

RULES OF NETWORK DESIGN

01 If you haven't found the tradeoffs, you haven't looked hard enough.

Design is an iterative process. You probably need one more iteration than you've done to get it right.

03 A design isn't finished when everything needed is added, it's finished when everything possible is taken away.

Good design isn't making it work, it's making it fail gracefully.

05 Effective, elegant, efficient. All other orders are incorrect.

Don't fix blame; fix problems.

07 Local and global optimization are mutually exclusive.

Reducing state always reduces optimization someplace.

09 Reducing state always creates interaction surfaces; shallow and narrow interaction surfaces are better than deep and broad ones.

The easiest place to improve or screw up a design is at the interaction surfaces.

11 The optimum is almost always in the middle someplace; eschew extremes.

Sometimes its just better to start over.

13 There are a handful of good solutions; there is an infinite number of bad ones.

You are not immensely smarter than anyone else in networking.

15 A bad design with a good presentation is doomed eventually; a good design with a bad presentation is doomed immediately.

You can only know your part of the system and a little bit about the parts around your part.

The rest is rumor and pop psychology.

17 To most questions the correct initial answer should be "how many balloons fit in a bag?"

Virtual environments still have hard physical limits.