DOSLib

DOS Library Programmer's Reference

Version 4.4

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1 Introduction

DOSLib, or DOS Library, is a library of LISP-callable functions that provide Windows operating system and DOS command-line functionality to various CAD applications, including AutoCAD and IntelliCAD.

DOSLib extends their LISP programming languages by providing the following functionality:

- Drive handling functions to change between drives and check disk space.
- Path handling functions to manipulate path specifications.
- Directory handling functions to create, rename, remove, select and change directories.
- File handling functions to copy, delete, move, rename, and select files. Functions for getting directory listings, searching and finding multiple instances of files, and changing attributes are provided.
- Print handling function to get and set default printers, and spool files.
- Initialization file handling functions to manipulate Windows-style initialization (INI) files, and Windows Registry access functions.
- Process handling functions to run internal DOS commands or other programs.
- Miscellaneous functions, like changing the system date and time, and displaying Windows message boxes.

What's New in DOSLib Version 4.4

Platform Support

In addition to supporting Autodesk's AutoCAD Release 13 and Release 14, DOSLib now support AutoCAD 2000. While support for Visio's IntelliCAD 98 continues, support for IMSI's TurboCAD Professional v5 has been discontinued.

New Functions

Six new functions have been added to DOSLib:

dos_closeall	Closes all open documents (ACAD2000 only)
dos_hostname	Returns the local DNS host name
dos_ipaddress	Returns a list of local ip addresses
dos_macaddress	Returns the local media access control (MAC) address
dos_saveall	Saves all open documents (ACAD2000 only)
dos_serialno	Returns the serial number of a disk

System Requirements

DOSLib requires either Autodesk's AutoCAD Release 13, Release 14, and 2000, or Visio's IntelliCAD 98 running under Microsoft Windows 95, 98, or NT 4.0.

Files in DOSLib

The following files make up DOSLib:

Filename	Description
DOSLIB4.PDF	DOSLib Programmer's Reference in Adobe® Acrobat® format
DOSLIB13.ARX	DOSLib for AutoCAD Release 13
DOSLIB14.ARX	DOSLib for AutoCAD Release 14
DOSLIB2K.ARX	DOSLib for AutoCAD 2000
DOSLIB4.DLL	DOSLib for IntelliCAD 98

Installing DOSLib

Though DOSLib files can be installed in and run from any directory on a disk, the following locations are recommended for the AutoCAD Release 14 environment:

- A directory specified by the "Support File Search Path" (for example, C:\Program Files\AutoCAD R14\Support).
- A directory common to multiple users (for example, Z:\Projects\Support).
- The directory where the AutoCAD executable file (ACAD.EXE) is located (for example, C:\Program Files\AutoCAD R14).

Loading DOSLib

Loading DOSLib Manually

You can load DOSLib manually several ways. Check the documentation included with your supported CAD application for details on loading AutoCAD ARX and IntelliCAD SDS applications.

To load DOSLib from AutoCAD:

1. From the AutoCAD **Tools** menu, choose **Load Applications**.

   Or, type **appload** at the command prompt.
2. In the Load AutoLISP, ADS and ARX Files dialog box, click **File**.
3. In the Select LISP, ADS or ARX File Routine dialog box, from the files list, select either DOSLIB13.ARX, DOSLIB14.ARX, or DOSLIB2K.ARX from the directory where you copied the files, and click **OK**.
4. In the Load AutoLISP, ADS and ARX Files dialog box, click **Load**.

Loading DOSLib Automatically

DOSLib can also be automatically loaded in several ways. Again, check the documentation included with your supported CAD application for details on loading AutoCAD ARX and IntelliCAD SDS.

To load DOSLib from AutoCAD:

- Add the appropriate DOSLib filename to an ACAD.RX file, or
- Add an **arxload** function for either the ACAD.LSP or *menu*.MNL file, or
- Add DOSLIB2K.ARX to the AutoCAD Startup Suite (ACAD2000 only).

If you choose the arxload method, the **arxload** function must be part of the **S::STARTUP** function. This is because AutoCAD does not initialize ARX until **S::STARTUP**. Also, AutoCAD processes the ACAD.LSP file before any *menu*.MNL file. If both files have a **S::STARTUP** function, only the function in *menu*.MNL is interpreted.

The following code example demonstrates how you might automatically load DOSLib with the **S::STARTUP** function:

Example

```
;AutoLISP Startup Function
(defun S::STARTUP ()
      (cond
            ((= (atoi (substr (getvar "acadver") 1 2)) 13)
                  (if (not (member "doslib13.arx" (arx)))
                        (arxload (findfile "doslib13.arx"))))
            ((= (atoi (substr (getvar "acadver") 1 2)) 14)
                  (if (not (member "doslib14.arx" (arx)))
                        (arxload (findfile "doslib14.arx"))))
            ((= (atoi (substr (getvar "acadver") 1 2)) 15)
                  (if (not (member "doslib2k.arx" (arx)))
                        (arxload (findfile "doslib2k.arx"))))
      )
)
```

Function Overview

Function	Description
dos_about	Displays information about DOSLib
dos_attrib	Returns or changes file attributes
dos_beep	Plays a Windows sound
dos_chdir	Changes the current directory
dos_closeall	Closes all open documents (ACAD2000 only)
dos_command	Runs a COMMAND.COM command
dos_computer	Returns or changes the computer name
dos_copy	Copies a file
dos_date	Returns or changes the system date
dos_delete	Deletes files
dos_dir	Returns a list of files
dos_chkdsk	Returns drive space statistics
dos_drive	Returns or changes the current drive
dos_drives	Returns a list of available drives
dos_drivetype	Returns the drive type
dos_encrypt	Password encrypts a file
dos_execute	Executes an external program
dos_exewait	Execute a program and waits for termination
dos_file	Returns detailed file information
dos_filesize	Returns file size information
dos_filesys	Returns the file system type
dos_find	Finds files
dos_format	Formats a disk or diskette
dos_fullpath	Converts a partial path to a qualified path
dos_getdir	Displays a directory selection dialog box
dos_getfilem	Displays a multiple selection file open dialog box
dos_getini	Returns an entry from an initialization file
dos_getprn	Returns the default Windows printer
dos_help	Displays a list of DOSLib functions
dos_hostname	Returns the local DNS host name
dos_ipaddress	Returns a list of local ip addresses
dos_label	Returns or changes the label of a disk
dos_macaddress	Returns the local media access control (MAC) address
dos_makepath	Creates a path name from components
dos_mem	Returns system memory statistics
dos_mkdir	Makes a directory
dos_move	Moves a file

Function	Description
dos_msgbox	Displays a Windows message box
dos_openp	Returns the open status of a file
dos_path	Returns the current DOS path
dos_pause	Pauses program execution
dos_pwdir	Returns the path to the current directory
dos_printers	Returns a list of Windows printers
dos_random	Returns a pseudorandom number
dos_recent	Adds to or clears the Windows recently used document list
dos_regdel	Deletes a value or key from the Windows Registry
dos_regget	Gets a value or key from the Windows Registry
dos_regset	Sets a value or key from the Windows Registry
dos_rename	Renames a file
dos_rendir	Renames a directory
dos_rmdir	Removes a directory
dos_saveall	Saves all open documents (ACAD2000 only)
dos_search	Searches for a file using environment paths
dos_serialno	Returns the serial number of a disk
dos_setini	Changes an entry in an initialization file
dos_setprn	Changes the default Windows printer
dos_shellexe	Open or print a specified file or document
dos_show	Display the AutoCAD window
dos_splash	Displays a bitmap splash screen
dos_splitpath	Breaks a path name into components
dos_spool	Spools a file to a Windows printer
dos_subdir	Returns a list of subdirectories
dos_sysdir	Returns the Windows system directory
dos_tempdir	Returns the temporary directory
dos_time	Returns or changes the system time
dos_touch	Changes file modification date and time
dos_username	Returns the username
dos_ver	Returns the operating system version number
dos_version	Returns the DOSLib version number
dos_wav	Plays a Windows waveform audio file
dos_win	Returns the Windows operating system
dos_windir	Returns the Windows directory

2 Drive Handling Functions

dos_chkdsk

Returns drive space statistics for the current drive or for the specified drive. Use the **rtos** function to convert the return values to strings.

Syntax

(dos_chkdsk [*drive*]**)**

Option

drive The drive name (for example, C:, D:).

Returns

A list of three real numbers indicating the total disk space, used disk space, and free disk space in bytes.

nil on error.

Example

```
(dos_chkdsk)
(5.23526e+008 4.78839e+008 4.46874e+007)
```

Example

```
(dos_chkdsk "z:")
(1.99996e+009 2,175e+008 1.78238e+009)
```

dos_drive

Returns the current drive or changes the current drive to the one specified.

Syntax

(dos_drive [*drive*]**)**

Option

drive The drive name (for example, C:, D:).

Returns

A string describing the current or new drive.

nil on error.

Example

```
(dos_drive)
"C:"
```

Example

```
(dos_drive "z:")
"Z:"
```

dos_drives

Returns a list of available drives.

Syntax

(dos_drives)

Returns

A list of available local and network drives.

nil on error.

Example

```
(dos_drives)
("A:" "B:" "C:" "X:" "Y:" "Z:")
```

dos_drivetype

Returns the type of the specified drive; either removable, fixed, CD-ROM, RAM disk, or a network drive.

Syntax

(dos_drivetype [*drive*]**)**

Option

drive The drive name (for example, C:, D:).

Returns

A string describing the drive type.

nil on error.

Example

```
(dos_drive)
"FIXED"
```

Example

```
(dos_drive "f:")
"CDROM"
```

dos_format

Displays a Windows Format dialog box allowing the user for prepare a disk or diskette for use.

Syntax

(dos_format *drive***)**

Argument

drive	The drive name (for example, A:, B:).

Returns

T if successful.

nil on error.

Example

```
(dos_format "a:")
T
```

dos_label

Returns or changes the volume label of a specified disk.

Syntax

(dos_label [*drive* [*label*]]**)**

Options

drive	The drive name (for example, C:, D:).
label	The volume label.

Returns

A string describing the volume label.

nil on error.

Example

```
(dos_label)
"DRIVE-C"
```

Example

```
(dos_label "d:" "drive-d")
"DRIVE-D"
```

dos_serialno

Returns the serial number of a specified disk.

Syntax

(dos_serialno [*drive*]**)**

Options

drive The drive name (for example, C:, D:).

Returns

A string describing the serial number.

nil on error.

Example

```
(dos_serialno)
"8CD63F34"
```

Example

```
(dos_label "d:" "drive-d")
"8048A4CC"
```

3 Path Handling Functions

dos_fullpath

Converts a partial path to a fully qualified path. Unlike the **dos_makepath** function, **dos_fullpath** can be used with .\\ and ..\\ in the path.

Syntax

(dos_fullpath *path***)**

Argument

path	If the path argument specifies a drive (C:, D:, etc.), the current directory of this drive is combined with the path.

Returns

A fully qualified path.

nil if drive is not valid or on error.

Example

```
(dos_fullpath "acad.dwg")
"C:\\ACAD\\SUPPORT\\ACAD.DWG"
```

Example

```
(dos_fullpath "..\\windows\\win.ini")
"C:\\WINDOWS\\WIN.INI"
```

Example

```
(dos_fullpath "z:")
"Z:\\PUBLIC"
```

dos_makepath

Creates a single path, composed of a drive letter, directory path, file name, and file extension.

Syntax

(dos_makepath *drive directory filename extension***)**

Arguments

drive	The letter (A, B, etc.) corresponding to the desired drive and an optional trailing colon (:). The function inserts the colon automatically in the composite path name if it is missing. If drive is an empty string (""), no drive letter and colon appear in the returned path.

directory The path of directories, not including the drive designator or the actual file name. The trailing slash is optional. Either forward slashes (/) or double-backslashes (\\) or both may be used in a single directory argument. If a trailing slash (/ or \\) is not specified, it is inserted automatically. If directory is a empty string (""), no slash is inserted in the returned path.

filename The base file name without any extensions. If *filename* is an empty string (""), no file name is inserted in the returned path.

extension The file name extension, with or without a leading period (.). The function inserts the period automatically if it does not appear in extension. If *extension* is an empty string (""), no period is inserted in the returned path.

Returns

A fully qualified path.

nil if drive is not valid or on error.

Example

```
(dos_makepath "c:" "\\acad" "acad" "exe")
"C:\\ACAD\\ACAD.EXE"
```

Example

```
(dos_makepath "c:" "\\acad" "" "")
"C:\\ACAD\\"
```

Example

```
(dos_makepath "" "\\acad" "acad" "exe")
"\\ACAD\\ACAD.EXE"
```

dos_path

Returns a list describing the current DOS search path for executable programs as set by the either the PATH command or SET PATH statement.

Syntax

(dos_path)

Returns

Current value of DOS PATH or SET PATH statement.

nil on error.

Example

```
(dos_path)
("C:\\ACAD\\" "C:\\WINDOWS\\" "C:\\DOS\\ "Z:\\PUBLIC")
```

dos_splitpath

Breaks a full path name into its four components. The function returns a list containing the four components.

Syntax

(dos_splitpath *path***)**

Argument

path	A string containing a qualified path

Returns

drive	The drive letter followed by a colon (:) if a drive is specified in *path*.
directory	The path of subdirectories, if any, including the trailing backslashes. Forward slashes (/), double-backslashes (\\), or both may be present in *path*.
filename	The base file name without any extension.
extension	The file name extension, if any, including the leading period.

nil on error.

Example

```
(dos_splitpath "c:\\acad\\acad.exe")
("C:" "\\ACAD\\" "ACAD" ".EXE")
```

Example

```
(dos_splitpath "c:\\acad\\")
("C:" "\\ACAD\\" "" "")
```

Example

```
(dos_splitpath "c:\\acad")
("C:" "\\" "ACAD" "")
```

4 Directory Handling Functions

dos_chdir

Changes the current directory to the specified directory. This function can change the current directory on any drive; it cannot be used to change the current drive.

Syntax

(dos_chdir *path***)**

Argument

path An existing directory.

Returns

A qualified path to the current directory.

nil on error.

Example

```
(dos_chdir "test")
"C:\\ACAD\\TEST\\"
```

Example

```
(dos_chdir "\\drawings")
"C:\\DRAWINGS\\"
```

Example

```
(dos_chdir "z:\\")
"Z:\\"
```

dos_getdir

Displays a Windows browse for folder dialog box.

Syntax

(dos_getdir *title* [*path*]**)**

Argument

title A dialog box title.

Option

path An existing directory.

Returns

A qualified path to the current directory selected by the user.

nil on cancel or error.

Example

```
(dos_getdir "Select a Directory" "c:\\")
"C:\\DRAWINGS\\PROJECTS\\"
```

dos_mkdir

Creates a new directory. Only one directory can be created at a time, so only the last component of *path* can name a new directory.

Syntax

(dos_mkdir *path***)**

Argument

path	The directory name.

Returns

A qualified path to the newly created directory.

nil on error.

Example

```
(dos_mkdir "test")
"C:\\ACAD\\TEST\\"
```

Example

```
(dos_mkdir "\\drawings")
"C:\\DRAWINGS\\"
```

dos_rendir

Renames a directory.

Syntax

(dos_rendir *oldpath newpath***)**

Arguments

oldpath	Must be the path name of an existing directory
newpath	Must not be the path name of an existing directory.

Returns

A qualified path containing the new directory name.

nil on error.

Example

```
(dos_rendir "test" "backup")
"C:\\ACAD\\BACKUP\\"
```

Example

```
(dos_rendir "backup" "support")
nil
```

dos_rmdir

Removes a directory.

Syntax

(dos_rmdir *path***)**

Argument

path	The specified directory must be empty and must not be the current directory or the root directory.

Returns

A qualified path to the removed directory.

nil on error.

Example

```
(dos_rmdir "test")
"C:\\ACAD\\TEST\\"
```

Example

```
(dos_rmdir "\\drawings")
"C:\\DRAWINGS\\"
```

dos_pwdir

Returns the path to the current directory for the current drive, or the specified drive.

Syntax

(dos_pwdir [*drive*]**)**

Option

drive	The drive name, for example: C:, D:.

Returns

The path to the current directory for specified drive.

nil on error.

Example

```
(dos_pwdir)
"C:\\ACAD\\
```

Example

```
(dos_pwdir "z:")
"Z:\\PUBLIC\\"
```

dos_subdir

Returns a list of subdirectories found in current directory or in the specified directory. This function is the only path-related function whose return values do not contain trailing double-backslashes (\\).

Syntax

(dos_subdir [*path*]**)**

Option

path Specifies the desired directory.

Returns

A list of subdirectories.

nil on error.

Example

```
(dos_subdir)
("." "ADS" "API" "FONTS" "IGESFONTS" "SAMPLE" "SUPPORT")
```

Example

```
(dos_subdir "c:\\")
("ACAD" "DOS" "TEMP" "WINDOWS")
```

dos_sysdir

Returns the path of the Windows system directory. The system directory contains such files as Windows libraries, drivers, and font files.

Syntax

(dos_sysdir)

Returns

A qualified path to the windows system directory.

nil on error.

Example

```
(dos_sysdir)
"C:\\WINDOWS\\SYSTEM\\"
```

dos_tempdir

Returns the path of the directory designated for temporary files.

Syntax

(dos_tempdir)

Returns

A qualified path to the temporary directory.

nil on error.

Example

```
(dos_tempdir)
"C:\\WINDOWS\\TEMP\\"
```

dos_windir

Returns the path of the Windows directory. The Windows directory contains such files as Windows-based applications, initialization files, and Help files.

Syntax

(dos_windir)

Returns

A qualified path to the Windows directory.

nil on error.

Example

```
(dos_windir)
"C:\\WINDOWS\\"
```

5 File Handling Functions

dos_attrib

Returns file attributes, or sets file attributes to the value described by *bits*.

Syntax

(dos_attrib [*filespec* [*bits*]]**)**

Options

filespec The desired file or files. Can contain DOS wildcard characters ("*" and "?"). If no *filespec* is supplied, it is assumed to be *.*.

bits An integer (bit-coded) identifying the desired file attributes. Specify more than one file attribute by adding the bit values.

The allowable *bit* values are as follows:

Bit value	Description
0	Normal
1	Read Only
2	Hidden
4	System
8	Archive

Returns

An association list containing the filename and an integer indicating the attribute bits if successful.

nil on error.

Example

```
(dos_attrib)
(("ACAD.EXE" . 0)("TEST.DWG" . 8))
```

Example

```
(dos_attrib "*.dwg")
(("ACAD.EXE" . 0)("TEST.DWG" . 8))
```

Example

```
(dos_attrib "c:\\projects\\*.dwg" 3)
(("SAMPLE.DWG" . 3)("PROJECT.DWG" . 3))
```

dos_closeall

Closes all open documents (AutoCAD 2000 only).

Syntax

(dos_closeall)

Returns

nil.

Example

```
(dos_closeall)
nil
```

dos_copy

Copies a file. The function can be used to copy a file from one directory to another, and from one drive to another.

Syntax

(dos_copy *srcfilename destfilename***)**

Arguments

srcfilename	Source file name. Must be the path name of an existing file.
destfilename	Destination file name. If this file exists, it will be overwritten.

Returns

A qualified path to *destfilename*.

nil on error.

Example

```
(dos_copy "drawing.dwg" "drawing.bak")
"C:\\ACAD\\DRAWING.BAK"
```

Example

```
(dos_copy "drawing.dwg" "c:\\acad\\backup\\drawing.bak")
"C:\\ACAD\\BACKUP\\DRAWING.BAK"
```

Example

```
(dos_copy "drawing.dwg" "a:\\drawing.dwg")
"A:\\DRAWING.DWG"
```

dos_delete

Deletes files.

Syntax

(dos_delete *filespec***)**

Argument

filespec	Can be any qualified path name and can contain DOS wildcard characters ("*" and "?").

Returns

A list of deleted files if successful.

nil on error.

Example

```
(dos_delete "acad.bak")
("ACAD.BAK")
```

Example

```
(dos_delete "*.bak")
("ACAD.BAK" "TEST.BAK")
```

dos_dir

Returns a list containing files found in the current directory or the specified files.

Syntax

(dos_dir [*filespec*]**)**

Option

filespec	Can be any qualified path name and can contain DOS wildcard characters ("*" and "?").

Returns

A list of filenames.

nil on error.

Example

```
(dos_dir)
("ACAD.ADS" "ACAD.ERR" "ACAD.EXE" ...)
```

Example

```
(dos_dir "*.dwg")
("ACAD.DWG" "TEST.DWG")
```

dos_encrypt

Encrypts or unencrypts a file with a specified password. **WARNING**: Once a file has been encrypted, it cannot be unencrypted without again calling the **dos_encrypt** function, and specifying the same password argument. Use this function with caution.

Syntax

(dos_encrypt *filename password***)**

Arguments

filename	The file to be encrypted or unencrypted.
password	The encryption password.

Returns

A qualified path to the encrypted or unencrypted file.

nil on error.

Example

```
(dos_encrypt "test.dwg" "password")
"c:\\drawings\\test.dwg"
```

dos_file

Returns a list containing detailed file information on a file.

Syntax

(dos_file *filename***)**

Argument

filename	The desired file name.

Returns

A list of strings describing file information

The return values of **dos_file** are as follows:

Value	Description
filename	The qualified path to *filename*.
size	The size of the file in bytes.
date	The date the file was last written.
time	The time the file was last written.
read-only	"R" if the file is read-only; otherwise "".
hidden	"H" if the file is hidden; otherwise "".
system	"S" if the file is system; otherwise "".
archive	"A" if the file is archive; otherwise "".

nil on error.

Example

```
(dos_file "test.dwg")
("C:\\ACAD\\TEST.DWG" "343038" "06-06-1994" "10:25:14a" "R" "" ""
"A")
```

dos_filesize

Returns file size information on the files found in the current directory or the specified files.

Syntax

(dos_filesize [*filespec*]**)**

Option

filespec	Can be any qualified path name and can contain DOS wildcard characters ("*" and "?").

Returns

An association list containing the filename and a real number indicating the size of the file in bytes.

nil on error.

Example

```
(dos_filesize)
(("DRAWING.DWG" . 35189.0)("TEST.DWG" . 44135.0))
```

Example

```
(dos_filesize "c:\\drawings\\*.dwg")
(("SAMPLE.DWG" . 54189.0)("PROJECT.DWG" . 24135.0))
```

dos_filesys

Returns the file system of the specified drive; either FAT, NTFS, HPFS, CDFS, or a network drive.

Syntax

(dos_filesys [*drive*]**)**

Option

drive	The drive name (for example, C:, D:).

Returns

A string describing the file system.

nil on error.

Example

```
(dos_filesys)
"FAT"
```

Example

```
(dos_filesys "d:")
"NTFS"
```

dos_find

Searches for all instances of a file.

Syntax

(dos_find *filename* [*drive*]**)**

Argument

filename The file name.

Option

drive The drive to search

Returns

A list containing qualified path names to all instances of *filename*.

nil if the file was not found or on error.

Example

```
(dos_find "acad.dwg")
("C:\\ACAD\\ACAD.DWG" "C:\\ACAD\\BACKUP\\ACAD.DWG")
```

Example

```
(dos_find "acad.dwg" "x:")
("X:\\PROJECTS\\MASTERS\\ACAD.DWG")
```

dos_getfilem

Displays a Windows common file open dialog box that allows for multiple file selection.

Syntax

(dos_getfilem *title path filter***)**

Argument

title A dialog box title.

path An existing directory

filter A filename filter string. The filter string consists of two components: a description (for example, "Text Files"), and a filter pattern (for example, "*.TXT"). Multiple filter patterns can be specified for a single item by separating the filter-pattern strings with a semicolon (for example, "*.TXT;*.DOC;*.BAK"). The components must be separated by a pipe character ("|"). The filename filter string can consist of one or more filter strings, each separated by a pipe character ("|").

Returns

A list of filenames. The first element of the list is a qualified path to the selected directory.

nil on cancel or error.

Example

```
(dos_getfilem "Select Drawings" "C:\\DRAWINGS\\" "Drawing Files
(*.DWG)|*.DWG")
("C:\\DRAWINGS\\" "TITLE1.DWG" "TITLE2.DWG"...)
```

Example

```
(dos_getfilem "Select Files" "C:\\FILES\\" "Text Files
(*.TXT)|*.TXT|All Files (*.*)|*.*")
("C:\\FILES\\" "TITLE1.TXT" "TITLE2.TXT"...)
```

dos_move

Moves a file to another location. The function can be used to move a file from one directory to another. However, files cannot be moved from one drive to another.

Syntax

(dos_move *filename1 filename2***)**

Arguments

filename1 Must be the path name of an existing file.

filename2 Must not be the same name as an existing file.

Returns

A qualified path to the file's new location.

nil on error.

Example

```
(dos_move "drawing.dwg" "c:\\backup\\drawing.dwg")
"C:\\BACKUP\\DRAWING.DWG"
```

Example

```
(dos_move "drawing.dwg" "c:\\drawing.dwg")
"C:\\DRAWING.DWG"
```

dos_openp

Returns the open status of a file. This function has use in network environments.

Syntax

(dos_openp *filename***)**

Argument

filename Must be the name of an existing file.

Returns

T if the file is open.

nil if the file is closed or on error.

Example

```
(dos_openp "drawing.dwg")
T
```

dos_recent

Adds to or clears the Windows recently used document list.

Syntax

(dos_recent [*filename*]**)**

Option

filename Must be the path name of an existing file. If no argument is specified, the recently used document list will be cleared.

Returns

nil if successful or on error.

Example

```
(dos_recent "c:\\drawings\\drawing.dwg")
nil
```

dos_saveall

Saves all open documents (AutoCAD 2000 only).

Syntax

(dos_saveall)

Returns

nil.

Example

```
(dos_saveall)
nil
```

dos_rename

Renames a file.

Syntax

(dos_rename *oldfilename newfilename***)**

Arguments

filename1	Must be the path name of an existing file.
filename2	Must not be the same name as an existing file.

Returns

A qualified path name containing the file's new name.

nil on error.

Example

```
(dos_rename "drawing.dwg" "drawing.bak")
"C:\\ACAD\\DRAWING.BAK"
```

dos_search

Searches for the target file in the specified domain. The function searches for a matching file in the directories specified by the *environment* argument. If the *environment* argument is **nil**, the following directories are searched, in the order listed: the directory from which the application loaded, the current directory, the Windows system directory, the Windows directory, and any directories listed by the PATH environment variable.

Syntax

(dos_search *filename environment***)**

Arguments

filename	The desired file name.
environment	Any environment variable that specifies a list of directory paths (for example, PATH, ACAD).

Returns

A qualified path name if successful.

nil if the file was not found or on error.

Example

```
(dos_search "acad.exe" (dos_path))
"C:\\ACAD\\ACAD.EXE"
```

Example

```
(dos_search "win.ini" nil)
"C:\\WINDOWS\\WIN.INI"
```

dos_touch

Sets the date and time at which files were last written. These values appear in the DOS date and time format.

Syntax

(dos_touch *filespec***)**

Argument

filespec	Can be any qualified path name and can contain DOS wildcard characters ("*" and "?").

Returns

A list of file that were modified if successful.

nil on error.

Example

```
(dos_touch "c:\\acad\\acad.dwg")
("ACAD.EXE")
```

Example

```
("ACAD.DWG" "TEST.DWG")
"C:\\ACAD\\*.DWG"
```

6 Print Handling Functions

dos_getprn

Returns the current, or default, Windows printer.

Syntax

(dos_getprn)

Returns

A string describing the current Windows printer.

nil on error.

Example

```
(dos_getprn)
"HP LaserJet 5Si/5Si MX"
```

dos_printers

Returns the list of installed Windows printers. These printers were installed through the Windows Control Panel.

Syntax

(dos_printers)

Returns

A list of string describing the current installed Windows printers.

nil on error.

Example

```
(dos_printers)
("HP LaserJet 5Si/5Si MX" "Phantom AutoCAD OLE/ADI Printer")
```

dos_setprn

Sets the current, or default, Windows printer. The printer name must be a name returned by the **dos_printers** function.

Syntax

(dos_setprn *printer***)**

Argument

printer	The printer name.

Returns

A string describing the current Windows printer.

nil on error.

Example

```
(dos_setprn "HP LaserJet 5Si/5Si MX")
"HP LaserJet 5Si/5Si MX"
```

dos_spool

Spools a disk file to a Windows printer. The spool file must be in a "raw" printer format. The **dos_spool** function can be used as a supplement to AutoCAD's Autospool plotting method.

Syntax

(dos_spool *filename printer***)**

Arguments

filename	The spool file name.
printer	The printer name.

Returns

A qualified path to the spooled file.

nil on error.

Example

```
(dos_spool "test.plt" "HP LaserJet 5Si/5Si MX")
"c:\\drawings\\test.plt"
```

7 Initialization File and Registry Handling Functions

dos_getini

Returns a string from the specified section in the Windows-style initialization (.INI) file. The initialization file must have the following form:

[*section*]
entry=string
.
.

Syntax

(dos_getini *section entry filename***)**

Arguments

section	The section containing the entry.
entry	The entry whose associated string is to be returned.
filename	The file name of the initialization file.

Arguments to **dos_getini** are not case dependent, so the strings in *section* and *entry* may be in any combination of uppercase and lowercase letters.

Returns

If *section* is **nil**, a list of section names is returned.

If *entry* is **nil**, a list of entries for the specified *section* is returned.

Otherwise, a string associated with *entry* is returned.

nil on error.

Example

```
(dos_getini "drawings" "dwg1" "dwg.ini")
"DWG1.DWG"
```

dos_regdel

Deletes a value and/or key from the Windows Registry.

Syntax

(dos_regdel *application section key*[*T*]**)**

Arguments

application	The application from which the value or key will be deleted.
section	The section from which the value or key will be deleted. If this parameter is **nil**, every section from the specified application-level key and all of its subkeys and values will be deleted.
key	The key and associated value to be deleted. If this parameter is **nil**, every key from the specified section-level key and all of its values will be deleted.

Option

T	The Registry hive from which to delete the value or key. If specified, the value or key is deleted from HKEY_LOCAL_MACHINE\Software\DOSLib. Otherwise, the value or key is deleted from HKEY_CURRENT_USER\Software\DOSLib.

Returns

The value or key that was removed if successful.

nil on error.

Example

```
(dos_regdel "CAD" "Project1" "User")
"User"
```

Example

```
(dos_regdel "CAD" "Project2" "User" T)
"User"
```

dos_regget

Gets or retrieves a value or key from the Windows Registry.

Syntax

(dos_regget *application section key*[*T*]**)**

Arguments

application	The application from which to retrieve the value or key. If this parameter is **nil**, every application-level key will be retrieved.
section	The section from which to retrieve the value or key. If this parameter is **nil**, every section-level key from the specified application will be retrieved.
key	The key from which the value will be retrieved.

Option

T	The Registry hive from which to retrieve the value or key. If specified, the value or key is retrieved from HKEY_LOCAL_MACHINE\Software\DOSLib. Otherwise, the value or key is retrieved from HKEY_CURRENT_USER\Software\DOSLib.

Returns

The value or key that was requested.

nil on error.

Example

```
(dos_regget "CAD" "Project1" "User")
"Dale"
```

Example

```
(dos_regget "CAD" "Project2" "User" T)
"Mary"
```

dos_regset

Sets or adds a string value or key to the Windows Registry.

Syntax

(dos_regset *application section key value* [*T*]**)**

Arguments

application	The application to which the value or key will be added.
section	The section to which the value or key will be added. If this parameter is **nil**, an application-level key will be added.
key	The key to which the value will be added. If this parameter is **nil**, a section-level key will be added.
value	The string value to added. If this parameter is **nil**, an empty string ("") is assigned to the specified key.

Option

T	The Registry hive to which to add the value or key. If specified, the value or key is set in or added to HKEY_LOCAL_MACHINE\Software\DOSLib. Otherwise, the value or key is set in or added to HKEY_CURRENT_USER\Software\DOSLib.

Returns

The value or key that was set.

nil on error.

Example

```
(dos_regset "CAD" "Project1" "User" "Dale")
"Dale"
```

Example

```
(dos_regset "CAD" "Project2" "User" "Mary" T)
"Mary"
```

dos_setini

Copies a string into the specified section of the Windows-style initialization (.INI) file. An initialization file must have the following form:

[*section*]
entry=string
.
.

Syntax

(dos_setini *section entry string filename***)**

Arguments

section	The section to which the string will be copied. If section does not exist, it is created.
entry	The name of the entry to be associated with a string. If the entry does not exist in the specified section, it is created. If this parameter is **nil**, the entire section, including all entries within the section, is deleted.
string	The string to be written to the file. If this parameter is **nil**, the entry pointed to by *entry* is deleted.
filename	The name of the initialization file. If file name does not exist, the function creates the file. The specified directory must already exist.

Arguments to **dos_setini** are not case dependent, so the strings in *section*, *entry* and *string* may be in any combination of uppercase and lowercase letters. Also, to improve performance, Windows keeps a cached version of the most recently accessed initialization file. If that *filename* is specified and the other arguments are **nil**, Windows flushes the cache. This function always returns **nil** after flushing the cache, regardless of whether the flush succeeds or fails.

Returns

A qualified path name to *filename*.

nil on error.

Example

```
(dos_setini "drawings" "dwg1" "dwg1.dwg" "dwg.ini")
"C:\\DRAWINGS\\DWG.INI"
```

Example

```
(dos_setini "drawings" "dwg1" nil "dwg.ini")
"C:\\DRAWINGS\\DWG.INI"
```

8 Process Handling Functions

dos_command

Runs an internal DOS command.

Internal DOS commands are those commands native to COMMAND.COM.

Syntax

(dos_command *command-line***)**

Argument

command-line A string describing the internal command and it's arguments.

Returns

Returns *command-line* if successful.

nil on error.

Example

```
(dos_command "copy *.dwg a:")
"COPY *.DWG A:"
```

dos_execute

Executes an external program.

The PATH environment variable is used to find the program to be executed.

Syntax

(dos_execute *command-line***)**

Argument

command-line A string describing the external program and it's arguments.

Returns

The function returns *command-line*.

nil on error.

Example

```
(dos_execute "c:\\dos\\format.com a: /s")
"C:\\DOS\\FORMAT.COM A: /S"
```

Example

```
(dos_execute "c:\\windows\\notepad.exe")
"C:\\WINDOWS\\NOTEPAD.EXE"
```

dos_exewait

Executes an external program, then waits for termination before returning control to the calling application.

Syntax

(dos_exewait *command-line***)**

Arguments

command-line A string describing the external program and it's arguments.

Returns

T if successful.

nil on error.

Example

```
(dos_execwait "notepad.exe")
T
```

dos_shellexe

Opens or prints a specified file. The file can be an executable file or a document file

Syntax

(dos_shellexe *file parameters* [*operation*]**)**

Arguments

file A file to open or print or the folder to open or explore. The function can open an executable file or a document file. The function can print a document file.

parameters The parameters to be passed to the application, like a document. If *file* specifies a document file, *parameters* should be **nil**.

Option

operation The operation to be performed. The default operation is open.

Bit value	Description
0	Open the executable or document.
1	Print the document.
2	Explore the specified folder

Returns

T if successful.

nil on error.

Example

```
(dos_shellexe "notepad.exe" "readme.txt")
T
```

Example

```
(dos_shellexe "www.mcneel.com" nil)
T
```

Example

```
(dos_shellexe "c:\\drawings\\" nil 2)
T
```

9 System Functions

dos_about

Displays version number and copyright information about DOSLib.

Syntax

(dos_about)

Returns

nil.

Example

```
(dos_about)
nil
```

dos_beep

Plays a Windows waveform audio file. The waveform sound for each sound type is identified by an entry in the [sounds] section of the registry. If the system cannot play the specified alert sound, **dos_beep** plays the system default sound. If the function cannot play the default sound, **dos_beep** produces a standard beep by using the computer speaker.

Syntax

(dos_beep [*type*]**)**

Option

type The waveform type. The allowable values are as follows:

Bit value	Description
0	Standard beep
1	System Asterisk
2	System Exclamation
3	System Hand
4	System Question
5	System Default

Returns

T if successful.

nil on error.

Example

```
(dos_beep 1)
T
```

dos_computer

Returns or sets the computer name of the current system. The name is established at system startup, when it is initialized from the registry. Changes to the computer name take effect the next time the system is started.

Syntax

(dos_computer [*computer*]**)**

Option

computer The computer name.

Returns

A string describing the computer name.

nil on error.

Example

```
(dos_computer)
"POKEY"
```

Example

```
(dos_computer "SPEEDY")
"SPEEDY"
```

dos_date

Returns the current system date or changes the current system date to one specified.

Syntax

(dos_date [*date*]**)**

Option

date Must be specified in a month-day-year, or MM-DD-YYYY, format.

Returns

The current system date.

nil on error.

Example

```
(dos_date)
"1-1-1996"
```

Example

```
(dos_date "9-1-1998")
"9-1-1998"
```

dos_help

Displays a listing of available DOSLib functions.

Syntax

(dos_help)

Returns

A list of DOSLib functions.

nil on error

Example

```
(dos_help)
("dos_about" "dos_attrib" "dos_beep" ...)
```

dos_hostname

Returns a systems local DNS hostname

Syntax

(dos_hostname)

Returns

A string containing the DNS hostname.

nil on error

Example

```
(dos_hostname)
"robert.mcneel.com"
```

dos_ipaddress

Returns a list of local TCP/IP addresses

Syntax

(dos_ipaddress)

Returns

A list of strings containing local TCP/IP addresses.

nil on error

Example

```
(dos_ipaddress)
("204.177.179.35")
```

dos_mem

Returns a list containing information about current available memory. The function returns information about both physical and virtual memory. Note, use the **rtos** function to convert the return values to strings.

Syntax

(dos_mem)

Returns

A list of numbers describing the current state of memory.

The return values of **dos_mem** are as follows:

Value	Description
MemLoad	The percent of memory in use (integer).
TotalPhys	Bytes of physical memory.
AvailPhys	Free physical memory bytes.
TotalPageFile	Bytes of paging file.
AvailPageFile	Free bytes of the page file.
TotalVirtual	User bytes of address space.
AvailVirtual	Free user bytes.

nil on error.

Example

```
(dos_mem)
(86 4.98401e+007 0.0 4.92831e+007 2.42934e+007 2.14329e+009
2.09243e+009)
```

dos_macaddress

Returns the system's media access control (MAC) addresses

Syntax

(dos_macaddress)

Returns

A strings containing the local MAC address.

nil on error

Example

```
(dos_macaddress)
"00:80:C7:C7:CE:96"
```

dos_msgbox

Creates, displays and operates a Windows message box, or dialog, box. The message box contains an application-defined message and title plus any combination of predefined icons and push buttons.

Syntax

(dos_msgbox *text title button icon***)**

Arguments

text The message to be displayed.

title The message box title.

button The push button format. The allowable values are as follows:

Bit value	Description
0	Abort, Retry and Ignore
1	OK
2	OK and Cancel
3	Retry and Cancel
4	Yes and No
5	Yes, No and Cancel

icon The icon. The allowable values are as follows:

Bit value	Description
0	Asterisk
1	Exclamation
2	Hand
3	Information
4	Question
5	Stop

Returns

The return values of **dos_msgbox** are as follows:

Value	Description
0	Abort
1	Cancel
2	Ignore
3	No
4	OK

Value	Description
5	Retry
6	yes

nil on error.

Example

```
(dos_msgbox "Are you sure?" "Save" 4 3)
6
```

dos_pause

Pauses the execution of a function or expression for a specified number of seconds.

Syntax

(dos_pause *duration***)**

Argument

duration Duration time in seconds.

Returns

nil if successful or on error.

Example

```
(dos_pause 5)
nil
```

dos_random

Returns a pseudorandom number.

Syntax

(dos_random)

Returns

An integer pseudorandom number.

Example

```
(dos_random)
8192
```

dos_show

Controls the display of the AutoCAD window.

Syntax

(dos_show *method***)**

Argument

icon The icon. The allowable values are as follows:

Bit value	Description
0	Maximize
1	Minimize
2	Restore

Returns

nil if successful or on error.

Example

```
(dos_show 0)
nil
```

dos_splash

Displays a Windows bitmap splash screen. The bitmap file must be a 256-color Windows BMP file.

Syntax

(dos_splash *filename duration***)**

Arguments

filename A 256-color Windows BMP file.

duration Duration time in seconds.

Returns

nil if successful or on error.

Example

```
(dos_splash "mylogo.bmp" 5)
nil
```

dos_time

Returns the current system time or changes the current system time to one specified.

Syntax

(dos_time [*time*]**)**

Option

time Time specified in 24-hour (military) format.

Returns

The current system time.

nil on error.

Example

```
(dos_time)
"4:00:00p"
```

Example

```
(dos_time "17:00")
"5:00:00p"
```

dos_username

Returns user name of the current thread. This is the name of the user currently logged onto the system.

Syntax

(dos_username)

Returns

A string describing the current user's name.

nil on error.

Example

```
(dos_username)
"DALE"
```

dos_ver

Returns the operating system version number.

Syntax

(dos_ver)

Returns

The operating system version number.

nil on error.

Example

```
(dos_ver)
"4.0"
```

dos_version

Returns the DOSLib version number.

Syntax

(dos_version)

Returns

The DOSLib version number.

nil on error.

Example

```
(dos_version)
"4.4"
```

dos_wav

Plays a Windows waveform audio file.

Syntax

(dos_wav *filename***)**

Argument

filename The waveform file name.

Returns

T if successful..

nil on error.

Example

```
(dos_wav "boink.wav")
T
```

dos_win

Returns the Windows operating environment.

Syntax

(dos_win)

Returns

The Windows operating environment.

nil on error.

Example

```
(dos_win)
"WIN95"
```

10 Version History

Version 4.4 – May, 1999

The eight release of DOSLib adds support for AutoCAD 2000. Functions added include dos_closeall, dos_hostname, dos_ipaddress, dos_macaddress, , dos_saveall, and dos_serialno. Support for IMSI's TurboCAD Professional v5 is discontinued.

Version 4.3 - November, 1998

The seventh release of DOSLib adds support for IMSI's TurboCAD Professional v5. Functions added include dos_exewait, dos_format, dos_getdir, dos_getfilem, dos_openp, dos_pause, dos_random, dos_recent, dos_regdel, dos_regget, dos_regset, dos_shellexe, dos_show, dos_splash, and dos_version.

Version 4.2 - August, 1998

The sixth release of DOSLib added support for Visio's IntelliCAD 98.

Version 4.1 - November, 1997

The fifth release of DOSLib. Functions added included dos_computer, dos_drivetype, dos_encrypt, dos_filesys, dos_getprn, dos_label, dos_mem, dos_msgbox, dos_printers, dos_setprn, dos_spool, dos_sysdir, dos_tempdir, dos_username, dos_wav, and dos_windir.

Version 4.0001 - May, 1997

The forth release of DOSLib, but the first as an AutoCAD Runtime Extension (ARX) application. Supporting AutoCAD Release 14, this version ships as a bonus tool with Release 14. Development for AutoCAD Release 12 for Windows and for all AutoCAD for DOS platforms was discontinued.

Version 3.0 - February, 1996

The third and final ADS release of DOSLib added support for both AutoCAD Release 13 for DOS and Release 13 for Windows. Functions added included dos_command, dos_execute, dos_filesize, dos_move, dos_path, and dos_rendir.

Version 2.0 - April, 1994

The second release of DOSLib. Functions added included dos_attrib, dos_beep, dos_getini, dos_help, dos_setini, dos_touch, and dos_win.

Version 1.0 - May, 1993

The first official release of DOSLib. Developed as an Autodesk Development System (ADS) application, DOSLib supported AutoCAD Release 12 for DOS and Release 12 for Windows. Function included were dos_about, dos_chdir, dos_chkdsk, dos_copy, dos_date, dos_delete, dos_dir, dos_drive, dos_drives, dos_file, dos_find, dos_fullpath, dos_makepath, dos_mkdir, dos_pwdir, dos_rename, dos_rmdir, dos_search, dos_splitpath, dos_subdir, dos_time, and dos_ver.

Version 0.6 - September, 1992

The original DOSLib. Developed as an Autodesk Development System (ADS) application, DOSLib supported AutoCAD Release 12 for DOS.

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