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_VOLUMELABEL           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;
   ModHdlP       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;
```