

IMPOSTER



**Beta Version 0.95
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Darrell W. Burgan
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IMPOSTER

Chapter 1 - Introduction

Thank you for your interest in IMPOSTER. This is my first publicly available program for Microsoft Windows; I hope you find it a useful addition to your library of Windows applications.

Please read the following sections carefully, as they provide important information about using and distributing IMPOSTER without violating my copyrights.

Freeware

If you are unfamiliar with freeware, it is simply an alternative distribution channel for quality software. You are allowed to use and distribute freeware products without restriction.

Freeware is not public domain, however. Public domain software generally places the source code as well as the executable product into the hands of the public. Freeware, however, places only the executable. The author still retains copyrights on the source code. This means that though you are free to use and distribute a freeware product, you cannot modify it, sell it or use it in any other way except how the author intended it.

Terms of Use and Distribution

IMPOSTER is offered as freeware. This means you are free to pass it on to your friends, to post it on bulletin boards and other online services or otherwise distribute it as long as you abide by the following terms:

- You distribute all files associated with IMPOSTER *exactly* as you initially received them. The only way to ensure this is to distribute only the archive it initially came in.
- You do not modify, reverse engineer, add to, or otherwise change the product. If you want to develop enhancements or discover problems with the product, please contact me as described in the technical support section.
- You do not distribute IMPOSTER in conjunction with any product for which anyone will derive profit without my prior written consent.
- You do not charge for the distribution of IMPOSTER, except for a nominal disk-handling fee not to exceed five U.S. dollars per disk.

Also, please read the following notice carefully:

THIS PRODUCT, CALLED IMPOSTER, IS OFFERED ON AN AS-IS BASIS. NO WARRANTIES OF FITNESS OR MERCHANTABILITY, EXPRESS OR IMPLIED, ARE GIVEN. NO OTHER WARRANTIES OF ANY KIND ARE GIVEN.

UNDER NO CIRCUMSTANCES WILL THE DEVELOPER, DARRELL BURGAN, BE HELD LIABLE FOR ANY DIRECT, INDIRECT, SPECIAL, CONSEQUENTIAL OR ANY OTHER DAMAGES CAUSED BY ANYTHING THIS PRODUCT DOES OR FAILS TO DO.

THE USER BEARS THE FULL RESPONSIBILITY FOR VERIFYING THIS PRODUCT IS RELIABLE AND WORKS TO THEIR SATISFACTION.

IF YOU CANNOT ACCEPT THESE TERMS OR ANY OTHER TERMS SPECIFIED IN THIS DOCUMENT, PLEASE DO NOT USE THIS SOFTWARE. BY USING THIS SOFTWARE, YOU INDICATE YOU AGREE WITH THESE TERMS AND WILL ABIDE BY THEIR RESTRICTIONS.

Sorry to offer the product under such terms, but I am a one-man development team and simply do not have the resources to adequately warrant this product. Since I am not charging you for the use of this product, I don't think this is unfair.

Still, I have to the best of my abilities verified that this product is substantially bug-free and will work on standard Windows platforms. I just cannot guarantee it will work properly under all circumstances or that any bugs haven't escaped my attention.

Special note: this is a beta version, which means that almost all of the features are in place but it is more likely that bugs will be encountered by users than with a full production release. As a result, *please* be extra careful in testing IMPOSTER's features before relying upon them!

Registration

In return for allowing you to use IMPOSTER free, I simply ask that you "register" your copy. Unlike with shareware, registering IMPOSTER simply means you are letting me know you are using the product, are interested in other products that might be released, and agree to the terms of use and distribution. There is no cost whatsoever associated with registering IMPOSTER. When you register:

- You will be placed on my electronic mailing list and informed of any new products/versions prior to public release. I may also attempt to keep anyone

notified via U.S. Post that has no access to an electronic mail service, but I cannot guarantee this due to the potential cost.

- And you will encourage me to continue to develop useful tools for Windows and make them publicly available via freeware.

I strongly encourage everyone who uses IMPOSTER and finds it useful to register, just so I can keep track of the success of this product.

To register, simply photocopy the following page, fill out the form, sign the form (indicating you agree to abide by the terms of use and distribution) and send it to the specified address.

If you like, you can also register electronically by sending me email via any of the three electronic technical support mechanisms. Just be sure to include the same information as on the form. REMEMBER: If you register electronically, you are implicitly agreeing to abide by the terms of use and distribution and accept their legal restrictions.

Thanks in advance, if you decide to register.

Imposter Registration

Send to: Darrell Burgan
8401 Santa Rosa
Frisco, TX 75034

Name: _____
 Company: _____
 Address: _____
 City: _____
 State: _____
 Zip: _____

Product Registered: **IMPOSTER**
Version Registered: _____

IMPORTANT: I have read the terms of use and distribution and agree to abide by their terms and restrictions.

Signature: _____ Date: _____

Comments:

[illegible]

Suggestions for Enhancements:

Technical Support

If you should encounter problems, if you have suggestions for improvements, or if you just want to talk Windows, you can contact me any of the following ways:

- The Digital X-Connect BBS - 214-517-8443. This is the official distribution site for IMPOSTER and the preferred mechanism for contacting me. Just send mail to the SYSOP, to ALL, or to Darrell Burgan in the IMPOSTER Conference and I'll be there to help you!
- CompuServe - Send mail to 73020,1023.
- America Online - Send mail to DarrellB.
- US Post. Send it to the following address:

Darrell Burgan
8401 Santa Rosa
Frisco, TX 75034

Since electronic correspondence is much quicker and less expensive, I strongly discourage regular mail unless you simply don't have access to a modem. I also cannot guarantee responses to messages sent this way.

I will provide technical support and answer questions to anyone using any of my products. One of the things I have learned in my years in the computer business is that good support is often worth as much as the benefit of using a good product. It is my goal to provide the best possible technical support to all users of my products. If your question may not be directly related to one of my products, you should still feel free to contact me and I will help you to the best of my abilities.

I will attempt to respond to all queries within 24 hours of receipt, but cannot guarantee that this will always be possible (I go on vacation every now and then, too). If you have an urgent question, your best bet is to send the question via all three electronic mail services listed above.

I am not currently offering voice technical support. If, however, you need a voice phone number to be able to register the product, contact me via email and we can make appropriate arrangements.

Credits

Someone once said we stand on the shoulders of those who came before us, and I am

certainly no different.

Many, many thanks are due to:

- My wife Anna for being a sometimes computer widow and still having a sense of humor about it. I certainly could not have completed this project without her love and support.
- Andy Walding of the Digital X-Connect BBS for providing a support mechanism for BU and outstanding advice on advertising and distributing this product. If you're looking for a good technical BBS with active file and message bases, look no farther--the X-Connect is for you.
- Neil Rubenking and the other members of Team Borland on CompuServe for their outstanding TPW advice and assistance.
- Borland International for making Turbo Pascal a reality under Windows. If you've been writing Windows apps using the usual Microsoft tools, take a look at TPW--once you've tried it, you'll never go back.

Dedication

Last I want to dedicate this product to my son Reese Gilbert, who is the source of much of my inspiration, joy, and heartburn (after all, he's in his terrible two's). Children are truly a gift from above.

Chapter 2 - IMPOSTER

What is IMPOSTER and why did I create it? Put simply, IMPOSTER is a DOS command interpreter that attempts to closely mimic COMMAND.COM. Using IMPOSTER allows you to use Windows as a superior operating system but retain all the familiarity and utility of the DOS command line.

IMPOSTER supports to some degree the entire internal DOS command set, as well as most of the external commands defined in DOS 5.0. When you're using IMPOSTER, it's easy to forget that you're NOT running a DOS program at all--just a carefully designed Windows application that emulates DOS as closely as possible.

Why Use IMPOSTER?

Why not just run COMMAND.COM in a window? Well, that works okay if you can run Windows in 386 Enhanced Mode, but some of us poor grunts are still trying to use our 286-class machines with Windows. IMPOSTER works just as well in Standard Mode as in Enhanced Mode, and IMPOSTER can even run in Real Mode for 8086-class diehards.

IMPOSTER also offers a lot of features that just can't easily be duplicated from running COMMAND.COM in a window:

- Is optionally able to run DOS *or Windows* applications from the command line, just like in DOS. Can execute .PIF files in exchange for .EXEs or .COMs if configured properly. COMMAND.COM simply can't do this at all.
- Fully supports the WIN.INI file extension associations to allow you to bring up an application just by typing the name of one of its documents. Again, COMMAND.COM just cannot accomplish this.
- Provides a much-needed mechanism for running batch files under Windows. When IMPOSTER runs a batch file, it can run Windows apps along with DOS apps, can execute any of the IMPOSTER internal commands, can utilize IMPOSTER's extended batch commands, etc. COMMAND.COM runs DOS batch files, accesses DOS apps and that's about it.
- Greatly reduced memory consumption. Now you can afford to have a DOS command-line available at all times, even while running other memory-hungry applications. You can even run several instances of the command line simultaneously without eating megabytes of RAM. And Windows can actually "borrow" memory from IMPOSTER if space gets tight. COMMAND.COM eats a minimum of 256K of RAM, for every single instance, and Windows can't get any of it back until you exit COMMAND.COM!

- Superior multitasking. Since IMPOSTER is a true Windows application, it doesn't depend on the somewhat risky time-slice multitasking of DOS windows in 386 enhanced mode. Ever try to run two or three DOS windows simultaneously? Not only does your whole system slow down, but strange things begin to happen if the system is really pushed hard. IMPOSTER is able to detect when things are going on in other processes and wait until the system is idle to continue processing. The result? Much smoother and safer multitasking.
- Program Manager replacement. IMPOSTER can serve as a fully functional Windows shell, replacing the Program Manager at startup. For DOS fanatics like me, this makes Windows' pretty-but-not-very-efficient interface more than just merely tolerable. This of course is impossible with COMMAND.COM.
- Supports nearly every internal DOS commands, several external DOS commands, several of the DOS Burgan Utilities commands and several Norton Utilities commands. You need the Norton Utilities to do this with COMMAND.COM.

Being a command-line fanatic myself, I feel IMPOSTER offers the best of both worlds--a DOS command line for speed and Windows for access to graphics and superior applications. All those icons just clutter up the screen, in my view. Of course, you can use the Program Manager or any other shell, if that is your preference, and use IMPOSTER simply as a regular Windows application.

Installation

Installing IMPOSTER is a fairly simple task:

- First make sure you have the IMPOSTER.EXE, IMPOSTER.ALS, IMPOSTER.WRI and IMPOSTER.HLP files available. It is also generally a good idea to scan any files for viruses before you install them on your PC, if you have not done so already.
- Copy IMPOSTER.EXE, IMPOSTER.ALS, IMPOSTER.WRI and IMPOSTER.HLP to any directory on your path. The Windows directory will work fine.
- Last, run IMPOSTER.EXE and bring up the Preferences dialog box. Make any changes you like, then press the "OK" button. This will make the following changes for you automatically:
 - The default order of the PROGRAMS= line in your WIN.INI is not very convenient for IMPOSTER use. IMPOSTER changes them from:

Programs=com exe bat pif

To:

Programs=pif exe com bat

- If you wish to use IMPOSTER as your Windows shell, IMPOSTER will edit the SYSTEM.INI file and change the SHELL= line from:

Shell=PROGMAN.EXE

To:

Shell=IMPOSTER.EXE

It will also add a new line to the [IMPOSTER] section of WIN.INI:

OldShell=[shellname]

IMPOSTER uses this to put your old Windows shell back if you choose for IMPOSTER to no longer be the Windows shell.

- IMPOSTER will add the following line to the [Extensions] section of your WIN.INI:

IPS=IMPOSTER.EXE ^.IPS

Adding this line is important because it allows you to run IMPOSTER batch files from the LOAD= or RUN= lines of your WIN.INI, even when IMPOSTER is not the shell. If IMPOSTER is the shell, then you are free to run .BAT or .IPS scripts from WIN.INI.

- IMPOSTER will finally add the following lines to your WIN.INI at the bottom:

```
[IMPOSTER]
HorizontalSize=80
VerticalSize=25
ForegroundColor=GRAY
BackgroundColor=BLACK
StartupCommand=
OldShell=PROGMAN.EXE
Font=OEM
MinimizeOnUse=0
AutoFocus=0
```

Depending on what preferences you entered, the values for these WIN.INI keywords may vary.

And that's all there is to installing IMPOSTER!

WIN.INI Settings

Just so you know what's going on, the following information documents the WIN.INI settings IMPOSTER uses.

`HorizontalSize=xx`

Specifies the width of the virtual screen in characters. The default is 80 if this setting is not supplied. The maximum allowed is 132. This does not affect the initial size of the IMPOSTER window, only how wide the screen is logically before line wrap occurs.

`VerticalSize=xx`

Specifies the height of the virtual screen in lines. The default is 25 if this setting is not supplied. Also, the maximum here is 256 as well. Again, this only affects the logical screen size (how many lines before scrolling occurs), not the initial height of the IMPOSTER window. This can be a useful parameter to set fairly high (e.g. 99 lines), to allow you to see more of what you have recently done.

Also note that the horizontal size x vertical size cannot exceed 32767; if you attempt settings that exceed this limit, IMPOSTER will assume 80x25.

`ForegroundColor=xxxxxxx`

Specifies the foreground color to use in IMPOSTER. Possible choices are BLUE, RED, GREEN, PURPLE, CYAN, WHITE, YELLOW, GRAY, BROWN, BLACK or MAGENTA. The default color is GRAY. If you specify anything else, IMPOSTER will assume GRAY. Note that due to the way Windows maps colors to the output device, some colors may only be close to what you specify. For example, on some EGA monitors PURPLE is actually displayed as a shade of blue.

`BackgroundColor=xxxxxxx`

Specifies the background color to use in IMPOSTER. Possible choices are also BLUE, RED, GREEN, PURPLE, CYAN, WHITE, YELLOW, GRAY, BROWN, BLACK or MAGENTA. The default color is BLACK. If you specify anything else, IMPOSTER will assume BLACK. Again, color mapping is approximate due to the color mapping approach Windows uses.

StartupCommand=xxxxxxxxxx

Specifies a command that is always to be executed upon startup of IMPOSTER. For example, if you always want a prompt that contains the current time only, you could say "StartupCommand=PROMPT \$t\$g" and receive a prompt that looks something like "11:33:25.03>". Or you could say "WINDOW MAXIMIZE" and IMPOSTER will always start in the maximized state. You can also run batch files or any other IMPOSTER command from this line, allowing you to implement something similar to an AUTOEXEC.BAT for your IMPOSTER instances. Bear in mind, however, that the startup command is executed every time you start IMPOSTER, even if you run multiple instances.

OldShell=xxxxxxxxxx

Specifies what the previous Windows shell was, in case you no longer want IMPOSTER to be the Windows shell. If you never selected IMPOSTER to be the Windows shell, this line may not appear. If you delete this line and then no longer want IMPOSTER to be the shell, IMPOSTER will warn you and assume that Program Manager is the new shell.

Font=xxxxxxxxxx

Specifies what font you wish to use in the IMPOSTER window. Possible choices are OEM, ANSI and SYSTEM, with the default being OEM. All fonts are fixed and take on the default size for your monitor configuration. It is a good idea to use OEM unless you just plain hate it, since extended ASCII characters are represented properly in this font. If your batch files use extended ASCII characters and you select a different font, you may see international language characters instead of what you expect.

MinimizeOnUse=x

Indicates if IMPOSTER should minimize itself whenever another application is launched. If this parameter is set to 1, IMPOSTER will minimize itself upon a program launch; if this parameter is set to 0, it will not. This WIN.INI parameter is actually controlled through the "Minimize On Use" menuitem, not the Preferences box.

AutoFocus=x

Indicates if IMPOSTER should always bring the focus to itself upon startup. If the value of the parameter is 1, it will autofocus; if it is 0, it will not.

Console Control Keys

IMPOSTER supports a large number of console control and editing keys. In general, the following keys are always supported:

<Ctrl-C>	Cancels the command you just executed. Has no effect when the command-line is idle.
<Ctrl-S>	Pauses screen output of any command. Also has no effect when the command-line is idle.
<Ctrl-Q>	Resumes screen output following a <Ctrl-S>. Has no effect otherwise.

Many additional keys are also supported when the command-line is idle and accepting input:

<Esc>	Erases anything input and returns the cursor to the start of the input line.
<Right>	Moves the cursor one character to the right.
<Left>	Moves the cursor one character to the left.
<Ctrl-Right>	Moves the cursor one word to the right.
<Ctrl-Left>	Moves the cursor one word to the left.
<Home>	Returns the cursor to the start of the input line.
<End>	Moves the cursor to the end of the last word in the input line.
<Ins>	Toggles insert/overstrike mode.
	Deletes the character pointed to by the cursor.
<Backspace>	Deletes the character to the left of the cursor.
<Enter>	Submits the command-line to IMPOSTER for processing.
<Ctrl-Enter>	Submits the command-line to IMPOSTER for processing; if your command is to launch another program, that program will start maximized. If your command is an internal IMPOSTER command, it has no other effect.
<Shift-Enter>	Submits the command-line to IMPOSTER for processing; if your command is to launch another program, that program will start minimized. If your command is an internal IMPOSTER command, it has no other effect.

Several keys are also supported to implement command history/recall:

<F3>	Recalls the last command you executed. If you have not executed a command yet, <F3> has no effect.
<Up>	Recalls the most recent/previous command in the command history ring buffer. Pressing <Up> several times will show you the last several commands you executed, in reverse order.
<Down>	Recalls the least recent/next command still stored in the command history ring buffer. Pressing <Down> several times

will show you the commands you executed, in order. Note that the command history ring buffer can store only the last 16 commands you've entered.

Last, the mouse is used as a "short-cut" to typing in a command by pointing to a word visible on the screen:

<Click> Copies the word to which you are pointing to the command-line. This can be useful, for example, for the COPY command.

<Double-Click> Copies the word to which you are pointing to the command-line and executes the command-line. This can be used to point to a filename on the screen and execute it by double-clicking.

Aliases

IMPOSTER supports aliases for any internal or external command. An alias is a name for a command that is commonly executed. When you execute an alias, IMPOSTER simply substitutes the definition for the alias for the actual alias name.

This simple structure allows you to provide short-cut names for other commands. You can access the alias list by selecting the Aliases menuitem from the Options pulldown menu.

From the alias list dialog box, you can add, change or delete aliases and close the dialog box with or without saving your changes. When you click on the Add button, IMPOSTER will ask you for the alias name and definition for this alias. If you click on Change, IMPOSTER will only allow you to modify the definition. Clicking on Delete will remove the selected alias from the list.

If you click on OK, all changes will be saved to IMPOSTER.ALS, otherwise none of your changes will be saved. Note that if IMPOSTER.ALS does not exist, IMPOSTER will create it for you automatically with no aliases defined.

IMPOSTER is distributed with a predefined set of aliases in IMPOSTER.ALS. Feel free to modify or delete these definitions as you see fit.

Command Set

As I mentioned previously, IMPOSTER supports all internal DOS commands and many external DOS commands and third-party utilities. The following is a list of all commands IMPOSTER responds to:

ATTRIB/ATTR

Format: ATTRIB [+/-R] [+/-S] [+/-H] [+/-A] [<path>]

Putting a '+' before an attribute turns the attribute on. A '-' will turn the attribute off. The following are attributes that are changeable:

- R - Read-only attribute
- S - System file attribute
- H - Hidden attribute
- A - Archive attribute

If no attribute changes are specified (i.e. only a path is specified, like "ATTRIB *.*"), the current attributes of all files meeting the path are displayed. If no path is provided, ATTR assumes the current directory.

BREAK

Format: BREAK

Displays the current status of the DOS BREAK flag. Does not allow you to change the status.

CHDIR/CD

Format: CD [path]

If the path is not specified, CD displays the current directory. If the path specified is only a drive letter ("C:"), CD will display the current directory on that drive.

CLS

Format: CLS

Clears the screen.

COPY

Format: COPY [/V] <path1> | CON <path2>

Copies file(s) from path1 to path2. The /V parameter indicates the source and destination files are compared byte for byte to ensure it was successful.

If you specify CON as the second parameter, IMPOSTER will read text from the console device until you hit <Ctrl-Z> and save what you typed to the file. If you hit <Ctrl-C> instead of <Ctrl-Z>, IMPOSTER will not save your changes.

Note that this implementation of COPY copies ALL files in binary mode, regardless of whether they are ASCII or not, unless you are executing COPY CON. This ensures <Ctrl-Z> characters don't cause premature EOFs.

COPY does not currently support concatenation of files.

DATE

Format: DATE [mm/dd/yy]

Updates the current DOS date. If no mm/dd/yy is specified, IMPOSTER will respond with:

Current date is Mon 03/12/1991 Enter new date (mm/dd/yy):

If the user hits enter at this prompt, the date is not changed.

DATECOPY

Format: DATECOPY <path> <directory>

DATECOPY simply copies all files matching the path to the directory, based on the file date/times.

DATECOPY accomplishes this by analyzing all DOS time stamps on the files and copying all later than the earliest to the destination directory. This is particularly useful with a "touch" utility; for example, simply "touch" the file(s) you wish to track. From that point forward, any file that is modified will automatically be copied by DATECOPY.

Why not use XCOPY and copy only things that have the archive bit set? Unfortunately, just reading a file sets the archive bit, whereas the date/time is only reset if the file is changed in some way. DATECOPY ensures that only files you have truly changed are copied.

DIR

Format: DIR [<path>] [/W] [/P] [/2] [/A]

Displays the directory specified or the current directory.

If /W is specified, only filenames will be displayed in 5 columns.

If /2 is specified, full directories will be displayed in 2 columns.

The /2 and /W switches cannot both be specified.

If /P is specified, the screen will be paused after the screen fills.

If /A is specified, all files will be shown regardless of attributes. If /A is not specified, only non-hidden and non-system files will be shown (as in DOS).

If there is a DIRCMD environment variable defined and you specify DIR with no switches, IMPOSTER will append the contents of DIRCMD to the command-line before executing it. For example, if you type "SET DIRCMD=/2" and then type "DIR *.*", IMPOSTER will execute "DIR *.* /2". If you type "DIR *.* /w", however, IMPOSTER will not use DIRCMD since you specified a switch parameter (/w).

DEL/ERASE

Format: DEL <path>

Deletes file(s) specified by the path.

DUMP

Format: DUMP <filespec> [<output file>] [/P]

DUMP is a simple utility for viewing any file stored under DOS. It

presents the file in hex format to the file specified.

If no file is given, DUMP assumes the console is the output device.

If the /P switch is specified, the output will be paused after each screenful. The /P switch is valid only when the output device is the console. The /P switch is invalid when outputting to a file or to any other device.

EXIT

Format: EXIT [WINDOWS]

Exits IMPOSTER and returns you to Windows. Note that it is not necessary to exit IMPOSTER to use other Windows applications, due to the multitasking nature of Windows.

If the WINDOWS parameter is specified, you will exit Windows and return to DOS. Note that all currently running Windows apps must also agree to return to DOS as well.

If IMPOSTER is the shell, typing EXIT at your first instance of IMPOSTER will also exit Windows.

FF/WHEREIS

Format: FF [<filename/pattern>] [/A]

Searches for all files matching the pattern on the current drive. Will display all matches. If no pattern is specified, all files are displayed.

If the /A switch is specified, it will search all drives for the pattern.

FS

Format: FS [<path>] [/S] [/T] [/P]

Reports the file sizes for all files matching the path. If no path is specified, the current directory is used.

If the /T switch is specified, only the total of the file sizes is

reported. If /S is specified, subdirectories will also be searched.
If /P is specified, the screen will pause as it fills.

HELP

Format: HELP [<command>]

Brings up the IMPOSTER help system. If a parameter is specified, IMPOSTER will bring up command-specific help for that parameter.

For example, if you type "HELP DIR", IMPOSTER will load the help system and immediately position you to the DIR command help screen.

Note that the same effect can be gained by using the /? parameter with any internal command (e.g. "DIR /?").

LABEL

Format: LABEL [drive] [label]

Allows you to update the volume label on the specified drive. If no drive is specified, the current drive is used.

If no label is specified, the following prompt is displayed:

```
Volume in drive C: is XXXXXXXXXXXX
Type a volume label of up
to 11 characters or press <Enter>
for no volume label update:
```

If the user presses <Enter> without entering a label:

```
Delete current volume label (Y/N)?
```

If the user says yes, the volume label is deleted.

MAX

Format: MAX <programname> [<parameters> ...]

Executes the specified program, maximizing it. This command is essentially the same as just typing the programname with

parameters, except that the application starts out maximized.

MEM

Format: MEM

Displays free global memory and system resources.

MIN

Format: MIN <programname> [<parameters> ...]

Executes the specified program, minimizing it. This command is essentially the same as just typing the programname with parameters, except that the application starts out minimized.

MKDIR/MD

Format: MD <path>

Creates the specified directory.

MOVE/RED

Format: RED <path1> <path2> [/V]

Moves file(s) from path1 to path2. Path2 must be only a directory specification. Note that if the paths are on the same drive, the files will be moved simply by renaming; otherwise, they are copied and then deleted.

If the /V switch is specified, files will be verified byte for byte as they are copied from one drive to another. If the paths are on the same drive, the /V switch has no effect.

NUKE

Format: NUKE <path> [/Z] [/Q] [/N] [/!]

Completely erases the specified subdirectory. Note that NUKER deletes subdirectories, not individual files. Unless the /! parameter is specified NUKER, will ask for permission before removing the specified directory tree. Also note that it will only ask once.

For example, "NUKER C:\ /!" could be very destructive if you didn't intend to delete all files and directories on drive C:.

If you specify the /Z option, NUKER will physically overwrite and rename deleted files with binary zeros to ensure files cannot be recovered. This option takes a long time, however.

If you specify /Q, NUKER will not echo any information to the screen while removing the subdirectory.

Last, if you specify /N, NUKER will not remove subdirectories within the directory you specify; i.e. it will only delete files from the first directory level.

PATH

Format: PATH

Displays the current path.

PROMPT

Format: PROMPT [[text] [\$character] ...]

Sets the DOS prompt to use. By default, IMPOSTER uses the \$P\$G prompt.

The following special characters are supported:

\$q	The = character.
\$\$	The \$ character.
\$t	Current time.
\$d	Current date.
\$p	Current drive/directory.
\$v	DOS version.
\$g	The > character.
\$l	The < character.

\$b	The character.
\$ _	RETURN-LINEFEED.
\$-	The blank character.

ANSI escape sequences are not supported. Other characters may be included in the prompt line and will be displayed literally.

RENAME/REN

Format: RENAME <path> <filename>

Renames the files specified by path to the filename mask specified by filename. If wildcards are used, the positions of the corresponding characters are literal.

RMDIR/RD

Format: RD <path>

Removes the specified directory.

SET

Format: SET [varname=[text]]

Displays the current DOS environment, if no parameters are specified.

If parameters are specified, they must take the form of "varname=text ...", with no space before or after the equals sign. The environment variable will be updated or added as appropriate. If no text is specified after the equals sign, the environment variable will be removed, unless the variable is the PATH or COMSPEC environment variable.

Note that only the local environment to the instance of IMPOSTER you are running is updated. The environment given to other Windows apps is unchanged.

TIME

Format: TIME [hh:mm:ss]

Updates the current DOS time. If no time is specified, the following prompt appears:

```
Current time is 13:05:00.  
Enter new time:
```

If the user hits enter at this prompt, the time is not changed.

TOUCH

Format: TOUCH <path>

Resets the DOS date/time on all files described by the path to the current date and time.

TS

Format: TS <path> <searchstring> [/CS] [/LOG]

Searches all files in the path for the searchstring.

If the /CS switch is specified, the search is case-sensitive, otherwise it is not. If /LOG is specified, the program will run non-interactive and will produce more batch-oriented output. If /LOG is not specified, the program will pause after every match is found and ask if you want to continue the search.

TYPE

Format: TYPE <filespec> [/P]

Displays the contents of the selected file to the console.

If /P is specified, the screen will be paused after the screen fills.

VER

Format: VER

Displays the IMPOSTER, DOS and Windows version numbers.

VERIFY

Format: VERIFY

Displays the current status of the DOS VERIFY flag. Does not allow you to change the setting.

VOL

Format: VOL [drive:]

Displays the volume label on the specified drive. If no drive is specified, the current drive is used.

WINDOW

Format: WINDOW [MAXIMIZE | MINIMIZE | RESTORE]
WINDOW <x> <y> <width> <height>

Adjusts the size of the IMPOSTER window. If MAXIMIZE is specified, the IMPOSTER window will be maximized. If MINIMIZE is specified, IMPOSTER will become an icon. If RESTORE is specified, IMPOSTER will be "restored" to its regular size if it was previously maximized or minimized.

If the alternate format is used, the IMPOSTER window will be placed with the upper-left corner at x:y and with the specified width and height. All values must be numeric and are expressed in physical device coordinates (i.e. pixels).

XCOPY

Format: XCOPY <path1> <path2> [/S] [/E] [/A] [/M] [/V]

Copies file(s) from path1 to path2, using the specified switches. All copies are binary mode.

The switches supported are:

/S	Copy all subdirectories except empty subdirectories.
/E	Copy empty subdirectories; used only with /S.
/A	Copies only files that have the archive bit set.
/M	Clears the archive bit after each file is copied.
/V	Compares source and destination files byte for byte after each copy.

External Applications

If a command is entered that is not on the list of supported internal commands, IMPOSTER assumes you wish to run another application by that name. It then searches the current directory and the DOS path for the application.

Unlike the DOS command interpreter, IMPOSTER will look for any file with the extension listed by the "Programs" keyword in the [Windows] section of the WIN.INI file. The extensions must have no period and be separated by spaces.

By default, Windows defines these extensions to be .COM, .EXE, .BAT and .PIF:

```
[Windows]
Programs=com exe bat pif
```

IMPOSTER will look for a matching application by the order specified in this WIN.INI parameter. So, if you were to type "NOTEPAD" at the IMPOSTER command prompt, IMPOSTER would search the current directory and the DOS path for NOTEPAD.COM; if it could not find one, it would then search for NOTEPAD.EXE, probably finding it in the WINDOWS directory.

Note that if you run a DOS command, IMPOSTER will spawn a copy of DOS to run the command. So, for example, if you type "123" at the command prompt, IMPOSTER will load DOS and run Lotus 1-2-3 (assuming you have 1-2-3 and it is locatable on the path). Note that since .EXE comes before .PIF in the example above, IMPOSTER will run 123.EXE before 123.PIF. It is for this reason that IMPOSTER juggles the order of the PROGRAMS= line to look like this:

```
[Windows]
Programs=pif exe com bat
```

In this way, IMPOSTER will run corresponding .PIF files instead of corresponding .EXEs.

Last, IMPOSTER makes full use of the [Extensions] section in WIN.INI. This is a section usually used by the Program Manager to allow relationships between types of

files and the applications that manipulate them. IMPOSTER uses the same approach.

The extensions section typically looks something like this:

```
[Extensions]
txt=notepad.exe ^.txt
doc=notepad.exe ^.doc
ini=notepad.exe ^.ini
```

These definitions all run NOTEPAD.EXE, if you enter a filename that has a .TXT, .DOC or .INI extension. So it is possible, for example, to type the following at the IMPOSTER command prompt:

```
C:\WINDOWS\WIN.INI
```

IMPOSTER will notice that the file has a .INI extension, so it will scan the [Extensions] section looking for an "INI=" line. If it did not find one, it would indicate the file cannot be run.

If it does find one, however, it notices that the .INI extension is associated with the NOTEPAD.EXE application. IMPOSTER then executes NOTEPAD.EXE and passes C:\WINDOWS\WIN.INI as a parameter, exactly as if you had typed in:

```
NOTEPAD C:\WINDOWS\WIN.INI
```

If you wish to add new application/file extension relationships, just edit the WIN.INI and enter them as you see the others. For example, if your version of Lotus 1-2-3 saves files with a .WK1 extension, you could establish a relationship as follows:

```
[Extensions]
WK1=123.EXE ^.WK1
```

Be careful in these definitions, however. Sometimes file extensions are not unique to the application that generated the file. For example, the .DOC extension is used very often by very different word processing packages with incompatible file structures; likewise, many people use .DOC as the file extension even for simple ASCII files.

Batch Files

IMPOSTER also fully supports standard DOS batch files. If you enter the name of a batch file at the IMPOSTER command prompt, IMPOSTER will execute the batch file the same way DOS will.

If the batch file is found, all commands in the batch file are executed in sequence. All standard batch file conventions are supported, although some of the more esoteric quirks of the DOS COMMAND.COM interpreter may not function quite the same way.

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Another difference is that, unlike DOS, IMPOSTER may not wait until a program is done executing if it is an external application. For example, if you have a batch file called WORDPROC.BAT:

```
@echo off
REM This batch file loads all
REM my favorite word processors.

ECHO Running Windows Notepad...
NOTEPAD

ECHO Running Brief...
B

ECHO Running Windows Write...
WRITE

ECHO Running Word for Windows...
WINWORD
```

Since Notepad, Write and Word for Windows are all Windows applications, IMPOSTER will only pause long enough for the application to load before continuing on to the next line in the batch file. The result? Notepad, Write and Word for Windows will all be running simultaneously.

Now what about Brief? Brief is a DOS-based editor, so will IMPOSTER wait until the user exits it before proceeding on with Write and WINWORD? If you run Windows in 386 Enhanced Mode, the answer is often no. IMPOSTER will run Brief in a window if you have a properly-designed .PIF file defined for it. Just make sure the .PIF extension appears before all others in the Programs= line of the [Windows] section in WIN.INI. Once Brief is loaded in the Window, IMPOSTER continues on to the other lines in the batch file.

If you run the B.EXE program with no .PIF file or if you are running Windows in Standard or Real Mode, IMPOSTER will run Brief full screen, and yes, IMPOSTER will wait until the user exits Brief before continuing on with Write and Word for Windows.

Arguments are also supported just as they are in DOS. The first command-line parameter is referred to as %1, the second as %2, and so on. The %0 parameter is also available and always refers to the name of the batch file that is running.

Environment variables are also expanded as they are in DOS. Take as an example:

Echo Current path is "%PATH%"

IMPOSTER will replace %PATH% with the contents of the PATH environment variable. This is consistent with DOS.

The @ prefix also works with IMPOSTER as it does with COMMAND.COM. If you prefix any line with the @ sign, that line will not be echoed to the console, even if

command echoing is on. This works with any command, not just the ECHO command!

Note that IMPOSTER allows two types of batch files--those that have a .BAT extension and those that have a .IPS extension. Regular .BAT batch files function almost exactly as they do under DOS, as described above. The .IPS batch files, however, are provided for future expansion when IMPOSTER allows more powerful but nonstandard extensions for the Windows environment. In the meantime, .IPS and .BAT files are interchangeable.

One important caveat, however: sometimes you may wish to execute a batch file whenever you startup Windows. To do this, you must have the .IPS extension associated with IMPOSTER (look in the [Extensions] section and see if the line "IPS=IMPOSTER.EXE ^.IPS" is there). Once this association is made, you can simply specify "LOAD=ANYBATCH.IPS" or "RUN=ANYBATCH.IPS" in your WIN.INI and the Windows shell will run IMPOSTER, execute the ANYBATCH.IPS batch file and then close IMPOSTER. This is a nice way to run multiple Windows applications, with parameters, whenever you start Windows. Unfortunately, you cannot do the same with .BAT files--the Program Manager will simply assume .BAT files were meant for COMMAND.COM and refuse to run IMPOSTER.

Batch File Commands

Some commands are useful only within a batch file. IMPOSTER supports all of the standard DOS batch file commands, as well as some enhancements:

ASK

Format: ASK "text" <keylist>

ASK will display the text specified in quotes to the console and wait for the user to press a key in the keylist. The DOS ERRORLEVEL will be set to the key number, as listed left to right.

For example:

```
ASK "Continue processing (y/n): " yn
```

If the user hits the Y key (whether shifted or not), ASK will return DOS ERRORLEVEL 1. If the user hits the N key, ASK will return DOS ERRORLEVEL 2.

CALL

Format: CALL <batchfile> [arguments...]

Calls the specified batch file. Control returns to the calling batch file after the sub-batch file is executed.

This differs from simply declaring the batch file name in that control does not return to the calling batch file if CALL is not used. The arguments used are passed to the batch file just as if the batch file had been typed at the command prompt with arguments.

CTTY

Format: CTTY CON | NUL

Changes the output device to the specified device. If CTTY CON is specified, all output will go to the console device (the IMPOSTER window). If CTTY NUL is specified, no output is displayed.

Unlike DOS, if you fail to reset to CTTY CON at the end of a batch file, IMPOSTER will reset it for you.

No other output devices are currently supported.

ECHO

Format: ECHO ON | ECHO OFF | ECHO <message>

Displays a message to the screen, turns off command echoing or turns on command echoing.

If ECHO ON is specified, command echoing will be switched on; likewise, ECHO OFF turns off command echoing. If the ECHO: variant is used, no message is allowed and a blank line is displayed on the console.

Remember that the @ prefix can be very useful with ECHO, particularly as the first command in a batch file (e.g. "@ECHO OFF").

FOR

Format: FOR <%%c> IN (<set>) DO <command <%%c>>

Executes the command for all files found in the set. The set can be a comma-delimited list of paths or can be a single wildcarded specification, but cannot use both. Note that the set must be bounded by parentheses and must be delimited by commas or a syntax error will occur. Command-line parameters may be used in the list if desired.

The %%c parameter is simply a placeholder that tells IMPOSTER where to substitute the argument in the command. This placeholder must be exactly three characters long and the last character must be alphabetic (e.g. %%A through %%Z or %%a through %%z).

IF

Format: IF [NOT] ERRORLEVEL <number> <command>
IF [NOT] <string1> == <string2> <command>
IF [NOT] EXIST <path> <command>

Evaluates the expression and, if true, executes the specified command.

GOTO

Format: GOTO <label>

Jumps forward or backward to the specified label.

:<label>

Format: :<labelname>

Declares a label within a batch file. Otherwise is not executed.

PAUSE

Format: PAUSE [message]

Pauses execution of the batch file. Either displays the specified message or displays:

Strike a key when ready...

If there are command-line parameters, PAUSE will simply display them. For example, "PAUSE Hey, hit a key bozo!" will result in the following prompt for the user:

Hey, hit a key bozo!

Any additional spaces between words in the message are ignored.

REM

Format: REM <remarks>

Ignored by IMPOSTER. Allows remarks to be placed in a batch file.

SHIFT

Format: SHIFT

The SHIFT command simply allows more than ten parameters to be accessed by your batch files (%0 to %9). When you specify SHIFT, all parameters are shifted down by one, so that %1 becomes %0, %2 becomes %1, etc.

The previous contents of %0 are lost and there is no backward shift command to retrieve it, even if you have less than ten parameters.

Appendix A - Common Questions and Answers

With each release of IMPOSTER, I've found that the same questions are often asked relating to the functionality of IMPOSTER. Here are some of these questions and some (hopefully) helpful answers:

Q: How can I set IMPOSTER up to always start maximized?

A: Simply set the startup command to be "WINDOW MAXIMIZE" in your preferences.

Q: What if I have multiple commands I want to execute at startup?

A: It may generally be a good idea for most users to set up a batch file to always execute upon startup of IMPOSTER. I like to call mine STARTUP.IPS, and I just have it hidden away somewhere on the path. In STARTUP.IPS, I set my prompt, set IMPOSTER's initial window position and size, and set the path to a special path I only want to use from IMPOSTER. For example:

```
@echo off
prompt $d $t$ _$p$g
set path=c:\windows;c:\winbin;c:\bin;c:\tools;c:\bat
window 10 10 1000 1000
```

Then I just set the startup command to be "STARTUP.IPS". IMPOSTER does the rest!

Q: I want to use IMPOSTER primarily to execute batch files but want to be able to trigger the batch files from icons in Program Manager. Any ideas?

A: Yes! IMPOSTER takes command-line parameters too, just like any other DOS application. If you specify parameters, IMPOSTER will execute those parameters and return to Windows after execution is completed. This is useful for running batch files. For example, you can create a Program Manager icon that calls "IMPOSTER BKUP.BAT" to XCOPY your hard disk over to a network drive. Then whenever you doubleclick on this icon, IMPOSTER will load, execute the batch file, and then return.

This also has some interesting uses within batch files. What if you want to be able to spawn multiple batch processes to copy files all over simultaneously? Assume you have a batch file called WILDCOPY.IPS:

```
@echo off
min imposter copybin
min imposter copywin
min imposter copybat
```

And assume COPYBIN.BAT, COPYWIN.BAT and COPYBAT.BAT all copy

different directories on your hard disk to various directories on a network. When you type WILDCOPY at the IMPOSTER command-line, IMPOSTER will load itself again three times and *simultaneously* perform the copies you specified. And since you loaded IMPOSTER with the MIN command, all three background processes will run as icons to boot!

Another interesting thing you can do using this technique is to create a batch file called "SPAWN.IPS" or "FORK.IPS":

```
@min imposter %1 %2 %3 %4 %5 %6 %7 %8 %9
```

Such a batch file would allow you to do things like type "SPAWN XCOPY *.GIF M:\BKUP", which would run a second copy of IMPOSTER as an icon and perform the specified copy in the background in that second process. This is such a useful technique that I'm actually considering making SPAWN or FORK an inherent command in IMPOSTER (as a shortcut for "MIN IMPOSTER"). It will be especially useful when I/O redirection and piping is supported, which will allow you to do things like "SPAWN FF *.GIF /A > SEARCH.TXT" and see the results of the search later in the SEARCH.TXT file. Imagine the possibilities!

Q: I'm confused about the difference between .IPS and .BAT batch files. What gives?

A: The answer is that there is no difference as far as IMPOSTER is concerned, for the time being. The real significance is that COMMAND.COM won't find .IPS batch files, so you may want to put IMPOSTER-specific scripts in .IPS batch files, while more common batch files could go in .BAT batch files. It's really up to you, but is provided as a way to prevent errors when running your batch files from the real COMMAND.COM.

At some point, I plan to add Windows-specific commands to make batch processing more powerful. When that occurs, IMPOSTER will limit these extended commands to .IPS batch files only, further protecting you from confusion when you are running the real COMMAND.COM.

Q: I want to run a batch file from my LOAD= or RUN= line in WIN.INI, but I'm not able to specify a parameter alongside IMPOSTER (due to the way Windows handles these lines). How can I do this?

A: Since IMPOSTER associates the .IPS extension with IMPOSTER, you can simply do this:

```
LOAD=ANYBATCH.IPS DRWATSON.EXE SAVER.EXE
```

Whenever you start Windows, IMPOSTER will load and execute the ANYBATCH.IPS script. If IMPOSTER is not your Windows shell, IMPOSTER will

then exit.

This is a useful technique for executing one set of batch commands when you start Windows and another when you start any instance of IMPOSTER (through the startup command).

Note also that if you run IMPOSTER as the shell, you can run regular .BAT files in the same way.

Q: The IF command mentions the ERRORLEVEL, which DOS uses as a return code from programs or internal commands. How does this work with IMPOSTER?

A: The ERRORLEVEL is fully emulated in IMPOSTER for all commands IMPOSTER executes. Generally, ERRORLEVEL 0 means your command was successful. ERRORLEVEL 1 means a minor error (like a syntax error) occurred, and ERRORLEVEL 2 means a bigger error occurred.

Unfortunately, there's no real way to return an ERRORLEVEL from a program you spawn from IMPOSTER, so the ERRORLEVEL only indicates if the program was successfully spawned in these cases.

Q: The DOS path just isn't big enough to point to all my DOS application directories and my Windows application directories at the same time! Is there anything I can do?

A: Since IMPOSTER supports environment variables, you can now define your own local path for IMPOSTER to use. An excellent place to define this path is in your startup command (or in STARTUP.IPS, if you use that convention). Additionally, IMPOSTER allows much longer environment variables than DOS and isn't constrained by artificial environment size limitations.

Q: I like to run DOS commands from IMPOSTER but sometimes the DOS window goes away too quickly for me to see the results of the command. For example, if I type PKZIP -v ANYFILE.ZIP, the window destroys itself before I can see the end of the listing. Is there a way for IMPOSTER to prevent this?

A: Actually, there is no way for IMPOSTER to prevent this but Windows fortunately provides a solution. If you create a .PIF file for each DOS command you use, you're already halfway there. Just ensure that the "Close Window on Exit" checkbox is NOT checked for programs that have this problem and Windows will wait for you to close the window manually before destroying the window.

Q: IMPOSTER is just such a great program and is such a wonderful contribution to Windows users everywhere that I am just compelled to send money to ease my conscience. What should I do?

A: Well, I am not distributing IMPOSTER to make money in any way. I want

IMPOSTER to be a publicly-available program that everyone can enjoy without having to spend any money on it. I can remember the good old days of public domain software (back when DOS was king) and there really was a lot of good stuff available just for the asking. I'm hoping a similar phenomenon occurs with Windows.

If, however, you feel you really must make a contribution as thanks for the huge amount of time I've invested in creating IMPOSTER, then I have two alternatives for you:

- Donate a few bucks to your favorite charity. That should really make you feel good and helps your community as well. If you let me know, it will also make me feel good (as well as my wife, who wonders why I spend so much time doing this).
- Donate a few bucks to Andy Walding of the Digital X-Connect BBS, who has graciously allowed me to use his BBS as the official distribution site. He really has a great board going and can always use some generous contributions to offset his cost in providing the BBS to the public. Just log on to the X-Connect as described in the technical support section and follow the BBS's instructions for becoming a contributor.

Appendix B - Planned Enhancements

Any software product is a moving target, and we sometimes have to sacrifice the "perfect spec" for something that can be sent to customers within a reasonable amount of time. I believe IMPOSTER is a one-of-a-kind tool for making Windows productive, but there are plenty of things I want to add as time goes on:

- Input/output redirection and piping. It sure would be nice to be able to redirect the output of directory listings or the FS command to a file for later editing. Likewise, piping allows commands to be enhanced by the user in ways I cannot anticipate. Of course, a full set of filters would be mandatory once piping is provided for.
- DOS device emulation. It will probably be useful to emulate the common DOS devices (NUL, CON, PRN, LPT1, LPT2, COM1, COM2, and AUX) in IMPOSTER commands. This would allow you to print an ASCII file by saying COPY <file> LPT1, allow you to send commands to your modem by saying ECHO ATH > COM1, etc. Probably needs to happen at the same time input/output redirection and piping is added.
- True environment manipulation. One limitation of IMPOSTER is that it does not provide for manipulation of the master Windows environment. This means that any environment changes you make in IMPOSTER are local to IMPOSTER and do not affect other Windows processes. It would be nice to allow the user to update either the local or the global environment, depending on what they want to accomplish. The problem, unfortunately, is that there is no documented way to even find the master Windows environment and some of the best minds in Windows programming can't find a way! Anyone who can give me some hints will earn my undying gratitude.
- Enhanced batch capabilities. The DOS batch command language is mostly adequate, but there are a lot of things that could be added to more powerfully complement Windows. Expect the ability to generate message boxes, to send DDE commands and perform other important Windows functions from your .IPS batch files. Regular .BAT files will be limited only to DOS commands for complete backwards compatibility. I may even investigate the possibility of running .WBT batch files, although I definitely cannot promise this yet.
- Extensibility. One long-term goal I have is to publish a specification for IMPOSTER add-ons, so that users or third parties can create new commands for IMPOSTER. Whether it will truly catch on is a big question, but at the very least it would empower you, the user, to extend IMPOSTER in any way you see fit to more directly meet your needs.

- More Windows-specific commands. There are a lot of times when I would like to

see how much memory a given program is taking up or a list of all running processes under Windows (Windows programs can run completely hidden, you know). I'd also like to be able to kill another process from the IMPOSTER command-line. A lot of other things would be useful, as well.

- ANSI.SYS emulation. This would be nice for dressing up batch files and prompts and just generally being able to have increased control over IMPOSTER. Would probably be a preference so that users wouldn't have to put up with the overhead unless they wanted to.
- 4DOS features. I've had many users suggest that adding some of the functionality of the 4DOS shareware product would be useful. In fact, this is now the most-requested enhancement on the list! Guess I'm going to have to look into this one...
- Additional Utilities. I'd like to replicate all of the Norton Utilities (if possible), plus other popular programs. CHKDSK and RENDIR would also be good commands to emulate. The ability to manipulate .ZIP files (and others) would likewise be a nice enhancement, some sort of "DOS shell" similar to Directory Magic might be nice, maybe an ASCII file editor/browser, etc.

Appendix C - Planned Release Schedule

Just so everyone knows what the "plan" is, I thought I would document my steps leading up to the full production release of IMPOSTER 1.00. If you have any questions, suggestions or concerns about this schedule, please let me know as described in the technical support section

Also bear in mind that the suggested release dates and included features will probably change to some degree (and already have) as development goes on, as I find difficulties I haven't anticipated, etc.

Version 0.96 (Due mid April)

- Look into the possibility of a "hotkey" to switch to/from IMPOSTER and whatever Windows app you are working in. It would be nice, for example, to be able to switch from your Windows word processor to IMPOSTER just by hitting a hotkey and to switch back just by hitting the hotkey again. I still have some research to do on this to see how feasible this would be.
- See if a RENDIR command is doable. Basically, this requires some research on my part, since I have no idea how to do this even from DOS. And then I will have to ensure that such a command will be safe from Windows (i.e. no risk of disk corruption or anything). If anyone can provide any tips or source code I would appreciate it greatly.
- Speed up the WHEREIS/FF command. Currently, this is just too plain slow to be really useful. Doesn't seem to be CPU-dependent either.
- Look into the possibility of adding a preference to make IMPOSTER run "exclusive", meaning while it is executing a command it completely takes over the processor. This would allow commands to run much more quickly at the expense of not allowing you to do anything while the command is running. May not be feasible, however.
- Ensure IMPOSTER runs under the debugging version of Windows. Several users have reported that it does not, and this is obviously a big inconvenience to Windows developers who run with the debug version all the time.
- Maybe look into the possibility of supporting ANSI.SYS screen escapes. This is a big maybe, depends on how well everything else goes.
- Fix any bugs found in 0.95.
- Freeze functionality with this release.

Version 0.97 (Due late April)

- Fix any bugs found in 0.96.

Version 1.00 (Due early May)

- Should be identical to 0.97, with possibly very minor bug fixes. If any remotely

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significant bugs are found in 0.97, I'll issue a 0.98 maintenance release which will then become 1.00 if stable, and so on.

Features not listed in the above releases will be a part of the 2.00 effort, for which I am not prepared to even think about a timeline yet. Probably will start a 2.00 beta sequence in Q3-Q4 1992 or so, maybe earlier if coding really goes well.

Appendix D - Revision History

Version 0.95 - Added still more features and fixed still more bugs:

- Added mouse support for clicking and doubleclicking on commands in the terminal window.
- Added the windows help system (finally!).
- Added support for aliases.
- Added support for the DIRCMD environment variable.
- Fixed a bug where MOVE or RED would sometimes not function properly when moving files to locations on the same drive.
- Fixed a minor problem in the RENAME command.
- Ensured that COPY, XCOPY and MOVE now preserve file attributes and the file date/time. Sorry I didn't catch that!
- Fixed a rather glaring bug relating to renaming while copying.
- Ensured that F6 now emulates <Ctrl-Z> as in DOS.
- <Ctrl-C> now behaves correctly for COPY CON.
- The FF/WHEREIS command now performs MUCH faster and will always search the entire drive. Sorry for all the problems with this command.
- COPY CON now appropriately puts a final <CR-LF> on the file.
- COPY CON now correctly refuses to run if a DOS device is specified.
- The command-line now "remembers" its last insert/overstrike mode.
- Removed the strange double-redraw of the main window when IMPOSTER is first started up.
- Made the cursor move to the end of the line when using command-line recall.
- Improved handling of DOS errors, e.g. DIR A: when there is no disk in drive a:.
- Added a monochrome icon for Windows users with monochrome monitors.

Version 0.94 - Added a number of new features and fixed a number of bugs:

- Added the very highly requested command-line editing and history. Hope this has been worth the wait!
- Added support for launching other apps minimized/maximized through the use of <Shift-Enter> and <Ctrl-Enter>.
- Added clipboard support and new Edit menuitem.
- Added support for <Ctrl-S> and <Ctrl-Q> scroll pausing.
- NUKE now defaults to ask for permission before nuking the specified directory. Added the /! to nuke without asking and /Q to nuke without displaying any text output.
- Added support for COPY CON for quick ASCII file creation. Works just like the real COPY CON.
- Allowed WIN to be an abbreviation for the WINDOW command. Also allowed abbreviations to the MAXIMIZE, MINIMIZE and RESTORE commands to be MAX, MIN and REST.
- Improved command-line processing to support "shortcuts" like "DIR.COM", "CD\TMP", and "COPY/B *.* A:". This turned out to be a real bear, so please let me know if you have any problems with this!

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- Sped up IMPOSTER scrolling to some degree. Also reduced amount of CPU usage when IMPOSTER is idle for faster concurrent DOS boxes. Note that regular Windows apps are NOT affected by any amount of CPU used by IMPOSTER when idle, only DOS boxes. A complete fix is hopefully forthcoming soon.
- The '@' character now correctly prevents command-line echoing for any command within a batch file, not just ECHO.
- Turned off autotracking for text output for faster and more coherent displays when the IMPOSTER window is small.
- Fixed non-standard functionality of the CD command when referencing a different drive (e.g. "CD D:\").
- Removed an extraneous carriage return when the SET command was issued.
- Fixed several small incompatibilities in COPY and MOVE parameter processing; these dealt with things like COPY .COM A:, renaming while copying, etc. These problems were not data-destructive in any way.

Version 0.93 - Added a number of new features and fixed a number of bugs:

- You can now correctly run applications by [Extensions] association from LOAD= and RUN= in the WIN.INI.
- IMPOSTER now more closely emulates COMMAND.COM's line spacing for various commands.
- The CLOSE system menuitem now exits Windows if IMPOSTER is the shell. Sorry I forgot that!
- The very weird font and spacing behavior when IMPOSTER starts up has been removed. Sorry, that was a very obnoxious (and immediately apparent) bug.
- The startup command is now executed every time you start a new instance of IMPOSTER as documented, not just for the first.
- IMPOSTER now fully emulates DOS environment variables, albeit only locally. I really like this enhancement!
- Added the "Confirm Exit Windows" preference.
- Put reasonable limitations on the horizontal and vertical terminal size, fixing a nasty UAE.
- Implicit directory wildcards now work correctly (i.e. "DIR .COM" behaves like "DIR *.COM" and "DIR IMPOSTER" behaves like "DIR IMPOSTER.*").
- Added the MIN and MAX commands, to allow you to start applications minimized or maximized.
- Enhanced the WINDOW command to allow placing and sizing of the IMPOSTER window.
- Added the "Autofocus on Startup" preference.
- Fixed the bug where the "Use as Windows Shell" checkbox always started out checked, regardless of whether IMPOSTER was the shell or not. I hope I can finally put this feature to bed!
- Added the "Minimize on Use" menuitem.
- Fixed a numeric overrun bug in the MEM command.
- IMPOSTER no longer starts in C:\ every time; instead it assumes the current directory.

Version 0.92 - Added a number of new features and fixed a number of bugs:

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- The CLOSE system menuitem is now available when IMPOSTER is idle.
- Virtual terminal sizes up to 999x999 are now possible.
- The background color is now user-selectable.
- The display font is now user-selectable.
- The SHIFT and CTTY batch commands have been added.
- Window sizing is now more intelligent when large virtual terminal sizes are specified.
- PROMPT and ECHO now properly handle multiple blanks.
- The preferences box no longer blindly assumes that Program Manager is the shell if IMPOSTER is not. This was an extremely nasty bug that a lot of people ran into! Many apologies...
- The LABEL command locked up the system if the specified volume label was too long. It now truncates the label at 11 characters.
- The FS command no longer assumes that /P is specified, even when it was not specified.

Version 0.91 - First beta in general availability. No known bugs at release.