Reading Writing `".DS_Store"` Files

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A `".DS_Store"` file is a metadata file on Mac OS X that holds information about folder and icons as viewed and manipulated in Finder. One common reason to manipulate `".DS_Store"` files is to create a nice-looking disk image for a Mac OS X installer.

`".DS_Store"` reading and writing is based on a reverse-engineered description of the file format [DS_Store].

1 ".DS_Store" Files and Entries

```
(require ds-store)
```
package: ds-store-lib

```
(read-ds-store path [#:verbose verbose?]) → (listof ds?)
  path : path-string?
  verbose? : any/c = #f
```

Reads the ".DS_Store" file at *path* returning a list of store items.

```
(write-ds-store path dses) → void?
  path : path-string?
  dses : (listof ds?)
```

Writes *dses* to the ".DS_Store" file at *path*, replacing the file's current content.

```
(struct ds (path id type data)
    #:transparent)
  path : (or/c path-element? 'same)
  id : symbol?
  type : (or/c 'long 'shor 'bool 'type 'ustr 'blob)
  data : (or/c exact-integer? boolean? symbol? string?
               bytes? iloc? fwind?)
```

Represents a entry in a ".DS_Store" file. A ".DS_Store" file typically has multiple entries for a single file or directory in the same directory as the ".DS_Store".

The `path` should be `'same` only for a volume root directory; information about a directory is otherwise recorded in its parent directory's ".DS_Store" file.

The `id` symbols should each have four ASCII characters. See the ".DS_Store" format description [DS_Store] for more information `id` and `type` values.

The `data` field long should be an exact integer for `'long` and `'shor` types, a boolean for the `'bool` type, a 4-character ASCII symbol for the `'type` type, a string for the `'ustr` type, and either a byte string, `iloc`, or `fwind` for the `'blob` type.

```
(struct iloc (x y)
    #:transparent)
  x : exact-integer?
  y : exact-integer?
```

Represents an icon location for an `'Iloc` entry.

```
(struct fwind (t l b r mode sideview?)
```

```
  #:transparent)
t : exact-integer?
l : exact-integer?
b : exact-integer?
r : exact-integer?
mode : symbol?
sideview? : any/c
```

Represent a window location for a `'fwi0` entry. The `mode` field should have four ASCII characters, and recognized `mode`s include `'icnv`, `'clmv`, and `'Nlsv`.

2 Finder Aliases

A 'pict entry in a ".DS_Store" file references a file through a Finder alias. See also ds-store/cross-alias.

```
(require ds-store/alias)
```
package: ds-store-lib

```
(path->alias-bytes path [#:wrt wrt-dir]) → (or/c bytes? #f)
  path : path-string?
  wrt-dir : (or/c #f path-string?) = #f
```

Constructs a byte string to represent a Finder alias but using the "CoreFoundation" library on Mac OS.

See also path->synthesized-alias-bytes.

3 Cross-Built Finder Aliases

```
(require ds-store/cross-alias)
```

package: ds-store-lib

Added in version 1.1 of package ds-store-lib.

```
(path->synthesized-alias-bytes
 #:volume-name volume-name
 #:file-name file-name
 #:file-inode file-inode
 #:parent-name parent-name
 #:parent-inode parent-inode
 #:file-absolute-name file-absolute-name
 #:file-absolute-path-within-volume file-absolute-path-within-volume
 #:volume-maybe-absolute-path volume-maybe-absolute-path)
→ bytes?
 volume-name : string?
 file-name : string?
 file-inode : exact-integer?
 parent-name : string?
 parent-inode : exact-integer?
 file-absolute-name : string?
 file-absolute-path-within-volume : string?
 volume-maybe-absolute-path : string?
```

Like path->alias-bytes, but creates alias bytes without using Mac OS libraries, which requires specifying details of the filesystem for the alias:

- *volume-name*: The name of the volume.
- *file-name*: The name of a file referenced by the alias, not including its path.
- *file-inode*: The inode the referenced file (in the same sense as the 'inode result of file-or-directory-stat).
- *parent-name*: The name of the directory containing the referenced file, not including the directory's path. If the referenced file is in the volume's root directory, *parent-name* will be *volume-name*.
- *parent-inode*: The inode of the file's enclosing directory (in the same sense as the 'inode result of file-or-directory-stat).
- *file-absolute-name*: The full path to the referenced file, but using Mac OS Classic path syntax, so path elements are separated by :s. This path starts with *volume-name* and ends with *file-name*.

- *file-absolute-path-within-volume*: The full path to the referenced file using Unix path conventions. If the referenced file is in the volume's root directory, this path is *file-name* prefixed with /.
- *volume-maybe-absolute-path*: A prediction of how the volume will be mounted, normally *volume-name* prefixed with /Volumes/.

Alias synthesis is based on a reverse-engineered description of the alias format [Alias].

Bibliography

[DS_Store] Wim Lewis and Mark Mentovai, "DS_Store Format." http://search.cpan.org/~wiml/Mac-Finder-DSStore/DSStoreFormat.pod

[Alias] Wikipedia, "Alias (Mac OS)." https://en.wikipedia.org/wiki/Alias_(Mac_OS)