Break With Your Phone

playing game using smartphone as a VR controller

CSED353 Network Term Project

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Background

The background we selected this topic

0. Background

Topic: Smartphone & VR Controller

- Let's compare smartphone & VR controller

– Smartphone –	– VR Controller –
Feature: • Gyro sensor • Acclerator → can track movement	Feature: • ? • Anyway… → can track movement

How about imitating VR controller using smart phone?

0. Background

Topic: Implement one example

- To show a case of imitating VR controller

  → we made a game breaking obstacles coming in with your phone

- The name of the game is "Break With Your Phone"

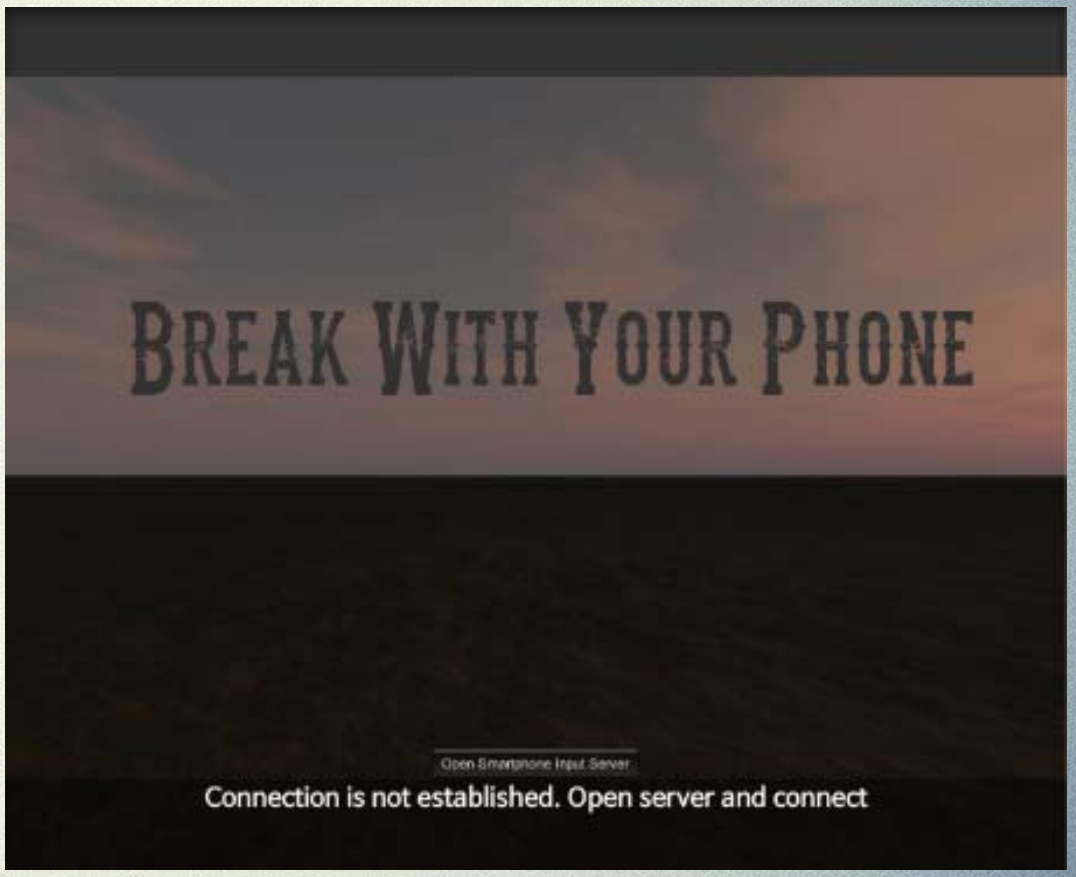
Game Play

This is our game"Break With Your Phone"

1. Game Play

Main Scene (1)

- Scene after game launch
- Provide network connection interface
- To proceed game…
- First, open web server

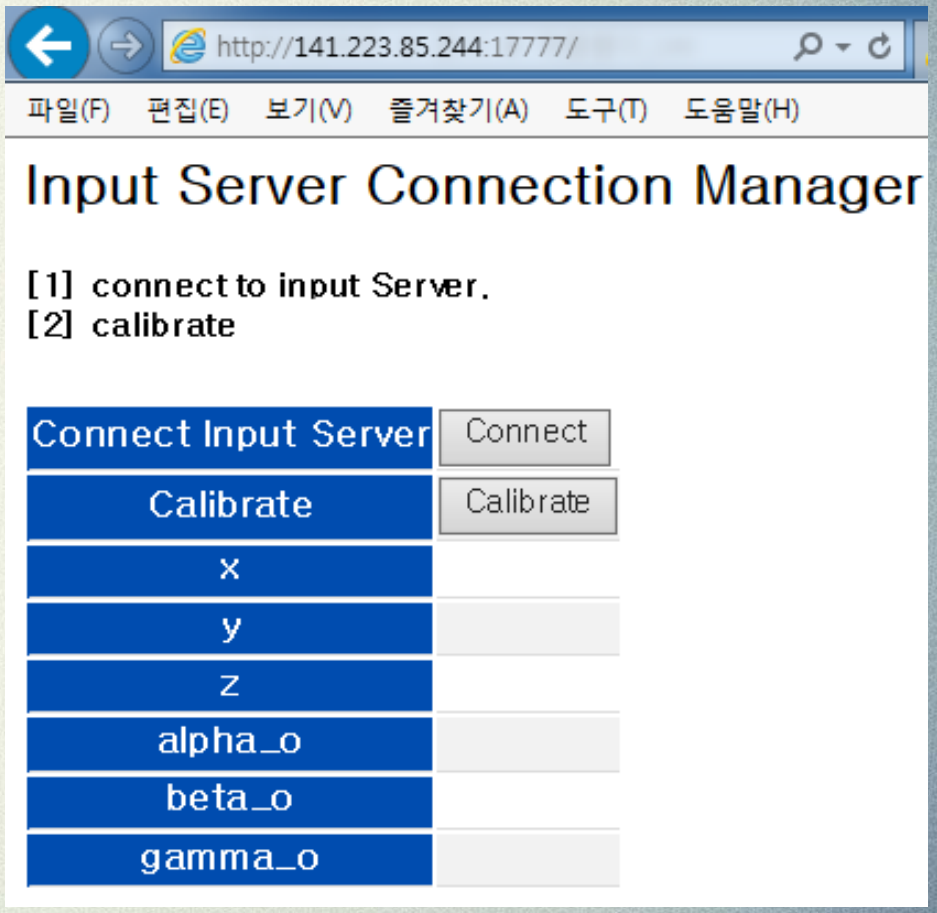


1. Game Play

Main Scene (2)

- Connect to game using web browser of your smartphone

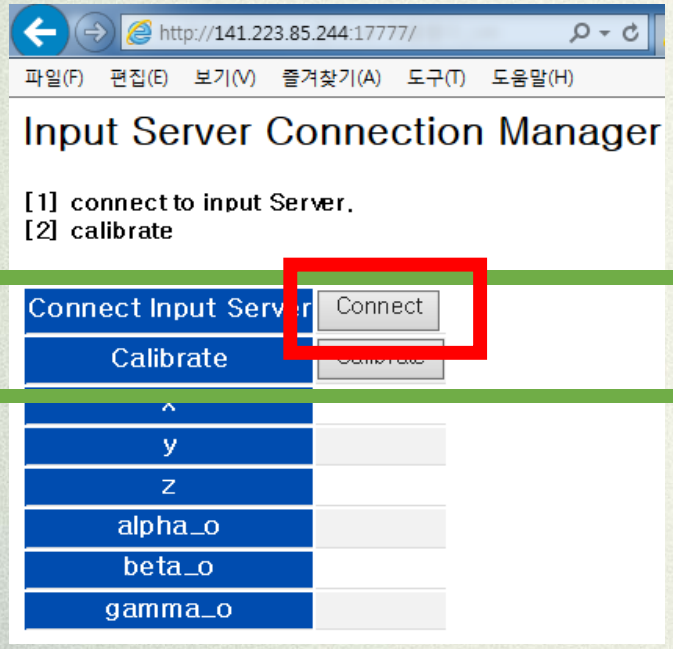
- If you type address shown on game scene, you can see page like this:



1. Game Play

Main Scene (3)

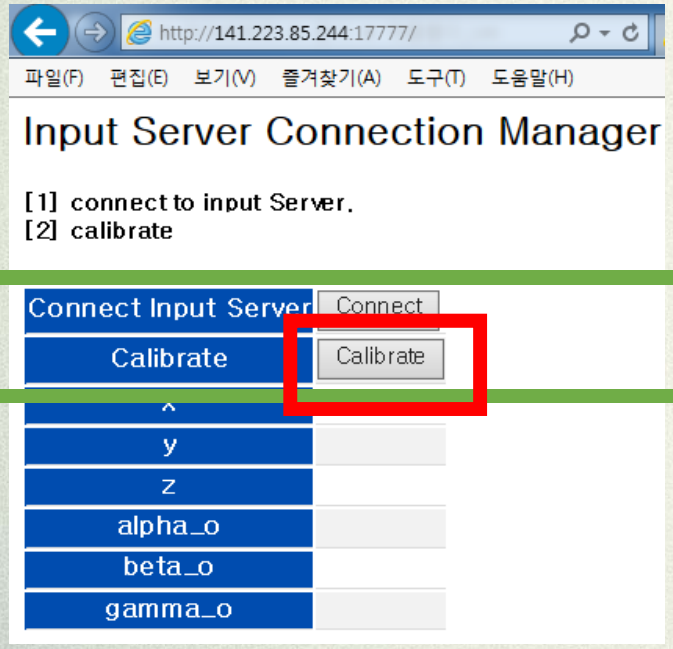
- First, connect to input server (by clicking the button)



1. Game Play

Main Scene (3)

- Then, click calibrate button following instruction



1. Game Play

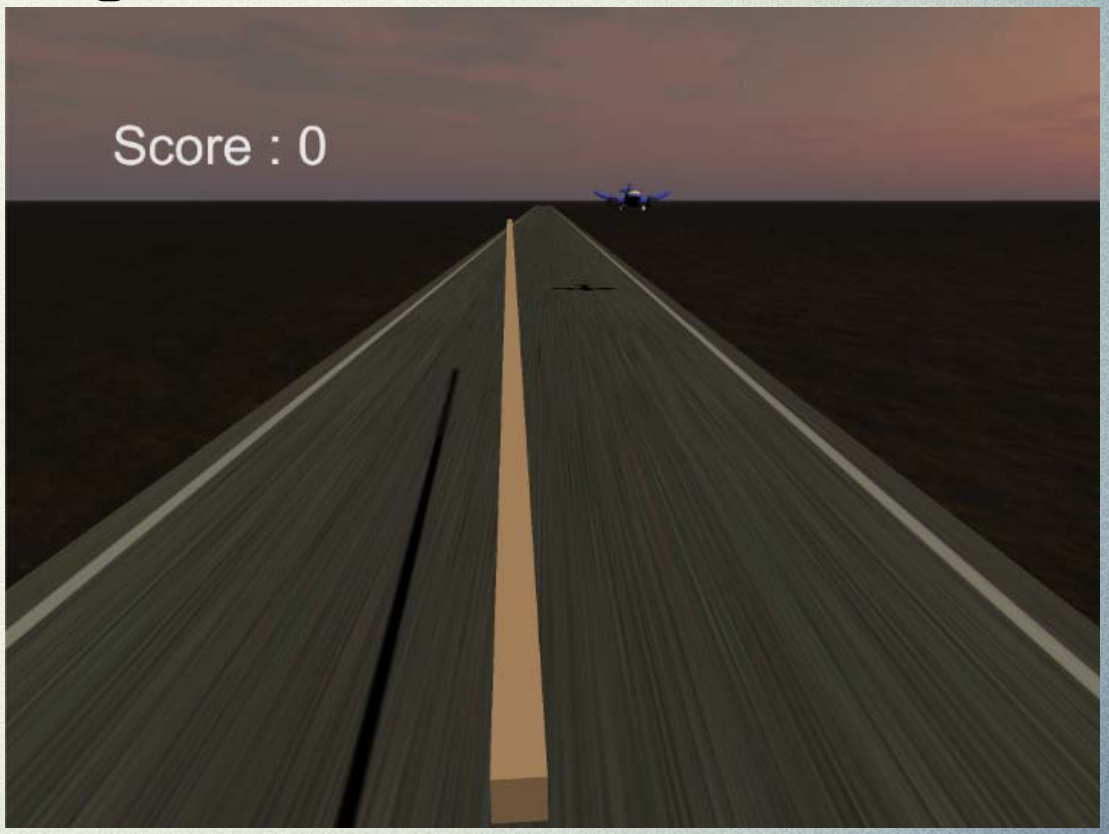
Main Scene (4)

- After calibration, start button appear

1. Game Play

Play Scene (1)

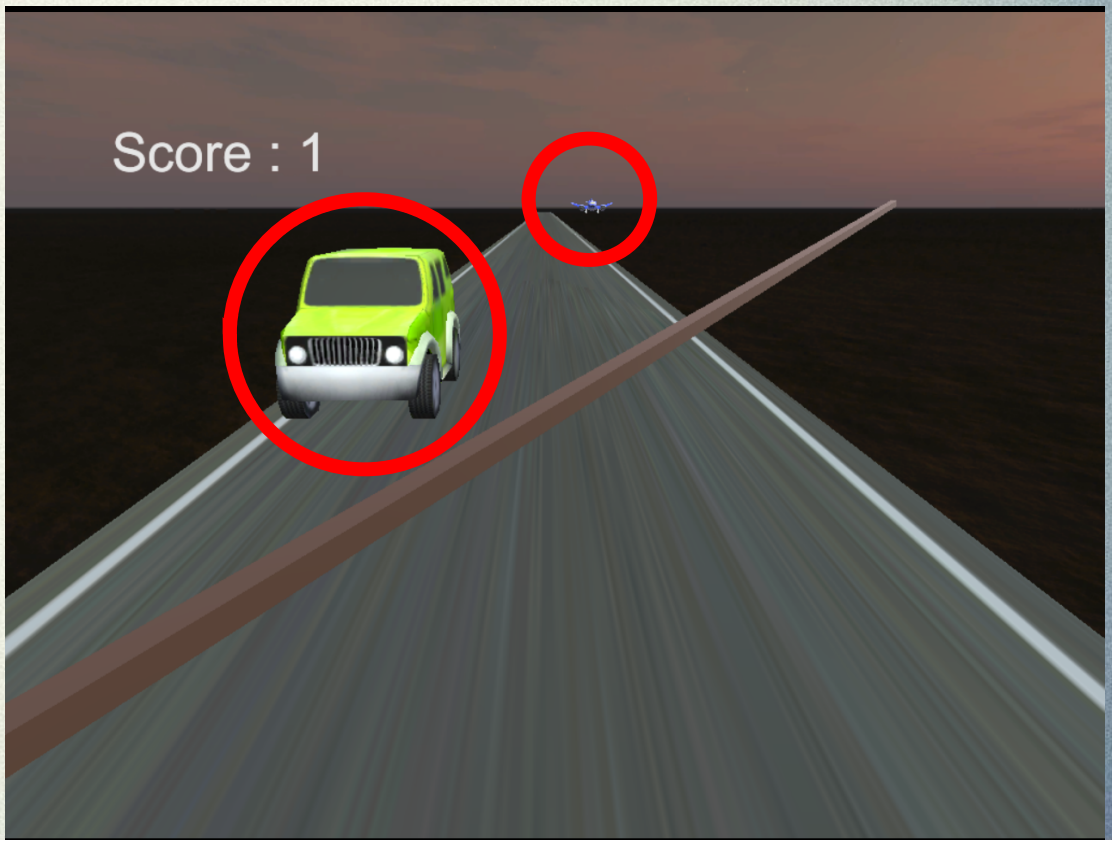
- If you click the start button, game starts



1. Game Play

Play Scene (2)

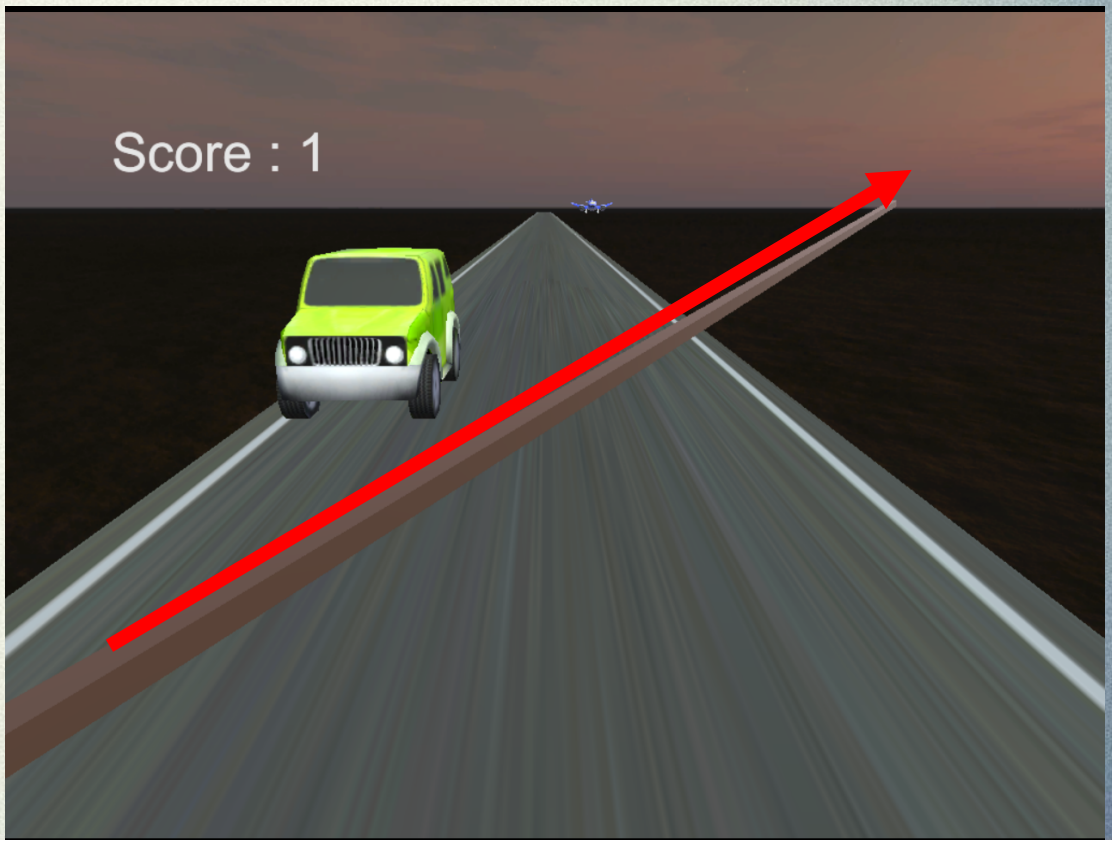
- There exists obstacles (plane, car) coming in



1. Game Play

Play Scene (3)

- The stick moves the same way we move the smartphone



1. Game Play

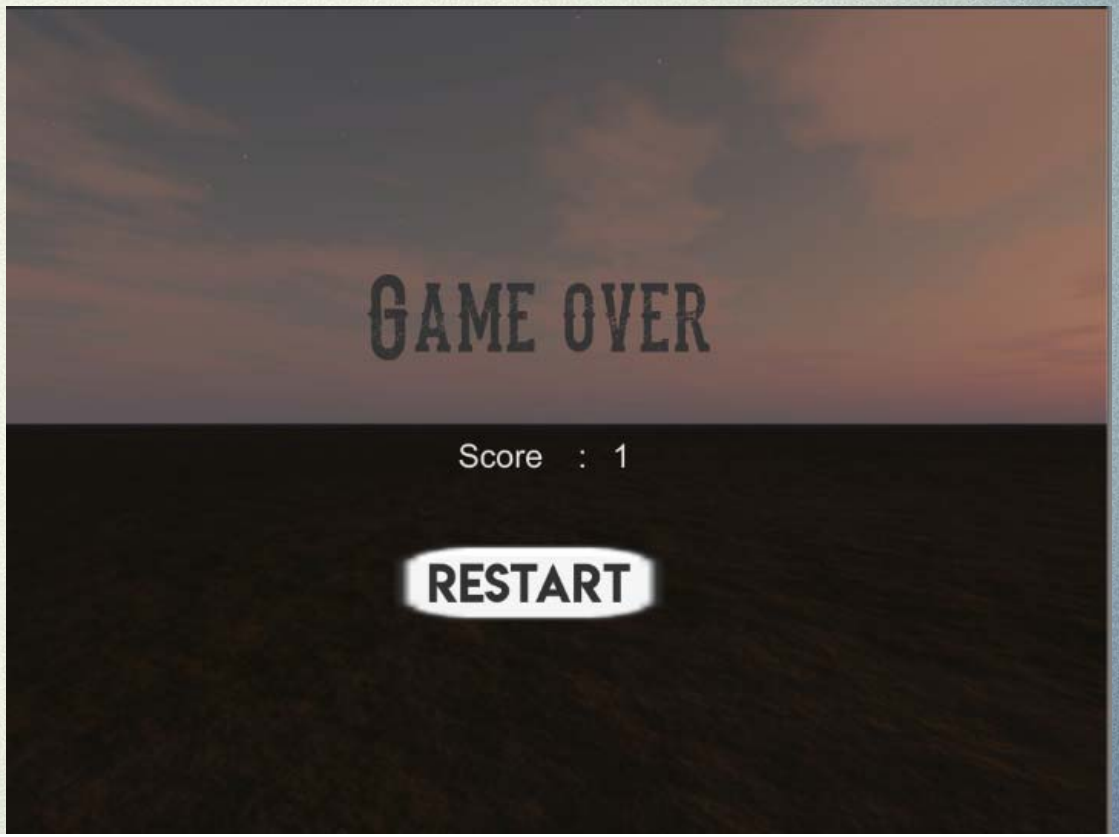
Play Scene (4)

- Hit the obstacles with your stick to get score

1. Game Play

Game Over

- If you miss any obstacles, game ends



Socket Commuincation

How we applied socket programming on our project?

2. Socket Communcation

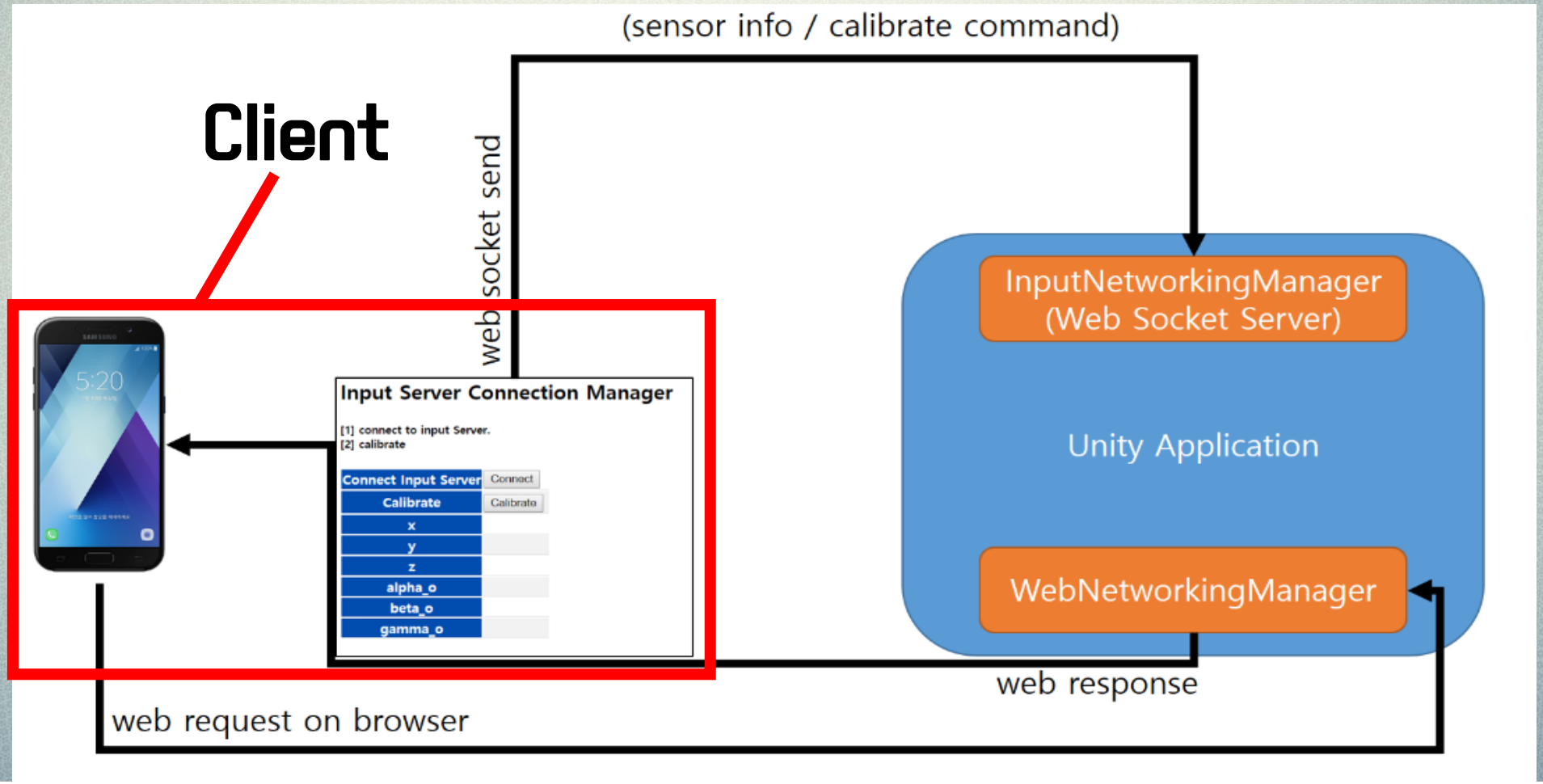
Development Environment

Language: C#, HTML, Javascript

Framework: Unity 5.6.0f3

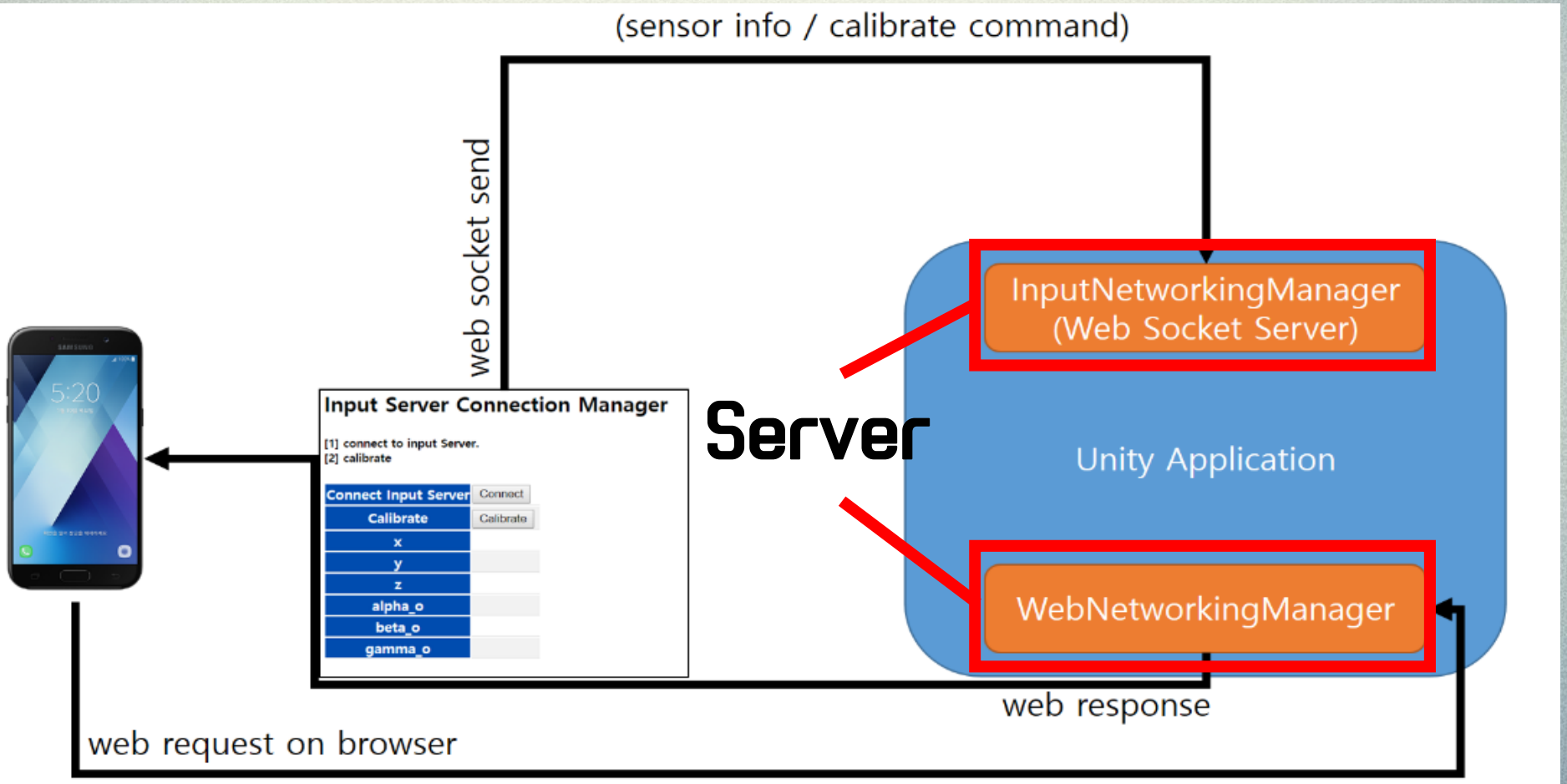
2. Socket Communcation

Overall Structure



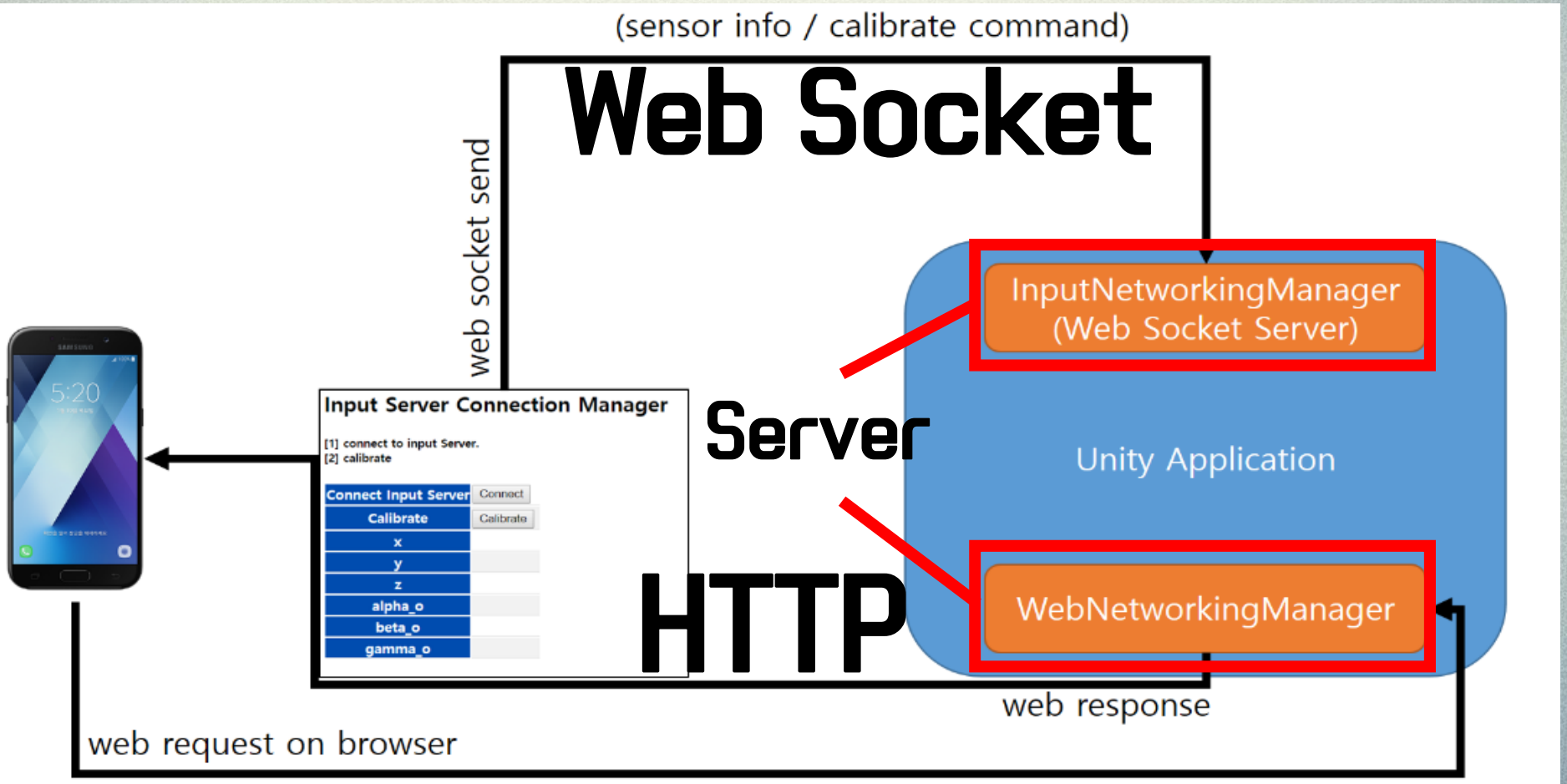
2. Socket Communcation

Overall Structure



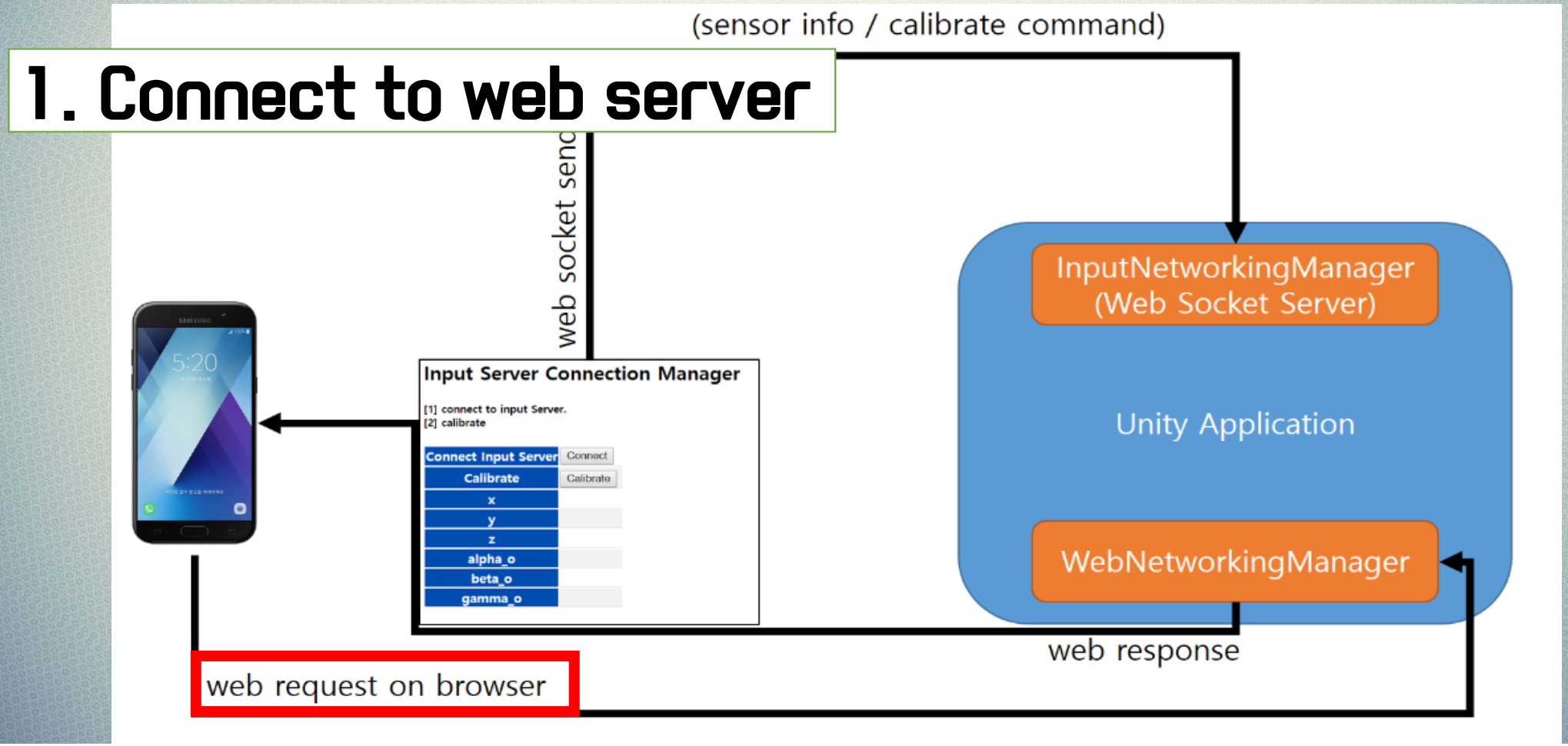
2. Socket Communcation

Overall Structure



2. Socket Communcation

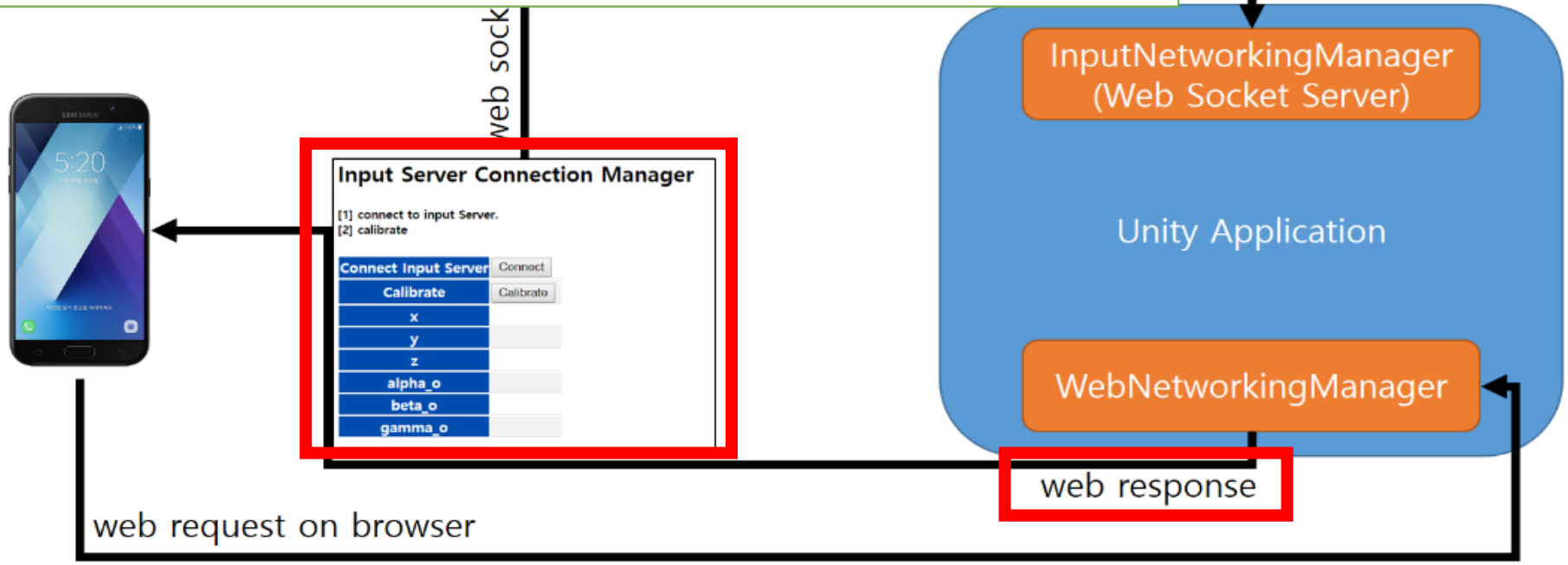
Socket Connect Scenario (1)



2. Socket Communcation

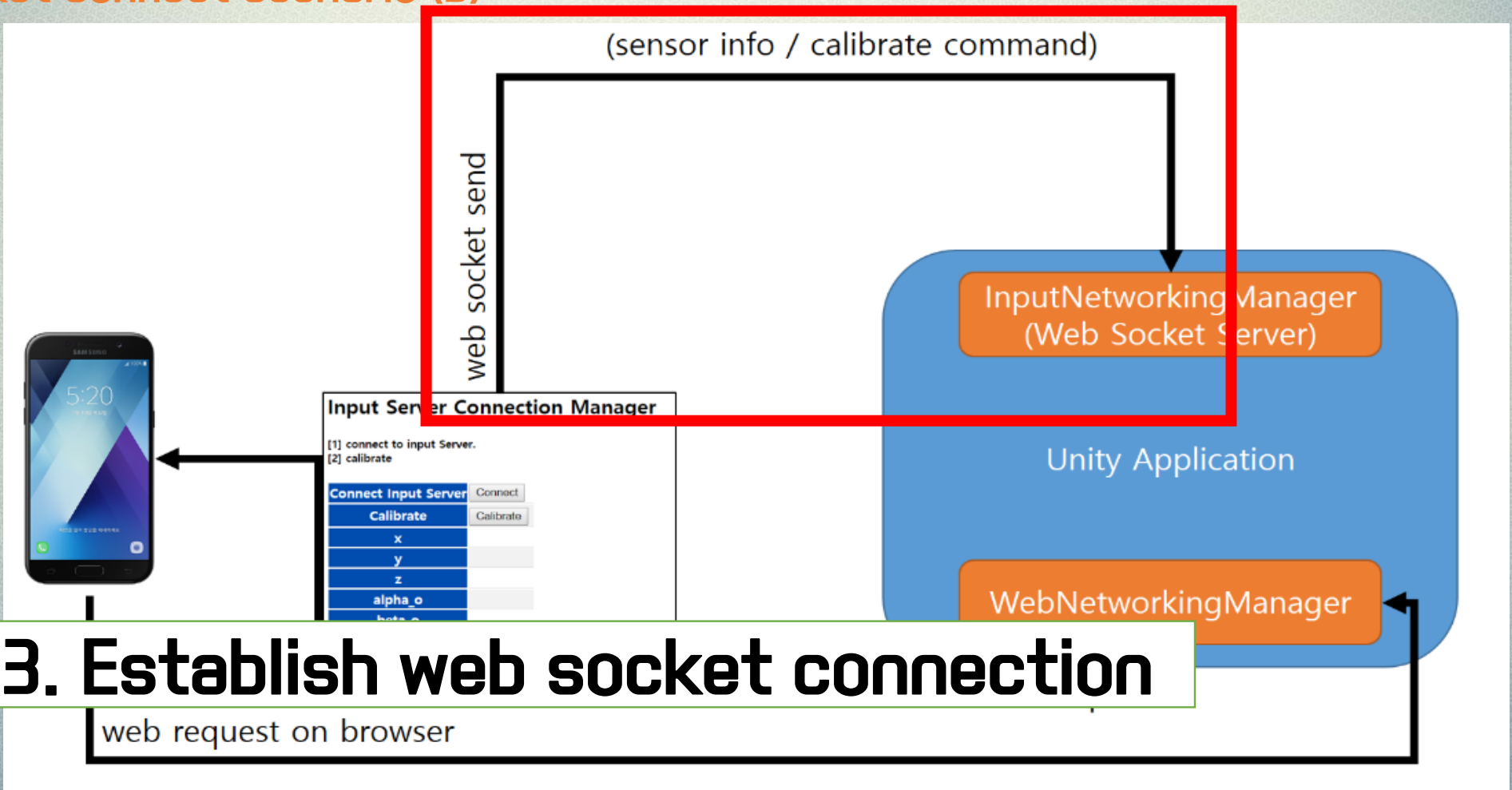
Socket Connect Scenario (2)

2. receive web response containing connection manager page



2. Socket Communcation

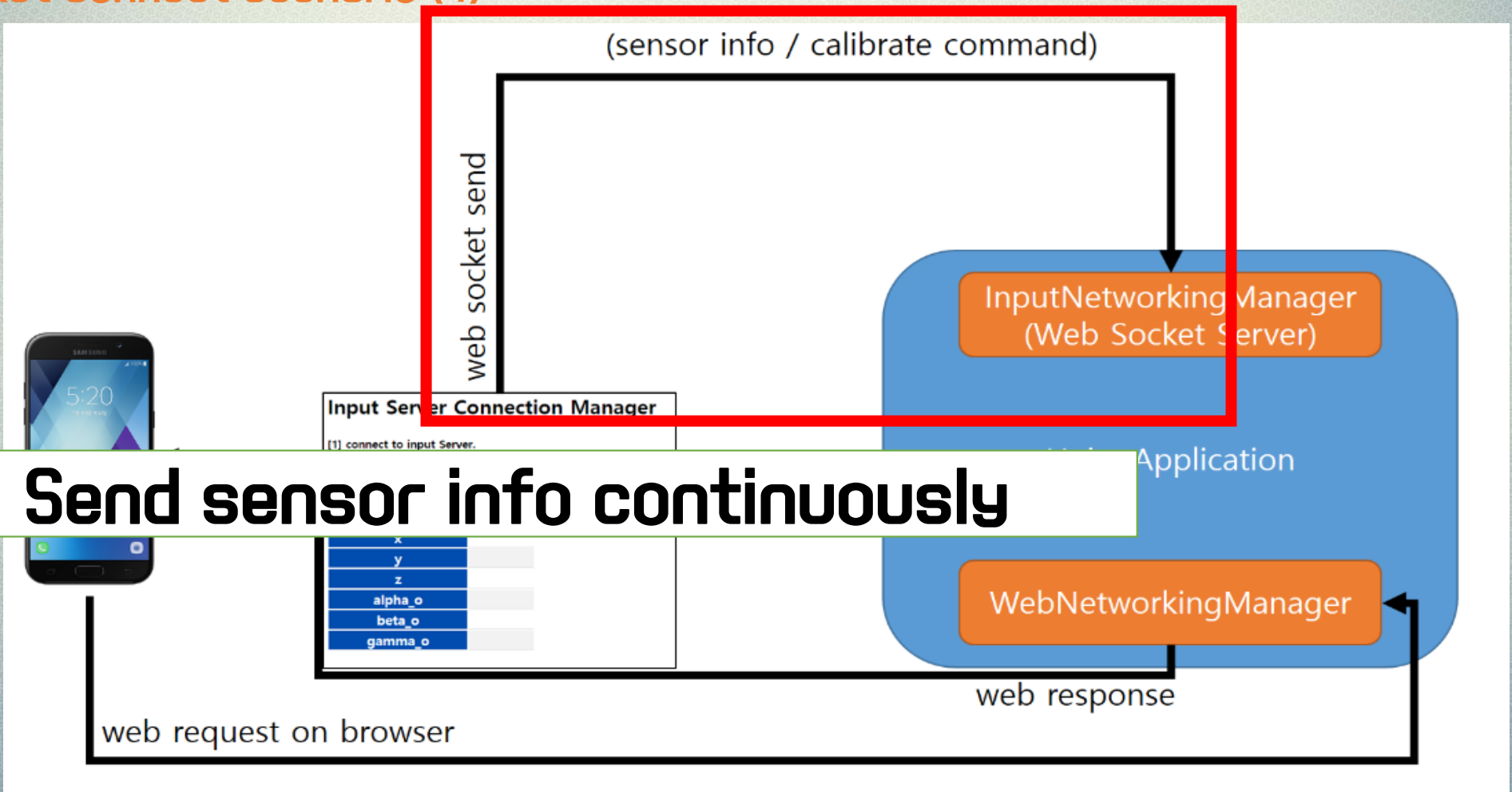
Socket Connect Scenario (3)



3. Establish web socket connection

2. Socket Communcation

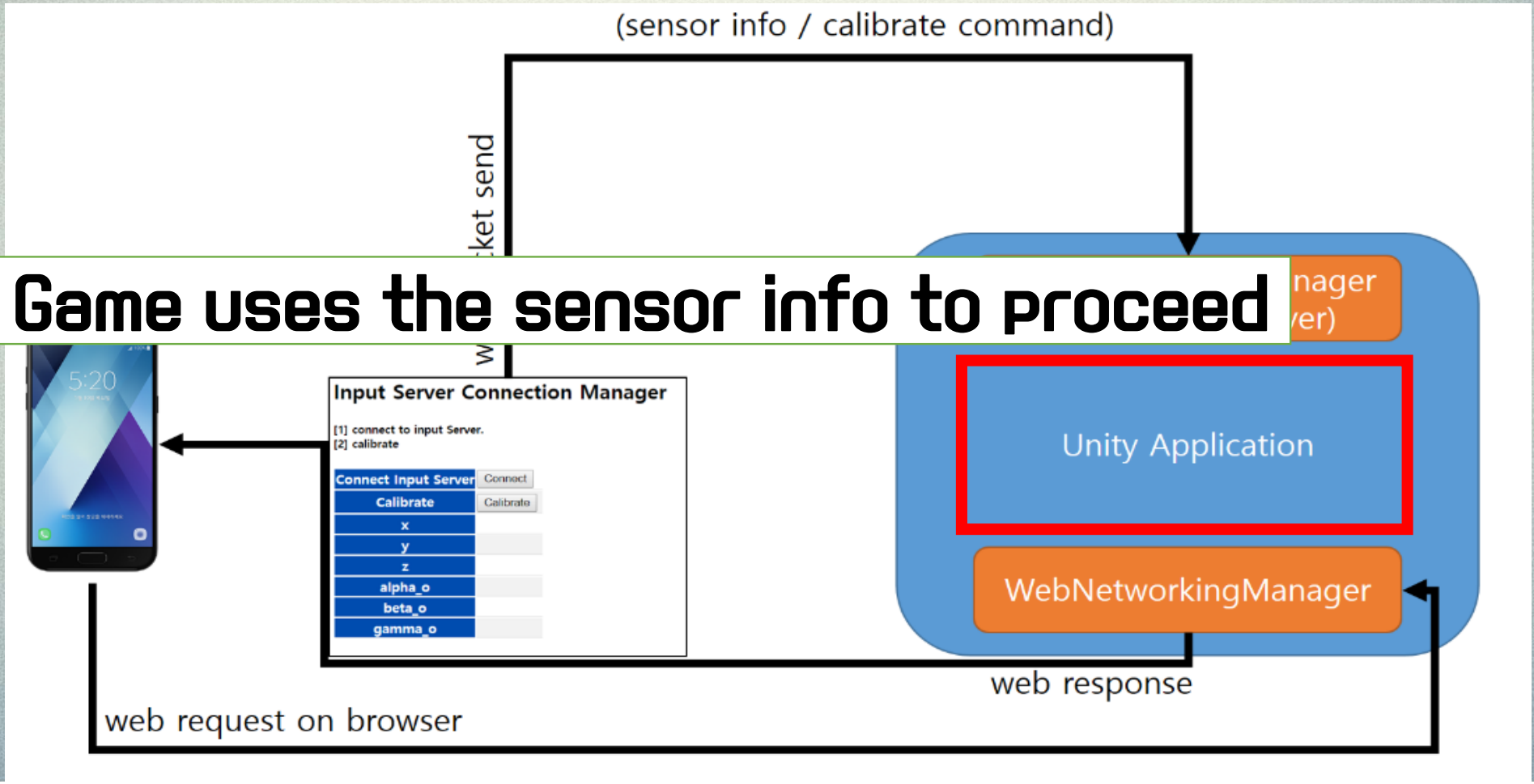
Socket Connect Scenario (4)



4. Send sensor info continuously

2. Socket Communcation

Socket Connect Scenario (4)



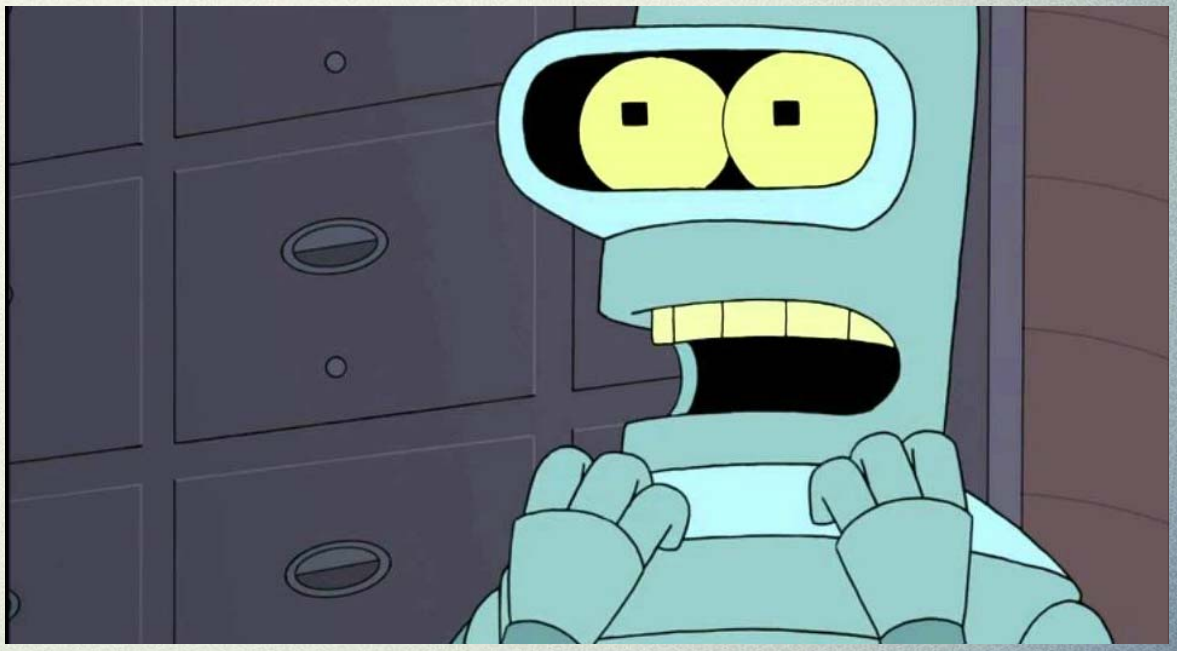
5. Game uses the sensor info to proceed

2. Socket Communcation

Benefit of using web server

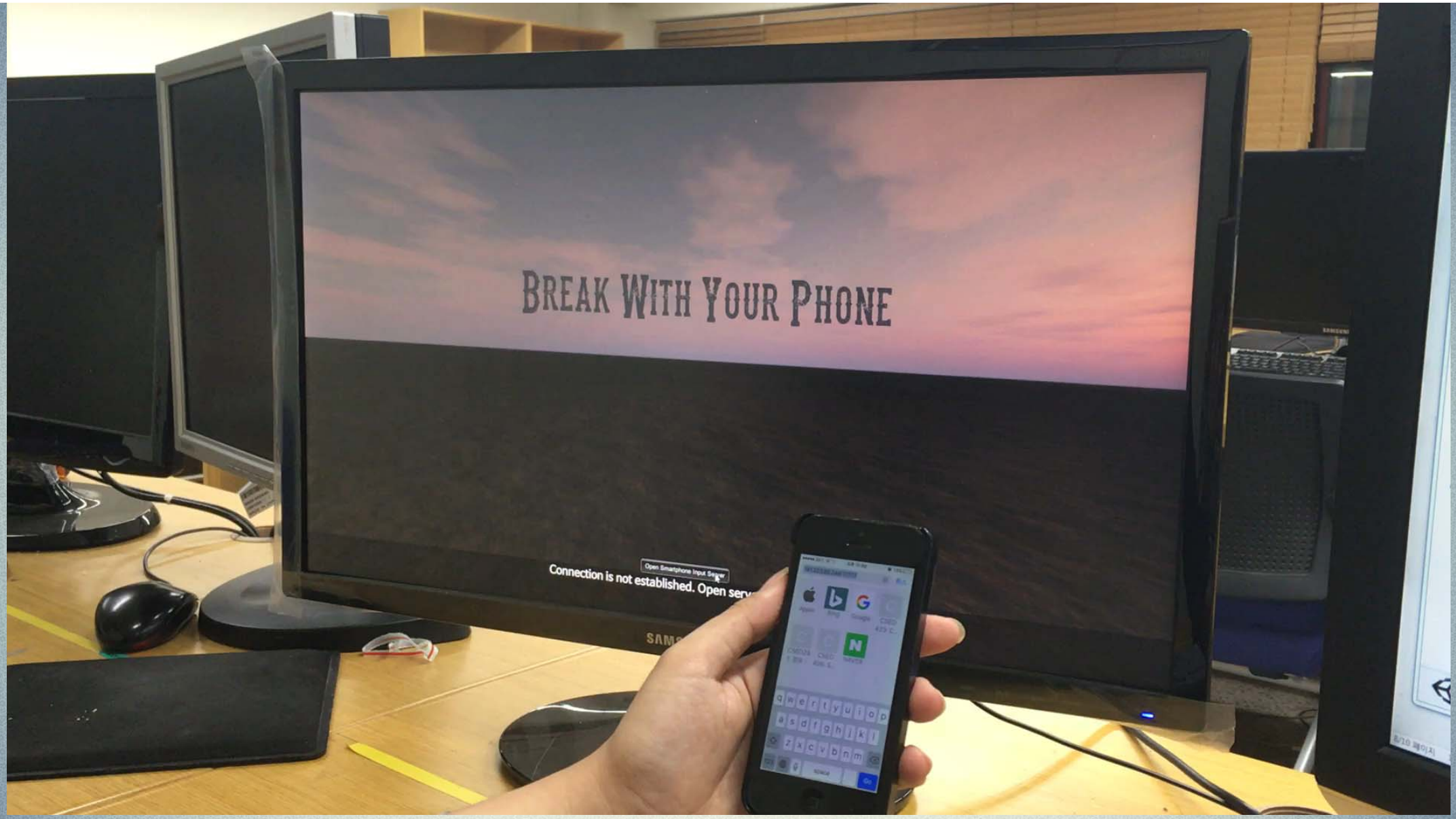
There exists a special design consideration

You don´t need additional application install!



Demo

Demonstration of game “Break With Your Phone”


BREAK WITH YOUR PHONE
Open Smartphone Input Server
Connection is not established. Open serv