CS423 Summary: Hints for computer system design

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Area:

This paper provides the general hints or anecdotes in system design. The Area fits generally in the whole designing of operating system.

Problem:

This paper did not work on a specific problem in system design area, but it provided a list of advice for system designers.

Methodology:

In order to reasonably provide suggestions. The author of this paper carefully provide logical reasoning and real-world example to answer two questions for every tip. These questions are:

- Why it helps in making a good system.

- Where in the system design it helps.

Solution:

The solution are the list of tips categorized into three areas

- Functionality:

    - The tips include: keep it simple; make it fast; don't hide power; use procedure arguments ... etc.

- Speed:

    - The tips include: split resources; use static analysis; dynamic translation; cache answer; ...etc.

- Fault-tolerate:

    - The tips include: end to end monitoring and log update.

Results:

As this paper did not work on a specific problem. There is no metric to evaluate the result. But these hints are really helpful for a system designer from

today's point of view.

Takeaway:

This paper is made up of takeaway suggestions. Any system builder should pay attention to these hints.