Lessons from Annotated Bibliographies

Citations are not Nouns

- Citations are parenthetical remarks
  - The “generic universe” was presented in [Chapman *et al.*, 2010]
  - Chapman *et al.* [2010] discovered the “generic universe”
- Separate callout from authors with a non-breaking space (option-space on Mac, ~ in LaTeX)
- Test: read the sentence without the parenthesis

solidus: don't use it

unless you mean "divided by"

- don't use the solidus (/): say what you mean!
  - and/or ➠ and, or, some combination of …
  - well-orderings/inductive types ➠ well orderings (also called inductive types)
  - idle/busy time ➠ idle time
    - **but:** idle/busy ratio

Hyphenate Compound Adjectives

- depth invariant alignment ➠ depth-invariant alignment
  - depth invariant alignment means that the “invariant alignment” had “depth”
  - what the writer meant was that the “alignment” was “depth invariant”
- type theoretical universe ➠ type-theoretical universe

Different

- different requires that two (or more) things are being compared
  - A is different from B — good
  - A is different — OK *only* if the context make it obvious what A is different from
  - several different techniques means several techniques, all of which are different from some other, implicitly understood set of techniques.
    - Did the writer mean "a variety of techniques" ?

different is *not* a synonym for multiple, or varied

Passive

- Use active verbs!
  - A general multi-agent framework is proposed for robotics
  - Every paper gets related ➠ Every paper relates
  - causes significant energy waste ➠ wastes energy
  - achieve minimal energy ➠ minimize energy
  - meets the bandwidth requirement ➠ supplies the required bandwidth

, which vs. that

- , which *describes* something that has already been uniquely identified
  - a type-theoretic universe, which is a mapping from codes to types,
- that *defines* something
  - the network path that has most overlap

Provide information

- Often you can provide more information without adding more words
  - that learn only a small percentage ➠ that learn only 1–5 percent
  - The authors evaluate their method experimentally ➠ Experiments showed a 27 percent space saving.

Concision

- When you revise, look for terse, clear re-phrasings:
  - … so as to save network energy consumption ➠
    … to save energy
- Each “cleaning” of the text will make others visible.

Bolla, R., Bruschi, R., Carrega, A., and Davoli, F. 2010. An Analytical Model for Designing and Controlling New-Generation Green Devices. In *IEEE GLOBECOM Workshops*. 1388–1393.

This paper presented a mathematical model of performance and energy consumption of energy-aware network devices, which can be configured with different power states that are adapted to the offered workload so as to save network energy consumption. The authors first gave the ACPI (Advanced Configuration Power Interface) definition of different power state of network device and deduced the model of incoming traffic and idle/busy time of the server using queuing theory. Then they derived the model to represent the network performance indexes and network energy consumption. This paper derives a novel mathematical model of energy-adaptive network devices. The model takes into account of device power configurations and traffic pattern parameters. Through this model, we can more accurately compute the trade-offs between power consumption and different network performance metrics such as packet loss probability and network latency.

140 words

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Bolla and colleagues present a mathematical model of performance and energy consumption for network devices; the devices can be configured into various power states, to save energy. The authors first define the possible power states for network devices, and model both incoming traffic and the idle time of the server using queuing theory. Then they refine the model to represent network performance and energy consumption, leading to a novel mathematical model of energy-adaptive network devices that accounts for device power configuration and traffic patterns. This model helps us to trade-off power consumption against network performance, as measured by metrics such as packet loss and latency.

107 words (a saving of 24%)

Can we do better?

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Bolla and colleagues present a mathematical model of network performance and energy consumption. The energy consumption of network devices can be regulated by changing their power state. Using queuing theory, the authors model both incoming traffic and the idle time of the server. They refine their model to include network performance and energy consumption. The resulting model lets network managers trade-off power consumption against network performance, as measured by metrics such as packet loss and latency, while accounting for device power and traffic patterns.

84 words (saved 40%)