

**up to and including Section 3.4*

1 Summary

Lampson summarizes the ‘what’, ‘how’, and ‘when, who’ with respect to computer systems design along the following three axes: goals, techniques, and process. Each axis is given a catchy acronym specifying its attributes that form the *hints*: (1) goals is given STEADY (Simple, Timely, Efficient, Adaptable, Dependable, Yummy), (2) techniques is given AID (Approximate, Incremental, Divide & Conquer), and (3) process is given ART (Architecture, Automate, Review, Techniques, Test). Together, they become STEADY by AID with ART: “reach goals by using techniques with the process.” §2 outline the “principles”: abstraction, specs, code, modularity, and the value of a point of view (“it’s not that one viewpoint is more correct than another, but that it’s more convenient for some purpose”). §3 provides techniques to achieve aforementioned goals with special focus on Efficient and Dependable due to the relevance of locality (E), concurrency (E), and redundancy (D) in today’s systems.

2 Strengths of the paper

This new short version of his 1983 paper sort of serves as proof of the point that Lampson makes about how a successful interface can live on for decades. It is no doubt helpful to convey the same ideas he espoused in the original paper by drawing on today’s technologies like using the Facebook friends graph as an example of a type of well-studied problem domain that adopting a widely-used library would be pragmatic for instead of reinventing the wheel. Another aspect I appreciate about this paper are the quotations that appear at the beginning of each section and set the tone for what’s to come. The reader’s mind is always more welcoming to absorb technical nuance when, at the very least, it’s forewarned about the flavor of the incoming argument. Furthermore, the fact that the quotations mostly come from analogous yet relatively non-technical backgrounds also aids the reader’s understanding of Lampson’s nuanced takes, in case they’re unable to understand the technicalities present within the meaty body of the section.

3 Major weakness of the paper

I wonder whether “Points of view” is an appropriate name for §2.5. Despite the author’s attempt to elucidate their point by highlighting some examples of alternative points of view, I failed to understand in detail the point he was trying to make. Does he mean it’s important to have various viewpoints of a system? Or, that it behooves designers to share a single one?

4 Future work opportunities

Given that I am seriously considering developing some sort of framework for a digital twins system related to smart cities, it seems imminent for me to borrow concepts mentioned herein when doing so. But really any computer system being designed necessitates the inclusion of the hints and principles mentioned in this paper.