Tamper Detection

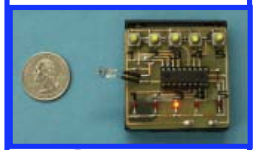
Anti-Evidence Seals

lock: a device to delay & complicate unauthorized entry.

seal: a tamper-indicating device (TID) designed to leave evidence of unauthorized access. Seals do not resist entry (like locks), nor do they report trespassing in real-time (like intrusion detectors).

examples of seal applications

- utility meters
- records integrity
- nuclear safeguards
- waste management
- cargo & port security
- banking & courier bags
- ballots & voting machines
- computer physical security
- loss detection & prevention
- law enforcement & forensics
- protecting medical sterilization
- protecting instrument calibration
- hazardous materials accountability
- protecting food & drugs, etc.



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- Current tamper-indicating seals are VERY easy to spoof.
- That's bad because they are protecting important stuff.
- There are workarounds that are labor-intensive & require considerable training.
- But much better seals are needed and possible:

Anti-Evidence Seals

> Time Trap
> Magic Slate Seal
> Blinking Lights Seals
> Talking Truck Cargo Seal

Advantages of Anti-Evidence Seals

- much better security
- some don't require a reader
- simple, low cost (few $ of parts)
- fully reusable (even if mechanical)
- Can monitor a wall or volume, not just portals.
- No tools are needed to install or remove the seal.
- Counterfeiting the seal gains the adversary nothing.
- You can check the seal multiple times without opening the container.
- The container can often be opened before checking or removing the seal.
- Can often be used inside the container (covert, plus limits damage to the seal).
- Anti-Gundecking: We can automatically verify that the seal inspectors actually checked the seal, rather than just saying they did--a major problem with conventional seals.

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