

Download from : https://github.com/wara-ps/Streaming_Map_Demo

SceneBuilder

This is a short guide to instal and run Scenebuilder and its client. SceneBuilder is used to make 3D files that is used for streaming 3D data.

Instal Nvidia driver

Start with downloading and install the Nvidia driver 32-bit NVIDIA_Texture_Tools_2.08.0601.1625
https://developer.nvidia.com/sites/default/files/akamai/tools/files/NVIDIA_Texture_Tools_2.08.0601.1625.exe

Use default settings during the instalation.

SceneBuilderClient

Copy all files from ../SceneBuilderClient/ to a sepearte folder on the computer.
Some settings need to be changed. Start with setting the tcp adress and number of cores to use on the computer. To find the right tcp adress open up a command promt and run “*ipconfig*” in windows.

Use the IPv4 Adress from “*Ethernet adapter vEthernet (Default Switch):*” not “*Ethernet adapter Ethernet:*”

Ethernet adapter vEthernet (Default Switch):

```
Connection-specific DNS Suffix . :  
Link-local IPv6 Address . . . . . : fe80::2904:546a:c090:118b%21  
IPv4 Address. . . . . : 192.168.40.97  
Subnet Mask . . . . . : 255.255.255.240  
Default Gateway . . . . . :
```

Open up the file SceneBuilderClient.xml and adjust the tcp settings for the client and also it is possbile to change numbers of cores to use.

```
<connection>  
  <authorized>  
    <!-- Add all authorized connection urls here -->  
    <url>tcp:192.168.40.97:7799?blocking=no</url>  
    <url>tcp:10.23.24.43:7799?blocking=no</url>  
  </authorized>  
  
  <capabilities>  
    <!-- number of active allocated cores (threads in parallel) -->  
    <workers>4</workers>  
  </capabilities>
```

Save the file and then you can start the SceneBuilderClient by open up a command prompt with administrator rights in the same folder as the program.

First run - **SceneBuilderClient64.exe -reg**

Then to start the service - **net start SceneBuilderClient**

To stop the service - **net stop SceneBuilderClient**

SceneBuilder

Copy all files from ../SceneBuilder/ to a separate folder on your computer.

Open up the SceneBuilder.xml file and change 10.23.24.50 to 127.0.0.1. Save the file.

```
<communication>
  <url>udp::65432?blocking=no&nic=127.0.0.1</url>
  <!--<url>udp::65432?blocking=no&nic=10.23.24.43</url>-->
</communication>
```

To start and use SceneBuilder start a command prompt in the same folder as the programs exe file. To use "SceneBuilder.exe" before each command to use the program.

An example

Below is an example to run 3D data from Vricon into dds format. All text in Bold are commands to run and the other is the messages out. Make sure that the data is located in a search path without any space.

-module Utility -func probe S:\Build_Maps\Sweden\vastervik\vricon_3d_surface_model_collada\data

GizmoSDK::

```
{
  "probe_result":
  {
    "score": 25,
    "type": "COMPRESSED"
  },
  "transforms": [
    {
      "parameters":
      {
        "source": "str",
        "destination": "str"
      },
      "module": "Utility",
      "func": "extract",
      "type": "*",
      "description": "Extract compressed data"
    }
  ]
}
```

-module Utility -func extract S:\Build_Maps\Sweden\vastervik\vricon_3d_surface_model_collada\data S:\Build_Maps\Sweden\vastervik\vricon_3d_surface_model_collada\extracted

-module Utility -func probe S:\Build_Maps\Sweden\vastervik\vricon_3d_surface_model_collada\extracted

GizmoSDK::

```
{
  "probe_result":
  {
    "top": "0/0/0_0_0/0_0_0",
    "score": 100,
    "type": "VRICON-3D-USE-DDS",
    "info":
    {
      "DbI-Database Origin": "33N X6402825.000 Y594575.000 H56.000",
      "DbI-SZ": "[-6301,-53,-4902,6301,53,4902]",
      "DbI-MeterScale": 1,
      "DbI-CoordSystem": "WGS84:UTM33N,ELLIPSOID"
    }
  },
  "transforms": [
    {
      "parameters":
      {
        "source": "str",
        "destination": "str",
        "rebuild": "bool:{false}",
        "min_size": "int:{0}:[0-]"
      },
      "module": "Image",
      "func": "convertDDS",
      "type": "VRICON-3D",
      "description": "Convert Vricon3D images to .dds format"
    }
  ]
}
```

-module Image -func convertDDS S:\Build_Maps\Sweden\vastervik\vricon_3d_surface_model_collada\extracted S:\Build_Maps\Sweden\vastervik\vricon_3d_surface_model_collada\dds -monitor

-module Utility -func probe S:\Build_Maps\Sweden\vastervik\vricon_3d_surface_model_collada\dds

GizmoSDK::

```
{
  "probe_result":
  {
    "top": "0/0/0_0_0/0_0_0",
    "score": 100,
    "type": "VRICON-3D",
    "info":
    {
      "DbI-Database Origin": "33N X6402825.000 Y594575.000 H56.000",
      "DbI-SZ": "[-6301,-53,-4902,6301,53,4902]",
      "DbI-MeterScale": 1,
      "DbI-CoordSystem": "WGS84:UTM33N,ELLIPSOID"
    }
  },
}
```

```

"transforms": [
  {
    "parameters":
    {
      "dds": "bool:{no}",
      "offset_y_out": "int:{56}",
      "offset_x_out": "int:{594575}",
      "offset_z_out": "int:{-6402825}",
      "etc2": "bool:{no}",
      "source": "str",
      "destination": "str",
      "rebuild": "bool:{no}",
      "cs_out": "str:{WGS84:UTM33N,ELLIPSOID}",
      "quality": "int:{0-100:40}",
      "gen_mipmaps": "bool:{no}"
    },
    "module": "Vricon",
    "func": "convert",
    "type": "GZ-RES",
    "description": "Convert Vricon3D format to Gizmo3D format"
  }
]
}

```

-module Vricon -func convert -cs_out WGS84:UTM33N,ELLIPSOID -offset_x_out 594575 -offset_y_out 56 -offset_z_out -6402825 S:\Build_Maps\Sweden\vastervik\vricon_3d_surface_model_collada\dds S:\Build_Maps\Sweden\vastervik\vricon_3d_surface_model_collada\processed -dds -monitor -rebuild

-module Utility -func probe S:\Build_Maps\Sweden\vastervik\vricon_3d_surface_model_collada\processed

GizmoSDK::

```

{
  "probe_result":
  {
    "top": "0/0/0_0_0/0_0_0",
    "score": 80,
    "type": "GZ-RES",
    "info":
    {
      "DbI-Database Origin": "33N X6402825.000 Y594575.000 H56.000",
      "DbI-CreationTime": "2020-06-04 12:13:48",
      "DbI-LR": 4194304,
      "DbI-SZ": "[-6301.783203125,-29.5755958557129,-
4901.61083984375,6301.94140625,40.6904945373535,4902.296875]",
      "DbI-MeterScale": 1,
      "DbI-Type": "gzd",
      "DbI-CoordSystem": "WGS84:UTM33N,ELLIPSOID",
      "DbI-Version": "2.16.0"
    }
  },
  "transforms": [
    {

```

```

        "parameters":
        {
            "source":    "str"
        },
        "module":    "DB",
        "func": "build",
        "type": "GZ-MAP",
        "description": "Build Gizmo3D map"
    }
}

```

-module DB -func build S:\Build_Maps\Sweden\vastervik\vricon_3d_surface_model_collada\processed -monitor

Built database with max lod 4194304 and with extent (-6301.8095703125,-52.7706146240234,-4901.6201171875)- (6301.94140625,53.7452697753906,4902.296875)

Date:2020-06-04 14:22:47
 MaxLOD:4194304
 Size:(-6301.8095703125,-52.7706146240234,-4901.6201171875)-
 (6301.94140625,53.7452697753906,4902.296875)
 Origin:33N X6402825.000 Y594575.000 H56.000
 CoordSys:WGS84:UTM33N,ELLIPSOID
 Projection:UTM
 Meter Scale:1
 Author:AMO
 Comment:Only for Demo Purposes and Development
 Builder:2.16.0
 GizmoSDK:2.10.6
 GZD:15

-module Utility -func probe S:\Build_Maps\Sweden\vastervik\vricon_3d_surface_model_collada\processed

GizmoSDK::

```

{
    "probe_result":
    {
        "score":    100,
        "type": "GZ-MAP",
        "info":
        {
            "Text Comment": "Only for Demo Purposes and Development",
            "DbI-Database Origin": "33N X6402825.000 Y594575.000 H56.000",
            "DbI-CreationTime":    "2020-06-04 12:22:47",
            "DbI-LR":    4194304,
            "DbI-SZ":    "[-6301.8095703125,-52.7706146240234,-
4901.6201171875,6301.94140625,53.7452697753906,4902.296875]",
            "DbI-Projection":    "UTM",
            "DbI-Ellipsoid":    "WGS 1984",
            "DbI-MeterScale":    1,
            "DbI-Type":    "gzd",

```

```
        "DbI-Author": "AMO",  
        "DbI-CoordSystem": "WGS84:UTM33N,ELLIPSOID",  
        "DbI-Version": "2.16.0"  
    }  
}
```

CombitechPlotViz

When running the commands for SceneBuilder it is possible with the help of CombitechPlotviz to view status of the jobs. CombitechPlotviz is located in folder ../Utilites/PlotViz