

Directory

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COLLABORATORS

	<i>TITLE :</i> Directory		
<i>ACTION</i>	<i>NAME</i>	<i>DATE</i>	<i>SIGNATURE</i>
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REVISION HISTORY

NUMBER	DATE	DESCRIPTION	NAME

Contents

1	Directory	1
1.1	Object: Directory	1
1.2	Object: Directory	1
1.3	Object: Directory	2
1.4	Object: Directory	3
1.5	Object: Directory	3
1.6	Object: Directory	3
1.7	Object: Directory	4
1.8	Object: Directory	4
1.9	Object: Directory	5
1.10	Object: Directory	6
1.11	Object: Directory	6

Chapter 1

Directory

1.1 Object: Directory

OBJECT DOCUMENTATION

Name: DIRECTORY
Version: 0.9 Beta
Date: December 1997
Author: Paul Manias
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Notes: This document is in the process of being written.

CHANGES VERSION 0.9B

Added: Directory->ChildDir
Directory->ChildFile
Directory->Next
Directory->Prev

Edited: Directory->Comment
Directory->Date

Renamed: Directory->UserFlags to Directory->Permissions

1.2 Object: Directory

OBJECT

Name: Directory
Module: Files
Version: 1
Type: Complex

DESCRIPTION

This object is used for file and directory management purposes.

FUNCTIONS

Some functions supporting the Directory object are:

WriteComment()
WriteDate()

ACTIONS

The Directory object supports the following actions:

```
Activate() Get a directory listing.
Free()     Free a Directory object.
Get()      Get a new Directory structure.
Init()     Initialise a Directory.
```

STRUCTURE

The Directory structure consists of the following public fields:

```
ChildDir    Pointer to first sub-directory in list.
ChildFile   Pointer to first sub-file list.
Comment     Comment for the directory, if any.
Date        Pointer to Time of last date stamping.
DirList     List of directories under this one.
FileList    List of files in this directory.
Flags       Directory flags and options.
Next        Next directory in list.
Prev        Previous directory in list.
Source      Pointer to Directory source.
Permissions Permission flags, eg RWED.
```

1.3 Object: Directory

FIELD

```
Name:      ChildDir
Type:      struct Directory *
Inheritance: Activate()
Status:    Read Only.
```

DESCRIPTION

This field points to the first structure of a linked-list of sub-directories for your master Directory. This list is only built if you call the `Activate()` function. The child structures will be `Query()`'d, so they will contain `Date`, `Comment` information and so on. You may treat them as normal objects and call `Init()` and `Activate()` on each child object to start building complex tree structures if you wish.

Note that when you free your Directory object, all child directories on the linked-list will be freed. If you want to keep a child directory, you may use the `Detach()` action to do this. After you have extracted your object you will be responsible for `Free()`ing it.

If there are no sub-directories then this field will be set to `NULL` after an `Activate()` or `Query()`.

SEE ALSO

```
Fields: ChildFile
        Next
        Prev
```

1.4 Object: Directory

FIELD

Name: ChildFile
Type: struct File *
Inheritance: Activate()
Status: Read/Write

DESCRIPTION

This field points to the first structure of a linked-list of sub-files for your master Directory. This list is only built if you call the Activate() function. The child structures will be Query()'d, so will contain Date, Comment information and so on. You may treat them as normal objects and use the various action functions for files.

Note that when you free your Directory object, all child files on the linked-list will be freed. If you want to keep a child File, you may use the Detach() action to do this. After you have extracted your object you will be responsible for Free()ing it.

If there are no sub-files then this field will be set to NULL after an Activate() or Query().

SEE ALSO

Fields: ChildDir
Next
Prev

1.5 Object: Directory

FIELD

Name: Comment
Type: BYTE *
Inheritance: Obtained from the existing directory, if possible.
To Change: SetFileComment()
Status: Read/IWrite

DESCRIPTION

This field points to a string that specifies the user comment for the Directory. Although the Directory object supports comments of an unlimited length, the file-system itself will have a cut-off point on the comment length. It would be unwise to assume support for anything longer than 128 bytes. If when setting a new Comment you go over the limit, the extraneous characters will be ignored.

NOTE

If you initialise an existing Directory and specify a Comment, the old comment (in the file system) will be over-written with your new one.

1.6 Object: Directory

FIELD

Name: Date
Type: struct Time *
Inheritance: Obtained from the existing directory, if possible.
To Change: SetFileDate()
Status: Read/IWrite

DESCRIPTION

This field points to a Time object, which specifies the date on which this Directory was last stamped. This is usually considered to be the last date on which the Directory was changed, but this does not always have to be the case.

NOTE

If you initialise an existing directory with a Date pointer, the old Date will be over-written with your new one.

1.7 Object: Directory

FIELD

Name: Flags
Type: LONG
On Change: Cannot change dynamically.
Status: Read/IWrite.

DESCRIPTION

Specifies the Flags to use when opening the Directory. Here are the flags you can specify for OpenFile() and Init():

FL_LOCK

Setting this will lock the directory for exclusive access - no other process will be able to open the directory while you are using it. If this flag is not set then the directory will be open for shared access. Attempting to set a lock on a directory that is already in use by another Task results in failure. Keep in mind that the effects of locking a Directory will not flow onto any child directories.

FL_FIND

This flag allows OpenFile() to use some intelligence and try to find the directory if it is not immediately located at the given FileName. The process involves a simple but effective tree search. This feature is limited to localised searching, no attempt will be made to do a tree search of all directories in an assignment (a lengthy process).

FL_NOBUFFER

Setting this flag prevents the directory data from being put in the cache. You may want to do this if it is imperative that the directory physically reflects its data at all points in time.

1.8 Object: Directory

FIELD

Name: Next
Type: struct Directory *
Inheritance: Activate()
Status: Read Only.

DESCRIPTION

This field only applies when a Directory object forms part of a linked-list of directories. It points directly to the next Directory in the chain. If the value is NULL, then this is the last link.

SEE ALSO

Fields: ChildDir
Prev

1.9 Object: Directory

FIELD

Name: Permissions
Type: LONG
Inheritance: Init()
Default: FPF_READ|FPF_WRITE|FPF_DELETE
Status: Read/IWrite

DESCRIPTION

The permissions field gives information on the user rights for a particular file or directory. Flags currently available are:

FPF_HIDDEN

If the directory should be hidden from this user then this flag will be set.

FPF_DELETE

If the user has delete rights for this directory then this flag will be set. Note that if there are sub files/directories that the user does not have permissions to delete, then the user will be prevented from deleting the entire directory structure.

FPF_PASSWORD

This is a special flag that can lock a user out from a directory until the correct password is given. If a directory contains sub files and directories, access to these will also be affected by the password setting. Note that support for this flag is still under-way and currently most file-systems are not able to support it directly.

FPF_READ

This flag does not apply to directories.

FPF_SCRIPT

This flag does not apply to directories.

FPF_WRITE

This flag does not apply to directories.

1.10 Object: Directory

FIELD

Name: Prev
Type: struct Directory *
Inheritance: Activate()
Status: Read/Write

DESCRIPTION

This field only applies when a directory object forms part of a linked-list of directories. It points directly to the previous directory in the chain. If the value is NULL, then this is the first link.

SEE ALSO

Fields: ChildDir
 Next

1.11 Object: Directory

FIELD

Name: Source
Type: struct FileName *
On Change: Cannot change dynamically.
Status: Read/IWrite.

DESCRIPTION

Points to a source object, which may be either a FileName or recognised system object. The Source will be used to read data from or write data to.

Note that only the FileName source type is fully supported at the moment.
