(a) Deepfake Proactive Forensics
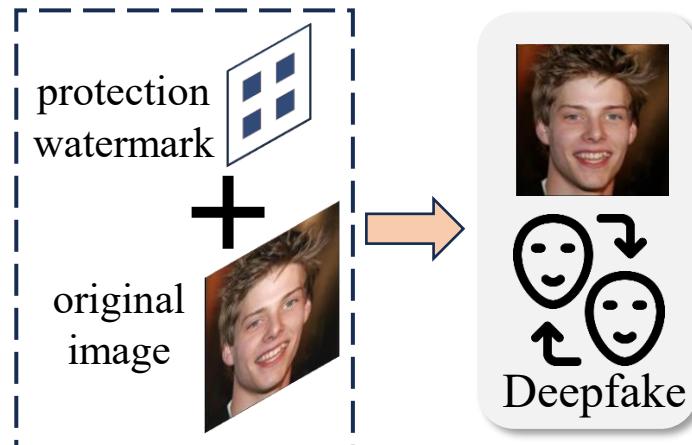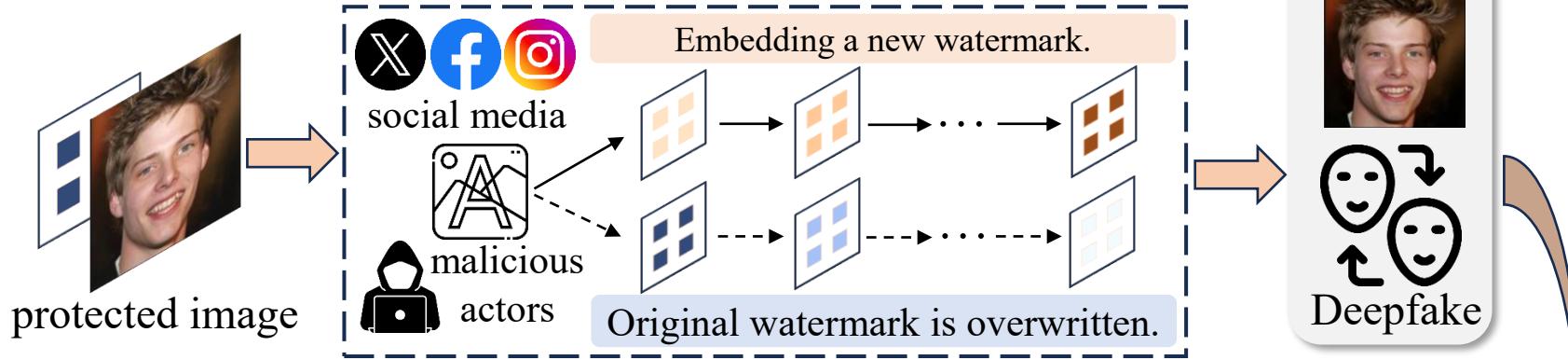
protection watermark

+

original image

Deepfake

Here's my image. The forensic information is correct.
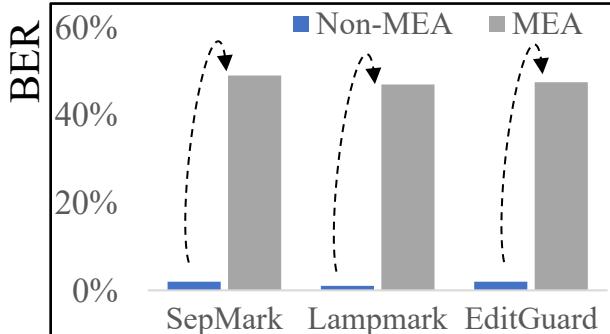
extract the protection watermark ✓

(b) Threat of Multi-Embedding Attacks

protected image

social media

malicious actors

Embedding a new watermark.

Original watermark is overwritten.

Deepfake

❌ failure of proactive forensic

BER
60%
40%
20%
0%

■ Non-MEA ■ MEA

SepMark Lampmark EditGuard

The forensic information is incorrect. Is this my image?

forensic information loss