

ONE DIV ZERO

AN EXPLORATION OF SOFTWARE DEVELOPMENT.

THURSDAY, MAY 7, 2009

A Brief, Incomplete, and Mostly Wrong History of Programming Languages

1801 - Joseph Marie Jacquard uses punch cards to instruct a loom to weave "hello, world" into a tapestry. Redditors of the time are not impressed due to the lack of tail call recursion, concurrency, or proper capitalization.

1842 - Ada Lovelace writes the first program. She is hampered in her efforts by the minor inconvenience that she doesn't have any actual computers to run her code. Enterprise architects will later relearn her techniques in order to program in UML.

1936 - Alan Turing invents every programming language that will ever be but is shanghaied by British Intelligence to be 007 before he can patent them.

1936 - Alonzo Church also invents every language that will ever be but does it better. His lambda calculus is ignored because it is insufficiently C-like. This criticism occurs in spite of the fact that C has not yet been invented.

1940s - Various "computers" are "programmed" using direct wiring and switches. Engineers do this in order to avoid the tabs vs spaces debate.

1957 - John Backus and IBM create FORTRAN. There's nothing funny about IBM or FORTRAN. It is a syntax error to write FORTRAN while not wearing a blue tie.

1958 - John McCarthy and Paul Graham invent LISP. Due to high costs caused by a post-war depletion of the strategic parentheses reserve LISP never becomes popular[1]. In spite of its lack of popularity, LISP (now "Lisp" or sometimes "Arc") remains an influential language in "key algorithmic techniques such as recursion and condescension"[2].

1959 - After losing a bet with L. Ron Hubbard, Grace Hopper and several other sadists invent the Capitalization Of Boilerplate Oriented Language (COBOL). Years later, in a misguided and sexist retaliation against Adm. Hopper's COBOL work, Ruby conferences frequently feature misogynistic material.

1964 - John Kemeny and Thomas Kurtz create BASIC, an unstructured



ABOUT ME

JAMES IRY

SAN FRANCISCO, CA, UNITED STATES

If cars were built like software then...well, I don't know squat about building cars so who knows. It might be kinda cool. But probably not.

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programming language for non-computer scientists.

Wrong History of P...

1965 - Kemeny and Kurtz go to 1964.

- April (6)
- March (1)
- January (1)

1970 - Guy Steele and Gerald Sussman create Scheme. Their work leads to a series of "Lambda the Ultimate" papers culminating in "Lambda the Ultimate Kitchen Utensil." This paper becomes the basis for a long running, but ultimately unsuccessful run of late night infomercials. Lambdas are relegated to relative obscurity until Java makes them popular by not having them.

- 2008 (5)
- 2007 (7)

1970 - Niklaus Wirth creates Pascal, a procedural language. Critics immediately denounce Pascal because it uses " $x := x + y$ " syntax instead of the more familiar C-like " $x = x + y$ ". This criticism happens in spite of the fact that C has not yet been invented.

LABELS

- C (5)
- C# (2)
- C++ (3)
- erlang (4)
- functional programming (15)
- groovy (2)
- haskell (6)
- humor (7)
- java (7)
- monads (5)
- object oriented (3)
- parallel/distributed/concurrent (5)
- programming languages (9)
- ruby (1)
- scala (16)
- scala humor (1)
- scuba (1)
- systems design (2)
- types (8)
- version control (1)

1972 - Dennis Ritchie invents a powerful gun that shoots both forward and backward simultaneously. Not satisfied with the number of deaths and permanent maimings from that invention he invents C and Unix.

1972 - Alain Colmerauer designs the logic language Prolog. His goal is to create a language with the intelligence of a two year old. He proves he has reached his goal by showing a Prolog session that says "No." to every query.

1973 - Robin Milner creates ML, a language based on the M&M type theory. ML begets SML which has a formally specified semantics. When asked for a formal semantics of the formal semantics Milner's head explodes. Other well known languages in the ML family include OCaml, F#, and Visual Basic.

1980 - Alan Kay creates Smalltalk and invents the term "object oriented." When asked what that means he replies, "Smalltalk programs are just objects." When asked what objects are made of he replies, "objects." When asked again he says "look, it's all objects all the way down. Until you reach turtles."

1983 - In honor of Ada Lovelace's ability to create programs that never ran, Jean Ichbiah and the US Department of Defense create the Ada programming language. In spite of the lack of evidence that any significant Ada program is ever completed historians believe Ada to be a successful public works project that keeps several thousand roving defense contractors out of gangs.

1983 - Bjarne Stroustrup bolts everything he's ever heard of onto C to create C++. The resulting language is so complex that programs must be sent to the future to be compiled by the Skynet artificial intelligence. Build times suffer. Skynet's motives for performing the service remain unclear but spokespeople from the future say "there is nothing to be concerned about, baby," in an Austrian accented monotones. There is some speculation that Skynet is nothing more than a pretentious buffer overrun.

1986 - Brad Cox and Tom Love create Objective-C, announcing "this language has all the memory safety of C combined with all the blazing speed of Smalltalk." Modern historians suspect the two were dyslexic.

1987 - Larry Wall falls asleep and hits Larry Wall's forehead on the keyboard. Upon waking Larry Wall decides that the string of characters on Larry Wall's monitor isn't random but an example program in a programming language that God wants His prophet, Larry Wall, to design. Perl is born.

1990 - A committee formed by Simon Peyton-Jones, Paul Hudak, Philip Wadler, Ashton Kutcher, and People for the Ethical Treatment of Animals creates Haskell, a pure, non-strict, functional language. Haskell gets some resistance due to the complexity of using monads to control side effects. Wadler tries to appease critics by explaining that "a monad is a monoid in the category of endofunctors, what's the problem?"

1991 - Dutch programmer Guido van Rossum travels to Argentina for a mysterious operation. He returns with a large cranial scar, invents Python, is declared Dictator for Life by legions of followers, and announces to the world that "There Is Only One Way to Do It." Poland becomes nervous.

1995 - At a neighborhood Italian restaurant Rasmus Lerdorf realizes that his plate of spaghetti is an excellent model for understanding the World Wide Web and that web applications should mimic their medium. On the back of his napkin he designs Programmable Hyperlinked Pasta (PHP). PHP documentation remains on that napkin to this day.

1995 - Yukihiro "Mad Matz" Matsumoto creates Ruby to avert some vaguely unspecified apocalypse that will leave Australia a desert run by mohawked warriors and Tina Turner. The language is later renamed Ruby on Rails by its real inventor, David Heinemeier Hansson. [The bit about Matsumoto inventing a language called Ruby never happened and better be removed in the next revision of this article - DHH].

1995 - Brendan Eich reads up on every mistake ever made in designing a programming language, invents a few more, and creates LiveScript. Later, in an effort to cash in on the popularity of Java the language is renamed JavaScript. Later still, in an effort to cash in on the popularity of skin diseases the language is renamed ECMAScript.

1996 - James Gosling invents Java. Java is a relatively verbose, garbage collected, class based, statically typed, single dispatch, object oriented language with single implementation inheritance and multiple interface inheritance. Sun loudly heralds Java's novelty.

2001 - Anders Hejlsberg invents C#. C# is a relatively verbose, garbage collected, class based, statically typed, single dispatch, object oriented language with single implementation inheritance and multiple

interface inheritance. Microsoft loudly heralds C#'s novelty.

2003 - A drunken Martin Odersky sees a Reese's Peanut Butter Cup ad featuring somebody's peanut butter getting on somebody else's chocolate and has an idea. He creates Scala, a language that unifies constructs from both object oriented and functional languages. This pisses off both groups and each promptly declares jihad.

Footnotes

1. Fortunately for computer science the supply of curly braces and angle brackets remains high.
2. Catch as catch can - Verity Stob

Edits

- 5/8/09 added BASIC, 1964
- 5/8/09 Moved curly brace and angle bracket comment to footnotes
- 5/8/09 corrected several punctuation and typographical errors
- 5/8/09 removed bit about Odersky in hiding
- 5/8/09 added Objective-C, 1986
- 5/8/09 added Church and Turing
- 4/9/10 added Ada (1983) and PHP(1995)

POSTED BY JAMES IRY AT 7:28 PM 1075 COMMENTS

LABELS: HUMOR, PROGRAMMING LANGUAGES

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Jack Cough • 6 years ago

Thanks. I'm cracking up.

37 ^ | ▾ • Reply • Share ›

Archimedes deSilva ➔ Jack Cough
• 2 years ago

Bad cough.

^ | ▾ • Reply • Share ›



Anonymous • 6 years ago

Jacquard's loom wasn't concurrent? It was pretty thoroughly multithreaded, I'd have thought!

328 ^ | ▾ • Reply • Share ›



Anonymous → Anonymous · 3 years ago

badom-tsch

20 ^ | v · Reply · Share ›



Devin → Anonymous · 3 years ago

Eeeeeeyyyoooooooooooooooo!

6 ^ | v · Reply · Share ›

Ralph Siegler → Anonymous · a year ago

ahead of its time, when threaded with silk, it could even make productive use of bugs.

40 ^ | v · Reply · Share ›

Jenny_Axe → Ralph Siegler
· 6 months ago

This was also the time and place where lint was invented.

4 ^ | v · Reply · Share ›

Philip Machanick →

Jenny_Axe · 6 months ago

Stop, you're getting me in stitches.

3 ^ | v · Reply · Share ›

Jenny_Axe → Philip

Machanick · 6 months ago

I'm sorry; I know I have a warped sense of humour...

3 ^ | v · Reply · Share ›

jmrm01 → Jenny_Axe

· 24 days ago

Given the subject, maybe you have a warped and woofed sense of humor.

^ | v · Reply · Share ›

Jenny_Axe → jmrm01

· 11 days ago

Maybe we should stop shuttling jokes back and forth...

^ | v · Reply · Share ›



Gabriel C. · 6 years ago

As the story goes, when Odersky got the idea for Scala, he was high on pizza and listening to

"Stairway to heaven"

27 ^ | v • Reply • Share ›

Philip Machanick → Gabriel C.
• 6 months ago

If he understood pizza, it would have been
stairway to leaven

2 ^ | v • Reply • Share ›



Eric • 6 years ago

Languages wars are usually sad but languages
history is definitely funny! Thanks.

9 ^ | v • Reply • Share ›



Jack Cough • 6 years ago

Thanks. I'm cracking up.

1 ^ | v • Reply • Share ›



gmlk • 6 years ago

:D Thx.

You did however forget some important/interesting
languages e.g. Objective C (all things Apple?)

8 ^ | v • Reply • Share ›

somercet → gmlk • 2 years ago

Dude, either it was in there or he added it
later.

^ | v • Reply • Share ›



Jim → somercet • a year ago

The prior comment was made about 6
months after the first iphone was
released. Dude

4 ^ | v • Reply • Share ›

Jezen Thomas → Jim
• 10 months ago

And? Obj-C wasn't created for
the iPhone. Obj-C first
appeared in 1983.

7 ^ | v • Reply • Share ›



Mr. Stone • 6 years ago

I can't stop laughing... thanks man! :)

3 ^ | v • Reply • Share ›



Anonymous • 6 years ago



Objective C is nice but it's not considered an influential language. It's only used on the Apple platform and nothing else. It didn't have anything that could inspire a new language designer, because in the end its object model is just a light smalltalk layer over C.

I'd say, it didn't make "History".

4 ^ | v • Reply • Share ›

Francis Devereux → Anonymous

• 3 years ago

Java was heavily influenced by Objective C

4 ^ | v • Reply • Share ›



Jimmt → Francis Devereux

• 3 years ago

More heavily by C++.

2 ^ | v • Reply • Share ›

e70838 → Jimmt

• 3 years ago

Objective-C was a reaction against C++ and was very much influenced by smalltalk. Java was influenced by smalltalk, by the lessons learned from Objective-C and by the defects of C++.

8 ^ | v • Reply • Share ›

greyfade → e70838

• 3 years ago

... And fixes none of those defects. :)

36 ^ | v • Reply • Share ›



Mason Wheeler →

greyfade • 8 months ago

No templates. I'd say that's fixing a major C++ defect! (I take no position here on the quality of Java's generics system; that's a totally different question.)

^ | v • Reply • Share ›

greyfade → Mason Wheeler

• 8 months ago

Templates are not a C++ defect. They're a happy accident, and a powerful metaprogramming language, albeit with a few warts and an ugly syntax. Generics are a joke.

^ | v • Reply • Share ›



InvaderACE ➔ e70838
• a year ago

ObjectiveC and C++ is about the same age (79-80 timeframe) and ObjectiveC is not a reaction to c++

4 ^ | v • Reply • Share ›

Ralph Johnson ➔ e70838
• 6 months ago

Objective-C and C++ were invented about the same time. Both were attempts to make C object-oriented, C++ was inspired by Simula, Objective-C by Smalltalk. I remember seeing them at OOPSLA'86 and thinking that Objective-C was better done and would probably win out in the long run. So much for my ability to predict the future.

4 ^ | v • Reply • Share ›

Anders ➔ Jimmt
• 3 years ago

No, it wasn't. Unless you count "don't do like C++" to mean heavily influenced. :)

2 ^ | v • Reply • Share ›

Philip Machanick ➔ Jimmt
• 6 months ago

Nothing is heavier than C++.

^ | v • Reply • Share ›

Sasmito Adibowo ➔ Anonymous
• 3 years ago

Objective-C is about as influential as C# is. Not to mention that it's about two decades

older and still going strong(er).

1 ^ | v • Reply • Share ›

Daniel Butler → Sasmito Adibowo
• 3 years ago

yes but C# was not put in here
because it was influential or used a
lot. It's put in here solely because it's
almost a direct knock off of Java.

11 ^ | v • Reply • Share ›



Mason Wheeler → Daniel
Butler • 8 months ago

It's actually a direct knockoff
of Delphi, rewritten to look like
Java. (It's not so obvious in
more modern versions, but if
you look at .NET 1.0, it's pretty
clear what it is you're looking
at, even if you didn't know
what Anders Hejlsberg was
doing before he went to work
for Microsoft.)

It's what Microsoft always
does: realize their product is
no good, look around, see
who's producing something
that actually works really well,
and blatantly rip it off to
produce their own version.

4 ^ | v • Reply • Share ›



Neorou → Sasmito Adibowo
• 3 years ago

Sasmito Adibowo is a Javanese name,
I wonder if the name bearer speaks
Javanese? I think there are more
people who read and write java than
those that speak Javanese if at all...

2 ^ | v • Reply • Share ›

Jens Hausherr → Anonymous • 3 years ago

It was the primary language for the NeXT
platform, sooo... it is in a way historical ;)

3 ^ | v • Reply • Share ›



Some_guy → Jens Hausherr
3 years ago



• 3 years ago

It's also heavily used for iPhone and iPad development. Last quarter Apple sold:

5.2 million Macs

37.04 million iPhones

15.4 million iPods (~half are iPod Touch)

15.43 million iPads

That's a total of 65.37 million devices
Objective C is used to develop for in one 3 month period. Seems significant to me even without NeXT.

3 ^ | v • Reply • Share ›

Jonathan C Dickinson ➔

Some_guy • 3 years ago

Or MonoDroid - and very likely some x-platform tech I am unaware of. As far as I know Java doesn't like Apple - apparently an Apple in a Mocha would have worked out better.

^ | v • Reply • Share ›



BobL ➔ Some_guy

• 3 years ago

You can stick with C++ on iPhones - and many folks do for some reason :-)

3 ^ | v • Reply • Share ›



blech ➔ Anonymous • 4 months ago

Objective C just objectified C in a way that only Apple can.

1 ^ | v • Reply • Share ›



Anonymous • 6 years ago

Jacquard's loom wasn't concurrent? It was pretty thoroughly multithreaded, I'd have thought!

7 ^ | v • Reply • Share ›



Tessa is a Horrible Person • 6 years ago

A laugh a line. Brilliant. Critics love "A Brief, Incomplete, and Mostly Wrong History of Programming Languages" and so will you.

6 ^ | v • Reply • Share ›



Nick • 6 years ago

Brilliant! Thank you!

5 ^ | v • Reply • Share ›



unix find command ➔ Nick • 3 years ago

Indeed brilliant.

^ | v • Reply • Share ›



Javier • 6 years ago

juasss "John McCarthy and Paul Graham invent LISP"

6 ^ | v • Reply • Share ›



Brown • 6 years ago

Oh God - that was hilarious!!!! Thank you for the best laugh I've had in ages!!!

4 ^ | v • Reply • Share ›



Gabriel C. • 6 years ago

As the story goes, when Odersky got the idea for Scala, he was high on pizza and listening to "Stairway to heaven"

^ | v • Reply • Share ›



=M • 6 years ago

Very nice! :) Ada is missing though.

2 ^ | v • Reply • Share ›

br0ther ➔ =M • 4 years ago

Not really, see the second note and 1983.

4 ^ | v • Reply • Share ›



Eric • 6 years ago

Languages wars are usually sad but languages history is definitely funny! Thanks.

^ | v • Reply • Share ›

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