Snake.City

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Thank you to all the passionate participants of Trust in Play

http://trustinplay.eu/

You inspired us to create and share Snake.City with you

Co-funded by the
Creative Europe Programme
of the European Union

INTRODUCTION

- Are you passionate about games as well as urban spaces?
- Do you enjoy interacting with technology while experiencing the real/tangible reality?

Then Snake.City is the right opportunity for you to learn how to create your own urban game.

You will be guided step by step on how to create new game using pervasive technology.

We will explain to you how to create the game server and the programming game code, and on to finally realise your own Snake.City inspired game!

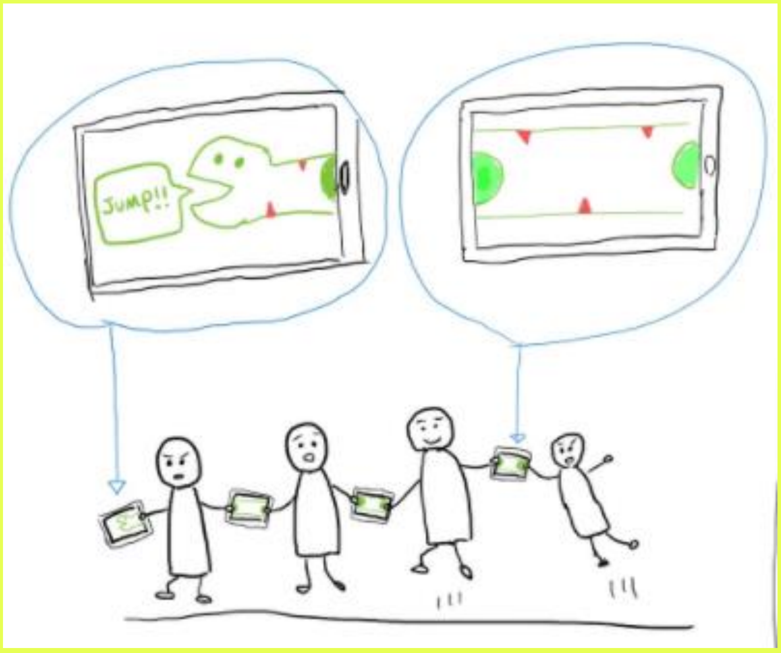

Figure 1. An early sketch of gameplay with touch interaction inspired by Bounden

HOW SNAKE.CITY WORKS?

Context

The game can be played anywhere - parties, festivals, university campus, schoolyards, and conferences. We think it works particularly well in festival locations, where, for example, we can make use of the logon process people go through on public WiFi to provide a convenient and very public link to the game.

However, before we tell you more, we need to talk about COVID-19. When we started this project, we were living in a world without COVID-19.

It depends where you live and the local rules, but it might not be a good idea to rush out and play closely with strangers in these worrying times.

That said, there are three big reasons you might be interested in Snake.City.

First, the three of us wanted to learn new tech that would make multi-player physical games possible. We want to share that tech with you.

Secondly, we are worried that we will forget how to play nicely with each other. If you have house mates or friends within your bubble, Snake.City might help you reconnect.

Lastly, we think Snake.City is fun. You might too.

Gameplay

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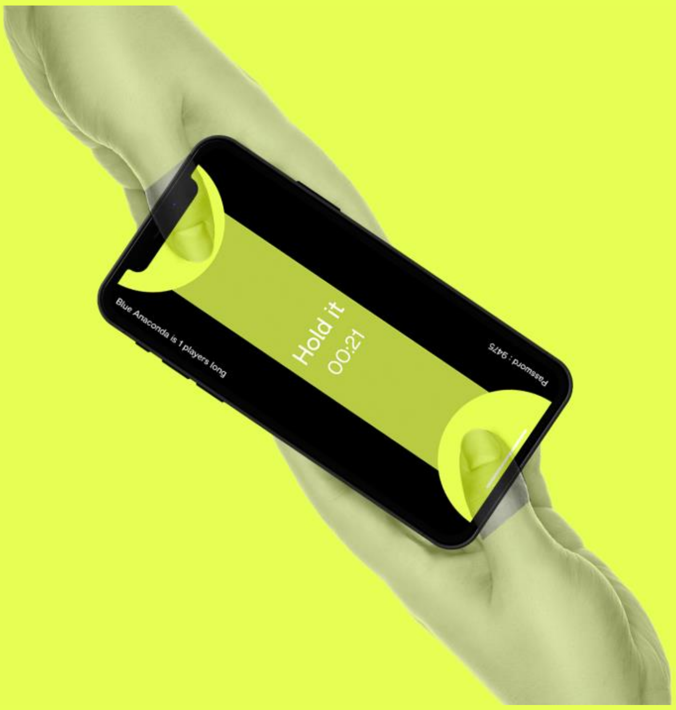


Figure 1. Snake.City Gamplay

INSPIRATIONS

There were many ideas behind the Snake.City, from single moments of inspirations to playing an actual follow my leader snake game devised by Simon.

In this section we are going to mention some games that were influentially and that we think you should check out.

Bounden

This game allows two people two dance together in what can be described as choreographed mobile-phone ballet. Bounden is instantly recognisable from its screen with two circles that shows clearly where to place fingers - we are inspired by the detail and it suggested how we make both detect and instruct people to form a chain of players

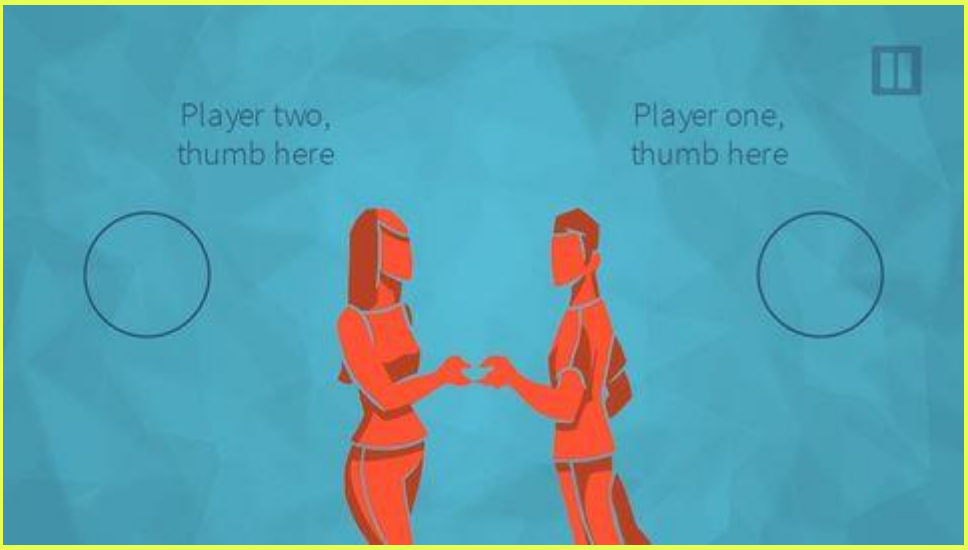


Figure 2. Bounden screenshot

Read about Bounden here: https://playbounden.com/

Noby Noby Boy

This game is a little crazy. Players take control of a worm-like character referred to as Boy. You control this character as you wind it around cartoon like villages and cities as you grow longer and longer. The game inspired players outside the game itself to work together and place points online to help Boy's friend Girl grow and reach the stars. The combined player effort sent Girl to Pluto in by November 23, 2015 and she is currently heading outside the solar system.

https://en.wikipedia.org/wiki/Noby_Noby_Boy

Correspondingly, we want to encourage lots of players. We would like to show an interactive map of where people might be playing Snake.City. The following games

Ocarina

This mobile game has a magical map of people playing its ocarina in the world. You can listen to people from all over the world playing familiar songs, as we are connected through their music.

https://apps.apple.com/us/app/ocarina/id293053479

Paperstorm.it

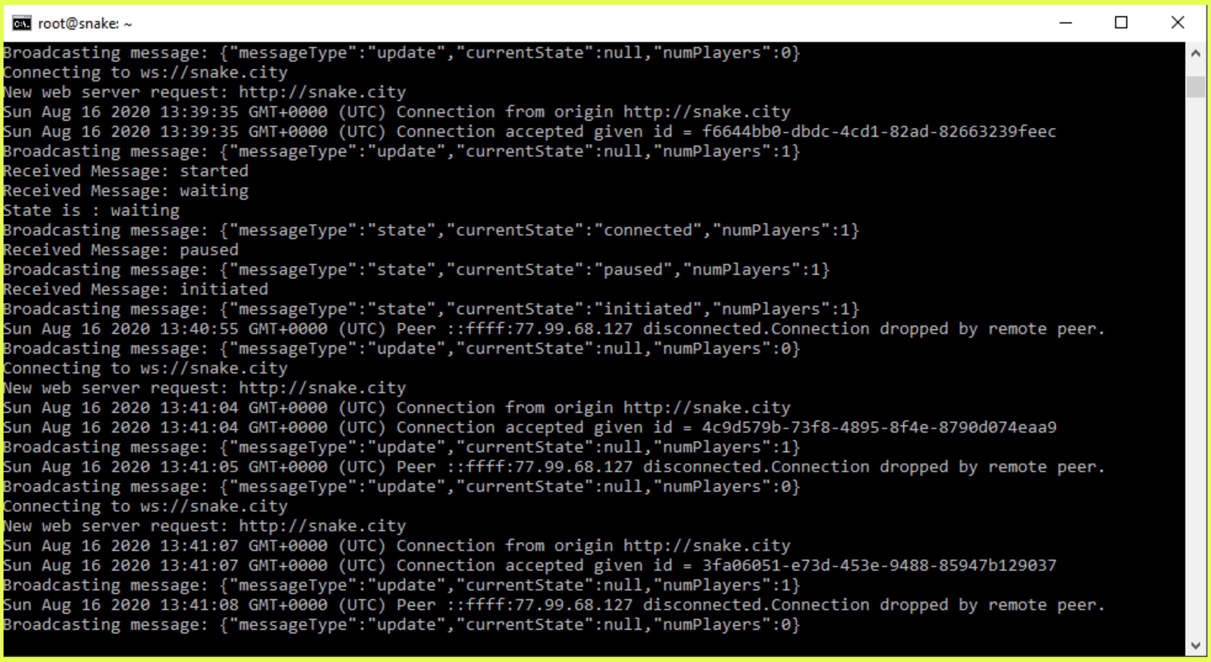
This game helps people to protest through an interactive map where you drop papers.

https://studiomoniker.com/projects/paperstorm

DEBUGGING YOUR GAME

The game is written in two parts – the JavaScript server and webpages. For both we can find out what our game is doing by printing debug messages to the screen.

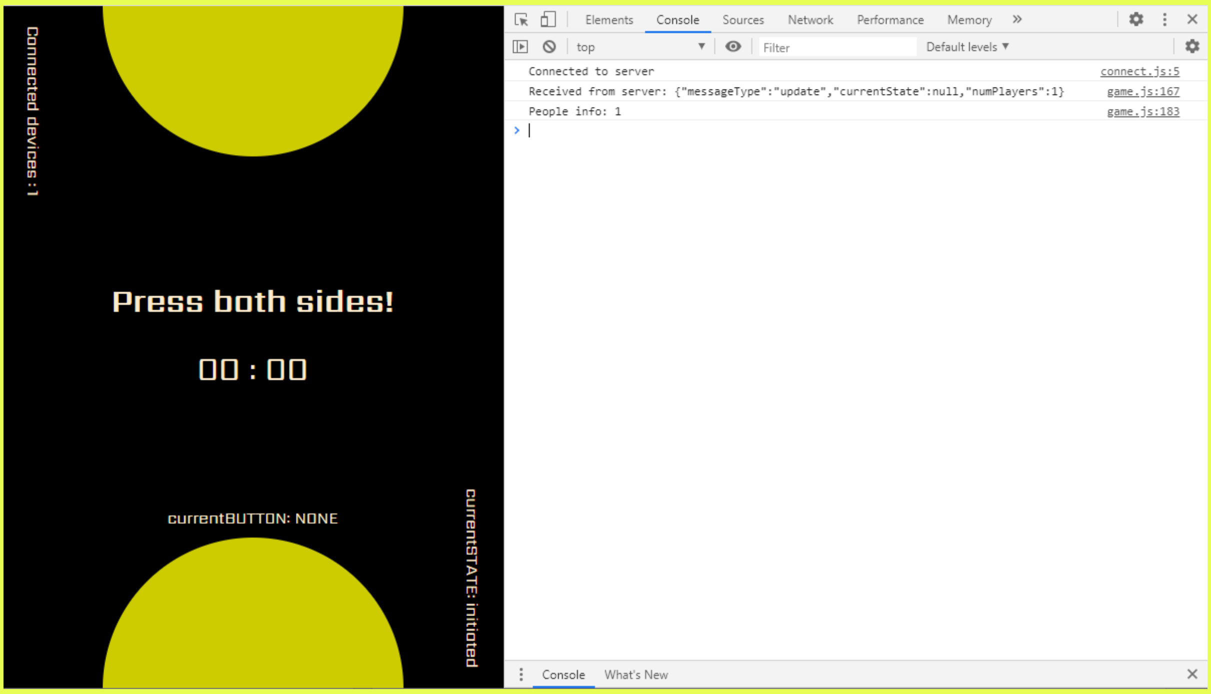
The diagram below shows debug prints from the nodeServer.js on the server. The JavaScript console.log("with your message and variables e.g. " + new Date()) can help you find bugs.



```
Broadcasting message: {"messageType":"update","currentState":null,"numPlayers":0}
Connecting to ws://snake.city
New web server request: http://snake.city
Sun Aug 16 2020 13:39:35 GMT+0000 (UTC) Connection from origin http://snake.city
Sun Aug 16 2020 13:39:35 GMT+0000 (UTC) Connection accepted given id = f6644bb0-dbdc-4cd1-82ad-82663239feec
Broadcasting message: {"messageType":"update","currentState":null,"numPlayers":1}
Received Message: started
Received Message: waiting
State is : waiting
Broadcasting message: {"messageType":"state","currentState":"connected","numPlayers":1}
Received Message: paused
Broadcasting message: {"messageType":"state","currentState":"paused","numPlayers":1}
Received Message: initiated
Broadcasting message: {"messageType":"state","currentState":"initiated","numPlayers":1}
Sun Aug 16 2020 13:40:55 GMT+0000 (UTC) Peer ::ffff:77.99.68.127 disconnected.Connection dropped by remote peer.
Broadcasting message: {"messageType":"update","currentState":null,"numPlayers":0}
Connecting to ws://snake.city
New web server request: http://snake.city
Sun Aug 16 2020 13:41:04 GMT+0000 (UTC) Connection from origin http://snake.city
Sun Aug 16 2020 13:41:04 GMT+0000 (UTC) Connection accepted given id = 4c9d579b-73f8-4895-8f4e-8790d074eaa9
Broadcasting message: {"messageType":"update","currentState":null,"numPlayers":1}
Sun Aug 16 2020 13:41:05 GMT+0000 (UTC) Peer ::ffff:77.99.68.127 disconnected.Connection dropped by remote peer.
Broadcasting message: {"messageType":"update","currentState":null,"numPlayers":0}
Connecting to ws://snake.city
New web server request: http://snake.city
Sun Aug 16 2020 13:41:07 GMT+0000 (UTC) Connection from origin http://snake.city
Sun Aug 16 2020 13:41:07 GMT+0000 (UTC) Connection accepted given id = 3fa06051-e73d-453e-9488-85947b129037
Broadcasting message: {"messageType":"update","currentState":null,"numPlayers":1}
Sun Aug 16 2020 13:41:08 GMT+0000 (UTC) Peer ::ffff:77.99.68.127 disconnected.Connection dropped by remote peer.
Broadcasting message: {"messageType":"update","currentState":null,"numPlayers":0}
```

Figure 3. Debug prints from the server

To look at what your program is doing at the client side we can use Google Chrome as our web browser. There are several different ways Chrome can help you debug your code. You can read about those here. In the following screenshot, F12 was used to open the console and we can see debug messages sent from the server.



```
Connected to server                                                                      connect.js:5
Received from server: {"messageType":"update","currentState":null,"numPlayers":1}        game.js:167
People info: 1                                                                           game.js:183
```

Figure 4. Console Log