1. Experiments Results on HoGS

Methods	Tanks&Temples [1]					DeepBlending [2]					Mip-NeRF360 [3]				
	PSNR ↑	SSIM ↑	LPIPS ↓	Time ↓	#G ↓	PSNR ↑	SSIM ↑	LPIPS ↓	Time ↓	#G ↓	PSNR ↑	SSIM ↑	LPIPS ↓	Time ↓	#G ↓
HoGS (30K)* [4]	23.73	0.845	0.184	12.2	2.1E6	29.31	0.898	0.251	16.8	2.3E6	27.37	0.813	0.217	21.6	3.5E6
+Group Training	**23.86**	0.849	0.182	**8.4**	1.5E6	**29.60**	0.903	0.253	**12.3**	1.5E6	**27.53**	0.820	0.217	**15.3**	2.6E6

Table 1. **Comprehensive quantitative evaluation on three different dataset [1–3] reconstructed by HoGS [4].** $*$ indicates that we retrained HoGS [4]. #G denotes the number of Gaussian primitives, with Time in minutes.

Methods	Train					Truck				
	PSNR ↑	SSIM ↑	LPIPS ↓	Time ↓	#G ↓	PSNR ↑	SSIM ↑	LPIPS ↓	Time ↓	#G ↓
HoGS (30K)* [4]	25.412	0.8766	0.1566	15.5	3.16E6	22.05	0.8140	0.2113	8.9	1.02E6
+Group Training	25.707	0.8834	0.1500	10.0	2.03E6	22.022	0.8149	0.2149	6.8	8.72E5

Table 2. **Comprehensive quantitative evaluation on the Tanks&Temples [1] reconstructed by HoGS [4].** #G = number of Gaussians.

Methods	Playroom					Dr. Johnson				
	PSNR ↑	SSIM ↑	LPIPS ↓	Time ↓	#G ↓	PSNR ↑	SSIM ↑	LPIPS ↓	Time ↓	#G ↓
HoGS (30K)* [4]	29.694	0.8985	0.2473	16.21	2.03E6	28.917	0.898	0.2544	17.42	2.46E6
+Group Training	30.027	0.9054	0.2517	11.97	1.19E6	29.178	0.901	0.2548	12.68	1.73E6

Table 3. **Comprehensive quantitative evaluation on the DeepBlending [2] reconstructed by HoGS [4].** #G = number of Gaussians.

	Methods	Mip-NeRF360 [3]								
		bicycle	flowers	garden	stump	treehill	bonsai	counter	kitchen	room
PSNR	HoGS (30K)* [4]	25.393	21.731	27.297	26.79	22.013	31.864	28.867	31.448	30.905
	+Group Training	25.406	21.985	27.39	27.097	22.898	31.762	28.776	31.463	30.988
SSIM	HoGS (30K)*	0.7761	0.6157	0.8620	0.7796	0.6145	0.9374	0.8999	0.9217	0.9100
	+Group Training	0.7796	0.6298	0.8663	0.7984	0.6418	0.9381	0.8988	0.9217	0.9099
LPIPS	HoGS (30K)*	0.1991	0.3273	0.1079	0.2021	0.3351	0.2034	0.2095	0.1351	0.2336
	+Group Training	0.2048	0.3191	0.1089	0.1982	0.3237	0.2049	0.2155	0.1383	0.2387
#G	HoGS (30K)*	6.50E6	4.18E6	6.89E6	4.60E6	3.90E6	1.50E6	1.14E6	1.58E6	1.45E6
	+Group Training	4.80E6	3.35E6	4.04E6	3.35E6	3.80E6	9.98E5	7.31E5	9.28E5	9.16E5
Time	HoGS (30K)*	27.75	20.96	28.77	23.96	19.02	18.23	17.35	20.91	17.79
	+Group Training	17.46	15.24	16.76	15.67	14.75	14.13	14.01	15.58	14.18

Table 4. **Comprehensive quantitative evaluation on the Mip-NeRF360 [3] reconstructed by HoGS [4].** #G = number of Gaussians.

Code based on: HoGS [4] and Group Training [5]

References

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