

# Issue 070: DOS

Adrian Kosmaczewski

July 1<sup>st</sup>, 2024



Welcome to the 70th issue of *De Programmatica Ipsum*, about *DOS*.

In this edition:

- We gather in loving memory to celebrate the legacy<sup>1</sup> of a bygone category of operating systems.
- In the Library section<sup>2</sup>, we browse the pages of “Dr. Dobb’s Journal of Computer Calisthenics & Orthodontia”<sup>3</sup>.
- In our Vidéothèque section<sup>4</sup>, we watch the “Gary Kildall Special”<sup>5</sup> episode of the “Computer Chronicles”.

We would like to thank our patrons who generously contribute every month (or have contributed in the past) to our work and help us run this magazine. Thank you so much! In alphabetical order: Adam Guest, Adrian Tineo Cabello, Benjamin Sheldon, Christopher Nascone, Colin Powell, Franz Lucien Moersdorf, Guillermo Ramos Álvarez, Jean-Paul de Vooght, Dr. Juande Santander-Vela, Patryk Matuszewski, Paul Hudson, Quico Moya, Roger Turner, and Szymon Licau.

Enjoy this issue! Please subscribe to our free newsletter<sup>6</sup> to stay updated about new releases, share the articles on social media, or contribute<sup>7</sup> if you would like to support our work with a donation via Liberapay<sup>8</sup>.

Cover photo by Felix Winkelkemper<sup>9</sup> on Flickr<sup>10</sup>.

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<sup>1</sup><https://deprogrammaticaipsum.com/a-requiem-for-dos/>

<sup>2</sup><https://deprogrammaticaipsum.com/category/library/>

<sup>3</sup><https://deprogrammaticaipsum.com/dr-dobbs-journal-of-computer-calisthenics-and-orthodontia/>

<sup>4</sup><https://deprogrammaticaipsum.com/category/videotheque/>

<sup>5</sup><https://deprogrammaticaipsum.com/gary-kildall/>

<sup>6</sup><https://deprogrammaticaipsum.com/newsletter/>

<sup>7</sup><https://deprogrammaticaipsum.com/contribute/>

<sup>8</sup><https://liberapay.com/>

<sup>9</sup><https://www.flickr.com/photos/winkelkemper/>

<sup>10</sup><https://flic.kr/p/2e7JFP>

# A Requiem For DOS

Adrian Kosmaczewski

July 1<sup>st</sup>, 2024



Operating systems shape our computing experience. They determine the kind of things people can do with their computer, how they can interact with it, what kind of programs they can run on it, and what kind of output they take out of it. In many ways, operating systems follow *l'air du temps* when it comes to their functionality; they offer slightly more than required, just enough to tantalize the imagination of users, while severely limiting the capabilities of developers on the other hand.

As a species, we have been computing in one way or another for around 70 years at the time of this publication. There have been (there are) many kinds of operating systems, but most of them have settled in families. There are real-time operating systems; there are operating systems specialized in running cloud applications; there are operating systems you use on your laptop, some others for your smartphone, and others to run COBOL programs on IBM mainframes. And, yes, somehow Linux appears in all of those categories in one way or another.

And then there is DOS. Yes, the venerable Disk Operating System.

Some of you reading this article might feel offended that I consider DOS an operating system<sup>1</sup>, but I will. For around 20 years, from the mid-1970s to the mid-1990s, DOS was the *de facto* focus point for a lot of “innovation” in the personal computer industry. And I am

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<sup>1</sup><https://deprogrammaticaipsum.com/aftermath-of-the-kernel-wars/>

not specifically talking about MS-DOS<sup>2</sup>, Apple DOS<sup>3</sup>, ProDOS<sup>4</sup>, DR-DOS<sup>5</sup>, FreeDOS<sup>6</sup>, or CP/M<sup>7</sup>, but as a whole family of operating systems, as a collective experience, sharing various characteristics with one another.

Let us enumerate those characteristics<sup>8</sup>; what was it like to use a personal computer, say, in 1982 or 1983? Before turning on the power on both the monitor and the computer itself, you would insert the DOS diskette on the A: drive. The BIOS would self-test the RAM chips, and then turn the attention of the CPU toward a specific sector of some disk; first on a hard disk (if any) invariably denominated “C:”, and if that failed, on the aforementioned diskette drive, usually “A:”, but maybe also “B:” for those fortunate enough to have some spare cash for a second diskette drive.

The DOS would load a kernel (yes, that word also applies to DOS) who in turn would read a couple of initialization files. In the case of MS-DOS, `CONFIG.SYS` and `AUTOEXEC.BAT`, and I suppose that after reading these names, a meteorite of nostalgia has hit the *connoisseur* reader to their core.

Wipe your tears and keep reading.

Disk Operating Systems were the pinnacle of computing minimalism<sup>9</sup>. They were, essentially, as simple as the computers they were meant to run on: single-user, single-task, lacking a graphical user interface or networking, devoid of any built-in security of any kind, and without any memory management whatsoever.

But (and this is the big upside) with tons and tons of applications of any kind you can imagine.

DOS also offered the simplest, laziest, and most straightforward API<sup>10</sup> to applications: interrupt vector 21h<sup>11</sup> and unlimited direct hardware access. Does your app require playing sound or reading the joystick? Be my guest, just read or write some registers here and there, and you are most welcome. (Well, to be honest, “playing sound” was a bit of a stretch on the original IBM PC, at least until Creative Labs released the Sound Blaster<sup>12</sup> card, but I digress.)

(Again, I hope readers will indulge me in calling such a crude mechanism an “API”; I know for sure Michael Kerrisk would not<sup>13</sup>. So be it.)

As the name “Disk Operating System” implies, the most important task of a DOS is that of providing access to... you guessed it, disk drives. The first edition of CP/M provided the basic five functions already in 1974: list all files on the screen; show their contents; copy them to another location; rename them; and delete them. And yes, if possible, also allow the user to launch applications just by typing their name, *thankyousomuch*.

(The inspiration from Unix and older operating systems is obvious; be mindful, however, to replace `rm -rf /` with `FORMAT C:` when pranking your friends.)

<sup>2</sup><https://en.wikipedia.org/wiki/MS-DOS>

<sup>3</sup>[https://en.wikipedia.org/wiki/Apple\\_DOS](https://en.wikipedia.org/wiki/Apple_DOS)

<sup>4</sup>[https://en.wikipedia.org/wiki/Apple\\_ProDOS](https://en.wikipedia.org/wiki/Apple_ProDOS)

<sup>5</sup><https://en.wikipedia.org/wiki/DR-DOS>

<sup>6</sup><https://freedos.org/>

<sup>7</sup><https://en.wikipedia.org/wiki/CP/M>

<sup>8</sup>[https://en.wikipedia.org/wiki/Comparison\\_of\\_DOS\\_operating\\_systems](https://en.wikipedia.org/wiki/Comparison_of_DOS_operating_systems)

<sup>9</sup><https://deprogrammaticaipsum.com/issue-14-minimalism/>

<sup>10</sup>[https://en.wikipedia.org/wiki/DOS\\_API](https://en.wikipedia.org/wiki/DOS_API)

<sup>11</sup>[https://en.wikipedia.org/wiki/DOS\\_API#DOS\\_INT\\_21h\\_services](https://en.wikipedia.org/wiki/DOS_API#DOS_INT_21h_services)

<sup>12</sup>[https://en.wikipedia.org/wiki/Sound\\_Blaster](https://en.wikipedia.org/wiki/Sound_Blaster)

<sup>13</sup>[https://en.wikipedia.org/wiki/The\\_Linux\\_Programming\\_Interface](https://en.wikipedia.org/wiki/The_Linux_Programming_Interface)

And that, essentially, was it. With such a small memory footprint, CP/M opened the door to the imagination of a whole generation of programmers, and created the first *de facto* personal computing platform, yielding an immense library of productivity and gaming software in just 5 or 6 years of existence.

There is, nowadays, a collective bout of nostalgia happening, this article notwithstanding. I have already talked in a previous issue<sup>14</sup> of this magazine about the wonders that an old DOS system, coupled with a rusty copy of WordStar<sup>15</sup>, did to the creativity of George R.R. Martin. Imagine this: just you and your words, in a laconic white-over-black screen, without any distractions (because there cannot be any, as a matter of fact.) The length and breadth of his creation have now an easy explanation. I consider this return to innocence<sup>16</sup> a required vacation for our brains, a way to escape an ever-growing complexity, or simply a mechanism to appreciate the goodness of our current computing world.

The revival of this kind of interactivity patterns happens as well in more modern systems. Software developers using Linux or macOS have a large array of quite advanced console tooling at their disposal, allowing them to work with (relative) comfort in a terminal window. Let us mention some of those tools: `tmux`, `vim`, `htop`, `k9s`, and autocompletion for `zsh` and `bash` alike. The list of tools I have just mentioned constitutes the bread and butter of the technology galaxy I am immersed right now (that is, Kubernetes, OpenShift, and cloud native applications). They form a cohesive set that makes some developers very productive, sometimes in quite challenging scenarios.

Probably the closest thing to `tmux` that ever existed for a DOS was the brilliant yet ill-fated MP/M<sup>17</sup>, or “Concurrent CP/M” system. Gary Kildall<sup>18</sup> himself, founder of Digital Research<sup>19</sup>, gave a short demo<sup>20</sup> of MP/M on the March 12th, 1984 episode of the “Computer Chronicles”<sup>21</sup>, switching between virtual consoles with his keyboard. Any `tmux` or screen user will nod and smile in appreciation of an uncannily similar experience upon watching this interaction.

(There was, apparently<sup>22</sup>, a multitasking<sup>23</sup> version of MS-DOS 4.0 available in Europe for a short time, but it was quickly discontinued.)

I also sometimes rant and yearn for a simpler bygone era, even wishing<sup>24</sup> for a new, upgraded edition of the venerable TRS-80 Model 100<sup>25</sup>.

The nostalgia of the DOS of yore is fueled by various recent events: the availability of CP/M<sup>26</sup> as open-source software since 2014, with its licensing status clarified<sup>27</sup> two years ago; MS-DOS 4.0 being open-sourced last April<sup>28</sup>; CP/M celebrating its 50th birthday<sup>29</sup>

<sup>14</sup><https://deprogrammaticaipsum.com/for-lack-of-a-better-word/>

<sup>15</sup><https://en.wikipedia.org/wiki/WordStar>

<sup>16</sup><https://deprogrammaticaipsum.com/return-to-innocence/>

<sup>17</sup><https://en.wikipedia.org/wiki/MP/M>

<sup>18</sup><https://deprogrammaticaipsum.com/gary-kildall/>

<sup>19</sup>[https://en.wikipedia.org/wiki/Digital\\_Research](https://en.wikipedia.org/wiki/Digital_Research)

<sup>20</sup><https://youtu.be/w9EHc80HY4U?t=404>

<sup>21</sup><https://deprogrammaticaipsum.com/stewart-cheifet/>

<sup>22</sup><https://web.archive.org/web/20050305055850/http://www.maxframe.com/HISZMSD.HTM>

<sup>23</sup>[https://en.wikipedia.org/wiki/MS-DOS\\_4.0\\_\(multitasking\)](https://en.wikipedia.org/wiki/MS-DOS_4.0_(multitasking))

<sup>24</sup><https://mastodon.online/@akosma/112638917285402560>

<sup>25</sup>[https://en.wikipedia.org/wiki/TRS-80\\_Model\\_100](https://en.wikipedia.org/wiki/TRS-80_Model_100)

<sup>26</sup><https://computerhistory.org/blog/early-digital-research-cpm-source-code/>

<sup>27</sup>[https://www.theregister.com/2022/07/15/cpm\\_open\\_source/](https://www.theregister.com/2022/07/15/cpm_open_source/)

<sup>28</sup><https://github.com/microsoft/MS-DOS>

<sup>29</sup><https://computerhistory.org/blog/fifty-years-of-the-personal-computer-operating-system/>

also last April; and FreeDOS<sup>30</sup> celebrating its 30th<sup>31</sup> as this article hits the press.

There is, however, another sad mention on the obituary these days. Just as Jim Hall<sup>32</sup> was starting the FreeDOS project on June 29th, 1994, Gary Kildall passed away exactly one week later, on July 6th. The legacy of Gary in the history of personal computing is nothing short of spectacular, but that will be the gist of the next article<sup>33</sup> in this edition.

Jack Crenshaw, of “Let’s Build a Compiler”<sup>34</sup> fame, said in a 2009 interview<sup>35</sup>:

The most recent operating system that I truly loved was CP/M. And the reasons were simple enough. First, it was small enough to understand.

So there you have it. Get your hands dirty, install DOSBox<sup>36</sup> or FreeDOS on QEMU<sup>37</sup>, then download<sup>38</sup> a copy of Microsoft Word 5.5, and write your next *magnus opus* on the simplest possible computing environment in history, just like I did to write the article you just read.

Cover photo by William Warby<sup>39</sup> on Unsplash<sup>40</sup>.

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<sup>30</sup><https://freedos.org/>

<sup>31</sup><https://www.freedos.org/presskit/>

<sup>32</sup>[https://en.wikipedia.org/wiki/Jim\\_Hall\\_\(computer\\_programmer\)](https://en.wikipedia.org/wiki/Jim_Hall_(computer_programmer))

<sup>33</sup><https://deprogrammaticaipsum.com/gary-kildall/>

<sup>34</sup><https://compilers.iecc.com/crenshaw/>

<sup>35</sup><https://web.archive.org/web/20090215132049/http://www.trs-80.org/interview-jack-crenshaw/>

<sup>36</sup><https://www.dosbox.com/>

<sup>37</sup><https://wiki.freedos.org/wiki/QEMU>

<sup>38</sup>[https://download.microsoft.com/download/word97win/Wd55\\_be/97/WIN98/EN-US/Wd55\\_ben.exe](https://download.microsoft.com/download/word97win/Wd55_be/97/WIN98/EN-US/Wd55_ben.exe)

<sup>39</sup>[https://unsplash.com/@wwarby?utm\\_content=creditCopyText&utm\\_medium=referral&utm\\_source=unsplash](https://unsplash.com/@wwarby?utm_content=creditCopyText&utm_medium=referral&utm_source=unsplash)

<sup>40</sup>[https://unsplash.com/photos/a-couple-of-legos-standing-next-to-a-hard-drive-\\_zIq5WCzfHE?utm\\_content=creditCopyText&utm\\_medium=referral&utm\\_source=unsplash](https://unsplash.com/photos/a-couple-of-legos-standing-next-to-a-hard-drive-_zIq5WCzfHE?utm_content=creditCopyText&utm_medium=referral&utm_source=unsplash)

# Gary Kildall

Adrian Kosmaczewski

July 1<sup>st</sup>, 2024



I had a revelation during the preparation of this article. Legend has it that Gary Kildall<sup>1</sup>, as Forbes<sup>2</sup> put it, “could have been Bill Gates”, if it were not that he was busy flying his airplane the day IBM knocked on the door. Most analysts dealing with this foundational moment in computing history, however, leave aside a particular piece of information, which I think explains why IBM chose Microsoft<sup>3</sup> over Digital Research<sup>4</sup> as the provider for the operating system of the original IBM PC, even though Bill Gates himself told IBM to knock on Gary’s door instead.

It is a simple fact, but one that popped up in my research immediately. Here it goes: Mary Maxwell Gates<sup>5</sup>, Bill’s mother, was appointed to the board of directors of the national United Way<sup>6</sup> in 1980. And guess who else was in that committee? The late John Opel<sup>7</sup>, president, chairman, and CEO of..., you guessed it, IBM, between 1974 and 1986.

As explained by James Cortada<sup>8</sup>, “Project Chess”, the codename of the original IBM PC project, was shrouded in secrecy and directly driven from the top of IBM by the (then presi-

<sup>1</sup>[https://en.wikipedia.org/wiki/Gary\\_Kildall](https://en.wikipedia.org/wiki/Gary_Kildall)

<sup>2</sup><https://www.forbes.com/forbes/1997/0707/6001336a.html>

<sup>3</sup><https://deprogrammaticaipsum.com/where-does-microsoft-want-to-go-today/>

<sup>4</sup>[https://en.wikipedia.org/wiki/Digital\\_Research](https://en.wikipedia.org/wiki/Digital_Research)

<sup>5</sup>[https://en.wikipedia.org/wiki/Mary\\_Maxwell\\_Gates](https://en.wikipedia.org/wiki/Mary_Maxwell_Gates)

<sup>6</sup>[https://en.wikipedia.org/wiki/United\\_Way](https://en.wikipedia.org/wiki/United_Way)

<sup>7</sup>[https://en.wikipedia.org/wiki/John\\_R.\\_Opel](https://en.wikipedia.org/wiki/John_R._Opel)

<sup>8</sup><https://deprogrammaticaipsum.com/james-cortada-emerson-pugh-louis-gerstner-jr/>

dent) Opel, together with William Lowe and Philip Don Estridge<sup>9</sup> (nowadays widely recognized to be the true father of the IBM PC). It is known that Ms Gates pointed Opel towards the small software company of his son, located at that time in Bellevue, Washington. And understandably enough; what loving mother would not do the same?

We will never know, of course, how much influence she had in the final decision of using MS-DOS instead of CP/M. In the opinion of this author, this was a decisive fact. Of course, this is pure speculation, but this magazine is, after all, an opinion piece.

Describing Gary's story in more detail, this month's Vidéothèque movie is the "Gary Kildall Special"<sup>10</sup>, a 1995 episode of the "Computer Chronicles" PBS<sup>11</sup> show, introduced by none other than Stewart Cheifet<sup>12</sup>. Gary was the co-host of the show from 1983 to 1990, and showcased many Digital Research projects and products on the show, a fact now acknowledged to have been a fatal flaw in his own business strategy. But more on that later on.

The episode understandably avoided mentioning the connection between Ms Gates and Mr. Opel. You did not want to upset the richest person on Earth (at the time) with wild speculative claims. The video does contain, however, a eulogy from Bill Gates at the end, one that could very well serve as a definition for the expression "crocodile tears":

"Gary Kildall was one of the original pioneers of the PC revolution. He was a very creative computer scientist who did excellent work. Although we were competitors, I always had tremendous respect for his contributions to the PC industry. His untimely death was very unfortunate and he and his work will be missed"

Bill Gates

Re-read the paragraph above, in particular the last phrase: "...his work will be missed". I have seldom read a more elegant way to spit on a grave.

Even if I can understand the rage that Gary Kildall might have chewed for the rest of his life, I think that there was little he could have done to avoid this outcome. The dice were pipped well before IBM took a decision. Even the fact that CP/M was priced at 140 USD per copy instead of the 40 USD they charged for PC-DOS could be traced back, in my opinion, to a relationship forged in the upper echelons of the American high society of the time.

Once again, the adage "it is not *what* you know, but *who* you know" comes into play. It is difficult to beat your competition when their literal mother drinks literal champagne with the literal CEO of your biggest potential customer ever.

Bill Gates, who really did not have an operating system, jumped at the opportunity: IBM is *not* known for ringing the bell more than once, and they did it twice at his doorstep. He then promptly bought 86-DOS<sup>13</sup> from Tim Paterson<sup>14</sup>, licensed it to IBM as "PC-DOS", and the rest is history. Thanks, mum.

It is essential, at this time, to state the non-obvious: the concept of a Disk Operating System for microcomputers is entirely and completely traceable to the mind of Gary Kildall. His creativity and candid personality yielded a great company called Digital Research, still remembered by their old employees as a hallmark in the history of computing. He was also the

<sup>9</sup>[https://en.wikipedia.org/wiki/Philip\\_Don\\_Estridge](https://en.wikipedia.org/wiki/Philip_Don_Estridge)

<sup>10</sup><https://www.youtube.com/watch?v=Tdj8gh9GPc4>

<sup>11</sup><https://en.wikipedia.org/wiki/PBS>

<sup>12</sup><https://deprogrammaticaipsum.com/stewart-cheifet/>

<sup>13</sup><https://en.wikipedia.org/wiki/86-DOS>

<sup>14</sup>[https://en.wikipedia.org/wiki/Tim\\_Paterson](https://en.wikipedia.org/wiki/Tim_Paterson)

author of the PL/M programming language<sup>15</sup> while working at Intel; the company would continue using it years after Kildall's departure.

His business acumen legacy, however, is more debatable. Gary's open approach to business led him to disclose trade secrets to the competition (read: Bill Gates), a fact that had a harmful impact in his business during the second half of the 1980s.

Gary's tragic passing in 1994 (almost exactly 30 years ago as this article hits the press) had, however, a silver lining; he did not get to see Windows 95 become a sales juggernaut, crushing all competition (which included, ironically enough, IBM's own OS/2). His obituary<sup>16</sup> in the New York Times fails to convey much more emotion than Bill Gates' own words.

As a personal note, I would have loved to see Gary in person testify before Congress during the trial against Microsoft<sup>17</sup>, to denounce how they had actively blocked DR-DOS<sup>18</sup> (CP/M's successor) from running Windows in the early 1990s. This was discovered in 1992, and known as the "AARD code"<sup>19</sup> ever since. Well, Caldera did sue Microsoft anyway<sup>20</sup>. Ah, monopolies.

Kathryn Strutynski<sup>21</sup> deserves a special mention before closing this article. She was Digital Research's fourth employee, and the manager of various products of the company; she was a true computer pioneer, and her name and career has been sadly forgotten by many historians.

To celebrate a simpler time, and to see CP/M in actual action, I can recommend a video<sup>22</sup> showing how to create "Hello World" programs on CP/M in seven programming languages: assembler, C<sup>23</sup>, FORTRAN, COBOL, Pascal<sup>24</sup>, BASIC<sup>25</sup>, and Forth.

But please, whatever your opinion on the subject might be, do not miss this month's Vidéothèque movie, the "Gary Kildall Special" on YouTube<sup>26</sup>. Continue your discovery of Gary Kildall through the transcript<sup>27</sup> of a Computer History Museum event in his memory, and then reading Gary's own recollections in his book "Computer Connections"<sup>28</sup>, freely available through the same museum.

Cover snapshot chosen by the author.

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<sup>15</sup><https://en.wikipedia.org/wiki/PL/M>

<sup>16</sup><https://www.nytimes.com/1994/07/13/obituaries/gary-kildall-52-crucial-player-in-computer-development-dies.html>

<sup>17</sup>[https://en.wikipedia.org/wiki/United\\_States\\_v.\\_Microsoft\\_Corp.](https://en.wikipedia.org/wiki/United_States_v._Microsoft_Corp.)

<sup>18</sup><https://en.wikipedia.org/wiki/DR-DOS>

<sup>19</sup>[https://en.wikipedia.org/wiki/AARD\\_code](https://en.wikipedia.org/wiki/AARD_code)

<sup>20</sup>[https://web.archive.org/web/20020108063436/http://www.maxframe.com/DR/Info/fullstory/ca\\_sues\\_ms.html](https://web.archive.org/web/20020108063436/http://www.maxframe.com/DR/Info/fullstory/ca_sues_ms.html)

<sup>21</sup>[https://en.wikipedia.org/wiki/Kathryn\\_Strutynski](https://en.wikipedia.org/wiki/Kathryn_Strutynski)

<sup>22</sup><https://www.youtube.com/watch?v=FGWshrMZcCc>

<sup>23</sup><https://deprogrammaticaipsum.com/brian-kernighan/>

<sup>24</sup><https://deprogrammaticaipsum.com/lazarus-come-forth/>

<sup>25</sup><https://deprogrammaticaipsum.com/programming-the-liberal-arts/>

<sup>26</sup><https://www.youtube.com/watch?v=Tdj8gh9GPc4>

<sup>27</sup><https://archive.computerhistory.org/resources/access/text/2014/06/102746909-05-01-acc.pdf>

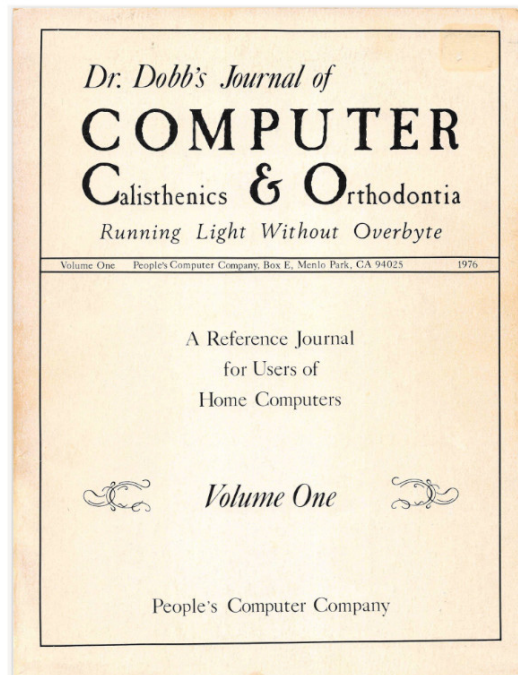
<sup>28</sup><https://computerhistory.org/blog/in-his-own-words-gary-kildall/>



# Dr. Dobb's Journal of Computer Calisthenics & Orthodontia

Adrian Kosmaczewski

July 1<sup>st</sup>, 2024



Back in the 1980s and 1990s, one of the most appropriate locations in Buenos Aires to find international magazines was the quintessential Calle Florida<sup>1</sup>. In those huge newsstands next to the corner with Avenida Corrientes one could find *incunabula* ranging from the September issue of *Vogue*<sup>2</sup> to the latest edition of *Paris Match*<sup>3</sup>. Among those, every so often my programmer self would jump in joy to find some lost computer magazine; and by far the one that made me the happiest to unearth was, without any doubt, *Dr. Dobb's Journal*<sup>4</sup>.

We have often mentioned *Dr. Dobb's* in the pages of this magazine, for one simple reason: it is one of our major inspirations. When we started planning *De Programmatica Ipsum* with Graham, *Dr. Dobb's* was one of those historic magazines that shaped our discovery of computers and programming. In my personal case, it is impossible to deny the profound effect that it had on my upbringing as a software developer.

For decades, every month, *Dr. Dobb's Journal* would dedicate a full issue to a particular subject... yes, just like this magazine does. Legend has it that, because of its name, copies of *Dr. Dobb's Journal* landed in the waiting rooms of otherwise unsuspecting dentists all over the USA.

<sup>1</sup>[https://en.wikipedia.org/wiki/Florida\\_Street](https://en.wikipedia.org/wiki/Florida_Street)

<sup>2</sup>[https://en.wikipedia.org/wiki/The\\_September\\_Issue](https://en.wikipedia.org/wiki/The_September_Issue)

<sup>3</sup>[https://en.wikipedia.org/wiki/Paris\\_Match](https://en.wikipedia.org/wiki/Paris_Match)

<sup>4</sup>[https://en.wikipedia.org/wiki/Dr.\\_Dobb's\\_Journal](https://en.wikipedia.org/wiki/Dr._Dobb's_Journal)

Please be mindful that those were the ages of the early Internet, without any World Wide Web<sup>5</sup> in the horizon. The access to reliable and advanced information from other practitioners in the field was much scarce than it is now, particularly when operating from peripheral regions of the world. To be honest, we are now drowning in a sea of information, with an overwhelming level of detail, and even worse, hysteria<sup>6</sup>.

During those calmer times, Dr. Dobb's would cover every month some programming topic with an excellent series of monographs and a wide array of sample code, interviews, and even excellent humor<sup>7</sup>. In the latter case, an honorary mention goes to Verity Stob<sup>8</sup>, whoever they are, because of their uncanny description of the daily life of a software developer in the Microsoft galaxy of the late 1990s. Those who witnessed (or suffered<sup>9</sup>) the good old days of `On Error Resume Next` are now nodding their heads in despair. I hear you.

Dr. Dobb's Journal has had some clear phases in its evolution. During the 1970s, it featured frequent articles about BASIC, starting with a historic description of a Tiny BASIC<sup>10</sup> interpreter that is now a hallmark<sup>11</sup> in the history of open-source and intellectual property.

In the 1980s, the focus of Dr. Dobb's switched to Forth<sup>12</sup>, one of the magazine's favorite programming languages of all time. By the end of the decade, however, the rise in prominence of object-oriented programming<sup>13</sup> became a force to reckon, and articles about C++ became the norm.

The inexorable enshittification<sup>14</sup> of Dr. Dobb's during the 2000s happened, first slowly, then all of a sudden. First, due to the pressure of advertising and sponsoring, the magazine slowly became a Microsoft-driven publication, even featuring more articles about .NET than their home-grown MSDN Magazine<sup>15</sup>.

But there were stronger forces at play. The rise of the World Wide Web meant the end of many printed computer magazines, unable to fight the proliferation of blogs, podcasts, and Stack Overflow questions. In 2009, the printed version of the magazine was discontinued, and in December 2014, almost 10 years ago, Andrew Binstock announced<sup>16</sup> the end of Dr. Dobb's Journal.

Since then, the website has slowly degraded, to the point that many articles are not available anymore, stripping huge swathes of history out of our collective memory. Shareholders surely enjoy taking<sup>17</sup> content offline because of TCO and returns, but they *love* stealing content<sup>18</sup> when it fits their agenda. Thankfully, we have the Internet Archive<sup>19</sup>. Please support them.

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<sup>5</sup><https://deprogrammaticaipsum.com/from-hypertext-to-spas-to-hypertext/>

<sup>6</sup><https://deprogrammaticaipsum.com/less-evangelization-more-honestization/>

<sup>7</sup><https://deprogrammaticaipsum.com/a-eulogy-for-schadenfreude/>

<sup>8</sup>[https://en.wikipedia.org/wiki/Verity\\_Stob](https://en.wikipedia.org/wiki/Verity_Stob)

<sup>9</sup><https://deprogrammaticaipsum.com/programming-the-liberal-arts/>

<sup>10</sup>[https://en.wikipedia.org/wiki/Tiny\\_BASIC](https://en.wikipedia.org/wiki/Tiny_BASIC)

<sup>11</sup><https://deprogrammaticaipsum.com/the-conquest-of-code/>

<sup>12</sup>[https://en.wikipedia.org/wiki/Forth\\_\(programming\\_language\)](https://en.wikipedia.org/wiki/Forth_(programming_language))

<sup>13</sup><https://deprogrammaticaipsum.com/the-hype-cycle-of-oop/>

<sup>14</sup><https://en.wikipedia.org/wiki/Enshittification>

<sup>15</sup><https://www.theverge.com/2019/8/7/20758249/microsoft-msdn-magazine-discontinues-systems-journal-internet-developer-three-decades>

<sup>16</sup><https://web.archive.org/web/20141216201457/https://www.drdoobs.com/architecture-and-design/farewell-dr-dobbs/240169421>

<sup>17</sup><https://www.hollywoodreporter.com/business/business-news/comedy-central-website-daily-show-clips-wiped-out-1235933345/>

<sup>18</sup><https://searchengineland.com/microsoft-web-content-freeware-443775>

<sup>19</sup><https://archive.org/>

If there is a single article from the magazine to read and re-read, that would undoubtedly be “We the people”<sup>20</sup>, written in 1991 by Jim Warren<sup>21</sup>, one of the founding editors of Dr. Dobb’s Journal, and also a host of the (often mentioned in this magazine) TV show “Computer Chronicles”<sup>22</sup>. Jim was rightfully described in a New York Times article<sup>23</sup> as “A Utopian With a Twinkle and an Idea: Online Democracy”.

People’s computers, accessing significant information about the People’s world, assure a Free People. Our electronic “intellectual assistants” can provide “power to the people” — not from the end of a gun, but, rather, by allowing citizens the practical opportunity to make knowledgeable, reasoned decisions about their person, family, community, state, nation, and world.

In these troubled times, we need more Jim Warrens than ever.

Dr. Dobb’s stood for so much more<sup>24</sup> than just computer code. The full collection of its first 15 years (from 1976 to 1990) is freely available on the Internet Archive<sup>25</sup> for our collective reading pleasure. Should you not know where to start your exploration, jump directly to the January 1980 issue<sup>26</sup>, entirely dedicated to the CP/M<sup>27</sup> operating system, and which starts with an article<sup>28</sup> by Gary Kildall<sup>29</sup> about the evolution of the first few years of the personal computer industry during the late 1970s.

Cover snapshot chosen by the author.

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<sup>20</sup><https://web.archive.org/web/20130119165843/http://www.drdoobbs.com/architecture-and-design/we-the-people-in-the-information-age/184408478>

<sup>21</sup>[https://en.wikipedia.org/wiki/Jim\\_Warren\\_\(computer\\_specialist\)](https://en.wikipedia.org/wiki/Jim_Warren_(computer_specialist))

<sup>22</sup><https://deprogrammaticaipsum.com/stewart-cheifet/>

<sup>23</sup><https://archive.ph/wmkAt>

<sup>24</sup><https://web.archive.org/web/20130115071523/http://www.drdoobbs.com/aboutus>

<sup>25</sup>[https://archive.org/details/dr\\_dobbs\\_journal](https://archive.org/details/dr_dobbs_journal)

<sup>26</sup>[https://archive.org/details/dr\\_dobbs\\_journal\\_vol\\_05\\_201803/page/n13/mode/2up](https://archive.org/details/dr_dobbs_journal_vol_05_201803/page/n13/mode/2up)

<sup>27</sup><http://www.cpm.z80.de/>

<sup>28</sup>[https://archive.org/details/dr\\_dobbs\\_journal\\_vol\\_05\\_201803/page/n15/mode/2up](https://archive.org/details/dr_dobbs_journal_vol_05_201803/page/n15/mode/2up)

<sup>29</sup><https://deprogrammaticaipsum.com/gary-kildall/>