

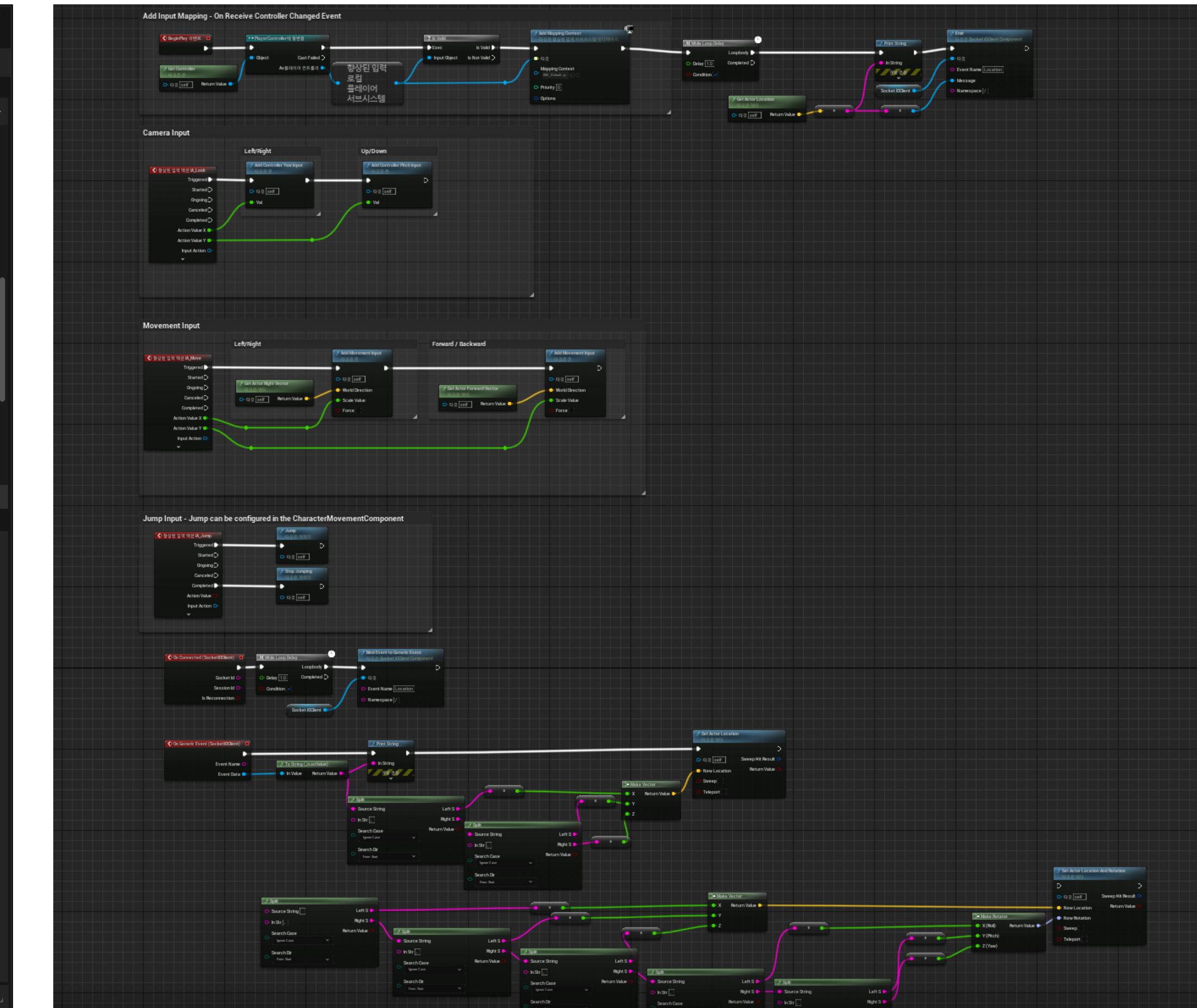
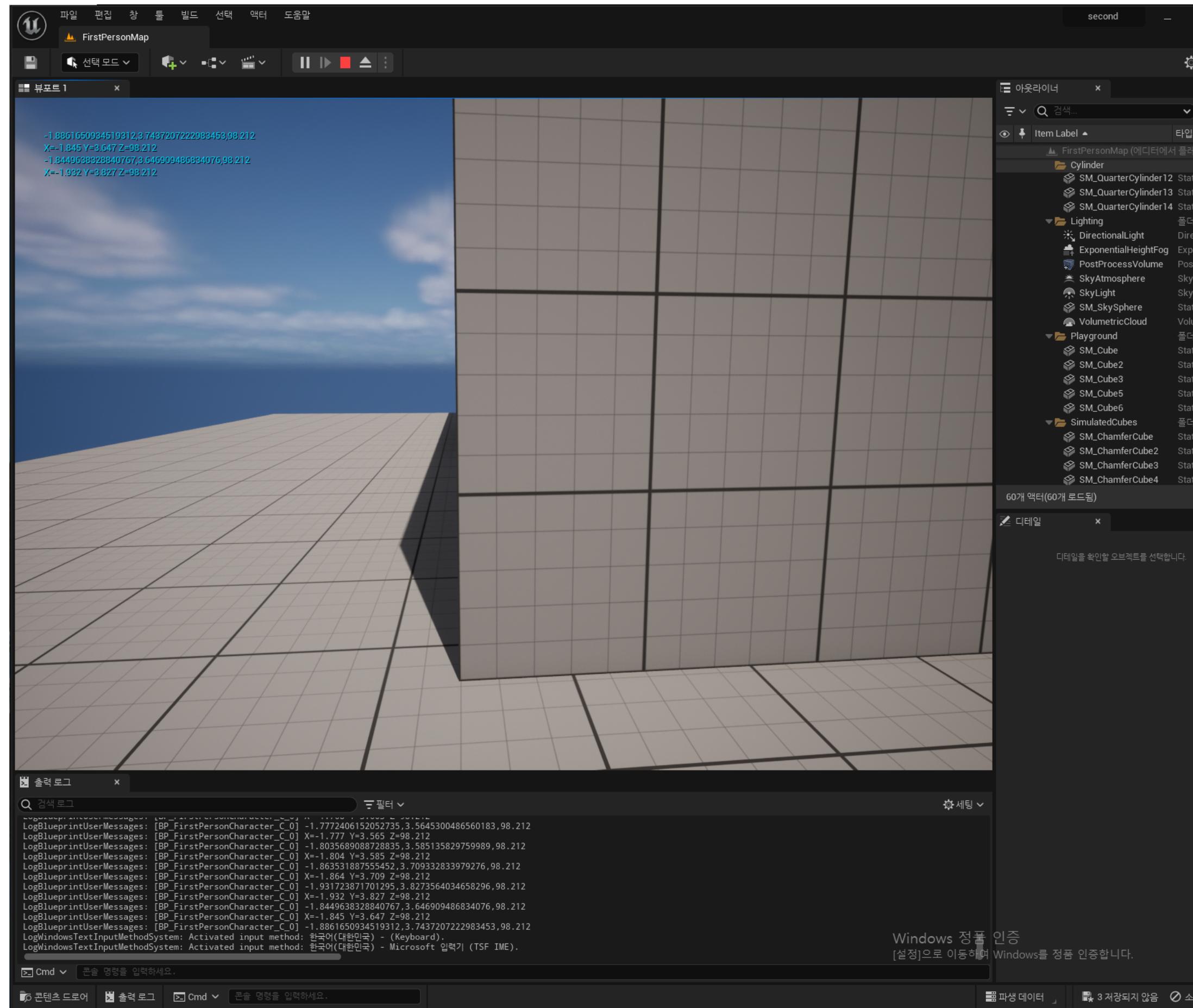
Redirected Walking

230616 19101188 고은수

Todo

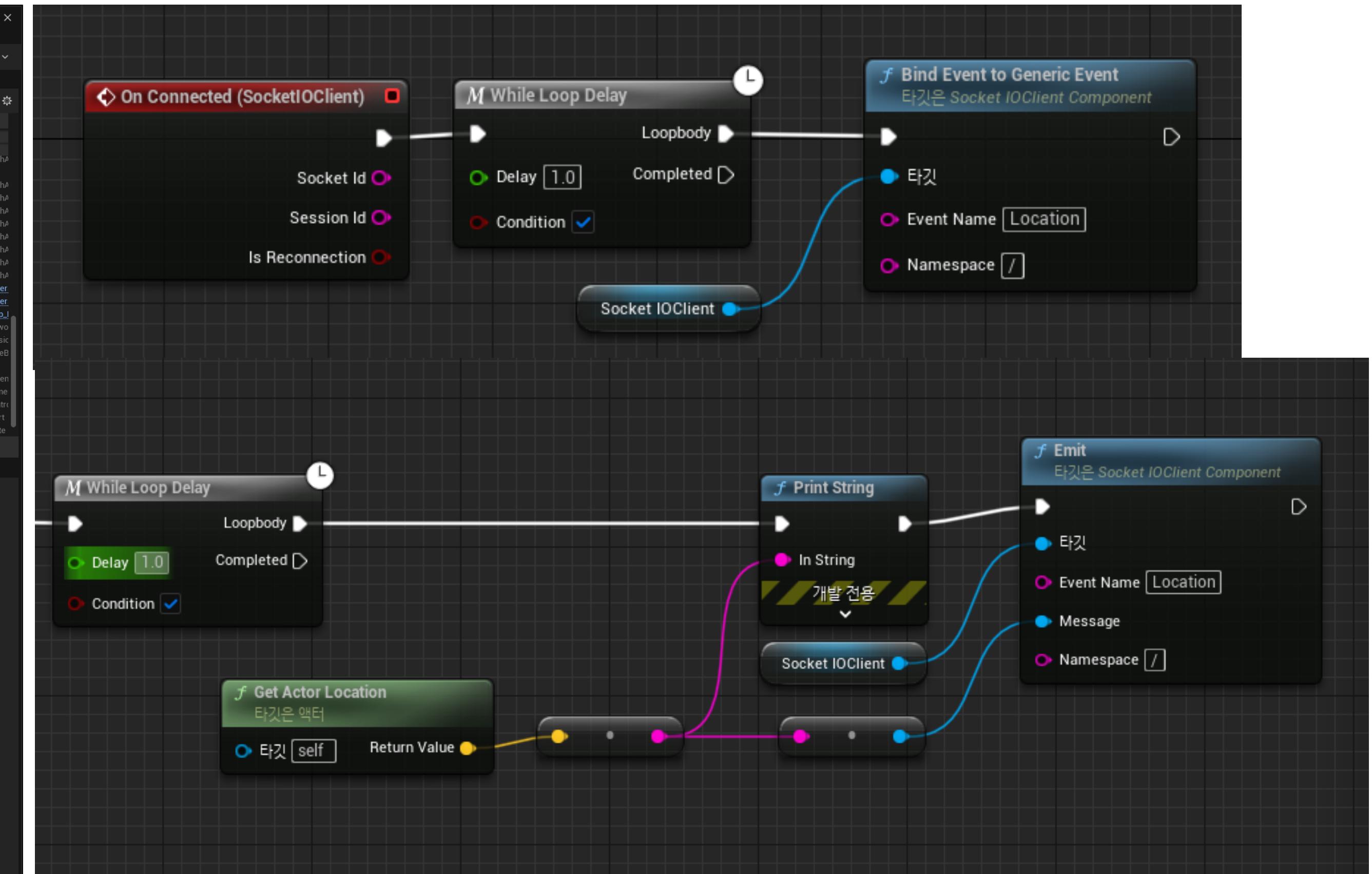
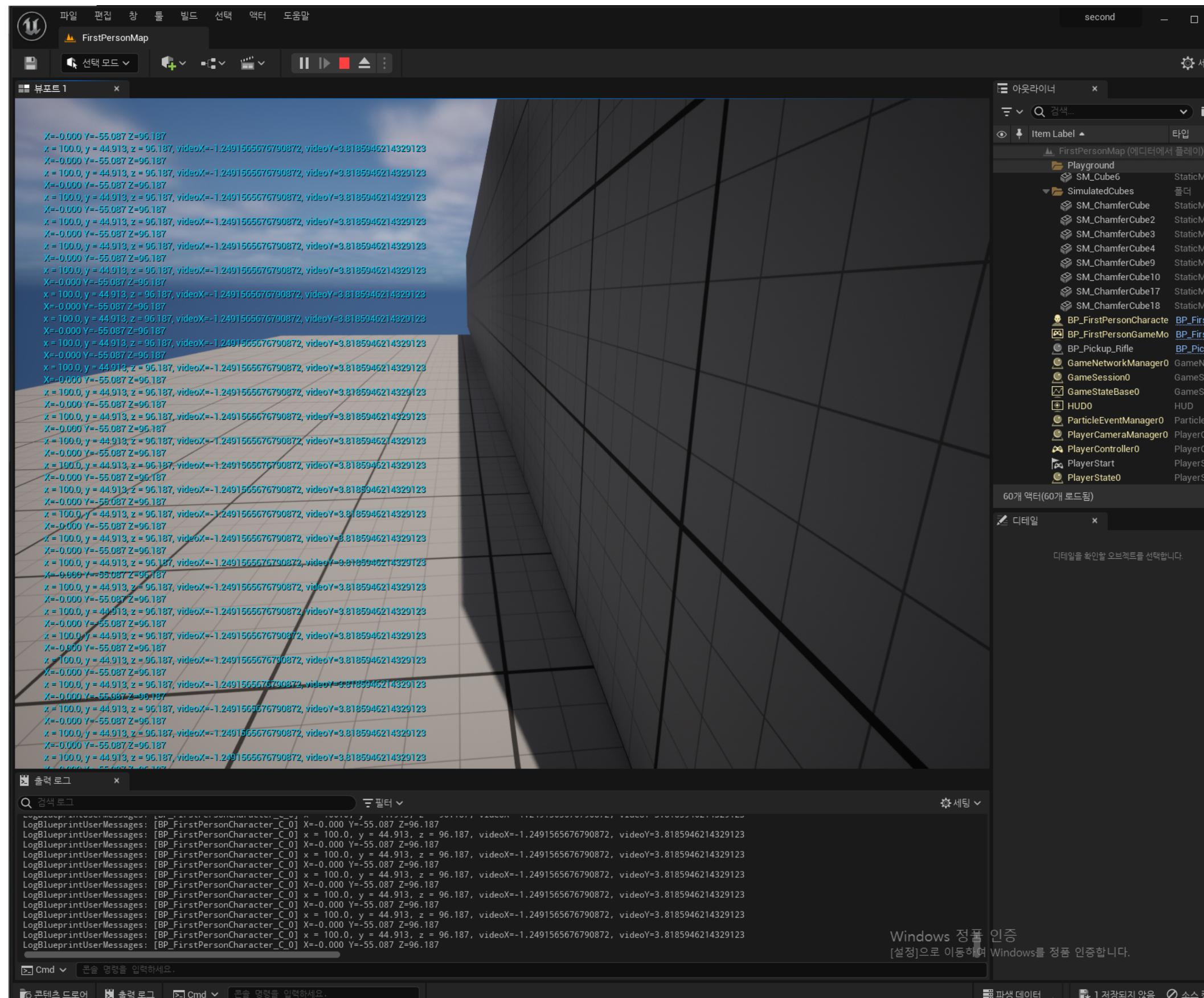
1. 서버로부터 받은 응답을 통해 화면(카메라) 조정이 가능한지 확인할 수 있는 1인칭 프로젝트 생성
2. 서버, 클라이언트간 전송시 latency와 frame 확인
3. RDW 로직 구상

1인칭 프로젝트에서의 화면 조정



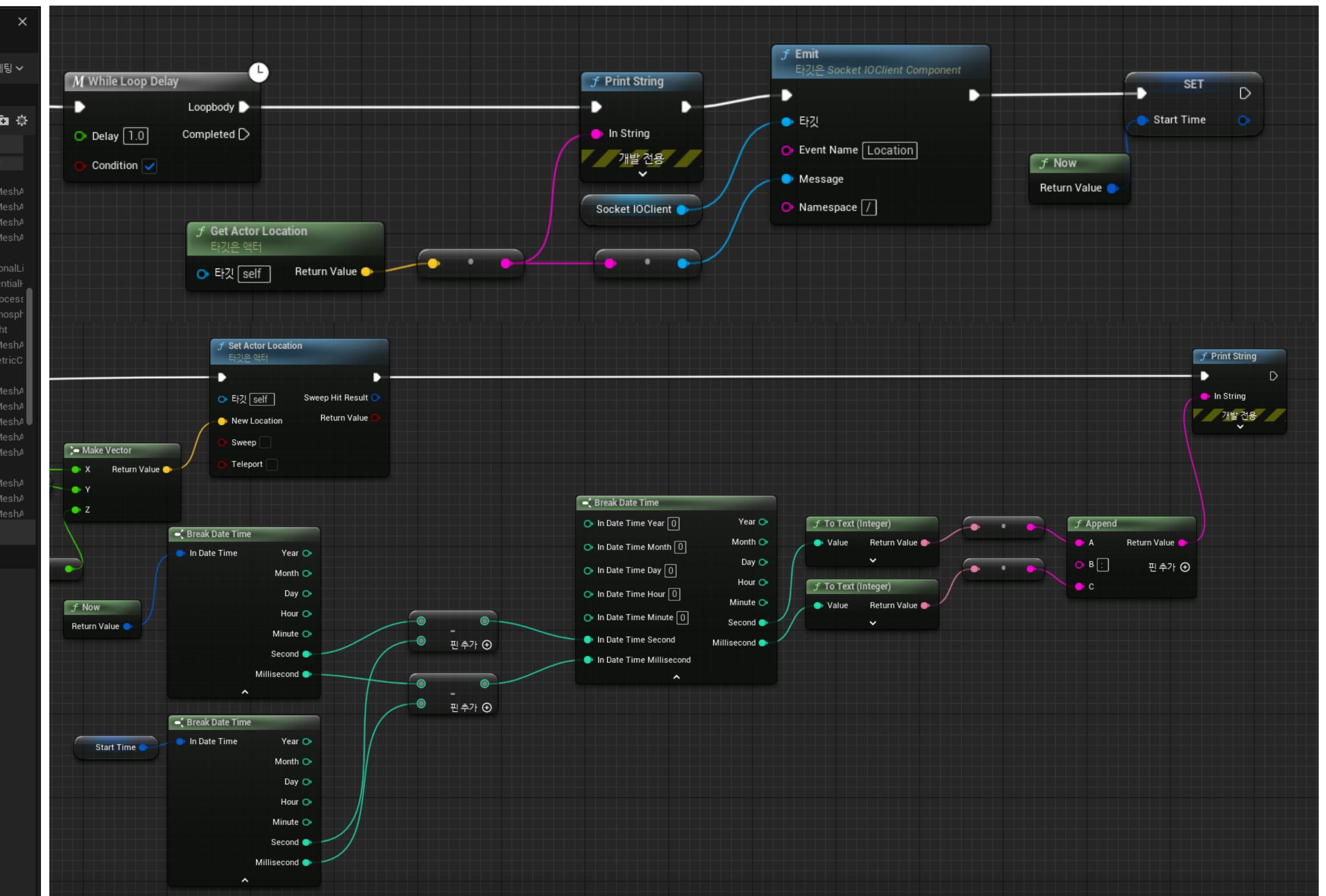
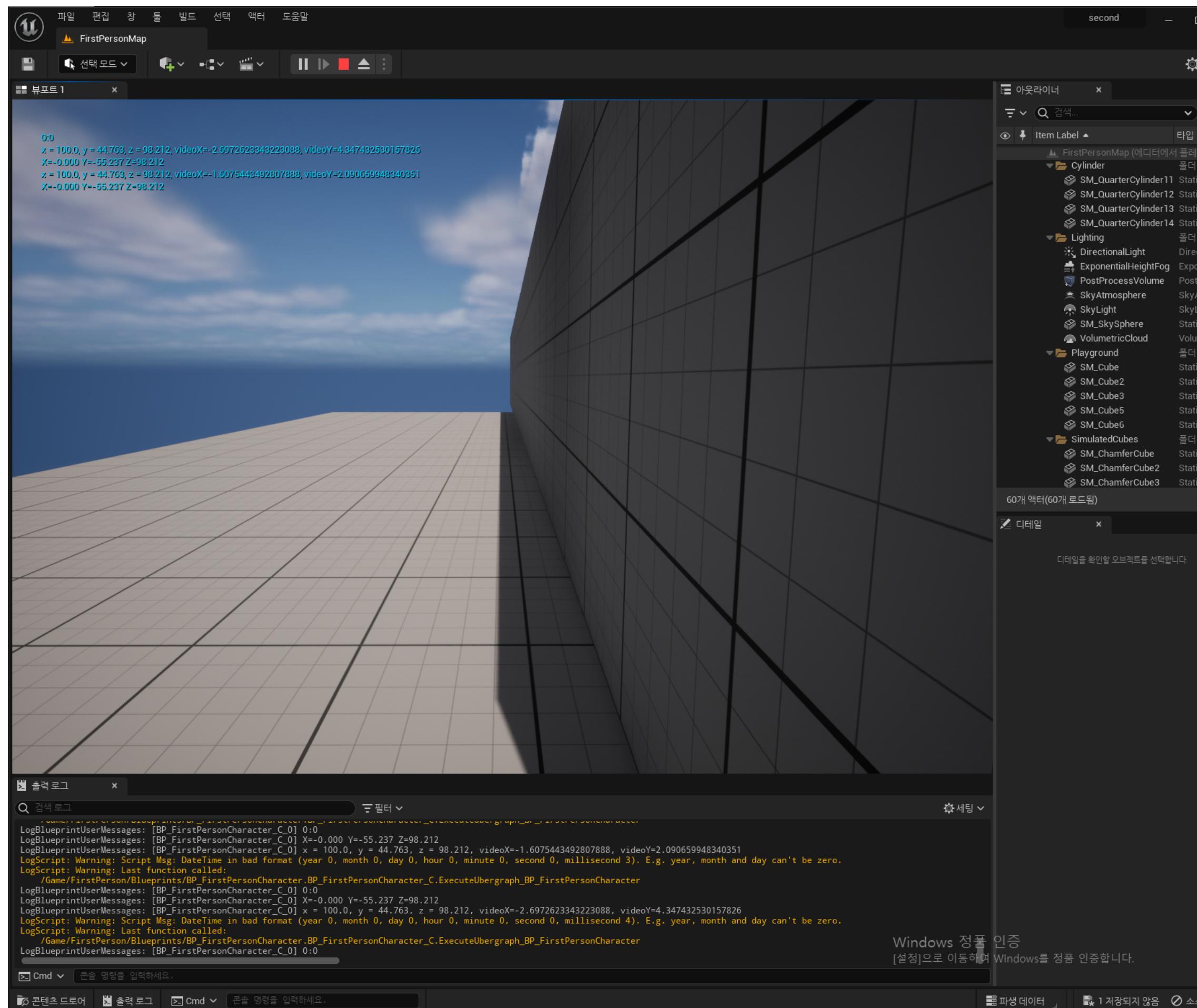
1인칭 프로젝트에서도 동일하게 서버로부터 응답을 받아서 캐릭터의 위치를 조정합니다.

Frame 조장



Unreal에서 데이터를 주고받는 loop의 delay를 조정하여 데이터 전송 주기를 조정할 수 있습니다.

서버, 클라이언트간 전송시 latency 확인



Latency는 거의 없는것으로 보여집니다.

RDW 구상

yaoling1997 / OpenRDW Public

Code Issues Pull requests Actions Projects Wiki Security Insights

main 1 branch 0 tags Go to file Add file <> Code

yaoling1997 Merge pull request #1 from Kyle-Kirsten/main ... 2291fcb on Jun 28, 2022 40 commits

File	Change	Date
.idea	add vis poly redirector	last year
.vs	add vis poly redirector	last year
Figures	delete plugin	2 years ago
OpenRDW	vis	last year
Real User Walking Paths	upload real walking paths	2 years ago
Sample Command File	update	2 years ago
.gitignore	change readme	2 years ago
LICENSE	Update LICENSE	2 years ago
README.md	update readme	2 years ago

README.md

About

The source code of OpenRDW

- Readme
- Apache-2.0 license
- Activity
- 27 stars
- 3 watching
- 8 forks

Report repository

Releases

No releases published

Packages

No packages published

C#, Unity, HMD 이용한 RDW

RDW 구상

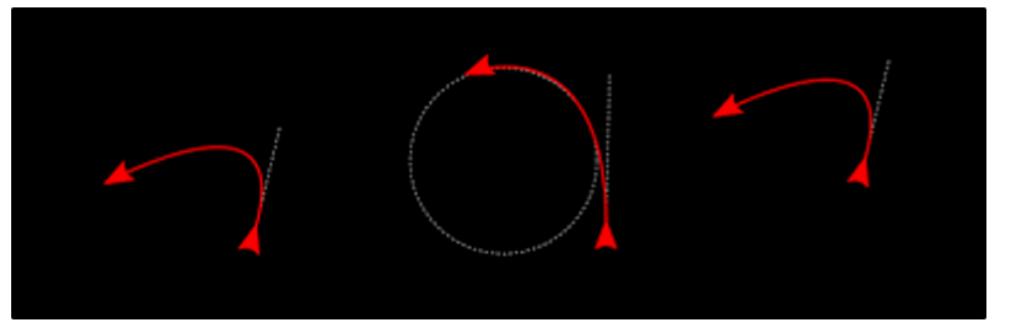
사용되는 알고리즘

1. S2C

a. Steering to Curve

2. S2O

a. Steering to Origin



3. Zigzag

4. ThomasAPF

- A general reactive algorithm for redirected walking using artificial potential functions
- <http://www.jeraldthomas.com/files/thomas2019general.pdf>

5. MessingerAPF

- Effects of tracking area shape and size on artificial potential field redirected walking
- <https://www.cs.purdue.edu/cgvlab/courses/490590VR/notes/VRLocomotion/MultiuserDirectedWalking/TrackingAreaShapeSizeEffects2019.pdf>

6. DynamicAPF

- Dynamic Artificial Potential Fields for Multi-User Redirected Walking
- <https://ieeexplore.ieee.org/abstract/document/9089569>

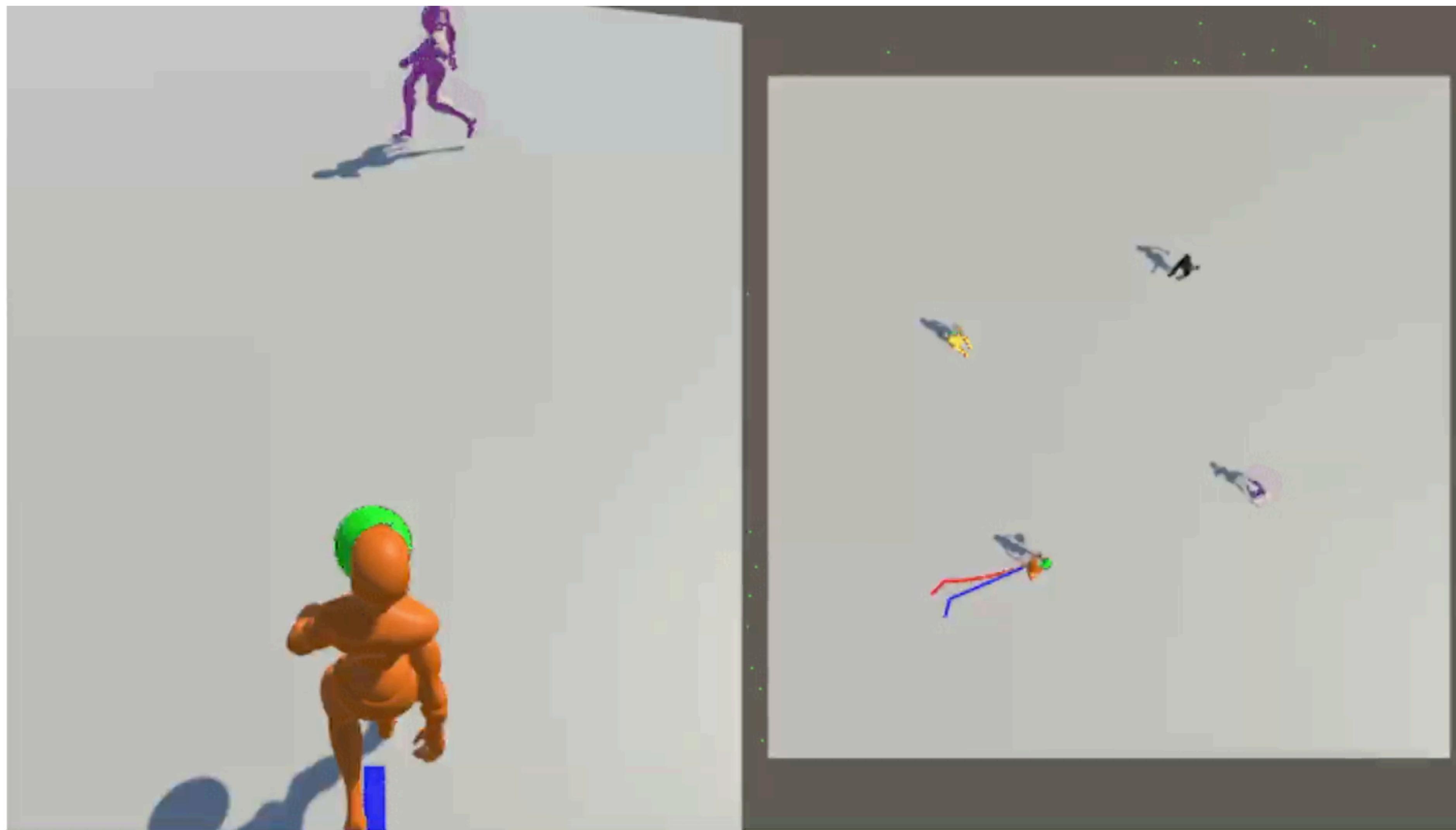
7. DL

- A steering algorithm for redirected walking using reinforcement learning
- <https://ieeexplore.ieee.org/abstract/document/8998570/>

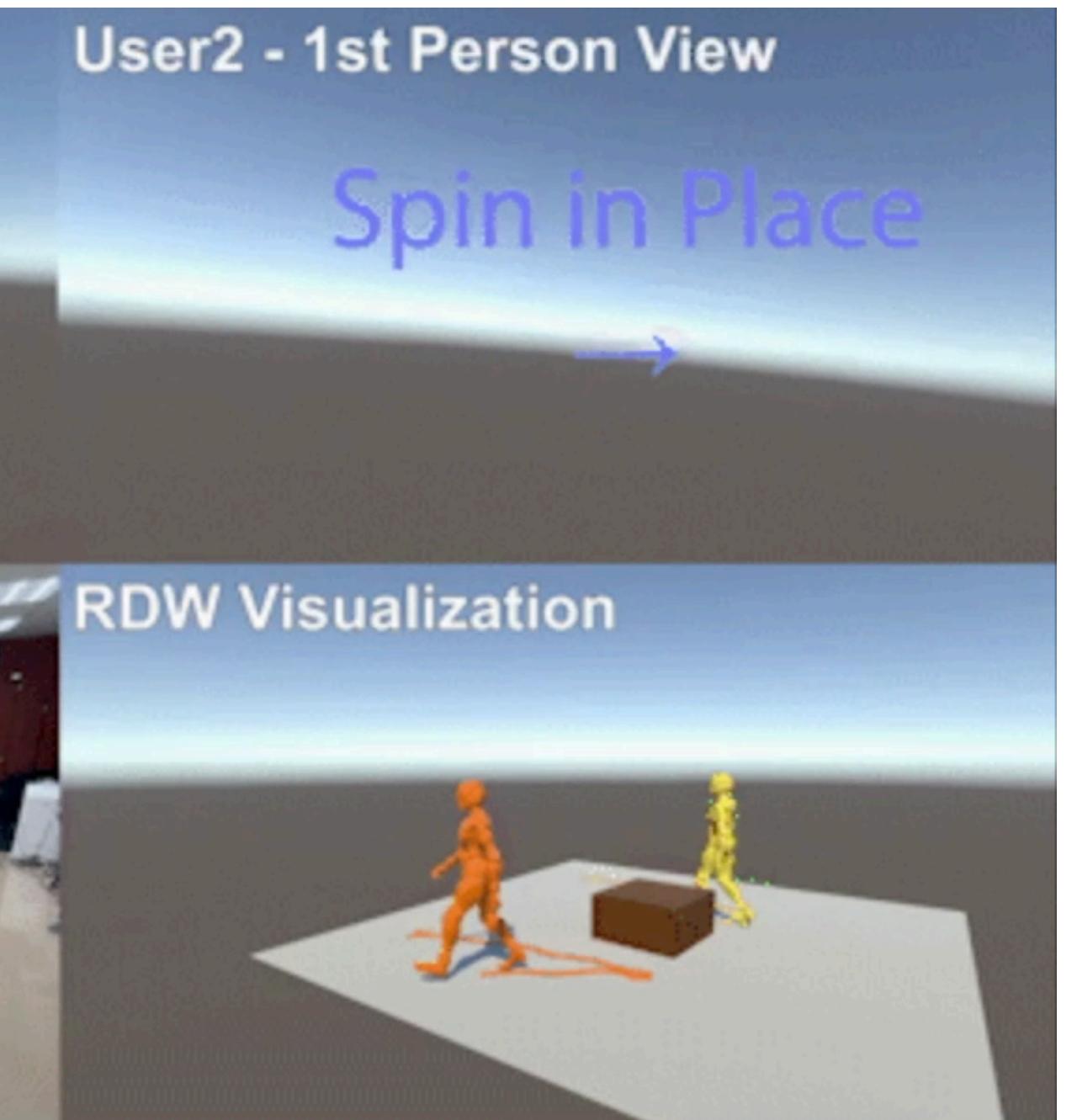
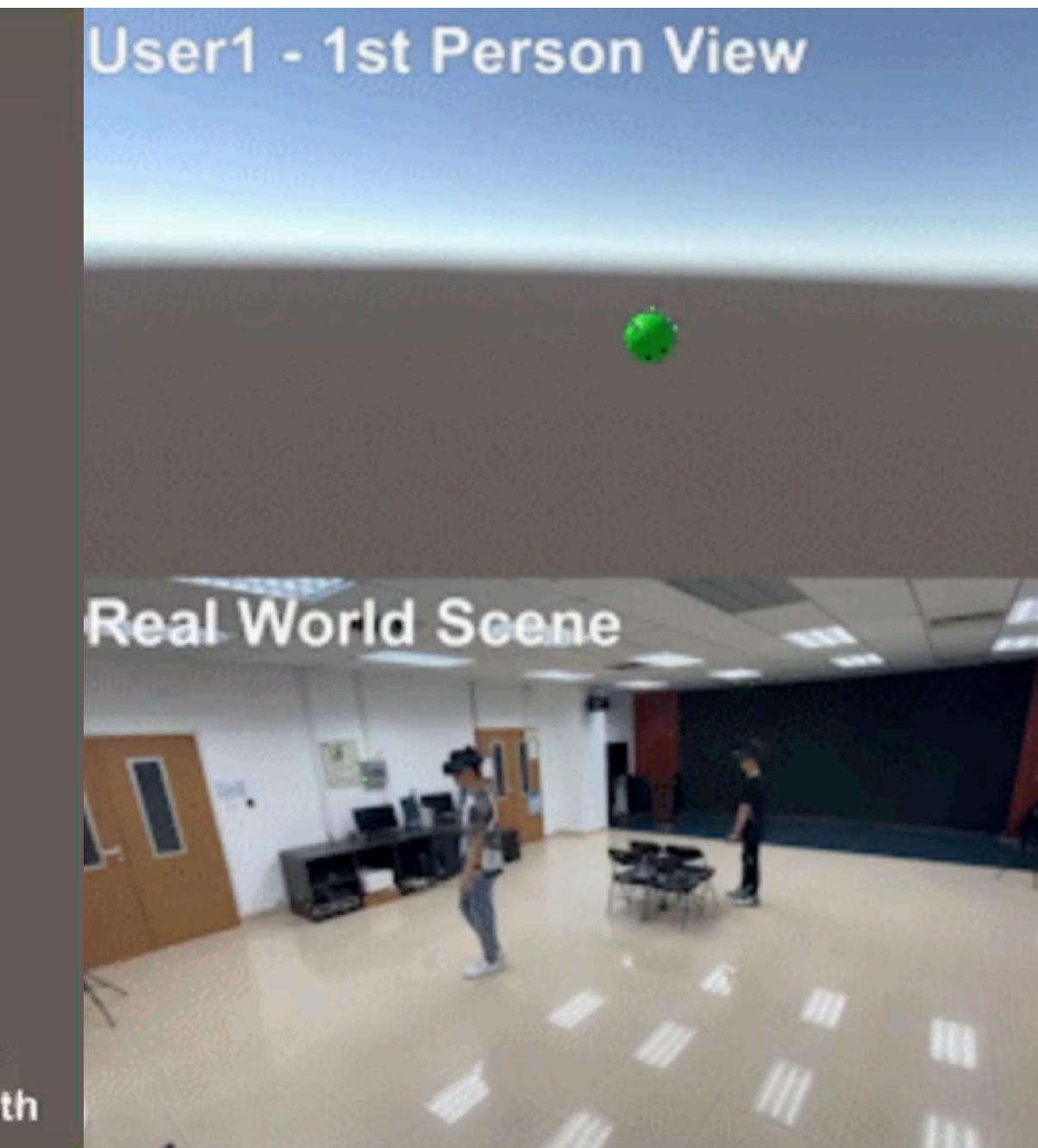
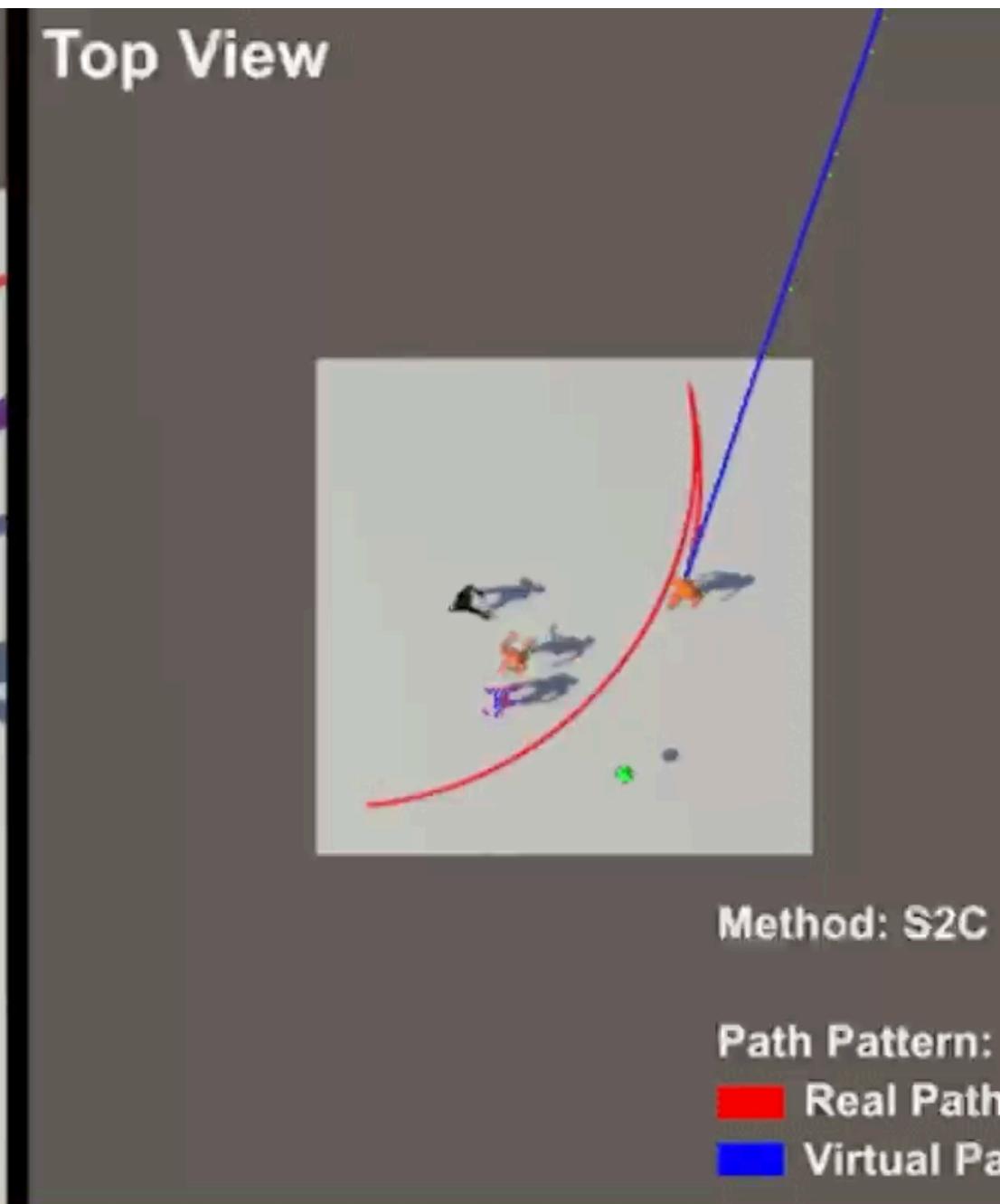
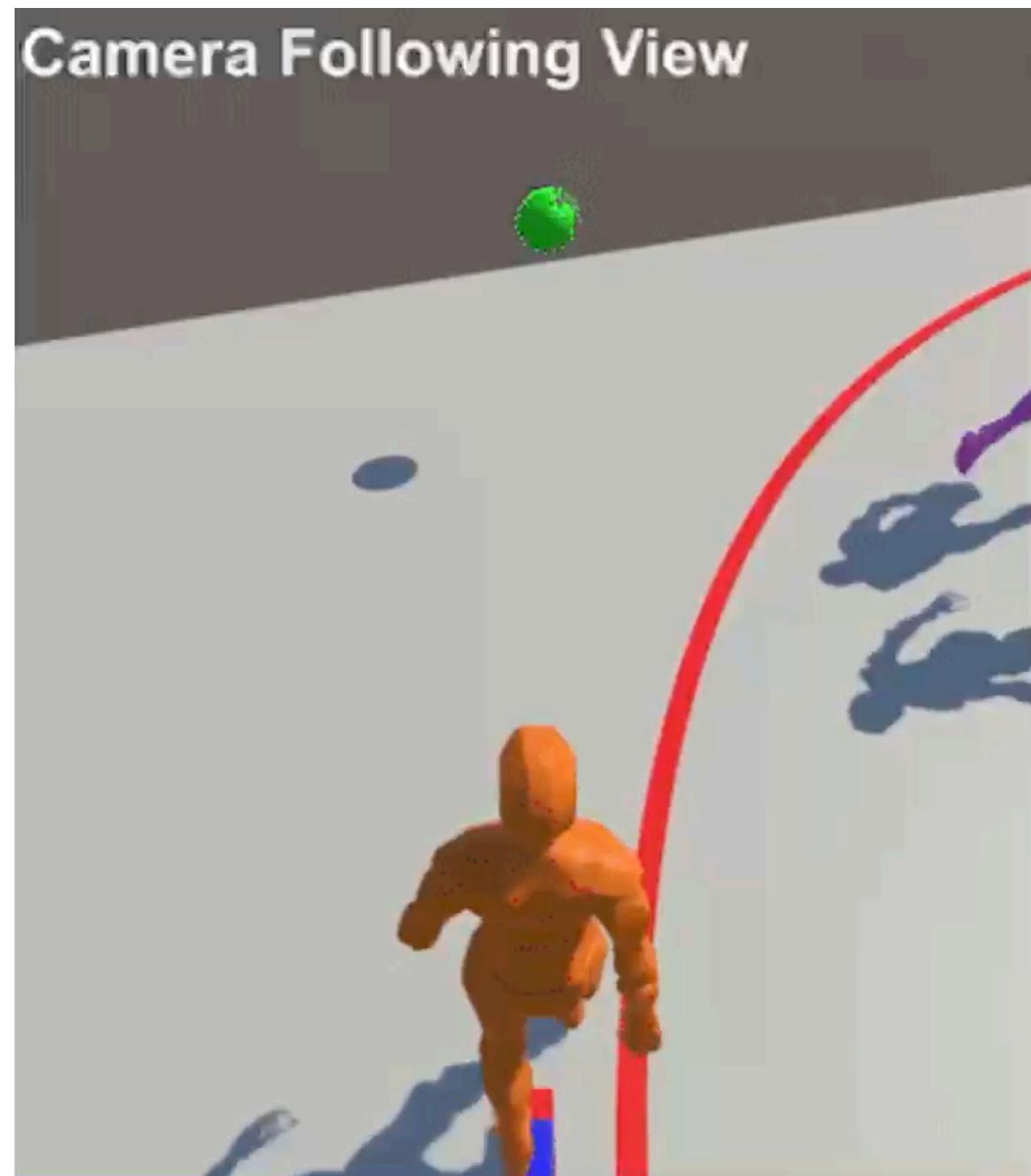
8. PassiveHapticAPF

- A general reactive algorithm for redirected walking using artificial potential functions
- <http://www.jeraldthomas.com/files/thomas2019general.pdf>

RDW 구상



RDW 구상



Sheer to Center

SteamVR Plugin과 HMD 이용

Todo

1. BoT-SORT 카메라 연동 테스트
2. 서버에서 위치 뿐만이 아니라 방향도 전송할 수 있도록
3. 여러 사람의 평균 위치를 구해서 사용하도록
4. 위의 코드를 어떻게 프로젝트에 적용할 수 있을지

감사합니다