



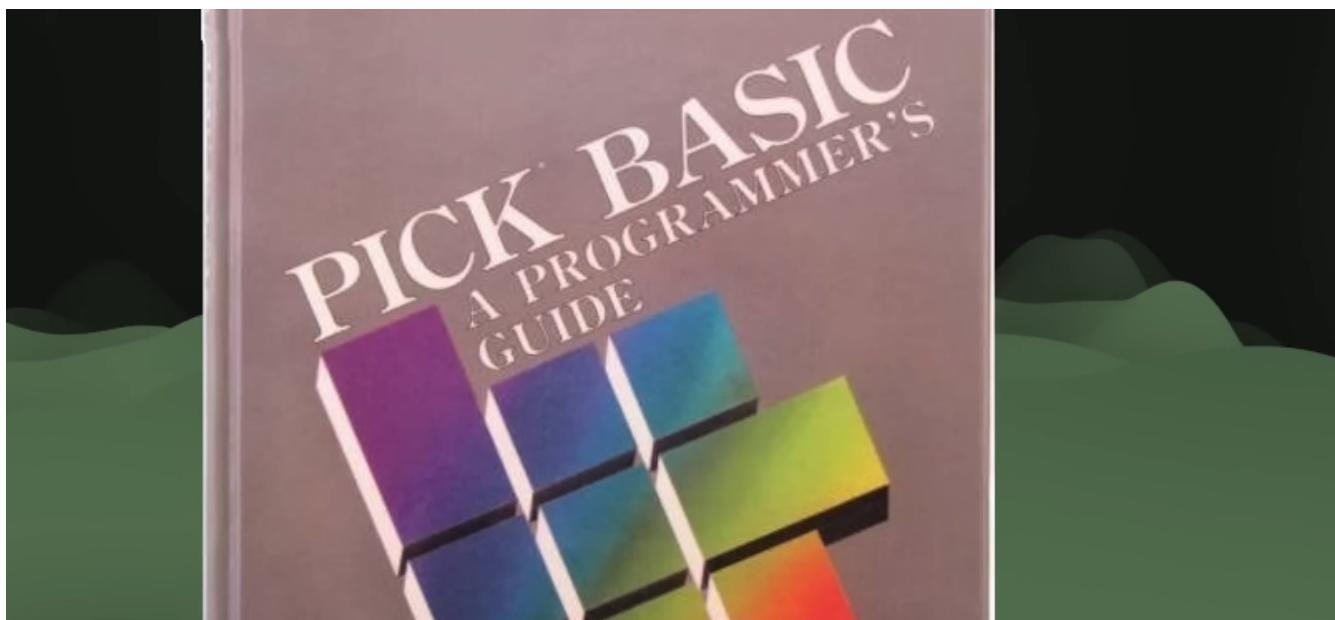
HACKADAY

PICKING AN OLD OPERATING SYSTEM

by: [AI Williams](#)

[50 Comments](#)

August 23, 2025



We usually at least recognize old computer hardware and software names. But [Asianometry] taught us a new one: [Pick OS](#). This 1960s-era system was sort of a database and sort of an operating system for big iron used by the Army. The request was for an English-like query language, and TRW assigned two guys, Don Nelson and Dick Pick, to the job.

The planned query language would allow for things like “list the title, author, and abstract of every transportation system reference with the principal city ‘Los Angeles.’” This was GIM or generalized information management, and, in a forward-looking choice, it ran in a virtual machine.

TRW made one delivery of GIM, but the program that funded it was in trouble. Since TRW didn't protect GIM, Dick took his program and formed a business. That business sold the rights to the software to Microdata, a minicomputer

company, which used it under the name ENGLISH.

After a lawsuit with Microdata, Pick was able to keep his software, but Microdata retained its rights. Pick dabbled in making hardware, but decided to sell that part of the enterprise and focus on licensing Pick OS.

The first sale was to Honeywell. The virtual machine concept made it easy to port to new machines. Pick had a very IBM-like structured file system, where all data is a string, and dictionaries organize the underlying data.

In addition to a database, there was a programming language like BASIC, a text editor, and even a spreadsheet program. Why haven't we heard of it? Part of the problem is that the computers using it typically renamed it and didn't say it was Pick under the hood.

In the early 1980s, Pick's appearance on the PC and the ability to support ten users on a single PC were notable features. The resellers didn't appreciate the thrust to sell directly to users, and more lawsuits emerged.

Pick also struggled to get a GUI going when that was taking off. After Dick died, the system sort of coasted through several acquisitions. There are echoes of it in [OpenQM](#), and there's at least one fork of that on [GitHub](#).

It is amazing how a system can utilize something like this and then [become locked in](#), even after things change. This explains why Japan still uses [floppy disks](#) for certain things.

The Weird OS Built Around a Database



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50 THOUGHTS ON “PICKING AN OLD OPERATING SYSTEM”

Pixel_K says:

August 23, 2025 at 4:11 pm

We (my actual employer) used Pick until 10 years ago in production. It served as a database to manage 100.000 clients. It ran in a virtual machine on an IBM mainframe. One of my first job was to recycle the hundred of terminals still on premise. Those terminals were connected to the mainframe, and our employees used terminal emulators on Windows to access the handful of apps specifically designed for the task. It was dull but snappy considering the size of the database.

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Allan says:

August 23, 2025 at 4:51 pm

I used Pick decades ago when I was doing some work for ... a large tyre company (no names, no pack drill). From (albeit fading) memory, Its record/field/sub-field separation strategy (using characters like the ASCII RS/FS/GS/US) was quite nice at the time and not as slow as you may think. Later on used a similar PC-based Advanced Revelation package.

[Reply](#)

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Neil says:

August 23, 2025 at 5:22 pm

My first ever job in 1993 was at an aluminium foundry that used Pick 4GL and 3GL (BASIC) running on a minicomputer with access via serial terminals around the site. That was the first and last time I saw anything that wasn't a PC.

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' **i_sloth** says:

A. , 2025 at 7:09 pm

I had to restore a Pick database and application that a Peterbuilt dealership in

Canada was running on an RS/6000 (running AIX) in the late 1990s. Their old RS/6000 was stolen (stolen!) and we drop-shipped a new one, which I set up and got their backups restored. Trickiest bit was getting the terminal multiplexer (an MCA (multi-channel architecture/adapter?) adapter that supported a cabled box that had a bunch of serial ports on it) working and all the terminals and printers redefined correctly in AIX and then in the Pick system/application. The dealership was writing stuff on paper for the weekend while I got it going.

[Reply](#)[Report comment](#)**Draug** says:[August 23, 2025 at 7:24 pm](#)

I still do maintenance on a PICK system, though it's little more than patching the host OS, and contacting vendor support if things fail to boot back up cleanly.

The virtual machine runs on a pretty modern Linux OS, and users connect to it with telnet. It's not clear to me if PICK is running natively on Linux, or if there's some kind of minicomputer emulator stuffed in there too.

This year the system is finally being retired and replaced with a modern web app, but it's amazing how well it's been extended with fancy terminal emulator tricks, connections to SMB shares, and passing jobs to modern printers.

[Reply](#)[Report comment](#)**RoganDawes** says:[August 25, 2025 at 12:32 am](#)

I did security testing for a company doing software for auto dealerships within the last 10 years. It was also running Pick on Linux (and wouldn't surprise me to find that it is still running today). I was able to find unauthenticated cmd injection, with the help of their developer, because I had no idea what I was doing when it came to writing code for Pick! Hopefully that was fixed ...

[Reply](#)[Report comment](#)**Meyer** says:[A , 2025 at 9:00 pm](#)

My dad (Bill Meyer) was a PICK programmer. He programed a database for DOD

transportation. He could make a dumb terminal to some crazy stuff. If I recall, his name is in the credits of that book.

[Reply](#)[Report comment](#)

Kyle says:

August 23, 2025 at 10:45 pm

In the 90's, I worked with a DOS port of the Pick database called Revelation. Once you got used to it's variable length records, static and calculated fields and sub-fields, multiple definitions of the same fields, you could do some amazing data structures.

[Reply](#)[Report comment](#)

Simon Clowes says:

August 28, 2025 at 6:39 am

I trrrmber Revelation. Found it shortly after I stopped workimg on msinframe Pick.

[Reply](#)[Report comment](#)

Doppler says:

August 24, 2025 at 2:50 am

I use to work for a company that was the first to port Pick O/S to software only. That's right the very first versions of Pick was Eprom based. Lot's and lot's of Eproms on PCB cards. They sold lot's of systems. They were early ported to IBM PC hardware. They sold many more machines using NCR 68040 based systems.

Little tidbit: Microsoft was dabbling with using the file system of Pick to replace NTFS. Thank god that didn't go anywhere. The underling FS needed a database structure to handle the allocation of sectors to files. 12 Bytes of every 512 sector was for forward and back links to data sectors. So only 500 of the 512 was usable. Worst yet. By controlling the the back link or forward link it was possible to inject code into the file. So how is that great for security. And you could lose large amounts of data to corruption. Break the chain of links, there goes the data. Until it is manually restored by a knowledgeable person. Back then MFM drives could corrupt for any reason i.e. Nightly back ups became vital.

[Reply](#)[Report comment](#)

TonyB says:

August 24, 2025 at 3:18 am

I remember the data corruption was called a GFE. Officially “Group Format Error” but unofficially “Get the F***** Engineer” :-)

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Ostracus says:

August 24, 2025 at 5:55 am

Ah, an alternative history where people learned to consistently do backups.

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chandru murthi says:

August 24, 2025 at 1:15 pm

There's lots (btw, it's “lots,” not “lot's,”) of errors here. Microdata was highly successful with their version of Pick (called Reality,) and, to my knowledge as one who worked intimately with Pick and Microdata (70's-80's) never tried to use the FS elsewhere. Criticizing the back/forward link structure, a genius move by Richard Pick, is ... idiotic? ... as it was the linchpin supporting the underlying philosophy of Pick OS ... that the disk was directly addressable by the base instruction set, and the links provided essentially unlimited string space. Real memory being a sort of cache only. Errors in data format were quite common in ALL FS's of the time, given the state of disc technology, hardly rampant in Pick. And you could correct many of them using the built-in Pick debugger which could directly address disc sector data.

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Jim J Jewett says:

August 24, 2025 at 1:28 pm

That is one “solution” to the 1000 vs 1024 dilemma of storage sizes.

[Report comment](#)

TonyB says:[August 24, 2025 at 3:15 am](#)

I started my career on a McDonnell Douglas 19450 (later a 19750) at a local council in the mid 80s. Lots of serial cables hanging out the back! I wrote in DataBasic for applications and English commands for reporting. We wrote most of our major systems in-house such as Council Tax, payroll, HR etc. Later moved to AIX running the D3 variant of Pick over telnet, and then multiple Intel based Unix servers which were all linked Pick databases and seemed like magic to me! I wrote our first internal email system in early 90s (later Internet connected) along with a sort of 4GL that these days is just a forms design package that generated some code. We developed all our systems using that. One of the happiest times of my career!

[Reply](#)[Report comment](#)**Abraham M** says:[August 24, 2025 at 5:52 am](#)

Funny, just like hackaday editors it is my very first time hearing of it. I'm no stranger to old tech but every comment is here has experience with it

[Reply](#)[Report comment](#)**Bill** says:[August 24, 2025 at 5:58 am](#)

My first job was for Aberdeen University Computing Services (AUCS) where I developed a PickOS package called “Pick Tools” – it wasn’t exactly a ‘best seller’ :)

[Reply](#)[Report comment](#)**Martin Welch** says:[August 24, 2025 at 7:27 am](#)

Although my actual exposure to Pick was somewhat limited, I worked for a long time as a support engineer in the UK for McDonnell Douglas Information Systems (which later became Microdata)

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jim Peel says:

August 24, 2025 at 7:55 am

My last company a very large auto glass retailer , used Pick as our OS . This was back in the 80's. I was an end user not a programmer at the time. I learned how to glitch their menus / programs to get to TCL. From there you could play STARTREK. I would poke around the system, dial in from home to play. Then I found that some of our competitors used the same system or the close cousin revelation. I started dialing them to and pulling sales info and such. I was easy to find the modem #'s since they were generally written on the line connection on the wall.

[Reply](#)[Report comment](#)**Kevin J. Cineay** says:

August 24, 2025 at 8:30 am

I worked for Dynix Library automation Systems in Canada. We implemented Pick R83 and later Universe for our library automation system. This software was widely used across The US and Canada. The chief rival, GEAC Advance, also used Pick as they both sprung from the same University library solution.

Dynix got bought out and the system replaced but the core Pick / Universe solution lived in for a long time.

[Reply](#)[Report comment](#)**Robert Rossney** says:

August 24, 2025 at 8:58 am

Prime Computer used their version of Pick, Information, to sell a lot of supermini computers during the 5-7 years that was what the industry was doing.

Revelation, the PC Pick product, was as solid and powerful a development environment as existed at the time. I was one of two programmers who used it to write a statewide data collection and analysis platform that had hundreds of users across the state. The state still, today, can't get data out of its many branches that's as accurate or fine-grained as what we got.

C'ne, if we'd stuck to C++ I would have been a lot more marketable when the i-shifted, but I did OK in the long run.

[Reply](#)[Report comment](#)

Robert F Porter says:

August 25, 2025 at 10:41 am

Was in the Pick world for many years at a large hospital system's lab (PI-Open then IBM/Ardent UniVerse, plus Rev G, Advanced Revelation and Intersystems Cache) and a multinational plumbing & waterworks supplier (IBM UniData on 5 HP Superdomes). Also talked with a large beer company about their warehouse system but didn't want to do St Louis

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Christopher Fortin says:

August 24, 2025 at 9:10 am

Sounds like a forgotten piece of tech partly because it more or less just worked (for the time)

[Reply](#)

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Alan T. says:

August 24, 2025 at 9:42 am

There are still quite a number of very big (like \$Billion turnover) and other commercial companies still running the Micodata variant called Reality and now owned by NEC, yes the NEC. It has the full Pick O/S features including variable size record Database, User Account, Data and location based security, English reporting and DataBasic & Proc programming languages. Their website is reality.necs.ws.com
... its main attributes are complete user and data environment with very efficient database storage and lookup, DataBasic programming language with a huge set of string handling and other features, now with modern interfaces.
Also look up on Wikipedia for the full Pick story...

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chandru murthi says:

/ August 25, 2025 at 1:49 pm

If you like to read a light-hearted and personal version of Pick History (I was one of the original Pick designers, circa 70's-80's,):

https://seeinggreen.typepad.com/my_weblog/2020/10/the-poet-the-physicist-and-the-immigrant.html

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RoganDawes says:

August 25, 2025 at 12:38 am

This is very cool. Casually dropping “I was there” vibes onto a random article. I wonder how many HaD readers this happens to on a daily basis. Kudos to the community of oh so smart people that HaD has built up over the years!

[Reply](#)

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Eric says:

August 24, 2025 at 3:06 pm

I was a CE at DEC, and we needed to propose a specific one to a customer. The off the shelf only one in the DEC partner catalog ran on a PICK on top of VMS on a VAX. We flew the customer people down to Philadelphia for a demo, but we didn't win the deal. Went to a 4rd party app running on an AS-400 from IBM.

[Reply](#)

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Equinoxe says:

August 24, 2025 at 9:32 pm

I was a Pick/UniVerse developer for many years, it's still alive and kicking under Rocket Software who continues to add features to an environment that's used in more systems than many folks know. I once had the privilege to meet the author of the book. In his desire to protect his IP through litigation Dick Pick stifled its innovation and eventually got distracted with dancers in a very surreal twist. Also the developer of DataBasic died tragically young. If things had turned out differently perhaps Pick would have been the Oracle of today.

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Camelus Minimus says:

August 25, 2025 at 5:14 am

Searching for some examples, I (kind of) lucked into checking the wikipedia page [1](#) and especially a link to an article in a BYTE Magazine from 1985 on the experience of a PC/XT user installing and trying to use PICK there.

Also: bitsavers provides a PDF version of the Pick System Users Reference Manual [3](#)

The “kind of” above, is due to me still not having any real idea how a PICK app is build...Is there a nice PICK Hello World out there?

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Camelus Minimus says:

August 25, 2025 at 5:16 am

The [link to the article](#) got cut from the above, due to me not understanding the link syntax...sorry...

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labgeek2007 says:

August 25, 2025 at 10:56 am

Major deja vu... I used multiple Pick (PI/open, UniVerse/Data, RevG Adv Rev, Cache) as well as both Coherent (w/MWC C) and THEOS. Man, I'm old...

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vivafirenzaparts says:

September 2, 2025 at 3:43 am

Not just you, I recall when Oasis became THEOS, and as developers on that system we did have a look at Pick to see if we could easily port our code to it, however there were significant differences between the two BASICs that would have made it more work than we wanted to do. Still have some THEOS systems in the field.

[Reply](#)

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Wol says:

August 26, 2025 at 12:04 pm

Go to ScarletDME on github to get a copy for linux, and join the mvdbms group on Google to learn how to use it.

But your hello world program is basically

PRINT "HELLO WORLD"

END

Nice and simple :-)

[Reply](#)

[Report comment](#)

Gordon wood says:

August 25, 2025 at 8:10 am

Ah yes, GFE's or Gone For Ever :-)

[Reply](#)

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labgeek2007 says:

August 25, 2025 at 10:50 am

Was in the Pick/Multi-Value world for many years at a large hospital system's lab (PL-Open then IBM/Ardent UniVerse, plus Rev G, Advanced Revelation and Intersystems Cache) and a multinational plumbing & waterworks supplier (IBM UniData on 5 HP Superdomes). Also talked with a large beer company about their warehouse system but didn't want to move to St Louis...

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Panondorf says:

August 25, 2025 at 10:53 am

F College I had a friend who had a job working for a non-technical lady in
the department. She tasked him with making her a userfriendly interface to their
database.

Most people at the time would have just sat down and created some MS Access forms for her. In fact, if I remember right that was what he tried first. But it was a pain because there were too many different scenarios that would have required different forms.

So he asked her permission to try something else. Then he wrote her a manual to teach her SQL. He called it “squirrel talk”. She loved it and was a whiz in no time.

This sort of old-school commandline English-like UI technique has a lot more to say for it than a lot of young people realize.

Or maybe they do realize. I guess that's why AI is getting so popular....

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Robert W Allen says:

August 26, 2025 at 12:15 am

I started working with Reality in 1979 and still work with it today.

[Reply](#)

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Wol says:

August 26, 2025 at 12:11 pm

I've worked with Pick (Prime INFORMATION, then UniVerse) most of my career. I've always preferred working with end users, rather than in the computer industry, and now I'm trying to introduce Pick (OpenQM) to my current company.

We have far too many Excel spreadsheets, and imho, replacing a horrible mess of them is probably the easiest introduction to Pick. Once you've done that, you can start replacing all those relational databases too :-)

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a_do_z says:

August 26, 2025 at 12:23 pm

As a native youngster, I worked with a Pick database in the early 90's, supporting it concerning an in-house warehouse/inventory management application used by a food producer. It ran on some flavor of Unix which I can't remember at the moment. First time I'd ever touched Unix.

MultiValue fields...not your ordinary, every day modern relational database. Handy, but weird by later standards.

[Reply](#)[Report comment](#)**Eric** says:[August 26, 2025 at 5:50 pm](#)

PICK, and its multiple off-shoots are still alive and well in all sorts of businesses. It just so happens to be “hidden” behind new interfaces, and no longer bound to the terminal. I still work in the industry using QM, but my end users wouldn’t know anything about it, they just want to see the data. And that is what makes PICK special, it can handle data with ease and more importantly speed. Most of our servers have enough RAM to load the entire database sets of our 80 clients all into RAM. Now that is nice.

[Reply](#)[Report comment](#)**Mike Yates** says:[August 27, 2025 at 2:45 am](#)

The many descendants of the Pick System (database rather than OS) should be acknowledged as such by the current and future generations. There has been so much renaming it seems they are ashamed to be using an old system, even if it works so well it need not be changed. The latest rename is “NoSQL” though that has hardly eclipsed “Multivalue”. How many people know that Amazon runs on one and why don’t Amazon admit it?

[Reply](#)[Report comment](#)**Mike Yates** says:[August 27, 2025 at 3:05 am](#)

In the early days, Pick kept getting renamed for legal and commercial reasons. Now it seems to be from shame of using an old system because it works. “Multivalue” and “NoSQL” seem to be current. How many people know that Amazon runs a Pick-type database and why don’t Amazon admit it?

[F](#)[Report comment](#)

BEVERLEY ANNE JENSEN says:

August 27, 2025 at 12:07 pm

About 30-40 years ago I had to find a computer system for a company that I was working for. I investigated a few different systems, IBM, ICL (can't even remember the others now). My neighbour was selling PERTEC computers with the PICK operating system. I had an appointment to see him but then decided my head was so full of what I had already seen that I would select one of the systems that I had already investigated. My neighbour said I really had to look at the PICK system before making up my mind. I sat with him as he demonstrated the PICK capabilities and within 30 minutes I was blown away and knew that this was the only system that I was interested in. It is interesting to hear the speaker in this video talking about finding PICK is like being a new born Christian as that is exactly how I feel about PICK. I am totally passionate about it. Still do the odd bit of coding for clients and would love to do more.

[Reply](#)

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Herb says:

August 27, 2025 at 3:31 pm

Started using PICK in 1978 on a Microdata system from SMI. System had 16K of memory and 100 Meg of disk. Online users were amazed at its response times and capabilities. Wrote my own manufacturing and financial system in the mid 1980(s). Many of those systems are still running TODAY. PICK was a great product. Like one of the comments above states: ROCKET SOFTWARE still supports PICK products. The PICK system has tremendous capabilities, Variable length fields, multivalued fields, and interfaces easily with Excel I must be a really old timer, but there are still 10s of thousands of companies still using PICK, most probably don't know it.

[Reply](#)

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Libin Xie says:

August 27, 2025 at 5:46 pm

I started out learning jBase back in 2001 from university and ended up working with jBase, D3, Pick, and Universe across supply chain, ERP, and finance. By 2003 though, the focus from university had pretty much shifted over to .NET as computer foundation .

[Reply](#)

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Felipe Gordillo says:

August 28, 2025 at 4:14 am

I started programming on Pick systems in 1987, and until last year I did so through Pick R8x, D3, and QM. It's something I miss a lot now.

[Reply](#)

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Simon Clowes says:

August 28, 2025 at 6:42 am

Back in the 80s work for AWA Computers supporting Pick OS on Reality and Seqel mainframes.

Love to gind a vetsion for my old laptop thst didnt run on top of another OS

[Reply](#)

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Jonathan Dehn says:

August 28, 2025 at 4:14 pm

In the 80s I worked at the Smithsonian Institution for the “Global Volcanism Program.” A former student now works there doing a bang up job. The program keeps a detailed catalogue of all the known volcanic activity through history. When I arrived at the Smithsonian, the database was on punch cards. After much deliberation, we ended up using Pick because of the tree-like nature of our data, and the scarcity of o` polulation, about 20% fill. Relational databases were just not any good at i aren’t). Dick himself came out to see what we were doing. Pick was fast and ran a couple of PC ATs a test and a deployment server. I ran wire for the terminals by hand to all the curator’s offices. As the years went on they switched to Revelation,

a Pick based program that ran on Windows. Today they are using a relational system, but still struggle with so many sub-fields under a single entry or field. It was a heady time. I could impress friends and neighbors by dialing in from home with a 1200 baud modem and get data and run queries very fast, even by today's standards. We'd produce carefully formatted CSV files to port to other applications, and for formatting the book we produced, a large table of eruptions called, "Volcanoes of the World" The legacy of that work can still be found at: <https://volcano.si.edu/>

[Reply](#)[Report comment](#)**abjq** says:

September 10, 2025 at 10:04 am

And now, Dick Pic is all over the internet – fame at last!

[Reply](#)[Report comment](#)**kkliu** says:

September 24, 2025 at 4:17 pm

was briefly a programmer using pick os for a couple of years in the late 80s. payroll/invoicing apps on minicomputer.

there was the programming of programs with basic language and the database programming (using a sort of query language.)

loved the relational databases, multivalue fields and the "programmable" fields. my memory faded already... but what i remember was that you actually code a whole query/program as a field. (sort of like a supercharged excel formula)

that made it easy to fulfill end users requests for customised query output from the main databases.

i remember the superuser id of SYSPROG!

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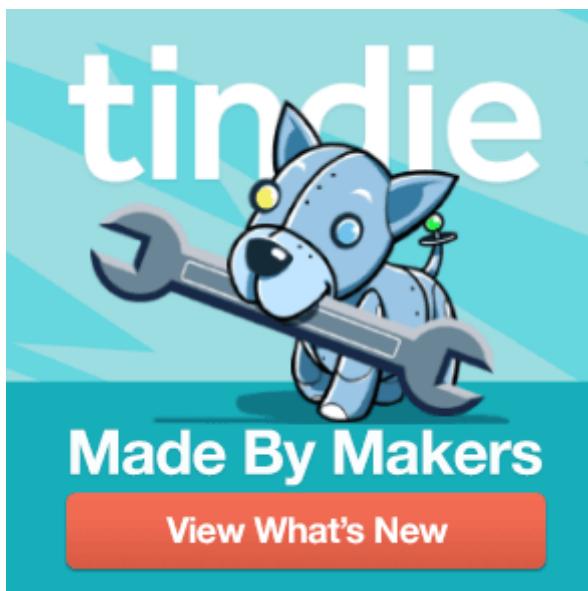


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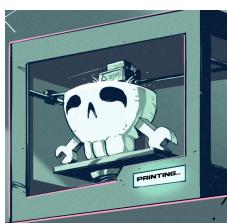
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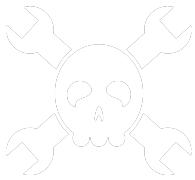
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