2025 mid-year link clearance

June 30, 2025

- [Visualizing all the books of the world in ISBN space](). What it says on the tin.
- Back in 2013, there was a series of promotional videos for the golf European Tour titled "Every Shot Imaginable", in which golfers attempted silly tasks. Professional golfers would try to [hit a clay pigeon out of the sky]() or [hit a gong placed in a lake](){[1]} or [chip a ball into an explosive-loaded boat]() or [hit the ball collector at a driving range]() (who hasn't talked about doing that?) or [go head-to-head against a trash-talking golf robot to drive balls into distant washing machines](). I enjoy how the golfers get in the spirit of the exercise and celebrate their silly accomplishment. The trash-talking golf robot is probably my favorite, though. [Behind the scenes of the washing machine video]().
- [The invalid 68030 instruction that accidentally allowed the Mac Classic II to successfully boot up](), a deep dive into retrocomputing and reverse-engineering.
- [How 6502 illegal opcodes really work](), a study of the 6502 instruction decode logic.
- *[Nine]()* is a Commodore 64 demo video showing what appears to be impossible: Nine active sprites on hardware that supports only eight sprites. I am not familiar with the Commodore 64, but I went with the premise. At first, you think you figured out the trick, but as the demo progresses, you realize that you were wrong, and it just gets more and more absurd. Once you've seen the trick, [watch the explanation]() and learn about the multiple layers of deception plus some truly mind-boggling beam-racing.
- [Debugging An Undebuggable App](). [Bryce Bostwick]() unwraps the anti-debugging measures taken by an iOS app. Bryce does this to accomplish tasks like [fixing a hang in the Disneyland app]() or (less practically (?)) [patching TikTok to show only cat videos]().
- [A calculator app? Anyone could make that](). It turns out that writing a calculator app is incredibly hard because people expect exact answers to certain classes of expressions. Related reading: [Windows Calculator switching to an arbitrary-precision rational numbers library]() (and using a 32-digit precision library for non-rational operations), resulting in [tiny errors in the calculation of square roots]() (because square roots are not rational operations), and leading to [a special carve-out for rational roots and powers that result in exact integers]().

- [Recreating An Old "Dirty Gamedev Trick"](#) by [Kyle Halladay](#), who tries to reproduce a dirty trick from [an old article from Gamasutra](#): Exploiting a buffer overflow bug in a network client in order to patch it.
- An identical trick was [used by AOL in their AOL Instant Messenger app to distinguish their real client from clones](#). In the late 1990s, there was a cat-and-mouse game between AOL Instant Messenger and MSN Messenger, where the MSN Messenger team reverse-engineered AOL's chat protocol, and then the AOL Instant Messenger team would issue an update that changed the protocol, and then the MSN Messenger team reverse-engineered the new protocol, *etc*. (I heard through a friend of a friend that the AOL Instant Messenger team relished pushing their updates at a time that was most inconvenient for Redmond.) The game ended when AOL relied on a buffer overflow bug in their own client. That was a bridge too far for the MSN Messenger Team. (In a contemporary article, an AOL spokesperson said that AOL is "[doing all it can to protect its users' security and privacy](#)", which is ironic given that the "protection" was "introduce a security vulnerability and then exploit it.")

[1] The gong shot was so popular that a decade later, [they brought back three of the original golfers to do it again](#) [[YouTube](#)] (with floating golf balls to allow subsequent retrieval).