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The Secret Origin of Windows

A quarter century ago, Windows wasn't everywhere. In fact, some were doubtful it would ever ship at all. And Tandy Trower was there.

By [Tandy Trower](#) | Monday, March 8, 2010 at 11:41 pm

Few people understand Microsoft better than [Tandy Trower](#), who worked at the company from 1981-2009. Trower was the product manager who ultimately shipped Windows 1.0, an endeavor that some advised him was a path toward a ruined career. Four product managers had already tried and failed to ship Windows before him, and he initially thought that he was being assigned an impossible task. In this follow-up to [yesterday's story on the future of Windows](#), Trower recounts the inside story of his experience in transforming Windows from vaporware into a product that has left an unmistakable imprint on the world, 25 years after it was first released.

Thanks to [GUIdebook](#) for letting us borrow many of the Windows images in this story.

—David Worthington



Microsoft staffers talk MS-DOS 2.0 with the editors of PC World in late 1982 or early 1983. Windows 1.0 wouldn't ship for almost another two years. From left: Microsoft's Chris Larson, PC World's Steve Cook, Bill Gates, Tandy Trower, and founding PC World editor Andrew Fluegelman.

In the late fall of 1984, I was just past three years in my employment with Microsoft. Considering the revolving doors in Silicon Valley at that time, I already had met or exceeded the typical time of employment with a high-tech company. Over that time I already had established a good track record, having started with product management of Microsoft's flagship product, [BASIC](#), and successfully introduced many versions including the so-called GW-BASIC which was licensed to PC clone vendors, various BASIC compilers, and a BASIC interpreter and compiler for the Apple Macintosh. As a result I had been given the overall responsibility for managing Microsoft's programming languages, which included FORTRAN, Pascal, COBOL, 8086 Macro Assembler, and its first C compiler for MS-DOS. It was at this point that things took a significant turn.

I had just gone through one of those infamous grueling project reviews with Bill Gates, who was known for his ability to cover all details related to product strategy, not only those on the technical side. [Borland's Turbo Pascal](#) had just come out, seemed to be taking the market by storm, and looked like a possible competitor to Microsoft BASIC as the language that was shipped with every PC. While Microsoft had its own version of Pascal, it had been groomed as a professional developer's tool, and in fact was the core language Microsoft wrote many of its own software products in before it was displaced by C.

Bill Gates made it quite clear that he was not happy.

At \$50 for the Borland product vs. the Microsoft \$400 compiler, it was a bit like comparing a VW to a Porsche. But while Turbo Pascal was lighter weight for serious development, it was almost as quick for programming and debugging as Microsoft's BASIC interpreters. And Pascal was the programming language that most computer science students most typically studied. The new Borland product would require serious strategy revisions to the existing plans to port Microsoft Pascal to a new compiler architecture. But it also required thinking about how to address this with our BASIC products. Could a Turbo BASIC be on the horizon? In any case, Gates made it quite clear that he was not happy .

Returning to my office I was somewhat devastated. In the days that followed, as I tried to come up with a revised strategy, I was uncertain about whether I should even continue in this role. I had come to Microsoft from a consumer computer company where I had primarily managed a variety of entertainment and education software. Even in my early career at Microsoft I had managed its early PC games like [Flight Simulator](#), [Decathlon](#), and Typing Tutor. And I had loved managing BASIC, not just because it was the product the company was best known for, but because BASIC helped me get my own start in the PC business, and I believed it allowed a wide audience to tap into the power of PCs. Now my job had evolved to where I was managing a family of products mostly for a highly technical audience. So, I spoke with Steve Ballmer, then my direct manager and head of Microsoft's product marketing group, and suggested that perhaps I was the wrong person for this job.

A couple of weeks later, Ballmer called me in and proposed that I transfer over to manage Windows. Sounds like a plum job right? Well, that wasn't so obvious at the time. Windows had been [announced the previous year](#) with much fanfare and support from most of the existing PC vendors. However, by the time of my discussion with Steve, Windows still had not shipped within the promised timeframe and was starting to earn the reputation of being “vaporware.” In fact Ballmer had just returned from what we internally referred to as the “mea culpa” tour to personally apologize to analysts and press for the product not having shipped on time and to reinforce Microsoft's definite plans to complete it soon.

Windows was developing a reputation for career death.

Further, Microsoft's strategy to get IBM to license Windows had failed. IBM had rejected Windows in favor of its own character-based DOS application windowing product called [TopView](#). With IBM still the dominant PC seller, Microsoft would have to market Windows directly to IBM PC users. It would be the first time the company sold an OS level product directly to end-users (unless you count the [Apple SoftCard](#), a hardware card that enabled Apple II users to run CPM-80 applications on their Apple IIs, which I had also previously managed). Since I had been the product manager that had the most experience with marketing technically oriented products through retail channels (rather licensed to PC vendors), Ballmer thought the job might be a good fit. In addition, he pointed out that since Windows was intended to expand the appeal of PC through its easier-to-use graphical user interface, it should appeal to my more end-user product experience and interests.



At that point Windows was no longer considered the company's star project, as it had become a bit of an embarrassment. Even internally there were doubts among some in the company that Windows would ever ship. Also, because Ballmer had already burned through four product managers to try to get there—people who now had been either reassigned or were no longer at Microsoft—the product was developing a reputation for career death. Apparently prior to offering the job to me, Ballmer had tried to persuade [Rob Glaser](#), already recognized as a bright, up-and coming talent, to take the position. But Glaser turned him down. When Glaser heard that I was offered the position, he even stopped by to counsel might that it would be a bad career move.

This made me think that perhaps the offer to me was a ploy by Gates and Ballmer to fire me because of their disappointment in dealing with Turbo Pascal and my suggestion that perhaps my assignment to managing programming languages was a poor choice on their part. It seemed clever: give me a task that no one else had succeeded with, let me fail as well, and they would have not only a scapegoat, but easy grounds to terminate me. So, I confronted Gates and Ballmer about my theory. After their somewhat raucous laughter they regained their composure and assured me that the offer was sincere and that they had confidence in my potential success.

So, in January of 1985 I transitioned over the Windows team, but even as I assumed my new role, I discovered that the Windows development architect and manager, Scott McGregor, a former Xerox PARC engineer, has just resigned. Ballmer himself took up McGregor's role as the development lead in addition to his other responsibilities.

Shaping Up Windows

My first task was to assess of what was done and what was left to be done as well as come up with a marketing strategy of how to sell an OS add-on to end users, a task that was a significant challenge because no Windows applications existed at that time. How to sell a new application interface without any applications?

I discovered that while the three core functional components of Windows (Kernel—memory management, User—

windowing and controls, and GDI–device rendering) were mostly in place there was still a substantial amount of work to be done, and Ballmer had given me only six months to finalize the product and get out the door. This didn't bother too much since I had currently held the record for getting a product from definition to market in the shortest time.

Windows needed to be finished, not further tweaked in any way that jeopardized getting it out that summer without further embarrassment.

There wasn't much time to make changes. Ballmer was emphatic not to redefine what was already done, even though McGregor had changed Windows from its original overlapping windows design to a tiled windows model and every windowing system out there or under development featured overlapping windows. There also was not enough time to change the Windows system font displayed in title bars and control labels from a fixed width typeface to a proportional typeface, which made the overall look a bit clunky, especially in comparison to the [newly announced Macintosh interface](#). Steve's promise was that in the next release I would get creative freedom to make any significant changes to the product's interface. I could add some functionality to make it more appealing to end-users, but overall the product needed to be finished, not further tweaked in any way that jeopardized getting it out that summer without further embarrassment.

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107 Comments For This Post

1. *interval* Says:

[March 9th, 2010 at 3:09 am](#)

Don;

Given the history of Silicon Valley business (I was there during the formative years and I know what I'm talking about) Microsoft, while there are plenty of things I can say about it, was not the only one doing the thieving or the copying. Bomb throwing comments are useless.

2. *Muay Thai* Says:

[January 4th, 2012 at 6:42 am](#)

Yea, people fail to realize that it was pretty common back then. [Muay Thai Combinations](#) | [Muay Thai Kick](#) | [Martial Arts for Children](#)

3. *IcyFog* Says:

[March 9th, 2010 at 5:23 am](#)

However, by the time of my discussion with Steve, Windows still had not shipped within the promised timeframe and was starting to earn the reputation of being “vaporware”.

<http://www.grammarbook.com/punctuation/quotes.asp>

Periods and commas always go inside quotation marks, even inside single quotes.

Examples: The sign changed from “Walk,” to “Don't Walk,” to “Walk” again within 30 seconds.

She said, "Hurry up."

She said, "He said, 'Hurry up.'"

4. *Jim* Says:

[July 20th, 2010 at 9:44 am](#)

Punctuation inside the quotation marks is a stupid rule. English is a living language and us intelligent people are doing away with that rule slowly but surely. <http://www.kranik.kiev.ua/>

5. *ha* Says:

[May 27th, 2011 at 8:26 am](#)

It's "we intelligent people." We is the subject.

6. *Anonymousdog* Says:

[November 22nd, 2010 at 3:51 pm](#)

...not when the quotes indicate that the word is a special term or unusual usage of a familiar word. So, your examples are correct, but so is the criticised text.

7. *David Worthington* Says:

[March 9th, 2010 at 6:29 am](#)

@icyfog fixed.

8. *David Worthington* Says:

[March 9th, 2010 at 6:32 am](#)

Here's a little more bio on Tandy:

Tandy Trower, a former 28 year employee of Microsoft, resigned in November 2009 to pursue a new venture to create software and services to support robotic solutions that can enhance the lives of an increasing worldwide population that require assistive care. In his last 6 years at Microsoft, Trower founded the company's current robotics initiative, successfully launching a series of development toolkits to help further catalyze the development of applications for the emerging personal robotics market.

9. *Winston Churchill* Says:

[March 10th, 2011 at 4:25 pm](#)

Cool Story – I'm sure Winston Churchill saw some of this coming. It was explained in many [Winston Churchill Quotes](#)

10. *Don* Says:

[March 9th, 2010 at 8:11 am](#)

A wonderful CYA article that totally omits the known thefts and copying done by MS. This attempt to rewrite history and facts for a company convicted of being an illegal monopoly: EPIC FAIL.

11. *fisch wallet* Says:

[December 3rd, 2010 at 11:17 am](#)

Yeah. thanks for adding this.

12. *Frombam* Says:

[December 14th, 2010 at 9:20 am](#)

What, exactly, does Microsoft have the monopoly on? Windows? What are you talking about?

13. *Nobody Real* Says:

[March 9th, 2010 at 9:27 am](#)

@George – You are confusing OS/2 2.0 and later versions with the 1.x versions of OS/2. Microsoft was long gone from OS/2 development by the time 2.0 came out, and 1.3 was largely a totally different beast.

Also, while you're on your high horse, you might think about the fact that Windows and OS/2 had different design requirements. Windows was required to work with 8 bit CPU's, while OS/2 could largely throw away backwards compatibility and start with 16 bit CPU's. Later versions of Windows had to carry that old DOS compatibility while OS/2 chose the more bloated approach of running DOS in a virtual machine which resulted in a minimum memory requirement of 4MB at a time when 4MB cost over \$1000.

Make no mistake, part of the reason OS/2 never succeeded was because it was far too bloated for the average PC of the time, and by the time PC's caught up, Windows caught up as well.

14. *Gregg E.* Says:

[October 26th, 2011 at 7:47 pm](#)

Windows never ran on an 8 bit CPU. The 8086 was a full 16 bit CPU. The 8088 was a 16 bit CPU on an 8 bit data bus. Windows versions through 3.0 could run on the 808x. 3.1 and 3.11 dropped Real Mode support so they required a minimum 80286 CPU.

Windows for Workgroups 3.11 dropped Standard Mode support and required a minimum 80386 CPU, even though Windows was still 16 bit. WFWG 3.11 could support 32bit disk and file access, but there was no benefit if the hardware could only support one or the other.

I don't know if Windows For Workgroups 3.1 still had Standard Mode support.

Windows 3.11 (with Standard Mode support) had support for 32 disk access. But it was useless without the 32 bit file access because it still had to thunk down to 16 bit so there was no speed improvement. Of course that bit of 32 bit support only worked on a 80386 or higher.

15. *gramie* Says:

[March 9th, 2010 at 11:42 am](#)

— Periods and commas always go inside quotation marks

You'll find that this is a style issue, and the British style is to put them outside the quotes, where they make much more sense.

16. *ram* Says:

[March 9th, 2010 at 12:01 pm](#)

Interesting article about the history and experience at microsoft. I'm a PC user from the begining and worked with windows since the begining starting with dos and windows 3.1. It is interesting to see how far PC has come and become integral part of our daily lives with hotmail, office, xbox, windows mobile. I'm even more excited about the future of PC user in light of the technologies microsoft is bringing like project natal, windows phone 7 series and media center.

17. *lordfu* Says:

[March 9th, 2010 at 12:14 pm](#)

Great write up, takes me back in time. Thanks.

18. *Prootwadi* Says:

[March 9th, 2010 at 12:44 pm](#)

IcyFog, you are correct when it comes to usage in the United States, but you might not be correct in many other English-Speaking countries:

<http://grammar.ccc.commnet.edu/grammar/marks/quotation.htm>

It seems that UK and US English differs in more ways than common idioms and certain spelling differences.

19. *Andreas* Says:

[March 9th, 2010 at 1:03 pm](#)

– Periods and commas always go inside quotation marks

Putting the periods and commas outside the quotation marks is usually referred to as either “British style” or “logical punctuation”. Look it up 😊

20. *nobody* Says:

[March 9th, 2010 at 1:38 pm](#)

Punctuation inside the quotation marks is a stupid rule. English is a living language and us intelligent people are doing away with that rule slowly but surely.

21. *Joy* Says:

[March 9th, 2010 at 2:40 pm](#)

Regarding the unnecessarily assertive punctuation complaint – have a look at <http://catb.org/jargon/html/writing-style.html>

22. *Tech* Says:

[March 9th, 2010 at 2:53 pm](#)

It’s quite interesting how Windows started out.

23. *George* Says:

[March 9th, 2010 at 2:58 pm](#)

“However, after many months of attempting to make the joint development process work, the process-driven IBM style that measured success on the number of lines of code rather than the quality or performance of that code and Microsoft’s more developer driven “cowboy” style just wasn’t working.”

So is Mr. Tandy trying to state that Microsoft and its “cowboy” style produced much better quality and performance than IBM? Give me a break!

OS/2 was a far superior product to Windows from a technical standpoint. Sure, OS/2 did crash from time to time, but not nearly as often as Windows did. And OS/2 could run rings around Windows in terms of performance, doing preemptive multitasking when Windows still could only do cooperative multitasking at best. OS/2 had a robust object model which is still superior to Windows. Ever see the animated Windows flashlight when a file is moved? That never happened with OS/2 because of its object model.

OS/2 died because IBM could not sell it. Windows flourished because of Microsoft’s excellence in business practices, like getting Windows pre-installed on every PC sold to the exclusion of all competitive OSes.

See the history of Microsoft’s technical aspects from products like Internet Explorer, MSN, Microsoft Bob, Live Search, and PocketPC. Microsoft typically has won due to its excellence in business, not technical superiority.

24. *Andy* Says:

[March 9th, 2010 at 3:58 pm](#)

If you think early Windows stole from MacIntosh and MIT’s X-Windows that is nothing compared to the outright code theft of Windows NT kernel from DEC VMS operating system. YES SIR, Windows 7 is still based on this same stolen Windows NT code base ! THIS IS FACT.

25. *Nobody Real* Says:

[March 9th, 2010 at 4:31 pm](#)

@Andy – Please don't confuse fact with allegation. While it's true that Microsoft and DEC settled a lawsuit, there was no admission of what you refer to. Certainly, NT was heavily influenced by Dave Cutler's previous work at DEC, but there is nothing other than circumstantial evidence to suggest that there was any stolen code.

You might as well claim that Netscape stole Mosaic, since both were written by the same people.

26. *Denver* Says:

[March 9th, 2010 at 5:59 pm](#)

I owned Windows 286 1.0. Bought it retail at MicroCenter in Marietta, GA. As I recall I needed it to play a game. I recall not being impressed.

27. *ITimeDECGuy* Says:

[March 9th, 2010 at 6:24 pm](#)

Andy's comment is about 99.5% right on NT being stolen. I wasn't at DEC West when this happened, but I worked there right out of college and talked with the old-timers. Dave Cutler was pissed that project Mica got canceled, so he went down the road (literally!) to Microsoft to sell what he'd been working on. Lawsuits were fired off once DECies saw how similar some of the kernel and subsystem design was when working on the DEC Alpha port of NT and reported it to their PHBs. Read some history for yourself here: <http://www.roughlydrafted.com/2009/07/30/readers-write-how-microsoft-got-windows-nt/> because while they may not have left DEC copyrights in the NT source, there were some line-for-line reproduction of VMS implementation!

28. *IDM* Says:

[March 9th, 2010 at 9:53 pm](#)

It's nice to look back and recall the days when today's biggest companies started. I don't know if there's something in common with Google, Microsoft, Apple in the way they start. If there is, I think it's innovation that led them to where they are now.

29. *bob sacamano* Says:

[March 9th, 2010 at 10:29 pm](#)

@George – no, he's not trying to state that at all – you're trying to imply it to fit your anti-MS screed. He was comparing the different programming paradigms each company used, not making any comment about the quality of code each produced.

he also never compared OS/2 and Windows 2, nor made claims about which was better. So what's the point of you comparing them? He's simply giving an insider perspective on the development of Windows, do we need to turn it into yet another holy OS war?

30. *Duggeek* Says:

[March 9th, 2010 at 10:42 pm](#)

As so many are pointing out punctuation mistakes, they seem to be fully ignoring other egregious language errors.

From featured excerpt: "Windows needed to be finished, not further tweaked in anyway that jeopardized getting it out that summer without further embarrassment."

A) Run-on sentence.

B) Incorrect usage of "anyway"; it should be the two-word form, "any way".

I remember some specialized flatbed-scanner proggies based on Win 1.x. Seems like Vista was just Windows 2.0 all over again; almost... but not quite.

@DW: Great piece, BTW. The writing here just needs some serious CE love.

31. *jon* Says:

[March 10th, 2010 at 12:48 am](#)

God, a lot of the readers on this site make want to never come back. Really? You read the article and all you can do is complain about grammar and punctuation? Pathetic.

32. *David Champion* Says:

[March 10th, 2010 at 1:57 am](#)

> But while Turbo Pascal was lighter weight for serious development, it
> was almost as quick for programming and debugging as Microsoft's BASIC
> interpreters.

It doesnt quite express the inequality between the two products. Turbo Pascal was a COMPILER that was almost as fast as the BASIC interpreter. So fast in compilation that you often had to compiler a project again just to make sure your eyes weren't deceiving you.

33. *David Josselyn* Says:

[March 10th, 2010 at 5:08 am](#)

"However, after many months of attempting to make the joint development process work, the process-driven IBM style that measured success on the number of lines of code rather than the quality or performance of that code and Microsoft's more developer driven "cowboy" style just wasn't working."

I'm curious. This implies that in the relationship, IBM was taking its project milestones from lines of code generated (or perhaps judging the project on how efficient it was— fewer lines being better— and that Microsoft was more interested in quality and performance.

How do you respond to the rather common public perception that it is usually Microsoft that is more interested in meeting ship dates and getting something— anything— out the door as soon as possible than in quality or performance— and that Windows itself is an example of this? That in the comparison between OS/2 and Windows, it is OS/2 which wins out on the quality and performance metrics, but was beaten to market by Windows?

34. *joe dauz* Says:

[March 10th, 2010 at 9:22 am](#)

Hey

Im kind of confused as the -newly announced Macintosh interface- was running on my mac by then (even the linked to article is dated a year before your story) How can you control MSBasic for Mac before the interface is announced?

dauz

35. *Greg Robertson* Says:

[March 10th, 2010 at 10:11 am](#)

Great post. Just reading some of the words (Turbo Pascal, 386, sends me back to when I started my first software company. Good memories. Thank you.

36. *ignamonius* Says:

[March 10th, 2010 at 10:53 am](#)

Regarding OS/2: OS/2 was always a stand-alone OS, wasn't it? Up until (& including, I do believe) Windows 95, Windows was simply a graphical shell that sat on top of DOS. That is, it was not an OS, it could not live without DOS.

C:>win

37. *Wiley* Says:

[March 10th, 2010 at 11:18 am](#)

The different perspective one gets when reading,

<http://tinyurl.com/yjrlld>

is interesting . . .

38. *mike s* Says:

[March 10th, 2010 at 11:19 am](#)

Thanks for the memories! We ran Windows 2 in our training labs (not in a widespread sense- just some staff machines) back in the day. Windows 3.1 was eventually loaded on all the lab machines, and finally a breakthrough, we fully embraced Windows for Workgroups and used it to connect to network services for the first time. it was a pretty exciting moment for us. We used Workgroups way past its prime just because stuff worked. Good times.

39. *John Keyes* Says:

[March 10th, 2010 at 11:29 am](#)

Great article Tandy! Brings back great memories of the Windows 1.0 days at Microsoft.

40. *NickT* Says:

[March 10th, 2010 at 11:35 am](#)

Interesting article. I have often thought that when Microsoft Windows was first announced in 1983 it closely resembled the VisiON user interface with the menu bar at the bottom of the screen see (<http://www.guidebookgallery.org/articles/microsoftwindows>) whereas the Microsoft Windows released in 1985 is more graphical and closer to the Lisa, Macintosh, and GEM user interfaces.

41. *guruparan* Says:

[March 10th, 2010 at 12:45 pm](#)

Nice article..and continue your efforts on new innovations (robotics) and hats off to MS to have people like you and support all your initiatives.

42. *Eric* Says:

[March 10th, 2010 at 1:33 pm](#)

Well, I think it glosses over the break between IBM and Microsoft with early implementations of OS/2. IBM wanted Microsoft to kill Windows, and Microsoft refused to do so. The counting lines of code was a thing at IBM that I remember hearing about back then. And it may have caused bloat, but once IBM took over development of OS/2 things got a lot better. If their marketing people had half a clue, they would have put Microsoft out of business. (They would also have to kill their proprietary PS/2 line of computers, but that's another story.) All you have to do is see how Microsoft deep-sixed so many joint projects they did with others to understand their culture. OS/2, Windows for Alpha, Office for Mac which floundered for so many years.

In the end, Windows actually ran better in OS/2 than it did on top of native DOS. I used it for several years before going to Windows 95/NT/2000 and then to Mac. I remember the good old days of the Caopus forum on CompuServe where even IBM's CEO showed up a few times to talk about OS/2. We got a lot of insight from insiders at IBM in that forum. Possibly even some stuff someone deep inside Microsoft might not have heard about.

I also remember talking about how Microsoft took that original OS/2 code, gave it to Dave Cutler, and he turned it all into NT using things he learned at DEC.

43. *TandyT* Says:

[March 10th, 2010 at 3:03 pm](#)

@Dave Champion – I never intended to understate the impact of Turbo Pascal. You are correct that its incremental

compilation made it very quick, almost as quick as running things as Microsoft's BASIC interpreter. Hence a part of the reason that Gates was concerned. If I could have fixed this by simply lowering the price of Microsoft Pascal that would have been an easy remedy. That said, Microsoft eventually did create a product called QuickBASIC that was done after my transfer to Windows that helped address the TP challenge.

@joe dautz – Macintosh shipped in early 1984 and I/Microsoft introduced our BASIC interpreter for Mac around the same time (being one of the first products available for Mac). I believe we released our BASIC compiler for Mac in late 1984. Not certain what date mismatch you are seeing.

@OS/2 commenters – I meant mostly to highlight the difference between the cultural differences and processes between IBM and Microsoft, not necessarily to make a judgmental comment on the quality of the products. That said, I will make one comment that you might find biased. From my interaction with IBM at the time (which was mostly with their user interface people rather than the coders—which is why I didn't end up on the OS/2 project post Windows 2.0) they wanted OS/2's interface to be CUA compliant, which meant that IBM wanted a somewhat consistent interface between all their systems including their mainframe terminals. This was a difficult challenge since mainframe terminals did not offer the same interactivity that a standalone PC had. Note also that had IBM totally had their way, you would have seen Esc = Cancel at the bottom of EVERY menu as IBM was concerned that users would have difficulty dismissing menus. But lest you believe I was/am anti-IBM, they did contribute the requirement that menus offer the click-to-open, click-to-select behavior. Windows 1.0 only featured the press-to-open, drag-to-release method. Today Windows still offers both behaviors and IMHO a better design than Windows 1.0 offered.

44. *Boyd Waters* Says:

[March 10th, 2010 at 5:27 pm](#)

This personal history is pure gold! Thanks very much for sharing it!

Whenever I talk with Microsoft employees of this caliber – and they are legion – I am humbled, and have the deepest respect for them and for the engineering that they have achieved. And yet I'm so often frustrated by the tedious mess of IT systems, I steered my career towards Mac and Linux, and I'm not above the occasional, snarky Microsoft-bash.

I think that the frustration stems from tension between what Microsoft engineers can (ideally) do, and the compromises that these engineers make, faced with the demands of widespread compatibility. We love the technology. We know we can improve upon what we've done, but we have to ship it now. Such delivery-driven discipline! It created an industry, a world. And made gobs of money. Maybe that's enough, maybe the artist in me should shut up...

45. *Homer Automation* Says:

[March 11th, 2010 at 6:51 am](#)

Great insight on the most important OS and company in the world!

46. *MartyG* Says:

[March 11th, 2010 at 8:55 am](#)

MS toured Minnesota to announce the Windows program in the mid 80's. At the time, I was using a self-developed softkey reprogramming technique monikered "PBDOS (PushButton DOS)" that I demo'd to the presenter. Wish I had taken the marketing manager up on his invitation to visit Seattle. Wonder who that was.

47. *Max Peck* Says:

[March 11th, 2010 at 10:06 am](#)

Tandy,

Great article. Really brings back some memories. I was there for it all. I remember us offering Windows 1.01 with our QuadBoards at Quadram. It was Win 1.01 or Concurrent DOS, your pick.

Hard to believe it was that long ago...

-Max

48. [*raghubetter*](#) Says:

[March 11th, 2010 at 10:18 am](#)

hello,

Nice article this is something that would actually add a potential thought when people dream about joining the giants, it is understood the higher you the harder will be the effect of fall.

Loved the article

49. [*Richard Dill*](#) Says:

[March 11th, 2010 at 10:48 am](#)

Funny, all these years after leaving Microsoft I thought I was the Windows Product Manager, I worked directly for Steve Ballmer just like Tandy) and perceived that Tandy was my internal customer. Steve was really the one directly responsible for getting Windows out the door not Tandy nor myself. Tandy had responsibility for managing getting the Windows Retail box put together which consisted of the underlying Windows Operating Environment and all the applets (like Calendar, Paint, Write, etc). The basic purchase proposition was to offer something akin to Borland Sidekick while seeding the market with the Windows software.

My role was getting both internal and external Software Developers on board to develop software for the new Windows environment. My responsibility was getting a Windows Software Development Kit shipped and lining up developers to support Windows. Does anyone recall a little Texas company called Micrographix? They shipped the first full size Windows application, a vector drawing package called Micrographix Designer.

For proof of all of this check out the Wall Street Journal archives around that time and see who they were interviewing as the Windows Product Manager. Not to take away the glory from Tandy but to be fair he was responsible for shipping a Borland Sidekick competitor which just happened to contain the Windows Operating Environment. Getting the actual Windows code itself out the door has always been something I was personally proud to have accomplished.

50. [*Herbie*](#) Says:

[March 11th, 2010 at 11:42 am](#)

I read this with fond memories. I worked on the dual floppy systems, 1st hard drive and 1st 286 pc's. However, we used it just a shell for what we were doing. Late in the afternoon we'd play QBert. You could hear the unforgettable chirping sound.

Does anyone remember CTOS (Convergent Technology System)? Ran on 286 and was bullet fast.

Oh well, maybe that's a topic for another discussion.

Thank you, fantastic article, really great.

51. [*douginator*](#) Says:

[March 11th, 2010 at 11:49 am](#)

Wonderful article. Enjoyed the read.

52. [*TandyT*](#) Says:

[March 11th, 2010 at 1:46 pm](#)

@Rick Dill – I am certainly happy to acknowledge your contribution to Windows 1.0 and never meant to imply that I handled this single-handedly. Your focus on the APIs and dev toolkit (and OEM's?) freed me to focus on how we were going to market this to retail IBM users.

Not certain I would characterize that as just a SideKick competitor that happened to include Windows, but no question that you and many others contributed to getting the product out the door. Again I didn't mean to imply I was the singular force behind Windows. In fact, noted I was the late guy to the party on that first release and you and the others had already spent a couple of years of your lives working on Windows before I came on. This mostly to give my perspective of what I went through during that time and in the subsequent years.

However, if my memory serves me, I believe the original Micrografix Windows-based app was called Innovision. Designer came later (or maybe I have that backwards). Another early Windows developer was a company I think was called Palantir who created a set of applications, including one that went beyond the terminal (emulation) applet we shipped with Windows.

53. *Wingspinner* Says:

[March 11th, 2010 at 4:19 pm](#)

“Back then, Intel’s processors only provided 640KB of contiguous address space for applications,”

Interesting article but does smell of a bit of “everything is someone else’s fault”.

Having been intimately involved with all of this at the time, the reason for Windows problems with memory were two-fold: 1. IBM designed the PC architecture for the 8086 which allowed access to 1 MEGABYTE of memory (not 640k as the write states) had they had a little foresight they could have made all this memory holes switchable such that they could have used the entire capability of the 8088/8086. Word is, they consulted Microsoft who said they can’t imagine any ever needing 640k let alone 1 megabyte.

2. Microsoft SHOULD have been designing Windows for the 80286 (which addressed 16 megabyte and also had virtual memory instead of the lowest common denominator system – the 8088.

Windows 1.x and 2.x were HORRIBLE products in most every way which is why Windows didn’t really take off until Win 3.0 – which was the first Windows OS to take advantage of the 80286 and 80286 memory architectures.

54. *Wingspinner* Says:

[March 11th, 2010 at 4:22 pm](#)

Sentence structure in my post may cause this to be misinterpreted:

“IBM designed the PC architecture for the 8086 which allowed access to 1 MEGABYTE of memory (not 640k as the write states)”

should be:

“IBM designed the system architecture for the PC such that it was restricted to 640k. This was not a processor limitation. The 8086 (and 8088) allowed access to 1 MEGABYTE of memory (not 640k as the writer states)

55. *Wingspinner* Says:

[March 11th, 2010 at 4:22 pm](#)

Sentence structure in my post may cause this to be misinterpreted:

“IBM designed the PC architecture ... ”

should be:

“IBM designed the system architecture for the PC such that it was restricted to 640k. This was not a processor limitation. The 8086 (and 8088) allowed access to 1 MEGABYTE of memory (not 640k as the writer states)

56. *Ken* Says:

[March 11th, 2010 at 4:26 pm](#)

It is unfortunate that “IcyFog” is the first comment you see. You can’t believe everything you see on the web. This grammar maven needs to be shoved head-first down in the garbage can and set out on the street to be picked up.

She can’t even follow her rules. “She said, ‘Hurry up.’” reads totally fine to me however, to follow her rules it should read: “She said ‘, Hurry up.’”, which is totally weird, along with the rest of her Rule 1. Quotes define context, the commas aren’t in the context of the quote, they belong outside. You have my permission to ignore this idiot on the web.

Of course, that is as valid as anything else you might see on the web.

PS I liked the story.

57. *Ken* Says:

[March 11th, 2010 at 8:17 pm](#)

I remember the “lines of code” performance criteria. It was definitely a “quantity is good.” measure. I also remember blowing up about it. I had just finished a project to modify someone else’s program. It did everything the original did, three new features they wanted, and performed faster than before as well. “I just modified 600 lines of code. That work doesn’t count because I didn’t add lines of code to do it. I did add about 80 lines of code and 20 new comments, but that’s kinda wrecked by removing about 200 lines of commented out code. This program went from 1000 lines to 900. Until now I was really proud of that. I’ve just totally failed the productivity measure! I’ve got it! I’ll add 20 lines of comments that say nothing. Then I’ll copy it 4 times, then I’ll take those 100 lines and copy them 10 more times. You are an idiot if you use this measure.”

OK, I quoted it but it isn’t a direct quote and this was quite a bit later than 1985. At that time I was helping to sell time-share with no clue the bottom was going to drop out a year later. In 1983 we got our first PC. It was a toy, a joke, nothing anyone doing serious programming should even look at. 8bit processors. Pffht, we’re putting down IBM’s mainframes for serious engineering problems, they only had 32bit processors. You HAD to go to CDC’s 60bit or Cray’s 64bit machines if you want accurate engineering results.

I don’t remember how fast a Cray was back then, but I think today’s \$350 64bit laptop beats it.

58. *Hans Bezemer* Says:

[March 11th, 2010 at 11:27 pm](#)

“Barbarians Led by Bill Gates” (Jennifer Edstrom and Marlin Eller) tells quite another story. He explicitly states several times that some things were or were not incorporated in Windows “because the Mac had or didn’t have them”. It’s quite obvious that the author didn’t shake off his MS-feathers. Even more interesting is the way Win 386 came to life. It was produced by running a debugger against the x86 code and fix the code that didn’t work in x386 mode. Nice going, that is really a good way to develop software. Consequently, Win 3.0 (and everything up to ME) was a piece of junk that never worked properly.

59. *rei* Says:

[March 12th, 2010 at 3:26 am](#)

those people pointing out grammar and punctuation errors are probably people who were painfully desperate to comment because they weren’t happy with the fact that the first “Windows stole from Apple” accusation was frivolous as hell, but couldn’t, because they were afraid that anything said about it might lead to an admission or pointing-out of the fact that Apple zealots have an innate culture of making such frivolous accusations, and so could do nothing but pick out *extremely* inconsequential errors in grammar and punctuation.

there’s a reason that you morons don’t have jobs as editors; it’s that you’re pathetic.

60. *Martin* Says:

[March 12th, 2010 at 9:25 am](#)

Yay! Came here trough Nick Hodges’ Blog [1] to read this article — “How Turbo Pascal Shaped Windows 1.0”. Muahaha! Enjoyed, reading it as a Pascal/Delphi programmer!

[1] <http://blogs.embarcadero.com/nickhodges/2010/03/09/39368>

One word to this quotation marks discussion... (US) English is the illogic exception to the logic rule. All the world has learned how to write well-formed sentences. When writing XML you wouldn’t write “” either, would you? Hence the question is, what you actually quote — or .

61. *Martin* Says:

[March 12th, 2010 at 9:28 am](#)

The filter killed my examples:

One word to this quotation marks discussion... (US) English is the illogic exception to the logic rule. All the world has learned how to write well-formed sentences. When writing XML you wouldn't write "[outer][inner][outer][inner]" either, would you? Hence the question is, what you actually quote — [sentence][quote][quote][sentence] or [quote][sentence(s)][sentence(s)][quote].

62. *Bill* Says:

[March 12th, 2010 at 4:03 pm](#)

Whatever, they stole everything they marketed. I was there too, and this is pretty much a cover up, they stole windows from Tandy, DOS from Apple, Access from DBase, Excel from Lotus and PowerPoint from WordPerfect. They didn't design anything themselves and seriously doubt they do now. Seems they have proven that theft is profitable and the rest of us should learn from there example and the excuse that everyone else was doing it is hogwash. Don't remember Apple stealing anything!

63. *hermes* Says:

[March 12th, 2010 at 8:07 pm](#)

Thanks so much for the sub-thread on punctuation, which has really clarified something for me. The reference to "logical punctuation" has been especially useful. An unexpected treat.

64. *s.b* Says:

[March 12th, 2010 at 8:08 pm](#)

An interesting article. What I noticed is the strategy to focus on some main aspects of a product and then freeze its development and only do bug fixes to get it out in a certain time frame. I think that's a strong Microsoft characteristic.

I've witnessed the development of computers since the early eighties; partly as a professional editor of a computer magazine. I've seen hypertext (and bulletin boards) before you had the internet, and think that it is as least as important as the GUI concept. We used to joke that real men don't use mice; GUI's only make computers more convenient to use but it's the OS that really counts. I still feel that way, but I would not want to miss the GUI and think that Microsoft has done a great job.

65. *murgatroyd* Says:

[March 12th, 2010 at 9:47 pm](#)

"The similarities between the products were largely due to the fact that both Windows and Macintosh has common ancestors, that being many of the earlier windowing systems such as those like Alto and Star (the latter shown at left) that were created at Xerox PARC. History shows that Jobs in fact visited PARC and hired people from there to join Apple."

But isn't the key difference the fact that *Apple actually licensed the GUI from Xerox*, and Microsoft didn't?

66. *John* Says:

[March 12th, 2010 at 10:09 pm](#)

I have to say this article salvaged just a bit of respect for Microsoft. But I still don't have much.

I was a fan and user in the early days. I paid \$400 for a pre-ordered copy of Windows 1.0 for my Tandy 2000 (an 80286 machine from Radio Shack) – it was never released, and I never got my money back.

Before Microsoft, pre-announcing software was scandalous – no one did it and preserved their reputation. Microsoft made it so that, by now, companies feel compelled to pre-announce in order to compete; everyone does it.

I was an early Windows OEM developer. As of Windows 3.0, I had to abandon it, because it simply wasn't up to my requirements (for image processing), and I wrote my own windowing system. Shortly thereafter, I got into Unix and X, and was one of the very early contributors to Linux.

I can tell Mr. Trower looks back fondly on the history of Windows; I appreciate that, and understand it, considering

his role. Personally, I think the computing world would be better now had it never been released, with all due respect to Mr. Trower.

I think Microsoft's (if not just Mr. Gates) "greatest" accomplishment (albeit an ignoble one) was figuring out how to manipulate intellectual property law so as to use it to make a huge fortune from software licensing. Fortunately, the courts are finally beginning to reverse the damage on that front, but in my opinion, Microsoft's "contributions" are of a kind with Pearl Harbor and the Holocaust. Tragedically, although I imagine how much better things would be had Microsoft never existed, most seem to think that contribution has been largely positive.

Sheesh...

67. *david* Says:

[March 12th, 2010 at 10:21 pm](#)

Tandy, you mention the advancement and convergence of hardware with the emergence of cell phones etc. But, no mention or nod towards "the cloud". (Period outside quotes) Why, because that is the real threat to Windows and any machined based OS in the future. You can't just ignore it. Otherwise, a great and interesting article for a computer user who used the first Macintosh and the early copy of MSDOS.

68. *weathor* Says:

[March 12th, 2010 at 11:24 pm](#)

We are in 2010.

69. *Walter L Johnson* Says:

[March 12th, 2010 at 11:58 pm](#)

People tend to forget that before windows the ability to work in multiple windows came with Desqview from Quarterdeck Software. The real advantage of windows was in only have to have one set of device drivers rather than custom drivers for each application device combination. At the same time the main problem in upgrading major releases of windows is the number of hardware devices no longer fully supported, or even no longer usable at all under later versions of windows. For those of us long retired from working careers there is rarely a good enough reason to upgrade to later versions of windows.

70. *Slice&Dice* Says:

[March 13th, 2010 at 7:02 am](#)

@Icyfog

This is a technical article about Windows – not English (American) grammar. Save your comments for Society of English Grammar and Usage (if exists). Enjoy the article – Moron.

71. *bundarifdah* Says:

[March 13th, 2010 at 8:02 am](#)

hahahahahaha...very cute bill gates....

72. *Tom* Says:

[March 13th, 2010 at 8:52 am](#)

Read the book, Microserfs (Harper Collins, 1995), by Douglas Coupland if you want insights into Windows and MS.

73. *Bob Kinney* Says:

[March 13th, 2010 at 8:54 am](#)

George,

OS/2 was written and developed by who??? It was made for IBM by Microsoft. In actuality you are comparing MS

products to each other.

IBM did finalize & finish off the product as MS & IBM had a falling out.

For all of you , and I agree a lot, that are on the MS theft bandwagon...Steve Jobs did it first. Xerox created the first GUI. Xerox handed it Over to Steve Jobs...and he ran with it. MS when making apps for the apple, used the GUI code to make Windows for DOS. Windows was not a true OS at the time, but a GUI that ran on top of DOS. Windows NT & 2000 changed that.

Make sure you “know” computer history before you comment on it.

74. *Dizzo* Says:

[March 13th, 2010 at 1:23 pm](#)

In 1985 Atari computers came out with the 520 computer with 64KB of ram with the TOS operating (BASIC) system. The screen had folders that your mouse could open with the point and click . It was very popular in Europe, used 3.5 floppy disks with a 3D image screen. Modem connection was 300 baud then but amazingly there was a text to speech software application.

RIP Atari computers – can’t believe Microsoft let Hasbro toys buy Atrai Corp for only \$2 million dollars

75. *andy* Says:

[March 13th, 2010 at 3:10 pm](#)

Nice spin article for Micro\$OFT

Windows at most should only be an operating system. I don’t think millions of people needed it to be an attempt at all-singing, all dancing, blahdey blah system.

What does it offer?

Their oppressive incentive system forcing M\$ products on computers for years etc etc.

The veterans will know this, but many don’t have a clue and let’s face it, we all know now that money crimes pay.....well.

76. *themunz* Says:

[March 13th, 2010 at 5:54 pm](#)

This article seems to confirm the saying... victors write the history.

There are many dead corporate bodies of the once great o/s innovators from the 1970s and 80s who could also tell an interesting story, if asked.

77. *livingsingl* Says:

[March 13th, 2010 at 8:45 pm](#)

@Richard Dill

You say, “Funny, all these years after leaving Microsoft I thought I was the Windows Product Manager, I worked directly for Steve Ballmer just like Tandy) and perceived that Tandy was my internal customer.”

I say, funny how you havn’t followed up on his response. And since you added a link to the “name” you are using here, why did it fail 4 times when i tried clicking on it?

78. *Robert* Says:

[March 13th, 2010 at 9:56 pm](#)

I had to pay the “Windows tax” for a copy of Windows 7 when I recently bought a laptop. Then I immediately re-formatted the harddrive and installed Linux. Bill Gates ought to feel ashamed.

79. *Gache* Says:

[March 13th, 2010 at 11:42 pm](#)

Linux

80. *maidi2211* Says:

[March 14th, 2010 at 8:06 am](#)

welcome to our website:HTTP:// w w w .b2b2.us, 50%off ca,ed hardy t-shirt\$15 jeans,coach handbag\$33,air max90,dunk,polo t-shirt\$13,,lacoste t-shirt \$13 air jordan for sale,l nba jersy for sale sale,\$35,nfl nba jersy for sale and so on.. if you like to order anything you like. More details, please just browse our website Quality is our Dignity; Service is our Lift. enjoy yourself. thank you!!

81. *Doug* Says:

[March 15th, 2010 at 6:08 am](#)

“Windows 3.1 was eventually loaded on all the lab machines, and finally a breakthrough, we fully embraced Windows for Workgroups and used it to connect to network services for the first time”, mike s

What was wrong with Novell netware, Trumpet Winsock and the Mozilla browser which is what we were using for network services, and telneting into a VAX for email. Oh, but wait, the desktop computer or the Internet didn't exist untill billg personally, on his own, created it .. 😊

82. *John David Galt* Says:

[March 16th, 2010 at 4:34 pm](#)

I agree with the article as far as it goes, but it doesn't talk about the biggest reason it took so many tries to get Windows 1.0 out the door: because Windows wasn't a real OS at all, but a kludge written to run on top of an “operating system” (MS-DOS) that couldn't even multitask. Read “Undocumented Windows” for details.

Don and interval: Yes, plenty of software “theft” went on and neither side is innocent. I find it interesting that Xerox Star gets mentioned in the article but MIT's X Window System doesn't. The biggest joke on that subject is that I've heard Bill Gates, in person, say “there is no such thing as a patent troll” — this from the man who patented “backing store” out from under X Windows which had been using it for a decade, and who is still sponsoring Caldera/SCO v. Linux and its sequels, the most egregious patent-troll suits in the history of mankind.

Andy: If only Microsoft *had* copied the VMS kernel! For all its clumsy UI, VMS's kernel is bulletproof. No virus or worm can run on a VMS system unless the owner is silly enough to download someone else's code and run it while logged in on a privileged account.

If someone ever *does* reuse the VMS kernel by building a friendly operating system around it, I'll switch to it in a heartbeat. Too bad no one at HP understands what they now own.

83. *George* Says:

[March 21st, 2010 at 8:10 pm](#)

@Nobody Real, I accept your arguments that OS/2 may have had larger memory requirements than Windows did. But to tell me that my argument that OS/2 was superior technology than Windows because I was confusing OS/2 2.0 versus 1.x when Microsoft abandoned OS/2 post 1.x is bogus. It is exactly the fact that OS/2 2.0 and later were so much better than OS/2 1.x which shows how much better OS/2 was after Microsoft was gone from that project.

I attended Comdex in 1993 in Las Vegas. IBM showed a demo of OS/2 vs. Windows NT at that time. On similarly-equipped machines, OS/2's feature set was far better than Windows NT's, which was far better than Windows 3.x. The most amazing things I saw were OS/2's multitasking and multimedia features, which were so much better than anything Microsoft was producing at the time. Any consumer who would have had the choice of which OS to pre-install would have likely chosen OS/2. But that choice was not available.

To this day, Windows comes pre-installed on the vast majority of PCs. I bought an HP laptop a few years ago with Windows Vista pre-installed. I never activated Vista. I asked HP for a Windows refund, which they rejected due to

it being an OEM version of Windows. So I paid for a copy of Vista which I never activated. How is that Microsoft winning on technical superiority as opposed to business practices?

If Microsoft wants to call other companies anti-competitive, then FIRST Microsoft must not charge for a copy of Windows until the consumer activates it. That would level the playing field at least somewhat. Even better would be to give the consumer a CHOICE of which OS to have pre-installed. But that will NEVER happen, because Microsoft cannot compete fairly based on technical excellence.

By the way, I have never ridden a horse, much less a “high horse” as you so claimed.

84. *dholyer* Says:

[March 26th, 2010 at 12:28 am](#)

In 1983 I was still using my Atari 800XL computer with Atari Basic (HP Basic clone) and just read about Xerox and GEM which was really only a GUI interface at the time. I liked the interface system and wrote a GUI interface to replace my Atari text DOS interface. The graphics was crude at the time but the best could get (only 652x384x2) and it had no mouse just a Atari Joystick. And I could only get one cursor with it's Player/Missile graphics that came from the old Atari Game Machine.

At around the same time Atari came out with it's Atari ST 16 bit machines that used a licensed version of GEM. This is what Xerox created and Apple and Microsoft cloned for it's GUI interface.

To bad the Atari people made bad money investments, thus Nintendo quickly replaced the replacement for Atari, whom replaced the the first video game maker Mattel. Over all it is who is better in efficiency, but behind the office walls it is who is the best in making their dirty deals look the cleanest to the guys with money to invest. New innovative ideas help but it's the investors that make the wheels roll. And we know Billionare Bill was good at playing that game. Almost every American would live happily just off the wasted money on some of the big projects that failed under bill driving of Microsoft.

85. *Richard Dill* Says:

[March 30th, 2010 at 2:42 pm](#)

Well in response to livingsingl... I didn;t resppond to Tandy's follow-up becuase I didn't keep a link to this article around. My website has had some hardware issues which is why the link is not working. Also, you might note that Tandy clearly acknowledged that I was involved with the Windows project for quite some time before he joined the project.

As for 'Innovision' versus 'Designer'... I get the two mixed up as well. I do have the first release box of 'Designer' on my bookshelf which was given to me by the Grayson brothers (founders of MicroGraphix) when they released the product. I believe this was shortly before Windows 1.0 shipped because we (Microsoft) allowed software developers to ship the Windows runtime as part of their application. But again, that was so long ago that I may have the names reversed.

After Windows 1.0 shipped I went on to out together the first Windows Software Developers Conference which was held in January after the release at the Westin Hotel in Seattle. After that I moved on to become the OS/2 Project Manager. OS/2 was sort of a Windows redux project. In effect Microsft rewrote Windows into what was eventually called 'Presentation Manager' which was hosted on top of the OS/2 kernel. Truth be told we eventually had to drag IBM kicking and screaming to get OS/2 Presentation Manager released on time. IBM had originally planned on the OS/2 release occuring at the same time as the initial PS/2 release, but their stupid “count lines of code” approach to project scheduling made them think they were on schedule when they were way behind. It took another 6 months of death march development to get OS/2 Presentation Manager out the door. Had IBM let the project follow what some call the “cowboy” style of Microsoft development, which actually is a more normal list the features/functions desired and estimate the time to develop approach, they more than likely estimated the ship date of OS/2 Presentation Manager more accurately.

86. *Rick Bellefond* Says:

[April 3rd, 2010 at 11:53 am](#)

Great article telling the history of Windows.

I found this article and the movie Pirates of Silicon Valley to be fascinating.

It is amazing to me just how far we have come in a relatively short period of time.

87. *Alan Rogers* Says:

[April 22nd, 2010 at 2:47 am](#)

At the start I must admit I have not waded through the entire series of comments, so this point may possibly have been raised before. As a computer user of nearly 30 years, my humble opinion is that Windows was a direct rip-off of the Atari operating system: the only difference of any note that I can see is that the Atari system is hardware and Windows is software.

And I say the Atari operating system IS hardware because I use my over 20-year-old Atari practically every day in order to work with the C-Lab Notator sequencer and notation program, which has a measly size of approximately 3 Mb and yet still does nearly all that monstrously bloated current programs do – or at least enough for my purposes, which is to produce printed piano scores and band arrangements at least as well presented as commercial ones. And you can't fault the speed, either, as anything I play on the keyboard appears on the screen almost instantaneously. The biggest difference though, is that my Atari and its associated equipment has been working faultlessly for over 20 years; these days I think some people buy a new computer more often than they change their underpants.

P.S. Why can't some clever programmer write a Windows version of the old C-Lab Notator? I reckon there would be a hell of a lot of people that would buy it in order to avoid having to spend three years figuring out how to use the current sequencers and notation programs that do mega-everything most of which nobody ever uses, but can also pick your nose and fry your eggs for breakfast.

88. *Berni* Says:

[April 22nd, 2010 at 11:04 am](#)

Was it ethical for Microsoft to offer IBM cooperation on OS/2 while it was already having its own product that was a competition to OS/2? Thanks.

89. *Richard Dill* Says:

[April 22nd, 2010 at 11:51 am](#)

Microsoft worked on OS/2 with IBM under a joint development agreement long before Windows became successful. In fact, there was a friendly internal competition between the OS/2 and Windows development groups.

Recall that it took several years for Windows to become successful. It wasn't until Windows 3.0 was released that the tide turned. During the interim it was not only ethical but simply good business for Microsoft to hedge the bet on Windows. There was certainly no guarantee which OS would be more successful. In fact, for quite a long time the plan had been for OS/2 to replace Windows since OS/2 was a true multitasking, protect-mode OS while Windows was simply a cooperative multitasking, non-protected memory environment.

As Windows became more successful, IBM got upset with Microsoft until IBM eventually demanded that Microsoft stop all work on Windows or risk having IBM pull the plug on the OS/2 joint development agreement. So it really wasn't Microsoft that killed the joint work on OS/2 but rather IBM. Microsoft was simply not willing to abandon what was then becoming the more successful operating system product.

In retrospect, by forcing that decision, IBM set the stage for OS/2's eventual failure since it caused Microsoft to transfer a lot more development resources into the Windows project and to focus more on Windows NT which eventually became the fully multitasking, protected memory replacement for Windows with the release of Windows XP.

90. *Yaro Kasear* Says:

[April 22nd, 2010 at 12:37 pm](#)

“As Windows became more successful, IBM got upset with Microsoft until IBM eventually demanded that Microsoft stop all work on Windows or risk having IBM pull the plug on the OS/2 joint development agreement.

So it really wasn't Microsoft that killed the joint work on OS/2 but rather IBM. Microsoft was simply not willing to abandon what was then becoming the more successful operating system product."

Actually, that wasn't what happened. What happened was NT. NT was originally designed to be an OS/2 operating system layer, including an entirely new kernel and architecture for OS/2. To make OS/2 "portable." What happened after a while, though, was that Microsoft decided to COMPLETELY ABANDON the OS/2 NT codebase, and focus NT entirely on Windows instead, largely because of the success of Windows 3. IBM saw the writing on the wall and saw Microsoft, YET AGAIN, backstab a close partner when it suited them.

It had nothing whatsoever to do with Windows 3.0 becoming succesful. It had EVERYTHING to do with changing their goal for NT, including what system distribution it was going to be a part of from OS/2 to Windows.

Anyone who told you it was about Windows 3.0 was probably trying to make Microsoft look good, instead of the REALITY behind why IBM broke its alliance with Microsoft had everything to do with Microsoft's tendency to exploit those who foolishly trust them. Lookup Apple and Spyglass for other companies that made that mistake.

91. *Richard Dill* Says:

[April 22nd, 2010 at 1:09 pm](#)

Yaro,

You are wrong.

I was the OS/2 Program Manager responsible for managing the OS/2 Joint Development relationship. I stand by my previous comments since I was there and lived it.

92. *Jim Barnes* Says:

[April 22nd, 2010 at 5:29 pm](#)

And to think , I still have MS 3.10 (5.25") in original box , never opened with the selling price Of \$15.00. We have come a long way/

93. *LestWeForget* Says:

[April 29th, 2010 at 6:47 am](#)

I can't believe no one mentioned the Amiga OS. It was way ahead of all of these guys and only lost the race due to bad marketing. Even though most forget, the Amiga came out with 4096 colors and Stereo sound while Windows could only produce 16 colors and mono sound and MAC was black and white. Too bad it didn't make it, we would be light years ahead of where we are now had it survived as a major player.

John C. Dvorak stated in 1996:

The AmigaOS "remains one of the great operating systems of the past 20 years, incorporating a small kernel and tremendous multitasking capabilities the likes of which have only recently been developed in OS/2 and Windows NT. The biggest difference is that the AmigaOS could operate fully and multitask in as little as 250 K of address space. Even today, the OS is only about 1MB in size. And to this day, there is very little a memory-hogging CD-ROM-loading OS can do the Amiga can't. Tight code — there's nothing like it.

I've had an Amiga for maybe a decade. It's the single most reliable piece of equipment I've ever owned. It's amazing! You can easily understand why so many fanatics are out there wondering why they are alone in their love of the thing. The Amiga continues to inspire a vibrant — albeit cultlike — community, not unlike that which you have with Linux, the Unix clone."[6]

AmigaOS is the default native operating system of the Amiga personal computer. It was developed first by Commodore International, and initially introduced in 1985 with the Amiga 1000. Early versions (1.0-3.9) run on the Motorola 68k series of 16-bit and 32-bit microprocessors, while the newer AmigaOS 4 runs only on PowerPC microprocessors.

On top of a preemptive multitasking kernel called Exec, it includes an abstraction of the Amiga's unique hardware, a disk operating system called AmigaDOS, a windowing system API called Intuition and a graphical user interface

called Workbench. A command line interface called AmigaShell is also available and integrated into the system. The GUI and the CLI complete each other and share the same privileges.

94. [нижнее белье](#) Says:

[June 22nd, 2010 at 4:15 am](#)

Интернет магазин сексуального белья, корсеты, ювелирные украшения – большие скидки гарантируем.
<http://www.kpasotka.ru>

95. [best ipad apps](#) Says:

[June 23rd, 2010 at 2:59 pm](#)

Great article telling the history of Micro\$oft, been with Linux for some period of time but I switching back to Windows (7).

96. [yhwebcn](#) Says:

[August 10th, 2010 at 12:24 am](#)

So that every customer can buy the rest assured that with the peace of mind! Your satisfaction is my greatest joy! Either give it away or bring their own are a good choice![Replica Swiss Chronomat Watch](#)

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and a few pieces, but can buy high quality imitation table ... reason to believe that a different way of life for those who desire for the urban population power with lore.

97. [yhwebcn](#) Says:

[August 10th, 2010 at 12:24 am](#)

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Welcome customers to patronize, to buy more discount more than the price the same product we; the same price we are more than quality;the same quality service site that we were honest promise:Quality assurance; customer first; credit management,[Avenger Skyland](#)

98. [Bob Beliveau](#) Says:

[September 22nd, 2010 at 12:20 am](#)

Thoroughly enjoyed the article, and was held captive with the MS vs Apple VS IBM vs DEC vs PARC...and Name that PM...and who can think up the most esoteric use for an old piece of hardware....how would it end!! HOW WOULD IT END!!!! With quality "50 fathom watches" of course!! It ws such an appropriate last post to an Internet thread with some historical value that I feel bad about posting after it...In reading all this .I was back to my first programming experience writing a Basic program on the Apple 2 to help the Special Olympics rank and slot in athletes, and then another to put school notices on the public access cable channel, back as a freshman in high school, but then realized being hunched over programming was not for me....then studied and lived and worked almost exclusively with MicroSquish products from MS Dos and Win 31 thru the latest HW hawg, good ol' MS #7....only just last year, bought my very first Apple product, the iPhone, and still feel sorta dirty 'bout it.

99. [wiskasaz](#) Says:

[January 1st, 2011 at 3:21 pm](#)

Портал мне показался очень привлекательным. Хочу купить рекламный блок для баннера в шапке, за 200WMR в месяц. Оплата 50% сразу, а остальное через 10 дней. И еще, адрес моего проекта <http://gala.su/> – он не будет противоречить тематике? Тема моего проекта [спамеры ,флудеры](#).

100. *Freddyf* Says:

[May 10th, 2011 at 2:41 pm](#)

@Frombam: “What, exactly, does Microsoft have the monopoly on? Windows? What are you talking about?” Operating systems of course. Even Linux is having a hard time getting its foot in the door. The problem is when bad features are forced on users. For example, [I hate Google instant](#) (don’t you?)

101. *Turbo Pascal* Says:

[May 22nd, 2011 at 8:19 am](#)

Well, Turbo Pascal is still alive at <http://turbopascal.org/>

And Anders Hejlsberg, who initially developed this compiler now works for Microsoft!

102. *John Barrett* Says:

[June 3rd, 2011 at 4:56 am](#)

Mac started a year earlier,..still in our days Microsoft has over 90% of market share..good job Billy, now donate some money to the poor please.

[window replacement cost estimator](#)

103. *Alfred* Says:

[September 10th, 2011 at 10:37 am](#)

I stumbled onto your web site, i think your website is awesome, keep writing.

104. *Gregg E.* Says:

[October 26th, 2011 at 4:07 am](#)

So is this guy the one to blame for the unchangeable anti-highlight color that's extremely hard to see in Windows Explorer in Vista and Windows 7?

105. *Gregg E.* Says:

[October 26th, 2011 at 7:56 pm](#)

I've fiddled around a bit with Windows 2.0 and one very striking difference from later versions are the dialog buttons with rounded corners and the solid inner outline for the default button. IIRC, that default cannot be moved. In other words those buttons are a direct copy from how Macintosh has always (and still does) their buttons. (But did Apple copy the buttons from Xerox?)

Windows 3.0 went to all square corners everywhere but gained the ability to use Tab to move the default selection (which changed to a dotted outline) for use with Enter.

The computing world would be far different had Xerox had people with the forward looking vision of Steve Jobs and Bill Gates.

106. *Robson Cozendey* Says:

[December 8th, 2011 at 9:54 am](#)

I really have fond memories of Windows 3.1.

Thanks to Mr.Trower and Mr.Dill. I'd like to shake hands to everyone that actually developed Windows, not just the

big stars like Gates and Ballmer.

For those telling that Windows was just good at version 3.0.

Look at a Windows 1.0 program written in C:

<http://www.charlespetzold.com/etc/Windows1/CAKE.C>

It is almost identical to a Windows 7 Win32 program written even today. They laid the back bones, for the flashes and lights come later.

Mr.Dill and Mr.Trower,

Do you remember whose was the people that came with the idea of a queued message strategy (in the example above, the GetMessage() function), and a non-queued message approach (in the example above, the WndProc() function) coupled, as the main paradigm of programming for Windows?

It seems a vital decision in Windows internal programming, from the developer perspective, and I was always curious about that.

107. [soundproofing an apartment](#) Says:
[June 12th, 2014 at 1:06 am](#)

) and works by turning sonic vibrations into heat over time and distance. With industries and commercial properties cropping up fast, it is becoming difficult to find exclusive areas to build our homes or offices. Quick Fix – Turn off any music or TVs you normally leave on.

17 Trackbacks For This Post

1. [The Secret Origin of Windows - Actualités](#) - Says:
[March 9th, 2010 at 1:56 am](#)

[...] : The Secret Origin of Windows Posted mars 09 2010, 10:55 by Laurent MILTGEN-DELINCHAMP Filed under: windows [...]

2. [\[TL\] The Secret Origin of Windows - Overclock.net - Overclocking.net](#) Says:
[March 9th, 2010 at 4:04 am](#)

[...] that has left an unmistakable imprint on the world, 25 years after it was first released. Read [...]

3. [Khanov blog » Blog Archive » Microsoft – povijest](#) Says:
[March 9th, 2010 at 4:37 am](#)

[...] sam naišao na ovaj članak pa bih ga želio podijeliti s vama. Ukoliko imate nekoliko minuta slobodnog vremena, mislim da se [...]

4. [Interesting article on origins Windows « pm snack](#) Says:
[March 12th, 2010 at 10:55 am](#)

[...] Trower shares the secret origins of Windows in this interesting article. Interesting enough, I am currently working with Larry Osterman who was around the time that Tandy [...]

5. [The Secret Origin of Windows - Winhistory-Forum](#) Says:
[March 12th, 2010 at 2:55 pm](#)

[...] The Secret Origin of Windows Der drei seitige Artikel beschreibt die irrwitzige Reifung von Windows 1.0 aus noch nie gesehenem Blickwinkel des leitenden Produktmanagers Tandy Trower. Ein echter MUST-READ für alle Windows-Historiker! Few people understand Microsoft better than Tandy Trower, who worked at the company

from 1981-2009. Trower was the product manager who ultimately shipped Windows 1.0, an endeavor that some advised him was a path toward a ruined career. The Secret Origin of Windows [...]

6. [*Stories from Around the Web « Solitary Walking Cat*](#) Says:
[March 14th, 2010 at 8:25 am](#)
[...] Here are recent interesting, noteworthy, or bizarre tales that I have happened upon. The first: an insider's story about the origins of [...]
7. [*Huffington Post, Technologizer, and Other Web Sites in Bill's Pocket | Boycott Novell*](#) Says:
[March 15th, 2010 at 2:06 am](#)
[...] is some other ugly stuff surrounding Gates at the moment, including this pathetic excuse of an article from the Technologizer. "The history of Windows, the Pravda version," calls it Groklaw. "Is there some [...]"
8. [*Sunday 14 March 2010 « Odoodee*](#) Says:
[March 20th, 2010 at 5:42 am](#)
[...] The Secret Origin of Windows [...]
9. [*The Secret Origin of Windows - World of MapleSteve*](#) Says:
[April 18th, 2010 at 6:42 am](#)
[...] via The Secret Origin of Windows. history, windows Kommentar schreiben Trackback [...]
10. [*Windows起源: 酷橘在线*](#) Says:
[May 8th, 2010 at 10:33 am](#)
[...] 没有多少人比Tandy Trower更了解微软，他为微软服务了28年，1981年加入公司时微软总共只有90名员工。他是Windows 1.0和2.0的产品经理。Windows统治桌面已久，很多人都遗忘了Windows 1.0曾被讥笑为OS/2之前的临时替代，里外都不讨好。Tandy Trower在一篇文章里回忆起了25年前的这段鲜为人知的往事。 [...]
11. [*Microsoft to businesses: No standalone concurrent programming toolkit for you | ZDNet*](#) Says:
[May 24th, 2010 at 8:31 am](#)
[...] (given Microsoft is recruiting for a handful of robotics-related openings at the moment). Given last year's departure of Robotics chief Tandy Trower, I'm wondering about Microsoft's future intentions and directions in the robotics [...]
12. [*Newsflash: clever tricks have never been clever | Computer Security Articles*](#) Says:
[May 27th, 2010 at 6:27 pm](#)
[...] not corrupt other applications." – Tandy Trower [...]
13. [*The Secret Origin of Windows « Windows Info Portal*](#) Says:
[July 23rd, 2010 at 6:22 am](#)
[...] Read More: Here. [...]
14. [*Blog | Webwereld*](#) Says:
[September 13th, 2010 at 7:47 am](#)
[...] via The Secret Origin of Windows. [...]
15. [*And That's What You Missed on Technologizer*](#) Says:
[December 31st, 2010 at 12:35 pm](#)
[...] Tandy Trower, the Microsoft product manager who shipped Windows 1.0, shared his memories of the

product's rocky start. [...]

16. [Brief Insight Into Microsoft | Interversant](#) Says:
[January 13th, 2011 at 12:28 pm](#)

[...] a peek at the article at Technologizer. ← Project Inbox [...]

17. [A history lesson on government R&D, Part 3 | Tekkie](#) Says:
[June 14th, 2014 at 5:11 am](#)

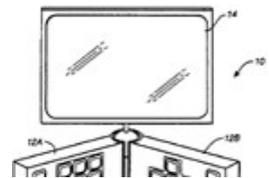
[...] Microsoft Windows, and Microsoft Word benefitted from the research that was done at PARC, though some inspiration came from the Macintosh as well. The look and feel of the first versions of Windows owed more to the X/Window system on Unix. Where Microsoft copied Apple was in how people interacted with Windows (icons and menus), and the application suite that came with the system. (source: The Secret Origin of Windows) [...]

Technologizer Highlights

[The Weird History of Windows](#)



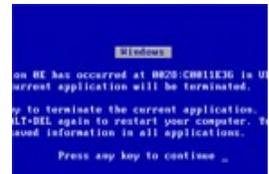
[Laptopia: Twenty-One Totally Bizarre Laptops](#)



[Fifteen Classic Game Console Design Mistakes](#)



[The Thirteen Greatest Error Messages of All Time](#)



[When the Muppets Worked for IBM](#)



[Tech Products That Were Brilliant. And Doomed](#)



[The Legend of the Legend of Zelda](#)



[15 Breakthrough Products That Went Absolutely Nowhere](#)



[The 25 Most Notable Quotes in Tech History](#)



[How 1940s Whiskey Ads Predicted the Future](#)



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