

Appendix 5B

FileDir Structures and Definitions

Definitions

```
#define GLOBAL_ACCESS          0xFFFFFFFF

#define MAX_PATH_LENGTH        260 // 0x104 includes null
#define MAX_SERVER_NAME_LENGTH 50  // includes null and slash
#define MAX_VOLUME_NAME_LENGTH 18  // includes null and slash
#define MAX_SEMA4_NAME_LENGTH  512 // does not include null

#define NAME_SPACE_DOS         0
#define NAME_SPACE_MAC         1
#define NAME_SPACE_UNIX        2
#define NAME_SPACE_FTAM        3
#define NAME_SPACE_OS2         4
#define NAME_SPACE_NT          5

#define DEVICE_TYPE_EXCLUSION  0x01
#define DEVICE_TYPE_PRINTER    0x02
```

File System flags

```
#define FS_CASE_SENSITIVE_SEARCHES 0x0001
#define FS_CASE_PRESERVED_NAMES     0x0002
#define FS_UNICODE_ON_DISK          0x0004
#define FS_LONG_FILENAME_APIS      0x4000
#define FS_VOLUME_COMPRESSED        0x8000
```

DIB flags

```
#define DIB_FLAG_PERMANENT          0x01
#define DIB_FLAG_ROOT               0x02
#define DIB_FLAG_TEMP_PRIVATE       0x03
```

File Open Mode

```
#define ACCESS_READ_ONLY           0x00
#define ACCESS_WRITE_ONLY          0x01
#define ACCESS_READ_WRITE          0x02
#define ACCESS_BACKUP              0x04
#define ACCESS_PRINT_JOB           0x08
#define ACCESS_DENY_READ_WRITE    0x10
#define ACCESS_DENY_WRITE         0x20
#define ACCESS_DENY_READ          0x30
#define ACCESS_DENY_NONE          0x40
#define ACCESS_INHERITANCE_FLAG   0x80 0= child, 1=private
#define ACCESS_NO_LOCK_CRITICAL_ERROR 0x4000
#define ACCESS_DONT_CACHE         0x10000
#define ACCESS_DONT_COMPRESS      0x20000
#define ACCESS_MEMORY_MAPPED      0x40000
#define ACCESS_TEMPORARY_FILE     0x80000
```

Open/Create Action Flags

```
#define ACTION_EXIST_FAIL_ELSE_CREATE    0x01
#define ACTION_EXIST_OPEN_ELSE_FAIL      0x02
#define ACTION_EXIST_OPEN_ELSE_CREATE    0x03
#define ACTION_EXIST_REPLACE_ELSE_FAIL   0x04
#define ACTION_EXIST_REPLACE_ELSE_CREATE 0x05
```

File Attributes

```
#define ATTRIBUTE_NORMAL                0x0000
#define ATTRIBUTE_READONLY               0x0001
#define ATTRIBUTE_HIDDEN                 0x0002
#define ATTRIBUTE_SYSTEM                 0x0004
#define ATTRIBUTE_VOLUME_LABEL           0x0008
#define ATTRIBUTE_SUBDIRECTORY           0x0010
#define ATTRIBUTE_ARCHIVE                 0x0020
#define ATTRIBUTE_UNKNOWN                0x0040
#define ATTRIBUTE_SHAREABLE              0x0080
#define ATTRIBUTE_FIND_ONLY              0x1000
```

NetWare File Access Rights

```
#define NW_FACC_DENY_NONE               0x00
#define NW_FACC_READ_ENABLE              0x01
#define NW_FACC_WRITE_ENABLE             0x02
#define NW_FACC_DENY_READ                0x04
#define NW_FACC_DENY_WRITE               0x08
#define NW_FACC_COMPATIBILITY            0x10
#define NW_FACC_WRITE_THROUGH            0x40
```

NetWare Directory Access Rights

```
#define NW_DACC_READ_FILES               0x01
#define NW_DACC_WRITE_FILES              0x02
#define NW_DACC_OPEN_FILES               0x04
#define NW_DACC_CREATE_FILES             0x08
#define NW_DACC_DELETE_FILES             0x10
#define NW_DACC_PARENTAL                 0x20
#define NW_DACC_SEARCH                    0x40
#define NW_DACC_MODIFY_RENAME_FILES      0x80
```

Synchronization Types

#define	SYNC_TYPE_LOG	0x00	Just logs for later locking
#define	SYNC_TYPE_LOCK_EXCLUSIVE	0x01	locks file exclusive
#define	SYNC_TYPE_LOCK_SHARE	0x02	locks file read shareable
#define	SYNC_TYPE_RELEASE	0x03	releases file locks, but still logged
#define	SYNC_TYPE_CLEAR	0x04	clears locks and logs

Seek Type Flags

#define	SEEK_FROM_START	0x00
#define	SEEK_FROM_CURRENT	0x01
#define	SEEK_FROM_END	0x02
#define	TRUE	1
#define	FALSE	0
#define	ON	1
#define	OFF	0

Structures

BuildFIBTag

```
typedef struct BuildFIBTag {
    UINT8      FileHandle[6];
    UINT16     Reserved;
    UINT8      NameZ[14];
    UINT8      AccessRights;
    UINT8      Reserved2;
    UINT32     Size;
    UINT16     CreationDate;
    UINT16     LastAccessDate;
    UINT16     LastUpdateDate;
    UINT16     LastUpdateTime;
    UINT16     CreationTime;
} BuildFIB;
```

DirEntryInfoTag

```
typedef struct DirEntryInfoTag {
    UINT16     Reserved;
    UINT8      Name[14];
    UINT32     Attributes;
    UINT32     SizeLo;
    UINT32     SizeHi;
    NDate      CreationDate;
    NDate      AccessDate;
    NDate      UpdateDate;
    UINT8      LongName[MAX_PATH_LENGTH];
} DirEntryInfo;
```

DirMapInfoTag

```
typedef struct DirMapInfoTag {
    UINT32     DirHandle32;
    UINT32     VolumeID;
    CONN_HANDLE ConnHandle;
    UINT32     AliasHandle;
    ModHdlP    ModHandle;
    UINT32     PG_ID;
    UINT32     ProcessID;
    UINT32     FakeRootDepth;
    UINT32     CDDepth;
    UINT16     Flags;                (DIB_FLAG_...)
    UINT8      DirHandle8;
    UINT8      DirHandleName;
    UINT8      NameSpace;
} DirMapInfo;
```

DiskSpaceTag

```
typedef struct DiskSpaceTag {
    UINT64    TotalSpace;
    UINT64    FreeSpace;
} DiskSpace;
```

FileInfoTag

```
typedef struct FileInfoTag {
    CONN_HANDLE    ConnHandle;
    ModHd1P        ModHandle;
    UINT32         FileHandle[2];
    UINT32         Attributes;
    UINT64         Size;
    NDate          CreationDate;
    NDate          LastUpdateDate;
    NDate          LastAccessDate;
    UINT32         SeekPositionLo;
    UINT32         SeekPositionHi;
    UINT32         OpenCount;
    UINT8          DOSFileName[16];
    UINT32         LongNameLength;
    UINT8          LongName[MAX_PATH_LENGTH];
} FileInfo;
```