

Arriving at an Anti-forensics Consensus

Examining How to Define and Control the
Anti-forensics Problem

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What is the problem?

- ◆ Lack of agreement about how to define anti-forensics
- ◆ No way to classify anti-forensic methods

Some current views of anti-forensics

- ◆ Ways to “avoid detection” or “break industry tools”
Foster & Liu
- ◆ Hiding a system intrusion attempt
Shirani

Based on Saferstein's definition

- ◆ Anti-forensics:

"Methods used to prevent (or act against) the application of science to those criminal and civil laws that are enforced by police agencies in a criminal justice system."

Viewing anti-forensics differently

- ◆ Ways to "...limit the identification, collection, collation and validation of electronic data..." Peron & Legary
- ◆ "Attempting to limit the quantity and quality of forensic evidence..." Grugg

Evidence and process based definition

- ◆ Anti-forensics:

Any attempts to compromise the availability or usefulness of evidence to the forensics process.

Categorizing anti-forensic methods

Peron & Legary	Rogers
Hiding	Data hiding
Destroying	Artifact wiping
Preventing from being created	
Manipulating	
	Trail obfuscation
	Attacks against the process & tools

Proposed categories

- ◆ Evidence Destruction
- ◆ Evidence Hiding
- ◆ Evidence Source Elimination
- ◆ Evidence Counterfeiting

Evidence Destruction

- ◆ Dismantling evidence or making it unusable to the investigative process
- ◆ Physical example: Wiping fingerprints
- ◆ Digital example: Wiping a filesystem

Evidence Hiding

- ◆ Removing evidence from view
- ◆ Physical example: throwing a gun into the sewer
- ◆ Digital example: Steganography

Evidence Source Elimination

- ◆ Neutralizing evidentiary sources
- ◆ Physical example: Wearing gloves during a crime
- ◆ Digital example: Disabling audit trails

Evidence Counterfeiting

- ◆ Creating a “faked” version of the evidence
- ◆ Physical example: planting fingerprints
- ◆ Digital example: Using a different user’s account

Anti-forensic attacks - human element

- ◆ Alert investigators
- ◆ Education
- ◆ Real world experience
- ◆ “Thinking outside the box”

Anti-forensic attacks - tool dependence

- ◆ Tool assumptions
- ◆ Implementation bugs

Anti-forensic attacks - physical/logical

- ◆ Storage space

- ◆ Time

- ◆ Money

Presentation references

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Questions/Comments?