicator |
| 1 | 1 | | Bit values<br>0x00 Internet Explorer<br>0x42 Libraries<br>0x44 Users<br>0x48 My Documents<br>0x50 My computer<br>0x58 My Network Places/Network<br>0x60 Recycle bin<br>0x68 Internet Explorer<br>0x70 |

| offset | size | value | description |
|---|---|---|---|
| | | | <mark>0x80 My Games<br>Related to KNOWN_FOLDER_FLAG<br>or CSIDL_FLAG?</mark> |
| 2 | 16 | | Folder identifier<br>Contains a GUID<br>See section: 4.2 Known folder identifiers |

## 3.4.1. Notes

Bit values

| offset | size | value | description |
|---|---|---|---|
| 0.0 | 4 bits | | <mark>Unknown</mark> |
| 0.4 | 2 bits | | <mark>Related to KF_CATEGORY?</mark> |
| 0.6 | 2 bits | | <mark>Unknown</mark> |

```
Syntax
Copy

typedef enum _KF_CATEGORY {
  KF_CATEGORY_VIRTUAL   = 1,
  KF_CATEGORY_FIXED     = 2,
  KF_CATEGORY_COMMON    = 3,
  KF_CATEGORY_PERUSER   = 4
} KF_CATEGORY;


Constants

KF_CATEGORY_VIRTUAL

    Virtual folders are not part of the file system, which is to say that they
have no path. For example, Control Panel and Printers are virtual folders. A
number of features such as folder path and redirection do not apply to this
category.
KF_CATEGORY_FIXED

    Fixed file system folders are not managed by the Shell and are usually
given a permanent path when the system is installed. For example, the Windows
and Program Files folders are fixed folders. A number of features such as
redirection do not apply to this category.
KF_CATEGORY_COMMON

    Common folders are those file system folders used for sharing data and
settings, accessible by all users of a system. For example, all users share a
common Documents folder as well as their per-user Documents folder.
KF_CATEGORY_PERUSER

    Per-user folders are those stored under each user's profile and accessible
only by that user. For example, %USERPROFILE%\Pictures. This category of folder
usually supports many features including aliasing, redirection and
customization.
```

```
     Note  The user profile root folder (FOLDERID_Profile) does not support
redirection.
```

## 3.5. 0x2e shell item data

```
shell item size                     : 20
shell item data:
00000000: 2e 1e 20 20 ec 21 ea 3a  69 10 a2 dd 08 00 2b 30   ..  .!.: i.....+0
00000010: 30 9d                                              0.

shell item type                     : 0x2e
```

| offset | size | value | description |
|--------|------|-------|-------------|
| 0 | 1 | 0x2e | Type indicator |
| 1 | 1 | | <mark>Flags</mark> <mark>0x1e</mark> |
| 2 | 16 | | Folder identifier Contains a GUID See section: 4.2 Known folder identifiers |

## 3.6. Volume name Shell Item data

The volume name Shell Item data is 23 bytes of size and consists of the following values:

| offset | size | value | description |
|--------|------|-------|-------------|
| 0 | 1 | 0x2f | Type indicator |
| 1 | 22 | | Volume name ASCII string <mark>NUL-terminated ?</mark> Remaining bytes are filled with 0 byte values |

## 3.7. Network volume name Shell Item data

The network volume name Shell Item data is variable of size and consists of the following values:

| offset | size | value | description |
|--------|------|-------|-------------|
| 0 | 1 | 0x41 0x42 0x46 0x47 | Type indicator |
| 1 | 1 | | <mark>Unknown</mark> <mark>Empty value</mark> |
| 2 | 1 | | <mark>Flags</mark> <mark>0x02 => has network volume name</mark> <mark>0x80 => has unknown 16-bit value</mark> |
| *If flag 0x02 is set* <mark>*Note this is an assumption*</mark> | | | |

| offset | size | value | description |
|---|---|---|---|
| 3 | ... | | Network volume name<br>ASCII string NUL-terminated |
| ... | ... | | Description<br>ASCII string NUL-terminated |
| If flag 0x80 is set | | | |
| ... | 2 | | Unknown<br>0x0002 |

Or are the network volume name and the 16-bit value linked to the same flag?

Workgroup/domain name
```
shell item size                      : 34
shell item data:
00000000: 41 00 82 44 6f 6d 69 6e  69 6f 6e 00 4d 69 63 72   A..Domin ion.Micr
00000010: 6f 73 6f 66 74 20 4e 65  74 77 6f 72 6b 00 02 00   osoft Ne twork...

additional string

shell item type                      : 0x41
```

UNC path
```
shell item size                      : 40
shell item data:
00000000: 42 00 82 xx xx xx xx xx  xx xx xx xx xx xx xx xx   B..\\xxx xxxxxxxx
00000010: xx 00 4d 69 63 72 6f 73  6f 66 74 20 4e 65 74 77   x.Micros oft Netw
00000020: 6f 72 6b 00 02 00                                  ork...

additional string

shell item type                      : 0x42
```

build-in ?
```
shell item size                      : 51
shell item data:
00000000: 46 00 82 4d 69 63 72 6f  73 6f 66 74 20 57 69 6e   F..Micro soft Win
00000010: 64 6f 77 73 20 4e 65 74  77 6f 72 6b 00 4d 69 63   dows Net work.Mic
00000020: 72 6f 73 6f 66 74 20 4e  65 74 77 6f 72 6b 00 02   rosoft N etwork..
00000030: 00                                                 .

additional string

shell item type                      : 0x46
```

build-in ?
```
shell item size                      : 20
shell item data:
00000000: 47 00 02 45 6e 74 69 72  65 20 4e 65 74 77 6f 72   G..Entir e Networ
00000010: 6b 00                                              k.

shell item type                      : 0x47
```

## 3.8. File entry Shell Item data

The file entry Shell Item data is variable of size and consists of the following values:

| offset | size | value | description |
|---|---|---|---|
| 0 | 1 | 0x31<br>0x32<br>0xb1 | Type indicator |
| 1 | 1 | | Flags<br>Empty value |
| 2 | 4 | | File size<br>What about > 32-bit file sizes? |
| 6 | 4 | | Last modification date and time<br>FAT date and time in UTC |
| 10 | 2 | | File attribute flags<br>Contains the lower 16-bit part of the file attribute flags.<br>See section: 4.1 File attribute flags |
| *Windows 2000* | | | |
| 12 | ... | | Primary name<br>ASCII string NUL-terminated<br>See below |
| ... | ... | | Secondary name<br>ASCII string NUL-terminated<br>See below |
| *Windows XP or later* | | | |
| 12 | ... | | Short name<br>ASCII string NUL-terminated<br>This value is 16-bit aligned, so it can contain an additional zero byte<br>Supports a maximum of 8 characters + 1 zero-byte + 1 alignment byte |
| ... | 2 | | Extension size<br>The size of the following data<br>including the 2 bytes of the size itself |
| ... | 2 | | Extension version<br>0x0003 Windows XP or Server 2003<br>0x0007 Windows Vista (SP0)<br>0x0008 Windows 7 |
| *Extension version 0x0003 and later* | | | |
| ... | 2 | 0x0004 | Unknown |
| ... | 2 | 0xbeef | Unknown<br>Probably remnant of uninitialized memory |
| ... | 4 | | Creation date and time<br>FAT date and time in UTC |

| offset | size | value | description |
|---|---|---|---|
| ... | 4 | | Last access date and time<br>FAT date and time in UTC |
| ... | 4 | | <mark>Unknown</mark><br>0x14 Windows XP or Server 2003<br>0x26 Windows Vista (SP0)<br>0x2a Windows 7 |
| *Extension version 0x0007 and later* | | | |
| ... | 8 | | File reference<br>See section: 3.8.1 The NTFS file reference |
| ... | 8 | | <mark>Unknown</mark> |
| ... | 2 | | Long string size<br>Contains the size of long name and additional long name or 0 if no additional long name is present |
| *Extension version 0x0008 and later* | | | |
| ... | 4 | | <mark>Unknown</mark> |
| *Extension version 0x0003 and later* | | | |
| ... | ... | | Long name<br>UTF-16 little-endian string NUL-terminated |
| *Extension version 0x0007 and later*<br>*If long string size > 0* | | | |
| ... | ... | | Additional long name<br>UTF-16 little-endian string NUL-terminated<br>E.g. @shell32.dll,-21781 |
| *Extension version 0x0003 and later* | | | |
| ... | 2 | | <mark>Unknown (flags?)</mark><br><br><mark>Directory:</mark><br><mark>0x0014</mark><br><mark>0x0018</mark><br><br><mark>File:</mark><br><mark>0x001a</mark><br><br><mark>extended file attributes?</mark> |

On Windows 2000 the primary name contains the long name if available otherwise it contains the short name. If the primary name contains the long name the secondary name contains the short name otherwise it is empty (consist of a single NUL-character). The secondary name is also the last value in the file entry Shell Item data.

### 3.8.1. The NTFS file reference

The NTFS file reference is 8 bytes of size and consists of:

| offset | size | value | description |
|---|---|---|---|
| 0 | 6 | | MFT entry index |
| 6 | 2 | | Sequence number |

## 3.9. Control Panel Shell item data

The Control Panel Shell Item data is 28 bytes of size and consists of the following values:

| offset | size | value | description |
|---|---|---|---|
| 0 | 1 | 0x71 | Type indicator |
| 1 | 1 | | Flags 0x80 |
| 2 | 10 | | Unknown Empty bytes |
| 12 | 16 | | Control Panel Item identifier Contains a GUID See section: 4.3 Control Panel Items |

## 3.10. URI Shell Item data

The URI Shell Item data is variable of size and consists of the following values:

| offset | size | value | description |
|---|---|---|---|
| 0 | 1 | 0x61 | Type indicator |
| 1 | 1 | | Flags 0x80 set if URI string in Unicode |
| 2 | 4 | | Unknown Empty values |
| 6 | ... | | URI string Unicode string terminated by a NUL-character |
| ... | 2 | | Unknown Empty values Used for alignment? |
| *Optional (CUri/IUri data specific to Vista and/or IE7?)* | | | |
| ... | 4 | | Unknown Data size |
| ... | ... | | Class/Interface data element |
| ... | ... | | CUri data element |

```
00000000: 61 80 00 00 00 00 68 00   74 00 74 00 70 00 3a 00   a.....h. t.t.p.:.
00000010: 2f 00 2f 00 67 00 6f 00   2e 00 6d 00 69 00 63 00   /./.g.o. ..m.i.c.
```

```
00000020: 72 00 6f 00 73 00 6f 00  66 00 74 00 2e 00 63 00   r.o.s.o. f.t...c.
00000030: 6f 00 6d 00 2f 00 66 00  77 00 6c 00 69 00 6e 00   o.m./.f. w.l.i.n.
00000040: 6b 00 2f 00 3f 00 4c 00  69 00 6e 00 6b 00 49 00   k./.?.L. i.n.k.I.
00000050: 64 00 3d 00 36 00 33 00  30 00 34 00 39 00 00 00   d.=.6.3. 0.4.9...
00000060: 00 00                                              .."..... ..../..%
```

```
00000060:          22 01 00 00                              .."..... ..../..%
```

```
00000060:                          14 00  ef be 13 ce 2f df ec 25   .."..... ..../..%
00000070: bb 45 9d 4c ce cd 47 c2  43 0c                    .E.L..G. C.......
```

```
00000070:                                   0a 01 00 00 00 00   .E.L..G. C.......
00000080: 00 00 00 00 00 00 84 2b  00 00 00 00 00 00 00 00   .......+ ........
00000090: 00 00 00 00 00 00 06 00  00 00 0b 00 00 00 5a 00   ........ ......Z.
000000a0: 00 00 68 00 74 00 74 00  70 00 3a 00 2f 00 2f 00   ..h.t.t. p.:././.
000000b0: 67 00 6f 00 2e 00 6d 00  69 00 63 00 72 00 6f 00   g.o...m. i.c.r.o.
000000c0: 73 00 6f 00 66 00 74 00  2e 00 63 00 6f 00 6d 00   s.o.f.t. ..c.o.m.
000000d0: 2f 00 66 00 77 00 6c 00  69 00 6e 00 6b 00 2f 00   /.f.w.l. i.n.k./.
000000e0: 3f 00 4c 00 69 00 6e 00  6b 00 49 00 64 00 3d 00   ?.L.i.n. k.I.d.=.
000000f0: 36 00 33 00 30 00 34 00  39 00 00 00 06 00 00 00   6.3.0.4. 9.......
00000100: 22 00 00 00 67 00 6f 00  2e 00 6d 00 69 00 63 00   "...g.o. ..m.i.c.
00000110: 72 00 6f 00 73 00 6f 00  66 00 74 00 2e 00 63 00   r.o.s.o. f.t...c.
00000120: 6f 00 6d 00 00 00 08 00  00 00 12 00 00 00 2f 00   o.m..... ....../.
00000130: 66 00 77 00 6c 00 69 00  6e 00 6b 00 2f 00 00 00   f.w.l.i. n.k./...
00000140: 10 00 00 00 04 00 00 00  50 00 00 00 0a 00 00 00   ........ P......
00000150: 1c 00 00 00 3f 00 4c 00  69 00 6e 00 6b 00 49 00   ....?.L. i.n.k.I.
00000160: 64 00 3d 00 36 00 33 00  30 00 34 00 39 00 00 00   d.=.6.3. 0.4.9...
00000170: 0c 00 00 00 0a 00 00 00  68 00 74 00 74 00 70 00   ........ h.t.t.p.
00000180: 00 00 64 00                                        ..d.
```

```
00000060:          22 01 00 00                              

00000060:                          14 00  ef be 13 ce 2f df ec 25   .."..... ..../..%
00000070: bb 45 9d 4c ce cd 47 c2  43 0c                    .E.L..G. C.......

00000070:                                   0a 01 00 00 00 00   .E.L..G. C.......
00000080: 00 00 00 00 00 00 84 2b  00 00 00 00 00 00 00 00   .......+ ........
00000090: 00 00 00 00 00 00 06 00  00 00 0b 00 00 00 5a 00   ........ ......Z.
000000a0: 00 00 68 00 74 00 74 00  70 00 3a 00 2f 00 2f 00   ..h.t.t. p.:././.
000000b0: 67 00 6f 00 2e 00 6d 00  69 00 63 00 72 00 6f 00   g.o...m. i.c.r.o.
000000c0: 73 00 6f 00 66 00 74 00  2e 00 63 00 6f 00 6d 00   s.o.f.t. ..c.o.m.
000000d0: 2f 00 66 00 77 00 6c 00  69 00 6e 00 6b 00 2f 00   /.f.w.l. i.n.k./.
000000e0: 3f 00 4c 00 69 00 6e 00  6b 00 49 00 64 00 3d 00   ?.L.i.n. k.I.d.=.
000000f0: 36 00 33 00 34 00 34 00  33 00 00 00 06 00 00 00   6.3.4.4. 3.......
00000100: 22 00 00 00 67 00 6f 00  2e 00 6d 00 69 00 63 00   "...g.o. ..m.i.c.
00000110: 72 00 6f 00 73 00 6f 00  66 00 74 00 2e 00 63 00   r.o.s.o. f.t...c.
00000120: 6f 00 6d 00 00 00 08 00  00 00 12 00 00 00 2f 00   o.m..... ....../.
00000130: 66 00 77 00 6c 00 69 00  6e 00 6b 00 2f 00 00 00   f.w.l.i. n.k./...
00000140: 10 00 00 00 04 00 00 00  50 00 00 00 0a 00 00 00   ........ P......
00000150: 1c 00 00 00 3f 00 4c 00  69 00 6e 00 6b 00 49 00   ....?.L. i.n.k.I.
00000160: 64 00 3d 00 36 00 33 00  34 00 34 00 33 00 00 00   d.=.6.3. 4.4.3...
00000170: 0c 00 00 00 0a 00 00 00  68 00 74 00 74 00 70 00   ........ h.t.t.p.
00000180: 00 00 64 00                                        ..d.
```

```
00000000: 61 80 00 00 00 00 68 00  74 00 74 00 70 00 3a 00   a.....h. t.t.p.:.
00000010: 2f 00 2f 00 67 00 2e 00  6d 00 73 00 6e 00 2e 00   /./.g... m.s.n...
00000020: 63 00 6f 00 6d 00 2f 00  57 00 4d 00 48 00 46 00   c.o.m./. W.M.H.F.
00000030: 55 00 53 00 45 00 4e 00  2f 00 31 00 30 00 31 00   U.S.E.N. /.1.0.1.
00000040: 37 00 32 00 32 00 00 00  00 00                     7.2.2... ........
```

```
00000040:                                          e8 00 00 00

Data size

00000040:                                       14 00   7.2.2... ........
00000050: ef be 13 ce 2f df ec 25  bb 45 9d 4c ce cd 47 c2   ..../..% .E.L..G.
00000060: 43 0c                                               C....... .......+
```

| offset | size | value | description |
|--------|------|-------|-------------|
| ... | 2 | | Unknown Data size |
| ... | 2 | 0xbeef | Probably remnant of uninitialized memory |
| ... | 16 | | CUri CLSID {DF2FCE13-25EC-45BB-9D4C-CECD47C2430C} |

## 3.10.1. CUri data

```
Data size

00000060:             d0 00 00 00 00 00  00 00 00 00 00 00 84 2b   C....... .......+
00000070: 00 00 00 00 00 00 00 00  00 00 00 00 00 00 05 00   ........ ........
00000080: 00 00                                               ........ ........

Number of properties

property array:
Uri_PROPERTY

00000080:             0b 00 00 00 42 00  00 00 68 00 74 00 74 00   ......B. ..h.t.t.
00000090: 70 00 3a 00 2f 00 2f 00  67 00 2e 00 6d 00 73 00   p.:.//. g...m.s.
000000a0: 6e 00 2e 00 63 00 6f 00  6d 00 2f 00 57 00 4d 00   n...c.o. m./.W.M.
000000b0: 48 00 46 00 55 00 53 00  45 00 4e 00 2f 00 31 00   H.F.U.S. E.N./.1.
000000c0: 30 00 31 00 37 00 32 00  32 00 00 00 06 00 00 00   0.1.7.2. 2......
000000d0: 14 00 00 00 67 00 2e 00  6d 00 73 00 6e 00 2e 00   ....g... m.s.n...
000000e0: 63 00 6f 00 6d 00 00 00  08 00 00 00 22 00 00 00   c.o.m... ...."...
000000f0: 2f 00 57 00 4d 00 48 00  46 00 55 00 53 00 45 00   /.W.M.H. F.U.S.E.
00000100: 4e 00 2f 00 31 00 30 00  31 00 37 00 32 00 32 00   N./.1.0. 1.7.2.2.
00000110: 00 00 10 00 00 00 04 00  00 00 50 00 00 00 0c 00   ........ ..P.....
00000120: 00 00 0a 00 00 00 68 00  74 00 74 00 70 00 00 00   ......h. t.t.p...

00000130: 4c 00                                               L.
```

| offset | size | value | description |
|--------|------|-------|-------------|
| 0 | 4 | | Data size |
| 4 | 8 | | Unknown Empty data |
| 12 | 4 | 0x00002b84 | Unknown |
| 16 | 12 | | Unknown |

| offset | size | value | description |
|---|---|---|---|
| | | | Empty data |
| 24 | ... | | Unknown |
| ... | ... | | Property table |
| ... | 2 | | Unknown |

## 3.10.2. CUri property table

| offset | size | value | description |
|---|---|---|---|
| 0 | 4 | | Number of properties |
| 4 | ... | | Array of property entries |

## 3.10.3. CUri property entry

| offset | size | value | description |
|---|---|---|---|
| 0 | 4 | | Property type<br>Uri_PROPERTY |
| 4 | 4 | | Property size |
| 8 | ... | | Property data |

TODO add Uri_PROPERTY types

## 3.11. Network share Shell Item data

The Network share Shell Item data is variable of size and consists of the following values:

| offset | size | value | description |
|---|---|---|---|
| 0 | 1 | 0xc3 | Type indicator |
| 1 | 1 | | Unknown<br>0x01 |
| 1 | 1 | 0xc5 | Flags |
| 3 | ... | | UNC path<br>ASCII string NUL-terminated |
| ... | ... | | Description<br>ASCII string NUL-terminated<br>Contains "Microsoft Network\0" |
| ... | ... | | Unknown string or alignment byte? |
| If flag 0x80 is set<br>*Currently assumed on basis of similarity with network volume shell item* | | | |
| ... | 2 | | Unknown<br>0x0002 |

# 4. Windows definitions

## 4.1. File attribute flags

The file attribute flags consist of the following values:

| Value | Identifier | Description |
| --- | --- | --- |
| 0x00000001 | FILE_ATTRIBUTE_READONLY | Is read-Only |
| 0x00000002 | FILE_ATTRIBUTE_HIDDEN | Is hidden |
| 0x00000004 | FILE_ATTRIBUTE_SYSTEM | Is a system file or directory |
| 0x00000008 | | Is a volume label |
| 0x00000010 | FILE_ATTRIBUTE_DIRECTORY | Is a directory |
| 0x00000020 | FILE_ATTRIBUTE_ARCHIVE | Should be archived |
| 0x00000040 | FILE_ATTRIBUTE_DEVICE | Is a device |
| 0x00000080 | FILE_ATTRIBUTE_NORMAL | Is normal<br>None of the other flags should be set |
| 0x00000100 | FILE_ATTRIBUTE_TEMPORARY | Is temporary |
| 0x00000200 | FILE_ATTRIBUTE_SPARSE_FILE | Is a sparse file |
| 0x00000400 | FILE_ATTRIBUTE_REPARSE_POINT | Is a reparse point or symbolic link |
| 0x00000800 | FILE_ATTRIBUTE_COMPRESSED | Is compressed |
| 0x00001000 | FILE_ATTRIBUTE_OFFLINE | Is offline<br>The data of the file is stored on an offline storage. |
| 0x00002000 | FILE_ATTRIBUTE_NOT_CONTENT_INDEXED | Do not index content<br>The content of the file or directory should not be indexed by the indexing service. |
| 0x00004000 | FILE_ATTRIBUTE_ENCRYPTED | Is encrypted |
| | | |
| 0x00010000 | FILE_ATTRIBUTE_VIRTUAL | Is virtual |

## 4.2. Known folder identifiers

The known folder identifier consists one of the following values:

| GUID | Description and identifier |
| --- | --- |
| 031e4825-7b94-4dc3-b131-e946b44c8dd5 | Libraries |

| GUID | Description and identifier |
|---|---|
| | |
| 1ac14e77-02e7-4e5d-b744-2eb1ae5198b7 | System<br>(FOLDERID_System, CSIDL_SYSTEM) |
| | |
| 208d2c60-3aea-1069-a2d7-08002b30309d | My Network Places |
| 20d04fe0-3aea-1069-a2d8-08002b30309d | My Computer |
| | |
| 21ec2020-3aea-1069-a2dd-08002b30309d | Unknown found in Vista ShellBags |
| | |
| 22877a6d-37a1-461a-91b0-dbda5aaebc99 | Unknown found in RecentPlaces.lnk |
| | |
| 2400183a-6185-49fb-a2d8-4a392a602ba3 | Public Videos<br>(FOLDERID_PublicVideos,<br>CSIDL_COMMON_VIDEO) |
| | |
| 2559a1f1-21d7-11d4-bdaf-00c04f60b9f0 | Unknown found in Help.lnk |
| | |
| 2559a1f3-21d7-11d4-bdaf-00c04f60b9f0 | Unknown found in Run.lnk |
| | |
| 26ee0668-a00a-44d7-9371-beb064c98683 | Unknown found in Vista and Win7 ShellBags<br>Related to Control Panel? |
| | |
| 3080f90d-d7ad-11d9-bd98-0000947b0257 | Unknown found in Shows Desktop.lnk |
| 3080f90e-d7ad-11d9-bd98-0000947b0257 | Unknown found in Window Switcher.lnk |
| | |
| 3214fab5-9757-4298-bb61-92a9deaa44ff | Public Music<br>(FOLDERID_PublicMusic,<br>CSIDL_COMMON_MUSIC) |
| | |
| 33e28130-4e1e-4676-835a-98395c3bc3bb | Pictures<br>(FOLDERID_Pictures, CSIDL_MYPICTURES) |
| | |
| 374de290-123f-4565-9164-39c4925e467b | Downloads<br>(FOLDERID_Downloads) |
| | |
| 4336a54d-038b-4685-ab02-99bb52d3fb8b | Unknown found in Sample Music.lnk and Sample<br>Pictures.lnk |
| | |

| GUID | Description and identifier |
|---|---|
| 450d8fba-ad25-11d0-98a8-0800361b1103 | My Documents |
| | |
| 4bd8d571-6d19-48d3-be97-422220080e43 | Music (FOLDERID_Music, CSIDL_MYMUSIC) |
| | |
| 5399e694-6ce5-4d6c-8fce-1d8870fdcba0 | Control Panel |
| | |
| 59031a47-3f72-44a7-89c5-5595fe6b30ee | Users |
| | |
| 645ff040-5081-101b-9f08-00aa002f954e | Recycle Bin |
| | |
| 724ef170-a42d-4fef-9f26-b60e846fba4f | Administrative Tools (FOLDERID_AdminTools, CSIDL_ADMINTOOLS) |
| | |
| 7b0db17d-9cd2-4a93-9733-46cc89022e7c | Documents Library (FOLDERID_DocumentsLibrary) |
| | |
| 7c5a40ef-a0fb-4bfc-874a-c0f2e0b9fa8e | Program Files (x86) (FOLDERID_ProgramFilesX86, CSIDL_PROGRAM_FILESX86) |
| | |
| 871c5380-42a0-1069-a2ea-08002b30309d | Internet Explorer (Homepage) |
| | |
| 905e63b6-c1bf-494e-b29c-65b732d3d21a | Program Files (FOLDERID_ProgramFiles, CSIDL_PROGRAM_FILES) |
| | |
| 9e52ab10-f80d-49df-acb8-4330f5687855 | Temporary Burn Folder (FOLDERID_CDBurning, CSIDL_CDBURN_AREA) |
| | |
| a305ce99-f527-492b-8b1a-7e76fa98d6e4 | Installed Updates (FOLDERID_AppUpdates) |
| | |
| b6ebfb86-6907-413c-9af7-4fc2abf07cc5 | Public Pictures (FOLDERID_PublicPictures, CSIDL_COMMON_PICTURES) |
| | |
| c1bae2d0-10df-4334-bedd-7aa20b227a9d | Common OEM Links |

| GUID | Description and identifier |
|---|---|
| | (FOLDERID_CommonOEMLinks,<br>CSIDL_COMMON_OEM_LINKS) |
| | |
| cce6191f-13b2-44fa-8d14-324728beef2c | Unknown found in XP BagMRU |
| | |
| d0384e7d-bac3-4797-8f14-cba229b392b5 | Common Administrative Tools<br>FOLDERID_CommonAdminTools,<br>CSIDL_COMMON_ADMINTOOLS |
| | |
| d65231b0-b2f1-4857-a4ce-a8e7c6ea7d27 | System32 (x86)<br>(FOLDERID_SystemX86, CSIDL_SYSTEMX86) |
| | |
| de61d971-5ebc-4f02-a3a9-6c82895e5c04 | Get Programs<br>(FOLDERID_AddNewPrograms) |
| | |
| df7266ac-9274-4867-8d55-3bd661de872d | Programs and Features<br>(FOLDERID_ChangeRemovePrograms) |
| | |
| dfdf76a2-c82a-4d63-906a-5644ac457385 | Public |
| | |
| de974d24-d9c6-4d3e-bf91-f4455120b917 | Common Files<br>(FOLDERID_ProgramFilesCommonX86,<br>CSIDL_PROGRAM_FILES_COMMONX86) |
| | |
| ed228fdf-9ea8-4870-83b1-96b02cfe0d52 | My Games |
| | |
| f02c1a0d-be21-4350-88b0-7367fc96ef3c | Network |
| | |
| f38bf404-1d43-42f2-9305-67de0b28fc23 | Windows<br>(FOLDERID_Windows, CSIDL_WINDOWS) |
| | |
| f3ce0f7c-4901-4acc-8648-d5d44b04ef8f | User's Files<br>(FOLDERID_UsersFiles) |
| | |
| fdd39ad0-238f-46af-adb4-6c85480369c7 | Documents<br>(FOLDERID_Documents,<br>CSIDL_MYDOCUMENTS, CSIDL_PERSONAL) |

## 4.2.1. Notes

```
FOLDERID_CommonPrograms
    GUID   {0139D44E-6AFE-49F2-8690-3DAFCAE6FFB8}
    Display Name     Programs
    Folder Type      COMMON
    Default Path     %ALLUSERSPROFILE%\Microsoft\Windows\Start Menu\Programs
    CSIDL Equivalent CSIDL_COMMON_PROGRAMS
    Legacy Display Name       Programs
    Legacy Default Path       %ALLUSERSPROFILE%\Start Menu\Programs


FOLDERID_CommonStartMenu
    GUID   {A4115719-D62E-491D-AA7C-E74B8BE3B067}
    Display Name     Start Menu
    Folder Type      COMMON
    Default Path     %ALLUSERSPROFILE%\Microsoft\Windows\Start Menu
    CSIDL Equivalent CSIDL_COMMON_STARTMENU
    Legacy Display Name       Start Menu
    Legacy Default Path       %ALLUSERSPROFILE%\Start Menu


FOLDERID_CommonStartup
    GUID   {82A5EA35-D9CD-47C5-9629-E15D2F714E6E}
    Display Name     Startup
    Folder Type      COMMON
    Default Path     %ALLUSERSPROFILE%\Microsoft\Windows\Start
Menu\Programs\StartUp
    CSIDL Equivalent CSIDL_COMMON_STARTUP, CSIDL_COMMON_ALTSTARTUP
    Legacy Display Name       Startup
    Legacy Default Path       %ALLUSERSPROFILE%\Start Menu\Programs\StartUp


FOLDERID_CommonTemplates
    GUID   {B94237E7-57AC-4347-9151-B08C6C32D1F7}
    Display Name     Templates
    Folder Type      COMMON
    Default Path     %ALLUSERSPROFILE%\Templates
    CSIDL Equivalent CSIDL_COMMON_TEMPLATES
    Legacy Display Name       Templates
    Legacy Default Path       %ALLUSERSPROFILE%\Templates


FOLDERID_ComputerFolder
    GUID   {0AC0837C-BBF8-452A-850D-79D08E667CA7}
    Display Name     Computer
    Folder Type      VIRTUAL
    Default Path     Not applicable—virtual folder
    CSIDL Equivalent CSIDL_DRIVES
    Legacy Display Name       My Computer
    Legacy Default Path       Not applicable—virtual folder
FOLDERID_ConflictFolder

    GUID   {4bfefb45-347d-4006-a5be-ac0cb0567192}
    Display Name     Conflicts
    Folder Type      VIRTUAL
    Default Path     Not applicable—virtual folder
    CSIDL Equivalent None, new in Windows Vista
    Legacy Display Name       Not applicable. This KNOWNFOLDERID refers to the
Windows Vista Synchronization Manager. It is not the folder referenced by the
older ISyncMgrConflictFolder.
```

```
        Legacy Default Path        Not applicable


FOLDERID_ConnectionsFolder
    GUID   {6F0CD92B-2E97-45D1-88FF-B0D186B8DEDD}
    Display Name     Network Connections
    Folder Type      VIRTUAL
    Default Path     Not applicable—virtual folder
    CSIDL Equivalent CSIDL_CONNECTIONS
    Legacy Display Name        Network Connections
    Legacy Default Path        Not applicable—virtual folder


FOLDERID_Contacts
    GUID   {56784854-C6CB-462b-8169-88E350ACB882}
    Display Name     Contacts
    Folder Type      PERUSER
    Default Path     %USERPROFILE%\Contacts
    CSIDL Equivalent None, new in Windows Vista
    Legacy Display Name        Not applicable
    Legacy Default Path        Not applicable


FOLDERID_ControlPanelFolder
    GUID   {82A74AEB-AEB4-465C-A014-D097EE346D63}
    Display Name     Control Panel
    Folder Type      VIRTUAL
    Default Path     Not applicable—virtual folder
    CSIDL Equivalent CSIDL_CONTROLS
    Legacy Display Name        Control Panel
    Legacy Default Path        Not applicable—virtual folder


FOLDERID_Cookies
    GUID   {2B0F765D-C0E9-4171-908E-08A611B84FF6}
    Display Name     Cookies
    Folder Type      PERUSER
    Default Path     %APPDATA%\Microsoft\Windows\Cookies
    CSIDL Equivalent CSIDL_COOKIES
    Legacy Display Name        Cookies
    Legacy Default Path        %USERPROFILE%\Cookies


FOLDERID_Desktop
    GUID   {B4BFCC3A-DB2C-424C-B029-7FE99A87C641}
    Display Name     Desktop
    Folder Type      PERUSER
    Default Path     %USERPROFILE%\Desktop
    CSIDL Equivalent CSIDL_DESKTOP, CSIDL_DESKTOPDIRECTORY
    Legacy Display Name        Desktop
    Legacy Default Path        %USERPROFILE%\Desktop


FOLDERID_Favorites
    GUID   {1777F761-68AD-4D8A-87BD-30B759FA33DD}
    Display Name     Favorites
    Folder Type      PERUSER
    Default Path     %USERPROFILE%\Favorites
    CSIDL Equivalent CSIDL_FAVORITES, CSIDL_COMMON_FAVORITES
    Legacy Display Name        Favorites
    Legacy Default Path        %USERPROFILE%\Favorites


FOLDERID_Fonts
    GUID   {FD228CB7-AE11-4AE3-864C-16F3910AB8FE}
    Display Name     Fonts
    Folder Type      FIXED
```

```
        Default Path    %windir%\Fonts
        CSIDL Equivalent CSIDL_FONTS
        Legacy Display Name       Fonts
        Legacy Default Path       %windir%\Fonts


FOLDERID_Games
        GUID   {CAC52C1A-B53D-4edc-92D7-6B2E8AC19434}
        Display Name    Games
        Folder Type     VIRTUAL
        Default Path    Not applicable—virtual folder
        CSIDL Equivalent None
        Legacy Display Name       Not applicable
        Legacy Default Path       Not applicable


FOLDERID_GameTasks
        GUID   {054FAE61-4DD8-4787-80B6-090220C4B700}
        Display Name    GameExplorer
        Folder Type     PERUSER
        Default Path    %LOCALAPPDATA%\Microsoft\Windows\GameExplorer
        CSIDL Equivalent None, new in Windows Vista
        Legacy Display Name       Not applicable
        Legacy Default Path       Not applicable


FOLDERID_History
        GUID   {D9DC8A3B-B784-432E-A781-5A1130A75963}
        Display Name    History
        Folder Type     PERUSER
        Default Path    %LOCALAPPDATA%\Microsoft\Windows\History
        CSIDL Equivalent CSIDL_HISTORY
        Legacy Display Name       History
        Legacy Default Path       %USERPROFILE%\Local Settings\History


FOLDERID_InternetCache
        GUID   {352481E8-33BE-4251-BA85-6007CAEDCF9D}
        Display Name    Temporary Internet Files
        Folder Type     PERUSER
        Default Path    %LOCALAPPDATA%\Microsoft\Windows\Temporary Internet Files
        CSIDL Equivalent CSIDL_INTERNET_CACHE
        Legacy Display Name       Temporary Internet Files
        Legacy Default Path       %USERPROFILE%\Local Settings\Temporary Internet
Files


FOLDERID_InternetFolder
        GUID   {4D9F7874-4E0C-4904-967B-40B0D20C3E4B}
        Display Name    Internet Explorer
        Folder Type     VIRTUAL
        Default Path    Not applicable—virtual folder
        CSIDL Equivalent CSIDL_INTERNET
        Legacy Display Name       Internet Explorer
        Legacy Default Path       Not applicable—virtual folder


FOLDERID_Links
        GUID   {bfb9d5e0-c6a9-404c-b2b2-ae6db6af4968}
        Display Name    Links
        Folder Type     PERUSER
        Default Path    %USERPROFILE%\Links
        CSIDL Equivalent None
        Legacy Display Name       Not applicable
        Legacy Default Path       Not applicable
```

```
FOLDERID_LocalAppData
    GUID  {F1B32785-6FBA-4FCF-9D55-7B8E7F157091}
    Display Name     Local
    Folder Type      PERUSER
    Default Path     %LOCALAPPDATA% (%USERPROFILE%\AppData\Local)
    CSIDL Equivalent CSIDL_LOCAL_APPDATA
    Legacy Display Name       Application Data
    Legacy Default Path       %USERPROFILE%\Local Settings\Application Data


FOLDERID_LocalAppDataLow
    GUID  {A520A1A4-1780-4FF6-BD18-167343C5AF16}
    Display Name     LocalLow
    Folder Type      PERUSER
    Default Path     %USERPROFILE%\AppData\LocalLow
    CSIDL Equivalent None
    Legacy Display Name       Not applicable
    Legacy Default Path       Not applicable


FOLDERID_LocalizedResourcesDir
    GUID  {2A00375E-224C-49DE-B8D1-440DF7EF3DDC}
    Display Name     None
    Folder Type      FIXED
    Default Path     %windir%\resources\0409 (code page)
    CSIDL Equivalent CSIDL_RESOURCES_LOCALIZED
    Legacy Display Name       None
    Legacy Default Path       %windir%\resources\0409 (code page)


FOLDERID_NetHood
    GUID  {C5ABBF53-E17F-4121-8900-86626FC2C973}
    Display Name     Network Shortcuts
    Folder Type      PERUSER
    Default Path     %APPDATA%\Microsoft\Windows\Network Shortcuts
    CSIDL Equivalent CSIDL_NETHOOD
    Legacy Display Name       NetHood
    Legacy Default Path       %USERPROFILE%\NetHood


FOLDERID_NetworkFolder
    GUID  {D20BEEC4-5CA8-4905-AE3B-BF251EA09B53}
    Display Name     Network
    Folder Type      VIRTUAL
    Default Path     Not applicable—virtual folder
    CSIDL Equivalent CSIDL_NETWORK, CSIDL_COMPUTERSNEARME
    Legacy Display Name       My Network Places
    Legacy Default Path       Not applicable—virtual folder


FOLDERID_OriginalImages
    GUID  {2C36C0AA-5812-4b87-BFD0-4CD0DFB19B39}
    Display Name     Original Images
    Folder Type      PERUSER
    Default Path     %LOCALAPPDATA%\Microsoft\Windows Photo Gallery\Original
Images
    CSIDL Equivalent None, new in Windows Vista
    Legacy Display Name       Not applicable
    Legacy Default Path       Not applicable


FOLDERID_PhotoAlbums
    GUID  {69D2CF90-FC33-4FB7-9A0C-EBB0F0FCB43C}
    Display Name     Slide Shows
    Folder Type      PERUSER
    Default Path     %USERPROFILE%\Pictures\Slide Shows
```

```
    CSIDL Equivalent None, new in Windows Vista
    Legacy Display Name       Not applicable
    Legacy Default Path       Not applicable


FOLDERID_Playlists
    GUID   {DE92C1C7-837F-4F69-A3BB-86E631204A23}
    Display Name    Playlists
    Folder Type     PERUSER
    Default Path    %USERPROFILE%\Music\Playlists
    CSIDL Equivalent None
    Legacy Display Name       Not applicable
    Legacy Default Path       Not applicable


FOLDERID_PrintersFolder
    GUID   {76FC4E2D-D6AD-4519-A663-37BD56068185}
    Display Name    Printers
    Folder Type     VIRTUAL
    Default Path    Not applicable—virtual folder
    CSIDL Equivalent CSIDL_PRINTERS
    Legacy Display Name       Printers and Faxes
    Legacy Default Path       Not applicable—virtual folder


FOLDERID_PrintHood
    GUID   {9274BD8D-CFD1-41C3-B35E-B13F55A758F4}
    Display Name    Printer Shortcuts
    Folder Type     PERUSER
    Default Path    %APPDATA%\Microsoft\Windows\Printer Shortcuts
    CSIDL Equivalent CSIDL_PRINTHOOD
    Legacy Display Name       PrintHood
    Legacy Default Path       %USERPROFILE%\PrintHood


FOLDERID_Profile
    GUID   {5E6C858F-0E22-4760-9AFE-EA3317B67173}
    Display Name    The user's username (%USERNAME%)
    Folder Type     FIXED
    Default Path    %USERPROFILE% (%SystemDrive%\Users\%USERNAME%)
    CSIDL Equivalent CSIDL_PROFILE
    Legacy Display Name       The user's username (%USERNAME%)
    Legacy Default Path       %USERPROFILE% (%SystemDrive%\Documents and
Settings\%USERNAME%)


FOLDERID_ProgramData
    GUID   {62AB5D82-FDC1-4DC3-A9DD-070D1D495D97}
    Display Name    ProgramData
    Folder Type     FIXED
    Default Path    %ALLUSERSPROFILE% (%ProgramData%, %SystemDrive
%\ProgramData)
    CSIDL Equivalent CSIDL_COMMON_APPDATA
    Legacy Display Name       Application Data
    Legacy Default Path       %ALLUSERSPROFILE%\Application Data


FOLDERID_ProgramFilesX64
    See Remarks for more information.
    GUID   {6D809377-6AF0-444b-8957-A3773F02200E}
    Display Name    Program Files
    Folder Type     FIXED
    Default Path    %ProgramFiles% (%SystemDrive%\Program Files)
    CSIDL Equivalent None
    Legacy Display Name       Program Files
    Legacy Default Path       %ProgramFiles% (%SystemDrive%\Program Files)
```

```
FOLDERID_ProgramFilesCommon
    See Remarks for more information.
    GUID   {F7F1ED05-9F6D-47A2-AAAE-29D317C6F066}
    Display Name     Common Files
    Folder Type      FIXED
    Default Path     %ProgramFiles%\Common Files
    CSIDL Equivalent CSIDL_PROGRAM_FILES_COMMON
    Legacy Display Name       Common Files
    Legacy Default Path       %ProgramFiles%\Common Files


FOLDERID_ProgramFilesCommonX64
    See Remarks for more information.
    GUID   {6365D5A7-0F0D-45E5-87F6-0DA56B6A4F7D}
    Display Name     Common Files
    Folder Type      FIXED
    Default Path     %ProgramFiles%\Common Files
    CSIDL Equivalent None
    Legacy Display Name       Common Files
    Legacy Default Path       %ProgramFiles%\Common Files


FOLDERID_Programs
    GUID   {A77F5D77-2E2B-44C3-A6A2-ABA601054A51}
    Display Name     Programs
    Folder Type      PERUSER
    Default Path     %APPDATA%\Microsoft\Windows\Start Menu\Programs
    CSIDL Equivalent CSIDL_PROGRAMS
    Legacy Display Name       Programs
    Legacy Default Path       %USERPROFILE%\Start Menu\Programs


FOLDERID_PublicDesktop
    GUID   {C4AA340D-F20F-4863-AFEF-F87EF2E6BA25}
    Display Name     Public Desktop
    Folder Type      COMMON
    Default Path     %PUBLIC%\Desktop
    CSIDL Equivalent CSIDL_COMMON_DESKTOPDIRECTORY
    Legacy Display Name       Desktop
    Legacy Default Path       %ALLUSERSPROFILE%\Desktop


FOLDERID_PublicDocuments
    GUID   {ED4824AF-DCE4-45A8-81E2-FC7965083634}
    Display Name     Public Documents
    Folder Type      COMMON
    Default Path     %PUBLIC%\Documents
    CSIDL Equivalent CSIDL_COMMON_DOCUMENTS
    Legacy Display Name       Shared Documents
    Legacy Default Path       %ALLUSERSPROFILE%\Documents


FOLDERID_PublicDownloads
    GUID   {3D644C9B-1FB8-4f30-9B45-F670235F79C0}
    Display Name     Public Downloads
    Folder Type      COMMON
    Default Path     %PUBLIC%\Downloads
    CSIDL Equivalent None, new in Windows Vista
    Legacy Display Name       Not applicable
    Legacy Default Path       Not applicable


FOLDERID_PublicGameTasks
    GUID   {DEBF2536-E1A8-4c59-B6A2-414586476AEA}
    Display Name     GameExplorer
```

```
        Folder Type       COMMON
        Default Path      %ALLUSERSPROFILE%\Microsoft\Windows\GameExplorer
        CSIDL Equivalent None, new in Windows Vista
        Legacy Display Name       Not applicable
        Legacy Default Path       Not applicable


FOLDERID_QuickLaunch
        GUID   {52a4f021-7b75-48a9-9f6b-4b87a210bc8f}
        Display Name     Quick Launch
        Folder Type      PERUSER
        Default Path     %APPDATA%\Microsoft\Internet Explorer\Quick Launch
        CSIDL Equivalent None
        Legacy Display Name       Quick Launch
        Legacy Default Path       %APPDATA%\Microsoft\Internet Explorer\Quick
Launch


FOLDERID_Recent
        GUID   {AE50C081-EBD2-438A-8655-8A092E34987A}
        Display Name     Recent Items
        Folder Type      PERUSER
        Default Path     %APPDATA%\Microsoft\Windows\Recent
        CSIDL Equivalent CSIDL_RECENT
        Legacy Display Name       My Recent Documents
        Legacy Default Path       %USERPROFILE%\Recent


FOLDERID_RecordedTV
        Not used.


FOLDERID_RecycleBinFolder
        GUID   {B7534046-3ECB-4C18-BE4E-64CD4CB7D6AC}
        Display Name     Recycle Bin
        Folder Type      VIRTUAL
        Default Path     Not applicable—virtual folder
        CSIDL Equivalent CSIDL_BITBUCKET
        Legacy Display Name       Recycle Bin
        Legacy Default Path       Not applicable—virtual folder


FOLDERID_ResourceDir
        GUID   {8AD10C31-2ADB-4296-A8F7-E4701232C972}
        Display Name     Resources
        Folder Type      FIXED
        Default Path     %windir%\Resources
        CSIDL Equivalent CSIDL_RESOURCES
        Legacy Display Name       Resources
        Legacy Default Path       %windir%\Resources


FOLDERID_RoamingAppData
        GUID   {3EB685DB-65F9-4CF6-A03A-E3EF65729F3D}
        Display Name     Roaming
        Folder Type      PERUSER
        Default Path     %APPDATA% (%USERPROFILE%\AppData\Roaming)
        CSIDL Equivalent CSIDL_APPDATA
        Legacy Display Name       Application Data
        Legacy Default Path       %APPDATA% (%USERPROFILE%\Application Data)


FOLDERID_SampleMusic
        GUID   {B250C668-F57D-4EE1-A63C-290EE7D1AA1F}
        Display Name     Sample Music
        Folder Type      COMMON
        Default Path     %PUBLIC%\Music\Sample Music
```

```
      CSIDL Equivalent None
      Legacy Display Name       Sample Music
      Legacy Default Path       %ALLUSERSPROFILE%\Documents\My Music\Sample
Music


FOLDERID_SamplePictures
      GUID   {C4900540-2379-4C75-844B-64E6FAF8716B}
      Display Name    Sample Pictures
      Folder Type     COMMON
      Default Path    %PUBLIC%\Pictures\Sample Pictures
      CSIDL Equivalent None
      Legacy Display Name       Sample Pictures
      Legacy Default Path       %ALLUSERSPROFILE%\Documents\My Pictures\Sample
Pictures


FOLDERID_SamplePlaylists
      GUID   {15CA69B3-30EE-49C1-ACE1-6B5EC372AFB5}
      Display Name    Sample Playlists
      Folder Type     COMMON
      Default Path    %PUBLIC%\Music\Sample Playlists
      CSIDL Equivalent None, new in Windows Vista
      Legacy Display Name       Not applicable
      Legacy Default Path       Not applicable


FOLDERID_SampleVideos
      GUID   {859EAD94-2E85-48AD-A71A-0969CB56A6CD}
      Display Name    Sample Videos
      Folder Type     COMMON
      Default Path    %PUBLIC%\Videos\Sample Videos
      CSIDL Equivalent None
      Legacy Display Name       Not applicable
      Legacy Default Path       Not applicable


FOLDERID_SavedGames
      GUID   {4C5C32FF-BB9D-43b0-B5B4-2D72E54EAAA4}
      Display Name    Saved Games
      Folder Type     PERUSER
      Default Path    %USERPROFILE%\Saved Games
      CSIDL Equivalent None, new in Windows Vista
      Legacy Display Name       Not applicable
      Legacy Default Path       Not applicable


FOLDERID_SavedSearches
      GUID   {7d1d3a04-debb-4115-95cf-2f29da2920da}
      Display Name    Searches
      Folder Type     PERUSER
      Default Path    %USERPROFILE%\Searches
      CSIDL Equivalent None, new in Windows Vista
      Legacy Display Name       Not applicable
      Legacy Default Path       Not applicable


FOLDERID_SEARCH_CSC
      GUID   {ee32e446-31ca-4aba-814f-a5ebd2fd6d5e}
      Display Name    Offline Files
      Folder Type     VIRTUAL
      Default Path    Not applicable—virtual folder
      CSIDL Equivalent None
      Legacy Display Name       Not applicable
      Legacy Default Path       Not applicable
```

```
FOLDERID_SEARCH_MAPI
    GUID  {98ec0e18-2098-4d44-8644-66979315a281}
    Display Name    Microsoft Office Outlook
    Folder Type     VIRTUAL
    Default Path    Not applicable—virtual folder
    CSIDL Equivalent None
    Legacy Display Name       Not applicable
    Legacy Default Path       Not applicable


FOLDERID_SearchHome
    GUID  {190337d1-b8ca-4121-a639-6d472d16972a}
    Display Name    Search Results
    Folder Type     VIRTUAL
    Default Path    Not applicable—virtual folder
    CSIDL Equivalent None
    Legacy Display Name       Not applicable
    Legacy Default Path       Not applicable


FOLDERID_SendTo
    GUID  {8983036C-27C0-404B-8F08-102D10DCFD74}
    Display Name    SendTo
    Folder Type     PERUSER
    Default Path    %APPDATA%\Microsoft\Windows\SendTo
    CSIDL Equivalent CSIDL_SENDTO
    Legacy Display Name       SendTo
    Legacy Default Path       %USERPROFILE%\SendTo


FOLDERID_SidebarDefaultParts
    GUID  {7B396E54-9EC5-4300-BE0A-2482EBAE1A26}
    Display Name    Gadgets
    Folder Type     COMMON
    Default Path    %ProgramFiles%\Windows Sidebar\Gadgets
    CSIDL Equivalent None, new for Windows Vista
    Legacy Display Name       Not applicable
    Legacy Default Path       Not applicable


FOLDERID_SidebarParts
    GUID  {A75D362E-50FC-4fb7-AC2C-A8BEAA314493}
    Display Name    Gadgets
    Folder Type     PERUSER
    Default Path    %LOCALAPPDATA%\Microsoft\Windows Sidebar\Gadgets
    CSIDL Equivalent None, new for Windows Vista
    Legacy Display Name       Not applicable
    Legacy Default Path       Not applicable


FOLDERID_StartMenu
    GUID  {625B53C3-AB48-4EC1-BA1F-A1EF4146FC19}
    Display Name    Start Menu
    Folder Type     PERUSER
    Default Path    %APPDATA%\Microsoft\Windows\Start Menu
    CSIDL Equivalent CSIDL_STARTMENU
    Legacy Display Name       Start Menu
    Legacy Default Path       %USERPROFILE%\Start Menu


FOLDERID_Startup
    GUID  {B97D20BB-F46A-4C97-BA10-5E3608430854}
    Display Name    Startup
    Folder Type     PERUSER
    Default Path    %APPDATA%\Microsoft\Windows\Start Menu\Programs\StartUp
    CSIDL Equivalent CSIDL_STARTUP, CSIDL_ALTSTARTUP
```

```
        Legacy Display Name        Startup
        Legacy Default Path        %USERPROFILE%\Start Menu\Programs\StartUp


FOLDERID_SyncManagerFolder
    GUID  {43668BF8-C14E-49B2-97C9-747784D784B7}
    Display Name     Sync Center
    Folder Type      VIRTUAL
    Default Path     Not applicable—virtual folder
    CSIDL Equivalent None, new in Windows Vista
    Legacy Display Name        Not applicable
    Legacy Default Path        Not applicable


FOLDERID_SyncResultsFolder
    GUID  {289a9a43-be44-4057-a41b-587a76d7e7f9}
    Display Name     Sync Results
    Folder Type      VIRTUAL
    Default Path     Not applicable—virtual folder
    CSIDL Equivalent None, new in Windows Vista
    Legacy Display Name        Not applicable
    Legacy Default Path        Not applicable


FOLDERID_SyncSetupFolder
    GUID  {0F214138-B1D3-4a90-BBA9-27CBC0C5389A}
    Display Name     Sync Setup
    Folder Type      VIRTUAL
    Default Path     Not applicable—virtual folder
    CSIDL Equivalent None, new in Windows Vista
    Legacy Display Name        Not applicable
    Legacy Default Path        Not applicable


FOLDERID_Templates
    GUID  {A63293E8-664E-48DB-A079-DF759E0509F7}
    Display Name     Templates
    Folder Type      PERUSER
    Default Path     %APPDATA%\Microsoft\Windows\Templates
    CSIDL Equivalent CSIDL_TEMPLATES
    Legacy Display Name        Templates
    Legacy Default Path        %USERPROFILE%\Templates


FOLDERID_TreeProperties
    Not used.


FOLDERID_UserProfiles
    GUID  {0762D272-C50A-4BB0-A382-697DCD729B80}
    Display Name     Users
    Folder Type      FIXED
    Default Path     %SystemDrive%\Users
    CSIDL Equivalent None, new for Windows Vista
    Legacy Display Name        Not applicable
    Legacy Default Path        Not applicable


FOLDERID_Videos
    GUID  {18989B1D-99B5-455B-841C-AB7C74E4DDFC}
    Display Name     Videos
    Folder Type      PERUSER
    Default Path     %USERPROFILE%\Videos
    CSIDL CSIDL_MYVIDEO
    Legacy Display Name        My Videos
    Legacy Default Path        %USERPROFILE%\My Documents\My Videos
```

```
Administrative Tools {D20EA4E1-3957-11d2-A40B-0C5020524153}
Briefcase {85BBD92O-42A0-1O69-A2E4-08002B30309D}
Control Panel {21EC2O2O-3AEA-1O69-A2DD-08002b30309d}
Fonts {D20EA4E1-3957-11d2-A40B-0C5020524152}
History {FF393560-C2A7-11CF-BFF4-444553540000}
Inbox {00020D75-0000-0000-C000-000000000046}
Microsoft Network {00028B00-0000-0000-C000-000000000046}

Network Computers {1f4de370-d627-11d1-ba4f-00a0c91eedba}
Network Connections {7007ACC7-3202-11D1-AAD2-00805FC1270E}
Printers and Faxes {2227A280-3AEA-1069-A2DE-08002B30309D}
Programs Folder {7be9d83c-a729-4d97-b5a7-1b7313c39e0a}
Scanners and Cameras {E211B736-43FD-11D1-9EFB-0000F8757FCD}
Scheduled Tasks {D6277990-4C6A-11CF-8D87-00AA0060F5BF}
Start Menu Folder {48e7caab-b918-4e58-a94d-505519c795dc}
Temporary Internet Files {7BD29E00-76C1-11CF-9DD0-00A0C9034933}
Web Folders {BDEADF00-C265-11d0-BCED-00A0C90AB50F}
```

```
AddNewPrograms

    DE61D971-5EBC-4F02-A3A9-6C82895E5C04
AdminTools

    724EF170-A42D-4FEF-9F26-B60E846FBA4F
AppDataLow

    A520A1A4-1780-4FF6-BD18-167343C5AF16
AppUpdates

    A305CE99-F527-492B-8B1A-7E76FA98D6E4
CDBurning

    9E52AB10-F80D-49DF-ACB8-4330F5687855
ChangeRemovePrograms

    DF7266AC-9274-4867-8D55-3BD661DE872D
CommonAdminTools

    D0384E7D-BAC3-4797-8F14-CBA229B392B5
CommonOEMLinks

    C1BAE2D0-10DF-4334-BEDD-7AA20B227A9D
CommonPrograms

    0139D44E-6AFE-49F2-8690-3DAFCAE6FFB8
CommonStartMenu

    A4115719-D62E-491D-AA7C-E74B8BE3B067
CommonStartup

    82A5EA35-D9CD-47C5-9629-E15D2F714E6E
CommonTemplates

    B94237E7-57AC-4347-9151-B08C6C32D1F7
Computer

    0AC0837C-BBF8-452A-850D-79D08E667CA7
Conflict
```

```
    4BFEFB45-347D-4006-A5BE-AC0CB0567192
Connections

    6F0CD92B-2E97-45D1-88FF-B0D186B8DEDD
Contacts

    56784854-C6CB-462B-8169-88E350ACB882
ControlPanel

    82A74AEB-AEB4-465C-A014-D097EE346D63
Cookies

    2B0F765D-C0E9-4171-908E-08A611B84FF6
Desktop

    B4BFCC3A-DB2C-424C-B029-7FE99A87C641
Documents

    FDD39AD0-238F-46AF-ADB4-6C85480369C7
Downloads

    374DE290-123F-4565-9164-39C4925E467B
Favorites

    1777F761-68AD-4D8A-87BD-30B759FA33DD
Fonts

    FD228CB7-AE11-4AE3-864C-16F3910AB8FE
Games

    CAC52C1A-B53D-4EDC-92D7-6B2E8AC19434
GameTasks

    054FAE61-4DD8-4787-80B6-090220C4B700
History

    D9DC8A3B-B784-432E-A781-5A1130A75963
Internet

    4D9F7874-4E0C-4904-967B-40B0D20C3E4B
InternetCache

    352481E8-33BE-4251-BA85-6007CAEDCF9D
Links

    BFB9D5E0-C6A9-404C-B2B2-AE6DB6AF4968
LocalAppData

    F1B32785-6FBA-4FCF-9D55-7B8E7F157091
LocalizedResourcesDir

    2A00375E-224C-49DE-B8D1-440DF7EF3DDC
Music

    4BD8D571-6D19-48D3-BE97-422220080E43
NetHood

    C5ABBF53-E17F-4121-8900-86626FC2C973
Network
```

```
    D20BEEC4-5CA8-4905-AE3B-BF251EA09B53
OriginalImages

    2C36C0AA-5812-4B87-BFD0-4CD0DFB19B39
PhotoAlbums

    69D2CF90-FC33-4FB7-9A0C-EBB0F0FCB43C
Pictures

    33E28130-4E1E-4676-835A-98395C3BC3BB
Playlists

    DE92C1C7-837F-4F69-A3BB-86E631204A23
Printers

    76FC4E2D-D6AD-4519-A663-37BD56068185
PrintHood

    9274BD8D-CFD1-41C3-B35E-B13F55A758F4
Profile

    5E6C858F-0E22-4760-9AFE-EA3317B67173
ProgramData

    62AB5D82-FDC1-4DC3-A9DD-070D1D495D97
ProgramFilesCommon

    F7F1ED05-9F6D-47A2-AAAE-29D317C6F066
ProgramFilesCommonX64

    6365D5A7-0F0D-45E5-87F6-0DA56B6A4F7D
ProgramFilesCommonX86

    DE974D24-D9C6-4D3E-BF91-F4455120B917
ProgramFilesX64

    6D809377-6AF0-444B-8957-A3773F02200E
ProgramFilesX86

    7C5A40EF-A0FB-4BFC-874A-C0F2E0B9FA8E
Programs

    A77F5D77-2E2B-44C3-A6A2-ABA601054A51
PublicDesktop

    C4AA340D-F20F-4863-AFEF-F87EF2E6BA25
PublicDocuments

    ED4824AF-DCE4-45A8-81E2-FC7965083634
PublicDownloads

    3D644C9B-1FB8-4F30-9B45-F670235F79C0
PublicGameTasks

    DEBF2536-E1A8-4C59-B6A2-414586476AEA
PublicMusic

    3214FAB5-9757-4298-BB61-92A9DEAA44FF
PublicPictures
```

```
    B6EBFB86-6907-413C-9AF7-4FC2ABF07CC5
PublicVideos

    2400183A-6185-49FB-A2D8-4A392A602BA3
QuickLaunch

    52A4F021-7B75-48A9-9F6B-4B87A210BC8F
Recent

    AE50C081-EBD2-438A-8655-8A092E34987A
RecordedTV

    BD85E001-112E-431E-983B-7B15AC09FFF1
RecycleBin

    B7534046-3ECB-4C18-BE4E-64CD4CB7D6AC
ResourceDir

    8AD10C31-2ADB-4296-A8F7-E4701232C972
RoamingAppData

    3EB685DB-65F9-4CF6-A03A-E3EF65729F3D
SampleMusic

    B250C668-F57D-4EE1-A63C-290EE7D1AA1F
SamplePictures

    C4900540-2379-4C75-844B-64E6FAF8716B
SamplePlaylists

    15CA69B3-30EE-49C1-ACE1-6B5EC372AFB5
SampleVideos

    859EAD94-2E85-48AD-A71A-0969CB56A6CD
SavedGames

    4C5C32FF-BB9D-43B0-B5B4-2D72E54EAAA4
SavedSearches

    7D1D3A04-DEBB-4115-95CF-2F29DA2920DA
SEARCH_CSC

    EE32E446-31CA-4ABA-814F-A5EBD2FD6D5E
SEARCH_MAPI

    98EC0E18-2098-4D44-8644-66979315A281
SearchHome

    190337D1-B8CA-4121-A639-6D472D16972A
SendTo

    8983036C-27C0-404B-8F08-102D10DCFD74
SidebarDefaultParts

    7B396E54-9EC5-4300-BE0A-2482EBAE1A26
SidebarParts

    A75D362E-50FC-4FB7-AC2C-A8BEAA314493
StartMenu
```

```
    625B53C3-AB48-4EC1-BA1F-A1EF4146FC19
Startup

    B97D20BB-F46A-4C97-BA10-5E3608430854
SyncManager

    43668BF8-C14E-49B2-97C9-747784D784B7
SyncResults

    289A9A43-BE44-4057-A41B-587A76D7E7F9
SyncSetup

    0F214138-B1D3-4A90-BBA9-27CBC0C5389A
System

    1AC14E77-02E7-4E5D-B744-2EB1AE5198B7
SystemX86

    D65231B0-B2F1-4857-A4CE-A8E7C6EA7D27
Templates

    A63293E8-664E-48DB-A079-DF759E0509F7
TreeProperties

    5B3749AD-B49F-49C1-83EB-15370FBD4882
UserProfiles

    0762D272-C50A-4BB0-A382-697DCD729B80
UsersFiles

    F3CE0F7C-4901-4ACC-8648-D5D44B04EF8F
Videos

    18989B1D-99B5-455B-841C-AB7C74E4DDFC
Windows

    F38BF404-1D43-42F2-9305-67DE0B28FC23
```

```
HKEY_LOCAL_MACHINE\SOFTWARE\Classes\CLSID
[folders]

fonts shell:::{D20EA4E1-3957-11d2-A40B-0C5020524152}
tasks   shell:::{D6277990-4C6A-11CF-8D87-00AA0060F5BF}
my computer shell:::{20D04FE0-3AEA-1069-A2D8-08002B30309D}
downloaded files shell:::{88C6C381-2E85-11D0-94DE-444553540000}
search shell:::{E17D4FC0-5564-11D1-83F2-00A0C90DC849}
{2559a1f0-21d7-11d4-bdaf-00c04f60b9f0}
recycle bin shell:::{645FF040-5081-101B-9F08-00AA002F954E}
network shell:::{208D2C60-3AEA-1069-A2D7-08002B30309D}
control panel shell:::{21EC2020-3AEA-1069-A2DD-08002B30309D}
printers shell:::{2227A280-3AEA-1069-A2DE-08002B30309D}
web folders shell:::{BDEADF00-C265-11d0-BCED-00A0C90AB50F}
connection shell:::{992CFFA0-F557-101A-88EC-00DD010CCC48}
my documents shell:::{450D8FBA-AD25-11D0-98A8-0800361B1103}
administrative tools shell:::{D20EA4E1-3957-11d2-A40B-0C5020524153}
briefcase shell:::{85BBD920-42A0-1069-A2E4-08002B30309D}
scanners and cameras shell:::{E211B736-43FD-11D1-9EFB-0000F8757FCD}
cabnet shell:::{0CD7A5C0-9F37-11CE-AE65-08002B2E1262}
startup shell:::{48e7caab-b918-4e58-a94d-505519c795dc}
common startup shell:::{0DF44EAA-FF21-4412-828E-260A8728E7F1}
```

```
programs folder shell:::{7be9d83c-a729-4d97-b5a7-1b7313c39e0a}
acvtivex folder shell:::{88C6C381-2E85-11D0-94DE-444553540000}
```

{DF0AD8E0-F91C-4109-AE46-1EAA5CD8AB08} WMEncMonMainPage Class
WMEnc.WMEncMonMainPage.1
{DF0AD8E1-F91C-4109-AE46-1EAA5CD8AB08} WMEncMonStatsPage Class
WMEnc.WMEncMonStatsPage.1
{DF0AD8E3-F91C-4109-AE46-1EAA5CD8AB08} WMEncMonServerPage Class
WMEnc.WMEncMonServerPage.1
{DF0B3D60-548F-101B-8E65-08002B2BD119} PSSupportErrorInfo
{DF0DAEF2-A289-11D1-8697-006008B0E5D2} MDhcp Class Mdhcp.MDhcp.1
{DF2269F4-F7D4-4E83-9D31-D2D43C26EDF1} CR7OptBtnGroup.General
{DF26FD0F-DCAC-4042-883E-29A2712D5348} PSTNConnectService Class
Msnpcs.PSTNConnectService.1
{DF2EFCB5-917A-11D3-A49E-00C04F6843FB} AnimTargetDHTMLBehavior Class
MsoRun.AnimTargetDHTMLBehavior.1
{DF2FCE13-25EC-45BB-9D4C-CECD47C2430C} CUri
{DF30358B-F480-338E-AC08-92E0ACDA476A} Microsoft.AnalysisServices.MdxScript
Microsoft.AnalysisServices.MdxScript
{DF3C5EDD-029A-31A1-BA90-96B6A118E0F0}
Microsoft.SqlServer.Replication.TracerToken
Microsoft.SqlServer.Replication.TracerToken
{DF5E5E34-AE22-483D-94C3-9DD02FFF231E} Nero Video Controls Property Page
{DF66AFC9-C61D-404A-B535-64FBF91D420F} MessengerNative.UIAutomation.1
{DF712EC6-6ED2-41E2-AE46-A29E9E793485} MixerSource Class uICE.MixerSource.1
{DF7A2782-9F74-4BFE-83AF-C4BCDFE2DD68} CDDBControl2 Class
CDDBControlYahoo.CDDBControl2.1
{DF9A1DA0-23C0-101B-B02E-FDFDFDFDFDFD} Adobe Acrobat Document
{DFA22B8E-E68D-11D0-97E4-00C04FC2AD98} SQLOLEDB Enumerator SQLOLEDB
Enumerator.1
{DFA699C5-B2C4-4CB7-BBAB-0AA56C566965} Microsoft Clip Organizer
MSClipGallery.Application.11
{DFAC1B20-4681-11D1-AA83-00008612DCF1} PureCoverage version of Java VM Event
Monitor. ICoverageJavaEventMonitor
{DFBC8609-D77F-3512-98BC-CF3FBCEF034F}
Microsoft.SqlServer.Management.Smo.Agent.JobCategory
Microsoft.SqlServer.Management.Smo.Agent.JobCategory
{DFC8BDC0-E378-11D0-9B30-0080C7E9FE95} MSDAOSP MSDAOSP.1
{DFCB3BDD-51BE-416D-9E6C-3655EBB2845D}
Microsoft.AnalysisServices.DimensionAttribute
Microsoft.AnalysisServices.DimensionAttribute
{DFD181E0-5E2F-11CE-A449-00AA004A803D} Microsoft Forms 2.0 ScrollBar
Forms.ScrollBar.1
{DFD74844-990B-4410-9DA0-2848EFA85D14} WMPlayer ClipPropPage Class
{DFD888A7-A6B0-3B1B-985E-4CDAB0E4C17D}
System.Diagnostics.SymbolStore.SymLanguageVendor
System.Diagnostics.SymbolStore.SymLanguageVendor
{DFD8B167-5652-4962-A162-9A227825AFAA} PropLockout Class
{DFE49CFE-CD09-11D2-9643-00C04F79ADF0} Cabview Data Object
{DFEF3E96-F1D4-47CE-A429-2CC8C10DFDB6} CddbID3TagManager Class
CDDBControl.CddbID3TagManager.1
{DFEF4B09-1B0A-4529-9775-AC437D6A93B3} HotfixWz Class vmappcfg.HotfixWz.9
{DFF332ED-0C72-416B-B128-5CC5BD888865} Photoshop GalleryThumbnailOptions
Photoshop.GalleryThumbnailOptions.9
{DFF44AEC-2370-469D-8A22-DF82448BFF64} VmdbUpdates Class vmdbCOM.VmdbUpdates.9

## 4.2.2. more notes

Windows 7 registry location that contains information about folder identifiers, related to Windows 7 Shell Libraries

```
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows\CurrentVersion\Explorer\FolderDes
criptions
```

Related to .libary-ms XML files. These files also contain serialized data.

Folder types
```
HKLM\SOFTWARE\Microsoft\Windows\CurrentVersion\Explorer\FolderTypes
{0b2baaeb-0042-4dca-aa4d-3ee8648d03e5} Pictures Library
{36011842-dccc-40fe-aa3d-6177ea401788} Documents
Search Results
{3f2a72a7-99fa-4ddb-a5a8-c604edf61d6b} Music Library
{4dcafe13-e6a7-4c28-be02-ca8c2126280d} Pictures Search Results
{5c4f28b5-f869-4e84-8e60-f11db97c5cc7} Generic (All folder items)
{5f4eab9a-6833-4f61-899d-31cf46979d49} Generic Library
{5fa96407-7e77-483c-ac93-691d05850de8} Videos
{631958a6-ad0f-4035-a745-28ac066dc6ed} Videos Library
{71689ac1-cc88-45d0-8a22-2943c3e7dfb3} Music Search Results
{7d49d726-3c21-4f05-99aa-fdc2c9474656} Documents
{7fde1a1e-8b31-49a5-93b8-6be14cfa4943} Generic Search Results
{80213e82-bcfd-4c4f-8817-bb27601267a9} Compressed Folder (zip folder)
{94d6ddcc-4a68-4175-a374-bd584a510b78} Music
{b3690e58-e961-423b-b687-386ebfd83239} Pictures
{ea25fbd7-3bf7-409e-b97f-3352240903f4} Videos Search Results
{fbb3477e-c9e4-4b3b-a2ba-d3f5d3cd46f9} Documents Library
```

## *4.3. Control Panel Items*

| GUID | Control Panel Item |
|------|--------------------|
| d20ea4e1-3957-11d2-a40b-0c5020524153 | Administrative Tools |
| 9c60de1e-e5fc-40f4-a487-460851a8d915 | AutoPlay |
| d9ef8727-cac2-4e60-809e-86f80a666c91 | BitLocker Drive Encryption |
| b2c761c6-29bc-4f19-9251-e6195265baf1 | Color Management |
| e2e7934b-dce5-43c4-9576-7fe4f75e7480 | Date and Time |
| 17cd9488-1228-4b2f-88ce-4298e93e0966 | Default Programs |
| 74246bfc-4c96-11d0-abef-0020af6b0b7a | Device Manager |
| d555645e-d4f8-4c29-a827-d93c859c4f2a | Ease of Access Center |
| 6dfd7c5c-2451-11d3-a299-00c04f8ef6af | Folder Options |
| 93412589-74d4-4e4e-ad0e-e0cb621440fd | Fonts |
| 259ef4b1-e6c9-4176-b574-481532c9bce8 | Game Controllers |
| 15eae92e-f17a-4431-9f28-805e482dafd4 | Get Programs |
| 87d66a43-7b11-4a28-9811-c86ee395acf7 | Indexing Options |
| a3dd4f92-658a-410f-84fd-6fbbbef2fffe | Internet Options |
| a304259d-52b8-4526-8b1a-a1d6cecc8243 | iSCSI Initiator |

| GUID | Control Panel Item |
|---|---|
| 725be8f7-668e-4c7b-8f90-46bdb0936430 | Keyboard |
| 6c8eec18-8d75-41b2-a177-8831d59d2d50 | Mouse |
| 8e908fc9-becc-40f6-915b-f4ca0e70d03d | Network and Sharing Center |
| d24f75aa-4f2b-4d07-a3c4-469b3d9030c4 | Offline Files |
| 96ae8d84-a250-4520-95a5-a47a7e3c548b | Parental Controls |
| 5224f545-a443-4859-ba23-7b5a95bdc8ef | People Near Me |
| 78f3955e-3b90-4184-bd14-5397c15f1efc | Performance Information and Tools |
| ed834ed6-4b5a-4bfe-8f11-a626dcb6a921 | Personalization |
| 025a5937-a6be-4686-a844-36fe4bec8b6d | Power Options |
| 7b81be6a-ce2b-4676-a29e-eb907a5126c5 | Programs and Features |
| 00f2886f-cd64-4fc9-8ec5-30ef6cdbe8c3 | Scanners and Cameras |
| 9c73f5e5-7ae7-4e32-a8e8-8d23b85255bf | Sync Center |
| bb06c0e4-d293-4f75-8a90-cb05b6477eee | System |
| 80f3f1d5-feca-45f3-bc32-752c152e456e | Tablet PC Settings |
| 0df44eaa-ff21-4412-828e-260a8728e7f1 | Taskbar and Start Menu |
| d17d1d6d-cc3f-4815-8fe3-607e7d5d10b3 | Text to Speech |
| 60632754-c523-4b62-b45c-4172da012619 | User Accounts |
| be122a0e-4503-11da-8bde-f66bad1e3f3a | Windows Anytime Upgrade |
| 78cb147a-98ea-4aa6-b0df-c8681f69341c | Windows CardSpace |
| d8559eb9-20c0-410e-beda-7ed416aecc2a | Windows Defender |
| 4026492f-2f69-46b8-b9bf-5654fc07e423 | Windows Firewall |
| 5ea4f148-308c-46d7-98a9-49041b1dd468 | Windows Mobility Center |
| e95a4861-d57a-4be1-ad0f-35267e261739 | Windows SideShow |
| 36eef7db-88ad-4e81-ad49-0e313f0c35f8 | Windows Update |

## Windows Vista

The following control panel items are specific to Windows Vista.

| GUID | Control Panel Item |
|---|---|
| 7a979262-40ce-46ff-aeee-7884ac3b6136 | Add Hardware |
| f2ddfc82-8f12-4cdd-b7dc-d4fe1425aa4d | Sound |
| b98a2bea-7d42-4558-8bd1-832f41bac6fd | Backup and Restore Center |
| 3e7efb4c-faf1-453d-89eb-56026875ef90 | Windows Marketplace |
| a0275511-0e86-4eca-97c2-ecd8f1221d08 | Infrared |
| f82df8f7-8b9f-442e-a48c-818ea735ff9b | Pen and Input Devices |
| 40419485-c444-4567-851a-2dd7bfa1684d | Phone and Modem |

| GUID | Control Panel Item |
|---|---|
| 2227a280-3aea-1069-a2de-08002b30309d | Printers |
| fcfeecae-ee1b-4849-ae50-685dcf7717ec | Problem Reports and Solutions |
| 62d8ed13-c9d0-4ce8-a914-47dd628fb1b0 | Regional and Language Options |
| 087da31b-0dd3-4537-8e23-64a18591f88b | Windows Security Center |
| 58e3c745-d971-4081-9034-86e34b30836a | Speech Recognition Options |
| cb1b7f8c-c50a-4176-b604-9e24dee8d4d1 | Welcome Center |
| 37efd44d-ef8d-41b1-940d-96973a50e9e0 | Windows Sidebar Properties |

## *Windows 7*

The following control panel items were added in Windows 7.

| GUID | Control Panel Item |
|---|---|
| bb64f8a7-bee7-4e1a-ab8d-7d8273f7fdb6 | Action Center |
| b98a2bea-7d42-4558-8bd1-832f41bac6fd | Backup and Restore |
| 0142e4d0-fb7a-11dc-ba4a-000ffe7ab428 | Biometric Devices |
| 1206f5f1-0569-412c-8fec-3204630dfb70 | Credential Manager |
| 00c6d95f-329c-409a-81d7-c46c66ea7f33 | Default Location |
| 37efd44d-ef8d-41b1-940d-96973a50e9e0 | Desktop Gadgets |
| a8a91a66-3a7d-4424-8d24-04e180695c7a | Devices and Printers |
| c555438b-3c23-4769-a71f-b6d3d9b6053a | Display |
| cb1b7f8c-c50a-4176-b604-9e24dee8d4d1 | Getting Started |
| 67ca7650-96e6-4fdd-bb43-a8e774f73a57 | HomeGroup |
| a0275511-0e86-4eca-97c2-ecd8f1221d08 | Infrared |
| e9950154-c418-419e-a90a-20c5287ae24b | Location and Other Sensors |
| 05d7b0f4-2121-4eff-bf6b-ed3f69b894d9 | Notification Area Icons |
| f82df8f7-8b9f-442e-a48c-818ea735ff9b | Pen and Touch |
| 40419485-c444-4567-851a-2dd7bfa1684d | Phone and Modem |
| 9fe63afd-59cf-4419-9775-abcc3849f861 | Recovery |
| 62d8ed13-c9d0-4ce8-a914-47dd628fb1b0 | Region and Language |
| 241d7c96-f8bf-4f85-b01f-e2b043341a4b | RemoteApp and Desktop Connections |
| f2ddfc82-8f12-4cdd-b7dc-d4fe1425aa4d | Sound |
| 58e3c745-d971-4081-9034-86e34b30836a | Speech Recognition |
| c58c4893-3be0-4b45-abb5-a63e4b8c8651 | Troubleshooting |

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