

Using Multiple Monitors in the Accounting Workflow

This document is designed to examine the functionality and usefulness of a multiple monitor environment: how it works and the benefits you might see in the tax and accounting workflow.

In the tax workflow, we see several uses for displaying applications side-by-side:

- Last year next to this year
- Tax return next to Document Management System (source documents)
- Trial Balance next to tax return
- Tax return next to tax planner

The list of applications goes on: time and billing, e-mail, spreadsheets, QuickBooks, etc. Chances are, at any given point in the workday you may have several different programs running.

Many users who are working in this environment have also used this technology as part of a paperless workflow that virtually eliminates the use of non-electronic documents. While that may be a lofty goal for some, this step is simple, affordable, and may just represent the single biggest leap in productivity you have experienced in years.

Who Should Read This

This document contains information about setting up a work environment that utilizes dual/multiple monitors. You will find the information beneficial if you:

- Believe in the benefits that new technology offers
- Are curious about multiple monitors and want to learn more
- Find the technological aspects of setting up a multiple monitor environment challenging

This document may not be useful if you are already using multiple monitors or do not see any benefit to working in this environment.

Contents

This document is designed to answer these questions:

- What is the purpose of using multiple monitors?
- How does it work?
- What are the hardware and software requirements?

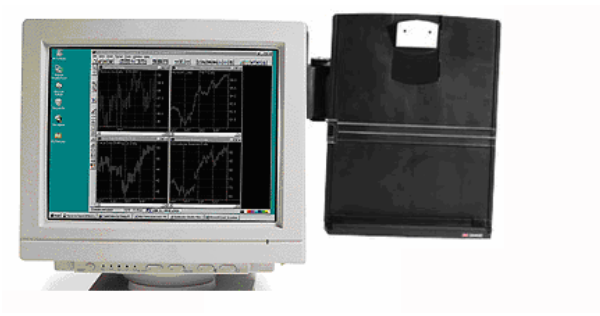
What is the Purpose of Using Multiple Monitors?

At the basic level, there is the simple argument of real estate. In a single-monitor environment, running a single application "maximized" uses all the screen real estate.

	A	B	C	D	E	F	G	H	I	J	K	L	M	
1	Actual Cost Basis using Specific Identification													
2	Buy Date	Buy Price	No. Shares	Comment	Cost Basis Per Share	Holding Period								
3	9/3/2004	10,000.00	382.6	Initial investment	26.14	LT								
4	9/24/2004	34.43	1.32	Reinvested dividends	26.11	LT								
5	10/1/2004	250	9.38	Additional investment	26.65	LT								
6	11/1/2004	250	9.36	Additional investment	26.72	ST								
7	12/1/2004	250	8.82	Additional investment	28.35	ST								
8	12/23/2004	78.17	2.73	Reinvested dividends	28.68	ST								
9	1/3/2005	250	8.78	Additional investment	28.49	ST								

Using applications in this environment usually involves extensive use of the task bar to "switch" between applications. An alternative to this is "tiling" the relevant applications side by side or on top of each other horizontally. Depending on screen size, this usually results in a less than desirable use of each application.

In many circumstances, the need exists to have visibility into a second piece of data as you are working in an application. For printed items, a document holder almost becomes a necessity.



The concept of “side-by-side” document usage has been around for many years in the accounting profession.....

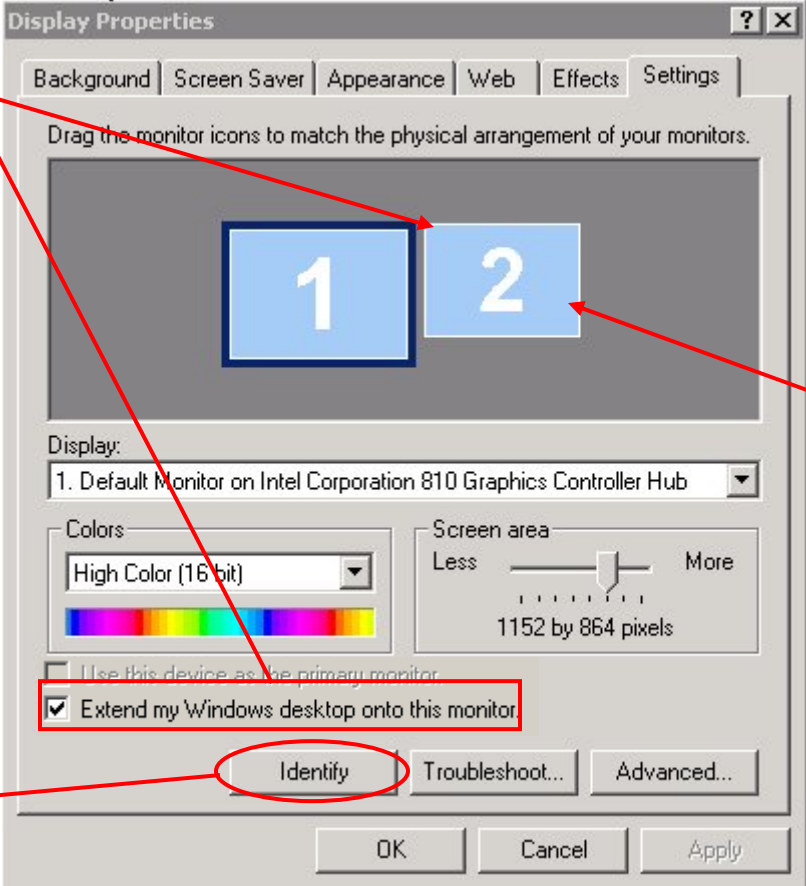
This concept holds true when you have the "document" in electronic format. The idea is that you can open the reference item on one monitor, while performing a task in an application on the other monitor.



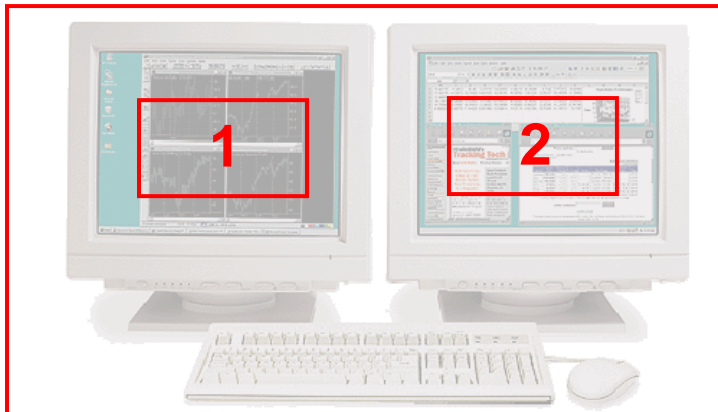
How Does It Work?

Once you have completed the necessary hardware modifications, you can easily configure most versions of Windows to operate in a dual/multiple monitor environment. The idea behind this is simple: rather than having applications tiled on top of one another, and "toggling" between those applications, you can display applications next to one another on your dual monitors.

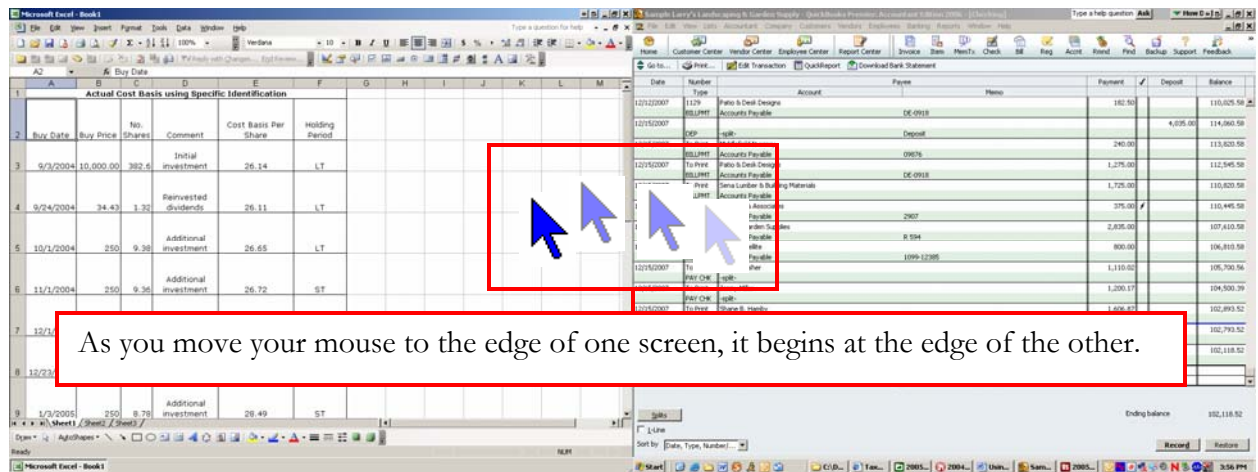
In your Windows Display properties, you arrange your displays to resemble your setup.



The screenshot shows the Windows Display Properties dialog box. The 'Settings' tab is selected. The main area displays two monitor icons labeled '1' and '2'. Below the icons, the 'Display' dropdown is set to '1. Default Monitor on Intel Corporation 810 Graphics Controller Hub'. The 'Colors' section is set to 'High Color (16 bit)'. The 'Screen area' section shows a slider and '1152 by 864 pixels'. The 'Use this device as the primary monitor' checkbox is unchecked, and the 'Extend my Windows desktop onto this monitor' checkbox is checked. The 'Identify' button is circled in red. Three callout boxes provide instructions: 1. 'Click the secondary monitor and then check the box to extend your desktop to this monitor.' 2. 'Click this button to put a temporary number on the screen of each monitor so you can see which is which.' 3. 'Click and "drag" the number that corresponds to the correct monitor and move it to "mirror" the physical location.'



Once you have Windows configured, you are ready to begin utilizing your new work environment. For example, let's say you need to enter transactions from a spreadsheet into QuickBooks. Opening them "side-by-side" gives you the ability to work simultaneously in both programs.



While you would not literally work in both programs at the exact same time, you can simply "switch" between the programs by clicking in the appropriate screen.

☞ You may experience some "quirkiness" in some applications, such as pop-up windows on a different monitor, drop-down menus not appearing, etc. If this occurs, simply run that application in the primary (number 1) monitor.

What are the Hardware and Software Requirements?

☞ This section contains terminology that you may or may not be familiar with. When possible, we have created hyperlinks for online reference material to either provide definition or give more detailed explanations.

The needs for using multiple monitors are actually quite simple, and the costs range. For PC's, you will need a video card with two or more video plugs, the drivers, the correct version of Windows to support it, and the monitors themselves. For laptops, the technology is usually already there. The biggest "hardware" expense usually lies in the monitors themselves. Before we discuss monitors, however, let's first examine the other needs.

First, we will begin with your operating system. While older versions of Windows may support some of the various video card drivers, most brands list later versions as part of their system requirements. Microsoft Windows 98, 98SE, ME, Windows 2000, XP and 2003 all have built-in support to recognize multi-monitor configurations. Windows NT4 and earlier versions, as well as Windows 95 do not. Pay close attention to the requirements of these drivers when you purchase your video card(s).

Next, the main component in this system: the video card. That is the piece of hardware in your computer that your existing monitor is plugged into. Most laptops in use today have the ability to display an image on the panel as well as through the VGA monitor port. PC's have traditionally been limited to a single port, but with the rising popularity of this technology, many that are built (or ordered) today come with newer cards that contain a [VGA](#) and a [DVI](#) port. There are also many with dual DVI ports.



These devices can even be installed in your existing computers, replacing the existing single port video card, and the prices range from \$50 to upwards of \$1,000. For standard use in an accounting environment, cards on the lower end of the price spectrum are generally sufficient. For use with dual VGA monitors, you can use a DVI-VGA adaptor. There are also some "less complex" solutions available, such as this [USB compatible device](#), and using old networked machines as monitors as discussed in [this article](#).

Once [installed](#), you can connect [compatible monitors](#) to each port to begin the configuration aspect of this setup. As previously mentioned, the monitors can be the most expensive part of the hardware purchase. You might begin by simply experimenting with some [CRT](#) monitors that you may have in surplus. An investment in flat panel monitors may not be a difficult decision to make once you realize the productivity benefits, as well as better utilization of desktop space and higher quality images.

Next, the drivers for the video card are installed. This is usually as simple as following the instructions that come with the video card. After everything is hooked up and loaded, you can easily configure [Windows 2000](#) , [Windows XP](#) , and [Windows Vista](#) for your exact setup (the setup in most versions of Windows is very similar).