Subject: Re: do some Americans write their 1's in this way ?
Posted by Harry Vaderchi on Sun, 06 Nov 2022 18:18:27 GMT

On Sun, 06 Nov 2022 11:12:52 -0700
Ken Blake <Ken@invalid.news.com> wrote:

> On Sat, 5 Nov 2022 12:12:23 -0700 (PDT), David Kleinecke
> <dkleinecke@gmail.com> wrote:
>
>> On Friday, November 4, 2022 at 10:08:06 AM UTC-7, Ken Blake wrote:
>>> On Fri, 4 Nov 2022 11:00:42 +0100, occam <oc...@nowhere.nix> wrote:
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>>>> >>>> In article <cd80f306-7e2c-4bb5...@googlegroups.com>,
>>>> >>>> henh...@gmail.com <henh...@gmail.com> wrote:
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>>>> >>>>> The numerals look French to me.
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>>>> work for?
>>> Howard Clothes, which no longer exists. We had an IBM 1401 computer,

>>> which was about the size of a large refrigerator, had no disk space
>>> and no screen, and was much slower, much less powerful, and had much
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>>> Add to its size its 1402 card reader/punch, its 1407 printer, and its
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>> But in the end
>> all the 1401 was used for was reading punched cards onto tapes and
>> tapes onto the printer. A line printer of course.

You need afc (if not already subscribed)

NB xpost!

--
Bah, and indeed Humbug.

Subject: Re: do some Americans write their 1's in this way ?
Posted by Dan Espen on Sun, 06 Nov 2022 22:10:06 GMT
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"Kerr-Mudd, John" <admin@127.0.0.1> writes:

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The IBM 1407 was a console, it had a printer but you wouldn't use it
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I knew about SPS but used Autocoder.

Many 1401s were used for a LOT more than card to tape.

It cost a lot to rent one of those things, but companies saved a fortune
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--
Dan Espen

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Posted by Dan Espen on Sun, 06 Nov 2022 22:18:40 GMT
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Dan Espen

Subject: Re: do some Americans write their 1's in this way ?
Posted by scott on Sun, 06 Nov 2022 22:22:32 GMT
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This one is still running at CHM:

http://ibm-1401.info/FullSizeRender-.jpg

Subject: Re: do some Americans write their 1's in this way ?
Posted by Anonymous on Mon, 07 Nov 2022 04:32:52 GMT
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Originally posted by: lar3ryca

On 2022-11-06 16:22, Scott Lurndal wrote:
> Dan Espen <dan1espen@gmail.com> writes:
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> This one is still running at CHM:

> http://ibm-1401.info/FullSizeRender-.jpg

I see a couple of 1403s in that shot. They were also used on the 360/370
series machines. I hated working on them.

--
A man, a plan, a canal. Suez!

Subject: Re: do some Americans write their 1's in this way ?
Posted by Dan Espen on Mon, 07 Nov 2022 04:46:52 GMT
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scott@slp53.sl.home (Scott Lurndal) writes:

> This one is still running at CHM:
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That's 2 systems. Very cool.

My school had a simple 1401. My first job they had a maxed out 1401 and
a 1460. Jobs would run on either one. Second job, they had a 1440 and
I found the wonderful world of hard disks.

--
Dan Espen

Subject: Re: do some Americans write their 1's in this way ?
Posted by Anonymous on Tue, 08 Nov 2022 21:42:42 GMT
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Originally posted by: Ken Blake

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> for volume printing. For that you'd use the 1403.

Yes, of course. I meant 1403. I have no idea why I remembered wrong
and wrote 1407. I'd like to claim it was a typo, but it wasn't. Thanks
for the correction.

I knew what the 1407 was, although I never worked anywhere that had
one. I think they were very uncommon.

> I knew about SPS but used Autocoder.
>
> Many 1401s were used for a LOT more than card to tape.
>
> It cost a lot to rent one of those things, but companies saved a fortune
> using one.

Yes.

Subject: Re: do some Americans write their 1's in this way ?
Posted by Anonymous on Tue, 08 Nov 2022 21:52:38 GMT
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Originally posted by: Ken Blake

On Sun, 06 Nov 2022 17:18:40 -0500, Dan Espen <dan1espen@gmail.com>
wrote:

> Dan Espen <dan1espen@gmail.com> writes:
>
>> "Kerr-Mudd, John" <admin@127.0.0.1> writes:
>>
>>> On Sun, 06 Nov 2022 11:12:52 -0700
>>> Ken Blake <Ken@invalid.news.com> wrote:
>>>
>>>> On Sat, 5 Nov 2022 12:12:23 -0700 (PDT), David Kleinecke
>>>> <dkleinecke@gmail.com> wrote:
>>>>
>>>> >On Friday, November 4, 2022 at 10:08:06 AM UTC-7, Ken Blake wrote:
>>>> >> On Fri, 4 Nov 2022 11:00:42 +0100, occam <oc...@nowhere.nix> wrote:
>>>> >>
>>>> >> >On 03/11/2022 17:17, Ken Blake wrote:
>>>> >> >> On Thu, 3 Nov 2022 11:26:15 +0100, occam <oc...@nowhere.nix> wrote:
>>>> >> >>
>>>> >> >>> On 02/11/2022 18:21, Jerry Friedman wrote:
>>>> >> >>>> On Wednesday, November 2, 2022 at 9:52:06 AM UTC-6, Garrett Wollman wrote:

>>>> >> >>>>> In article <cd80f306-7e2c-4bb5...@googlegroups.com>,
>>>> >> >>>>> henh...@gmail.com <henh...@gmail.com> wrote:
>>>> >> >>>>>> do some Americans write their 1's in this way ?
>>>> >> >>>>>>
>>>> >> >>>>>> https://i.redd.it/phpsw48kjfx91.jpg
>>>> >> >>>>>>
>>>> >> >>>>>> The numerals look French to me.
>>>> >> >>>>> I think many people who have lived in Europe will have picked up the
>>>> >> >>>>> habit of crossing sevens to keep them from being interpreted as ones
>>>> >> >>>>> -- and similarly z's and twos.
>>>> >> >>>> ...
>>>> >> >>>>
>>>> >> >>>> I've never lived in Europe, but I always cross my z's (a habit that was
>>>> >> >>>> necessary for me in math and physics) but not my 7's.
>>>> >> >>>>
>>>> >> >>>
>>>> >> >>>
>>>> >> >>> When I took my first programming course at university, in the days of
>>>> >> >>> punch-cards and hand-written code, I was told to cross my zeros (with a
>>>> >> >>> diagonal slash, Ø) in order to distinguish them from capital letter 'O's.
>>>> >> >>

>>>> >> >> There were no computer courses in college when I was a student (I
>>>> >> >> graduated in 1959) but I started programming professionally in 1962,
>>>> >> >> and that's what we did in those days, unless it was the letter that we
>>>> >> >> slashed; I can't remember for sure which it was.
>>>> >> >>
>>>> >> >
>>>> >> >When you say "when I started programming professionally", who did you
>>>> >> >work for?
>>>> >> Howard Clothes, which no longer exists. We had an IBM 1401 computer,
>>>> >> which was about the size of a large refrigerator, had no disk space
>>>> >> and no screen, and was much slower, much less powerful, and had much
>>>> >> less memory than the smart phone I now have in my pocket.
>>>> >>
>>>> >> Add to its size its 1402 card reader/punch, its 1407 printer, and its
>>>> >> four tape drives and it was bigger than the kitchen I now have.
>>>> >>
>>>> >> Its monthly rental cost was also much more than the purchase cost of
>>>> >> my smart phone, powerful desktop computer with 5TB of disk space, 34"
>>>> >> widescreen monitor, keyboard, mouse, scanner, printer, speakers,
>>>> >> router, modem, and UPS all added together.
>>>> >>
>>>> >> I programmed in SPS and later in Autocoder, both roughly 1401
>>>> >> equivalents of the later 360/370 Assembly Language.
>>>> >>
>>>> >> I worked there for four years before moving on to more responsible IT
>>>> >> positions in other companies.
>>>> >>
>>>> >The IBM 1401 I remember was a wonderfully weird machine.
>>>>
>>>> Weird? In what way?
>>>>
>>>>
>>>> > I used to
>>>> >code ours in the 1401 machine code. It was lots of fun.
>>>>
>>>> The only time I used machine code was for patching object code to fix
>>>> errors or make small requested changes. It was very difficult to get
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>>>> >But in the end
>>>> >all the 1401 was used for was reading punched cards onto tapes and
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>>>
>>> You need afc (if not already subscribed)
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>>> NB xpost!
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>> The IBM 1407 was a console, it had a printer but you wouldn't use it
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much memory it had. The 1.4 KB model was about the size of a
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big it was. The 4KB, 8KB, 12KB, and 16KB models were bigger, but not
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phrase "about the size of a large refrigerator" only as an
approximation. It was the closest common thing I thought of with a
similar size.

We started with a 4KB model, which was upgraded to 8KB and then 12KB.
We never went to 16KB, at least not before I left.

Subject: Re: do some Americans write their 1's in this way ?
Posted by Anonymous on Tue, 08 Nov 2022 22:03:17 GMT
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Originally posted by: Ken Blake

On Sun, 06 Nov 2022 22:22:32 GMT, scott@slp53.sl.home (Scott Lurndal)
wrote:

> Dan Espen <dan1espen@gmail.com> writes:
>> Dan Espen <dan1espen@gmail.com> writes:
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>>> "Kerr-Mudd, John" <admin@127.0.0.1> writes:
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>>>> > >> Its monthly rental cost was also much more than the purchase cost of
>>>> > >> my smart phone, powerful desktop computer with 5TB of disk space, 34"

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>>> Many 1401s were used for a LOT more than card to tape.
>>>
>>> It cost a lot to rent one of those things, but companies saved a fortune
>>> using one.
>>
>> Oh yeah, a 1401 would be a LOT larger than a refrigerator. Just the
>> main cabinet would be at least 3 refrigerators.
>>
>
> This one is still running at CHM:

What is CHM?

> http://ibm-1401.info/FullSizeRender-.jpg

I didn't know any 1401s still existed. That one has two 1403
printers-very unusual--and six tape drives--a lot.

For those here who don't recognize the devices, the printers are the
two on the left, the device on the right is a 1402 card-reader pinch.
the six devices against the wall in the back are tape drives. The 1401
is the device in the middle--wider than a refrigerator, but not as
tall as a big refrigerator today.

All those devices are connected to the 1401 by cables, but you can't
see them. They are sitting on a raised floor and the cables are under
that floor.

Subject: Re: do some Americans write their 1's in this way ?
Posted by Charlie Gibbs on Tue, 08 Nov 2022 22:42:30 GMT
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On 2022-11-08, Ken Blake <Ken@invalid.news.com> wrote:

> On Sun, 06 Nov 2022 22:22:32 GMT, scott@slp53.sl.home (Scott Lurndal)
> wrote:
>
>> This one is still running at CHM:
>
> What is CHM?

Computer History Museum

>> http://ibm-1401.info/FullSizeRender-.jpg

Nice photo.

> I didn't know any 1401s still existed. That one has two 1403
> printers-very unusual--and six tape drives--a lot.

Take a closer look in the background behind the leftmost 1403.
That looks like another processor cabinet. I suspect they have
two complete systems, each with a 1402, 1403, and three tape
drives. (Actually, the rightmost system has four tape drives -
the fourth is hiding behind someone but is just visible.)

--

```
/~\  Charlie Gibbs              |  Microsoft is a dictatorship.
\ /  <cgibbs@kltpzyxm.invalid>   |  Apple is a cult.
 X   I'm really at ac.dekanfrus  |  Linux is anarchy.
/ \  if you read it the right way. |  Pick your poison.
```

Subject: Re: do some Americans write their 1's in this way ?
Posted by Dan Espen on Wed, 09 Nov 2022 03:35:10 GMT

Ken Blake <Ken@invalid.news.com> writes:

> On Sun, 06 Nov 2022 17:10:06 -0500, Dan Espen <dan1espen@gmail.com>
> wrote:
>> The IBM 1407 was a console, it had a printer but you wouldn't use it
>> for volume printing. For that you'd use the 1403.
>
> Yes, of course. I meant 1403. I have no idea why I remembered wrong
> and wrote 1407. I'd like to claim it was a typo, but it wasn't. Thanks
> for the correction.
>
> I knew what the 1407 was, although I never worked anywhere that had
> one. I think they were very uncommon.

I never saw one on a 1401. The first company I worked at had a 1460
with a console.

--
Dan Espen

Subject: Re: do some Americans write their 1's in this way ?
Posted by Dan Espen on Wed, 09 Nov 2022 03:44:17 GMT

Ken Blake <Ken@invalid.news.com> writes:

> On Sun, 06 Nov 2022 17:18:40 -0500, Dan Espen <dan1espen@gmail.com>
> wrote:
>> Oh yeah, a 1401 would be a LOT larger than a refrigerator. Just the
>> main cabinet would be at least 3 refrigerators.
>
> I was talking about the main cabinet. How big it was depended on how
> much memory it had. The 1.4 KB model was about the size of a
> refrigerator. The next memory size was 2KB, and I don't remember how
> big it was. The 4KB, 8KB, 12KB, and 16KB models were bigger, but not
> as big as three refrigerators. Yes, bigger than one, but I used the

> phrase "about the size of a large refrigerator" only as an
> approximation. It was the closest common thing I thought of with a
> similar size.
>
> We started with a 4KB model, which was upgraded to 8KB and then 12KB.
> We never went to 16KB, at least not before I left.

Take another look at the picture.

1401s don't have bytes so it would be 4K, not 4KB.

It's been a REALLY long time, but all the models I remember had the same
size cabinet. I worked on the 1.4K model. If it had a smaller cabinet
I don't remember it.

--
Dan Espen

Subject: Re: do some Americans write their 1's in this way ?
Posted by Dan Espen on Wed, 09 Nov 2022 03:49:03 GMT

Charlie Gibbs <cgibbs@kltpzyxm.invalid> writes:

> On 2022-11-08, Ken Blake <Ken@invalid.news.com> wrote:
>
>> On Sun, 06 Nov 2022 22:22:32 GMT, scott@slp53.sl.home (Scott Lurndal)
>> wrote:
>>
>>> This one is still running at CHM:
>>
>> What is CHM?
>
> Computer History Museum
>
>>> http://ibm-1401.info/FullSizeRender-.jpg
>
> Nice photo.
>
>> I didn't know any 1401s still existed. That one has two 1403
>> printers-very unusual--and six tape drives--a lot.
>
> Take a closer look in the background behind the leftmost 1403.
> That looks like another processor cabinet. I suspect they have
> two complete systems, each with a 1402, 1403, and three tape
> drives. (Actually, the rightmost system has four tape drives -
> the fourth is hiding behind someone but is just visible.)

Agree, that picture shows 2 systems.

A single 1401 wouldn't have any way to use 2 printers.

--
Dan Espen

Subject: Re: do some Americans write their 1's in this way ?
Posted by Anonymous on Wed, 09 Nov 2022 05:21:53 GMT
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Originally posted by: lar3ryca

On 2022-11-08 16:42, Charlie Gibbs wrote:
> On 2022-11-08, Ken Blake <Ken@invalid.news.com> wrote:
>
>> On Sun, 06 Nov 2022 22:22:32 GMT, scott@slp53.sl.home (Scott Lurndal)
>> wrote:
>>
>>> This one is still running at CHM:
>>
>> What is CHM?
>
> Computer History Museum
>
>>> http://ibm-1401.info/FullSizeRender-.jpg
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> Nice photo.
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> Take a closer look in the background behind the leftmost 1403.
> That looks like another processor cabinet. I suspect they have
> two complete systems, each with a 1402, 1403, and three tape
> drives. (Actually, the rightmost system has four tape drives -
> the fourth is hiding behind someone but is just visible.)

Charlie Gibbs of Panorama fame?

--
I got tired of being accused of having no sense of direction,
so I packed up my things and right.

Subject: Re: do some Americans write their 1's in this way ?
Posted by Peter Flass on Wed, 09 Nov 2022 13:04:46 GMT

Dan Espen <dan1espen@gmail.com> wrote:
> Ken Blake <Ken@invalid.news.com> writes:
>
>> On Sun, 06 Nov 2022 17:18:40 -0500, Dan Espen <dan1espen@gmail.com>
>> wrote:
>>> Oh yeah, a 1401 would be a LOT larger than a refrigerator. Just the
>>> main cabinet would be at least 3 refrigerators.
>>
>> I was talking about the main cabinet. How big it was depended on how
>> much memory it had. The 1.4 KB model was about the size of a
>> refrigerator. The next memory size was 2KB, and I don't remember how
>> big it was. The 4KB, 8KB, 12KB, and 16KB models were bigger, but not
>> as big as three refrigerators. Yes, bigger than one, but I used the
>> phrase "about the size of a large refrigerator" only as an
>> approximation. It was the closest common thing I thought of with a
>> similar size.
>>
>> We started with a 4KB model, which was upgraded to 8KB and then 12KB.
>> We never went to 16KB, at least not before I left.
>
> Take another look at the picture.
>
> 1401s don't have bytes so it would be 4K, not 4KB.

I think that the "K" there is decimal, i.e. 4,000 characters (4KC?) not
4,096 - or is that digits?

Actually, "byte" is really an unspecified number of bits, although nowadays
it's conventionally 8. Normally a byte is a glob large enough to hold a
character, so six bits could be a byte.

>
> It's been a REALLY long time, but all the models I remember had the same
> size cabinet. I worked on the 1.4K model. If it had a smaller cabinet
> I don't remember it.
>

--
Pete

Subject: Re: do some Americans write their 1's in this way ?

Posted by Dan Espen on Wed, 09 Nov 2022 14:06:21 GMT

Peter Flass <peter_flass@yahoo.com> writes:

> Dan Espen <dan1espen@gmail.com> wrote:
>> Ken Blake <Ken@invalid.news.com> writes:
>>
>>> On Sun, 06 Nov 2022 17:18:40 -0500, Dan Espen <dan1espen@gmail.com>
>>> wrote:
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> I think that the "K" there is decimal, i.e. 4,000 characters (4KC?) not
> 4,096 - or is that digits?

Yes, 4,000 characters.

> Actually, "byte" is really an unspecified number of bits, although nowadays
> it's conventionally 8. Normally a byte is a glob large enough to hold a
> character, so six bits could be a byte.

Until S/360 was announced I never heard the term byte.

--
Dan Espen

Subject: Re: do some Americans write their 1's in this way ?
Posted by Anonymous on Wed, 09 Nov 2022 18:11:39 GMT

Originally posted by: Tak To

On 11/9/2022 9:06 AM, Dan Espen wrote:
> Peter Flass <peter_flass@yahoo.com> writes:
>
>> Dan Espen <dan1espen@gmail.com> wrote:
>>> Ken Blake <Ken@invalid.news.com> writes:
>>>
>>>> On Sun, 06 Nov 2022 17:18:40 -0500, Dan Espen <dan1espen@gmail.com>
>>>> wrote:
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> Yes, 4,000 characters.
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>> Actually, "byte" is really an unspecified number of bits, although nowadays
>> it's conventionally 8. Normally a byte is a glob large enough to hold a
>> character, so six bits could be a byte.
>
> Until S/360 was announced I never heard the term byte.

And not until the PDP-11 did it cross the EBCDIC-Ascii or the
mainframe-mini boundary.

--
Tak
 --- ----+-----
Tak To   takto@alum.mit.eduxx
 --- -------^^

Subject: Re: do some Americans write their 1's in this way ?
Posted by Charlie Gibbs on Wed, 09 Nov 2022 18:36:22 GMT
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On 2022-11-09, lar3ryca <larry@invalid.ca> wrote:

> On 2022-11-08 16:42, Charlie Gibbs wrote:
>
>> Take a closer look in the background behind the leftmost 1403.
>> That looks like another processor cabinet. I suspect they have
>> two complete systems, each with a 1402, 1403, and three tape
>> drives. (Actually, the rightmost system has four tape drives -
>> the fourth is hiding behind someone but is just visible.)
>
> Charlie Gibbs of Panorama fame?

Are you _that_ Larry?

I'm still living in the same place, but I'm running Linux now.
Although I still have four Amigas in storage...

--
/~\ Charlie Gibbs | Microsoft is a dictatorship.
\ / <cgibbs@kltpzyxm.invalid> | Apple is a cult.
 X   I'm really at ac.dekanfrus | Linux is anarchy.
/ \ if you read it the right way. | Pick your poison.

Subject: Re: do some Americans write their 1's in this way ?
Posted by Anonymous on Wed, 09 Nov 2022 19:06:21 GMT
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Originally posted by: lar3ryca

On 2022-11-09 12:36, Charlie Gibbs wrote:
> On 2022-11-09, lar3ryca <larry@invalid.ca> wrote:
>
>> On 2022-11-08 16:42, Charlie Gibbs wrote:
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> Are you _that_ Larry?

Indeed. That be me.

> I'm still living in the same place, but I'm running Linux now.
> Although I still have four Amigas in storage...

Biggest mistake I ever made was to throw all my Amigas out.

I am also using Linux now.
I spent WAY too long running Windows for work, and finally got totally
fed up with it.

--
The best way to accelerate a Windows machine is at 32 ft/sec/sec.

Subject: Re: do some Americans write their 1's in this way ?
Posted by Anonymous on Wed, 09 Nov 2022 19:49:58 GMT
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Originally posted by: greymaus

On 2022-11-09, lar3ryca <larry@invalid.ca> wrote:
> On 2022-11-09 12:36, Charlie Gibbs wrote:
>> On 2022-11-09, lar3ryca <larry@invalid.ca> wrote:
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>
> I am also using Linux now.
> I spent WAY too long running Windows for work, and finally got totally
> fed up with it.
>

Present hate. Foss IRC was easy, and one could type while reading
earlier texts. Zoom reminds me of Goebbels screaming at a captive
audience.

--
greymausg@mail.com

Fe, Fi, Fo, Fum, I smell the stench of an Influencer.
Where is our money gone, Dude?

Subject: Re: do some Americans write their 1's in this way ?
Posted by Anonymous on Wed, 09 Nov 2022 20:46:30 GMT
View Forum Message <> Reply to Message

Originally posted by: Ken Blake

On Tue, 08 Nov 2022 22:42:30 GMT, Charlie Gibbs
<cgibbs@kltpzyxm.invalid> wrote:

> On 2022-11-08, Ken Blake <Ken@invalid.news.com> wrote:
>
>> On Sun, 06 Nov 2022 22:22:32 GMT, scott@slp53.sl.home (Scott Lurndal)
>> wrote:
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>> What is CHM?
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> Computer History Museum

Thanks. I had never heard of it before.

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>>> http://ibm-1401.info/FullSizeRender-.jpg
>
> Nice photo.

Yes.

>> I didn't know any 1401s still existed. That one has two 1403
>> printers-very unusual--and six tape drives--a lot.
>
> Take a closer look in the background behind the leftmost 1403.
> That looks like another processor cabinet.

Yes, that you mention it, I'm almost sure you're right. And I think
that's another 1402 in front of it.

> I suspect they have
> two complete systems, each with a 1402, 1403, and three tape
> drives.

Yes.

> (Actually, the rightmost system has four tape drives -
> the fourth is hiding behind someone but is just visible.)

Yes.

Subject: Re: do some Americans write their 1's in this way ?
Posted by Anonymous on Wed, 09 Nov 2022 20:48:03 GMT
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Originally posted by: Ken Blake

On Tue, 08 Nov 2022 22:49:03 -0500, Dan Espen <dan1espen@gmail.com>
wrote:

> Charlie Gibbs <cgibbs@kltpzyxm.invalid> writes:
>
>> On 2022-11-08, Ken Blake <Ken@invalid.news.com> wrote:
>>
>>> On Sun, 06 Nov 2022 22:22:32 GMT, scott@slp53.sl.home (Scott Lurndal)
>>> wrote:
>>>
>>>> This one is still running at CHM:
>>>
>>> What is CHM?
>>
>> Computer History Museum
>>

>>>> http://ibm-1401.info/FullSizeRender-.jpg
>>
>> Nice photo.
>>
>>> I didn't know any 1401s still existed. That one has two 1403
>>> printers-very unusual--and six tape drives--a lot.
>>
>> Take a closer look in the background behind the leftmost 1403.
>> That looks like another processor cabinet. I suspect they have
>> two complete systems, each with a 1402, 1403, and three tape
>> drives. (Actually, the rightmost system has four tape drives -
>> the fourth is hiding behind someone but is just visible.)
>
> Agree, that picture shows 2 systems.
>
> A single 1401 wouldn't have any way to use 2 printers.

I didn't give it any thought when I posted my previous message, but
now that you mention it, I'm sure you're right.

Subject: Re: do some Americans write their 1's in this way ?
Posted by Anonymous on Wed, 09 Nov 2022 21:07:30 GMT
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Originally posted by: Ken Blake

On Tue, 08 Nov 2022 22:44:17 -0500, Dan Espen <dan1espen@gmail.com>
wrote:

> Ken Blake <Ken@invalid.news.com> writes:
>
>> On Sun, 06 Nov 2022 17:18:40 -0500, Dan Espen <dan1espen@gmail.com>
>> wrote:
>>> Oh yeah, a 1401 would be a LOT larger than a refrigerator. Just the
>>> main cabinet would be at least 3 refrigerators.
>>
>> I was talking about the main cabinet. How big it was depended on how
>> much memory it had. The 1.4 KB model was about the size of a
>> refrigerator. The next memory size was 2KB, and I don't remember how
>> big it was. The 4KB, 8KB, 12KB, and 16KB models were bigger, but not
>> as big as three refrigerators. Yes, bigger than one, but I used the
>> phrase "about the size of a large refrigerator" only as an
>> approximation. It was the closest common thing I thought of with a
>> similar size.
>>
>> We started with a 4KB model, which was upgraded to 8KB and then 12KB.

>> We never went to 16KB, at least not before I left.
>
> Take another look at the picture.
>
> 1401s don't have bytes so it would be 4K, not 4KB.

Right. Its characters weren't called bytes, and they had only six bits
(and a seventh bit called a word mark), so I suppose K is more
accurate than KB, but I just used the common abbreviation KB that I
thought most people would understand.

Also a 4K machine had only 4000 characters, not 4096. That 96
character difference sounds like very little, but with so little
memory, an extra 96 would have my life much easier.

> It's been a REALLY long time, but all the models I remember had the same
> size cabinet. I worked on the 1.4K model. If it had a smaller cabinet
> I don't remember it.

It's been a REALLY long time for me too--1966. I never worked on a
1.4K 1401 and I don't think I even ever saw one, but I saw pictures of
one, and I'm almost sure I remember correctly. Look at the vertical
line in the center of the 1401 in the middle of the picture. A 1.4K
1401 cabinet was like just what's on the left side of that line.

Subject: Re: do some Americans write their 1's in this way ?
Posted by Anonymous on Wed, 09 Nov 2022 21:16:41 GMT
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Originally posted by: Ken Blake

On Wed, 9 Nov 2022 06:04:46 -0700, Peter Flass <peter_flass@yahoo.com>
wrote:

> Dan Espen <dan1espen@gmail.com> wrote:
>> Ken Blake <Ken@invalid.news.com> writes:
>>
>>> On Sun, 06 Nov 2022 17:18:40 -0500, Dan Espen <dan1espen@gmail.com>
>>> wrote:
>>>> Oh yeah, a 1401 would be a LOT larger than a refrigerator. Just the
>>>> main cabinet would be at least 3 refrigerators.
>>>
>>> I was talking about the main cabinet. How big it was depended on how
>>> much memory it had. The 1.4 KB model was about the size of a
>>> refrigerator. The next memory size was 2KB, and I don't remember how

>>> big it was. The 4KB, 8KB, 12KB, and 16KB models were bigger, but not
>>> as big as three refrigerators. Yes, bigger than one, but I used the
>>> phrase "about the size of a large refrigerator" only as an
>>> approximation. It was the closest common thing I thought of with a
>>> similar size.
>>>
>>> We started with a 4KB model, which was upgraded to 8KB and then 12KB.
>>> We never went to 16KB, at least not before I left.
>>
>> Take another look at the picture.
>>
>> 1401s don't have bytes so it would be 4K, not 4KB.
>

Yes.

> (4KC?)

I suppose that could have been the abbreviation, but it was never
used. At least I've never seen or heard it.

> not 4,096 -

Right.

> or is that digits?

Most (all?) people said characters. Since each could contain a
letter, a number, or a special character, "digit" isn't really an
appropriate name.

Is it? I'm not sure. I just did a web search. I found some sites that
said what you said, and some that said it's always 8, which is what I
would have said.

> although nowadays

In my experience it's always been 8.

> Normally a byte is a glob large enough to hold a
> character, so six bits could be a byte.
>
>>
>> It's been a REALLY long time, but all the models I remember had the same
>> size cabinet. I worked on the 1.4K model. If it had a smaller cabinet
>> I don't remember it.
>>

Subject: Re: do some Americans write their 1's in this way ?
Posted by Charlie Gibbs on Wed, 09 Nov 2022 21:32:11 GMT
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On 2022-11-09, lar3ryca <larry@invalid.ca> wrote:

> Biggest mistake I ever made was to throw all my Amigas out.

Would you like one or two?

> I am also using Linux now.
> I spent WAY too long running Windows for work, and finally got totally
> fed up with it.

I'm still at it. I like to say that my software doesn't so much run
under Windows as despite it. However, I also build Linux versions,
and we have a few Linux customers out there. Hopefully there will
be more.

To build and test my stuff, I run XP under VirtualBox. XP is the
last version of Windows that I can tolerate at all, and if my stuff
runs there it'll run under whatever newer version our customers are
afflicted with. The front-end stuff has been taken over by someone
else, so I don't need get into all that fluff - I just sit in the
background doing the heavy lifting, and communicate with the world
via sockets.

--
/~\ Charlie Gibbs | Microsoft is a dictatorship.
\ / <cgibbs@kltpzyxm.invalid> | Apple is a cult.
 X   I'm really at ac.dekanfrus | Linux is anarchy.
/ \ if you read it the right way. | Pick your poison.

Subject: Re: do some Americans write their 1's in this way ?
Posted by Anonymous on Wed, 09 Nov 2022 22:35:28 GMT
View Forum Message <> Reply to Message

Originally posted by: Ken Blake

On Wed, 09 Nov 2022 09:06:21 -0500, Dan Espen <dan1espen@gmail.com>
wrote:

> Peter Flass <peter_flass@yahoo.com> writes:
>
>> Dan Espen <dan1espen@gmail.com> wrote:
>>> Ken Blake <Ken@invalid.news.com> writes:
>>>
>>>> On Sun, 06 Nov 2022 17:18:40 -0500, Dan Espen <dan1espen@gmail.com>
>>>> wrote:
>>>> > Oh yeah, a 1401 would be a LOT larger than a refrigerator. Just the
>>>> > main cabinet would be at least 3 refrigerators.
>>>>
>>>> I was talking about the main cabinet. How big it was depended on how
>>>> much memory it had. The 1.4 KB model was about the size of a
>>>> refrigerator. The next memory size was 2KB, and I don't remember how
>>>> big it was. The 4KB, 8KB, 12KB, and 16KB models were bigger, but not
>>>> as big as three refrigerators. Yes, bigger than one, but I used the
>>>> phrase "about the size of a large refrigerator" only as an
>>>> approximation. It was the closest common thing I thought of with a
>>>> similar size.
>>>>
>>>> We started with a 4KB model, which was upgraded to 8KB and then 12KB.
>>>> We never went to 16KB, at least not before I left.
>>>
>>> Take another look at the picture.
>>>
>>> 1401s don't have bytes so it would be 4K, not 4KB.
>>
>> 4,096 - or is that digits?
>
> Yes, 4,000 characters.
>

>> character, so six bits could be a byte.
>
> Until S/360 was announced I never heard the term byte.

Nor had I.

Page 35 of 96 ---- Generated from   Megalextoria

Subject: Re: do some Americans write their 1's in this way ?
Posted by Anonymous on Thu, 10 Nov 2022 05:29:36 GMT
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Originally posted by: lar3ryca

On 2022-11-09 15:32, Charlie Gibbs wrote:
> On 2022-11-09, lar3ryca <larry@invalid.ca> wrote:
>
>> Biggest mistake I ever made was to throw all my Amigas out.
>
> Would you like one or two?

Gasp! Two, please.
What would you want for them?
And how should I contact you?

>> I am also using Linux now.
>> I spent WAY too long running Windows for work, and finally got totally
>> fed up with it.
>
> I'm still at it. I like to say that my software doesn't so much run
> under Windows as despite it. However, I also build Linux versions,
> and we have a few Linux customers out there. Hopefully there will
> be more.
>
> To build and test my stuff, I run XP under VirtualBox. XP is the
> last version of Windows that I can tolerate at all, and if my stuff
> runs there it'll run under whatever newer version our customers are
> afflicted with. The front-end stuff has been taken over by someone
> else, so I don't need get into all that fluff - I just sit in the
> background doing the heavy lifting, and communicate with the world
> via sockets.

Sounds like you're still having fun.

I still have a Windows box, it's on the same LAN as one of my Linux
boxes. I need it for my call recording software and for Adobe Digital
Editions, neither of which have a Linux version

My other Linux machine is a Pi4 on my second IP address.

--
A: Because it messes up the order in which people normally read text.
Q: Why is top-posting such a bad thing?
A: Top-posting.
Q: What is the most annoying thing on usenet and in e-mail?

Subject: Re: do some Americans write their 1's in this way ?
Posted by Peter Flass on Thu, 10 Nov 2022 13:40:14 GMT
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Dan Espen <dan1espen@gmail.com> wrote:
> Peter Flass <peter_flass@yahoo.com> writes:
>
>> Dan Espen <dan1espen@gmail.com> wrote:
>>> Ken Blake <Ken@invalid.news.com> writes:
>>>
>>>> On Sun, 06 Nov 2022 17:18:40 -0500, Dan Espen <dan1espen@gmail.com>
>>>> wrote:
>>>> > Oh yeah, a 1401 would be a LOT larger than a refrigerator. Just the
>>>> > main cabinet would be at least 3 refrigerators.
>>>>
>>>> I was talking about the main cabinet. How big it was depended on how
>>>> much memory it had. The 1.4 KB model was about the size of a
>>>> refrigerator. The next memory size was 2KB, and I don't remember how
>>>> big it was. The 4KB, 8KB, 12KB, and 16KB models were bigger, but not
>>>> as big as three refrigerators. Yes, bigger than one, but I used the
>>>> phrase "about the size of a large refrigerator" only as an
>>>> approximation. It was the closest common thing I thought of with a
>>>> similar size.
>>>>
>>>> We started with a 4KB model, which was upgraded to 8KB and then 12KB.
>>>> We never went to 16KB, at least not before I left.
>>>
>>> Take another look at the picture.
>>>
>>> 1401s don't have bytes so it would be 4K, not 4KB.
>>
>> I think that the "K" there is decimal, i.e. 4,000 characters (4KC?) not
>> 4,096 - or is that digits?
>
> Yes, 4,000 characters.
>
>> Actually, "byte" is really an unspecified number of bits, although nowadays
>> it's conventionally 8. Normally a byte is a glob large enough to hold a
>> character, so six bits could be a byte.
>
> Until S/360 was announced I never heard the term byte.
>

I'd have to look it up to see where it came from. I know the PDP-10 had the
ability to handle various byte sizes, and I think they used the term. I
think systems with 36-bit words that stored characters in 9 bits may have
called them bytes. "Characters" was the term of art earlier.

--

Pete

___

Subject: Re: do some Americans write their 1's in this way ?
Posted by Peter Flass on Thu, 10 Nov 2022 13:40:15 GMT
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Charlie Gibbs <cgibbs@kltpzyxm.invalid> wrote:
> On 2022-11-09, lar3ryca <larry@invalid.ca> wrote:
>
>> Biggest mistake I ever made was to throw all my Amigas out.
>
> Would you like one or two?
>
>> I am also using Linux now.
>> I spent WAY too long running Windows for work, and finally got totally
>> fed up with it.
>
> I'm still at it. I like to say that my software doesn't so much run
> under Windows as despite it. However, I also build Linux versions,
> and we have a few Linux customers out there. Hopefully there will
> be more.
>
> To build and test my stuff, I run XP under VirtualBox. XP is the
> last version of Windows that I can tolerate at all, and if my stuff
> runs there it'll run under whatever newer version our customers are
> afflicted with. The front-end stuff has been taken over by someone
> else, so I don't need get into all that fluff - I just sit in the
> background doing the heavy lifting, and communicate with the world
> via sockets.
>

XP wasn't too bad. When I shared a machine with Spouse she needed to have
'Doz, so I used that a bit. I have it now on VirtualBox because I
occasionally have to use Windows PL/I to see how something is supposed to
work. I had some games I used to play, some day I'll install them on XP,
too.

--
Pete

___

Subject: Re: do some Americans write their 1's in this way ?
Posted by D.J. on Thu, 10 Nov 2022 16:57:36 GMT
View Forum Message <> Reply to Message

On Wed, 9 Nov 2022 13:06:21 -0600, lar3ryca <larry@invalid.ca> wrote:

> On 2022-11-09 12:36, Charlie Gibbs wrote:
>> On 2022-11-09, lar3ryca <larry@invalid.ca> wrote:
>>
>>> On 2022-11-08 16:42, Charlie Gibbs wrote:
>>>
>>>> Take a closer look in the background behind the leftmost 1403.
>>>> That looks like another processor cabinet. I suspect they have
>>>> two complete systems, each with a 1402, 1403, and three tape
>>>> drives. (Actually, the rightmost system has four tape drives -
>>>> the fourth is hiding behind someone but is just visible.)
>>>
>>> Charlie Gibbs of Panorama fame?
>>
>> Are you _that_ Larry?
>
> Indeed. That be me.
>
>> I'm still living in the same place, but I'm running Linux now.
>> Although I still have four Amigas in storage...
>
> Biggest mistake I ever made was to throw all my Amigas out.
>
> I am also using Linux now.
> I spent WAY too long running Windows for work, and finally got totally
> fed up with it.

There appears to be a Pi emulator for Amiga, along with an SD card
drive that can hold hundreds of programs. I wonder if my Fred Fish
floppies will fit ?
--
Jim

Subject: Re: do some Americans write their 1's in this way ?
Posted by Anonymous on Thu, 10 Nov 2022 17:04:21 GMT
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Originally posted by: Tak To

On 11/10/2022 8:40 AM, Peter Flass wrote:
> Dan Espen <dan1espen@gmail.com> wrote:
>> Peter Flass <peter_flass@yahoo.com> writes:
>>> [...]
>>> Actually, "byte" is really an unspecified number of bits, although nowadays
>>> it's conventionally 8. Normally a byte is a glob large enough to hold a
>>> character, so six bits could be a byte.
>>
>> Until S/360 was announced I never heard the term byte.

>
> I'd have to look it up to see where it came from. I know the PDP-10 had the
> ability to handle various byte sizes, and I think they used the term.

Yes, but

 - The PDP-10 came out a couple of years after the S/360.

 - "Byte" for PDP-10 is not specifically intended for representing
   characters. It is just any chunk that is smaller than a 36-bit
   word.

 - The PDP-10 can extract a byte (into a 36-bit register) with a
   single instruction via a 36-bit pointer, but is not really
   byte-addressable. I.e., the memory address lines are still
   word granular.

whereas for the s/360

 - byte is specifically for representing an EBCDIC character; or
   two BCD (binary coded decimal) digits

 - address lines are byte-granular (and thus the s/360 can have
   variable length instructions, which is the real payout)

> think systems with 36-bit words that stored characters in 9 bits may have
> called them bytes. "Characters" was the term of art earlier.

The only system I know of that fits that description is Multics,
and I don't remember how those 9-bit entities were called.

Around MIT's ITS (PDP-10) environs, a 7-bit ASCII character was
simply an ASCII character. ASCII characters were generally
packed 5 to a 36-bit word.

--
Tak

 --- ----+-----
Tak To   takto@alum.mit.eduxx
 --- --------^^
 [taode takto ~{LU5B~}]   NB: trim the xx to get my real email addr

---

Subject: Re: do some Americans write their 1's in this way ?
Posted by Charlie Gibbs on Thu, 10 Nov 2022 19:08:37 GMT
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On 2022-11-10, lar3ryca <larry@invalid.ca> wrote:

> On 2022-11-09 15:32, Charlie Gibbs wrote:
>
>> On 2022-11-09, lar3ryca <larry@invalid.ca> wrote:
>>
>>> Biggest mistake I ever made was to throw all my Amigas out.
>>
>> Would you like one or two?
>
> Gasp! Two, please.
> What would you want for them?
> And how should I contact you?

E-mail me. See my .sig.

--
/~\ Charlie Gibbs | Microsoft is a dictatorship.
\ / <cgibbs@kltpzyxm.invalid> | Apple is a cult.
 X I'm really at ac.dekanfrus | Linux is anarchy.
/ \ if you read it the right way. | Pick your poison.

Subject: Re: do some Americans write their 1's in this way ?
Posted by Anonymous on Thu, 10 Nov 2022 21:09:59 GMT
View Forum Message <> Reply to Message

Originally posted by: Vir Campestris

On 10/11/2022 17:04, Tak To wrote:
> On 11/10/2022 8:40 AM, Peter Flass wrote:
>> Dan Espen <dan1espen@gmail.com> wrote:
>>> Peter Flass <peter_flass@yahoo.com> writes:
>>>> [...]
>>>> Actually, "byte" is really an unspecified number of bits, although nowadays
>>>> it's conventionally 8. Normally a byte is a glob large enough to hold a
>>>> character, so six bits could be a byte.
>>>
>>> Until S/360 was announced I never heard the term byte.
>>
>> I'd have to look it up to see where it came from. I know the PDP-10 had the
>> ability to handle various byte sizes, and I think they used the term.
>
> Yes, but
>
>   - The PDP-10 came out a couple of years after the S/360.
>
>   - "Byte" for PDP-10 is not specifically intended for representing
>   characters. It is just any chunk that is smaller than a 36-bit

>   word.
>
>   - The PDP-10 can extract a byte (into a 36-bit register) with a
>   single instruction via a 36-bit pointer, but is not really
>   byte-addressable. I.e., the memory address lines are still
>   word granular.
>
> whereas for the s/360
>
>   - byte is specifically for representing an EBCDIC character; or
>   two BCD (binary coded decimal) digits
>
>   - address lines are byte-granular (and thus the s/360 can have
>   variable length instructions, which is the real payout)
>
>> think systems with 36-bit words that stored characters in 9 bits may have
>> called them bytes. "Characters" was the term of art earlier.
>
> The only system I know of that fits that description is Multics,
> and I don't remember how those 9-bit entities were called.
>
> Around MIT's ITS (PDP-10) environs, a 7-bit ASCII character was
> simply an ASCII character. ASCII characters were generally
> packed 5 to a 36-bit word.
>
PDP-10 is a long time ago, but I don't recall any byte type stuff.
Strings were as you say packed as 5x7-bit chars in a word. And there
were SIXBIT strings too - 6-bit characters, as used in filenames.

I can't recall anything that allowed you to pull parts of words out.

Andy

Subject: Re: do some Americans write their 1's in this way ?
Posted by Anonymous on Thu, 10 Nov 2022 21:45:43 GMT
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Originally posted by: Anders D. Nygaard

Den 10-11-2022 kl. 18:04 skrev Tak To:
> On 11/10/2022 8:40 AM, Peter Flass wrote:
>> [... I ...]
>> think systems with 36-bit words that stored characters in 9 bits may have
>> called them bytes. "Characters" was the term of art earlier.
>
> The only system I know of that fits that description is Multics,
> and I don't remember how those 9-bit entities were called.

My memory is *very* hazy, but the system I used in my first year
at university answers to that description.
I'm fairly sure it was a UNIVAC; probably a model 1100.

Since then, every byte I've come across has been 8 bits.

/Anders, Denmark

Subject: Re: do some Americans write their 1's in this way ?
Posted by Anonymous on Thu, 10 Nov 2022 23:18:15 GMT

Originally posted by: Bob Eager

On Thu, 10 Nov 2022 21:09:59 +0000, Vir Campestris wrote:

> PDP-10 is a long time ago, but I don't recall any byte type stuff.
> Strings were as you say packed as 5x7-bit chars in a word. And there
> were SIXBIT strings too - 6-bit characters, as used in filenames.
>
> I can't recall anything that allowed you to pull parts of words out.

It had byte pointers which allowed such selection.

 http://pdp10.nocrew.org/docs/instruction-set/Byte.html

It was also true on the PDP-6, and that came out the same year as the IBM
360 (1964).

--
Using UNIX since v6 (1975)...

Use the BIG mirror service in the UK:
 http://www.mirrorservice.org

Subject: Re: do some Americans write their 1's in this way ?
Posted by Rich Alderson on Fri, 11 Nov 2022 03:42:21 GMT

Tak To <takto@alum.mit.eduxx> writes:

> On 11/10/2022 8:40 AM, Peter Flass wrote:
>> Dan Espen <dan1espen@gmail.com> wrote:

>>> Peter Flass <peter_flass@yahoo.com> writes:
>>>> [...]
>>>> Actually, "byte" is really an unspecified number of bits, although nowadays
>>>> it's conventionally 8. Normally a byte is a glob large enough to hold a
>>>> character, so six bits could be a byte.
>>>
>>> Until S/360 was announced I never heard the term byte.
>>
>> I'd have to look it up to see where it came from. I know the PDP-10 had the
>> ability to handle various byte sizes, and I think they used the term.
>
> Yes, but
>
> - The PDP-10 came out a couple of years after the S/360.

The PDP-6 is the origin of the architecture. It was announced in March 1964 in
Business Week, 3 weeks before the announcement of the IBM System/360 in April.

First customer ship of the PDP-6 was in June 1964; FCS of the System/360 was in
October 1965.

> - "Byte" for PDP-10 is not specifically intended for representing
>   characters. It is just any chunk that is smaller than a 36-bit
>   word.

The original definition of a byte, in signal processing, was "a collection of
bits", and had nothing to do with characters, or memory words.

The PDP-6 usage of the term is based on that original definition.

> - The PDP-10 can extract a byte (into a 36-bit register) with a
>   single instruction via a 36-bit pointer, but is not really
>   byte-addressable. I.e., the memory address lines are still
>   word granular.

No one ever said that was addressable at the character level!

 [snip irrelevancies]

>> think systems with 36-bit words that stored characters in 9 bits may have
>> called them bytes. "Characters" was the term of art earlier.

> The only system I know of that fits that description is Multics,
> and I don't remember how those 9-bit entities were called.

They were called "characters", as were 6 bit entities.

> Around MIT's ITS (PDP-10) environs, a 7-bit ASCII character was simply an

> ASCII character. ASCII characters were generally packed 5 to a 36-bit word.

That is also the format for ASCII text in the DEC operating systems for the
PDP-6 (on which ITS originally ran) and PDP-10. Nothing special about MIT
here.

And the 7 bit entities treated as ASCII characters are called "bytes" when
manipulating them with byte pointers in the relevant instructions.

--
Rich Alderson   news@alderson.users.panix.com
    Audendum est, et veritas investiganda; quam etiamsi non assequamur,
  omnino tamen proprius, quam nunc sumus, ad eam perveniemus.
        --Galen

Subject: Re: do some Americans write their 1's in this way ?
Posted by Rich Alderson on Fri, 11 Nov 2022 03:45:56 GMT

Vir Campestris <vir.campestris@invalid.invalid> writes:

> PDP-10 is a long time ago, but I don't recall any byte type stuff.
> Strings were as you say packed as 5x7-bit chars in a word. And there
> were SIXBIT strings too - 6-bit characters, as used in filenames.

> I can't recall anything that allowed you to pull parts of words out.

Then that's a function of your failing memory.

The PDP-6/10 instruction set includes LDB, DPB, ILDB, and IDPB: Load byte
pointed to by the byte pointer addressed in the instruction, deposit byte to
the addressed byte pointer, increment the byte pointer and load the noewly
addressed byte, increment the byte pointer and deposit into the newly addressed
byte location.

Bytes may be any size from 1 to 36 bits.

--
Rich Alderson   news@alderson.users.panix.com
    Audendum est, et veritas investiganda; quam etiamsi non assequamur,
  omnino tamen proprius, quam nunc sumus, ad eam perveniemus.
        --Galen

Subject: Re: do some Americans write their 1's in this way ?
Posted by Rich Alderson on Fri, 11 Nov 2022 03:47:11 GMT

"Anders D. Nygaard" <news2012adn@gmail.com> writes:

> Den 10-11-2022 kl. 18:04 skrev Tak To:
>> On 11/10/2022 8:40 AM, Peter Flass wrote:
>>> [... I ...]
>>> think systems with 36-bit words that stored characters in 9 bits may have
>>> called them bytes. "Characters" was the term of art earlier.
>>
>> The only system I know of that fits that description is Multics,
>> and I don't remember how those 9-bit entities were called.
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> My memory is *very* hazy, but the system I used in my first year
> at university answers to that description.
> I'm fairly sure it was a UNIVAC; probably a model 1100.
>
> Since then, every byte I've come across has been 8 bits.

Because the 400kg gorilla from Armonk changed the definition.

--
Rich Alderson   news@alderson.users.panix.com
    Audendum est, et veritas investiganda; quam etiamsi non assequamur,
  omnino tamen proprius, quam nunc sumus, ad eam perveniemus.
        --Galen

Subject: Re: do some Americans write their 1's in this way ?
Posted by Anonymous on Fri, 11 Nov 2022 09:35:39 GMT

Originally posted by: greymaus

On 2022-11-10, Anders D. Nygaard <news2012adn@gmail.com> wrote:
> Den 10-11-2022 kl. 18:04 skrev Tak To:
>> On 11/10/2022 8:40 AM, Peter Flass wrote:
>>> [... I ...]
>>> think systems with 36-bit words that stored characters in 9 bits may have
>>> called them bytes. "Characters" was the term of art earlier.
>>
>> The only system I know of that fits that description is Multics,
>> and I don't remember how those 9-bit entities were called.
>
> My memory is *very* hazy, but the system I used in my first year
> at university answers to that description.
> I'm fairly sure it was a UNIVAC; probably a model 1100.
>

> Since then, every byte I've come across has been 8 bits.
>
> /Anders, Denmark

I remember the BBS's time, the communications program had to be set. I
remember that 8n1 was a good general setting. The local telecom called
bytes `octets'. what would develope into the internet was *very*
expensive. Many people had `blue-boxes'. I made one but never used it.

--
greymausg@mail.com

Fe, Fi, Fo, Fum, I smell the stench of an Influencer.
Where is our money gone, Dude?

Subject: Re: do some Americans write their 1's in this way ?
Posted by Peter Flass on Fri, 11 Nov 2022 17:11:38 GMT

Anders D. Nygaard <news2012adn@gmail.com> wrote:
> Den 10-11-2022 kl. 18:04 skrev Tak To:
>> On 11/10/2022 8:40 AM, Peter Flass wrote:
>>> [... I ...]
>>> think systems with 36-bit words that stored characters in 9 bits may have
>>> called them bytes. "Characters" was the term of art earlier.
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>> The only system I know of that fits that description is Multics,
>> and I don't remember how those 9-bit entities were called.
>
> My memory is *very* hazy, but the system I used in my first year
> at university answers to that description.
> I'm fairly sure it was a UNIVAC; probably a model 1100.
>

Yes, I think that one too. IIRC 110x used both 6 and 9 bit characters.

> Since then, every byte I've come across has been 8 bits.
>
> /Anders, Denmark
>

--
Pete

Subject: Re: do some Americans write their 1's in this way ?
Posted by Anonymous on Fri, 11 Nov 2022 21:30:33 GMT

Originally posted by: Vir Campestris

On 11/11/2022 03:45, Rich Alderson wrote:
> Then that's a function of your failing memory.

Agreed. Thank you, and also Bob for the doc link.

I really liked the PDP-10 instruction set. OTOH, it was my first!

Andy

Subject: Re: do some Americans write their 1's in this way ?
Posted by Anonymous on Fri, 11 Nov 2022 22:47:28 GMT

Originally posted by: Bob Eager

On Fri, 11 Nov 2022 21:30:33 +0000, Vir Campestris wrote:

> On 11/11/2022 03:45, Rich Alderson wrote:
>> Then that's a function of your failing memory.
>
> Agreed. Thank you, and also Bob for the doc link.
>
> I really liked the PDP-10 instruction set. OTOH, it was my first!

It was about my fourth. My first was the Elliott/ICL 4100 series, which
is rarely mentioned.

The PDP-10's instruction set was so orthogonal that there was a complete
set of conditional jumps and skips. For example, JUMP was a no-op. JUMPA
was an unconditional jump. (but JRST was reputedly faster)

--
Using UNIX since v6 (1975)...

Use the BIG mirror service in the UK:
 http://www.mirrorservice.org

Subject: Re: do some Americans write their 1's in this way ?
Posted by Anonymous on Sat, 12 Nov 2022 00:52:07 GMT

Originally posted by: Tak To

On 11/11/2022 5:47 PM, Bob Eager wrote:
> On Fri, 11 Nov 2022 21:30:33 +0000, Vir Campestris wrote:
>
>> On 11/11/2022 03:45, Rich Alderson wrote:
>>> Then that's a function of your failing memory.
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>> Agreed. Thank you, and also Bob for the doc link.
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>> I really liked the PDP-10 instruction set. OTOH, it was my first!
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> It was about my fourth. My first was the Elliott/ICL 4100 series, which
> is rarely mentioned.
>
> The PDP-10's instruction set was so orthogonal that there was a complete
> set of conditional jumps and skips. For example, JUMP was a no-op. JUMPA
> was an unconditional jump. (but JRST was reputedly faster)

Yes. And the fastest no-op is JFCL.

--
Tak

 --- ----+-----
Tak To   takto@alum.mit.eduxx
 --- --------^^
 [taode takto ~{LU5B~}]   NB: trim the xx to get my real email addr

Subject: Re: do some Americans write their 1's in this way ?
Posted by Anonymous on Sat, 12 Nov 2022 01:03:57 GMT

Originally posted by: Tak To

On 11/10/2022 10:42 PM, Rich Alderson wrote:
> Tak To <takto@alum.mit.eduxx> writes:
>
>> On 11/10/2022 8:40 AM, Peter Flass wrote:
>>> Dan Espen <dan1espen@gmail.com> wrote:
>>>> Peter Flass <peter_flass@yahoo.com> writes:
>>>> > [...]
>>>> > Actually, "byte" is really an unspecified number of bits, although nowadays
>>>> > it's conventionally 8. Normally a byte is a glob large enough to hold a

>>>> > character, so six bits could be a byte.
>>>>
>>>> Until S/360 was announced I never heard the term byte.
>>>
>>> I'd have to look it up to see where it came from. I know the PDP-10 had the
>>> ability to handle various byte sizes, and I think they used the term.
>>
>> Yes, but
>>
>> - The PDP-10 came out a couple of years after the S/360.
>
> The PDP-6 is the origin of the architecture. It was announced in March 1964 in
> Business Week, 3 weeks before the announcement of the IBM System/360 in April.
>
> First customer ship of the PDP-6 was in June 1964; FCS of the System/360 was in
> October 1965.
>
>> - "Byte" for PDP-10 is not specifically intended for representing
>>   characters. It is just any chunk that is smaller than a 36-bit
>>   word.
>
> The original definition of a byte, in signal processing, was "a collection of
> bits", and had nothing to do with characters, or memory words.
>
> The PDP-6 usage of the term is based on that original definition.
>
>> - The PDP-10 can extract a byte (into a 36-bit register) with a
>>   single instruction via a 36-bit pointer, but is not really
>>   byte-addressable. I.e., the memory address lines are still
>>   word granular.
>
> No one ever said that was addressable at the character level!

I was pointing out a related fact -- byte was a more tangible concept
when memory was organized by bytes.

> [snip irrelevancies]
>
>>> think systems with 36-bit words that stored characters in 9 bits may have
>>> called them bytes. "Characters" was the term of art earlier.
>
>> The only system I know of that fits that description is Multics,
>> and I don't remember how those 9-bit entities were called.
>
> They were called "characters", as were 6 bit entities.
>
>> Around MIT's ITS (PDP-10) environs, a 7-bit ASCII character was simply an
>> ASCII character. ASCII characters were generally packed 5 to a 36-bit word.

>
> That is also the format for ASCII text in the DEC operating systems for the
> PDP-6 (on which ITS originally ran) and PDP-10. Nothing special about MIT
> here.

No one ever said ITS was unique. I just have no idea how other
PDP-10 OS works.

> And the 7 bit entities treated as ASCII characters are called "bytes" when
> manipulating them with byte pointers in the relevant instructions.

No one ever said otherwise.

--
Tak
 -- ----+-----
Tak To   takto@alum.mit.eduxx
 -- --------^^
 [taode takto ~{LU5B~}]   NB: trim the xx to get my real email addr

---

Subject: Re: do some Americans write their 1's in this way ?
Posted by Peter Flass on Sat, 12 Nov 2022 01:16:36 GMT
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Vir Campestris <vir.campestris@invalid.invalid> wrote:
> On 11/11/2022 03:45, Rich Alderson wrote:
>> Then that's a function of your failing memory.
>
> Agreed. Thank you, and also Bob for the doc link.
>
> I really liked the PDP-10 instruction set. OTOH, it was my first!

I thought it was the acme of instruction sets. Everything was downhill from
there.

--
Pete

Subject: Re: do some Americans write their 1's in this way ?
Posted by Anonymous on Sat, 12 Nov 2022 02:55:32 GMT
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Originally posted by: Snidely

Vir Campestris submitted this gripping article, maybe on Friday:

> On 11/11/2022 03:45, Rich Alderson wrote:
>> Then that's a function of your failing memory.
>
> Agreed. Thank you, and also Bob for the doc link.
>
> I really liked the PDP-10 instruction set. OTOH, it was my first!
>
> Andy

The coincidence of having 365 instructions in the set led my high
school group to make the joke that the opcodes were "November 11",
"November 12", ...

(there were a couple of DEC10's we could observe, one at a timesharing
service that gave idle time to Tektronix's terminal group)

/dps

--
Who, me? And what lacuna?

Subject: Re: do some Americans write their 1's in this way ?
Posted by Anonymous on Sat, 12 Nov 2022 02:57:48 GMT

Originally posted by: Snidely

Just this Friday, Vir Campestris explained that ...
> On 11/11/2022 03:45, Rich Alderson wrote:
>> Then that's a function of your failing memory.
>
> Agreed. Thank you, and also Bob for the doc link.
>
> I really liked the PDP-10 instruction set. OTOH, it was my first!
>
> Andy

My first was the PDP-8. A straight 8 in a cabinet, with DECtape.
Later upgraded to 8K words (8192 x 12 bits). You had to bank-switch
the memory to use it all.

/dps

--
 Maybe C282Y is simply one of the hangers-on, a groupie following a
future guitar god of the human genome: an allele with undiscovered

virtuosity, currently soloing in obscurity in Mom's garage.
  Bradley Wertheim, theAtlantic.com, Jan 10 2013

Subject: Re: do some Americans write their 1's in this way ?
Posted by Anonymous on Sat, 12 Nov 2022 04:16:18 GMT
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Originally posted by: lar3ryca

On 2022-11-10 13:08, Charlie Gibbs wrote:
> On 2022-11-10, lar3ryca <larry@invalid.ca> wrote:
>
>> On 2022-11-09 15:32, Charlie Gibbs wrote:
>>
>>> On 2022-11-09, lar3ryca <larry@invalid.ca> wrote:
>>>
>>>> Biggest mistake I ever made was to throw all my Amigas out.
>>>
>>> Would you like one or two?
>>
>> Gasp! Two, please.
>> What would you want for them?
>> And how should I contact you?
>
> E-mail me. See my .sig.

Sent email yesterday.

--
I don't have an accent.
This is just how things sound when they're promounced properly.
  - Jimmy Carr

Subject: Re: do some Americans write their 1's in this way ?
Posted by Peter Moylan on Sat, 12 Nov 2022 09:50:12 GMT
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On 12/11/22 12:16, Peter Flass wrote:
> Vir Campestris <vir.campestris@invalid.invalid> wrote:
>> On 11/11/2022 03:45, Rich Alderson wrote:

>>> Then that's a function of your failing memory.
>>
>> Agreed. Thank you, and also Bob for the doc link.
>>

>> I really liked the PDP-10 instruction set. OTOH, it was my first!
>
> I thought it was the acme of instruction sets. Everything was
> downhill from there.

I still give top score to the PDP-11. OK, it was not as powerful as the
PDP-10, but the design of its addressing modes was brilliant.

Once microprocessors started to appear, it was obvious (from the
instruction sets) which designers had an IBM computer background and
which ones had a DEC computer background. And, just as with mainframes,
it soon became clear that there was no correlation between elegance of
design and market dominance.

--
Peter Moylan   Newcastle, NSW   http://www.pmoylan.org

Subject: Re: do some Americans write their 1's in this way ?
Posted by Peter Moylan on Sat, 12 Nov 2022 10:05:44 GMT
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Subject: Re: do some Americans write their 1's in this way ?
Posted by Anonymous on Sat, 12 Nov 2022 10:16:48 GMT
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Originally posted by: Bob Eager

On Fri, 11 Nov 2022 19:52:07 -0500, Tak To wrote:

> On 11/11/2022 5:47 PM, Bob Eager wrote:
>> On Fri, 11 Nov 2022 21:30:33 +0000, Vir Campestris wrote:
>>
>>> On 11/11/2022 03:45, Rich Alderson wrote:
>>>> Then that's a function of your failing memory.
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>>> Agreed. Thank you, and also Bob for the doc link.
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>>> I really liked the PDP-10 instruction set. OTOH, it was my first!
>>
>> It was about my fourth. My first was the Elliott/ICL 4100 series, which
>> is rarely mentioned.
>>
>> The PDP-10's instruction set was so orthogonal that there was a

>> complete set of conditional jumps and skips. For example, JUMP was a
>> no-op. JUMPA was an unconditional jump. (but JRST was reputedly faster)
>
> Yes. And the fastest no-op is JFCL.

I'd forgotten that one!

--
Using UNIX since v6 (1975)...

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 http://www.mirrorservice.org

Originally posted by: Bob Eager

On Fri, 11 Nov 2022 18:57:48 -0800, Snidely wrote:

> Just this Friday, Vir Campestris explained that ...
>> On 11/11/2022 03:45, Rich Alderson wrote:
>>> Then that's a function of your failing memory.
>>
>> Agreed. Thank you, and also Bob for the doc link.
>>
>> I really liked the PDP-10 instruction set. OTOH, it was my first!
>>
>> Andy
>
> My first was the PDP-8. A straight 8 in a cabinet, with DECtape. Later
> upgraded to 8K words (8192 x 12 bits). You had to bank-switch the
> memory to use it all.

I've built a couple of SBC-6120s, and a PiDP-8. I have wanted an 8 since
1973.

NO real ones. But I do have four 11s and three VAXes!

--
Using UNIX since v6 (1975)...

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 http://www.mirrorservice.org

Subject: Re: do some Americans write their 1's in this way ?
Posted by Anonymous on Sat, 12 Nov 2022 10:19:48 GMT

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Originally posted by: Bob Eager

On Fri, 11 Nov 2022 18:16:36 -0700, Peter Flass wrote:

> Vir Campestris <vir.campestris@invalid.invalid> wrote:
>> On 11/11/2022 03:45, Rich Alderson wrote:
>>> Then that's a function of your failing memory.
>>
>> Agreed. Thank you, and also Bob for the doc link.
>>
>> I really liked the PDP-10 instruction set. OTOH, it was my first!
>
> I thought it was the acme of instruction sets. Everything was downhill
> from there.

I rather like the ICL 2900 (based loosely on MU5). I plan to do a web
page about it soon.

Single accumulator, single index register, single descriptor register.
Stack frame and top registers and two off-stack pointers. 128
instructions and 32 addressing modes.

--
Using UNIX since v6 (1975)...

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 http://www.mirrorservice.org

Subject: Re: do some Americans write their 1's in this way ?
Posted by Harry Vaderchi on Sat, 12 Nov 2022 11:22:22 GMT

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On 12 Nov 2022 10:19:48 GMT
Bob Eager <news0009@eager.cx> wrote:

> On Fri, 11 Nov 2022 18:16:36 -0700, Peter Flass wrote:
>
>> Vir Campestris <vir.campestris@invalid.invalid> wrote:
>>> On 11/11/2022 03:45, Rich Alderson wrote:
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> page about it soon.
>
> Single accumulator, single index register, single descriptor register.
> Stack frame and top registers and two off-stack pointers. 128
> instructions and 32 addressing modes.
>
>
Sounds ideal for a Forth!

--
Bah, and indeed Humbug.

Subject: Re: do some Americans write their 1's in this way ?
Posted by Peter Flass on Sat, 12 Nov 2022 14:06:14 GMT

Peter Moylan <peter@pmoylan.org.invalid> wrote:
> On 11/11/22 14:47, Rich Alderson wrote:
>> "Anders D. Nygaard" <news2012adn@gmail.com> writes:
>>
>>> Den 10-11-2022 kl. 18:04 skrev Tak To:
>>>> On 11/10/2022 8:40 AM, Peter Flass wrote:
>>>> > [... I ...] think systems with 36-bit words that stored
>>>> > characters in 9 bits may have called them bytes.
>>>> > "Characters" was the term of art earlier.
>>>>
>>>> The only system I know of that fits that description is Multics,
>>>> and I don't remember how those 9-bit entities were called.
>>>
>>> My memory is *very* hazy, but the system I used in my first year
>>> at university answers to that description. I'm fairly sure it was
>>> a UNIVAC; probably a model 1100.
>>>
>>> Since then, every byte I've come across has been 8 bits.
>>
>> Because the 400kg gorilla from Armonk changed the definition.
>
> I don't think that was the main reason. There were, in my opinion, two

> more important factors.
>
> 1. In the early days of computing, BCD was very important. That set a
> precedent that suggested that the best choice of word size is a multiple
> of 4 bits.
>
> 2. The choice of character width was all over the place, but gradually
> the design of serial I/O interfaces - and serial was more pervasive than
> parallel back in those days - was converging to the idea that a
> character code should be 7 bits plus one parity bits. (Plus some start
> and stop bits, but those didn't have to be stored once the character
> reached the computer.) Thus, there was heavy off-she-shelf hardware
> support for 8-bit characters.
>
> These days we accept that a parity bit (or other form of
> error-detecting/correcting) is needed only while passing the information
> over a communications channel, and can be ignored once the character is
> in computer memory, but that wasn't the thinking back then.
>

Back then memories were a lot flakier, although now I think data is stored
with lots of check bits that only the hardware sees.

--
Pete

Subject: Re: do some Americans write their 1's in this way ?
Posted by Anonymous on Sat, 12 Nov 2022 14:07:59 GMT
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Originally posted by: lar3ryca

On 2022-11-12 03:50, Peter Moylan wrote:
> On 12/11/22 12:16, Peter Flass wrote:
>> Vir Campestris <vir.campestris@invalid.invalid> wrote:
>>> On 11/11/2022 03:45, Rich Alderson wrote:
>
>>>> Then that's a function of your failing memory.
>>>
>>> Agreed. Thank you, and also Bob for the doc link.
>>>
>>> I really liked the PDP-10 instruction set. OTOH, it was my first!
>>
>> I thought it was the acme of instruction sets. Everything was
>> downhill from there.
>
> I still give top score to the PDP-11. OK, it was not as powerful as the

> PDP-10, but the design of its addressing modes was brilliant.
>
> Once microprocessors started to appear, it was obvious (from the
> instruction sets) which designers had an IBM computer background and
> which ones had a DEC computer background. And, just as with mainframes,
> it soon became clear that there was no correlation between elegance of
> design and market dominance.

Boy howdy!

I never did like the 8080 or any of its successors, and the RCA COSMAC,
Z80, and PIC were in the same category. Actually the PIC was in a class
of its own, the worst microprocessor I ever used.

The ones I used and liked were the Signetics 2650, the 6502 and the
ones that followed it, and the Motorola chips.

The ones I didn't like would have been perfectly acceptable, of course,
had there been a high level language available when I was programming then.

--
If swimming is so good for your figure, how do you explain whales?

Subject: Re: do some Americans write their 1's in this way ?
Posted by Anonymous on Sat, 12 Nov 2022 15:32:00 GMT
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Originally posted by: gareth evans

On 12/11/2022 09:50, Peter Moylan wrote:
> I still give top score to the PDP-11. OK, it was not as powerful as the
> PDP-10, but the design of its addressing modes was brilliant.
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> instruction sets) which designers had an IBM computer background and
> which ones had a DEC computer background. And, just as with mainframes,
> it soon became clear that there was no correlation between elegance of
> design and market dominance.
>

Indeed. From the point of view of elegance of instruction set and the
joy of writing assember therein, it's a pity that the Motorola
68000 series ws not the choice for the IBM PC

Subject: Re: do some Americans write their 1's in this way ?

Posted by Anonymous on Sat, 12 Nov 2022 15:35:11 GMT
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Originally posted by: gareth evans

On 12/11/2022 11:22, Kerr-Mudd, John wrote:
> On 12 Nov 2022 10:19:48 GMT
> Bob Eager <news0009@eager.cx> wrote:
>>
>> I rather like the ICL 2900 (based loosely on MU5). I plan to do a web
>> page about it soon.
>>
>> Single accumulator, single index register, single descriptor register.
>> Stack frame and top registers and two off-stack pointers. 128
>> instructions and 32 addressing modes.
>>
>>
> Sounds ideal for a Forth!

I wonder whether perhaps exposure to the architecture of the KDF9
was the inspiration for Charles Moore to invent FORTH

Subject: Re: do some Americans write their 1's in this way ?
Posted by Anonymous on Sat, 12 Nov 2022 17:36:49 GMT
View Forum Message <> Reply to Message

Originally posted by: Tak To

On 11/12/2022 4:50 AM, Peter Moylan wrote:
> On 12/11/22 12:16, Peter Flass wrote:
>> Vir Campestris <vir.campestris@invalid.invalid> wrote:
>>> On 11/11/2022 03:45, Rich Alderson wrote:
>
>>>> Then that's a function of your failing memory.
>>>
>>> Agreed. Thank you, and also Bob for the doc link.
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>> I thought it was the acme of instruction sets. Everything was
>> downhill from there.
>
> I still give top score to the PDP-11. OK, it was not as powerful as the
> PDP-10, but the design of its addressing modes was brilliant.

Agree. The PDP-10 instruction set was the acme in orthogonality,
but at the cost of having too many no-ops. All in all, it was

doomed by the limitation of fixed length instructions
architecture.

Byte-addressable and variable length instructions was the
future and IBM got it right, if not being the first one to
do so.

> Once microprocessors started to appear, it was obvious (from the
> instruction sets) which designers had an IBM computer background and
> which ones had a DEC computer background.
> And, just as with mainframes,
> it soon became clear that there was no correlation between elegance of
> design and market dominance.

Elegance is hard to compare without a common set of desiderata.

--
Tak
 -- ----+-----
Tak To   takto@alum.mit.eduxx
 -- --------^^
 [taode takto ~{LU5B~}]   NB: trim the xx to get my real email addr

---

Originally posted by: Tak To

On 11/12/2022 10:32 AM, gareth evans wrote:
> On 12/11/2022 09:50, Peter Moylan wrote:
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>> instruction sets) which designers had an IBM computer background and
>> which ones had a DEC computer background. And, just as with mainframes,
>> it soon became clear that there was no correlation between elegance of
>> design and market dominance.
>
> Indeed. From the point of view of elegance of instruction set and the
> joy of writing assember therein, it's a pity that the Motorola
> 68000 series ws not the choice for the IBM PC

The Motorola 68000 was not ready at the time of the first PC,
and the future of the personal computer market was read
horribly incorrectly by IBM (and DEC, and almost every key

player at that time).

Yes, there were many regrettable moments in the history of
computing. IBM did not partner with MIT to develop Multics
-- to name just one.

--
Tak

 --- ----+-----
Tak To   takto@alum.mit.eduxx
 --- --------^^
 [taode takto ~{LU5B~}]   NB: trim the xx to get my real email addr

---

Subject: Re: do some Americans write their 1's in this way ?
Posted by Anonymous on Sat, 12 Nov 2022 18:08:29 GMT

Originally posted by: Thomas Koenig

[F'up]

Tak To <takto@alum.mit.eduxx> schrieb:
> On 11/12/2022 4:50 AM, Peter Moylan wrote:
>> On 12/11/22 12:16, Peter Flass wrote:
>>> Vir Campestris <vir.campestris@invalid.invalid> wrote:
>>>> On 11/11/2022 03:45, Rich Alderson wrote:
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>> PDP-10, but the design of its addressing modes was brilliant.
>
> Agree. The PDP-10 instruction set was the acme in orthogonality,
> but at the cost of having too many no-ops. All in all, it was
> doomed by the limitation of fixed length instructions
> architecture.

Fixed length instruction is not a problem per se, as can
be seen from numerous RISC chips.

But it would have been interesting to see what a 72-bit
version (who needs a tiny 64-bit address space, anyway :-)
would have looked like.

> Byte-addressable and variable length instructions was the
> future and IBM got it right, if not being the first one to
> do so.

The /360 was indeed groundbreaking. The eight-bit byte (even if
it was motivated by BCD) changed computers in a fundamental way.
It also had its faults, lots of them, found in hindsight and later
corrected in subsequent revisions and in other instruction set
architectures.

>> Once microprocessors started to appear, it was obvious (from the
>> instruction sets) which designers had an IBM computer background and
>> which ones had a DEC computer background.
>> And, just as with mainframes,
>> it soon became clear that there was no correlation between elegance of
>> design and market dominance.
>
> Elegance is hard to compare without a common set of desiderata.

There is a kind of elegance to more or less pure RISC designs like
the MIPS and the Alpha, but they have their warts, too.

Subject: Re: do some Americans write their 1's in this way ?
Posted by Ahem A Rivet's Shot on Sat, 12 Nov 2022 18:42:09 GMT
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On Sat, 12 Nov 2022 12:55:24 -0500
Tak To <takto@alum.mit.eduxx> wrote:

> On 11/12/2022 10:32 AM, gareth evans wrote:

>> Indeed. From the point of view of elegance of instruction set and the
>> joy of writing assember therein, it's a pity that the Motorola
>> 68000 series ws not the choice for the IBM PC
>
> The Motorola 68000 was not ready at the time of the first PC,

 This is true - but even the 6809 would have been nicer than the
8088.

> and the future of the personal computer market was read
> horribly incorrectly by IBM (and DEC, and almost every key

> player at that time).

 Yep. I could have wished that IBM had left it a couple of years
longer before getting involved. A 68000 and XENIX with IBM leaning on the
license fee like Godzilla with a hangover would have been nice in 1985.
Instead we had to wait a while and get BSD or Linux on an 80386 (shudder)
in 1992.

--
Steve O'Hara-Smith
Odds and Ends at http://www.sohara.org/

Subject: Re: do some Americans write their 1's in this way ?
Posted by Peter Flass on Sat, 12 Nov 2022 18:42:12 GMT

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lar3ryca <larry@invalid.ca> wrote:
> On 2022-11-12 03:50, Peter Moylan wrote:
>> On 12/11/22 12:16, Peter Flass wrote:
>>> Vir Campestris <vir.campestris@invalid.invalid> wrote:
>>>> On 11/11/2022 03:45, Rich Alderson wrote:
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>>>> > Then that's a function of your failing memory.
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>>>> Agreed. Thank you, and also Bob for the doc link.
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>> I still give top score to the PDP-11. OK, it was not as powerful as the
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>> Once microprocessors started to appear, it was obvious (from the
>> instruction sets) which designers had an IBM computer background and
>> which ones had a DEC computer background. And, just as with mainframes,
>> it soon became clear that there was no correlation between elegance of
>> design and market dominance.
>
> Boy howdy!
>
> I never did like the 8080 or any of its successors, and the RCA COSMAC,
> Z80, and PIC were in the same category. Actually the PIC was in a class
> of its own, the worst microprocessor I ever used.
>
> The ones I used and liked were the Signetics 2650, the 6502 and the

> ones that followed it, and the Motorola chips.
>
> The ones I didn't like would have been perfectly acceptable, of course,
> had there been a high level language available when I was programming then.
>

When microprocessors first started to get popular I read a book that
compared the then-popular chips: 6502, Cosmac, 8080, 6800, (and maybe
etc.). Looking at the instruction sets, interfacing considerations, etc., I
decided that hands-down the best was the 6800, and the 6502 was well down
the list. Well, it was VHS vs. Beta all over again.

--
Pete

Subject: Re: do some Americans write their 1's in this way ?
Posted by Peter Flass on Sat, 12 Nov 2022 18:42:13 GMT
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Thomas Koenig <tkoenig@netcologne.de> wrote:
> [F'up]
>
> Tak To <takto@alum.mit.eduxx> schrieb:
>> On 11/12/2022 4:50 AM, Peter Moylan wrote:
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>> Agree. The PDP-10 instruction set was the acme in orthogonality,
>> but at the cost of having too many no-ops. All in all, it was
>> doomed by the limitation of fixed length instructions
>> architecture.
>
> Fixed length instruction is not a problem per se, as can

> be seen from numerous RISC chips.
>
> But it would have been interesting to see what a 72-bit
> version (who needs a tiny 64-bit address space, anyway :-)
> would have looked like.

Heck, these days you could write a simulator and have it perform reasonably
well, but, of course, lack of software would be a huge problem. You could
have it transparently run 36-bit stuff.

--
Pete

Subject: Re: do some Americans write their 1's in this way ?
Posted by Anonymous on Sat, 12 Nov 2022 19:14:37 GMT

Originally posted by: Tak To

On 11/12/2022 1:08 PM, Thomas Koenig wrote:
> [F'up]
>
> Tak To <takto@alum.mit.eduxx> schrieb:
>> On 11/12/2022 4:50 AM, Peter Moylan wrote:
>>> On 12/11/22 12:16, Peter Flass wrote:
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>>>> > On 11/11/2022 03:45, Rich Alderson wrote:
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>> doomed by the limitation of fixed length instructions
>> architecture.
>
> Fixed length instruction is not a problem per se, as can
> be seen from numerous RISC chips.

.... only when suitably pipe-lined.

> But it would have been interesting to see what a 72-bit
> version (who needs a tiny 64-bit address space, anyway :-)
> would have looked like.

No doubt advantageous to some kind of programs and dis-
advantageous to others.

>> Byte-addressable and variable length instructions was the
>> future and IBM got it right, if not being the first one to
>> do so.
>
> The /360 was indeed groundbreaking. The eight-bit byte (even if
> it was motivated by BCD) changed computers in a fundamental way.
> It also had its faults, lots of them, found in hindsight and later
> corrected in subsequent revisions and in other instruction set
> architectures.
>
>>> Once microprocessors started to appear, it was obvious (from the
>>> instruction sets) which designers had an IBM computer background and
>>> which ones had a DEC computer background.
>>> And, just as with mainframes,
>>> it soon became clear that there was no correlation between elegance of
>>> design and market dominance.
>>
>> Elegance is hard to compare without a common set of desiderata.
>
> There is a kind of elegance to more or less pure RISC designs like
> the MIPS and the Alpha, but they have their warts, too.

FWIW, the later PDP-10's were already micro-coded.

--
Tak
 --- ----+-----
Tak To   takto@alum.mit.eduxx
 --- --------^^
 [taode takto ~{LU5B~}]   NB: trim the xx to get my real email addr

---

Subject: Re: do some Americans write their 1's in this way ?
Posted by Anonymous on Sat, 12 Nov 2022 19:25:26 GMT
View Forum Message <> Reply to Message

Originally posted by: Thomas Koenig

Ahem A Rivet's Shot <steveo@eircom.net> schrieb:
> On Sat, 12 Nov 2022 12:55:24 -0500
> Tak To <takto@alum.mit.eduxx> wrote:
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>> On 11/12/2022 10:32 AM, gareth evans wrote:
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>> The Motorola 68000 was not ready at the time of the first PC,
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> This is true - but even the 6809 would have been nicer than the
> 8088.

The 6809 only has a 16-bit address bus, and even the severely
crippeled 8088 can address a megabyte (insert fear and loathing
about just _how_).

Now, if Motorola had built an ARM v2 instead of the 68000 (entirely
possible at that timeframe, it had far fewer transistors, and much
higher performance) history might have been different.

>
>> and the future of the personal computer market was read
>> horribly incorrectly by IBM (and DEC, and almost every key
>> player at that time).
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> Yep. I could have wished that IBM had left it a couple of years
> longer before getting involved. A 68000 and XENIX with IBM leaning on the
> license fee like Godzilla with a hangover would have been nice in 1985.
> Instead we had to wait a while and get BSD or Linux on an 80386 (shudder)
> in 1992.

I well remember downloading Slackware on a stack of floppy discs.
At University, I had already worked with HP workstations, which
were a revelation compared to mainframes.

Subject: Re: do some Americans write their 1's in this way ?
Posted by Anonymous on Sat, 12 Nov 2022 19:38:36 GMT
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Originally posted by: Thomas Koenig

Peter Flass <peter_flass@yahoo.com> schrieb:

> When microprocessors first started to get popular I read a book that

> compared the then-popular chips: 6502, Cosmac, 8080, 6800, (and maybe
> etc.). Looking at the instruction sets, interfacing considerations, etc., I
> decided that hands-down the best was the 6800, and the 6502 was well down
> the list. Well, it was VHS vs. Beta all over again.

Of course, the 6502 was designed by many of the original 6800
design team. You can see the relationship in the opcodes, and
you can even see it in the die shots which look quite similar.

Where it beat the 6800 hands down was price. A 6800 cost $360 at
the time of the 6502's introduction, the 6502 $25 (if I read
the soruces right).

Subject: Re: do some Americans write their 1's in this way ?
Posted by Anonymous on Sat, 12 Nov 2022 19:41:29 GMT
View Forum Message <> Reply to Message

Originally posted by: Tak To

On 11/12/2022 2:25 PM, Thomas Koenig wrote:
> Ahem A Rivet's Shot <steveo@eircom.net> schrieb:
>> On Sat, 12 Nov 2022 12:55:24 -0500
>> Tak To <takto@alum.mit.eduxx> wrote:
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>>> On 11/12/2022 10:32 AM, gareth evans wrote:
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>
> Now, if Motorola had built an ARM v2 instead of the 68000 (entirely
> possible at that timeframe, it had far fewer transistors, and much
> higher performance) history might have been different.

Or if DEC has come up with a single chip LSI-11...

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---

```
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>>
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--
Tak

 ------------------------------------------------------------ ----+-----
Tak To                           takto@alum.mit.eduxx
 ------------------------------------------------------------ --------^^
 [taode takto ~{LU5B~}]      NB: trim the xx to get my real email addr
```

Subject: Re: do some Americans write their 1's in this way ?
Posted by Charlie Gibbs on Sat, 12 Nov 2022 19:42:26 GMT

On 2022-11-12, Peter Moylan <peter@pmoylan.org.invalid> wrote:

> On 12/11/22 12:16, Peter Flass wrote:
>
>> Vir Campestris <vir.campestris@invalid.invalid> wrote:
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>>> On 11/11/2022 03:45, Rich Alderson wrote:
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of the PDP-11 when I started analyzing some of its machine code. Making
the program counter and stack pointer just another couple of registers
allowed some nifty tricks.

> Once microprocessors started to appear, it was obvious (from the
> instruction sets) which designers had an IBM computer background and
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> it soon became clear that there was no correlation between elegance of
> design and market dominance.

Yes, the dominance of the 80x86 over the 680x0 is a tragic reminder
of the difference between doing it right and doing it right now.

```
--
/~\  Charlie Gibbs            |  Microsoft is a dictatorship.
\ /  <cgibbs@kltpzyxm.invalid>    |  Apple is a cult.
 X   I'm really at ac.dekanfrus    |  Linux is anarchy.
/ \  if you read it the right way.  |  Pick your poison.
```

Subject: Re: do some Americans write their 1's in this way ?
Posted by Anonymous on Sat, 12 Nov 2022 19:59:14 GMT

Originally posted by: Tak To

On 11/12/2022 2:42 PM, Charlie Gibbs wrote:
> On 2022-11-12, Peter Moylan <peter@pmoylan.org.invalid> wrote:
>
>> On 12/11/22 12:16, Peter Flass wrote:
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Tak

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Tak To   takto@alum.mit.eduxx
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 [taode takto ~{LU5B~}]   NB: trim the xx to get my real email addr

---

Subject: Re: do some Americans write their 1's in this way ?
Posted by Anonymous on Sat, 12 Nov 2022 20:53:41 GMT

Originally posted by: Richard Heathfield

On 12/11/2022 5:55 pm, Tak To wrote:
> On 11/12/2022 10:32 AM, gareth evans wrote:

<snip>

>> Indeed. From the point of view of elegance of instruction set and the
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> The Motorola 68000 was not ready at the time of the first PC,
> and the future of the personal computer market was read
> horribly incorrectly by IBM (and DEC, and almost every key
> player at that time).

And they also famously turned down the Beatles.

--
Richard Heathfield
Email: rjh at cpax dot org dot uk

"Usenet is a strange place" - dmr 29 July 1999
Sig line 4 vacant - apply within

Subject: Re: do some Americans write their 1's in this way ?
Posted by Peter Flass on Sat, 12 Nov 2022 21:38:30 GMT
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Ahem A Rivet's Shot <steveo@eircom.net> wrote:
> On Sat, 12 Nov 2022 12:55:24 -0500
> Tak To <takto@alum.mit.eduxx> wrote:
>
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>

The IBM System 9000 with a 68000 CPU came out in 1982 and ran XENIX.

--
Pete

Subject: Re: do some Americans write their 1's in this way ?
Posted by Peter Flass on Sat, 12 Nov 2022 21:38:31 GMT
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Charlie Gibbs <cgibbs@kltpzyxm.invalid> wrote:

> On 2022-11-12, Peter Moylan <peter@pmoylan.org.invalid> wrote:
>
>> On 12/11/22 12:16, Peter Flass wrote:
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> of the PDP-11 when I started analyzing some of its machine code. Making
> the program counter and stack pointer just another couple of registers
> allowed some nifty tricks.

The -10 and the -11 had pretty much nothing in common except the name PDP-.

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--
Pete

Subject: Re: do some Americans write their 1's in this way ?
Posted by Peter Moylan on Sat, 12 Nov 2022 23:32:40 GMT
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On 13/11/22 05:42, Peter Flass wrote:
> lar3ryca <larry@invalid.ca> wrote:
>> On 2022-11-12 03:50, Peter Moylan wrote:

>>> Once microprocessors started to appear, it was obvious (from the
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> maybe etc.). Looking at the instruction sets, interfacing
> considerations, etc., I decided that hands-down the best was the
> 6800, and the 6502 was well down the list. Well, it was VHS vs. Beta
> all over again.

Where Intel won out was in chip manufacture. They could get their chips
to market quickly, and in high volume. Also the Intel designers were
very good at the little tweaks that improved speed.

This was (at least to me) particularly noticeable in the case of
embedded processor application. The 8051, in particular, was cheap,
reliable, and available, and appeared in engineering applications all
over the place.

--
Peter Moylan   Newcastle, NSW   http://www.pmoylan.org

Subject: Re: do some Americans write their 1's in this way ?
Posted by Ahem A Rivet's Shot on Sun, 13 Nov 2022 05:41:37 GMT
View Forum Message <> Reply to Message

On Sat, 12 Nov 2022 14:38:30 -0700

Peter Flass <peter_flass@yahoo.com> wrote:

> Ahem A Rivet's Shot <steveo@eircom.net> wrote:
>> On Sat, 12 Nov 2022 12:55:24 -0500

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>> (shudder) in 1992.
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> The IBM System 9000 with a 68000 CPU came out in 1982 and ran XENIX.

 Two out of three - IIRC it was rather pricy due to the license fee.

--
Steve O'Hara-Smith
Odds and Ends at http://www.sohara.org/

Subject: Re: do some Americans write their 1's in this way ?
Posted by Ahem A Rivet's Shot on Sun, 13 Nov 2022 05:42:55 GMT
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On Sat, 12 Nov 2022 20:53:41 +0000
Richard Heathfield <rjh@cpax.org.uk> wrote:

> And they also famously turned down the Beatles.

 Did IBM own Decca ?

--
Steve O'Hara-Smith
Odds and Ends at http://www.sohara.org/

Subject: Re: do some Americans write their 1's in this way ?
Posted by Harry Vaderchi on Sun, 13 Nov 2022 09:55:02 GMT
View Forum Message <> Reply to Message

On Sat, 12 Nov 2022 20:53:41 +0000
Richard Heathfield <rjh@cpax.org.uk> wrote:

> On 12/11/2022 5:55 pm, Tak To wrote:
>> On 11/12/2022 10:32 AM, gareth evans wrote:

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>
Pete was Best.

--
Bah, and indeed Humbug.

Subject: Re: do some Americans write their 1's in this way ?
Posted by Harry Vaderchi on Sun, 13 Nov 2022 10:04:18 GMT
View Forum Message <> Reply to Message

On Sat, 12 Nov 2022 14:59:14 -0500
Tak To <takto@alum.mit.eduxx> wrote:

> On 11/12/2022 2:42 PM, Charlie Gibbs wrote:
>> On 2022-11-12, Peter Moylan <peter@pmoylan.org.invalid> wrote:
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> The 80386 wasn't behind the 68020 by that much. The real
> tragedy was that IBM-Microsoft essentially sat on the
> technology for close to 10 years(!!!) and did not upgrade
> the OS accordingly.
>
They had a tiff over implementing OS/2, and intel was churning out 286's -
they didn't want to spoil that earner by jumping to the 386 too soon. Or
maybe this is just stuff I've made up over the years.
>

--
Bah, and indeed Humbug.

Subject: Re: do some Americans write their 1's in this way ?
Posted by Anonymous on Sun, 13 Nov 2022 17:02:05 GMT
View Forum Message <> Reply to Message

Originally posted by: greymaus

On 2022-11-13, Kerr-Mudd, John <admin@127.0.0.1> wrote:
> On Sat, 12 Nov 2022 14:59:14 -0500
> Tak To <takto@alum.mit.eduxx> wrote:
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>> the OS accordingly.
>>
> They had a tiff over implementing OS/2, and intel was churning out 286's -
> they didn't want to spoil that earner by jumping to the 386 too soon. Or
> maybe this is just stuff I've made up over the years.
>>
>
>

When did stamped cards finish on computers, to be replaced by computer
screens?.

--
greymausg@mail.com

Fe, Fi, Fo, Fum, I smell the stench of an Influencer.
Where is our money gone, Dude?

Subject: Re: do some Americans write their 1's in this way ?
Posted by Ahem A Rivet's Shot on Sun, 13 Nov 2022 17:57:02 GMT
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On 13 Nov 2022 17:02:05 GMT
greymaus <greymaus@dmaus.org> wrote:

> When did stamped cards finish on computers, to be replaced by computer
> screens?.

 I was using punched cards regularly in the mid 1970s, by the late
1970s they were almost but not quite gone - systems still supported them
but hardly anyone used them for anything other than notes.

--
Steve O'Hara-Smith
Odds and Ends at http://www.sohara.org/

Subject: Re: do some Americans write their 1's in this way ?
Posted by Harry Vaderchi on Sun, 13 Nov 2022 21:03:08 GMT
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On Sun, 13 Nov 2022 17:57:02 +0000
Ahem A Rivet's Shot <steveo@eircom.net> wrote:

> On 13 Nov 2022 17:02:05 GMT
> greymaus <greymaus@dmaus.org> wrote:
>
>> When did stamped cards finish on computers, to be replaced by computer
>> screens?.
>
>   I was using punched cards regularly in the mid 1970s, by the late
> 1970s they were almost but not quite gone - systems still supported them
> but hardly anyone used them for anything other than notes.
>
I came in at the end of punchcards; we'd have to book a slot at a vdu to
do line editing.

--
Bah, and indeed Humbug.

Subject: Re: do some Americans write their 1's in this way ?
Posted by Anonymous on Sun, 13 Nov 2022 21:55:04 GMT
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Originally posted by: snipeco.2

Kerr-Mudd, John <admin@127.0.0.1> wrote:

> On Sun, 13 Nov 2022 17:57:02 +0000
> Ahem A Rivet's Shot <steveo@eircom.net> wrote:
>
>> On 13 Nov 2022 17:02:05 GMT
>> greymaus <greymaus@dmaus.org> wrote:
>>
>>> When did stamped cards finish on computers, to be replaced
>>> by computer screens?.
>>
>>   I was using punched cards regularly in the mid 1970s, by the late
>> 1970s they were almost but not quite gone - systems still supported them
>> but hardly anyone used them for anything other than notes.
>>
> I came in at the end of punchcards; we'd have to book a slot at a vdu to
> do line editing.

Punch cards were still in use in ~1979 at a car dealership near me.
They were used for spare parts stock control, 1 card per item of stock.
(Gurl znqr rkpryyrag ebnpurf.)

--
^ï^.   My pet rock Gordon just is.

~ Slava Ukraini ~

Subject: Re: do some Americans write their 1's in this way ?
Posted by Peter Flass on Sun, 13 Nov 2022 22:31:49 GMT

Ahem A Rivet's Shot <steveo@eircom.net> wrote:
> On 13 Nov 2022 17:02:05 GMT
> greymaus <greymaus@dmaus.org> wrote:
>
>> When did stamped cards finish on computers, to be replaced by computer
>> screens?.
>
>   I was using punched cards regularly in the mid 1970s, by the late
> 1970s they were almost but not quite gone - systems still supported them
> but hardly anyone used them for anything other than notes.
>

They kind of slipped away without anyone noticing. I don't recall exactly
when, but a professor asked me to convert his research results on cards
into something usable and I had to look all over the city for someone with
a card reader to get them copied to tape, and I was a bit surprised by how
hard I had to search.

PPOE had an IBM 3505/3525 reader punch for a long time, perhaps into the
80s. They may still have it, but I don't think it was ever used.

--
Pete

Subject: Re: do some Americans write their 1's in this way ?
Posted by Charlie Gibbs on Mon, 14 Nov 2022 02:42:59 GMT

On 2022-11-13, greymaus <greymaus@dmaus.org> wrote:

> When did stamped cards finish on computers, to be replaced by computer
> screens?.

I was using cards well into the '80s, although in the end they were
used primarily for JCL and small data decks, the large files having
moved to disk. Part of this was inertia, e.g. a reluctance to change
a system that worked. Another part was cost - computer terminals
were available in the '70s, but you could buy a lot of cards for the
several thousand (1970s) dollars that one terminal cost at the time.

--
```
/~\  Charlie Gibbs            |  Microsoft is a dictatorship.
\ /  <cgibbs@kltpzyxm.invalid>  |  Apple is a cult.
 X   I'm really at ac.dekanfrus  |  Linux is anarchy.
/ \  if you read it the right way.  |  Pick your poison.
```

Subject: Re: do some Americans write their 1's in this way ?
Posted by Anonymous on Mon, 14 Nov 2022 14:33:59 GMT
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Originally posted by: Mark Triggers

>> When did stamped cards finish on computers, to be replaced by computer
>> screens?.

I was using this deck to IPL the main UK Air Traffic Control computer system (IBM 9020 running NAS - no screens) into the 90's. Last punch card IPL was on 6th April 1990. Next day it was a new system using screens.

https://photos.app.goo.gl/B3FTLov5Y2YRhWE49

Subject: Re: do some Americans write their 1's in this way ?
Posted by Anonymous on Mon, 14 Nov 2022 17:36:29 GMT
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Originally posted by: Vir Campestris

On 12/11/2022 19:25, Thomas Koenig wrote:
> The 6809 only has a 16-bit address bus, and even the severely
> crippeled 8088 can address a megabyte (insert fear and loathing
> about just_how_).

My first home computer was a Dragon with a 6809. I quite liked that one too.

I'm still mystified as to why the 8086 didn't shift the segment register
4 more bits. It would have made a lot of difference to the life of the
devices.

Andy

Subject: Re: do some Americans write their 1's in this way ?
Posted by Anonymous on Mon, 14 Nov 2022 17:54:08 GMT

Originally posted by: Vir Campestris

On 12/11/2022 14:06, Peter Flass wrote:
> Back then memories were a lot flakier, although now I think data is stored
> with lots of check bits that only the hardware sees.

It's been like that for a while. I've used systems that would raise an
NMI (non-maskable interrupt) for a parity error. It's a *** to test the
handler, you need a system that will give you a reasonable number of
errors, but not so many it won't run at all.

I've heard some systems even have error correcting memory. And I've also
heard that the extra complexity may make them _more_ likely to make a
mistkae...

Andy

Subject: Re: do some Americans write their 1's in this way ?
Posted by scott on Mon, 14 Nov 2022 18:16:29 GMT

Vir Campestris <vir.campestris@invalid.invalid> writes:
> On 12/11/2022 14:06, Peter Flass wrote:
>> Back then memories were a lot flakier, although now I think data is stored
>> with lots of check bits that only the hardware sees.
>
> It's been like that for a while. I've used systems that would raise an
> NMI (non-maskable interrupt) for a parity error. It's a *** to test the
> handler, you need a system that will give you a reasonable number of
> errors, but not so many it won't run at all.

We used to have a little ISA card with a single (debounced) button that could
be pressed to generate an NMI; later we had a similar pci card.
Unfortunately, PCIe is serial, so there's no system error pin to toggle.

There are often chipset specific mechanisms for triggering NMI from
software to test fault injection.

Subject: Re: do some Americans write their 1's in this way ?
Posted by Peter Flass on Mon, 14 Nov 2022 20:51:40 GMT

Vir Campestris <vir.campestris@invalid.invalid> wrote:
> On 12/11/2022 14:06, Peter Flass wrote:

>> Back then memories were a lot flakier, although now I think data is stored
>> with lots of check bits that only the hardware sees.
>
> It's been like that for a while. I've used systems that would raise an
> NMI (non-maskable interrupt) for a parity error. It's a *** to test the
> handler, you need a system that will give you a reasonable number of
> errors, but not so many it won't run at all.
>
> I've heard some systems even have error correcting memory. And I've also
> heard that the extra complexity may make them _more_ likely to make a
> mistkae...
>

I think most do these days. IBM mainframe memory corrects (IIRC) single-bit
errors and detects multiple-bit errors.

--
Pete

Subject: Re: do some Americans write their 1's in this way ?
Posted by Anonymous on Mon, 14 Nov 2022 21:49:28 GMT
View Forum Message <> Reply to Message

Originally posted by: Bob Eager

On Mon, 14 Nov 2022 13:51:40 -0700, Peter Flass wrote:

> Vir Campestris <vir.campestris@invalid.invalid> wrote:
>> On 12/11/2022 14:06, Peter Flass wrote:
>>> Back then memories were a lot flakier, although now I think data is
>>> stored with lots of check bits that only the hardware sees.
>>
>> It's been like that for a while. I've used systems that would raise an
>> NMI (non-maskable interrupt) for a parity error. It's a *** to test the
>> handler, you need a system that will give you a reasonable number of
>> errors, but not so many it won't run at all.
>>
>> I've heard some systems even have error correcting memory. And I've
>> also heard that the extra complexity may make them _more_ likely to
>> make a mistkae...
>>
>>
> I think most do these days. IBM mainframe memory corrects (IIRC)
> single-bit errors and detects multiple-bit errors.

We had that on our ICL 2900 in 1976. The manufacturer's operating system
(VME/K) handled a single bit error by rewriting the 64 bits, not logging

anything, and continuing. When the inevitable two bit error occurred, it crashed.

When we put a third party system in, it generated an error loog each day that identified the suspect board and chip.

--
Using UNIX since v6 (1975)...

Use the BIG mirror service in the UK:
 http://www.mirrorservice.org

Subject: Re: do some Americans write their 1's in this way ?
Posted by scott on Mon, 14 Nov 2022 22:07:37 GMT
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Peter Flass <peter_flass@yahoo.com> writes:
> Vir Campestris <vir.campestris@invalid.invalid> wrote:
>> On 12/11/2022 14:06, Peter Flass wrote:
>>> Back then memories were a lot flakier, although now I think data is stored
>>> with lots of check bits that only the hardware sees.
>>
>> It's been like that for a while. I've used systems that would raise an
>> NMI (non-maskable interrupt) for a parity error. It's a *** to test the
>> handler, you need a system that will give you a reasonable number of
>> errors, but not so many it won't run at all.
>>
>> I've heard some systems even have error correcting memory. And I've also
>> heard that the extra complexity may make them _more_ likely to make a
>> mistkae...
>>
>
> I think most do these days. IBM mainframe memory corrects (IIRC) single-bit
> errors and detects multiple-bit errors.

IOW, SECDED (single error correction, double error detection)
and IBM had invented chipkill.

https://en.wikipedia.org/wiki/Chipkill

Subject: Re: do some Americans write their 1's in this way ?
Posted by Robin Vowels on Tue, 15 Nov 2022 04:19:56 GMT
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On Sunday, November 13, 2022 at 5:08:31 AM UTC+11, Thomas Koenig wrote:

>> Byte-addressable and variable length instructions was the
>> future and IBM got it right, if not being the first one to
>> do so.
..
> The /360 was indeed groundbreaking.
..
Only in the sense of a family of computers having the same instruction set.

Subject: Re: do some Americans write their 1's in this way ?
Posted by Anonymous on Tue, 15 Nov 2022 06:05:16 GMT
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Originally posted by: Thomas Koenig

Vir Campestris <vir.campestris@invalid.invalid> schrieb:
> On 12/11/2022 19:25, Thomas Koenig wrote:
>> The 6809 only has a 16-bit address bus, and even the severely
>> crippeled 8088 can address a megabyte (insert fear and loathing
>> about just_how_).
>
> My first home computer was a Dragon with a 6809. I quite liked that one too.

I remember looking at articles about that one. It never caught on
in Germany, the C64 just dominated too much. Its floating point
arithmetic was dead slow, though.

As for the processor: It fell into a crack between the
higher-performance 16-bit CPUs and the lower-price 8-bit CPUs.

Subject: Re: do some Americans write their 1's in this way ?
Posted by Anne & Lynn Wheel on Tue, 15 Nov 2022 18:42:42 GMT
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Peter Flass <peter_flass@yahoo.com> writes:
> I think most do these days. IBM mainframe memory corrects (IIRC) single-bit
> errors and detects multiple-bit errors.

more than that for some time, from archived 6sep2001 afc post, 3090
(mid/late 80s) had 64/80 ECC memory, detect (up to) all 16bit errors and
correct (up to) all 15bit errors
http://www.garlic.com/~lynn/2001j.html#13

other trivia: after joining IBM, I got asked to help with 370/195

hyperthreading ... hypertreading mention in this post about
end of acs/360
https://people.cs.clemson.edu/~mark/acs_end.html

195 out-of-order, but no branch-prediction and speculative execution, so
conditional branches drained pipeline ... and most codes ran at half 195
rated speed. simulating multiprocessor with two i-streams (running at
half rated speed) could keep execution units busy ... modulo MVT/MVS
claimed two-processor was 1.2-1.5 throughput of single processor
(because of multiprocessor software overhead and lock contention).

they also said that big difference between 360/195 and 370/195 (in
addition to the few new instructions) was adding 370 hardware
instruction retry ... 195 had so many circuits that mean-time between a
system transient hardware error was a few hrs.

project was canceled when decision was made to add virtual memory to all
370s (and it wasn't justified to do it for 195). trivia: decade ago, i
was asked if I could track down the virtual memory decision ... archived
afc post from decade ago
http://www.garlic.com/~lynn/2011d.html#73

.... basically MVT storage management was so bad that regions had to be
specified four times larger than actually used ... result was 1mbyte
370/165 typically only running four concurrent executing regions ... not
sufficient to keep it busy/justified. Going to virtual memory would
allow number of concurrent regions to be increased by four times with
little or no paging.

--
virtualization experience starting Jan1968, online at home since Mar1970

Subject: Re: do some Americans write their 1's in this way ?
Posted by Charles Richmond on Thu, 17 Nov 2022 08:26:41 GMT
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On 11/13/2022 8:42 PM, Charlie Gibbs wrote:
> On 2022-11-13, greymaus <greymaus@dmaus.org> wrote:
>
>> When did stamped cards finish on computers, to be replaced by computer
>> screens?.
>
> I was using cards well into the '80s, although in the end they were
> used primarily for JCL and small data decks, the large files having
> moved to disk. Part of this was inertia, e.g. a reluctance to change
> a system that worked. Another part was cost - computer terminals
> were available in the '70s, but you could buy a lot of cards for the

> several thousand (1970s) dollars that one terminal cost at the time.
>

The ad I remember was in a computer or electronics magazine. It asked
the question: "Are your programmers online???" The picture showed a
line (queue) of programmers waiting to get a chance to use a *single*
keypunch machine.

The ad (of course) was an attempt to convince employers that, though VDU
terminals were expensive, it was *more* expensive to force your
programmers to continue using punch cards...

--

Charles Richmond

--
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www.avast.com

Subject: Re: do some Americans write their 1's in this way ?
Posted by Charles Richmond on Thu, 17 Nov 2022 08:31:45 GMT
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On 11/14/2022 2:51 PM, Peter Flass wrote:
> Vir Campestris <vir.campestris@invalid.invalid> wrote:
>> On 12/11/2022 14:06, Peter Flass wrote:
>>> Back then memories were a lot flakier, although now I think data is stored
>>> with lots of check bits that only the hardware sees.
>>
>> It's been like that for a while. I've used systems that would raise an
>> NMI (non-maskable interrupt) for a parity error. It's a *** to test the
>> handler, you need a system that will give you a reasonable number of
>> errors, but not so many it won't run at all.
>>
>> I've heard some systems even have error correcting memory. And I've also
>> heard that the extra complexity may make them _more_ likely to make a
>> mistkae...
>>
>
> I think most do these days. IBM mainframe memory corrects (IIRC) single-bit
> errors and detects multiple-bit errors.
>

ECC used to be called Hamming code, after Richard Hamming, the inventor

of Hamming code.

https://en.wikipedia.org/wiki/Hamming_code

--

Charles Richmond

--

This email has been checked for viruses by Avast antivirus software.
www.avast.com

Originally posted by: Bob Eager

On Thu, 17 Nov 2022 02:31:45 -0600, Charles Richmond wrote:

> On 11/14/2022 2:51 PM, Peter Flass wrote:
>> Vir Campestris <vir.campestris@invalid.invalid> wrote:
>>> On 12/11/2022 14:06, Peter Flass wrote:
>>>> Back then memories were a lot flakier, although now I think data is
>>>> stored with lots of check bits that only the hardware sees.
>>>
>>> It's been like that for a while. I've used systems that would raise an
>>> NMI (non-maskable interrupt) for a parity error. It's a *** to test
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>>> I've heard some systems even have error correcting memory. And I've
>>> also heard that the extra complexity may make them _more_ likely to
>>> make a mistkae...
>>>
>>
>> I think most do these days. IBM mainframe memory corrects (IIRC)
>> single-bit errors and detects multiple-bit errors.
>>
>>
> ECC used to be called Hamming code, after Richard Hamming, the inventor
> of Hamming code.

Well, *some* ECC is Hamming.

--

Using UNIX since v6 (1975)...

Use the BIG mirror service in the UK:
 http://www.mirrorservice.org

Subject: Re: do some Americans write their 1's in this way ?
Posted by Charlie Gibbs on Thu, 17 Nov 2022 18:37:50 GMT
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On 2022-11-17, Charles Richmond <codescott@aquaporin4.com> wrote:

> On 11/13/2022 8:42 PM, Charlie Gibbs wrote:
>
>> On 2022-11-13, greymaus <greymaus@dmaus.org> wrote:
>>
>>> When did stamped cards finish on computers, to be replaced by computer
>>> screens?.
>>
>> I was using cards well into the '80s, although in the end they were
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>> moved to disk. Part of this was inertia, e.g. a reluctance to change
>> a system that worked. Another part was cost - computer terminals
>> were available in the '70s, but you could buy a lot of cards for the
>> several thousand (1970s) dollars that one terminal cost at the time.
>
> The ad I remember was in a computer or electronics magazine. It asked
> the question: "Are your programmers online???" The picture showed a
> line (queue) of programmers waiting to get a chance to use a *single*
> keypunch machine.
>
> The ad (of course) was an attempt to convince employers that, though
> VDU terminals were expensive, it was *more* expensive to force your
> programmers to continue using punch cards...

Only in the long term, which managers are notorious for ignoring.
Besides, why should lowly programmers have access to such fancy
toys? That should be the sole domain of the beautiful people,
i.e. management.

When personal computers were first spreading, a PPOE purchased several.
There were three models available: a high-end one with a large screen
and lots of CPU power; an intermediate one; and the cheapo unit with
minimal hardware and a small screen. The managers, who barely used
them or even knew how, naturally got the high-end machines. We techies
got the intermediate model, while our poor data entry clerk, who pounded
away on it all day, got the cheapest model and spent her days squinting
at its small screen. (They really treated her like dirt. Several times

she stormed out of the office in tears. One day she never came back.)

--
/~\ Charlie Gibbs | Microsoft is a dictatorship.
\ / <cgibbs@kltpzyxm.invalid> | Apple is a cult.
 X I'm really at ac.dekanfrus | Linux is anarchy.
/ \ if you read it the right way. | Pick your poison.

Subject: Re: do some Americans write their 1's in this way ?
Posted by scott on Thu, 17 Nov 2022 19:04:42 GMT

Charlie Gibbs <cgibbs@kltpzyxm.invalid> writes:
> On 2022-11-17, Charles Richmond <codescott@aquaporin4.com> wrote:
>
>> On 11/13/2022 8:42 PM, Charlie Gibbs wrote:
>>
>>> On 2022-11-13, greymaus <greymaus@dmaus.org> wrote:
>>>
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>>
>> The ad (of course) was an attempt to convince employers that, though
>> VDU terminals were expensive, it was *more* expensive to force your
>> programmers to continue using punch cards...
>
> Only in the long term, which managers are notorious for ignoring.
> Besides, why should lowly programmers have access to such fancy
> toys? That should be the sole domain of the beautiful people,
> i.e. management.
>

I visited the Sperry office in Clear Lake, Iowa around 1980.
At the Uni, we had dozens of ADM33a in the student labs, attached to a
quad of VAX-11/780's.

The Sperry programmers had to fight for a handful of mobile video
terminals on carts.

Subject: Re: do some Americans write their 1's in this way ?
Posted by Andreas Eder on Sat, 19 Nov 2022 15:10:56 GMT
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On So 13 Nov 2022 at 17:02, greymaus <greymaus@dmaus.org> wrote:
> When did stamped cards finish on computers, to be replaced by computer
> screens?.

When I started university in autumn of 1981 O had toe work with puncg
cards.
Next year I could use a glass tty.

'Andreas

Subject: Re: do some Americans write their 1's in this way ?
Posted by D.J. on Mon, 21 Nov 2022 16:18:50 GMT
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On Thu, 17 Nov 2022 18:37:50 GMT, Charlie Gibbs
<cgibbs@kltpzyxm.invalid> wrote:
> On 2022-11-17, Charles Richmond <codescott@aquaporin4.com> wrote:
>
>> On 11/13/2022 8:42 PM, Charlie Gibbs wrote:
>>
>>> On 2022-11-13, greymaus <greymaus@dmaus.org> wrote:
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>> the question: "Are your programmers online???" The picture showed a
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>>

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>> VDU terminals were expensive, it was *more* expensive to force your
>> programmers to continue using punch cards...
>
> Only in the long term, which managers are notorious for ignoring.
> Besides, why should lowly programmers have access to such fancy
> toys? That should be the sole domain of the beautiful people,
> i.e. management.

The university I was at, got some brand new 386 computers in 1988/89.
They were for the graphics lab.

One professor told me to take one to his office. I told him to take a
flying leap to the moon.

He asked me if I knew who he was ? I replied, yes, someone tryng to
dstreal a computer from the computer lab.

My boss walked in just then, and asked me what was going on. I pointed
to the professor and said that thief wants me to take one of our brand
new computers to his office and I told him no.

The campus dean walke in and told the professor that if he moved one
of those computers to his office he would find himself out the door
and not come back.

I smiled at the professor. He left the computer lab.

And no, I didn't get fired. My boss bought me lunch that day.

> When personal computers were first spreading, a PPOE purchased several.
> There were three models available: a high-end one with a large screen
> and lots of CPU power; an intermediate one; and the cheapo unit with
> minimal hardware and a small screen. The managers, who barely used
> them or even knew how, naturally got the high-end machines. We techies
> got the intermediate model, while our poor data entry clerk, who pounded
> away on it all day, got the cheapest model and spent her days squinting
> at its small screen. (They really treated her like dirt. Several times
> she stormed out of the office in tears. One day she never came back.)

Same at most places I ever worked, except one. Any computer had to be
justified to the big boss at one job. He wanted finance and purchasing
to be happy. So most of them had 2 monitors and nice computers.

--
Jim

Subject: Re: do some Americans write their 1's in this way ?
Posted by Clark G on Tue, 22 Nov 2022 15:39:37 GMT

Peter Flass <peter_flass@yahoo.com> wrote in
news:33377678.690071219.935255.peter_flass-yahoo.com@news.eternal-septemb
er.org:

> Ahem A Rivet's Shot <steveo@eircom.net> wrote:
>> On 13 Nov 2022 17:02:05 GMT
>> greymaus <greymaus@dmaus.org> wrote:
>>
>>> When did stamped cards finish on computers, to be replaced by
>>> computer screens?.
>>
>>   I was using punched cards regularly in the mid 1970s, by the
>>   late
>> 1970s they were almost but not quite gone - systems still supported
>> them but hardly anyone used them for anything other than notes.
>>
>
> They kind of slipped away without anyone noticing. I don't recall
> exactly when, but a professor asked me to convert his research results
> on cards into something usable and I had to look all over the city for
> someone with a card reader to get them copied to tape, and I was a bit
> surprised by how hard I had to search.
>
> PPOE had an IBM 3505/3525 reader punch for a long time, perhaps into
> the 80s. They may still have it, but I don't think it was ever used.
>

In my first year of engineering at the University of British Columbia in
1980, I was in the last class of 'Introduction to Programming' to use
punch cards, programming in WATFIV (Waterloo's FORTRAN dialect).
I used terminals for the rest of my courses, but they still had a card
punch attached to the MTS mainframe for me to produce my resume on punch
cards when I graduated in 1983. I still have a box of cards in the crawl
space with that resume and other nostalgic bits.

--
Clark G
* take away the em's to reply

Subject: Re: do some Americans write their 1's in this way ?
Posted by Alan Bowler on Thu, 26 Jan 2023 23:54:57 GMT

On 2022-11-10 12:04 p.m., Tak To wrote:
> On 11/10/2022 8:40 AM, Peter Flass wrote:
>
>> think systems with 36-bit words that stored characters in 9 bits may have
>> called them bytes. "Characters" was the term of art earlier.
>
> The only system I know of that fits that description is Multics,
> and I don't remember how those 9-bit entities were called.

It was not just the Multics boxes. It was the whole line of
machines descended from the GE-600, (Honeywell 6000, DPS-8,
DPS-8000, DPS-9000 ...) Most ran Gcos-III, later Gcos-8, although
Dartmouth created DTSS for this architecture (from which came BASIC).

GE also had the MarkIII timesharing system, which is what
the GEnie service ran under.

There are still Gcos8 systems in production today although
they are emulating the instruction set using Itanium or Xeon
processors.

Subject: Re: do some Americans write their 1's in this way ?
Posted by Charlie Gibbs on Fri, 27 Jan 2023 01:18:56 GMT
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On 2023-01-26, Alan Bowler <atbowler@thinkage.ca> wrote:

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The 36-bit Univac 1100 series originally stored six 6-bit Fieldata
characters in a word, but later models offered quarter-word (9-bit)
operations and supported ASCII that way.

--
/~\ Charlie Gibbs | Microsoft is a dictatorship.
\ / <cgibbs@kltpzyxm.invalid> | Apple is a cult.
 X   I'm really at ac.dekanfrus | Linux is anarchy.
/ \ if you read it the right way. | Pick your poison.

Subject: Re: do some Americans write their 1's in this way ?
Posted by Anonymous on Fri, 27 Jan 2023 06:27:23 GMT

Originally posted by: songbird

Charlie Gibbs wrote:
> On 2023-01-26, Alan Bowler <atbowler@thinkage.ca> wrote:
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  yes, i enjoyed writing assembler on those machines.
it spoiled me for many others.

  songbird