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Reading 5

Summarized Article: <http://groups.csail.mit.edu/ana/Publications/PubPDFs/Rethinking%20the%20design%20of%20the%20internet2001.pdf>

Other Article:

<http://arstechnica.com/security/2013/09/touchid-hack-was-no-challenge-at-all-hacker-tells-ars/>

The Internet has long been a multi-faceted resource that the world now is so integrated into that some have considered a major redesign of its architecture. The original ideas of today’s Internet were first published in the 1980s, and have been debated from there forward. The original idea was to create what we know as the datagram service to deliver packets of data to and from end-nodes on the network, by traveling through other nodes in the network to get there. In essence, it was a fairly minimal design that abstracted the details of how delivery was done into different levels, of which made using the internet fairly easy for applications.

In their article, titled “Rethinking the Design of the Internet: The End-to-End Arguments vs. the Brave New World,” David Clark and Marjory Blumenthal describe the advantages of abstracting the various layers of the Internet, by stating “there are a number of advantages in moving application-specific functions out of the core of the network and providing only general-purpose system services there,” which includes “complexity of the core is reduced,” “new applications can be added without having to change the core of the network,” and “increased reliability,” in the implementation of applications. Of course, Clark and Blumenthal also provide the arguments to move away from this, and move towards a more application-oriented core of the network. In short, “Untrustworthy” entities operating on the backbone of the network, “more demanding applications” of which weren’t originally conceivable at the implementation of the original Internet services, and the presence of “less sophisticated users” all are arguments that the other side offer when describing the need for change.

I believe, however, that little can be done to change what is the largest resource on the planet, and has many deep connections to governments, societies, and economic forces in the world today. Even though some of the arguments presented in the article do make a good case for change, I believe that keeping the resources more generalized make for a more reliable and understandable Internet. If we were to change that today, it could either be a catastrophe, or make for a few painful years, and many displeased users. In the end, I agree with Blumenthal and Clark when they say that “the open, general nature of the Net, which derived from the end-to-end arguments, is a valuable characteristic that encourages innovation, and that this flexibility should be preserved.”