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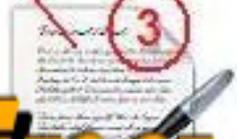
Welcome to TrimWord ¹

Watch a demo video ², if you like

Markdown for

Word Processing

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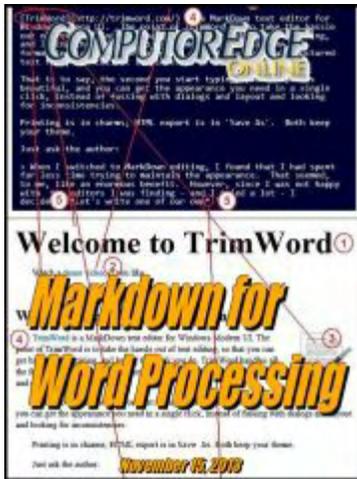
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Markdown for Word Processing

Working with HTML is tedious. The Markdown language was created to bypass those difficulties.

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by Digital Dave

Digital Dave answers your tech questions.

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by Jack Dunning

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[A Slider App for Dimming the Computer Screen](#)

by Jack Dunning

A Simple App That Anyone Can Write to Change the Brightness of Their Windows Computer

Screen

There are AutoHotkey functions available to control most aspects of your Windows computer. You don't need to know how they work to use them. Here is a simple AutoHotkey script called ScreenDimmer which uses one of those mysterious AutoHotkey functions.

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Digital Dave

“Digital Dave answers your tech questions.” by *Digital Dave*

Moving Windows Taskbar; Windows 7 .Net 4 Problem; Windows 95 Programs on Windows 7.

Moving Windows Taskbar

Dear Digital Dave,

Clicked on the clock (lower right-hand corner) to get the date, and my screen changed from a blue taskbar at the bottom to a taskbar on the right-hand side. How do I get it back to bottom?

Jim Adair

San Diego, CA

Dear Jim,

Oops!

When you clicked on the clock in the taskbar, you accidentally dragged the mouse up and to the right before you released the button. To put it back, click on an empty area of the taskbar and drag (click and hold) it back. In some versions of Windows (Windows 7 and 8) you can open the Properties window (right-click on the taskbar and select Properties) and adjust the location of the taskbar location on the screen a the dropdown menu.

If you want to make sure that it doesn't happen again, right-click on the taskbar and lock it.

Digital Dave

Windows 7 .Net

Dear Digital Dave,

I have a problem with a couple programs and .NET Framework 4. I have .NET Framework

4.03 installed per Microsoft instructions. However, two programs won't run, complaining that they need .NET Framework 4. The programs are System Suite 12 and Sea Tools. I have looked a bit for answers, without success. Win 7, 32 bit. I do not appear to be unique.

Bonnell Frost

Loveland Colorado

Dear Bonnell,

The .NET (pronounce "dotnet") framework is a layer of software that sits between the Windows operating system and applications that use that framework. This allows programmers to design for .NET without concern for the particular version of Windows, the type of CPU, or memory issues. The .NET framework is designed to make the programming problem easier in the Windows environment.

If you have a program that requires a .NET version that you don't have installed on your computer, the best programs will tell you that you need to get it installed. It's not uncommon to get this message when the appropriate .NET already appears to be installed.

The problems with .NET can be pretty insidious. I've run into them myself. Some solutions indicate that you need the [full version](#) of the .NET 4 Framework, not just the client.

If you get no help from Microsoft's [.NET Framework Setup Verification Tool User's Guide](#), then I would check with the support sites and forums for the individual programs (System Suite and Sea Tools). The problem seems to be program specific and there will be others who have encountered it and have offered solution.

Make sure that you have all the Windows 7 updates. I had a problem related to .NET on a Windows 7 machine and couldn't seem to find a solution. Then one day it magically worked. Mostly likely it was a fixed with an update from Microsoft.

Digital Dave

Windows 95 Program on Windows 7

Dear Digital Dave,

How can I get Cooking Light, a Windows program to play With Windows 7?

Billy Newbery

San Diego, CA

Dear Billy,

While I can't guarantee that it will work, there are a number to things that you can try.

The first step is to open the Properties window of the program by right-clicking on the program name and selecting Properties (see Figure 1). (Be sure that it is the actual program (e.g. EXE file) and not a shortcut to the program.) Select the Compatibility tab.



Figure 1. Select the Compatibility tab in the programs Properties window and check the box next to "Run this program in compatibility mode for:" to activate the dropdown menu.

Check the box next to "Run this program in compatibility mode for:" to activate the dropdown menu and select the version of Windows that the program last ran on. Click Apply and try running the program. If that doesn't work then try one of the other Windows versions.

The next thing to try is the Program Compatibility Wizard built into Windows 7. The easiest way to open it is by typing "compat" into the "Search programs and files" field in the Start menu. "Run programs made for previous versions of Windows" should pop-up at the top of the list. Program Compatibility will search your computer and provides a list of programs. Hopefully, your recalcitrant software will appear. As you work through the wizard you will be given the opportunity to test run the software. If you're lucky one of these settings will do the job.

If nothing else works, then, if you have the Professional level of Windows 7 or above, you can download [Windows XP Mode](#) which will run Windows XP in a virtual machine. Some legacy programs will run in Windows XP Mode which is actually running XP when setting the Properties in Windows 7 doesn't work.

Digital Dave



The Markdown Language for Easier Web Word Processing

“Markdown Is Designed to Make HTML Easy to Read and Write” by Jack Dunning
Most people don't know the tags for embedding HTML codes on the Web. To make Web markup easier, Markdown was invented to make writing on the Web easier to do and read.

The other day I decided to dig a little deeper into what's available for the Windows 8.1 operating system through the Modern interface. These are the apps which will run on any version of Windows 8.1, whether the full Windows version which runs older Windows programs or the RT version which only runs on tablets and does not support earlier Windows programs. In particular, I looked for word processing programs.



“Look! Robbie has invented a new word processor that doesn’t require a computer or batteries!”

If you own a Windows 8 tablet, then it comes with [Microsoft Office RT](#) which, while including most of what you need, is a stripped down version of the full Office package. If Microsoft didn't include this freebie with the Windows 8 tablets, then there would be pretty slim pickings for word processing software on RT tablets. If you own a Windows 8 Pro machine with full Desktop support, then you can download the free LibreOffice, OpenOffice, or one of the many other free office suites. They all include powerful word processing packages.

When I searched the Microsoft store I only found a couple of free word processors, one of which was [TrimWord](#). I decided to take a look at TrimWord not knowing if I would write about it. TrimWord became the topic of this week's article not because I'm recommending it, but due to the overall reaction people have had to it—they either love it or hate it—and how it works. There are features of the app which are worth noting—although they may seem mysterious to the uninitiated. The primary concept behind TrimWord is [Markdown Language](#) which which was created by [John Gruber](#) in 2004. Markdown is a way of writing HTML code (the language of the Web) without writing any HTML code. The Markdown concept is to lose worrying about document formatting and concentrate on the writing process. All formatting is done in an intuitive way.

Markdown Word Processing

A [Markup Language](#) (as opposed to Markdown) is used to directly format documents with plain text tags or codes. The best example of this is HTML (Hyper Text Markup Language) which uses codes enclosed in arrow brackets (< >) or beginning with an ampersand (&) to instruct Web browsers and other programs which read HTML how to display pages. (In the early days of word processing, special text markup codes were commonly used to format documents.) For example, when markup is used in word processing any words in italics or bold are enclosed with special characters indicating the beginning and end to the formatting (e.g. `<i>this is italics</i>` in HTML).

[Rich Text Format](#) is another markup language developed by Microsoft. What distinguishes a markup file is that it is entirely a text file with no special control characters. That means you can open the file with any text editor (e.g. Notepad) to read and edit it. This gives you direct control over virtually every aspect of the editing and formatting. On the downside, you need to know the codes and where to embed them in the text. While many computer people love to work in this type of environment, the average user may have more trouble.

As more people began writing and editing on the Web (e.g. Blogs), the "markdown:" language was developed as an easier way to enter HTML codes for formatting styles and adding links without needing to learn or remember the many complex HTML tags. Markdown language substitutes simpler (easier to remember) symbols for HTML code. The Markdown symbols are converted to HTML code by the Markdown editor or word processor.

Most modern WYSIWYG (What You See Is What You Get) word processors handle all the formatting for you while hiding the formatting control codes. If you want italics, you highlight the words and click the "Italicize" button. All formatting is handled with buttons and clicks, while never displaying the embedded format codes. This approach to word processing is popular because there is no requirement to remember any codes for the various types of formatting. This is the type of word processing that most people know and use.

The negative reviews for TrimWord come from people who are expecting the usual word processing experience when they are actually using a markup language (called Markdown). The rave reviews come from people who know and understand how Markdown works and prefer it. Once understood, Markdown in TrimWord is pretty simple, but if you've never used this type of word processor, then it is very much like staring at a blank wall.

To make matters worse, the documentation for TrimWord is sparse and enigmatic. I don't know of any proper manual. It even took me a while to figure out what was going on. On the plus side, if you know a little HTML code, then you can place it directly into the document and have it appear properly in the display window (usually). You can also save the documents as HTML files for direct posting on the Web.

Probably the reason there is no manual for TrimWord is because of the many [Markdown cheat sheets](#) found on the Web. For anyone who wants to use TrimWord (or any other Markdown editor), one of these reference cheat sheets should be more than enough. Of course, TrimWord doesn't tell you that. You have to go looking for it.

The purpose of demonstrating how to use TrimWord is not to encourage you to adopt it as your Windows 8 word processor, but, rather, demonstrate how the Markdown language works. The design of TrimWord is particularly useful for this purpose since anything done in the Markdown (editing) pane will immediately appear in the viewing pane—just as it would on the Web or in your documents. (Plus, since TrimWord interprets HTML, it would be very useful for teaching yourself HTML or testing the various HTML tags in real-time.)

How Markdown Works

When TrimWord is loaded there are two panes opened side-by-side (see Figure 1). The editing pane is on the left and the viewing pane is on the right. This is where the confusion starts.

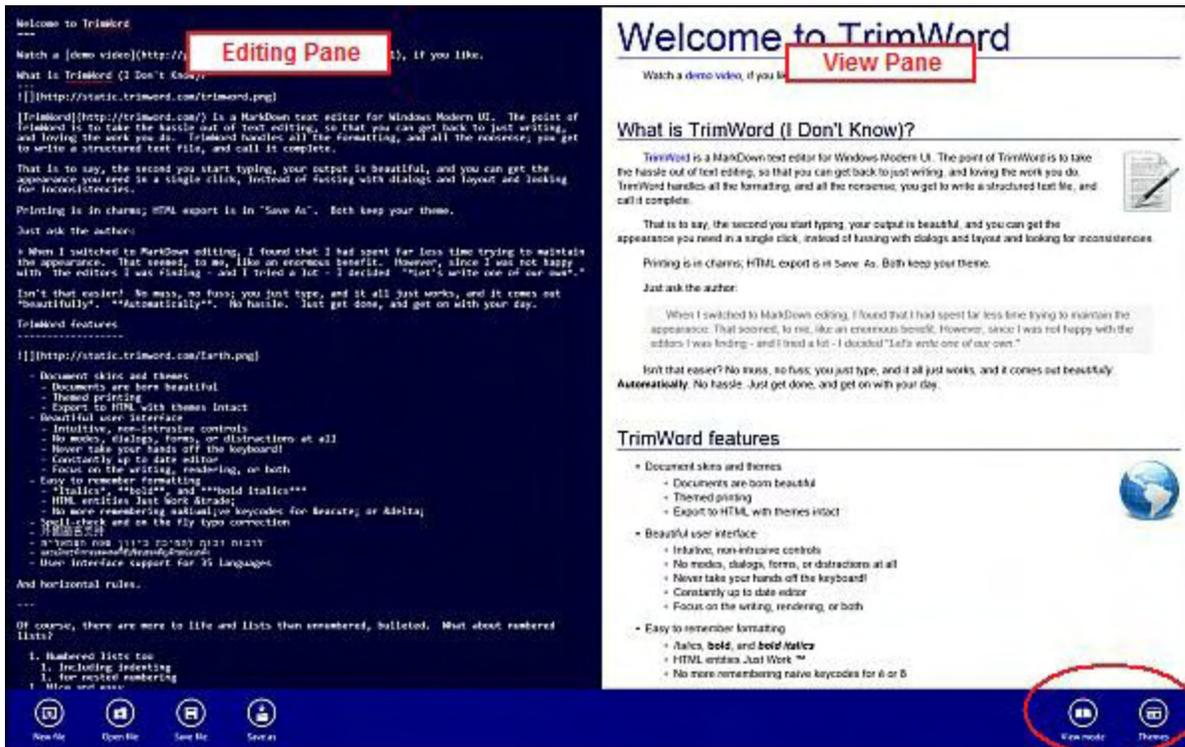


Figure 1. In TrimWord the editing pane is on the left side while the viewing pane is one the right.

Anyone who has experience with the usual word processors (Microsoft Word, LibreOffice, OpenOffice, etc.) will attempt to click into the right side and start typing. The frustration comes when nothing happens. The right pane is merely the readonly representation of the documentation. The work is done on the left side. Any typing into the left pane will immediately appear formatted in the right pane. The only hints as to how it all works are in the sample document which opens when the app is first loaded. If you have experience with Markdown, then this will be obvious, but to the average computer user, it is can seem obscure—if not opaque.

Simple Markdown Formatting Codes

A closer look at the editing on the left side and the display on the right, shows us how the various Markdown codes work. Once it's understood, it's quite simple and we can concentrate on the writing rather than the formatting. Examples of the Markdown codes are highlighted in Figure 2.

```

Welcome to TrimWord 1
=====

Watch a [demo video](http://youtube.com/v/IA-3P0kefX8?autoplay=1), if you like 2

What is TrimWord (I Don't Know)?
---
 3
[TrimWord](http://trimword.com/) 4 a MarkDown text editor for
Windows Modern UI. The point of TrimWord is to take the hassle
out of text editing, so that you can get back to just writing,
and loving the work you do. TrimWord handles all the
formatting, and all the nonsense; you get to write a structured
text file, and call it complete.

That is to say, the second you start typing, your output is
beautiful, and you can get the appearance you need in a single
click, instead of fussing with dialogs and layout and looking
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Printing is in charms; HTML export is in `Save As`. Both keep
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Just ask the author:

> When I switched to MarkDown editing, I found that I had spent
far less time trying to maintain the appearance. That seemed,
to me, like an enormous benefit. However, since I was not happy
with the editors I was finding - and I tried a lot - I
decided *Let's write one of our own* 5
    
```

Welcome to TrimWord 1

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What is TrimWord (I Don't Know)?

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Figure 2. (1) A headline is created by adding three equal signs on the next line. (2) A link is create by using square brackets "[hot words]" followed by parentheses "(URL)". (3) Put an exclamation point in front of the link markdown to display an image on the right. (4) For links the hot words are inside the square brackets and the URL is inside the parentheses. (5) To italicize place an asterisk at each end of the phrase.

The first example (1) creates a headline by placing three (or more) equal signs (===) on the line after the headline. Add only one or two equal signs and nothing happens (the equal signs appear in the document view), but add three or more and the previous line jumps to the larger font size in the display window. This same effect can be produced by placing the hash mark (#) before the headline.

In the second example (2), a link is created by placing the hot words between square brackets (*[demo video]*) and in the URL inside parentheses (*(<http://youtube.com/v/IA-3P0kefX8?autoplay=1>)*).

Placing an exclamation point in front of the link Markdown code (3) changes it to an image link which floats to the right. I found that if I want to move the image to the left, I have to embed HTML code:

```
<div style="float: left"></div>
```

In example (4), the words inside the square brackets (*[TrimWord]*) become the hot words for the URL inside the parentheses (*(<http://trimword.com/>)*).

Adding emphasis is as simple as surrounding the text with asterisks (*). One asterisk on each end for *italics*, two for **bold**, the three for ***bold italics***.

As you look through the Markdown side of the TrimWord sample page, you will see various other codes used for instant formatting. Toward the bottom are examples of adding lists and tables (see Figure 3).

Of course, there are more to life and lists than unnumbered, bulleted.

```

1. Numbered lists too
  1. Including indenting
    1. for nested numbering
  1. Nice and easy
    1. Does what you expect
      1. at whatever depth
  1. in way that doesn't need to be kept up to date
    
```

What if I need stuff?

There's always HTML. (Though we filter out `script`.)

```

<dl>
  <dt>Like definition lists</dt>
  <dd>Which aren't in MarkDown</dd>
</dl>
    
```

```

<table>
  <tr><td>And</td><td>Tables</td></tr>
  <tr><td>Work</td><td>Too</td></tr>
</table>
    
```

Of course, there are more to life and lists than unnumbered, bulleted.

- I. Numbered lists too
 - i. Including indenting
 - ii. for nested numbering
- II. Nice and easy
 - i. Does what you expect
 - i. at whatever depth
- III. in way that doesn't need to be kept up to date

What if I need stuff?

There's always HTML. (Though we filter out `script`.)

Like definition lists
Which aren't in MarkDown

And	Tables
Work	Too

Figure 3. The TrimWord sample page offer examples of a list with Markdown and HTML, plus a table in HTML.

The top example shows how to create numbered lists (any number plus a dot and indentation)

converts to indented lists with the appropriate numbers. The number value used doesn't matter. (Hyphens or asterisks can be used to create bulleted lists.)

The next two examples show HTML code added to first produce a list (<DL>), then a table (<table>).

Changing Fonts in TrimWord

TrimWord comes with a number of fonts in the built in Themes (styles). To change to an alternative font/style right-click in the viewing pane (WIN+Z) and select Themes from the bottom menu (see Figure 4). Each theme controls how the entire page looks.

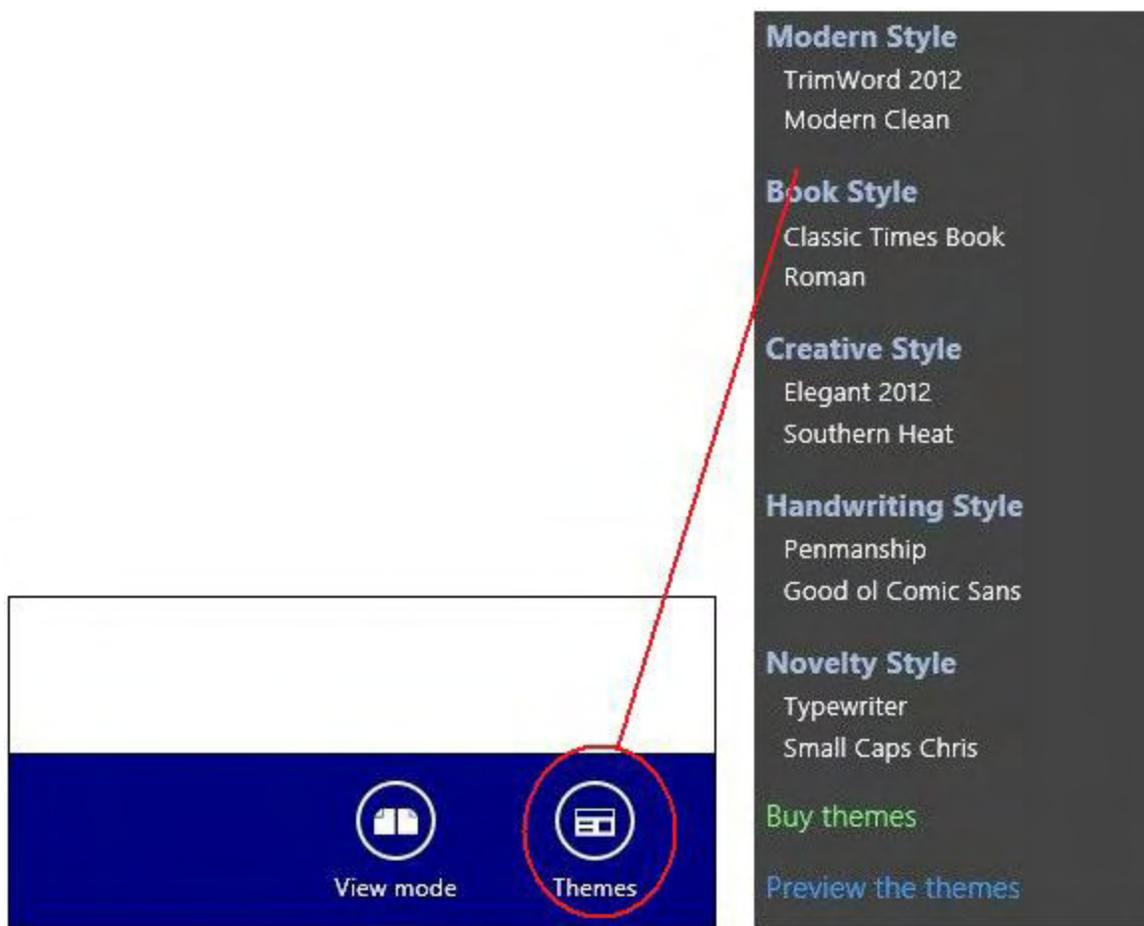


Figure 4. Right-click on the view pane (WIN+Z) to expose the bottom menu and select Themes to open the font/styles options. As each style is selected, the view pane will reflect the change.

The file can be saved as Markdown or HTML. It can be printed by selecting Print from the Devices charm (WIN+K). (Move the cursor to the upper or lower right-hand corner, or WIN+C, then select Devices after the Charms menu opens.)

Drawback of User-Friendly Formatting

One thing that annoys me about TrimWord is that it indents every paragraph. Technically, if there is space between paragraphs, then no indentation is required. It has become accepted (especially on the Web) that paragraphs are not indented—leaving extra space to differentiate the paragraphs. This may require adding a double carriage return at the end of each paragraph, but this is preferable to attempting indentation. This has become the convention on the Web because extra spaces and tabs are ignored in HTML. Since this is a user-friendly product there is a loss of flexibility and no way of changing this settings in TrimWord.

If you're like me and don't like the paragraph indentation in TrimWord, then could use the HTML code `

` instead of the hitting the return key. However, using HTML code defeats the purpose of Markdown which is supposed to eliminate the need for non-intuitive codes.

There is evidence of the growing popularity of Markdown by the [increasing number of Markdown editors](#) for the Mac and PC—both free and paid. If you're curious about Markdown, give one or two of these a try.

The purpose of this article is not to sell you on TrimWord, but to introduce you to Markdown language. That way, if you happen upon a Markdown editor either as an app or on the Web, you'll have some idea of where to start and how to use it. You be forced to give up in frustration because it doesn't act like a regular word processor.

* * *

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Jack is the publisher of ComputerEdge Magazine. He's been with the magazine since first issue on May 16, 1983. Back then, it was called The Byte Buyer. His Web site is www.computoredge.com. He can be reached at ceeditor@computoredge.com. Jack is now in the process of updating and compiling his hundreds of articles and columns into e-books. Currently available:

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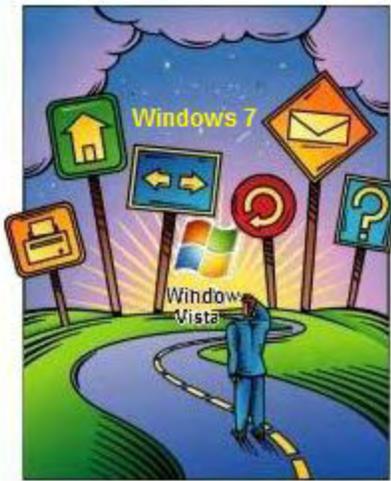
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and [*That Does Not Compute!*](#), brilliantly drawn cartoons by Jim Whiting for really stupid gags by Jack about computers and the people who use them.



Windows Tips and Tricks

Windows Tips and Tricks: ZoomIt from Sysinternals

**“ZoomIt for Live Presentations
and Magnified Screen Shots” by**

Jack Dunning

There are many magnifying apps, but ZoomIt magnifies with a purpose. A light, utility tool from Microsoft's Sysinternals, ZoomIt enhances live presentations and enlarges Windows screen shots.

If you ever have a need to do presentations or seminars directly from a computer screen or want to capture enlarged screen images, then [ZoomIt v4.5](#) from [Windows Sysinternals](#) may be just the ticket. It is simple, easy to use and offers many little features that make it easier to enhance live computer presentations or add something extra to your screen shots.

ZoomIt for Magnifying Computer Screens

To get ZoomIt running, download the ZIP file from the Sysinternals Web site, extract the files and double click on the *ZoomIt.exe* file. Once loaded the ZoomIt icon will appear in the System Tray. The ZoomIt menu opens with a right-click on the icon (see Figure 1).

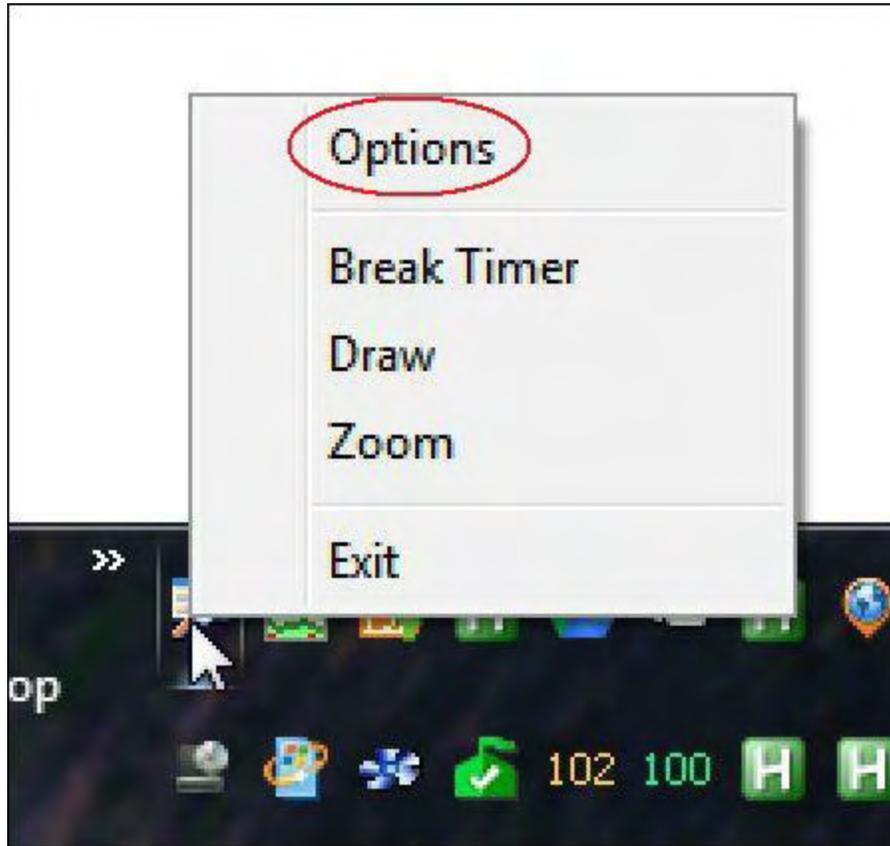


Figure 1. The ZoomIt menu opens with a right-click on its System Tray icon. (This screen shot was made with ZoomIt in the LiveZoom mode using the Windows Snipping Tool to capture this portion of the screen. Notice that the cursor was also captured.)

Selecting Options from the ZoomIt menu opens the setup window (see Figure 2). This Options window not only allows the setup of the various hotkey combinations, but it also acts as a pretty complete instruction manual. Clicking through the tabs will tell you everything that you need to know about how to use ZoomIt.

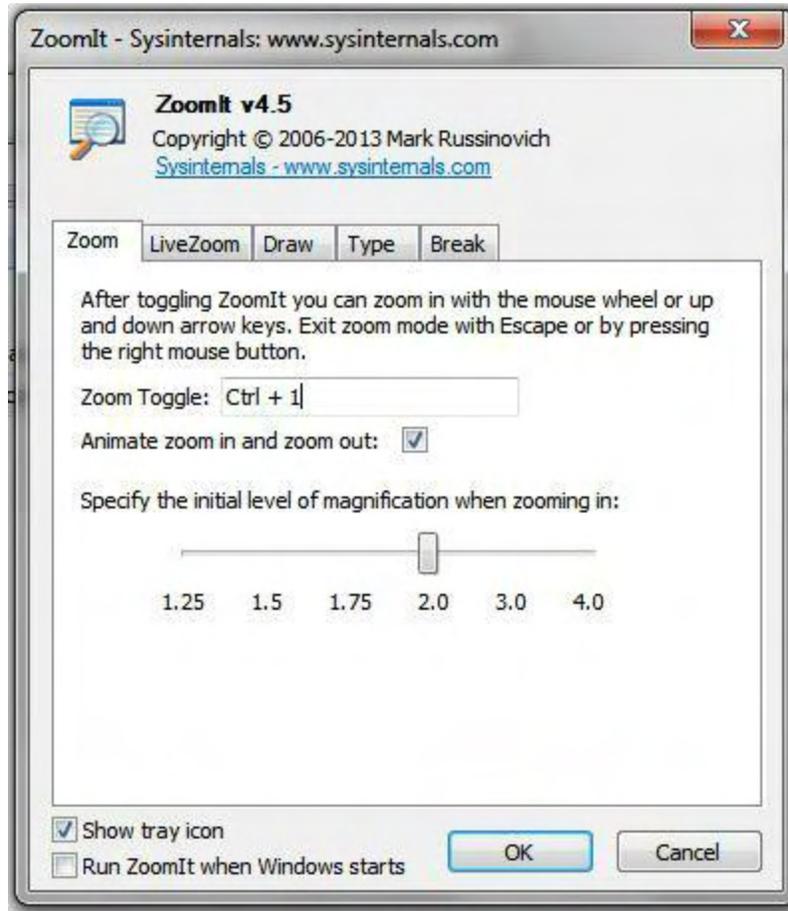


Figure 2. The ZoomIt Options window allows the setup of the various hotkeys, plus gives detailed instructions on the Zoom, LiveZoom, Draw, Type, and Break (for timing breaks in seminars) features.

When entering the Zoom mode (default CTRL+1) the screen is frozen and magnified based upon the setting in the Zoom tab (see Figure 3). Once in the Zoom mode, moving the mouse will scroll around the screen area. Using the mouse wheel or up/down arrows will change the zoom level.

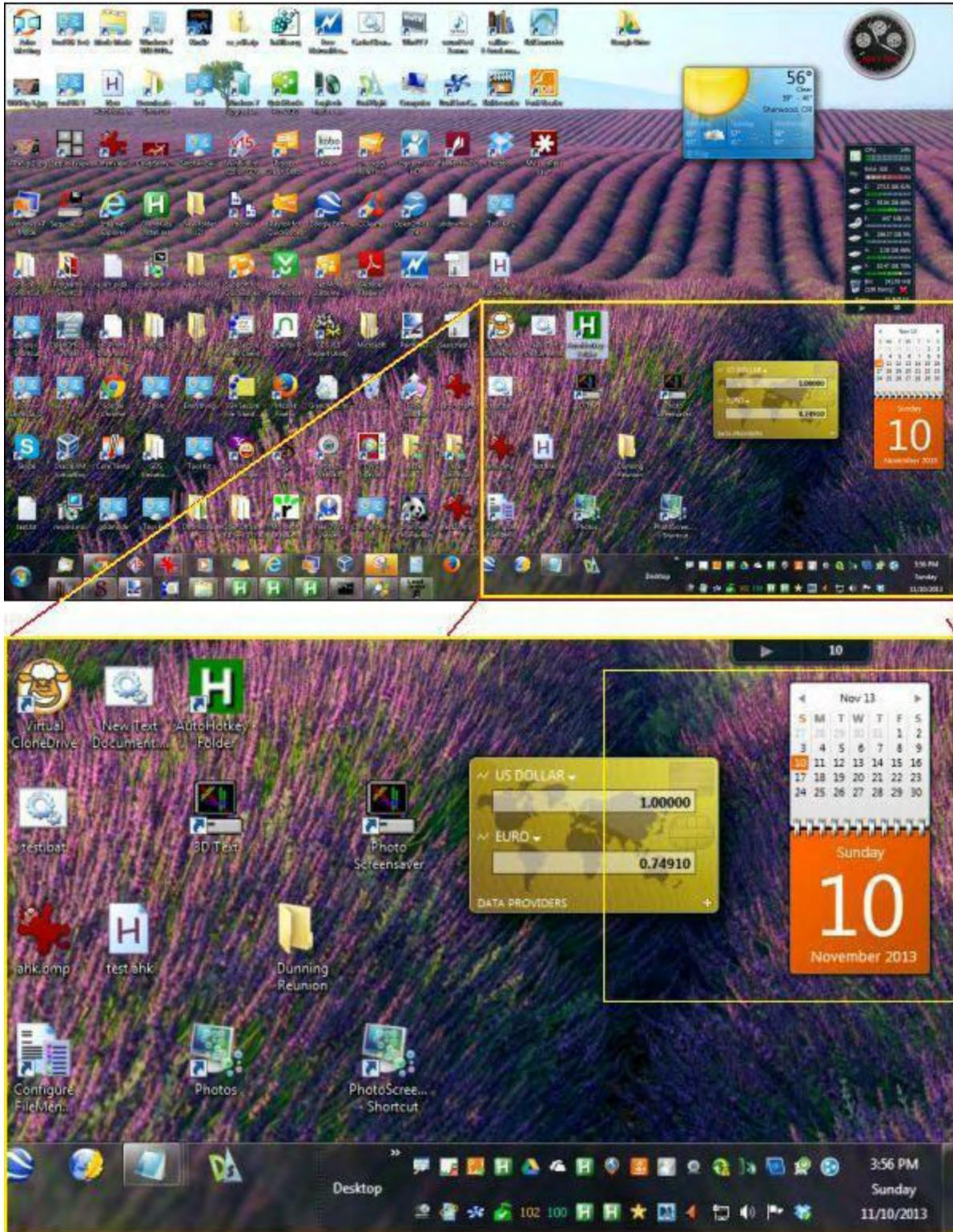


Figure 3. The full screen is displayed before entering the Zoom mode (top). After Zoom only a portion of the screen is shown, although magnified (bottom). The yellow box in the bottom screen is shown at actual Zoom size in Figure 4.

The above images in Figure 3 required reduction for Web viewing. The image in Figure 4 shows the actual zoom size of the screen area in the yellow box in the bottom screen view.



Figure 4. The actual size of the zoom image for the yellow box in the bottom image in Figure 3.

If all that ZoomIt did was magnify the screen, then there are plenty of other apps for that purpose. However, the other features included in ZoomIt make it the right tool for the right purpose. The addition of the LiveZoom mode makes it possible to continue with all the usual computing operations while in the zoom mode. When I did the screen capture using the Windows Snipping Tool for Figure 1 in the LiveZoom mode I was able to open and capture the right-click menu. While this capability is normal for the Snipping Tool, I noted that the cursor was also captured. I found that normally capturing the cursor on a screen shot is hard to do. (I also discovered that capturing the entire screen with the Print Screen button when in the LiveZoom mode captures the cursor. I may make more use of this feature in future articles.)

The Draw mode is particularly useful for adding lines, arrows, boxes and ellipses to the screen in real time or for a screen shot (see Figure 5). In the Zoom mode a click of the mouse enters the Draw mode. Right-click to leave it. You can draw freehand (default), but who can make that look good when working with a mouse? Type T to enter text (Type mode). Type E to

erase it all.

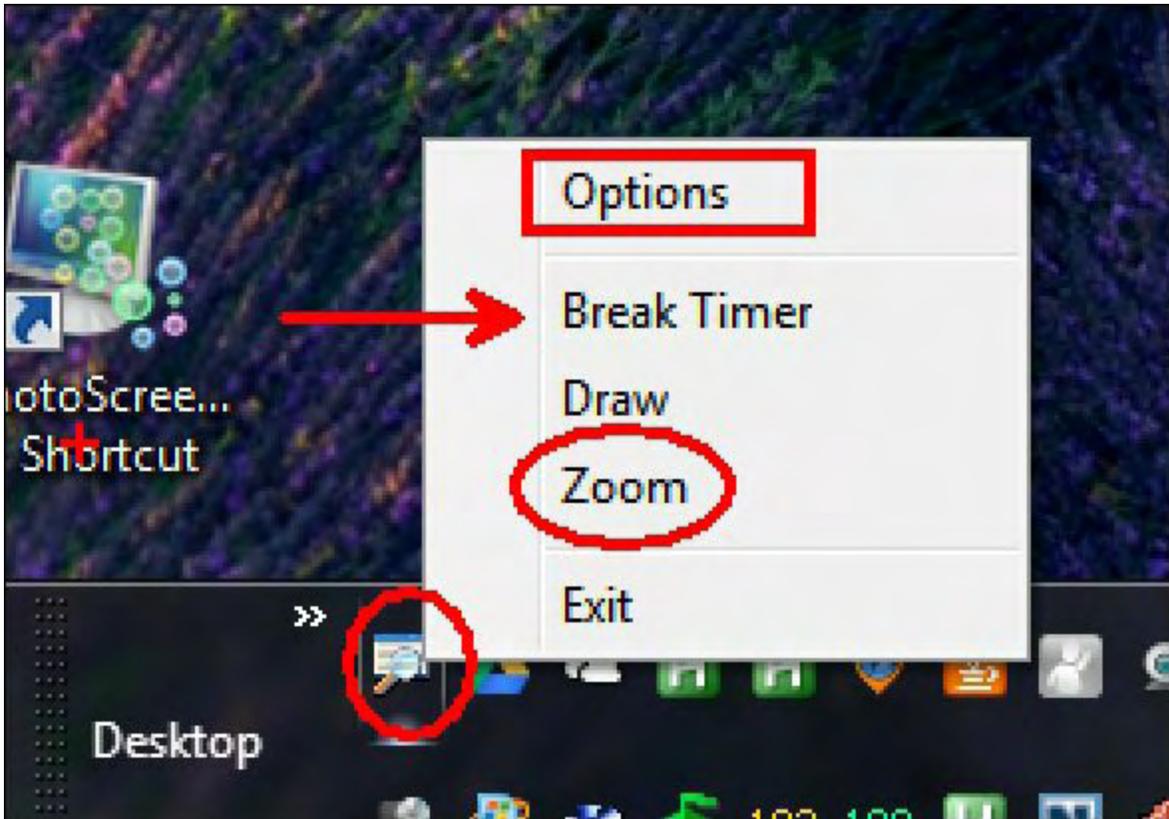


Figure 5. In the Draw mode boxes, circles and arrows are available.

When it's time to take a ten minute break, select the Break Timer. A clock will appear on the screen, counting down until the break is over (see Figure 6).



Figure 6. The Break Timer counts down until the break is over.

ZoomIt is a specialized tool for people who do computer screen seminars or need to capture magnified screen shots.

* * *

Get a free copy of *Jack's Favorite Free Windows Programs* at [ComputerEdge E-Books](#).

Jack is the publisher of ComputerEdge Magazine. He's been with the magazine since first issue on May 16, 1983. Back then, it was called The Byte Buyer. His Web site is www.computoredge.com. He can be reached at ceeditor@computoredge.com. Jack is now in the process of updating and compiling his hundreds of articles and columns into e-books. Currently available:

[Hidden Windows Tools for Protecting, Problem Solving and Troubleshooting Windows 8, Windows 7, Windows Vista, and Windows XP Computers.](#)

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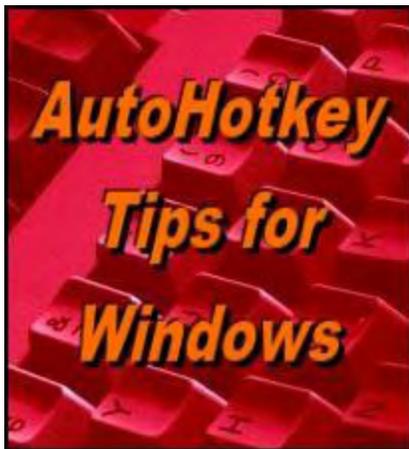
[Misunderstanding Windows 8: An Introduction, Orientation, and How-to for Windows 8 \(Seventh Edition\)!](#)

[Windows 7 Secrets Four-in-One E-Book Bundle,](#)

[Getting Started with Windows 7: An Introduction, Orientation, and How-to for Using Windows 7,](#)

[Sticking with Windows XP—or Not? Why You Should or Why You Should Not Upgrade to Windows 7,](#)

and [That Does Not Compute!](#), brilliantly drawn cartoons by Jim Whiting for really stupid gags by Jack about computers and the people who use them.



**Yet, One More
Reason to Use
AutoHotkey
Free Software!**

A Slider App for Dimming the Computer Screen

**“A Simple App That Anyone
Can Write to Change the Brightness of Their Windows Computer Screen”** by Jack
Dunning

There are AutoHotkey functions available to control most aspects of your Windows computer. You don't need to know how they work to use them. Here is a simple AutoHotkey script called ScreenDimmer which uses one of those mysterious AutoHotkey functions.

Build your own apps with [AutoHotkey](#). Anyone can do it!

* * *

If you want to control an adjustable level such as the volume, then the AutoHotkey [Slider Gui](#) is probably your best bet. It provides a scale and movable control tab that can be dragged from left to right (or top to bottom depending upon options) and vice versa. It's the easiest way to make an adjustment which depends upon subjective judgment rather than discrete numbers.

I thank Ellen for the heart of this ScreenDimmer app which (as the name suggests) dims or brightens the computer screens light level. She sent me a script containing the function which makes it all possible. I stole the function (*DisplaySetBrightness()*) and don't actually know who originally wrote it. (I suspect that a number of people have written similar AutoHotkey functions at some time.) I haven't attempted to decipher the function nor will I try to explain it. This short script demonstrates how anyone can put together AutoHotkey apps even if they don't understand everything they put into it. Sometimes copying a snippet of code that works from another script is the best way to develop a new app.

How ScreenDimmer Works

The ScreenDimmer script is a Windows pop-up which includes a horizontal slider control (see Figure 1). If the pointer control is dragged to the left, the computer becomes darker. This could be useful when working late at night in a dark room. Slide the control to the right and the screen becomes brighter.

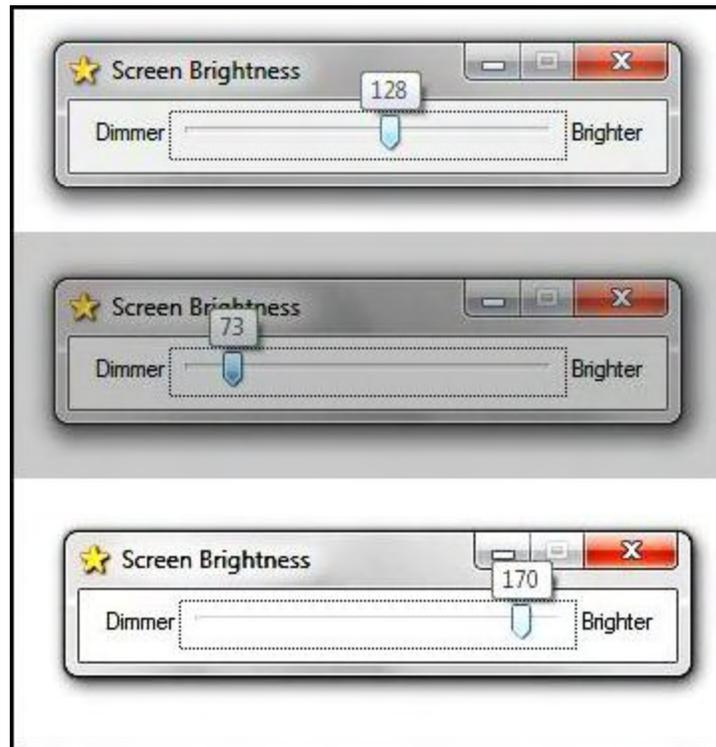


Figure 1. The ScreenDimmer app controls the brightness level of the computer screen. The top image simulates the normal screen level. The middle image is darker while the bottom image is lighter. (All levels are simulated since screen capture programs ignore light levels.)

If you want to use ScreenDimmer, but don't want to mess with AutoHotkey, then you can find the EXE file in the ZIP file ScreenDimmer.zip at the ComputerEdge [AutoHotkey Dropbox download Web site](#). Just download the ZIP file, extract the ScreenDimmer.exe file, and double-click the filename to load.

The ScreenDimmer Script

While the *ScreenDimmer.ahk* script is not very long there are a number of options used in the [Gui, Add, Slider command](#). In fact I used so many of the options (each of which I explain later) that the line became too long to display properly on the Web. Since the *Slider* options do not fall into the usual format for AutoHotkey [line continuation](#), I used a trick to make the code more readable. I stored a number of the options to a variable I called *Options* which is evaluated in the *Gui, Add, Slider* line of code:

```
Options := "Range60-180 NoTicks Buddy1Dim Buddy2Bright vMySlider gDimmer"
Gui, Add, Slider, w200 x50 y5 AltSubmit Tooltip Reverse %options% , 128
```

The only purpose of the variable *Options* is to shorten the next line by using *%options%* to place the list of items into that line. The script would work just as well (and was how I originally wrote it) if all the options appeared in one long *Gui, Add, Slider* line of code.

Other than the stolen function (*DisplaySetBrightness()*) which controls the screen brightness, understanding the *Gui, Add, Slider* line is the key to this script. The following is the entire *ScreenDimmer.ahk* script:

```

Menu, Tray, Add, Reset, Reload
Menu, Tray, Add, Show Dimmer, ShowWindow
Menu, Tray, Icon, Shell32.dll, 44

Gui +AlwaysOnTop
Gui, Add, Text, vDim x0 y0, Dimmer
Gui, Add, Text, vBright x0 y0, Brighter
Options := "Range60-180 NoTicks Buddy1Dim Buddy2Bright vMySlider gDimmer"
Gui, Add, Slider, w200 x50 y5 AltSubmit Tooltip Reverse %options% , 128

Gui, Show, W300, Screen Brightness
Return

Dimmer:
    Gui, Submit, NoHide
    DisplaySetBrightness( MySlider )
Return

DisplaySetBrightness( Br=128 ) {
    Loop, % VarSetCapacity( GR,1536 ) / 6
        NumPut( ( n := (Br+128)*(A_Index-1)) > 65535 ? 65535 : n, GR, 2*(A_Index-1), "USHORT" )
    DllCall( "RtlMoveMemory", UInt,&GR+512, UInt,&GR, UInt,512 )
    DllCall( "RtlMoveMemory", UInt,&GR+1024, UInt,&GR, UInt,512 )
    Return DllCall( "SetDeviceGammaRamp", UInt,hDC := DllCall( "GetDC", UInt,0 ), UInt,&GR,
        , DllCall( "ReleaseDC", UInt,0, UInt,hDC )
    }

ShowWindow:
    DetectHiddenWindows, on
    WinRestore, Screen Brightness
    WinActivate, Screen Brightness
Return

Reload:
    Reload
Return

```

Since the *Gui, Add, Slider* control is the primary working line of code, we will start with it first. Most of the options in this line of code could be removed without affecting the function of the script, but it wouldn't look or act as nice.

Slider Options in the ScreenDimmer.ahk Script

The first three options in the *Gui, Add, Slider* line are *w200 x50 y5*. These are the size and positional options available to all *GUI* controls. The *w* is for a width of 200 pixels, *x* moves the control 50 pixels to the right. This makes room for the text "Dimmer" on the left side. The *y*

tells AutoHotkey to position the control down 5 pixels from the top. Otherwise, there is too much space above the control—mostly caused by the *Gui, Add, Text* lines used to create the two labels on either end. (More on that later.)

Adding the *AltSubmit* option makes the *Slider* control respond by firing the *gLabel Dimmer* with more events than just releasing the left mouse button (default). This adds significantly to the responsiveness of the app since the screen will continually update whenever arrow keys, HOME key, END key, etc. are used or continually while the button is dragged left or right.

The *Tooltip* option adds the label which pops up with the value of the Slider variable *MySlider* (the brightness level) whenever the slider button is pressed with the left mouse button as shown in Figure 1.

The *Reverse* option swaps the value of the ends of the slider. Without *Reverse*, the slider would increase brightness to the left and dim to right.

The remainder of the items are contained in the variable *Options* (defined in the line of code just above) which is evaluated in the *Gui, Add, Slider* line of code with the expression *%options%*.

Note: The options may be added in any order between the two appropriate commas in the Gui, Add, Slider command line, only separated by space—no punctuation. The options are not case sensitive. Capital letters are only added for readability.

By default the values of a *Slider Gui* control run from zero to 100. By adding the option *Range60-180* the slider now runs from 60 to 180. This is a way of establishing (and recalling) the correct set of numbers without any complicated calculations.

The *Slider Gui* control will show tick marks by default which can be set at regular intervals with the *TickInterval* option. Using *NoTicks* eliminates the visual scale.

The *Slider Gui* control has a special way of adding text (or other controls) to each end of the slider. The options *Buddy1* (left) and *Buddy2* (right) are used to add these controls. The controls must be defined before the Slider control is added:

```
Gui, Add, Text, vDim x0 y0, Dimmer
Gui, Add, Text, vBright x0 y0, Brighter
```

Often these controls will be *Text* controls, but they may be others such as *Edit* controls. The *vVariable* option (*vDim* and *vBright*) must be used in the *Text* controls so the *Buddy* options will know which control to use. A *Buddy* option is expressed as a combination of *Buddy* and the variable name (*Buddy1Dim* and *Buddy2Bright*). The coordinates (*x0 y0*) are added to the *Gui, Add, Text* commands to prevent the adding of the *Text* controls from changing the shape of the *GUI* window.

The option *vMySlider* defines the variable *MySlider* which will contain the value from the

slider after the *Gui, Submit* command is issued. The *gDimmer* option calls out the label (subroutine) *Dimmer* which is fired by moving the slider button. This label contains the *Gui, Submit* command for loading *MySlider* with the value from the slider.

The *Gui, Show* command displays (opens) the slider window:

```
Gui, Show, W300, Screen Brightness
```

The *W300* option sets the width of the window to 300 pixels. "Screen Brightness" is the title which appears at the top of the window.

The Dimmer Label (Subroutine) Is Where the Work Is Done

Whenever the Slider button is moved the label *Dimmer* runs. It's a short routine which uses the enigmatic *DisplaySetBrightness()* function:

```
Dimmer:
    Gui, Submit, NoHide
    DisplaySetBrightness( MySlider )
Return
```

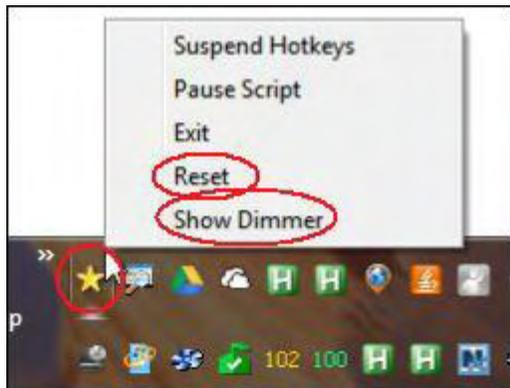
As mentioned previously, the [Gui, Submit command](#) is needed to save the slider value to *MySlider*. The *NoHide* option is used in the *Gui, Submit* command to prevent the window from closing after only one change.

Next the *DisplaySetBrightness()* function is called using *MySlider* as input. This is the function which actually sets the brightness of the screen. You can review it in the full code listing above, but from my point of view, you don't need to know how it works. I haven't dug into it, but I know it works as advertised. That's all that matters. It's quite possible for you to write a multitude of apps using functions found at the AutoHotkey Web site without truly understanding how any of them do it. As long as you include them intact and use the proper input, they will give you a great deal of flexibility and power in solving AutoHotkey problems.

Adding Items to the Systems Tray Right-Click Menu and Changing the Icon

There is a bit of code added to the beginning of the script just to make the app a little easier to use:

```
Menu, Tray, Add, Reset, Reload
Menu, Tray, Add, Show Dimmer, ShowWindow
Menu, Tray, Icon, Shell32.dll, 44
```



All three of these lines of code affect the System Tray menu or icon as shown by the image on the left. The first line of code adds the menu option Reset to the System Tray right-click menu. It merely uses the *Reload* command in the label named *Reload*: at the end of the script to rerun the code. This will bring the window to the top set at its default value.

The second line of code is for activating the dimmer window if it is minimized or closed. If you look at the label *ShowWindow* in the main script listing, you'll see that both *DetectHiddenWindows*, *on* and the *WinRestore* command are used. This approach is taken since it is quite possible that the window was closed by clicking the *x* in the upper right-hand corner. Since it is then hidden, the window will not be detected unless *DetectHiddenWindows* is set to *on*. Next, *WinActivate* will not work on a closed window while *WinRestore* will as long as the process is still running (shows in the System Tray). However, *WinRestore* will have no effect on a window that is merely behind another window, therefore *WinActivate* is used to bring the window on top. (The *WinActivate* line becomes more important if the *Gui +AlwaysOnTop* line is removed.)

The list line sets the System Tray icon to icon number 44 (a star) found in the file *Shell32.dll*. It is important that this line appear before the GUI commands since whenever it does, that icon will also automatically be used in place of the AutoHotkey icon in the upper left-hand corner of the GUI window.

Both this *ScreenDimmer.ahk* and the compiled *ScreenDimmer.exe* app which will run without AutoHotkey are available in the *ScreenDimmer.zip* file for download at the [ComputerEdge AutoHotkey Dropbox download Web site](#).

For more information about AutoHotkey, see the [AutoHotkey e-books](#) from ComputerEdge E-Books.

Jack is the publisher of ComputerEdge Magazine. He's been with the magazine since first issue on May 16, 1983. Back then, it was called The Byte Buyer. His Web site is www.computoredge.com. He can be reached at ceeditor@computoredge.com. Jack is now in the process of updating and compiling his hundreds of articles and columns into e-books. Currently available:

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Wally Wang's Apple Farm

“Typing on a Keyboard” by Wally Wang

Wally Wang's Apple Farm

Typing on a Keyboard; Bye, Bye, Blockbuster; Another Trend Coming From a Mile Away; The Pointlessness of Gun Control; iWork '09 Features Coming Soon; Don't Shop at the Apple Store; The Japanese Love the iPhone; Be Careful of Donation Scams; Emoticons in Mavericks.

In 2010, a British woman set the world record for typing the [fastest text message](#) at 25.94 seconds. The message she typed was this:

The razor-toothed piranhas of the genera *Serrasalmus* and *Pygocentrus* are the most ferocious freshwater fish in the world. In reality they seldom attack a human.

Try typing that same sentence on a full size keyboard in front of a desktop PC and you'll find that many people can't type that same text in under 26 seconds. So does that prove that full size keyboards are less efficient than smaller keyboards found on smartphones?

Obviously the answer is no, yet people use that same type of logic to "prove" that typing on anything other than a full size, physical keyboard is always inherently inefficient. Many people want a full size, physical keyboard simply because that's what they're used to typing on, not because typing on other types of keyboards is inherently worse.

When you're used to one way of accomplishing a task, any different way will always feel awkward and less efficient. Yet if you first learned to accomplish a task a different way first, then tried to relearn that same task another way, any unfamiliar way will also feel awkward and inefficient.

For non-English speakers, speaking English is difficult because they're not used to it, but speaking Arabic or Chinese is easy because they're used to it. That doesn't mean one language is superior to another but that once you get used to one way, learning a second way will always be difficult initially.

Imagine someone who learned only to type on a smaller smartphone keyboard using their thumbs. Give that person a full size, physical keyboard and that person would type much

slowly and less efficiently on that full size, physical keyboard. The problem isn't that the full size, physical keyboard is inherently inefficient, but that the person is not used to using that type of keyboard.

If full size, physical keyboard were inherently more efficient, then someone who only typed on smartphone keyboards would immediately type faster on a full size, physical keyboard. That isn't always true, which suggests that keyboard typing speed is more a function of the person's familiarity with the keyboard and less on that keyboard somehow being more efficiently designed.

When people first started using computers, they often complained that computer screens were too small so they were unable to view an entire page of text like a typewriter could do with a piece of paper sticking out from the top. Therefore, computer word processors must forever be inherently inferior to typewriters.

The biggest obstacles to progress aren't technological limitations but people's mindset in refusing to adapt to change. Give someone a tablet to type on and they'll find that typing on a virtual keyboard can be awkward if they're already familiar with typing on a physical keyboard. Yet as the iPhone and Blackberry phones proved, typing on physical keyboard isn't always an advantage.

Blackberry clung to physical keyboards for too long while people flocked to the iPhone. By using the iPhone's virtual keyboard, an entire generation of people are now getting comfortable with the idea of typing on non-physical keyboards.

Once people learn to type exclusively on virtual keyboards, will they immediately find that typing on a physical keyboard will be faster, easier, and more efficient? Probably not because physical keyboards will suddenly seem unfamiliar and clumsier to use. Type on a virtual keyboard for an extended period of time and then type on a physical keyboard and you'll immediately feel the greater effort that your muscles need to exert to press on a physical keyboard.

Not only are physical keyboards more likely to create hand and wrist problems, but physical keyboards are also less flexible in typing different types of characters while also being more prone to mechanical failure. Try typing Chinese characters or foreign accent characters in Spanish with a typical American physical keyboard and you'll suddenly see the limitation of physical keyboards.

So the best way to input data into any device is simply the way you're used to doing it. Every method has its pros and cons, so don't ignore both to "prove" that one way is always superior to another. Familiarity should never be mistaken for superiority.

The biggest appeal of Microsoft's Surface tablets is that you can type on a physical keyboard (if you buy it as an optional accessory). Yet this is the exact same advantage that Blackberry tried to tout with their smartphones that used physical keyboards. When your only advantage

is appealing to the past, it's not a sustainable advantage in the long run. As Blackberry learned the hard way, the future is not a physical keyboard.

Eventually, virtual keyboards will become commonplace so you can go through the initial discomfort of learning to use a virtual keyboard now, or you can cling to physical keyboards and claim that virtual keyboards will always be absolutely worthless. Then you can wake up one day like Blackberry and wonder why nobody still thinks physical keyboards are an advantage any more.

Bye, Bye, Blockbuster

To absolutely no one's surprise (except for people who cling to the past as if nothing could ever change or improve), Blockbuster Video announced that they're [shutting down](#) almost all of their stores. Ironically, Blockbuster helped kill independent video retail stores, and now competition from Netflix, Redbox, and streaming video online has helped kill Blockbuster Video.

Yet all this could have been avoided if Blockbuster had just kept their eyes open to the future. When Netflix started in 1997, the founder designed the company from the start to provide online video streaming. Even back then, the founder knew that renting DVDs by mail would just be a temporary fad until online video streaming became practical. If Netflix's founder could see this far in the future, how come none of those high-priced executives at Blockbuster Video could see the future too?

Far too many high-priced executives can only see as far as the next quarter. When your vision only extends as far as the next three months, it's easy to overlook inevitable trends that occur over a longer time frame. When companies fail, they should demand that all those high-priced executives return their multi-million dollar salaries because none of these executives did their real job of leading the company.

When you see former leaders like Blackberry and Blockbuster Video go down the drain so rapidly, it makes you realize how quickly life can change. As long as you keep watching the trends, you can predict the future with a high degree of accuracy. When you bury your head in the sand and pretend that information contradicting your way of thinking doesn't really exist, you'll get blindsided every time. The sad part is how so many people refuse to understand this lesson, even when it's in their best interests to do so.

Another Trend Coming From a Mile Away

Kodak got hurt when digital photography wiped out their film business that relied on both selling film and developing it. Now digital camera manufacturers are getting hurt by smartphones that include cameras that are often just good enough. Perhaps the real advantage

of smartphone cameras is that you always have a camera with you as long as you have your smartphone with you.

Few people take a separate camera with them unless they plan to take pictures. That means the low-end digital camera market is slowly dying as more people just rely on their smartphone cameras instead. Professional photographers still need professional tools, so don't expect separate cameras to disappear completely. Then again, even professionals can find that smartphone cameras can [deliver good results](#) in many cases.

Photojournalist Damon Winter of the *New York Times* even took pictures with his iPhone while covering the First Battalion, 87th Infantry of the 10th Mountain Division in Afghanistan. Damon [used the iPhone](#) to capture images and then used the Hipstamatic app to edit those captured images. Dedicated professional cameras may capture better pictures, but they're heavier and bulkier. A smartphone is smaller and lighter, which means you can easily take it anywhere you go.



Figure 1. Professional photographers are using smartphone cameras more often.

The days of buying a separate camera just for taking vacation or holiday pictures are already

past. If your income relies on selling low-end digital cameras to consumers, you can already see the writing on the wall. Unless, of course, you pretend that the trend towards smartphone cameras doesn't really exist after all.

The Pointlessness of Gun Control

In theory, the idea of gun control is to keep people from shooting each other. Of course, what works in theory rarely works in real life. If the government ever tries to take guns away from people, ordinary citizens will soon be able to create their own guns [from a 3D printer](#) like a company called Solid Concepts has done.

Right now, the more common 3D printers work with plastic, but more expensive 3D printers can use any type of material including metal. While metal 3D printers are still further away in the future than plastic 3D printers, you can clearly see that 3D metal printing is inevitable. That means the cost and availability of using a 3D printer to create a handgun will soon be available to practically everyone.



Figure 2. Solid Concepts has used a 3D printer to create a workable handgun.

Perhaps gun control advocates can start banning 3D metal printers next. Or they might as well go all the way and burn books that explain how to build your own guns out of metal pipes. Then they can ban the Internet to destroy any links leading to information about 3D printing of handguns. Trying to block information is like trying to block the sun from shining.

If a metal 3D printer can change the way we look at the availability of guns, imagine how 3D printers will change the rest of the world when we can all inexpensively print plastic, metal,

wood, ceramics, fabric, and even living tissue to create our own replacement internal organs. We might not see these advances in our lifetime, but they're coming. Trying to pretend they won't eventually arrive is as pointless as trying to pretend that sales of traditional PCs aren't steadily declining or that netbooks running underpowered processors and obsolete operating systems represent the future of computer technology. If you look at recent history, those were actually beliefs that many people vocally held until they quietly stopped.

iWork '09 Features Coming Soon

When Apple released the latest version of iWork, they removed several features from the previous version of iWork. While you can still use the old version of iWork '09, you might be relieved to know that Apple [plans to add](#) iWork '09's features to the latest versions of iWork eventually.



Figure 3. iWork offers seamless file and user interface compatibility across all versions.

While nobody likes losing features, the rationale behind the rewritten iWork suite is to provide identical features so the programs work the same and use the exact same file format whether you use iWork for Cloud, iWork for OS X, or iWork for iOS. In comparison, Microsoft offers Office 365 online, Microsoft Office 2013 for Windows, and Microsoft Office 2011 for the Mac, which all sport different features and user interfaces. By going through initial pain today, Apple can hopefully maintain complete file and user interface compatibility with all three versions of iWork in the future.

Since iWork is now free, it's hard to complain about a free office suite. For many people, iWork provides just enough features to be useful. As iWork continues to evolve, you'll only need to learn how to use its features once and hopefully Apple won't change features around and rearrange commands and user interfaces that confuse and frustrate users. If you want to hunt for the features you thought you knew how to use every time the company releases a new version, you already know which office suite you can buy for constant frustration every time.

Don't Shop at the Apple Store

At one time, few retailers sold Apple products so Apple wound up opening their own retail stores. Now many retailers sell Apple products and best of all, they're offering lower prices than if you bought directly from Apple.

Target, Wal-mart, and Best Buy sell the iPad Air for \$479, which is a \$20 savings over the \$499 list price. However if you wait for Black Friday, Target will throw in a \$75 gift card (for an iPad mini purchase) or a \$100 gift card (for a full size iPad purchase). Take a \$479 iPad Air, get a \$100 gift card, and instead of paying \$499 for an iPad Air at the Apple Store, you can really pay \$379 for the same product at Target.

**WHILE
QUANTITIES
LAST!**

FREE! \$75 GiftCard when you buy any iPad mini**

\$299

iPad mini® Wi-Fi 16GB

FREE! \$100 GiftCard when you buy any iPad**

\$479

iPad® Air Wi-Fi 16GB
* Gift card offer applies to all other iPads, including iPad 2.

Figure 4. On Black Friday, Target is rumored to be offering gift cards with every iPad purchase.

Of course with other retailers discounting the price of Apple products, revenue from Apple Stores has gone down. Then again, more retailers mean more customers, so Apple can keep winning over new customers who might never have gone to an Apple Store, especially if there are no Apple Stores nearby.

The Japanese Love the iPhone

In many parts of the world, Apple and Samsung have locked up the mobile phone market with other companies trailing far behind in their wake. Yet in Japan, Apple recently grabbed 30 percent of [the Japanese market](#), helped in part with Japan's largest telecom carrier, NTT DOCOMO, finally selling the iPhone.

One reason why Samsung sells poorly in Japan involves the traditional dislike the Japanese and Koreans have for each other. The Japanese also have a fondness for Western brands, including Apple. By understanding cultural differences, you can better understand the challenges in getting different groups of people to cooperate. If you fail to understand long-standing cultural differences, you can charge into any situation and try to boss everyone around. This will likely waste time and money while accomplishing almost nothing, which is the method most governments prefer.

Try typing Japanese characters into a physical keyboard on Blackberry phones and you'll find it difficult. Now use a virtual keyboard on a touchscreen and you'll see how simple it can be. Apple just needs to manufacture a single iPhone model that they can customize through software to sell all over the world. In comparison, other companies have to build specific models of their mobile phones to sell to different international markets. Guess which company has less inventory to juggle when selling to so many different international markets?

At one time American automakers tried selling cars in Japan where the steering wheel was on the left side. Unfortunately, the Japanese drive on the other side of the road like the British, so they want cars with the steering wheel on the right side of the car. Not surprisingly, American auto makers sold [few cars in Japan](#) and couldn't figure out why.

When you can easily customize your product for various markets quickly and easily, you don't have to worry about manufacturing specific products for different markets. Instead, you can reduce costs by mass producing a single type of unit, which demonstrates yet another advantage that virtual keyboards hold over physical keyboards that need special keys for typing languages in local markets.

Be Careful of Donation Scams

Every time there's a disaster of any kind, con artists flood the Internet with requests for donations. To avoid giving your money to scams that won't help anyone, you can donate directly within iTunes to give money to the Red Cross to help the victims in the Philippines.

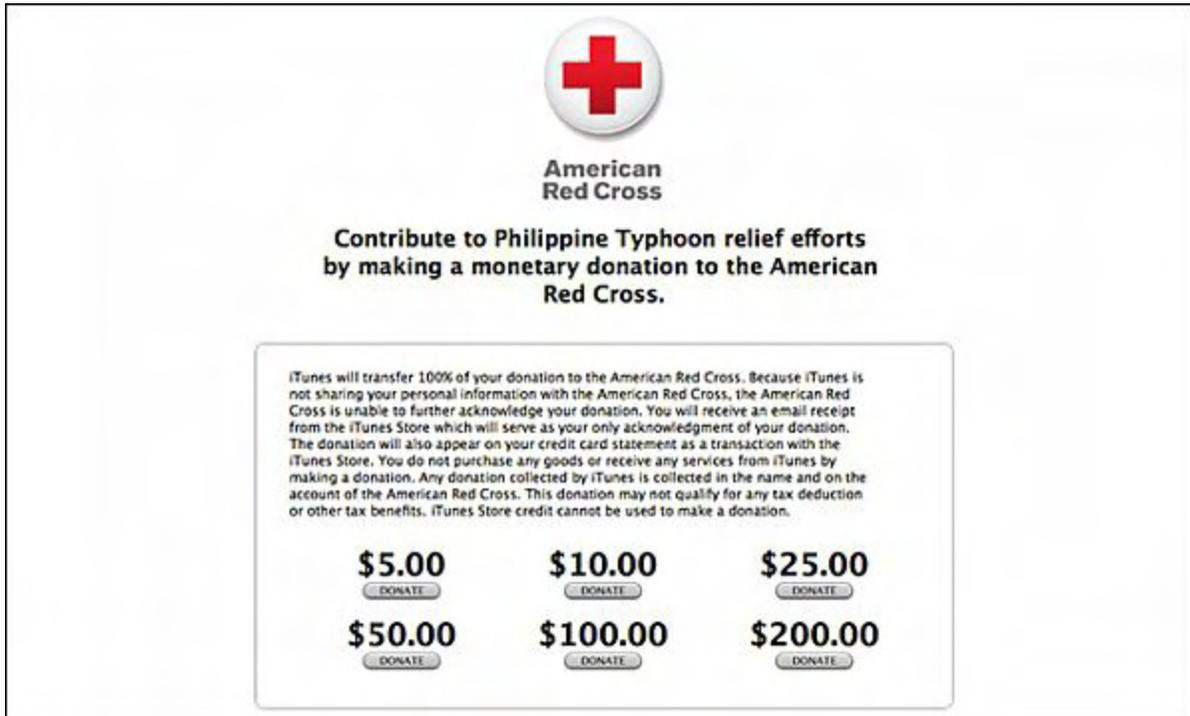


Figure 5. Donate to the Red Cross through iTunes.

Best of all, Apple will send 100 percent of your donation to the Red Cross, so if you want to give money, make sure you do it through reputable organizations such as the Red Cross through iTunes. Any amount will help, but if for some reason you harbor an irrational hatred towards Apple, feel free to make a donation directly to the Red Cross through the [Red Cross site](#) itself.

* * *

If you're using the latest version of OS X 10.9 Mavericks, you might want to type emoticons, which are symbols such as a smiley face. To do that, just press Control+Command+Spacebar and a window pops up. Now you can click on the emoticon you want to use.

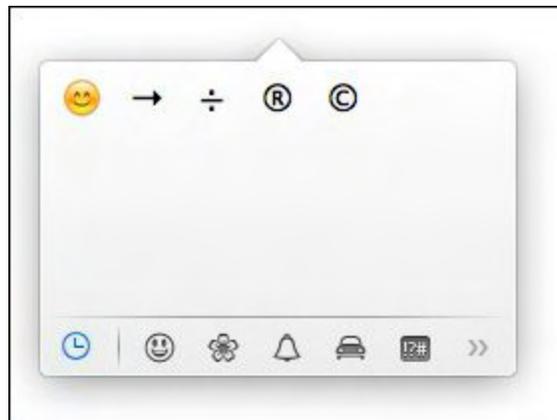


Figure 6. OS X Mavericks offers emoticons.

In the early days, before Wally became an Internationally renowned comedian, computer book writer, and generally cool guy, Wally Wang used to hang around The Byte Buyer dangling participles with Jack Dunning and go to the gym to pump iron with Dan Gookin.

Wally is responsible for the following books:

[*Microsoft Office 2013 For Dummies*](#)

[*Beginning Programming for Dummies*](#)

[*Beginning Programming All-in-One Reference for Dummies*](#)

[*Breaking Into Acting for Dummies with Larry Garrison*](#)

[*Strategic Entrepreneurism with Jon and Gerald Fisher*](#)

[*How to Live with a Cat \(When You Really Don't Want To\)*](#)

[*The Secrets of the Wall Street Stock Traders*](#)

[*Mac Programming For Absolute Beginners*](#)

[*Republican Fairy Tales \(Children's Stories the 1% Tell About the Rest of Us\)*](#)

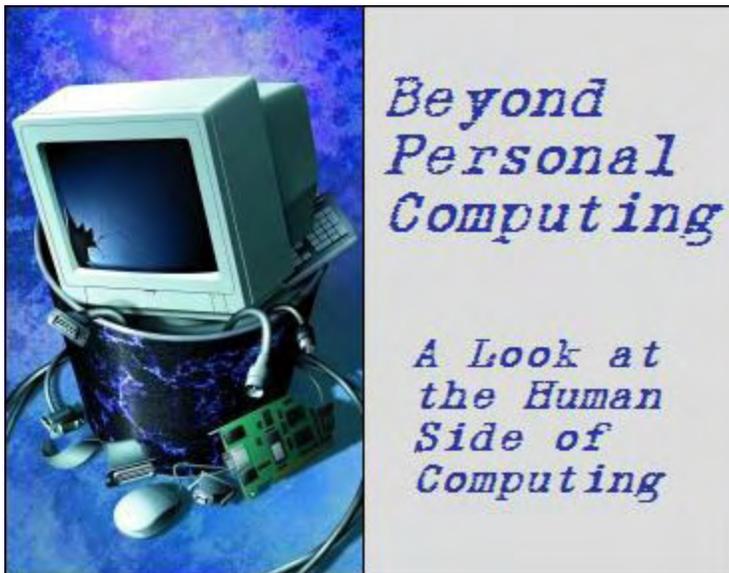
[*The Zen of Effortless Selling with Moe Abdou*](#)

[*The 15-Minute Movie Method*](#)

[*Erotophobia \(A novel\)*](#)

[*Math for the Zombie Apocalypse*](#)

In his spare time, Wally likes blogging about movies and writing screenplays at his site "[The 15 Minute Movie Method](#)," finding interesting news stories about cats at his site "[Cat Daily News](#)," and providing the type of advice he wishes someone would have told him when he was much younger at his [personal Web site](#). Wally can be reached at wally@computoredge.com.



3D Printers and How They're Being Used

“3D Printers: Plastic, Prototypes and Passion” by Marilyn K. Martin

Everything you need to know about how 3D printing is being used.

Sometime last year when we weren't looking (consumed with politics most likely), 3D printers started turning out products that were no longer just more plastic-disasters to laugh at. Up until this point, 3D printers were sidelined in their own little niche, like underwater robots, under a banner that said Fun Technology We're Still Working The Bugs Out Of. They could crank out little plastic soldiers, "artwork" for the myopically-inclined, and scare the bejeezes out of Homeland Security with printed guns that melted after firing a few bullets. But otherwise, 3D printers seemed to have frustratingly insurmountable "technical issues."

3D printers can theoretically "create" all sorts of things layer by layer, and are about as close as we can come right now to Star Trek's famed "replicator"—or creating something desired from the instantaneous remix of molecules. To younger folks, always more jazzed about possibilities than realities, 3D printers are like game consoles from an alternate dimension, which can layer-print strange plastic creatures they can sell on eBay as "prototypes."

And in the Beginning...There Was Embarrassing Plastic Failure

According to Wikipedia, 3D (or Additive) Printing was invented in 1984 by Chuck Hull, co-founder of [3D Systems](#), who coined the tongue-twister term "stereolithography." Sixty patents and a few decades later, 3D printers had come down in price and complexity, and lots of people suddenly wanted one of these mysterious and magical machines.

But there's a steep learning curve with 3D printers, and [Flickr](#) has an entire section of "3D Print Failures." If kindergartens of the future let kiddies play on 3D Printers instead of with fingerpaints, this is probably what parents will be tacking to the refrigerator door: plastic busts of people with their head going left in half-inch sections, to a vague shape amidst a tangle of

plastic strings.

3D Printers—Top Ten to DIY

TopTenReviews ranks the [Best 3D Printers](#) in 2013, with [Cubify CubeX](#) at the top, which sells for about \$2,500. But the next best is also from Cubify, their [plain Cube](#), which sells for around \$1,300. Although eBay lists Cubify 3D printers [starting at \\$600](#).

But if you have the tools and time, Craftsmanspace.com offers free plans for Do-It-Yourself 3D printers. Or you could invent a new kind of 3D printer and put it up on Kickstarter. Kickstarter has had [74 3D Printer projects](#), with about half (42) funded, to date.

If you don't want to buy a 3D Printer for your occasional needs, there are plenty of 3D businesses around, like [HoneyBee3D](#) which recently opened in Oakland, California. Even United Parcel is experimenting with some [3D printing services](#) in select stores. You can find other businesses worldwide through the [3D Printing Directory](#).

Buy a 3D Printer—Make Stuff!

Of course, if you do invest in your own 3D Printer, you can join the growing legions of "makers," and participate in the many global [MakerFaires](#). So what kinds of things could you make? Visit [Pinterest's page](#) on 3D Printing. Everything from 3D printed lampshades and chandeliers, to buttons and headphones, and even guitars and cars which all help prove that additive-crafted-plastic Rocks!

CGTrader.com reports that even [wearable 3D](#) printed fashions are now possible. 3D printed female underwear and bikinis look identical, but clothing designer Iris Van Herper and others have also created some 3D printed dresses that are both beautiful and futuristic. While other designers are making 3D printed purses, shoes and jewelry.

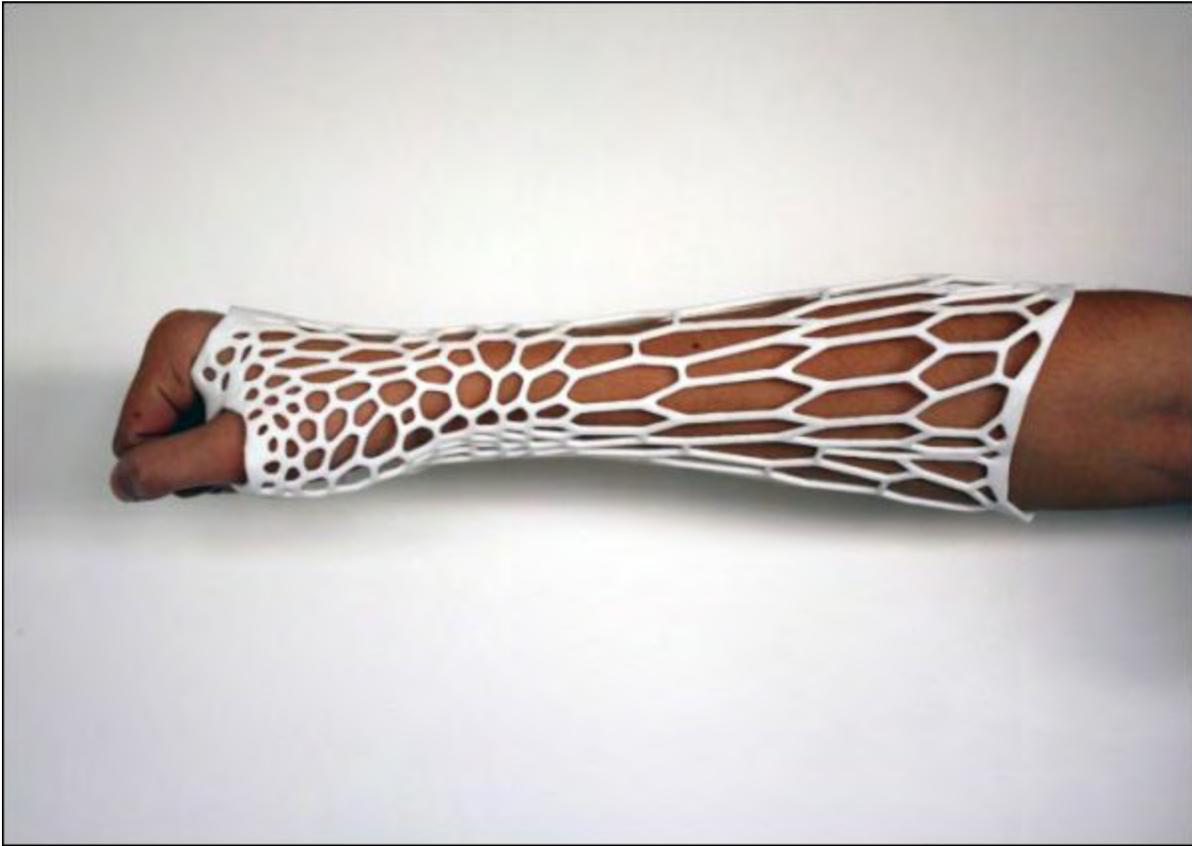


If you like to cook or "be creative" in the kitchen, Mashable reports that Missouri-based [Modern Meadow](#) is the pioneering company working on "[novel biomaterials](#) like cultured leather and meat products which require no animal slaughter." While Cornell University pioneered [3D printed desserts](#) in 2010, NASA is now funding a serious [3D food printer](#) that could go into space.

And there are plenty of 3D design sites online, like [3DPrinterDesign](#), which aims for Middle America. Their Top Free Designs range from jewelry to toys, iPhone cases to duplicates of your "beloved pet." While [MakeShop](#) is more for professional designers and 3D printer small businesses

3D Printers for Medicine and Wildlife

Gigaom reports that a [3D printed cast](#) for a broken arm is not only lightweight and waterproof, but exotically beautiful—and even has holes to let you scratch. While the *Telegraph* reports that a 3D printer has created a [new jawbone](#) from titanium powder for an 83 year old woman who lost her original jawbone to infection. She was reportedly speaking and swallowing normally with her new jaw the day after surgery.



If "wildlife prosthetics" is something you'd like to fire up your 3D printer for, *Grist* reports that a bald eagle was shot in the face by a poacher, and her beak was damaged so badly she couldn't eat on her own. After being rescued and nursed back to health by hand-feeding, the eagle was fitted with a new [3D printed nylon polymer beak](#).

Grist also reported on a duck named Buttercup who was born with a malformed foot that had to be amputated. A new [flexible duck foot](#) was designed and 3D printed from silicone.

The Outer Limits of 3D Creations

Not everyone is a tech genius who can make 3D printers spit out chandeliers and toys with movable parts. But everyone wants to make money, and most of us nurture the fervent hope that we are just One Great Idea away from a fortune—especially if we own a 3D printer.

Sites like MakerBot's Thingiverse.com, for example, solicit free and downloadable computer designs by mostly young people for "should work, maybe" 3D computer designs. They have 31 bong (or water pipe) designs, from skulls with eyes to double-percolated. But under their Most Popular Designs, the most downloaded designs from Thingiverse are simple plastic cases for bare-bones "learning electronics," from sites such as [Adafruit](#). (The most well known example is the Raspberry Pi circuit-board computer, just \$40.45 from Amazon). Other Most Popular Designs are video game or movie props, like Assassins Creed Hidden Blade, helmets and visors from Halo games, and even the movie *Forbidden Planet's* blaster gun.

Although one of the oddest products now is a [3D print of your unborn fetus](#), based on an ultrasound scan, embedded in clear plastic. Japanese company Fasotec began offering this baby-weight in July 2012, and reports that mothers loved the idea of their almost-baby in hand-held plastic.



Most Controversial? 3D Printed Guns!

In 2012, some college students in Texas formed a company called [Defense Distributed](#), and announced they were working on a 3D printed plastic gun. Homeland Security panicked, fearing all-plastic guns could get past airport scanners, until someone pointed out that there would still have to be a metal firing pin and metal bullets.

By May 2013, Defense Distributed had produced a working 3D printed gun called [the Liberator](#), that is now on sale for \$8,000 apiece, and fires tiny .380 bullets. It was designed after a one-shot pistol to be air-dropped over France during WWII. It's not clear what a one-shot-then-melts pistol could "liberate" today, but the buzz over this gun was enormous.

DD also uploaded the plastic gun's free plans to the Internet, with 100,000 downloads before the State Department told DD to stop sharing the file. However, reproducing the 3D printed gun was problematic, and even with a working model the plastic tended to melt or warp after firing a dozen or so small bullets.

Leave it to our slacker sages at *Cracked Magazine* to weigh in about [everything wrong](#) with this plastic pistol. The \$8,000 Liberator looks like a blocky toy-gun, for starters, and can only fire a few tiny .380 bullets before melting or exploding. And beyond the danger quotient, its accuracy is a joke. Beyond that, major legal barriers are in flux, with federal and state Congresses already working on laws to ban 3D printed guns—before someone with a high-end 3D printer and the most expensive plastic DOES produce a marketable 3D plastic gun.

While Defense Distributed is now working on just plastic gun components, like 30-round AR bullet magazines, the idea of 3D printed plastic guns has caught on in the UK. In Manchester,

England in October 2013, a gang raid by police found the UK's first ever [3D printed gun components](#), along with a sizeable quantity of gun powder.

3D Printer Gun Jokes

I think I know why that plastic 3D printed gun costs \$8,000. They're buying the plastic from Dept. of Defense contractors.

So if some armed criminal tries to hold you up, wouldn't his red/green glasses be a dead giveaway his gun's only got one bullet?

I don't get it! I thought my start-up, Plastic Hollow-Point Bullets, would have been a slam-dunk for a big Homeland Security ammo contract...

3D Printers and April Fool's Jokes—A Match Made in Heaven?

With all the hoopla about 3D printers, and the outrageous things they may (or may not) be able to make, they are the perfect launcher for [April Fools Jokes](#). Those yucksters at ThinkGeek (remember their "embedded tattoo grid for changeable tattoos"?) came up with a Play-Doh 3D printer this past April Fool's Day.



On that same Joker Day, Tesco announced a 3D Food Printer. "You can get ice from a fridge, so why not food from a printer?" their press release asked. "It's really very easy...except, perhaps, bananas. For some reason, we can't yet figure out bananas," although the photo of their 3D Food Printer shows a printed-pineapple. 3D printed Porafillo pasta was announced elsewhere on April 1st. And folks not familiar with 3D printing almost fell for 3Dprinter.net's video on how to do your own SLS 3D printing at home with just...an iPhone and a magnifying glass.

3D Printing in the Future: Entire Buildings to a Moon Base

Techcrunch thinks that in 2014 we will see the first [3D printed buildings](#). MIT and a Dutch

architect are already working separately on 3D printing a house frame—or a whole house—in a matter of days. Will office buildings be far behind?



Here is a *National Geographic* video [about Z Corp](#) (which was acquired by 3D Systems in January 2013) as it reproduces a theoretical physicist's all-metal wrench, complete with movable parts and one part in a chosen color.

Futurists have already said taking 3D printers into space could help astronauts manufacture tools or replacement parts while in orbit. But *BusinessInsider* reports that the European Space Agency (ESA) is investigating if a 3D printer could be used to [build a moon habitat](#) while on the moon, and is already partnered with an architecture firm. A 3D printer on the moon could use moon dust, soil and broken rock to form a concrete-like building over a sealed inflatable living dome with breathable air. This 3D printed, hardened structure would protect the astronauts in the living dome from space radiation and tiny meteoroids.

Marilyn is a freelance writer and humorist, with a special interest (besides computers and technology) in Science Fiction. Besides short stories published in various magazines, she also has some new e-books available on Amazon Kindle: [Hunting Monster Aliens](#) is an ongoing series of novellas, about a wise-cracking team of ghost investigators who occasionally turn into alien-monster hunters. [Culture Crash! A California Yankee Transplanted to Texas](#) is a collection of humor essays chronicling her adventures in her new home-state.

Twelve months (July 2012 through June 2013) of Marilyn's [Little Known High Tech](#) series has been compiled into an almanac (with a complete index) available exclusively at Amazon. If you want a quick reference for the obscure or unusual in computers and the Internet over the last year, then [check it out](#).

ComputerEdge E-Books has converted many of Marilyn's computer humor columns into four e-books. Now available in a four-book Kindle bundle from Amazon.com [The Best Computer and Internet Humor, Anecdotes, and Jokes Found on the Web](#). Marilyn's collection of the funniest stories about our computing machines and how we use them at home, the office, and in cyber space. Save 25% off the individual book price!



Editor's Letters: Tips and Thoughts from Readers

“Computer and Internet tips, plus comments on the articles and columns.” by ComputerEdge Staff

"Win W Doesn't Work for Searching Games," "BgInfo on Windows 8"

Win+W Doesn't Work for Searching Games

[Regarding the October 25 [Digital Dave column](#):]

While I normally do not use the TileWorld system in my W8 (not 8.1) machine, I thought I'd check out the games per this week's articles. Got to the list of games (no option to list alphabetically, sheesh!) and hit Windows key plus W and it just took me to the search for settings, no search for the games/store app.

What am I missing?

-Rich Ernst, San Diego, CA

Rich, I've added an update to the answer, although it may not be much help. I was probably in error when I said use WIN+W (which searches settings) rather than WIN+Q (which searches apps). I distinctly remember the search executing within the Store, but I have no way of verifying that since I'm now on Windows 8.1 where WIN+Q does a general "Everywhere" search of the computer rather than just an app search.

-Digital Dave

Hi Dave,

Yup, Win+Q works, but it has to be run from the store main screen, not in the games section, at least in W8 (not 8.1 yet).

And, since I use a local login, not wanting MS in anything else of mine, apparently you cannot get any apps without a Microsoft account! Sheesh!

So I'm setting up a fake/no valid info MS account to see how to allow the app downloads.

Thanks,

-Rich

Yet Another Reason *not* to Use Windows 8

Ok, I've been running Windows 8 since the Consumer Preview, then Release Preview, and now full version. I like its stability and boot improvements a lot, and have worked around most of its quirks and missing features of 7.

I always skip the TileWorld screen (without addon for such) and only use it when I had to search for something.

Now, after seeing Digital Dave's comments on games missing by default, I tried to install the "Minesweeper is Back" app, only to get an error. Doing all the troubleshooting and googling the error, apparently you *must* be logged into your computer with a "Microsoft Account." I'm not and don't want to be, I don't want my personal info, computer, e-mail, etc. sent to MS at every turn. Not that I don't trust MS (I don't), but in this era of identity theft and misuse of personal info, I don't allow it out as much as possible.

Now, promises of a great OS, full featured, but *not*, it's crippleware if I have to not only sign up/in with a Microsoft (vs. linking? a MS account to my PC), I have to use their login, which would also require an Internet connection all the time (not always feasible on a notebook or other personal computer). Add to this that I've no way of knowing what info is sent to MS (I recently turned *off* the smartscreen filter).

Back to W7, I guess, too bad, 8 had many improvements over 7.

-Rich Ernst, San Diego, CA

BgInfo on Windows 8

[Regarding the October 25 [Windows Tips and Tricks: Make the Desktop More Useful column](#).]

Wanted to warn users of Windows 8 about leaving desktop sync on. The same wallpaper change caused on the computer with this app will appear on all synced computers. I had some difficulty changing the wallpaper back since the app has no provision to remove the background. Wound up unsyncing desktop settings and uninstalling the app from the PC it was on. Finally had to go to Windows "Personalize" on each PC to restore my original wallpaper. Didn't seem to provide any useful information at all in my case (Windows 8), just messed up the desktop with text & lots of zeros for data.

-Ron Cerrato, San Diego, CA

Ron, while I don't feel that anyone should add software that doesn't prove to be useful, I

think you would find that deleting all the items in the BgInfo window and clicking Apply would have removed the data from the desktop. Then the sync should have done the same for the other desktops.

-Jack Dunning , ComputerEdge

ComputerEdge always wants to hear from you, our readers. If you have specific comments about one of our articles, please click the "Tell us what you think about this article!" link at the top or bottom of the specific article/column at ComputerEdge.com. Your comments will be attached to the column and may appear at a later time in the "Editor's Letters" section. If you want to submit a short "ComputerQuick Review", or yell at us, please e-mail us at ceeditor@computoredge.com. If you would like to review our recent e-books, please visit [ComputerEdge E-Books](#).

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