

Applied Research Project – Progress Report 1


Date	Number of Hours	Description of work done
Sep 07, 2025	5	Created a test unreal project to learn ClientListener, ReplicatedAsset, Information synchronization.
Sep 08, 2025	2	Learnt RPCs(Remote Procedure Calls)
Sep 09, 2025	4	Redefine the game's worldview; Low-meshes in maya (GDI: 4 vehicles, Nod: 4 vehicles)
Sep 12, 2025	6	Gamelog output; debug crush with build in unreal 5.6.1; change coding part from visual studio to Rider; Unsolvale crush in unreal 5.6.1, then switch to unreal 5.5.4.
Sep 13, 2025	4	Setup new project, test LAN multiplayer connect.
Sep 14, 2025	8	Learned using steam as the agent to hold a remote server. Add session create, join. Unsuccess with a multiplayer test in a remote environment.
Sep 15, 2025	4	Text LAN and Remote connection.
Sep 17, 2025	4	Not working in steam remote. Learnt online video: https://www.youtube.com/watch?v=jc0COamYRm4&t=488s
Sep 19, 2025	4	Debug code for the remote connection. Still not working.
Sep 21, 2025	4	Test Unreal Engine 5.6.1. A lot of new debugging issue with a raw project. And learnt: https://www.youtube.com/watch?v=Pk_Ki8rV8Wo But still not working...
Sep 22, 2025	3	Currently, the most reasonable issue is the APP IP, maybe I have to pay 100 US\$ for it. So, I plan to pause the remote connection and redebug it (or to pay for the IP) after we finish all the other mechanisms. Focus on LANconnection. Cleaned the working project and started to learn to replicate assets.
Sep 24, 2025	3	Learned to find the reason why our lab computers cannot connect each other: the NetConnection -Port 7777 failed. Reconnect the listen level and build focus ip connection. Finally in our prototype all the lab computers can connect to each other now!
Sep 26, 2025	5	Replicate assets in C++, contribute to a two-player interactive gameplay.








In the past two weeks, I setup the game project and learnt how the basic multiplayer functions work. There were a lot of issues on the remote WAN connection with a Steam delegation. Also tried so many different versions of the Unreal Engine, but still only can work in a LAN. For now, the only reason for the issue should be the APP IP or switch to another unfamiliar agent or build a cloud server. This will take an uncountable schedule on it. So, I plan to pause it now and to make the gameplay mechanisms first. After the whole game could work in LAN, I will start to solve the issue.

This week, I solved the problem of the connection in our campus labs. Then continue working on multiplayers interactive with assets (replicate assets).


Github Game project:




Implementation/WorldRebalance

[F2025_4495_071_YLi547](#) / [Implementation](#) / [WorldRebalance](#) / 

 YaolongLiu Yaolong Game project update	
Name	Last commit message
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 Config	Yaolong Game project update
 Content	Yaolong Game project update
 Source C++ folder	Yaolong Game project update
 WorldRebalance.sln	Yaolong Game project update
 WorldRebalance.uproject Project start up file	Yaolong Game project update

Implementation/GameTestVideo

[F2025_4495_071_YLi547](#) / [Implementation](#) / [GameTestVideo](#) / 

 YaolongLiu Create GameTest20250924_LANLabConnection.mp4	
Name	Last commit message
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 GameTest20250924_LANLabConnection.mp4	Create GameTest20250924_LANLabConnection.mp4