



I Choose You, Fact 44!

Understanding what is there is harder than just writing something new

Steven Koenig







Summary of Fact 44

- Programmes are written once, read several times
- Every reader has to re-understand
- intent of the code
- what the code actually does
- Maintenance documentation missing almost always
- reasons against certain design decisions not clear
- "Let's make the same mistake (over and over) again."
- Have you ever read a piece of code and thought "why the hell is this working?" or "what on Earth is this doing?"
- Result: high costs for maintenance





Connection to Own Work (1)

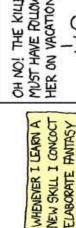
Next Generation Sequencing Data

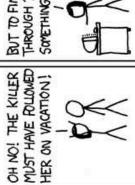
- paired reads = sequences belonging to each other
- two files, pair = entry of one file + entry of other file (same IDs)
- processing can lead to losing one partner of a pair
- using sequences to build a genome
- paired data must be complete
- need way to remove singletons, so only pairs are left
- select_paired.pl does that
- not... because our IDs do not match "^ (\>. *) \/ \d\$"
- •



Technische Universität München

Connection to Own Work (2)

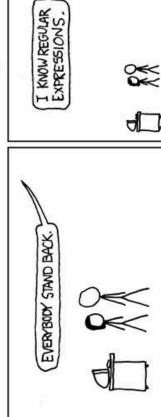


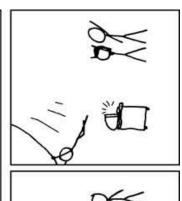


SCENARIOS WHERE IT

LETS ME SAVE THE DAY.







Source: https://xkcd.com/208/

Author: Randall Munroe









Connection to Own Work (3)

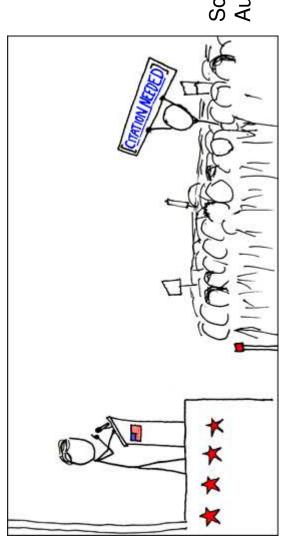
- Finding the wrong regular expression when the script was touted as being able to handle data produced by the sequencer we used took quite some time.
- Also: I do not know Perl~
- What happened here?
- Requirement changed
- "design a solution within the context of the existing product's design"
- Change the regular expression to match our IDs
- for the nosy ones:
- ,\$(p\:\n\:\]+:[\]+:[\]+:[\]+:[\]+:\d+:\d+:\d+; \]
- Also added some debug output and left that in the script





Fact 44 is true[Citation needed]

- I experience this very often.
- Actually, every time I look at other people's code.
- Or even my own code from years ago
- "OMFG! I cannot believe, I did it that way back then."



Source: https://xkcd.com/285/ Author: Randall Munroe







What I learned from this

- There is something called ,maintenance documentation'.
- I had this idea/notion of something like that in my head, but thought it was just one of my unrealistic perfectionist ideas.
- But: There is a good chance that maintenance documentation would be actually useful and beneficial.
- I want to encourage everyone to create maintenance documentation. This needs to be the standard.