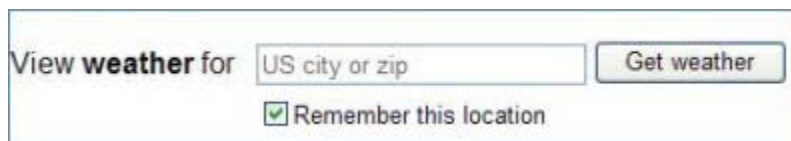


What is Google doing that Microsoft isn't?

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Call me nostalgic, but there are times I long for DOS 1.0. It was a simpler time. And though I didn't realize it then, the personal computer and the microprocessor was going to change how we lived and worked forever. But back then we couldn't wait to buy DOS 1.1 and it wasn't an upgrade. How the hearts and minds of the PC user has changed over the last 25 years.

Typing in a DOS command was sort of like typing text into a Google search. The big difference is you didn't have Google AdSense ads popping up on your monochrome text monitors every time you entered a command. Entering English words and expecting a response seems very natural. Google actually has taken advantage of this by creating a number of useful keywords that users may enter into the Google search. Some of these include for example the keyword "weather" which will result in a display similar to:



View **weather** for
 Remember this location

By entering "weather Phoenix", a display similar to the following will appear at the top of the search list:

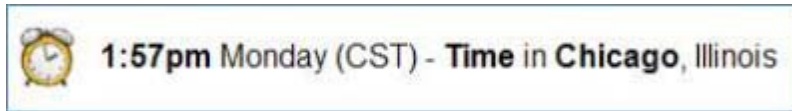


Similarly, a stock quote may be obtained by entering the stock symbol "INTC" into the Google search field – resulting with a display similar to:



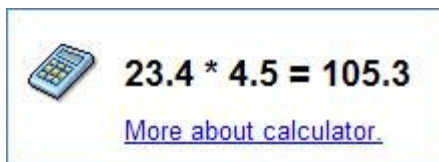
If you ever wanted to know the time in a particular city, that can be obtain by entering

the keyword time followed by the city name. In this example if one enters “time Chicago” they may see a result similar to:



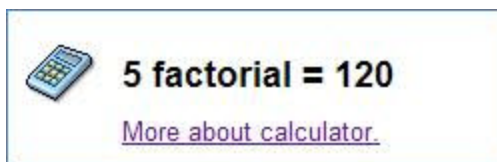
With local number portability and the fact that many numbers are now associated with cell phones, one cannot always know where a caller is calling from. However, it would be nice if this feature was extended to handle both area codes, zip codes and airport codes. For instance it would be nice to be able to enter “time 602” or “time 85023” or “time PHX.” Well extending this one step further how about “time ” e.g. “time Bob” to find out what time it is based on Bob’s current location (which may be dynamic).

Have you ever needed a quick calculator? Well one can also use the Google search entry as a calculator by entering something like “23.4*4.5=” or simply “23.4*4.5”. Microsoft also does this in free format anywhere in a OneNote page which I find very interesting and I will touch on at a future time how the feature could be extended in that application. Of course in OneNote, one simply has to hit the space bar rather than an “Enter.” More on this later.

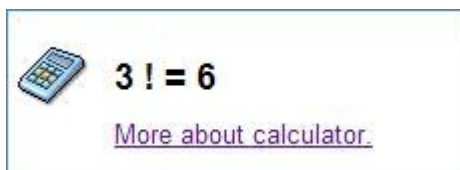


Some more examples of other common mathematical operators supported by the Google search window:

Entering 5 factorial yields:



The user may also have simply entered the number with the factorial symbol (e.g. 3!):



Basic math functions such as square root may be entered either as fractional exponents or with the sqrt function:



$$25^{**} (1 / 2) = 5$$

[More about calculator.](#)

or



$$\text{sqrt}(25) = 5$$

[More about calculator.](#)

Another useful option is to request a conversion. One may enter "500mm in inches" which returns a display similar to:



$$500 \text{ millimeters} = 19.6850394 \text{ inches}$$

[More about calculator.](#)

Math constants such as "pi":



$$\text{pi} = 3.14159265$$

[More about calculator.](#)

and "e" are recognized:



$$e = 2.71828183$$

[More about calculator.](#)


Trig functions such as sin are recognized:



$$\text{sin}(\text{pi}) = 0$$

[More about calculator.](#)

The keywords degrees and radians may be used as in this hyperbolic function example "tanh(180 radians)". The use of parenthesis is optional:



cos(0 degrees) = 1
[More about calculator.](#)

A very good guide to all math functions may be found at GoogleGuide.com

The original point was that Google is providing an interface to the user to access useful and often changing data. Sports scores and programming times are two widely searched topics. If we had typed in "Fiesta Bowl" we might see something such as:

Fiesta Bowl: Ohio State Buckeyes vs. Texas Longhorns
 Jan 5 8:00pm ET
www.fiestabowl.org

or if we had typed in "arizona cardinals" :

Atlanta Falcons 24 - Arizona Cardinals 30
 Jan 3

Falcons	0	17	0	7	24
Cardinals	7	7	14	2	30 «

Next game: @ Carolina Panthers, Jan 10 8:15pm ET
www.nfl.com

What is Google doing that Microsoft isn't? They are offering information on demand to the user. They are offering connectivity and information which is only available on the web. In some ways, the client platform can be very dumb. It can almost be a thin client with the actual parsing and response all happening at the server. Well, this isn't ideal for everything, but it works very well for things which need to access data in the cloud.

Where am I going with all of this rambling? Well the Microsoft solution for the PC has gone from terribly primitive PC DOS 1.0 to a piggish Vista in two and a half decades. So what are we going to get with a Windows 7? The verdict is still out on this future OS. But for the future, I actually would like to see is a shift in thinking.

Well am I wanting the return of a command prompt window? No, I don't want a command prompt window. I want a command prompt everywhere – in every window, at every cursor location and in every application. I am tired of navigating from point to point on the screen just to enter a command, pull down a menu or click on a button. At times I think the nerves in my wrist are about to catch on fire from moving the mouse

about the screen. I want to be able to enter a command from wherever the cursor currently is.

This first occurred to me when I was playing with Microsoft OneNote. As a side comment, OneNote has great potential but is very deficient in some very needed features as a product. As I was playing with OneNote's command-line-like calculator feature it occurred to me that the user interface was not only interesting but that it could be extended to be very functional. For those of you that haven't used it, in OneNote you simply can type anywhere on the screen $5+6=$ and as soon as you press the space bar you get $5+6=11$. I thought to myself, this certainly could be extended in many ways. So I started envisioning an operating system which would be OneNote like and set out to document all the features that could be accomplished with such an interface. By simply typing the name of any program or feature from within anywhere in the window, the application would launch or an action would be taken without leaving a trace that the command was entered and I would never have to lift my hands from the keyboard. Then for any window or application that was launched, I could from within any of those windows also simply enter a command without having to navigate to a window or pull down menu.

If you are in the middle of typing a document and you want to send someone an SMS message regarding lunch you might enter..

The brown cow jumped over Redmond. ../SMS Bill Hey Bill would you like to do lunch?

This would send an SMS message to a contact Bill with the message "Hey bill would you like to do lunch?" and the text would return to the following with the cursor positioned at the end of the text.

The brown cow jumped over Redmond.

This could be applied to an entire family of commands. If the command demanded a graphical window, it would pop open and once closed, the user would return to the point where they entered the original command-text. What I like about this is that I can work and do various tasks without taking my hands off the keyboard. I can make a simple phone call ../call Bill, I can make a conference call ../call Bill Jim Tim, I can insert a file ../Insert, I can request a stock quote ../quote INTC, I can easily integrate ecommerce into my operating system ../shop computers, or I can do a million other features only limited by my imagination. It would not have to be known commands. If a user enters a question or specific information, a web search would be performed. For instance, going back to the sports score example, the user could simply type in

The brown cow jumped over Redmond.../Arizona cardinals

Once the OS saw that this was not a known command or a misspelling of a known command, it would simply search the internet for the term and return:

Atlanta Falcons 24 - Arizona Cardinals 30						
	Jan 3	1	2	3	4	T
	Falcons	0	17	0	7	24
	Cardinals	7	7	14	2	30 «
	Next game: @ Carolina Panthers, Jan 10 8:15pm ET					
	www.nfl.com					

just as Google did from the browser search window. In fact, the result could simply be a Google, MSN, or Yahoo search directly from the command line. And, the command line is anywhere on the page. There is no dedicated command line prompt or dedicated search window.

I think it would be useful to see a computing environment similar to this for a complete system. No more start menu. No more tray icons which I hate and often have to strain to see if my somewhat less than perfect eye sight. And there would be no more reaching for the mouse every ten seconds. If I wanted to open a copy of word, I simply would type something like ../word myFile.docx. So this would be revolutionary shift in interfacing to a system and not just windows in a new skin or a command line interface inside a window. Graphical menus and help can still be present, but it would work in conjunction with human keyboard input rather than trying to be everything to everyone.

It is about time the software vendors start thinking about how people can accomplish tasks with the computer and quit making the OS, the tools and the applications the end in itself. I want to accomplish a task. I don't care if it is a Mac or a PC - I use both, written in Java, C# or F#, and I don't care if the icons look like they have a glass surface. As a side note, it is interesting that HP recently introduced their new Linux based Mini 1000 mi with the command line interface disabled. For the target market, it probably made since to the product manager. However, they are probably leaving a lot of money on the table by turning away the Linux faithful. I know from reading several web sites, HP frustrated a number potential customers with their decision to provide only a GUI on a Linux based computer. Command line interfaces aren't bad. But they shouldn't be thought of as an end in themselves - nor should a GUI be thought of as an end in itself. We need more and better ways to input to computers.