Supporting document for "Advancing the JPEG Compatibility Attack: Theory, Performance, Robustness, and Practice"

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This document supplies additional details of experiments that appear in Section 10 of the above referenced paper by the same authors presented at the 11th ACM Information Hiding & Multimedia Security Workshop that took place in Chicago, IL, June 28–30, 2023. In particular, we provide the list of all downloaded and analyzed steganographic tools with links (Table 1 and Table 2). Additionally, we also include details about the tools that are relevant for our study.

We wish to emphasize that we do not take any responsibility for the accuracy, safety, or legality of the information provided. The use of these tools and websites is at your own risk and discretion. We do not endorse any specific tool or website listed in the tables and we cannot be held liable for any damages or consequences that may arise from the use of these resources. By accessing the tools and websites listed in the tables, you agree to waive any claims or liabilities against us, including but not limited to any damages, losses, or expenses. Please use these resources responsibly and exercise caution when downloading or using any software or accessing any website.

#	Tool's name	Weblink	Preserve grayscale	Quantization matrix est.	Source code
1	LSBSteg	GitHub	✗	✓	✓
2	cloacked-pixel	GitHub	✗	✓	✓
3	Matroschka	GitHub	✓	✓	✓
4	Stegano	GitHub	✗	✓	✓
5	LSBSteg	GitHub	✓	✓	✓
6	StegoVeritas	GitHub	✓	✓	✓
7	Steganography	GitHub	✗	✗	✓
8	stegpy	GitHub	✗	✓	✓
9	Steganography Lib	GitHub	✗	✓	✓
10	OpenStego	Tool's webpage	✗	✗	✓
11	SilentEye	GitHub	✗	✓	✗
12	QuickCrypto	Tool's webpage	✗	✓	✗
13	Steg	Tool's webpage	✗	✓	✓
14	rSteg	Tool's webpage	✗	✗	✗
15	SSuite PS	Tool's webpage	✗	✗	✗
16	StegoStick	Sourceforge	✗	✓	✓
17	Steganography	Tool's webpage	✗	✓	✗
18	HuggingFace Stego	Tool's webpage	✓	✓	✗
19	StegOnline	Tool's webpage	✗	✓	✗

Table 1: Steganographic tools susceptible to the JCA. The checkmarks in the first column mark tools that preserve a grayscale color space. The second column informs for which tools our quantization matrix estimation algorithm succeeded . Finally, the third column shows which tools give access to their source code. The underlined tool introduces visible artifacts since the embedding makes use of the three least significant bits.

#	Tool's name	Weblink
20	tweetable-polyglot-png	GitHub
21	Hermetic Stego	Tool's webpage
22	Hide in picture (HIP)	Tool's webpage
23	Hide4PGP	Tool's webpage
24	Gifshuffle	Tool's webpage
25	Invisible Secrets	Tool's webpage
26	PGM.stealth	FTP server
27	OpenPuff	Tool's webpage
28	StegHide	Sourceforge
29	stegodos	FTP server
30	wbstego	Tool's webpage
31	winstorm	FTP server
32	s-tools	FTP server
33	Xiao Steganography	Tool's webpage
34	Crypture	Sourceforge
35	FIRA2	Sourceforge
36	Hide & Reveal	Sourceforge
37	SteganoG	Tool's webpage
38	HexaStego-BMP	Tool's webpage
39	Hallucinate	Tool's webpage
40	Stegnography Tool	Tool's webpage
41	HDSK41	FTP server

Table 2: All other steganographic tools downloaded for our study for which the JCA is inapplicable because they output JPEG stego images when presented with JPEG covers. Tools designed solely for the JPEG format, such as Jsteg or F5, were excluded from our study.