Cityscape

Generator..

And additional tools

This product comes with 3 scripts :

1. one to generate a cityscape,

2. the other one allowing to add human beings in front of a selection of elements,

3. and the final one to define whether or not the instances are visible in the Preview Mode of the viewport.

A Few Words About The render Engines :

The Scripts tools are the same whether you are using 3Delight or Iray. By default, the scripts are set up to load Iray Props (Tool 1 and Tool 2).

If you are working with 3Delight, you have one checkbox to check by script. In the case of the Cityscape Generator itself, this is the third box after "Create First Street(s)" Button, located in the Create Streets page.

To be clear, this button will not magically turn your the existing props in your scene in 3Delight props. It will tell the script, when it loads new props, to load 3Delight props instead of Iray ones.
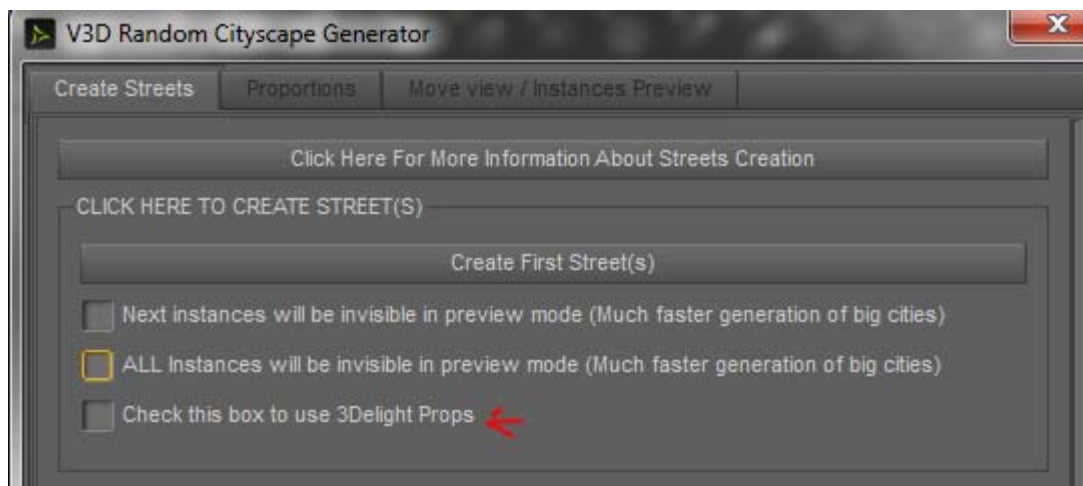
How To choose to work with 3Delight props (Tool 1 : Cityscape Generator script)

For the script adding human Props in front of selected elements, you have the same button which is the last of the interface.
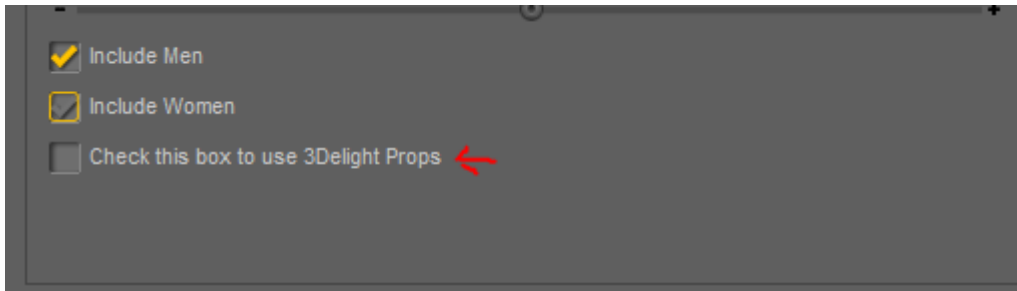
*How To choose to work with 3Delight props (Tool 2 : Add Human Script)*

1. TOOL 1 : Cityscape Generator

The cityscape Generator will help you to create 90% or more of your cityscape using the houses of the product Medina Cityscape Generator.

1.1. Cityscape Generator : The basics :

The interface is divided in 3 tabs :
- Create Streets, where you can define the characteristics of the streets to create in term of number of street, of elements per streets, scale, alignment, location and visibility of instances in the viewport.

- Proportions, where you can define the proportion of the different buildings you want to use to create the next set of street.

- Move view / Instances Preview, where you can rotate a camera around the city, change the distance of this camera, eventually see specific angles using your own cameras placed in the scene, change the Draw Style in the viewport, and hide and show some instances in the viewport (they will remain visible in the render).
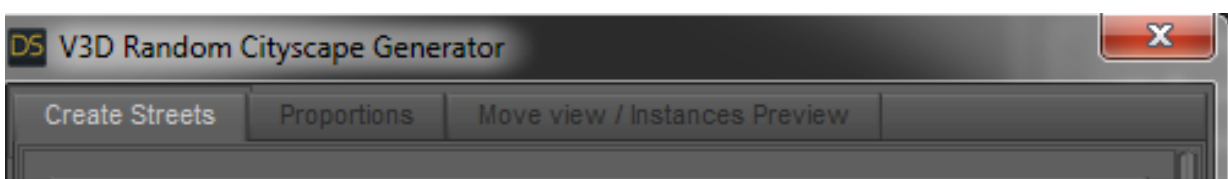

The 3 tabs of the cityscape Generator

A Few Words About Growing Streets :

By one "Street", I describe an alignment of N houses along the X axis.

You can create the cityscape street by street or group of streets by group of streets, by clicking on the "Create First Street(s)" button (which will then turn into a "Create Next Street(s)" button). This will create a new amount of streets each time you click it. All the rest of this tab of the interface will help you to define the type of street and repartition you want.
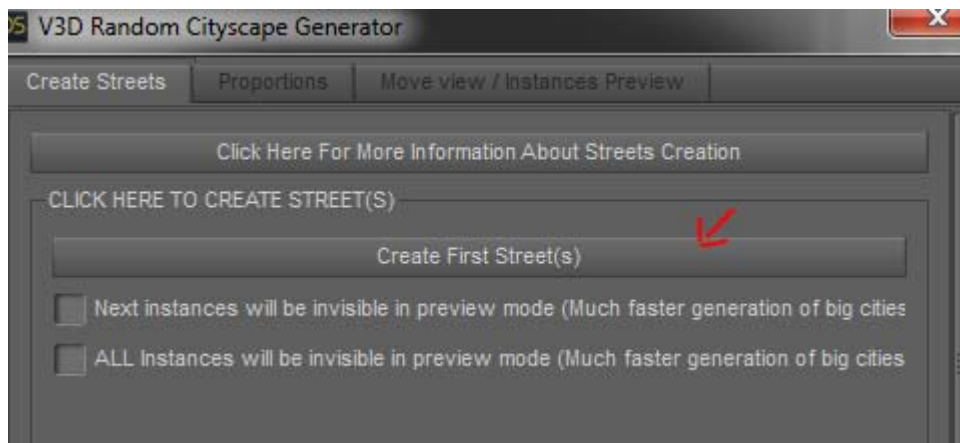
The "Create Streets" Button

You can use this button "Create First Street(s)" several times, and change - or not - the settings for the street generation each time before clicking this button. This means that you can create for instance 10 streets with given street parameters (spatial repartition and various proportions of buildings), and then you can if you want change some parameters and create 5 new streets with another set of parameters. The number of streets created each time you press this button is defined by the "Number Of Street To Create" dial, and the number of elements per street (houses, trees, souk, minaret, garden) is defined by the "Number of Elements To Load In Next Streets" dial.

Unless you change the initial Street Location in the interface box using the " Street Location" name, the cityscape will start in the 0,0,0 location. ==Then, the city will grow in the X positive and Z positive direction.==

The best way to use this product is to create the city first, to adjust it if necessary, and then to place it where you want in your scene. If you use a terrain, remember that unless otherwise specified, the "corner of the city" is at the 0 of the scene and the city grows in X and Z positive direction, so please, place the terrain subsequently. Once the city is created on this terrain, you can parent all the streets to the terrain and move the terrain to the exact position and angle you want it in the rest of your scene. Of course you can proceed differently, but my feeling is that it is the most efficient way to proceed.

In order to drop the city on a terrain during the creation process, a terrain must be named in the scene "Cityscape Terrain", and the script will then check if some terrain parts are underneath the created buildings. If it is the case the elements of the streets will be dropped (or raised) on the terrain with an Y margin depending on the "Offset Distance with Cityscape Terrain" dial.

One important note about Cityscape Terrains :

The resolution of the terrain must be low enough so that the process consisting in dropping houses on the terrain does not become too long. 200 000 polys is the maximum size tolerated by the script, and corresponds to a 1 minute drop procedure per element (on my computer). Above this limit, the script will warn you that it will not drop the elements on the terrain. The lower the resolution will be, the faster the "drop" procedure will go.

This product includes 4 terrains : the Desert Cityscape Main Terrain is for rendering purposes, and is the only one visible in the scene. As children of the main terrain you will find 4 hidden low resolution terrain. Two of them (Cityscape Terrain and Cityscape Vert Low Res Terrain, are the central part of the Main terrain, but in lower resolution. The use of the low resolution terrain is a bit slower, but also a bit more precise in term of height of elements in the scene than the use of the **very** low resolution one. I personally use the very low resolution terrain. If you need to use the full Terrain in low resolution and not only the center part, you have to select with "Cityscape Terrain Full Version". If you want only to use something larger than the initial low resolution terrain in the Z dimension, use "Citycape Terrain Larger

Version". You have a dropdown Menu to change the drop terrain at the bottom of the tab "Create Street" of the interface.

You are not forced to use this terrain. The script will search for any node named "Cityscape Terrain" located above or underneath the elements of a street.

If you don't use the terrain provided, and if in this case, the terrain you are using is too heavy, you can, in less than 2 minutes create a low resolution version of it, which will be set as invisible in the scene, and will be here just for "drop purposes", and name it with the terrain name you are going to pick up in the dropdown menu.

Creating a low resolution terrain yourself:

In order to do so on a terrain which would be too high resolution, load only your terrain, and nothing else in a Daz Studio scene. Then export it as a wavefront ".obj" with the default "Poser" settings options at export (this is a matter of size, remember to use the same options when loading back at the end of the process). Then you have to use the free software "Blender".

In order to import the obj into "Blender", you may have to set up blender user preferences. For this, go in blender, file/user preferences, and in the Addons tab (top), once you choose the import/export sub-tab (left), you will find Wavefront obj (near the end of the list) as a checkable option in the proposed list. Check it and make "Save user settings" bottom left of the window. Now you can import your object in blender, doing file, import, Wavefront (.obj).

Well import the obj you saved, with preferentially the keep vertex order option checked bottom left, and select the new object, by right clicking it with your mouse. Then in the right tab (the one at the bottom, not the scene tab of the top), you will see a wrench image amongst many others. This will allow to add a modifier to your object, so click on the wrench the click on "Add Modifier" and choose "Decimate". Then you can try the collapse or unsubdivide option, each one you will see the total final face count displayed. Once you are happy just press "Apply", and make "file/export" Wavefront obj. Now you have a low resolution obj version that you can reload in Daz Studio and use as a low resolution drop terrain (make it invisible, and keep the high resolution version visible for rendering).

Using the Cityscape with the Medina and the terrain provided :

If you want to use the cityscape with the Medina product, here is how to proceed :

1. Load the terrain and create the cityscape. Eventually already add human elements if necessary.

2. Group all the streets and the human elements : select them all, make create / new group, with the option parent elements to the group.

3. Then parent the group including the human and the city to the terrain, it will be easier to move them all together if you want to change their placement.

3. Load the Ksaar prop of this product. This is here to allow a strong altitude variation between the terrain and the medina for better images.

4. Select the terrain and move it until you have a nice panorama, or choose one of the proposed poses for the terrain in this product. DO NOT APPLY THE POSES BEFORE THE CITY IS GENERATED.

!!! Tip to finish an incomplete cityscape

In order to finish an incomplete cityscape, a simple way is to parent the streets already created to the terrain, and then to translate the terrain in X and Z so that the "0" of the scene on the terrain is located where the first house of the "missing" city is supposed to be created. Take care yet not to go out of the default cityscape terrains used for drop. If it is the case, use the low resolution of the full terrain (see terrain part of this document.)

1.1. Cityscape Generator : Street Creation :

The elements in the scene will mainly be instances. When you use this script, the props are loaded only once, and then when the same element is supposed to be loaded in a street, an instance of the element is created instead.

One important thing to note is *that if you close the script, and then you open it again, all the props will be randomly loaded once again* and then instances will be used for the loaded props. We decided to let them visible so that after you close the script, you are able to move away from camera individually the houses or full streets for the eventual final adjustments you would like to do to your cityscape. You have an option

to have them invisible in the viewport while generating the street. This allows faster generation. You can define each time you press "Create Next Street(s)" button if you want the next instances created to be visible in the viewport or not. This is a checkbox at the bottom of the "Create Street" tab.

The way this script works is the following one. Each time you will click on the "Create First (Next) Street(s)" Button :

1.a. Ns times, Ne elements of the product "Product Name" are randomly loaded in the scene. Ns is defined by the "Number of Streets to Create" dial. Ne is defined by the Number Of Elements To Load In Next Street" first dial of the interface. If a house has already been loaded previously by this script - and if you have not closed it in the meantime -, then an instance of this specific house is created instead. The instances are visible and can be selected once the script is closed so that you can move them individually at the end.

Scene with 3 Streets of 12 elements. 3 streets are aligned along the Z (front to back in this image) axis. There are for each street, 12 elements aligned along the X (right to left in this image) axis.
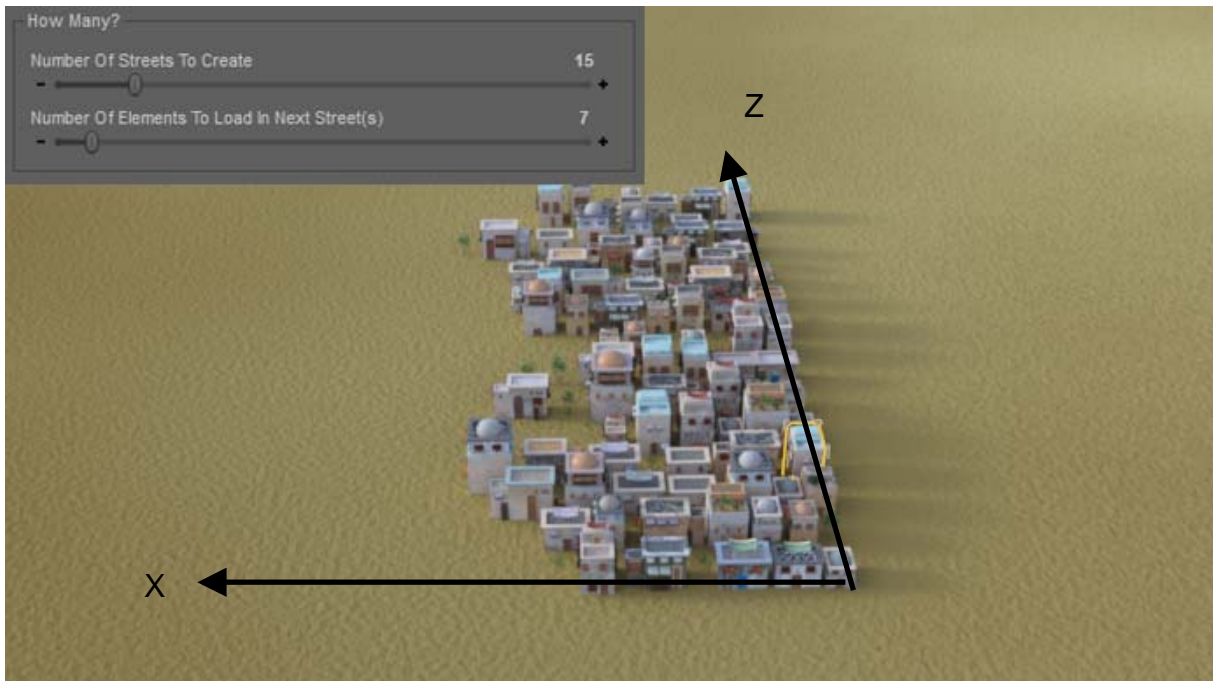
Scene with <mark>15 Streets of 7 Elements</mark> (for the one who count, small elements, trees, are almost not visible here). 15 streets are aligned along the Z (front to back in this image) axis. There are for each street, 7 elements aligned along the X (right to left in this image) axis.

1.b. You can define if you want to make the next instances create invisible in the viewport and eventually if you want to hide all the instances in the preview. In this second case, the script will browse all the elements of the scene with "Instance" in their name and will set them not visible in the viewport, visible in the render. You can at any time make them visible again using the "Show instances" button located in the third tab.

2. Ns times, these Ne house are aligned along the X axis (in the positive direction - please use positive numbers). The distance between the bounding boxes (borders) of these houses is defined by the "Distance Between Elements Bounding Boxes (cm)" dial which is the exact distance you will have in the X positive direction between two successive bounding boxes if the "Percentage Of Randomness In Distance Between Elements In The Street" is null...
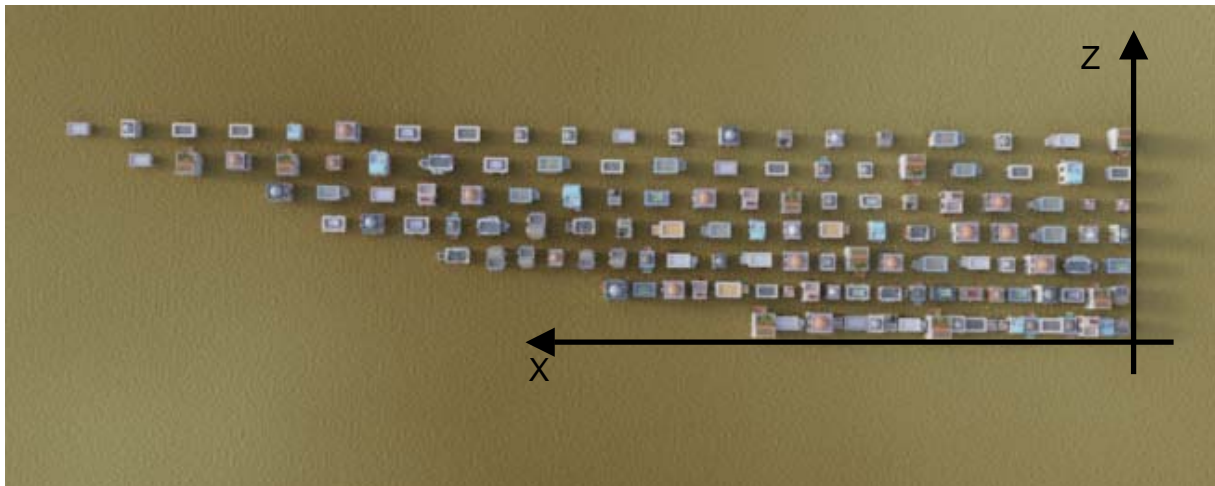
Scene with streets for which the <mark>"Distance Between Elements Bounding Boxes"</mark> *dial has been raised, street after street from 0 (bottom street) to 900 cm (top street) in 150 cm steps.*

3. ...AND this distance can also be modulated by the "Percentage Of Randomness In Distance Between Elements In The Street" dial. This dial will add or subtract a random distance (different for each house, proportional the the Distance Between Houses). For instance, if you define a distance between houses of 200, and a Percentage of Randomness of 50%, then 50% of 200 can be added or subtracted to these 200 to define the distance of the next house.

Scene with streets for which the <mark>"Percentage of Randomness in Distance Between Elements In The Street"</mark> *dial has been raised, street after street from 0 (bottom street) to 100% (top street) in 25% steps. The upper street has a less "organized" look than the lower street.*

It means that at the end you will have a random distance between 100 (200-50% of 200) and 300 (200+50% of 200) for two successive houses. If the percentage of Randomness is 100%, then the distance between two successive houses can vary from 0 to 2 times the "Distance Between Elements Bounding Boxes (cm)" dial value. And of course, if the percentage of Randomness is 0%, then the distance between successive houses is constant.

4. The dial "Random Misalignment Of Front Of Houses (cm - Z direction)" must be used only if you don't want the houses in a street to have there bounding boxes faces perfectly aligned along the X axis. It adds a positive or negative offset in the Z direction for the location of each house of the street. The value used for this offset must in general be lower than 100.

Scene with streets for which the "Random Misalignment Of Houses Bounding Boxes (cm - Z direction)" dial has been raised, street after street from 0 (bottom street) to 450 cm (top street) in 50 cm steps. The upper street has a less "organized" look than the lower street. 100 remains the maximum recommended value so that street do not go to far from each other.

5.a. The location of the first Street - and of each street - will depend on the one of the first house of this street. This location can be entered in the "Street Location (X,Y,Z)" Box with the X, Y, Z coordinates of the first house of this street. The first house will have the X, Y, Z coordinates and the other houses will follow by X translation (with the same Y and Z).

If the option "Automatically Try To Drop Or Raise Houses On Any Object Called "Cityscape Terrain"" is checked, then the Y (vertical axis) location you enter can be overridden by the fact that the houses fall (or raise) on any object called "Cityscape Terrain" which would be located above or bellow the houses loaded.

The "Street Location (X,Y,Z)" dials can also be useful if you closed the script for any reason and want to restart a city where you had stopped it. You have then 2 choices : move the terrain with the previous houses the right place in the scene knowing the new houses will start at 0,0,0, or you can define where you want the city to begin using these dials.

5.b. If a street has already been previously created (and you have not closed the script in the meantime), then the next street (and each new one you will create) will be translated along the Z positive direction in comparison with the previous street, this is why, once the first street has been created, *only* the X Offset and Y Offset (altitude) of the first house of the next street you create will be available in the "Street Location" Box. In order to handle the Z offset (or position) of the next street that you will create, you have to go in the "Define "Z" Distance Of Next Street" Box.

==> The X OFFSET can still be used to define the OFFSET in X of the first house of the next street you will create in comparison with the first house of the previous street. Since it is an offset, it means that if you leave 0 for Xoffset, then the first elements of each street will have the same X coordinate (will be aligned).

==> The Y OFFSET will define the vertical OFFSET (Y positive direction) of the next street in comparison with the previous street created. As already mentioned, this may be overridden if you choose to drop the houses on a city terrain.

6. Once a street has been created, in order to define the distance of the next street to the previous street, well between two successive streets, you have two dials in the "Define "Z" Distance Of Next Street" box. As it is the case for the houses in each

street, this time, the "Distance Between Next And Previous Street" dial will define the distance between the two successive bounding boxes of the streets in the Z positive direction. Please use a positive number here. A distance of 0 means that the Bounding boxes touch each other in the Z direction. If the percentage of randomness is null, then the distance between two successive streets will be constant and will be the one you enter in "Distance Between Next And Previous Street". If the percentage of randomness is not null, the distance will be randomly modulated by n% of the "Distance Between Next And Previous Street" value, n being the value of "Percentage Of Randomness In Distance Between Elements In The Street".

Scene with streets for which the "Distance Between Next Street And Previous Street" dial has been raised. Remember that even with a 0 distance the buildings will probably will not touch each other, because we work here with the bounding boxes of the streets, which are defined by the maximum largeness of the elements.

The last parameter is the "Random Additional X Offset Of First Houses Of Successive Streets". It defines if the successive streets are perfectly aligned, more precisely, it will add an offset in the X direction of the first house of each street. It will prevent you from having a "line" effect on the front of the city. The first houses (and then the whole street) will have a random offset in the X direction comprised between this value and its negative value.
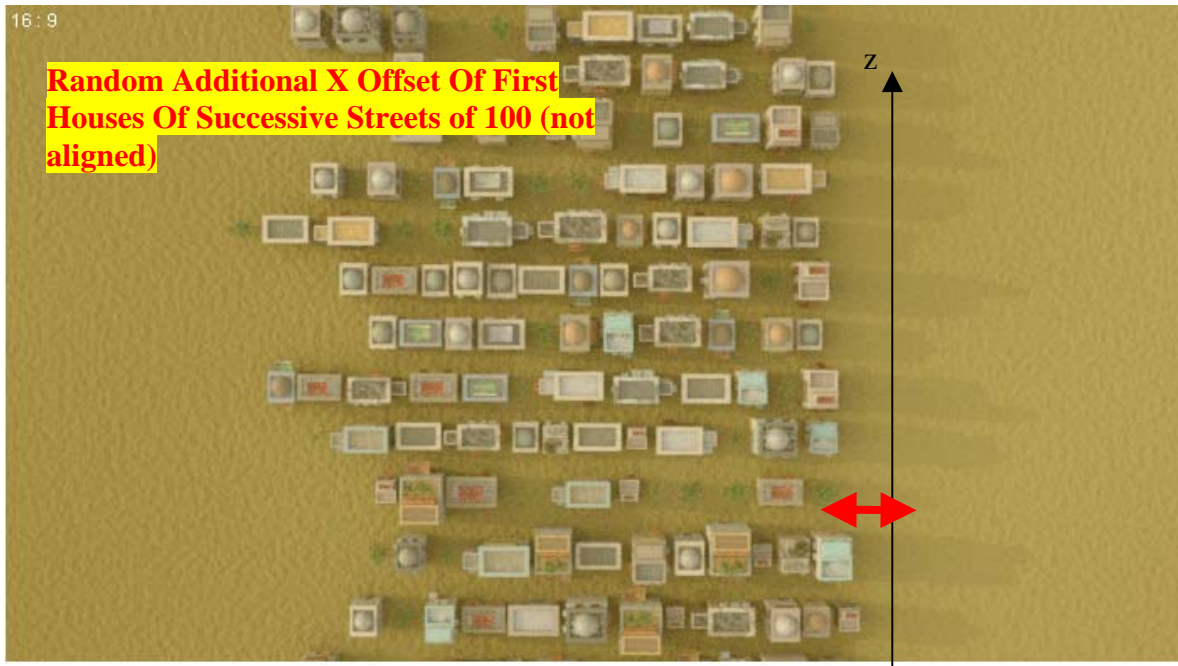
7. The "Altitude Additional Options" allow you to drop houses on a terrain during the creation of the street. In consists in a box you can check in order to drop houses on any object that you would name "Cityscape Terrain" in the scene. If you do so, the script will look for a terrain bellow (or above) each house create, and then will drop (or raise) the houses on it ONLY IF the terrain resolution (number of faces) does not exceed 200 000 faces. If you have a higher resolution terrain, you have to create and load a decimated version of it for this purpose (and you can keep the high resolution

for rendering. The reason for this is that the time to compute the new altitude of each house depends on the terrain resolution. For 200 000 faces, it already one minute per house. This is why this limit has been fixed. A pop up message will inform you if the resolution is higher. It is recommended to use the resolution as low as possible, and the procedure is explained in the first pages of this document.

 In the same box you can find a dial called "Offset Distance With Cityscape Terrain (cm)". This allow you, when you place houses on the terrain, to define the distance you want to place it above (positive dial) or bellow (negative direction) this terrain. If this dial is 0, the script tries to place houses "just on" the terrain, but I remarked that often a small negative value provided better results.

You have two low resolution terrains parented to the Main Terrain for rendering. The one will the lowest resolution will provide faster, but less accurate in term of height results.

8. The "General Tools" are additional options allowing you to frame the "V3D City Camera" on all the houses created using this script (since the script is opened). It means that if previous streets had been created, then you closed the script and opened it again, only the new streets created after you re-opened this script will be framed.

"V3D City Camera" is a camera that you don't need to create, it will be created by this script if it does not already exist in the scene. You can move this camera around the city using the tools you can find in the tab called "Move View".

Progress Bars :

Some progress bars let you know what the city generator is presently doing. You will see a "cancel" button. You can cancel the process at any time, but then the last street which creation was cancelled will probably have to be removed from your scene (not loaded properly or aligned properly or not dropped properly). Yet you are not forced to close the script, you can go on with street creations, but you have to remember that the street you cancelled probably has to be removed.

PLEASE ALSO NOTE : When you close this script interface, then there will be a group in your scene call "Street "i" (can be removed)". As the name said, this group

can be deleted, it was just a tool of the script, which you don't need any more. This script will change the scene Draw Style mode for Texture Shaded in the viewport preview mode. This is because the creation process would otherwise be longer if, for instance, Iray had to refresh the scene.

- Please before rendering huge city in Iray, take care that the instance mode is set to memory instead of speed. You can find this setting in Render Settings.

- The elements you load present their vertical 0 at the right place, even if you might find surprising to have so much "useless" material below their 0. The additional length beneath the Y = 0 is here in order to allow the elements to be placed on slopes, even high slopes, without showing empty space under them.

- If you want to remove an element, either it is an instance, and you can remove it, or it is a parent of an instance, in this case do not remove it, just hide it away from the camera field. Under the terrain for example..

1.2. Cityscape Generator : Proportions :

This part of the Generator will allow you to define the proportion of the various elements you want in your scene. For instance, if you want no vegetation at all, you set the proportion of Garden, Palm and Palm Groups at 0 (then the vegetation will be located only on the roof of a few of the buildings which you can, of course, set to a 0 Proportion to get "completely" rid off vegetation). If you want something less specific in term of architecture, you can set the proportion of the most "specific" buildings to 0, as well as the souks and the minarets to 0.

If you want a lot of smaller houses you can set a strong proportion of buildings of type 1 (1 to 7) and 02 (02-1 to 02-5).

Once the proportions are defined, the script proceeds to a "random" load, each object of a street having a "probability" proportional to the proportion you decided to be loaded. As everything which is statistics, the exact proportions you choose will be more and more respected as the number of objects you load will increase.

Medina Cityscape Generator

The Proportions tab allows fine tuning of the proportions of each elements. A 0 proportion means that the element will never be loaded by the script.

You will find several buttons loading 4 sets of parameters (well 3 sets and the default set). This is to give examples of what can be done, and **I strongly please you to play with the various proportions, this can help you to produce a wide diversity of styles of streets.**

1.3. Cityscape Generator : Move view / Instance preview
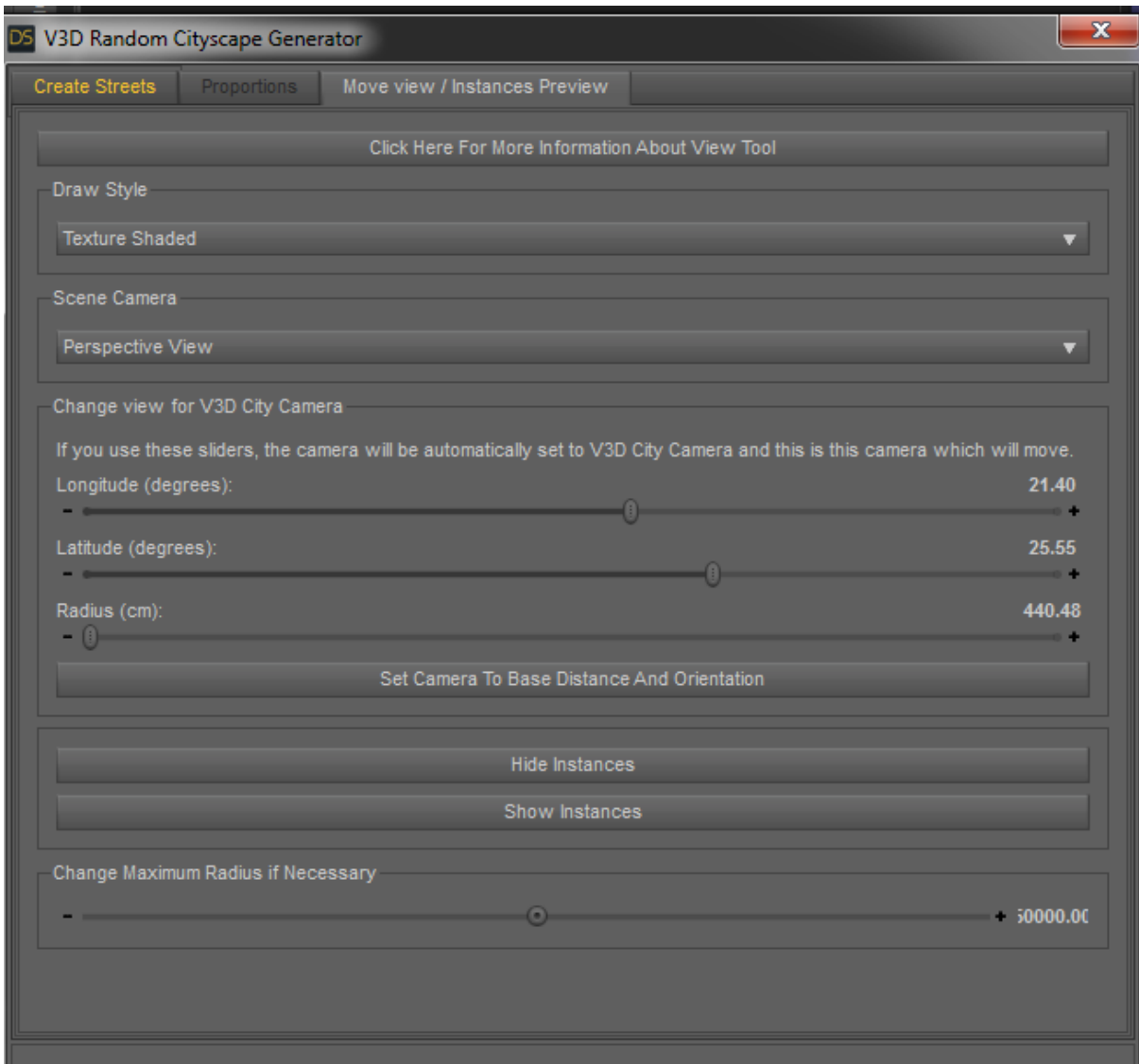
The <mark>Move View tab</mark> is here to allow you to see your city with different angles, cameras, draw styles, with or without instances visible in the preview.

The first box of this tool "Draw Style", will allow you to change the viewport draw style in several styles. Not all of them have been represented but the most important such as Texture Shaded and NVIDIA Iray are provided. When you create a new street the Draw style is automatically set back to Texture Shaded.

The *Scene Camera box* will allow you to swap the view between the various camera present in the scene.

The Change View for V3D City Camera tool allows you to see your city with different angles of view. The "V3D City Camera" camera (automatically created by this script if it does not already exists in your scene) will frame all the houses *added with this script (in this session, meaning that if you created other houses during previous sessions of this script, they will not be framed).*
Each time you use on the Latitude, Longitude, or radius to orbit camera around the city, then the active camera will be set to "V3D City Camera".
- The Longitude dial will rotate the angle of view of the camera around the "right/front/left/back" cube.
- The Latitude dial will rotate the angle of view of the camera from bottom to top view.
" The radius defines the distance of the camera. The maximum of the radius has been set pretty high, but if it is not enough (if you create huge cityscapes), you can change this maximum using the dial in the box "Change Maximum Radius If Necessary."

The two following buttons, "Hide Instances" and "Show Instances" will allow you to hide from preview (in the preview window), all the instances with "Instance" in their names. Hiding the instances will allow you faster movements of camera in the viewport.
Take care : when instances are hidden in the viewport, they are not hidden for the "Nvidia Iray" Draw Style, meaning that if you choose this Draw Style, all instances will be rendered.
Hidden instances are hidden only in the viewport. They will be visible in the renders!

It is also recommended to hide a lot of instances when creating the streets of a big city. Otherwise the refresh of the viewport will increase drastically the time required to create a city. This product comes with a script allowing to select which instances you want to see and hide.

2. TOOL 2 : Add Human
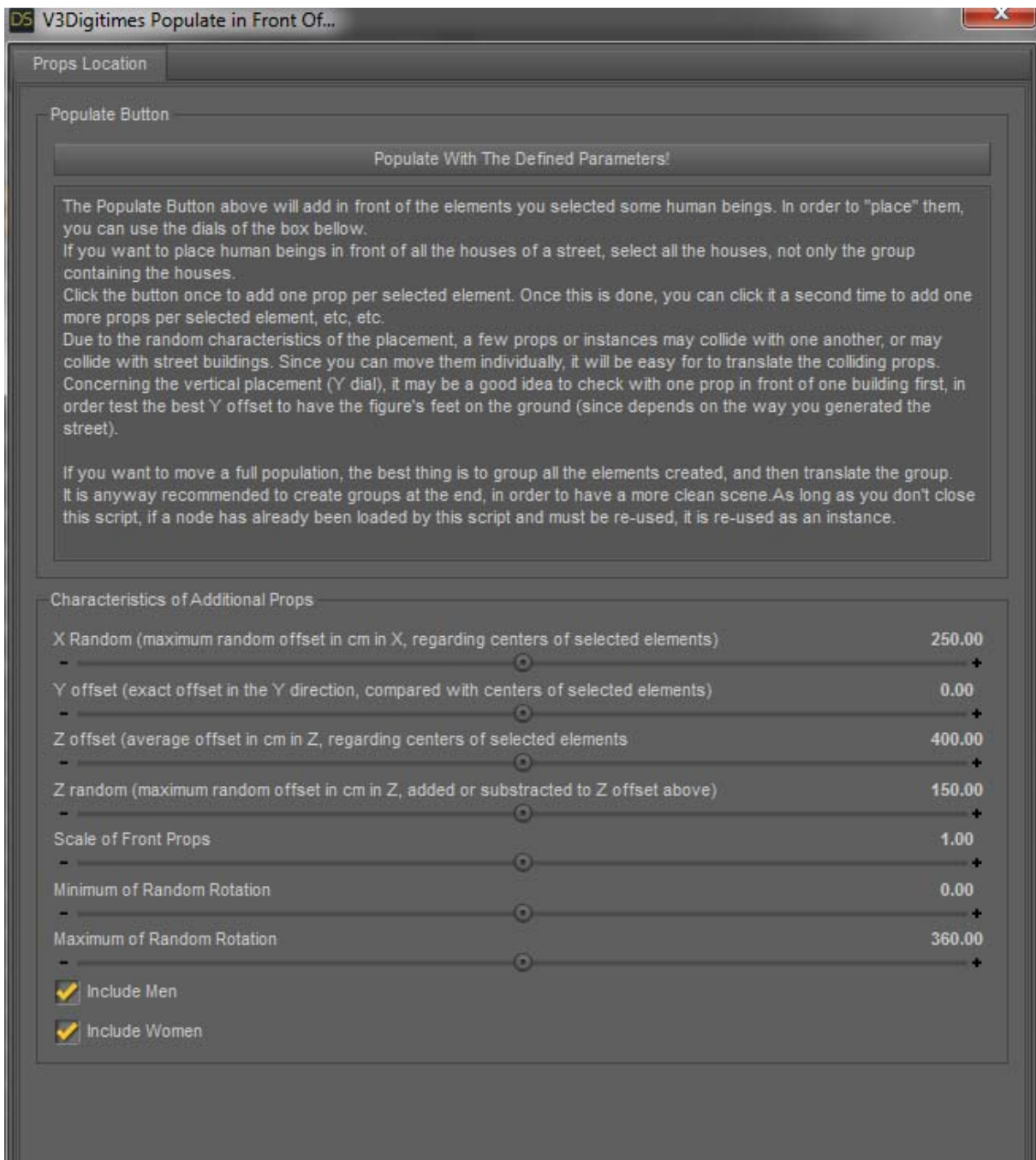
This tool will allow you to add low resolution human beings in front of the selection of elements you make. A element must be selected in the scene if you want the script to work. I will call them the "selected elements".

Each time you will click "Populate with the defined parameters", human props will randomly be selected amongst the ones proposed by the product. If they have already been loaded during this session of the script, an instance of this human prop will be used instead. This means that if you close and reopen the script, then new props will be loaded once again (and then instances will be used instead of them).

For each selected element, the human prop will be placed at a random distance along the X axis, compared with the center of this element, comprised between "-X random" and "X random", "X random" being the value you define using the first dial. This avoids having people placed all in front of the middle of the selected elements.

For each selected element, the human prop will be placed at the exact distance along the Y axis, compared with the center of this element, defined by the Yoffset dial (second dial). This allows you to place them better on the floor. Normally the center of the elements of the streets (unless changed in the city generator interface) are on the ground.

For each selected element, the human prop will be placed at a random distance along the Z axis, compared with the center of this element, comprised between "Zoffset-Z random" and "Z offset + Z random", "Z offset" being the value you define using the third dial, and Z random in the fourth dial. The default values I propose here should correspond pretty well to the streets created by the city generator. Yet you can change them in order to change the average distance of the human props to the houses in the street.

For each loaded human prop, the Scale of front props, the fifth dial, will define the scale used for the human being loaded.

For each loaded human prop, the Y rotation angle of the human prop will be "randomly" comprised between the Minimum rotation and Maximum rotation of front props angles. This allows to give more diversity to your population.

For all these parameters, and especially the height (Y) it is recommended to make tests to be sure that the elements are not placed. You can tests in front of one prop or of all the elements of one street for instance.

Due to the random placement in X and Z of the human props, some of them might collide with each other, or with the buildings of the street. You will have to adjust the placement of these colliding elements yourself (all elements and instances can be moved).

If you see that the human props are too high or too low regarding the terrain, you can select them all, make create/new group, and move he group up or down.

If you want to move all the human props collectively, you have to group them (select them all and make Create/New Group), and them move the group. It might be anyway interesting to create a new group to keep a clean scene tab.

If you want to have more people in the street, do not close the script, simply click again on the Populate Now button.

Take care : it is, unless you make a pure "top view", in general useless to place human props in front of all scene elements. In general the camera angle is such as only 2 or 3 - or a few - streets can have visible human props. Populate only these ones, it would be wiser, or you might have tons and tons of human props at the end, and a scene which is very hard to handle in the viewport.

Any way for a better viewport management, I have created the tool showing or hiding instances. Please use it to hide all instances you would need to hide for a better comfort in the viewport. You can hide them all, then select a few of them in the scene tab, which will be useful to see where you are in the viewport, and then show them again. All this using the Show or Hide instance tool.

3. TOOL 3 : Show or Hide Instances

This Tool is very easy to use and will help you to navigate faster in the viewport once the cityscape is done. If allows to hide from the viewport, or show in the viewport, either all the instances or all the selected instances.

Take care, using NVIDIA Iray Draw style, the result of hiding and showing will not be visible, because the instances will still be rendered. In this case, if you are permanently using NVIDIA IRAY Draw Style, the best you have to do is to group all the streets you want to hide and then hide the group.
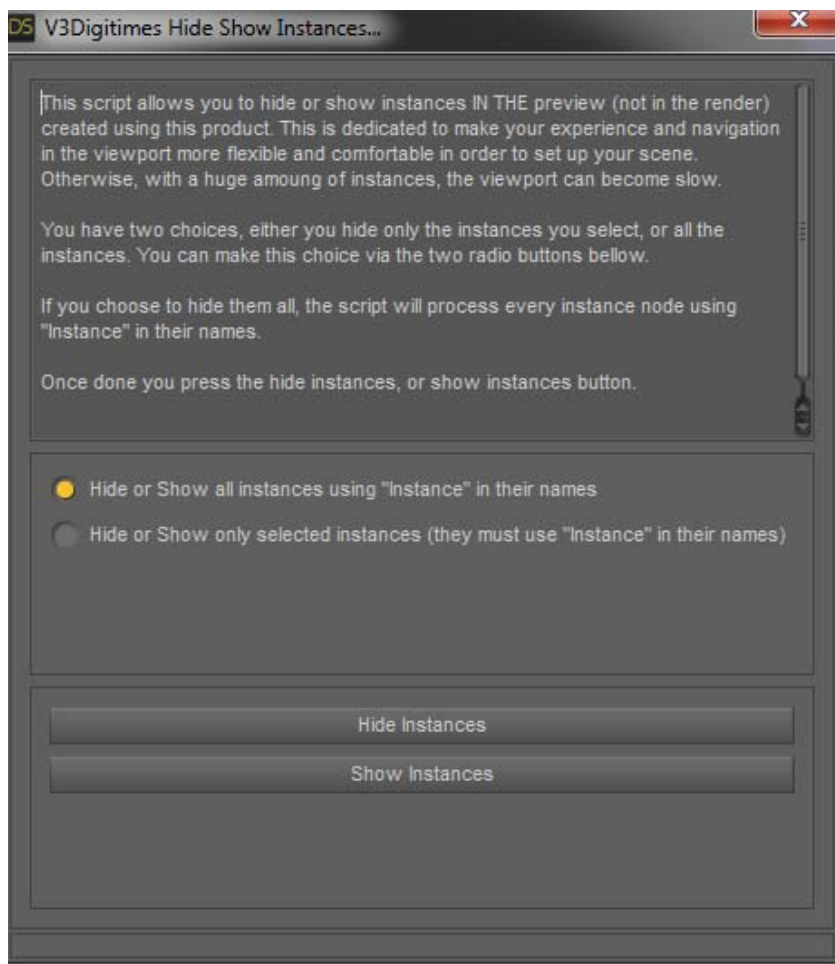
The Hide Show Instances Interface.

In order to use it, either you want to hide or show all instances, in this case, just open the script and click either on the "Hide Instances" button to hide them all, or "Show Instances" button to show them all.

Or you want to make a specific selection of what you want to hide (for instance you want to hide only the human props and the streets from 10 to 20), and then open the interface. In the second box, select the second option ("Hide or Show Only Selected Instances..."), and then click on Hide Instances or Show Instances button.

Remember that only instances with "Instance" in their names will be treated by this script.

The best usage - well my personal one -is to hide all instances. Once done, in the scene tab, select a few instances, and then re-run the script to show only some representative instances.

IMPORTANT REMARK : ONCE AN INSTANCE IS SET AS HIDDEN IN THE VIEWPORT, YOU ARE NOT ABLE TO SELECT IT ANY MORE IN THE VIEWPORT if you are in NVIDIA Iray Draw style. If you want to select it again, you have to make it "visible" again in the viewport using this tool or using the parameters tab.

4. Additional Notes :

4.1. Cameras

There are cameras provided with the cityscape Terrain. Camera number 01 to 10 are better for very big cityscapes, i.e. cityscapes filling almost all the surface of the center of the terrain (defined by the "Cityscape Terrain" hidden node).

Camera with number above 10 are better for smaller cities (around 50 streets of 50 elements).

Due to the size of the scene, the best way to handle camera location is to select the camera in the scene tab, and then to go in the parameters tab in order to move

4.2 Poses

The initial pose of the MAIN terrain provided (the visible big one) is set so that the zero of the scene is located at the bottom left corner of the hidden node "Cityscape Terrain" (smaller terrain of the center, lower resolution for fast drop procedure when generating the streets). This pose allows the maximum space you can fill using the "Cityscape Terrain" low resolution hidden node. Typically you can set 75 streets on this terrain. If you want more streets, you have to use the full low resolution terrain (covering the full visible terrain), as explained in the terrain part.

The other poses are here for a compatibility with the Medina product, in order to see the cityscape from the different points of view.

PLEASE CREATE YOUR CITYSCAPE AND PARENT IT TO THE TERRAIN BEFORE APPLYING THE POSES. This is the only way to ensure that the script will find a "cityscape terrain" (the hidden node) to drop the streets elements on.

5. Speed : viewport management / terrain

The bigger the cityscape, the more these advices are important :

- For the speed of the creation of a city, what is important is that the viewport remains "light" (not heavy). For this, it is interesting to create the cityscape in a separate scene, then merge it in the scene you want to add it in (by saving it as a scene subset or by merging the two scenes). If you want to create it directly in an existing scene, take care that your this scene is not already heavy for the viewport, or the process creation will become long. If it is the case, hide all heavy elements of your scene before creating the cityscape.

- A second point to prevent the slow down due to the viewport preview, is to hide the instance during the creation process. This is very easy. You simply have to check the "All Instances will be invisible in preview mode" checkbox located bellow the "Create First (Next) Street(s)" button. This will, before creating the streets, hide all the instances of the scene from the viewport (instances will still be visible in Iray preview

Mode, this is why the script swaps the viewport to Texture Shaded draw style"). This also prevents the new instances created to be visible. Don't worry you can see and hide all instances for a preview using the "Hide/ Show All Instances" Buttons located in the "Move View / Instances preview" tab (top part of the interface).

- The new factor influencing the speed, if you choose to drop on a terrain, is the resolution of the terrain. You have to use low resolution terrains as mentioned at the beginning of the document. The best terrain in my opinion is the "very low res" one provided in the dropdown menu.

- For issues of Speed in the viewport once the city is finished and the Generator script is closed, please use the Hide or Show Instances interface in order to hide large part of your city (all instances, and eventually just show a few streets if you need them to place your cameras).

Iray Render Settings :

For big scenes, it is better to choose, in Iray Render Settings / Optimisation : "Memory" instead of "Speed". The scene will render slower but will use less memory.

You have a script for that, named : "Medina Cityscape 04 Render Settings To Memory Optimization".

6. Provided Subsets / Poses :

2 Full cityscapes are already provided for Iray and 2 for 3Delight.

In these subsets, a wide part of the instances are, by default, hidden in the viewport, but not for the render. This was done for a better management of the viewport.

These instances are not hidden if you use the NVIDIA Iray draw style in the viewport, or if you use the Aux Viewport (3Delight).

THESE CITYSCAPES ARE HUGE, SO WHEN USING THEM WITH IRAY, PLEASE USE "Medina Cityscape 04 Render Settings To Memory Optimization" script in order to minimize the weight for your video board. If this is not enough, you should hide the last groups of streets of the subset.

In case you have a computer not powerful enough for the provided subsets, it is a matter of video board memory. In order to use less memory you can create a city with less different buildings by setting the proportion of them to "0" in the "Proportions" tab before creating your city. Normally the RAM required for the subsets is around 2 or 3 Go.

In the cityscapes subsets provided, the streets are organised by groups. If you hide the first group ("City 01-..."), you will hide in the viewport and the render all the instances of all the streets elements. If you hide the second, third and fourth group, you will hide only the instances of these groups. Hiding the last groups of streets while setting up a scene may be interesting for a better navigation in the viewport.

Additional remark for MAC users :

There are two terrains provided for Iray, one with a procedural material, one with a mapped material. The procedural terrain may not be compatible with the video boards for MAC, resulting in a CPU only rendering. In this case, it may be a good idea to choose by default the mapped terrain if you are a MAC user. For the subsets, you can load this terrain, parent the whole city and camera to this terrain, and then remove the previous (procedural) terrain.

7. Unresolved Issues :

Occasionally, when you use very big (500) scales for creating cities (Minimum Scale of Elements / Maximum Scale of Elements dials of the Create Street Tab of the

Generator interface), a single house may appear huge. This is occasional and there is no real way to reproduce it, this is why, so far, I did not find a way to solve that.

For any additional questions, please use the commercial thread dedicated to this product on Daz Forums.

Thank you for buying this product, I hope you will enjoy creating cityscapes.