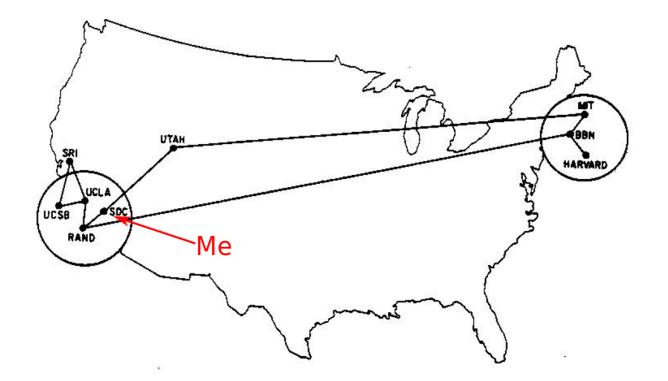
Network Operations On A Public Utility Internet

Karl Auerbach

CTO IWL – <u>https://iwl.com/</u>



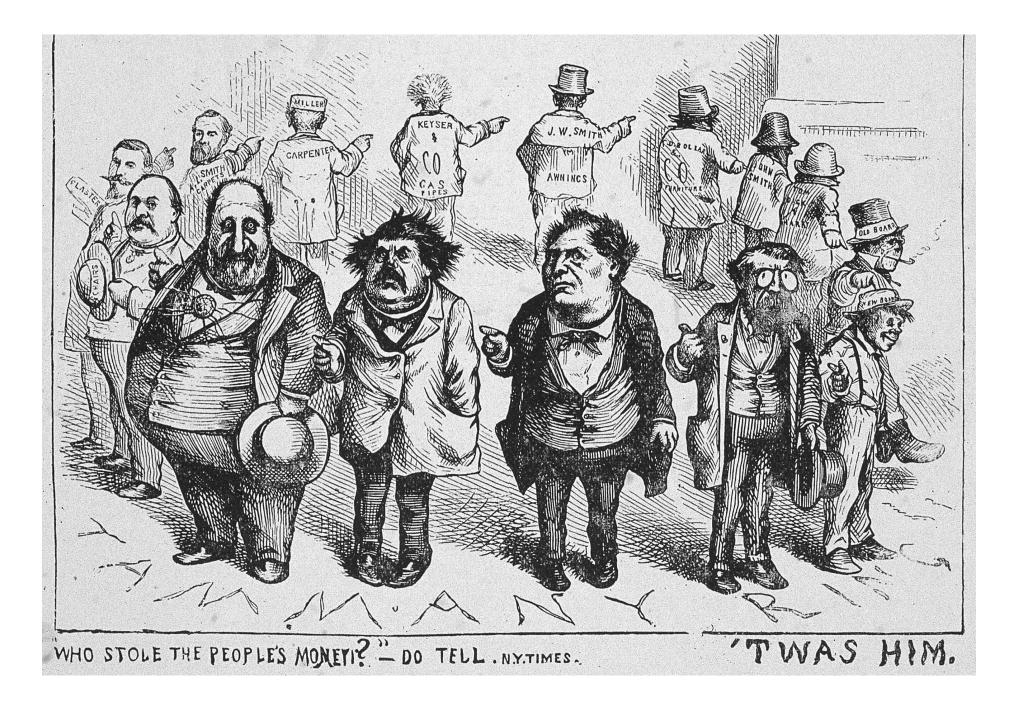


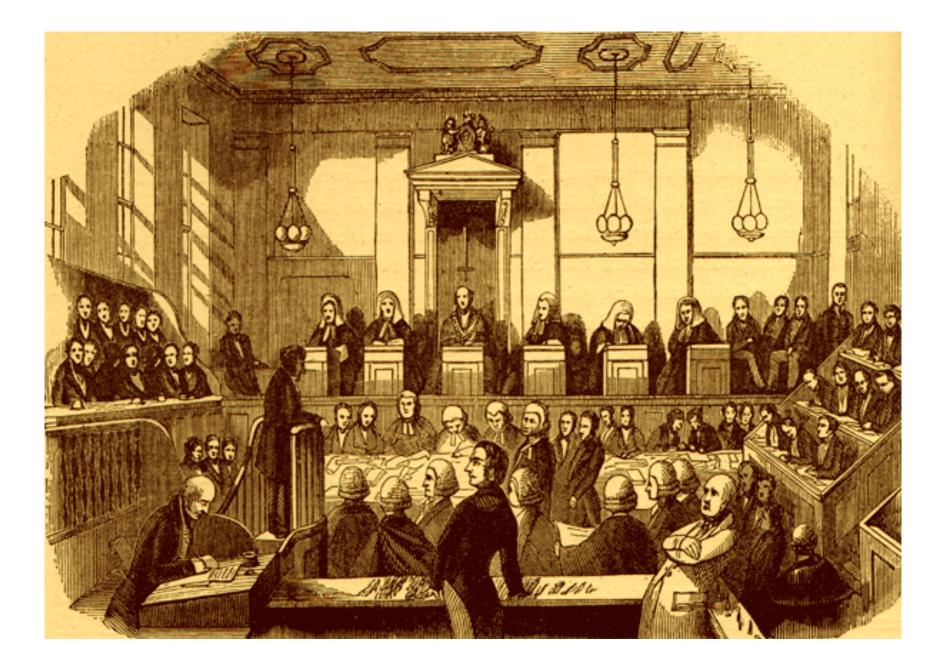














Alice v. Bob - Judgment Rendered





Obvious Things

That you are probably already doing

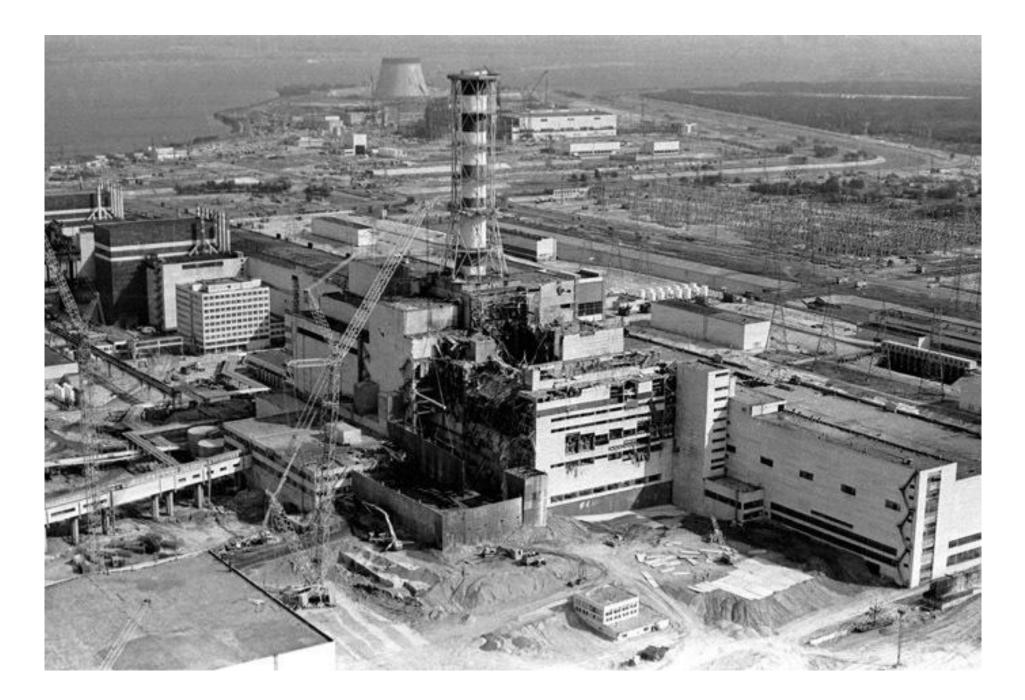
- Use your trouble ticket system and be verbose.
- Don't do anything that can't be tracked back to a ticket.
- Have written procedures and follow them.
- Use checklists to make sure that procedures are followed.
- Work with others in the industry to adopt design rules and best practices.

Less Obvious Things

- Have, and use, a triage procedure to assign priorities. Use it even when you are not overloaded.
- Make sure that people who do tasks are properly qualified. Consider periodic re-validation of skills and yearly refresher classes.
- Keep before and after records of configuration changes.
- Don't trust what vendors tell you verify.
- Test equipment and software before upgrades.
- Have a sandbox for that testing.
- Think about what could fail; have contingency plans.
- Have insurance.
- Have baseline measures of your traffic flows and routing patterns: Generate warnings when there are sudden changes that have not been seen previously.

Things To Consider

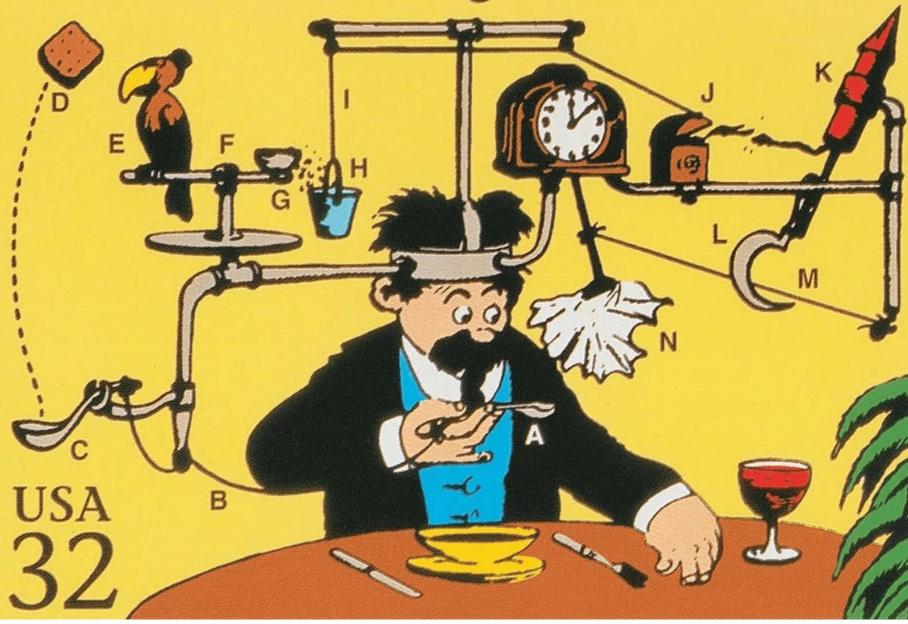
- Keep archival copies of everything.
- Have a regular schedule for purging old materials and archives. Religiously follow it.
- Avoid ad hoc procedures. If you encounter a new situation create a written procedure for it before resolving it even though every neuron in your body is screaming "fix it now".
- Don't unilaterally invent new procedures for yourself unless yours are clearly and demonstrably better. And when you do invent be sure to document your reasoning. Articulate with clarity why you are deviating from the norm. Your reasons should be compelling.
- Equipment and service agreements should push responsibility back onto the vendors.
- Remember that you may have obligations to notify the public or regulatory bodies.
- Before you work with competitors be sure to get the advice of an anti-trust lawyer.
- Make sure your corporate structure is strong corporate formalities are important to keep liability from leaking onto management, shareholders, or owners.
- Develop databases of known network pathologies so that when you see symptoms you can quickly look up what that might indicate and what diagnostic tests are in order.

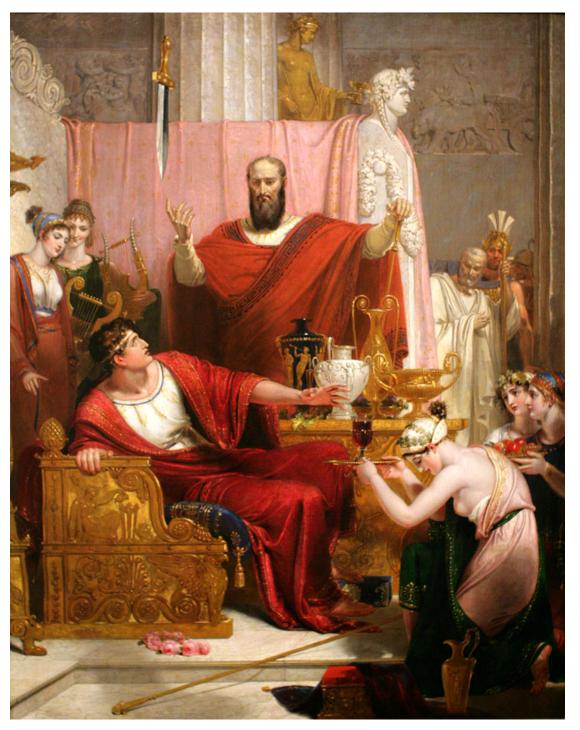


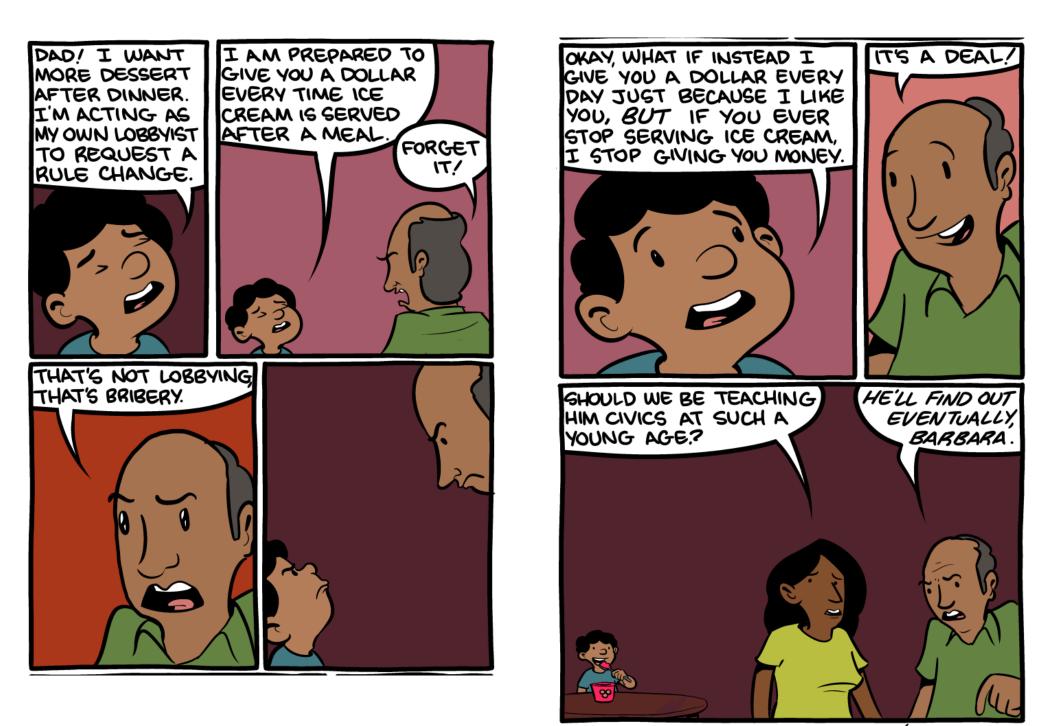


"To make it look like an accident"

Rube Goldberg's Inventions







Smbc-comics.com



Network Operations On A Public Utility Internet

Karl Auerbach

CTO IWL – <u>https://iwl.com/</u>

karl@iwl.com

