3D Mall/Airport/Cruiseship Directory

In movie Star Wars, robot R2-D2 showed Jedi the 3D path to the top of the battle space ship to rescue Senator Palpatine. In this website app, we did the same thing. If you give R2-D2 a browser and add the store name into the URL (e.g.

http://mysite.com?search=201), R2-D2 will show you the path to the store in a browser! If R2-D2 can search according to your words like Siri, then R2-D2 can automatically create a URL (e.g. http://mysite.com?search=201) and show you the path in a browser. If possible, it could be integrated with car and airplane's driving assistant system. Google map and Bing map could also use this technology to add an earth 3D model feature to show airports and malls 3D directions. Many new customers of airports and malls need this kind of directions before they arrive at airports and malls.

This 3D Mall/Airport/Cruiseship Directory Website is for customers to find their way to the expected store in a multi-floor building. Blender is used to create the 3D model of the mall. Three.js is used to move the 3D model.

It can be easily integrated into your existing website. It used html, jQuery, Blender and Three.js. So it can be easily added to a PHP/C#/Java/Python/Node.js/Wordpress website and any other websites.

It's a responsive website. You can access the website from your cellphone and get a great look of the web page.

You need to create your own mall/building/cruiseship's 3D model using Blender or other software. If you need us to make the 3D model for you, make a comment including your email address and/or phone number. Then we will get an email about your message. Thanks.

The store name and label content are saved in the data.json file. You can change these values accordingly.

You need a web server such as IIS, Apache for the 3D model to work. If you use Mac, please visit this URL to learn how to set up a web server: https://www.lifewire.com/use-your-mac-to-share-web-site-2260400

The preview does not enable most important features. Since it's written in javascript, if I enable most important features in the preview/demo, then you do not need to buy it. Do you know what I mean?

Youtube video: https://www.youtube.com/watch?v=TTMunw4DIRg&feature=youtu.be

Demo: https://threejsdirection.herokuapp.com/

Put your search string into the URL: https://threejsdirection.herokuapp.com/?search=107

Documentation page: https://threejsdirectiondocumentation.herokuapp.com

This website is responsive design. You can use it from your cellphone, iPad, Notepad. Then the layout will change accordingly. For example, here is an example for cellphone:



How to use this system to create your 3D direction project:

You need to create javascript files for each 3D model object. Here is how to do that:

1. This is done using a free software called blender. If you do not know how to create a 3D model using blender, just google and you will find lots of tutorial video. It's easy to learn. To assist you in this learning process, I have included the blender model I have created for this mall. It's in the root folder, mall.blend. Open this file in blender, you will find the file.

Then, you click one part of the model and it will show as yellow lines (see below screen shot). In the blender menu, click "File", then click "Export", then click "Wavefront (.obj)" to export the selected part. Attached is the screenshot about how to export a part as an obj file:



After you get the .obj file, you need to convert it to Three.js JSON format using obj2three.js. You can get this js file and related project files in these URLs. You need the whole project to use this obj2three.js file. Here are the URL links: http://cs.uef.fi/~radum/lamad/demos/lamadEarth/three.js-dev/utils/converters/ https://git.ucsc.edu/jlao3/CMPM163Labs/-/tree/3a82933291c281975bad302e87702fadadf3f210/three.jsmaster/utils/converters If you cannot find the obj2three.js file from these 2 URL links, just google "converter obj2three.js" and you will find one. Just try to download the whole free project into your local computer hard drive. Then go to this obj2three.js file's location (You also need to download node.js. Google node.js if you do not know how to download node.js):

cd C:\xxx\xxx\utils\converters

node obj2three.js my3dobject.obj

Then you will get a JSON file. This file is located at cd C:\xxx\xxx\utils\converters. Rename the file to .js file. And save it to a specific folder. For example, you get a mytest.json file, rename it to mytest.js. Then save it to a folder like G:\project\xxx\obj\rooms

- 2. You need a web server to set up the website. And then you can read the data.json file from the file system to your project using javascript. If your web server is **NOT** set up, set up the web server:
 - a. Use Windows IIS as the web server: 2.1.1 Enable IIS: https://msdn.microsoft.com/en-us/library/ms181052(v=vs.80).aspx
 - 1. In Windows, access the Control Panel and click Add or Remove Programs.
 - 2. In the Add or Remove Programs window, click Add/Remove Windows Components.
 - 3. Select the Internet Information Services (IIS) check box, click Next, then click Finish.
 - 4. To learn how to use IIS, you can view the documentation at http://localhost/iishelp/iis/misc/default.asp.
 - 2.1.2 Configure IIS
 - 1. Right-click the My Computer icon on your server computer desktop, and then click Manage.
 - 2. In the Computer Management dialog box, open the Services and Applications node.
 - 3. Click Internet Information Services, and then click Web Sites.
 - 4. Right-click the Default Web Site node to start it, if it is not started already.

5. If a secure Internet connection is required, set up Secure Sockets Layer (SSL). For more information, see



https://msdn.microsoft.com/en-us/library/ms181053(v=vs.80).aspx

2.1.3 Create a website:

In IIS left panel, right click "Sites", choose "Add Website...". For example, we want the website name as "threed". Then create the website like the screenshot below:

Add Website	?	×
Site name: Application pool: threed Select		
Content Directory <u>Physical path:</u> G:\project\threed `\public Pass-through authentication Use your own file path		
Lonnect as Test Settings Binding		
Host name: localhost Example: www.tontoso.com or marketing.contoso.com		
✓ Start Website immediately		
ОК	Cancel	

If you don't know how to set up this, please ask a network administrator for details. For example, if you want to host multiple IIS websites on your local server, you may check out this website: <u>https://www.mojoportal.com/adding-a-host-name-to-the-hosts-file-for-local-</u>

testing

2.1.4 Setting "Default Document" and "Handler Mappings"

In IIS left panel, double click your website "threed", then in the middle panel, double click "default document". Make sure index.html is at the top.

2.1.5 In IIS left panel, right click the website "threed" you just created. Then right click, choose "Manage website", then "restart". Then in IIS left panel, right click the website "threed" you just created. Then right click, choose "Manage website", then "browse". Your website homepage should appear in the browser.

2.1.6 Before checking with DNS servers your machine will look in its hosts file for a mapping for the host name.

On Windows the hosts file exists at C:\Windows\system32\drivers\etc folder.

The file is named hosts and it has no file extension but it is just a text file. To edit it, you need to right click on Notepad and choose "Run as Administrator", then browse to C:\Windows\system32\drivers\etc

For example, a hosts file may look like this:

```
hosts - Notepad
File Edit Format View Help
# Copyright (c) 1993-2009 Microsoft Corp.
#
# This is a sample HOSTS file used by Microsoft TCP/IP for Windows.
#
# This file contains the mappings of IP addresses to host names. Each
# entry should be kept on an individual line. The IP address should
# be placed in the first column followed by the corresponding host name.
# The IP address and the host name should be separated by at least one
# space.
#
# Additionally, comments (such as these) may be inserted on individual
  lines or following the machine name denoted by a '#' symbol.
#
#
#
 For example:
#
#
        102.54.94.97
                             rhino.acme.com
                                                          # source server
#
         38.25.63.10
                             x.acme.com
                                                          # x client host
  localhost name resolution is handled within DNS itself.
#
                             localhost
#
         127.0.0.1
#
                             localhost
          ::1
127.0.0.1
                   mojonet35
127.0.0.1
                   mojosite
172.16.0.40
                   vm
127.0.0.1
                   mojo2
127.0.0.1
                   mojo3
127.0.0.1
                   mojoclassic
127.0.0.1
                   deploy40
127.0.0.1
                   deploy35
127.0.0.1 mojotest1
```

b. Use Apache as the web server.

You can use Apache server for this web application in any operating systems: Windows, Mac, Unix and Linux.

If you are using Windows operating system, you can download Apache server from <u>https://httpd.apache.org/</u>. Google "windows apache install", then you will get a lot of examples. For example, <u>https://docs.moodle.org/35/en/Manual_install_on_Windows_7_with_Apache_and_MySQL</u>

If you are using Linux or Mac, Google it, then you will get examples. For example,

https://www.digitalocean.com/community/tutorials/how-to-install-the-apacheweb-server-on-ubuntu-16-04 https://www.digitalocean.com/community/tutorials/how-to-install-linuxapache-mysgl-php-lamp-stack-on-ubuntu-16-04

3. Now your website should look like this:



- 4. Use this website as your template to create your own 3D directory project. Go to data folder to open data.json file. Try to understand the structure of this project. Javascript files are all located at obj folder. And there is another javascript for interaction. It's located at js folder, then src foler, new.js file. To play with these files, you can just replace one or two javascript files from obj folder with your own js file and see what will happen. Most of the time it will show your 3D model onto the webpage. It's fun playing with it.
- 5. If you have any questions, please go to the website where you bought this product and add a comment to it.