

TauBench: Dynamic Benchmark for Graphics Rendering

Supplementary Material

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1 Properties of the Datasets

Table 1 presents a comparison of various properties of the datasets, such as the triangle face and texture counts and the material workflow. The proposed ETERNALVALLEYFPS and ETERNALVALLEYVR datasets are the only ones using the modern glTF format, with the comparison datasets using either fbx or obj. On the other hand, all datasets except TOASTERS use the PBR roughness/metallic (r/m) material workflow.

Table 2 presents further details about the animations and frame counts.

2 Camera Rotations of the Datasets

The plots in Figures 1–6 illustrate the frame-to-frame camera rotation angle changes for each dataset. The angles are shown separately for pitch (blue line), yaw (red dashed line), and roll (green line). These plots supplement the average values of the camera rotation angle changes, which are presented in Table 3 of the main paper. Note that the y-axis has a different range in each plot; the changes in ETERNALVALLEYFPS and ETERNALVALLEYVR are significantly larger than in the comparison datasets.

Table 1: File properties of the datasets.

	file format	file(s) size (MiB)	triangle faces	texture count	material workflow
ETERNAL VALLEY FPS	glTF	2616	11 633 050	154	PBR r/m
ETERNAL VALLEY VR	glTF	2617	11 628 059	145	PBR r/m
TOASTERS	obj	163	11 141	6	Phong
BISTRO INTERIOR	fbx	559	1 248 093	212	PBR r/m
BISTRO EXTERIOR	fbx	1098	2 829 226	417	PBR r/m
EMERALD SQUARE	fbx	2459	2 691 019	701	PBR r/m

Table 2: Animation properties of the datasets.

	animation frames 24 fps	animation frames 60 fps	camera key frames	length (s)
ETERNAL VALLEY FPS	144	360	360	6
ETERNAL VALLEY VR	144	360	360	6
TOASTERS	248	620	0	10
BISTRO INTERIOR	1433	3583	11	60
BISTRO EXTERIOR	2404	6010	17	100
EMERALD SQUARE	1541	3853	15	64

EternalValleyFPS

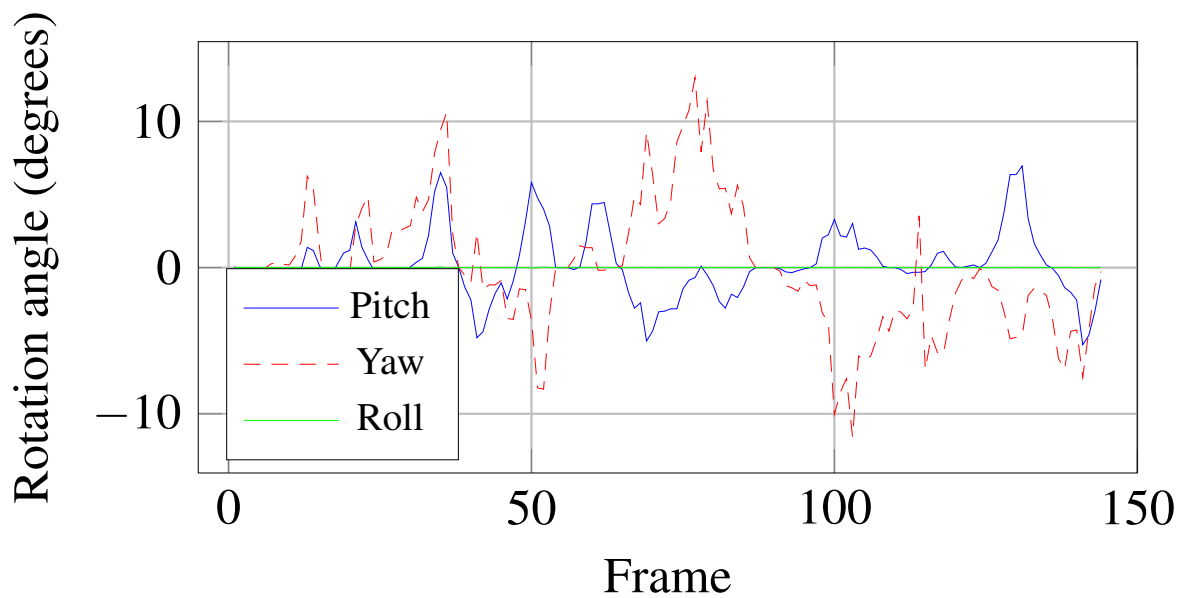


Figure 1: Framewise pitch, yaw and roll angles for Eternal Valley FPS.

EternalValleyVR

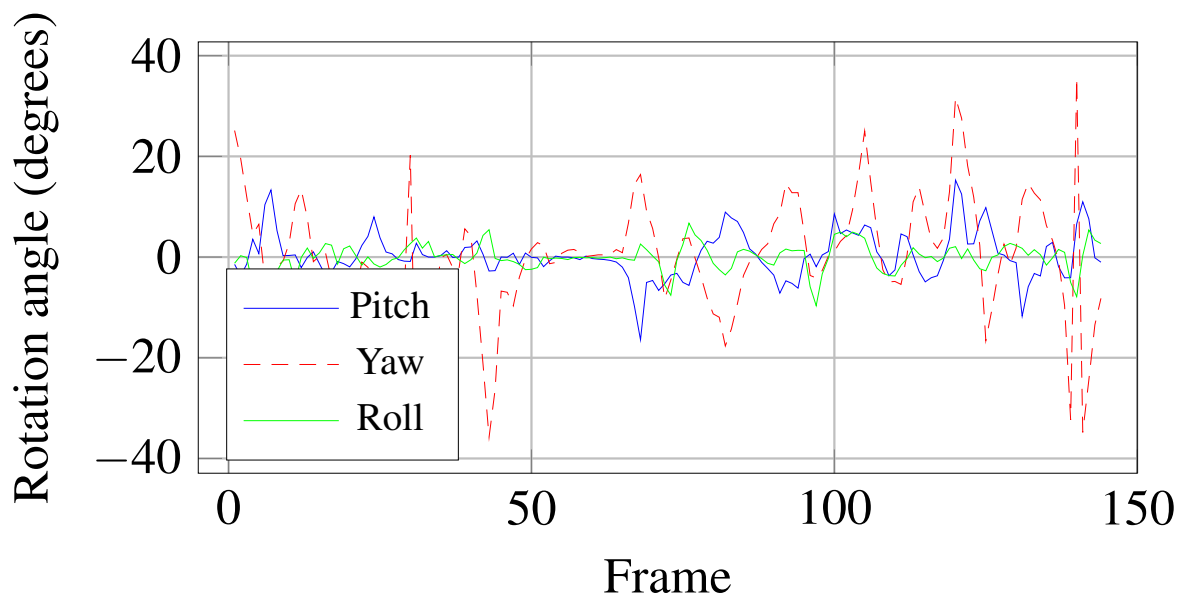


Figure 2: Framewise pitch, yaw and roll angles for Eternal Valley VR.

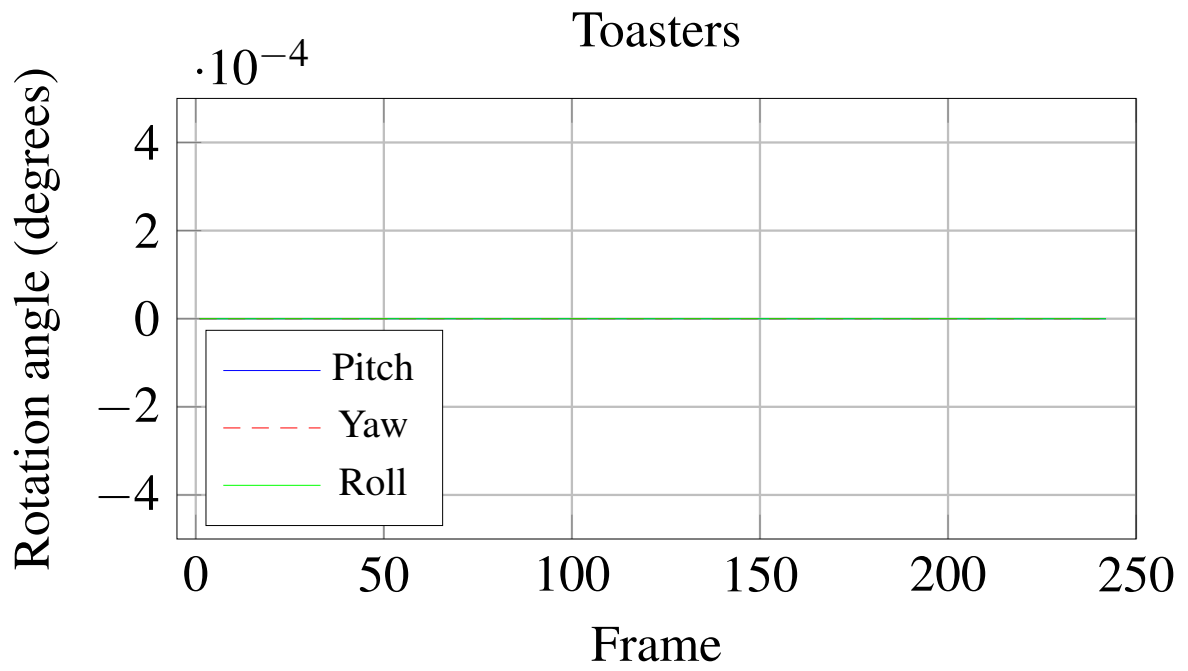


Figure 3: Framewise pitch, yaw and roll angles for Toasters (no change in any of them).

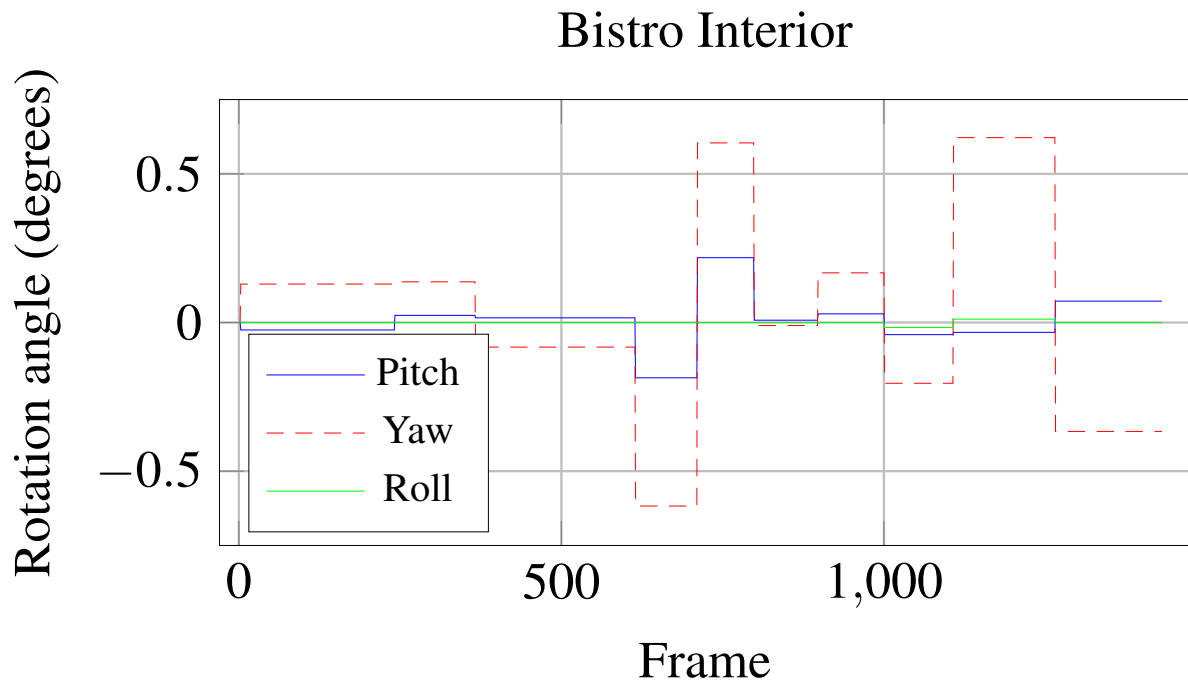


Figure 4: Framewise pitch, yaw and roll angles for Bistro Interior.

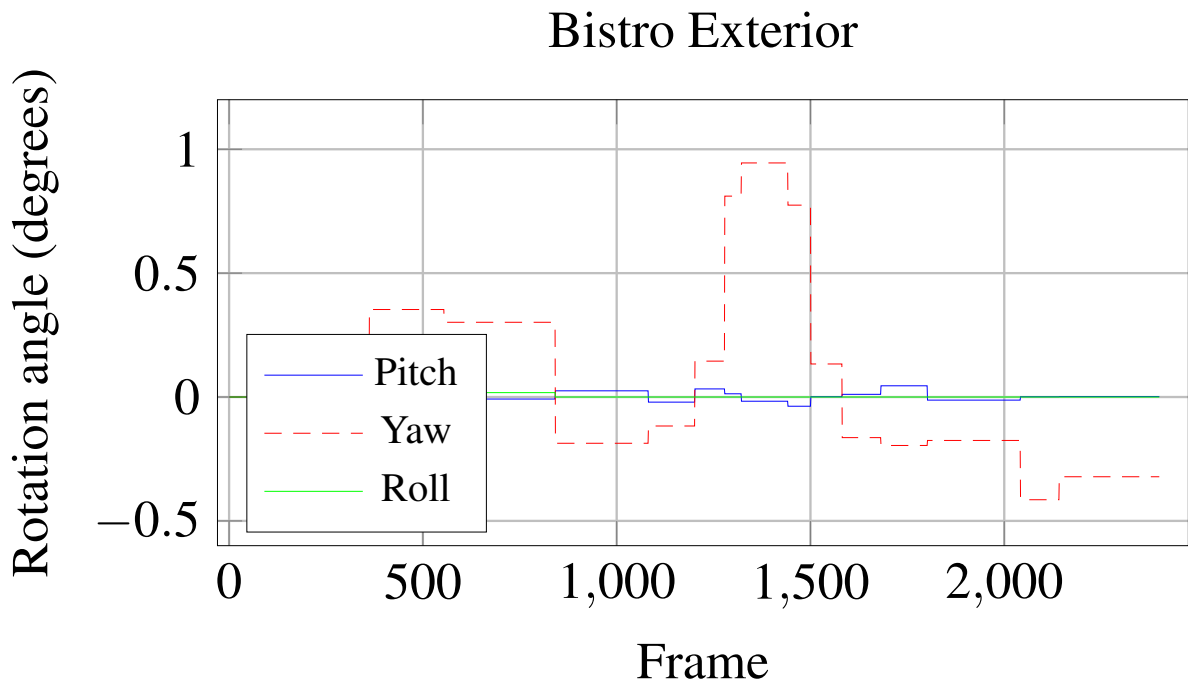


Figure 5: Framewise pitch, yaw and roll angles for Bistro Exterior.

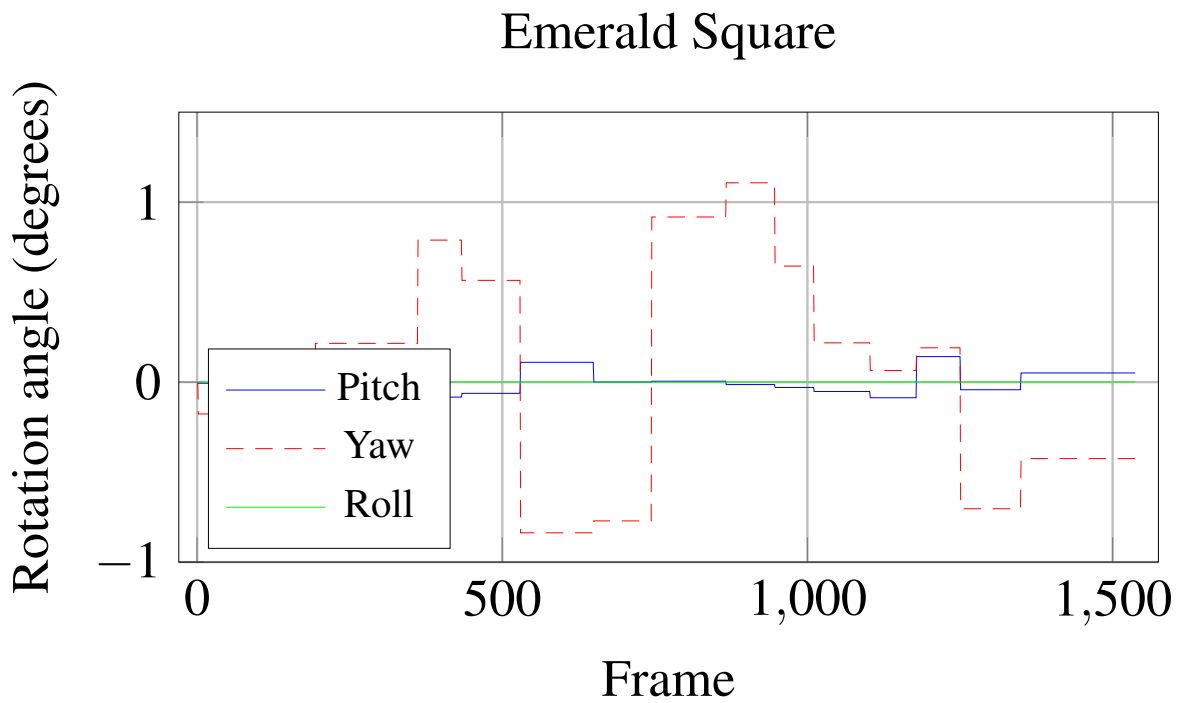


Figure 6: Framewise pitch, yaw and roll angles for Emerald Square.