Final Considerations

“The most important function of computer code is to communicate the programmer's intent to a human reader.”

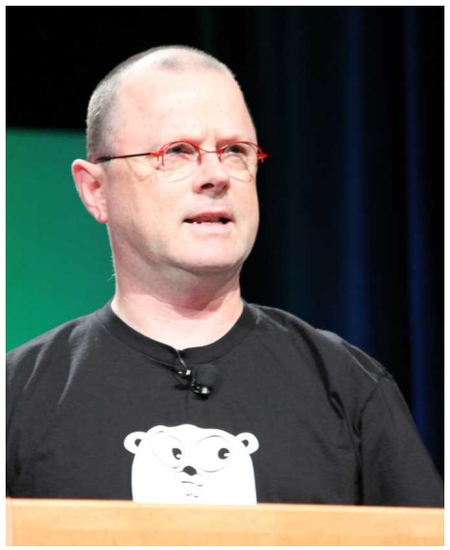
OPTIMIZATION IS SACRIFICING CLARITY & MAINTAINABILITY IN THE NAME OF PERFORMANCE

“We should forget about small efficiencies, say about 97% of the time: premature optimization is the root of all evil.”

DO NOT SACRIFICE CODE CLARITY BY OPTIMIZING BEFORE YOU KNOW THAT YOU NEED TO

The author also continues, saying: “Yet we should not pass up our opportunities in that critical 3%.”

The message is: Avoid sacrificing code clarity for **negligible** performance improvement.

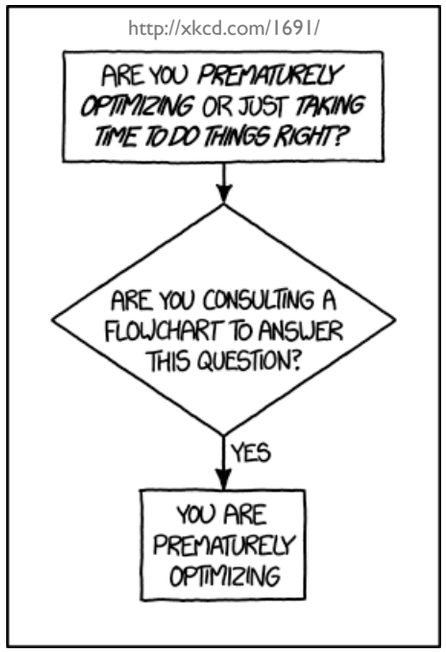


Rob Pike's 5 Rules of Programming

Bell Labs
Unix Team
UTF-8
Go Language
...and a lot more

1

- You can't tell where a program is going to spend its time. Bottlenecks occur in surprising places, so don't try to second guess and put in a speed hack until you've proven that's where the bottleneck is.



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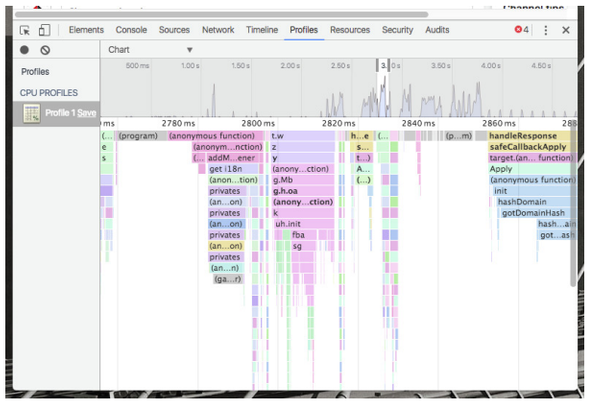
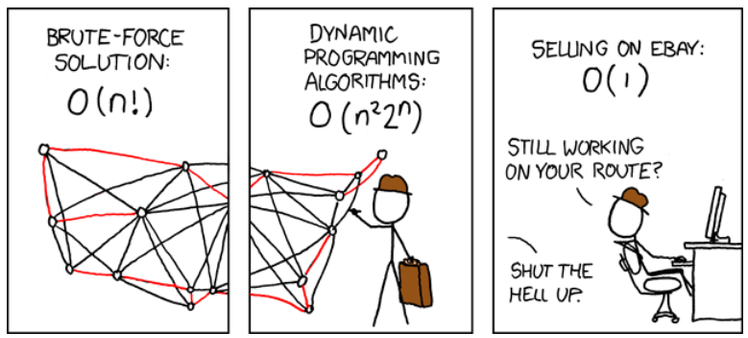


- Measure. Don't tune for speed until you've measured, and even then don't unless one part of the code overwhelms the rest.

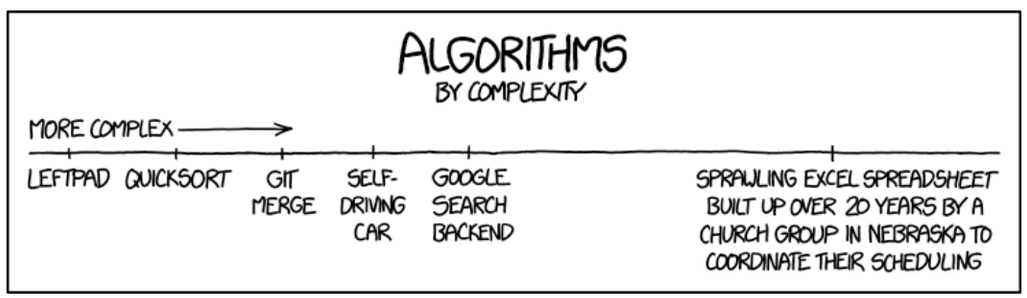
3

- Fancy algorithms are slow when n is small, and n is usually small. Fancy algorithms have big constants. Until you know that n is frequently going to be big, don't get fancy.



4

- Fancy algorithms are buggier than simple ones, and they're much harder to implement. Use simple algorithms as well as simple data structures.



5

- Data dominates. If you've chosen the right data structures and organized things well, the algorithms will almost always be self-evident. Data structures, not algorithms, are central to programming.