

Table 1 Comparison of measured angle and content angle

Content angle	x-axis	y-axis	z-axis
-180°	-178.7°	-178.7°	-178.6°
-150°	-151.5°	-151.5°	-149.5°
-120°	-121.3°	-122.3°	-120.4°
-90°	-90.1°	-90.1°	-91.3°
-60°	-61.9°	-61.9°	-60.2°
-30°	-30.7°	-30.7°	-30.1°
0°	0.5°	-0.5°	-3°
30°	29.8°	29.5°	29.1°
60°	60.3°	60.3°	60.2°
90°	90.6°	89.6°	90.3°
120°	119.9°	118.9°	120.4°
150°	148.2°	148.2°	150.5°
180°	179.5°	179.5°	178.6°

7 Conclusion

This study developed a motion capture system for multi-sensor real-time motion tracking and implemented an HMC system for the experiment. By comparing the actual measured angles to the content angles, this study verified the effectiveness of the real-time motion tracking technology. As future work, readings from accelerometers will be used to express sportic human motion more effectively, and in-depth studies will be performed on user recognition models.



Fig. 13 Use of HMC system

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