

A APPENDIX

A.1 SECRECY OF THE COMPARED IMAGE STEGANOGRAPHY AND NNS METHODS

Table 1: Secrecy of the compared image steganography methods. PSNR, SSIM, LPIPS, and DISTs are calculated between the ground truth cover images and the stego images.

Method	32×32				256×256			
	PSNR $\uparrow$	SSIM $\uparrow$	LPIPS $\downarrow$	DISTS $\downarrow$	PSNR $\uparrow$	SSIM $\uparrow$	LPIPS $\downarrow$	DISTS $\downarrow$
Baluja17	27.05	0.90	0.085	0.039	33.15	0.95	0.065	0.037
HiDDeN	28.72	0.95	0.116	0.043	30.44	0.96	0.147	0.057
Weng19	35.87	0.97	0.030	0.021	36.00	0.96	0.041	0.031
HiNet	31.09	0.95	0.013	0.012	40.83	0.97	0.019	0.007
PRIS	32.34	0.96	0.007	0.008	41.32	0.98	0.005	0.006

Table 2: Secrecy of the compared NNS method. Single image Fréchet inception distance (SIFID) and diversity score (DS) are population-level metrics that measure the quality and diversity of a set of generated images, while PSNR, SSIM, LPIPS, and DISTs are sample-level metrics that measure the discrepancy between each two samples generated from the pre-trained and stego models respectively.

Method	32×32						256×256					
	SIFID $\downarrow$	DS $\uparrow$	PSNR $\uparrow$	SSIM $\uparrow$	LPIPS $\downarrow$	DISTS $\downarrow$	SIFID $\downarrow$	DS $\uparrow$	PSNR $\uparrow$	SSIM $\uparrow$	LPIPS $\downarrow$	DISTS $\downarrow$
Pretrained	0.032	0.027	N/A	N/A	N/A	N/A	0.019	0.436	N/A	N/A	N/A	N/A
Chen22	0.041	0.034	32.09	0.93	0.033	0.016	0.016	0.468	17.85	0.66	0.294	0.087

A.2 MORE RESULTS OF TIME STEP ABLATION EXPERIMENT

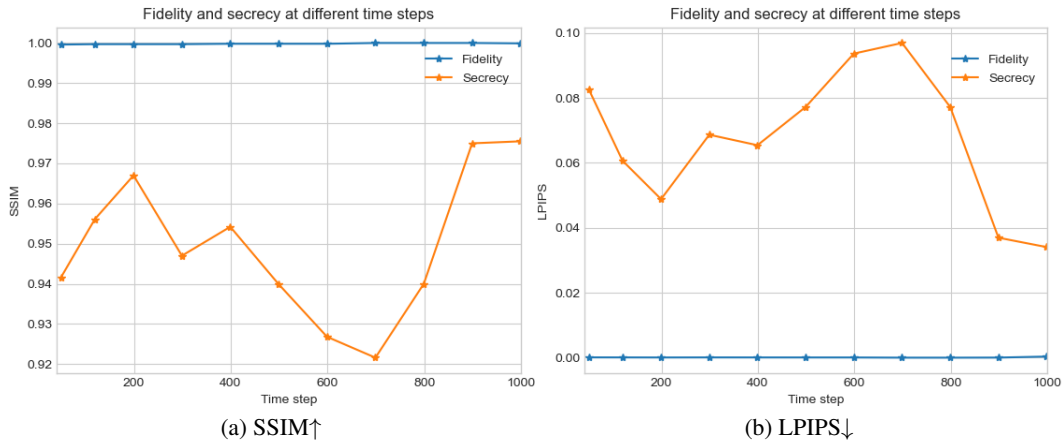


Figure 1: Ablation of different secret time steps. The fidelity is indicated by blue lines and the secrecy is indicated by orange lines.