

# A DIFFERENT VIEW OF MIES VAN DER ROHE'S WORK

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## 1. Glossary

- **Bauhaus:** It was the name of an art school in Germany that combined crafts and fine arts. It was famous for the approach to design that it publicized and taught.
- **Expressionism:** It was a modernist movement originated in Germany at the beginning of the 20th century.
- **Dadaism:** It was an art movement of the European avant-garde in the early 20th century.
- **UV mapping:** It is the 3D modeling process of making a 2D image representation of a 3D model.
- **UV texturing map:** It is an image which is projected to the 3D model in order to know if the UV mapping is correct.
- **Shooting script:** It is the version of a screenplay used during the production of a motion picture
- **Storyboard:** It is a series of illustrations displayed in sequence with the objective to serve as a guide to understand a story
- **Animatic:** It is the animation that is made from the illustrations of the storyboard.
- **HDRI:** It is a set of techniques used in imaging and photography to reproduce a greater dynamic range of luminosity than possible using standard digital imaging or photographic techniques.
- **Render:** It is the process of generating an image from a 3D model.



## 2. Introduction

Mies Van Der Rohe was one of the greatest exponents of the Bauhaus school and the new artistic trends that emerged in this school. It is because of this, and the fascination of its architecture, that I decided to do this project using infoarchitecture as a tool for audio-visual creation.

This project, if successful, is intended to convey the beauty of the architecture made by Mies, taking into account the sunlight and the spaces that made his work recognized worldwide. Apart from this, I also want to convey the light changes that occur in the course of time. In this regard, I presume that the emotions would be closely related to the architectural emotions wanted to express by the author. All this process is going to be done through a 3D visualization tool, taking the same role as photography could do.

Mies pursued an ambitious lifelong mission to create a new architectural language. He applied a disciplined design process using rational thought to achieve his spiritual goals. He believed that the configuration and arrangement of every architectural element must contribute to an unified expression.

Every aspect of his architecture, from overall concept to the smallest detail, supports his effort to express the modern age and therefore the idea that every single piece of an artistic work is important.

Adding to what has been said so far, and considering that convey emotions are the key point between a successful project and one without, one can sense that pre and post-production will be a key point to the video for reaching the expected result.



## 3. Talking about Mies Van Der Rohe

### 3.1. Introducing Mies Van Der Rohe

Ludwig Mies van der Rohe (March 27, 1886 – August 19, 1969) was a German-American architect. He served as the last director of Berlin's Bauhaus. Along with Le Corbusier, Alvar Aalto, and Frank Lloyd Wright, he is widely regarded as one of the pioneering masters of modern architecture.

Mies, like many of his post-World War I contemporaries, sought to establish a new architectural style that could represent modern times just as Classical and Gothic did for their own eras. He created an influential twentieth century architectural style, stated with extreme clarity and simplicity. His mature buildings made use of modern materials such as industrial steel and plate glass to define interior spaces. He strove toward an architecture with a minimal framework of structural order balanced against the implied freedom of free-flowing open space. He called his buildings "skin and bones" architecture. He sought a rational approach that would guide the creative process of architectural design, but he was always concerned with expressing the spirit of the modern era. He is often associated with his quotation of the aphorisms, "less is more" and "God is in the details".



Figure 1. Mies Van Der Rohe

### 3.2. Biography

(Aachen, Germany, 1886 - Chicago, 1969) German architect. In 1900 he began working in the studio of his father, a stonemason, and in 1905 he moved to Berlin to work in the study of Bruno Paul. In 1908-1911, in P. Behrens, he met Walter Gropius and Le Corbusier, who are, along with himself and the American Frank Lloyd Wright, the greatest architects of the twentieth century.

Initially targeted the neoclassical architecture, but a trip to the Netherlands in 1912 led him to change his interests, following the discovery of the works of H.P. Berlage. After the interruption of the First World War, joined various avant-garde movements (Novembergruppe, De Stijl) and began to make revolutionary projects. Such as intended for an office building on Friedrichstrasse in Berlin, consisting of two towers of twenty stories joined by a central core for elevators and stairs.

During this period he published in the magazine called "G", in collaboration with Hans Richter, and was associated with some of the most advanced artists of the moment, such as Tristan Tzara and El Lissitzky. Since 1926, he carried out works of a certain size, as Wold Guben home, all brick home and Hermann Lange in Krefeld. Around the same time raised the monument to Karl Liebknecht and Rosa Luxemburg (destroyed by the Nazis), a simple brick wall with two cantilevered panels.

Following these and some other projects, he became a renowned architect and began to receive official commissions, the first one an experimental housing complex for exhibition in Stuttgart in 1927, the Weissenhof Siedlung for which requested help from main European architects.



The consecration of Mies van der Rohe came in 1929, when he made the German Pavilion for the International Exposition in Barcelona, considered by many his masterpiece and one of the most influential architectural works of the twentieth century. His enormous simplicity and continuity of spaces that seem to have no beginning or end are his most admired qualities.

In the same line, he did some other works, always characterized, as was natural to him, for advanced use of new building materials (reinforced concrete, steel and glass) and a simplicity that leads to leaving bare structures and provide them with almost linear ways in which the creation of beauty is encrypted.

After directing the Bauhaus from 1930 to 1933 the developments in Germany forced him to emigrate to America, where he was appointed director of the Faculty of Architecture of the Illinois Technology Institute of Chicago (1938), for which he designed a new campus that, once completed, his fame spread throughout the United States. Hereinafter was showered orders and worked mainly in the capital of Illinois, where he picked up and carried to its logical postulates of the Chicago school.

In 1958-1959 he put finishing touches on his career with the famous Seagram Building in New York, which is said to be the most beautiful skyscraper in smoked glass and aluminum, and the Neue Nationalgalerie in Berlin (1962-1968), a heavy steel roof that is supported by few and slender columns, which acquired all the attention to the glass walls. With this work, Mies van der Rohe was kept on the line to oppose horizontalism its European architectural and verticalism in U.S.

### **3.3. Artistic context**

#### **3.3.1. Bauhaus art movement**

Bauhaus was the name of a school in Germany that combined all the arts. It was famous for the design that it was published and taught from 1919 to 1933.

The Bauhaus school was founded by Walter Gropius in Weimar. Despite the fact that its founder was an architect, the Bauhaus did not have an architecture department during the first years of its existence. Nonetheless it was founded with the idea of changing all arts, including in it architecture. The Bauhaus style became one of the most influential currents in Modernist architecture and modern design and had a profound influence upon subsequent developments in art, architecture, graphic design, interior design, industrial design, and typography.

The school existed in three German cities (Weimar from 1919 to 1925, Dessau from 1925 to 1932 and Berlin from 1932 to 1933), under three different architect-directors: Walter Gropius from 1919 to 1928, Hannes Meyer from 1928 to 1930 and Ludwig Mies Van Der Rohe from 1930 until 1933, when the school was closed by its own leadership under pressure from the Nazi regime.

The changes of venue and leadership resulted in a constant shifting of focus, technique, instructors, and politics.



### 3.3.2.2. German Modernism & Bauhaus Influences

#### Typography

The Bauhaus typeface design is based on Herbert Bayer's 1925 experimental Universal typeface. It is made by simple geometric shapes and monotone stroke weights that has the aim to represent the simplicity of the Bauhaus movement. Some of the typeface's that belong into this style are:

- Blippo
- Bauhaus 93
- ITC Ronda
- ITC Bauhaus



Figure 2. Bauhaus 93 typography

#### Fine Art

With the appearance of the photography the aim of the fine art changed completely and turned into a non-stopping search to find new ways to express art. New tendencies of art such as expressionism or surrealism became important and changed completely the concept of art that it was before.

#### Expressionism

The aim of this style is to present the world solely from a subjective perspective, distorting it radically for emotional effect in order to evoke moods or ideas. Expressionist artists sought to express meaning or emotional experience rather than physical reality.

#### Dadaism

The Dadaist poem used to be a succession of words and sounds so difficult to find logic. It was distinguished by an inclination towards uncertainty and absurdity. It also had a general trend of rebellion and destruction due they were against literary and artistic conventions. Therefore, they were rejecting the conventions of bourgeois society that they considered selfish and apathetic.



Figure 3. Theo Van Doesburg - Dadamatinée



### 3.4. Architecture features

Mies's architecture is characterized by the simplicity of structural elements taking the geometrical composition as a key point. In addition, the objects proportions take also an important role basing its dimensions on the absence of ornamental elements.

Interest in materials as an expressive element defines his work. He employed stone, marble, steel and glass in its absolute purity. He also used concrete in all its possibilities either as a structural element or as an exterior finish material.

Mies van der Rohe during his life work tended to the pure the simplicity as itself taking the abstraction of the elements as a key point in a continuous search for rational plants. In 1912, he met Teo Van Doesburg whose abstracts paintings influenced him to reduce forms and clean up the designs of the buildings. The architecture resulted of this inspiration is based on rooms that are never closed, always looking for integration with the environment.

The ultimate expression of his style is achieved with the German Pavilion (Barcelona, 1929) and the Villa Tugendhat (Czechoslovakia, 1928-1930).

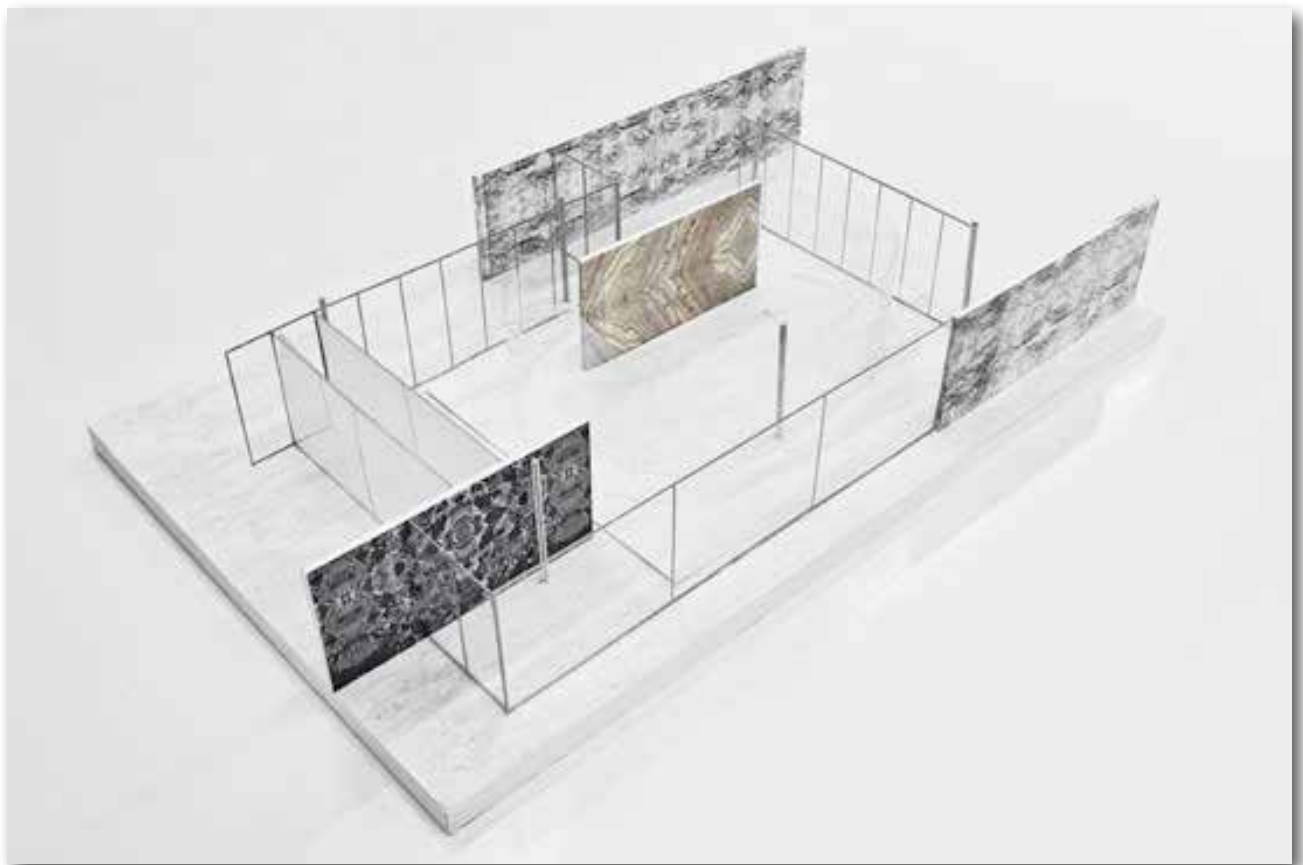


Figure 4. Materials used on the German Pavilion



### 3.5. Most famous buildings

#### German Pavilion

The building is on a covered travertine podium, next to a small pool. The roof of the building is flat and supported by eight steel pillars that are in the form of a cross. Between the pillars there are polished marble screens that have no structural function and large crystals that give the impression of lightness and brightness.



Figure 5. German Pavilion

#### Farnsworth House

The Farnsworth house located in Chicago is a transparent box of glass and steel. It is five feet high from the ground and with a fluid distribution, the house seems to float above the garden, like the stairs, which are small boxes that connect the interior with the exterior. The roof and floor are joined by eight columns of steel.



Figure 6. Farnsworth House

#### Crown Hall

The Crown Hall is designed as a free space contained in a rectangular shape on two levels. It is surrounded by a large green area with large trees, mainly in the south facade.

This building is characterized by an industrial aesthetic simplicity, clearly stated on their steel frames.



Figure 7. Crown Hall

#### Tugendhat House

The Tugendhat house has a small structure attached by cruciform pillars that help the spaces to flow between each other. These spaces are separated with light panels of onyx, marble or ebony. Large windows fill the entire height.



Figure 8. Tugendhat House



### 3.6. Related artists

#### Walter Gropius

Walter Adolph Georg Gropius (May 18, 1883 – July 5, 1969) was a German architect and founder of the Bauhaus School, who, along with Ludwig Mies van der Rohe, Le Corbusier and Frank Lloyd Wright, is widely regarded as one of the pioneering masters of modern architecture.

Walter Gropius was born in Berlin, the son and grandson of architects. He studied architecture in Munich and Berlin. After his studies he worked for three years in the office of Peter Behrens and then independence. Between 1910 and 1915 (the year of his marriage to Alma Mahler) was mainly devoted to the reform and expansion of Fagus Factory in Alfeld. With her large glass surfaces, their flat roofs, and orthogonal forms thin metal structures, this work became a pioneer of modern architecture.

Gropius was the founder of the famous design school Bauhaus, in which students are taught to use modern and innovative materials to create buildings, furniture and original and functional objects. He served in this school, first in Weimar and then in Dessau from 1919 to 1928.

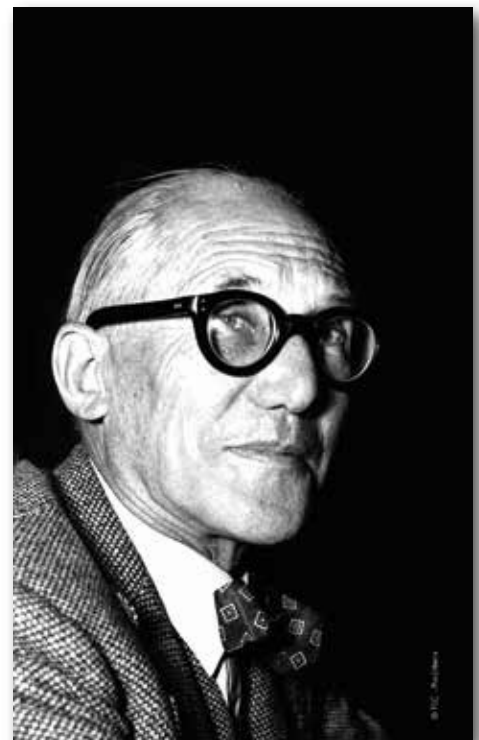
From 1926, Gropius was intensely devoted to large blocks of flats, which saw the solution to the urban and social problems. He also called for the rationalization of the construction industry, building to allow faster and more economically. He designed numerous housing complexes, in which he applied his ideas.



#### Le Corbusier

Le Corbusier (October 6, 1887 – August 27, 1965), was a Swiss-French architect, designer, painter, urban planner, writer, and one of the pioneers of the modern architecture. His career spanned five decades, with his buildings constructed throughout Europe, India, and America.

In his architecture, he chiefly built with steel and reinforced concrete and worked with elemental geometric forms. Le Corbusier's painting emphasized clear forms and structures, which corresponded to his architecture.





## Frank Lloyd Wright

Frank Lloyd Wright (June 8, 1867 – April 9, 1959) was an American architect, interior designer, writer and educator, who designed more than 1000 structures and completed 532 works. Wright believed in designing structures which were in harmony with humanity and its environment, a philosophy he called organic architecture. This philosophy was best exemplified by his design for Fallingwater. Wright was a leader of the Prairie School movement of architecture and developed the concept of the Usonian home, his unique vision for urban planning in the United States

His work includes original and innovative examples of many different building types, including offices, churches, schools, skyscrapers, hotels, and museums. Wright also designed many of the interior elements of his buildings, such as the furniture and stained glass.





## 4. Talking about the procedure to CG Mies Van Der Rohe's buildings

### 4.1. Retrieving information and plans of the buildings

#### 4.1.1. Autocad Plans

Before creating all the buildings into 3ds Max, I needed its dimensions. To do so, I decided to use Autocad Plans as my starting point. These autocad Plans can be found in this web:

<http://arquitectostrabajando.blogspot.com.es/2012/08/descarga-90-obras-famosas-en-autocad-y.html>

#### • German Pavilion

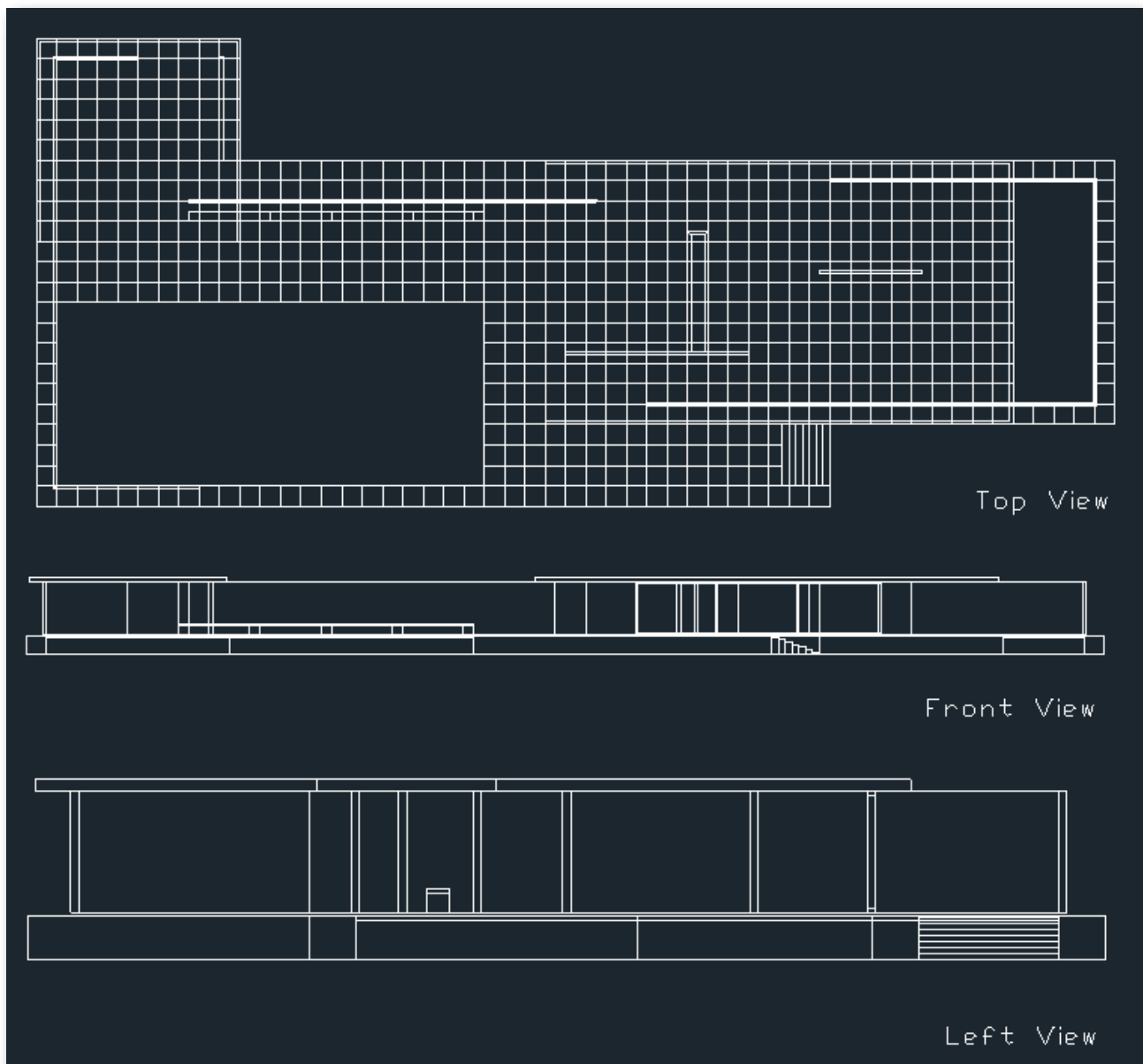


Figure 9. German Pavilion's plans



• Farnsworth House

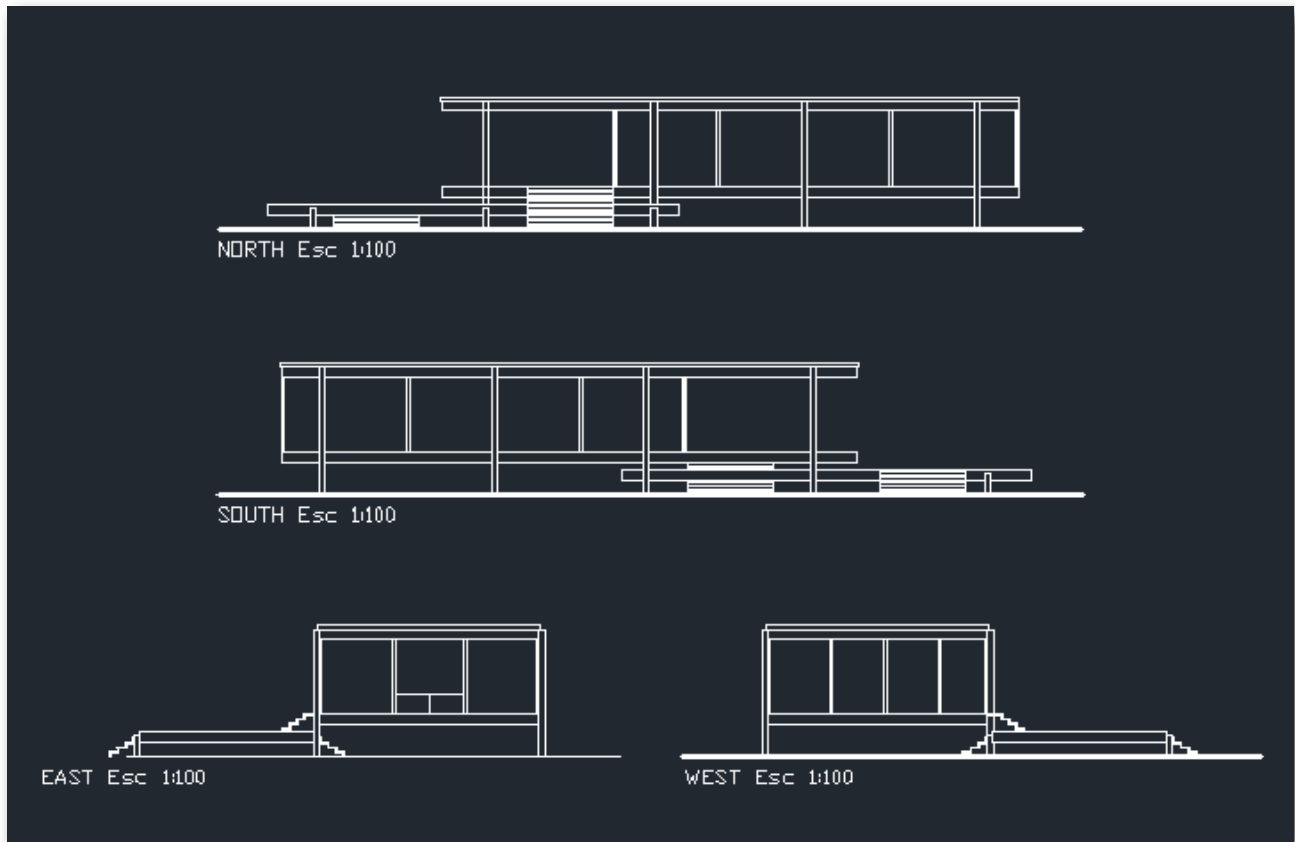


Figure 10. Farnsworth House's plans

• Crown Hall

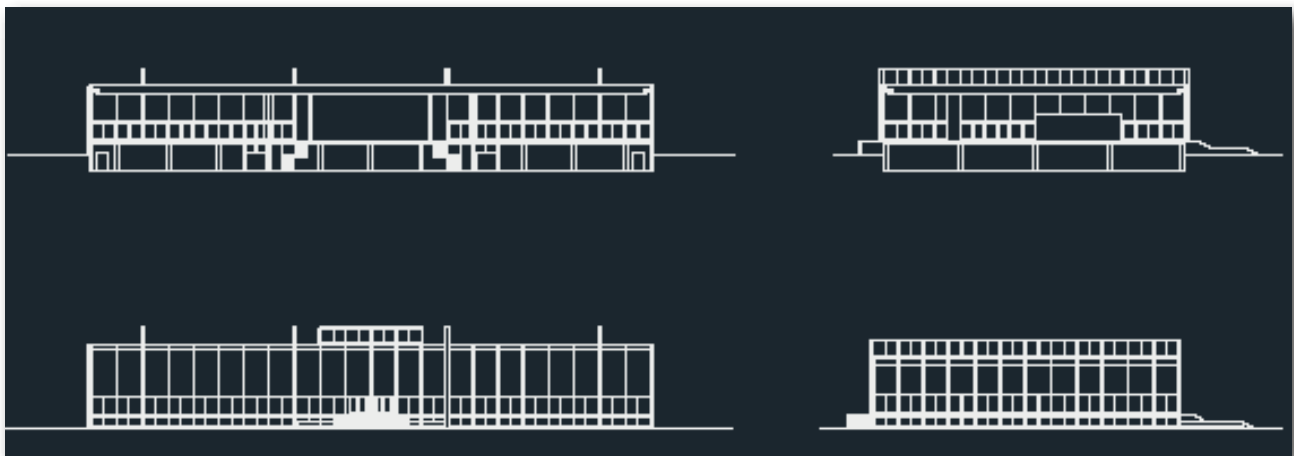


Figure 11. Crown Hall's plans



### • Tugendhat House

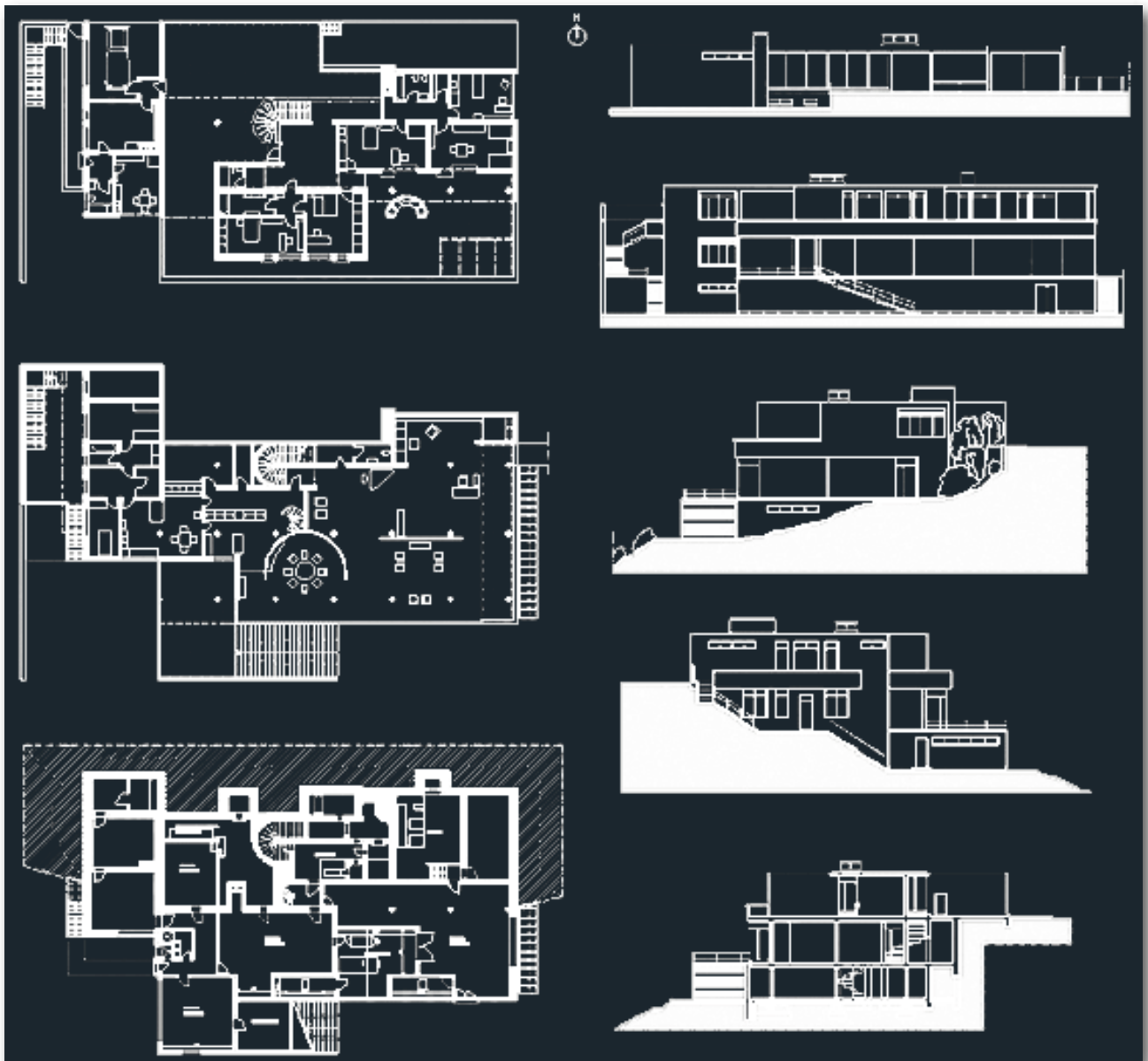


Figure 12. Tugendhat House's plans

#### 4.1.2. Photographies

Although plans are very useful, I also helped myself with pictures of the buildings. These pictures helped me to understand how each building interact with the environment and how materials are used on each one.



• German Pavilion



Figure 13. Pictures of the German Pavilion

• Farnsworth House



Figure 14. Pictures of the Farnsworth House



• Crown Hall



Figure 15. Pictures of the Crown Hall

• Tugendhat House



Figure 16. Pictures of the Tugendhat House



## 4.2. Modelling

Once I had all the plans in Autocad, I had to import them into 3DS Max in order to create a 3D recreation. All of them were 2D representations of the buildings. As a result of that, I had to convert from 2D to 3D following the process explained below.

### 4.2.1. 2D to 3D procedure

This process is large-known by the Architects who mostly recreate buildings in CG. Although it might sound similar to them, I would explain how it works anyway.

First of all, as can be seen in the image below, all we have is splines in our scene after importing Autocad plans into 3ds max. These splines are our building seen from the top view.

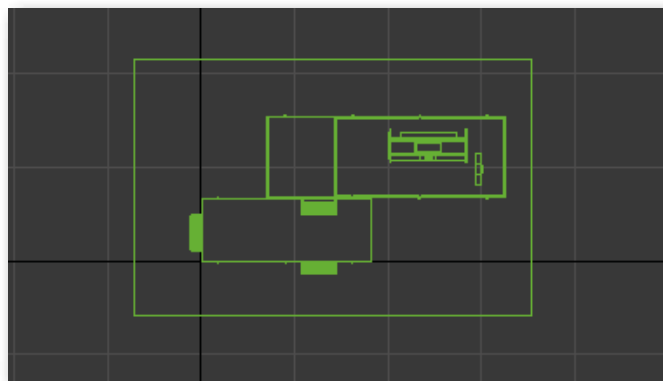


Figure 17. 3ds Max Top View

#### So, what's next?

All we need to do is give the 3rd dimension to these splines.

#### How we do that?

In order to give volume to the buildings we have to extrude the splines on the Z direction.

First of all, we have to select the spline or splines we want to extrude and go to the modify panel. Once there, slide down the dropdown menu and select extrude.

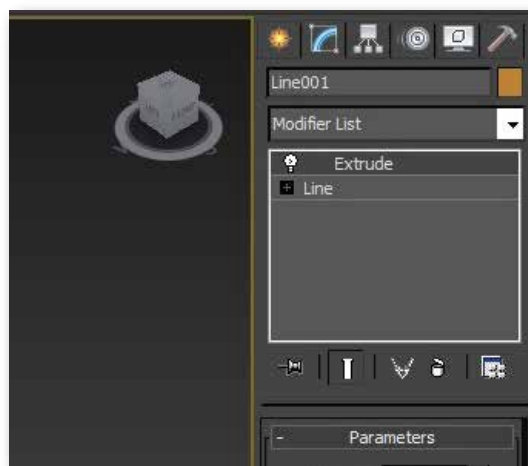


Figure 18. Extrude modifier



After having added the extrude modifier to the splines, height to each part has to be added. To do so, the information retrieved from the AutoCAD Plans has to be taken into consideration in order to recreate correctly every single part of each building.

As can be seen in the image below, the default unit system is metrical. This setup will be really helpful in order to be as much precise as it can be.

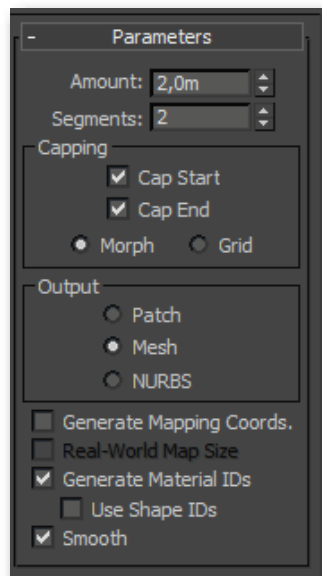


Figure 19. Extrude modifier

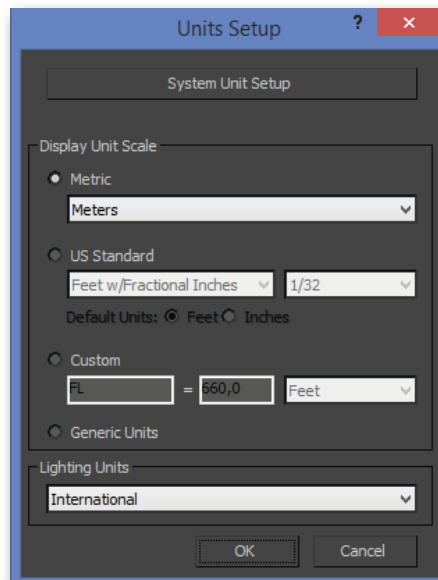


Figure 20. Units Setup

In addition, this process will be required for each part of each building. As a result, a huge time of investment is required to model all fourth buildings.

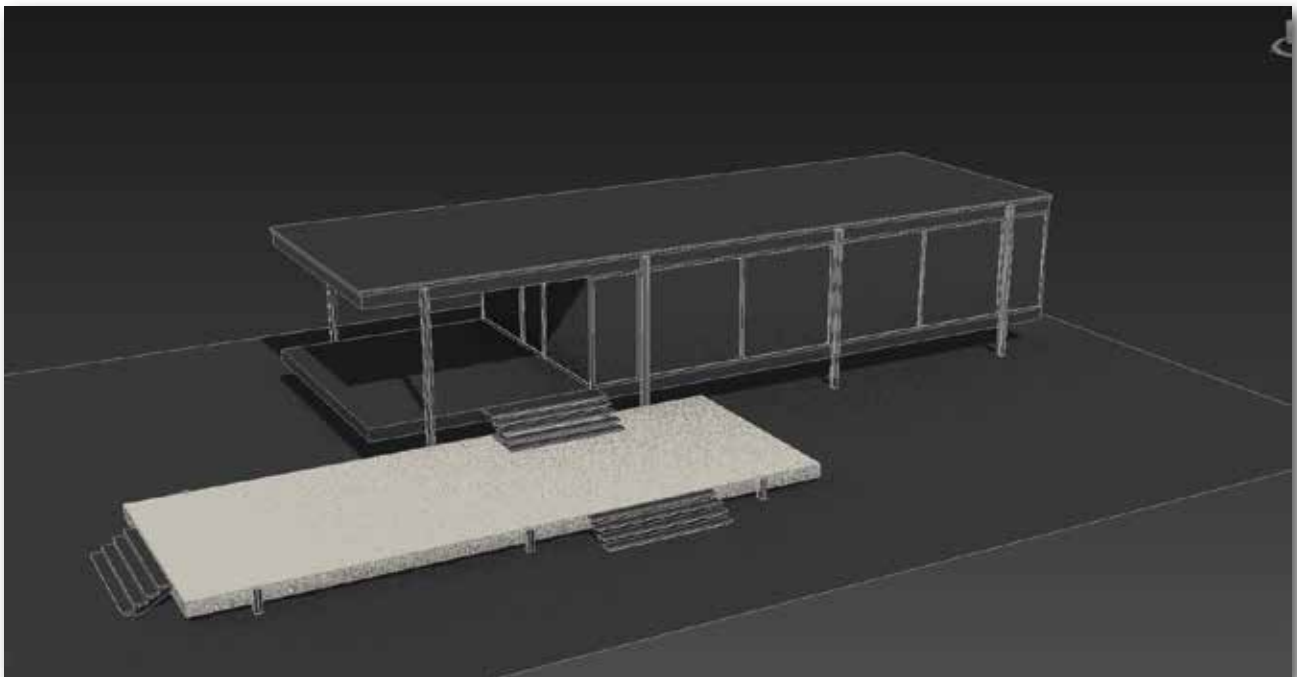


Figure 21. Modelled Fransworth House



### 4.3. Texturing

In order to get the most realistic approach to the buildings, the materials of every single part of them are keys points. Therefore, I needed to focus on this part in order to succeed in the project.

To do so, I decided to use images and Internet information as references trying to know which type of material Mies used in their buildings. As I previously stated, the author was putting a lot of effort in deciding which materials he should use. As a reason of that, I also have put a lot of effort on it, in order to recreate them exactly.

#### 4.3.1. Creating UV

Once every building was modelled, I had all the parts shaded in a plain grey texture. In order to make this process easier I divided every piece of each building, creating UVS for each part. These stated process could be seen in the image below.

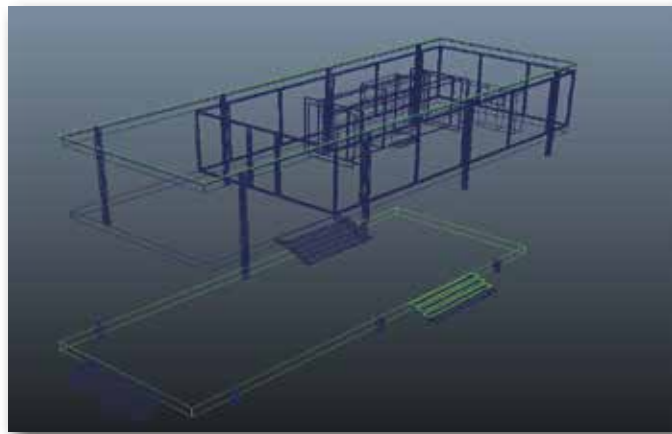


Figure 22. Fransworth House building parts

In order to texture the building correctly thought, I had to create UVS for every part of each building. Adjusting the tiling, the shape and type for each part.

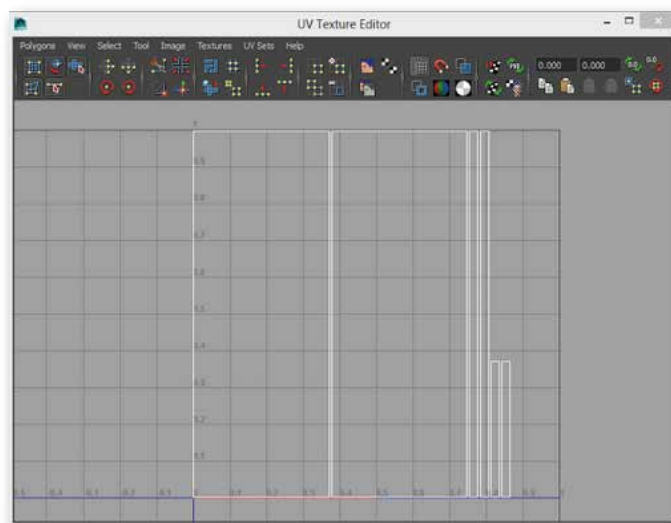


Figure 23. UV Texture Editor



In addition, I had to ensure that each piece had the same UV dimension. To do so, I have used a UV texturing Map. This square shape based map is commonly used as a visual reference for artists, due it shows the UV scale on all parts of the 3D model.

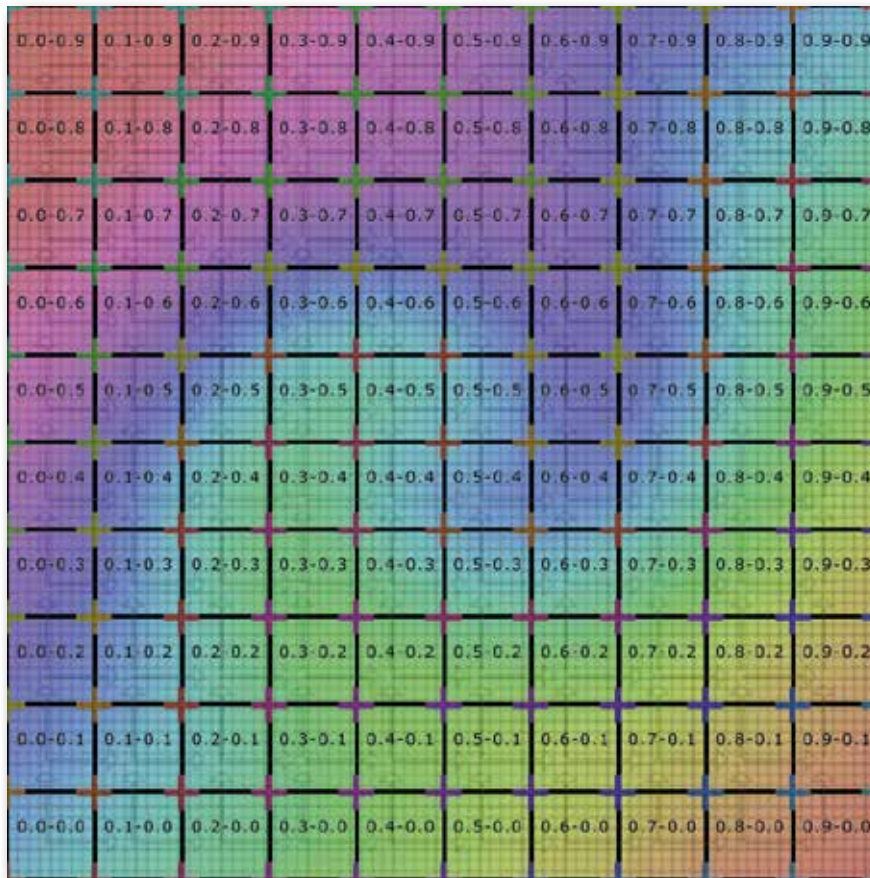


Figure 24. UV Texturing Map

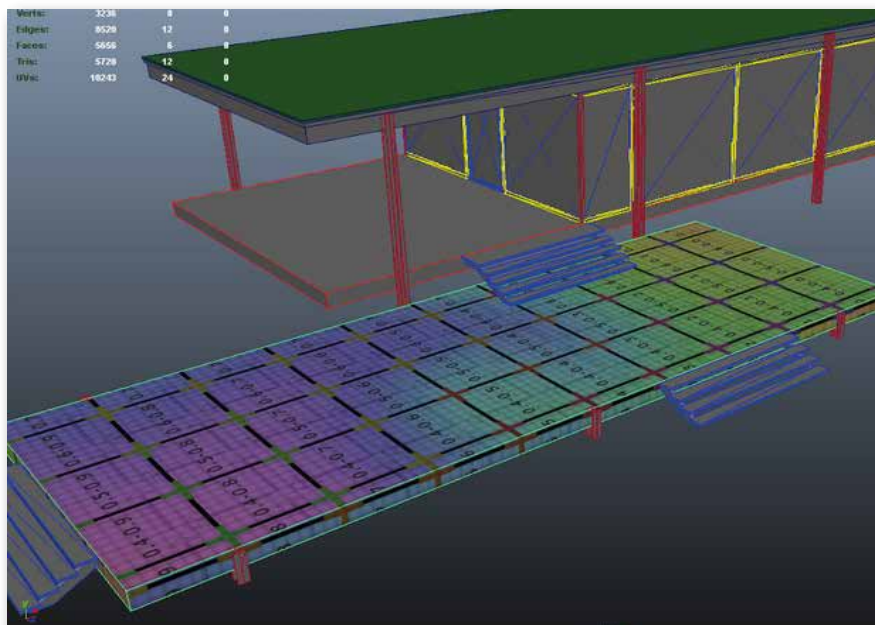


Figure 25. UV Texturing Map applied on the building



• UV Farnsworth House

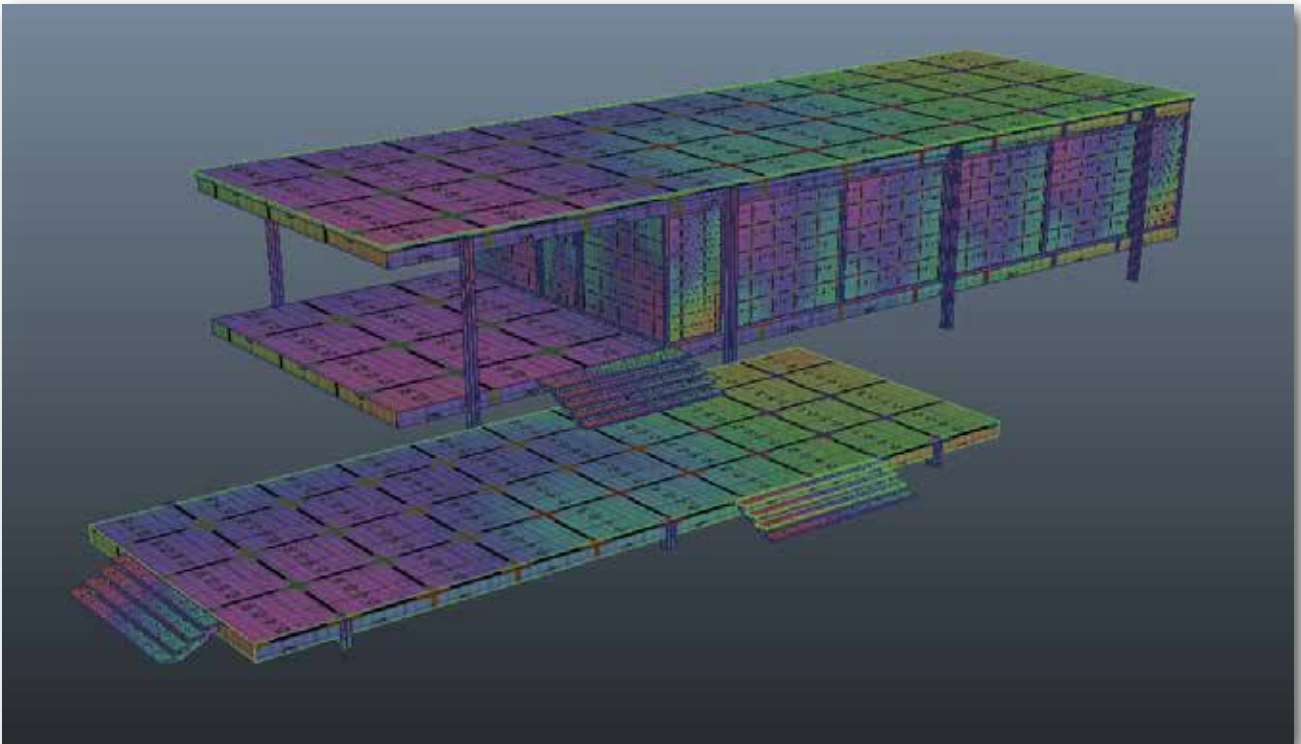


Figure 26. UV Texturing Map applied on Farnsworth House

• UV German Pavilion

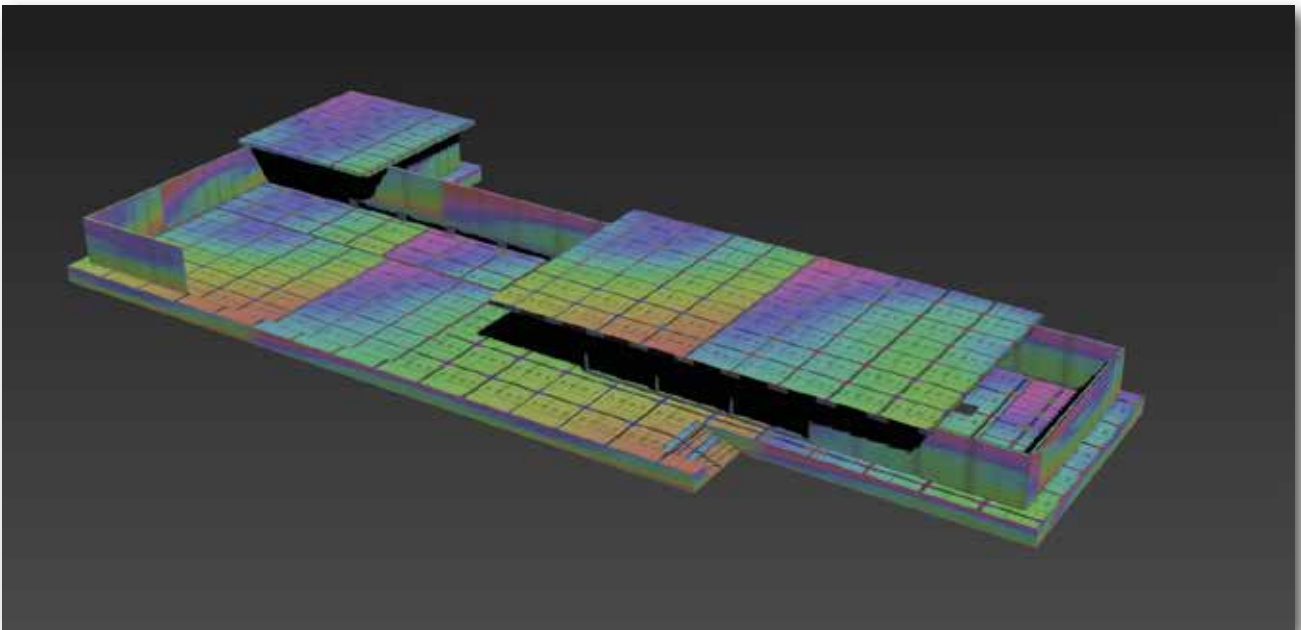


Figure 27. UV Texturing Map applied on German Pavilion



• UV Tugendhat House

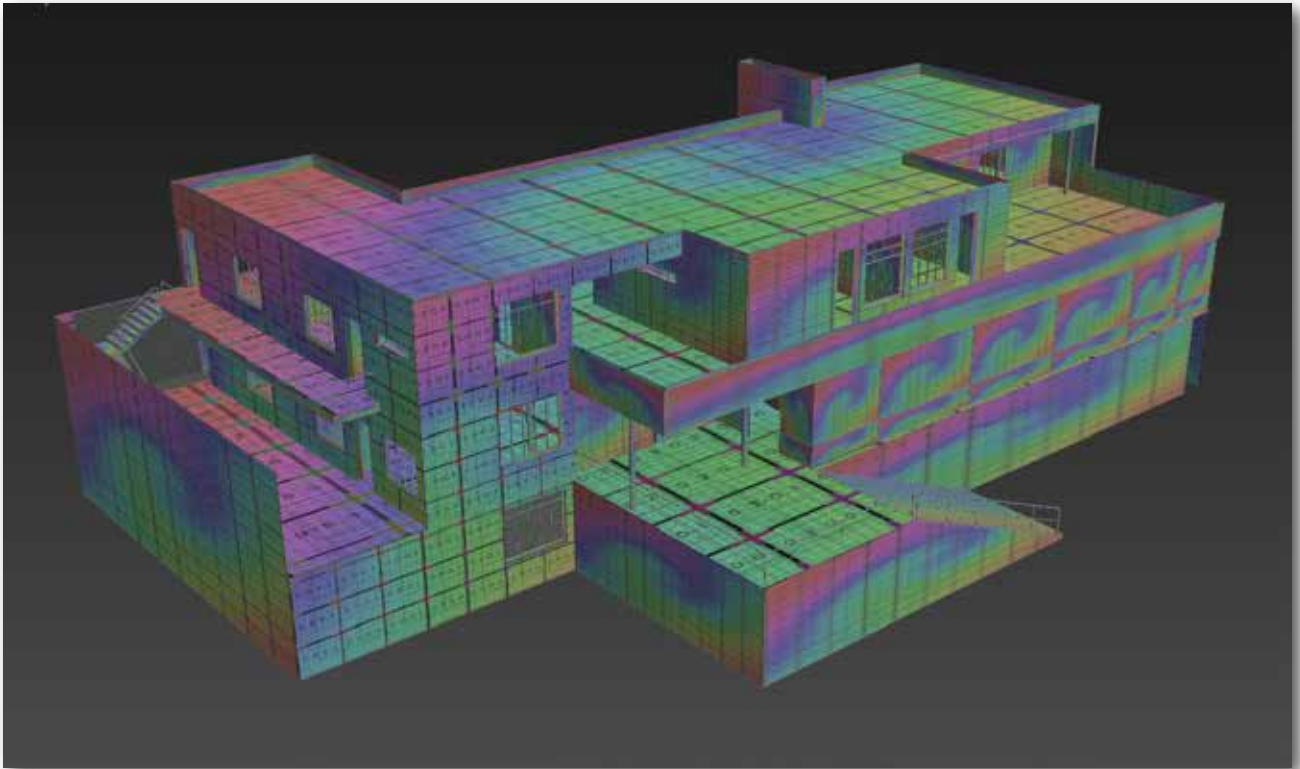


Figure 28. UV Texturing Map applied on Tugendhat House

• UV Crown Hall

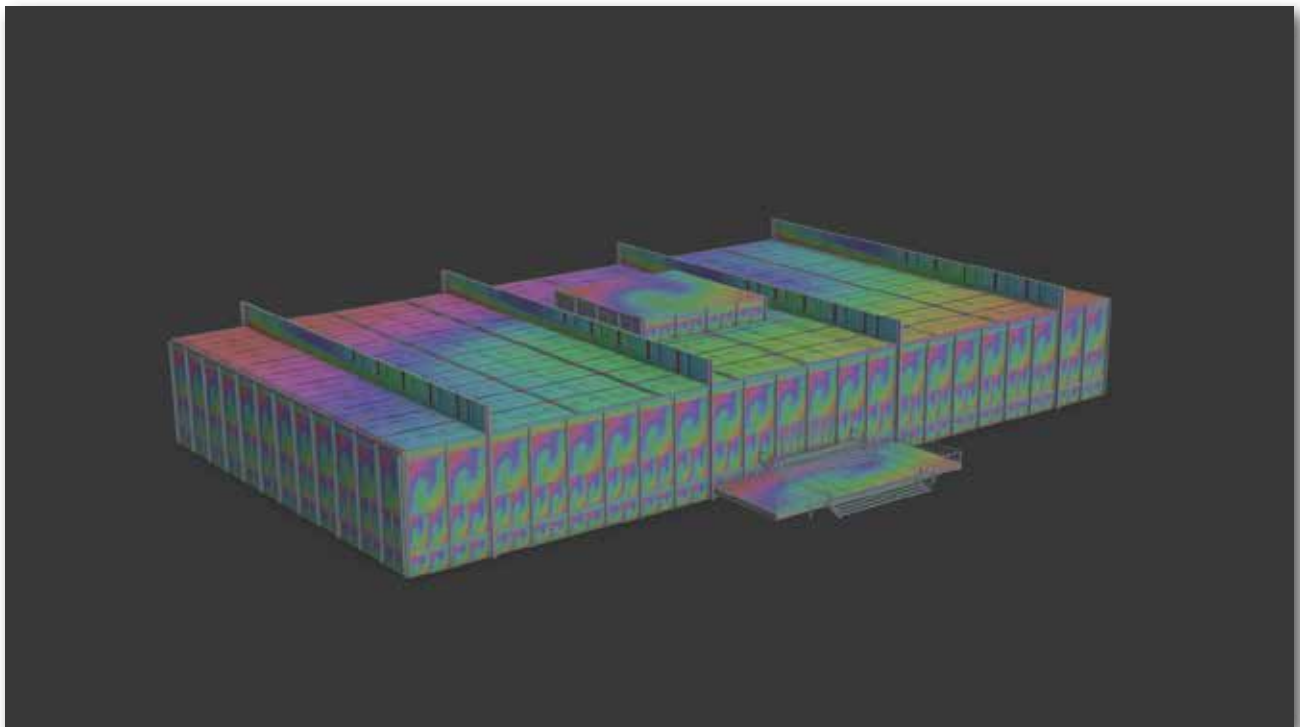


Figure 29. UV Texturing Map applied on Crown Hall



### 4.3.2. Creating materials

This part is probably one of the most important ones as materials are the visible texture of Mies Van Der Rohe's buildings.

In order to recreate materials as how they look in real life, I used pictures shown on the paragraph 4.1.2 as a reference.

Having these pictures as references, I used VrayMtl as a base shader for most of the materials (Wood, Aluminium, Chrome, Concrete, etc.) modifying for each one the reflexion & refraction parameters and the opacity value & the diffuse colours.

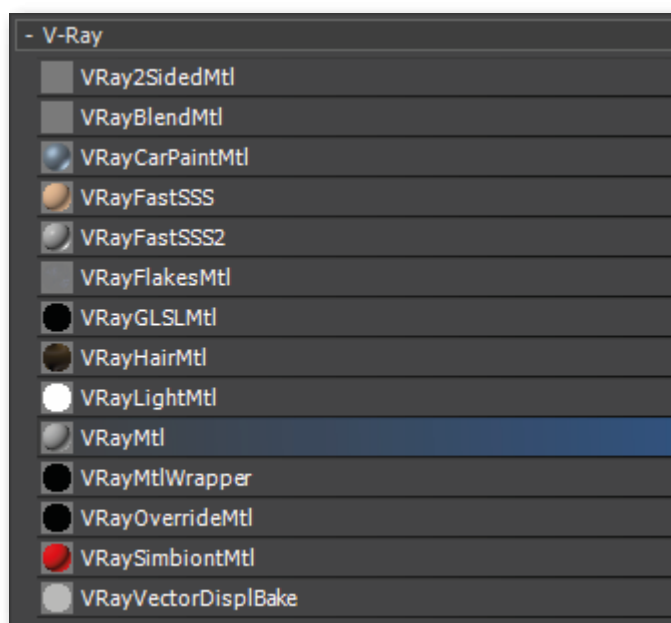


Figure 30. Vray Materials List

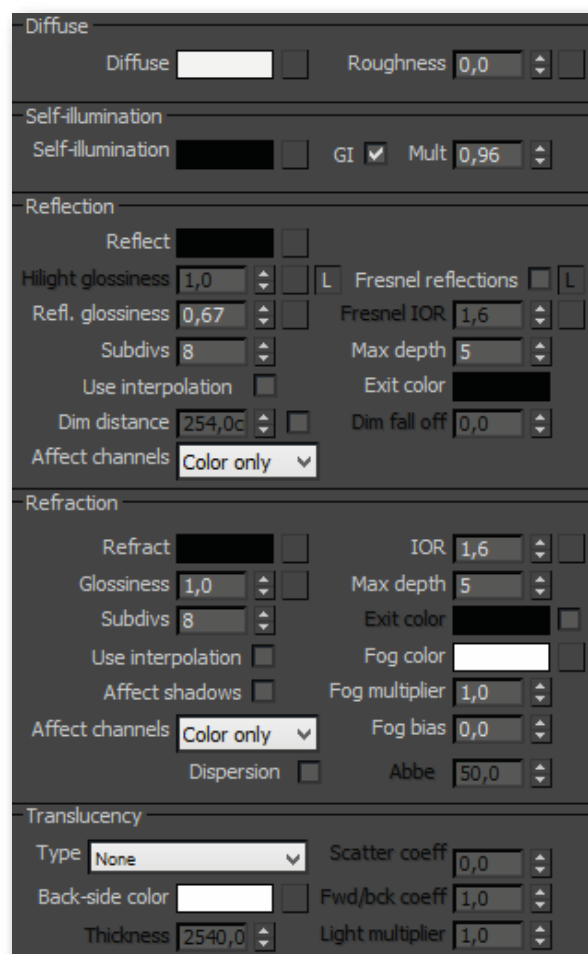


Figure 31. Vray Materials parameters

In addition, I used materials maps as textures as a resource in some types of materials such as wood. However, sometimes these maps had not the brightness and the colour hue required. In these cases, I used colour RGB output correction as a hue modifier. This parameter can be seen in the image below.



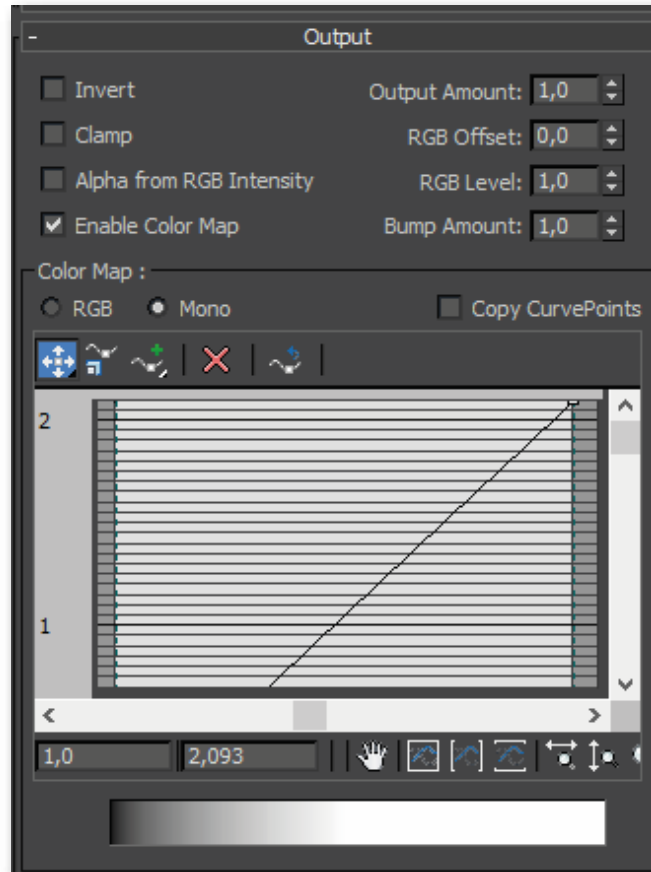


Figure 32. RGB Output Modifier

#### 4.3.3. Using materials libraries

Although I created most of the materials of the buildings, I also used pre-created materials in order to accelerate the duration of this process. The library used in this project is called "Vray Materials Presets Pro" and it is used under Creative Commons License.

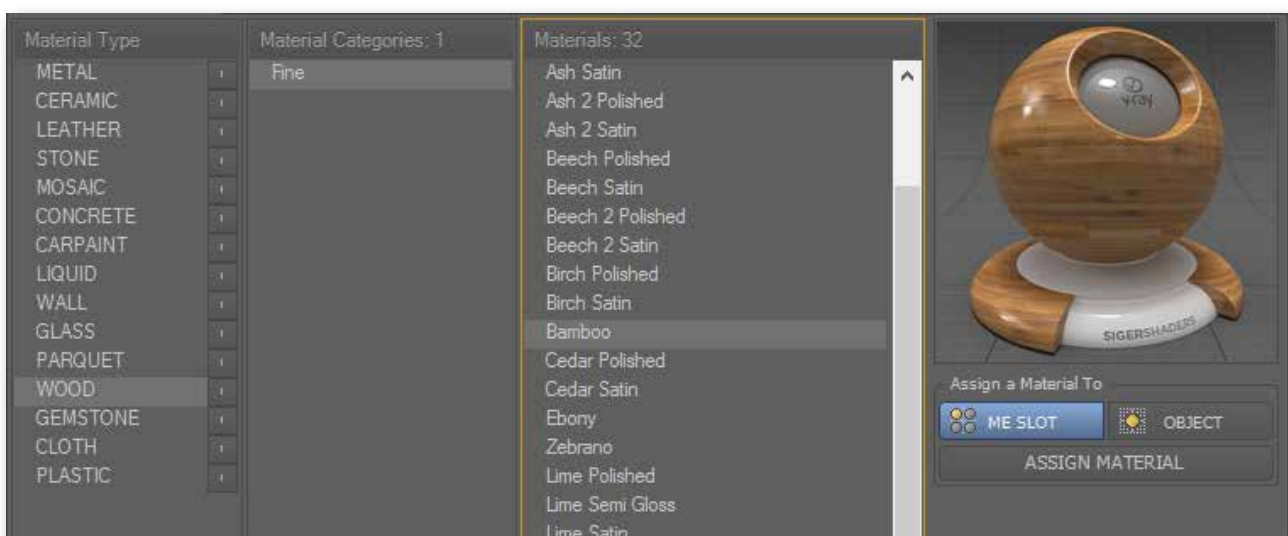


Figure 33. Vray Materials Presets Pro



## 4.4. Illumination

### 4.4.1. Global illumination

In order to recreate the sunlight I used HDRI maps downloaded from "<http://www.viz-people.com/>" under Creative Commons License. To do so, I used a V-Ray HDRI map as an environment map instanced to the light source.









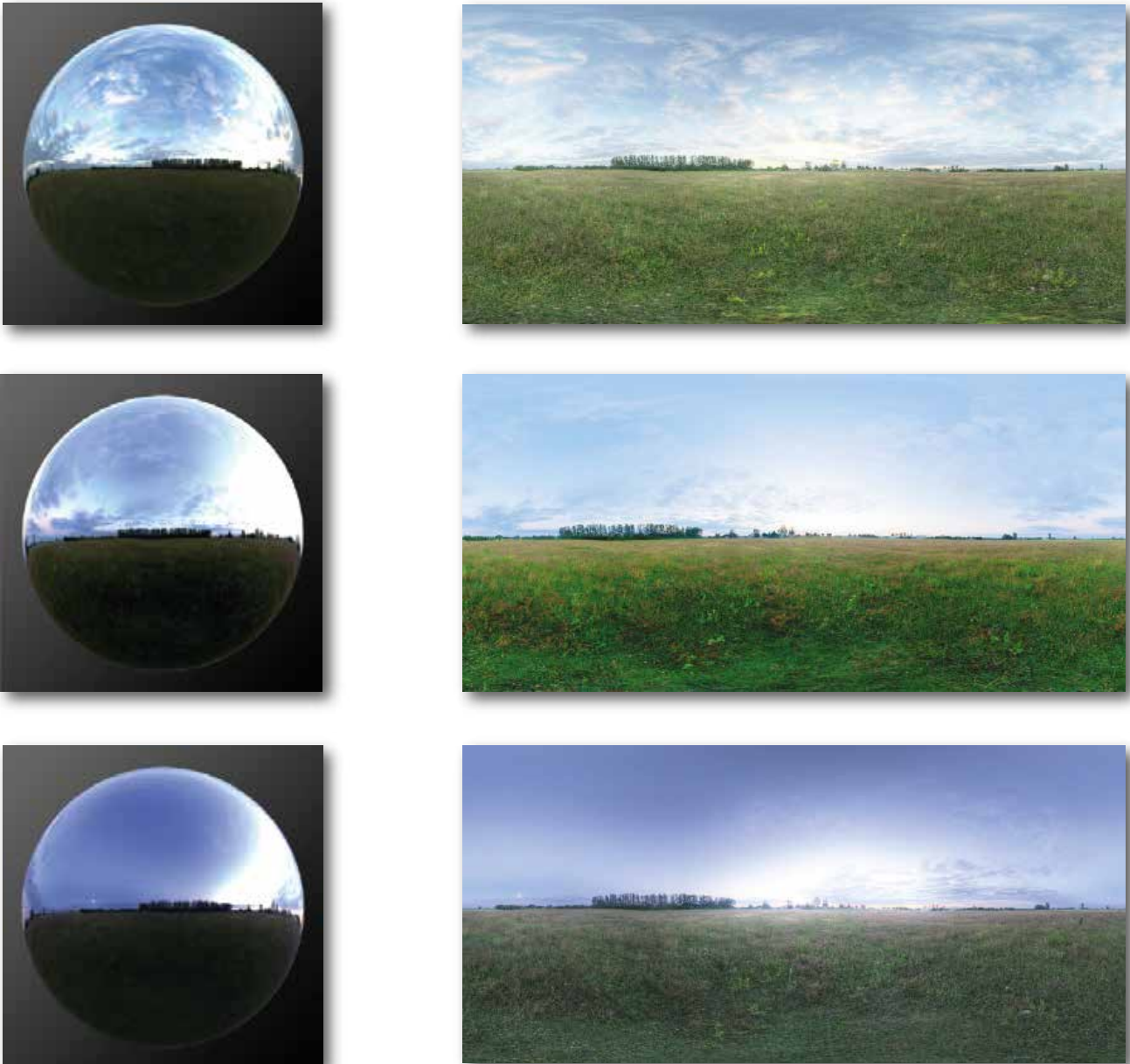


Figure 34. HDRI Background maps

The Vray HDRI Map that was instanced to the light source was configured as a spherical map in the scene. This configuration gave light to the scene as it was casting from the sun having horizon in all directions.

In addition, Vray HDRI Map has the option to adjust the horizontal and vertical rotation and the overall multiplier of it. These parameters, and specially the last one, are really useful when adjusting the final render in order to avoid the image being under or overexposed. These stated parameters can be seen in the image below.



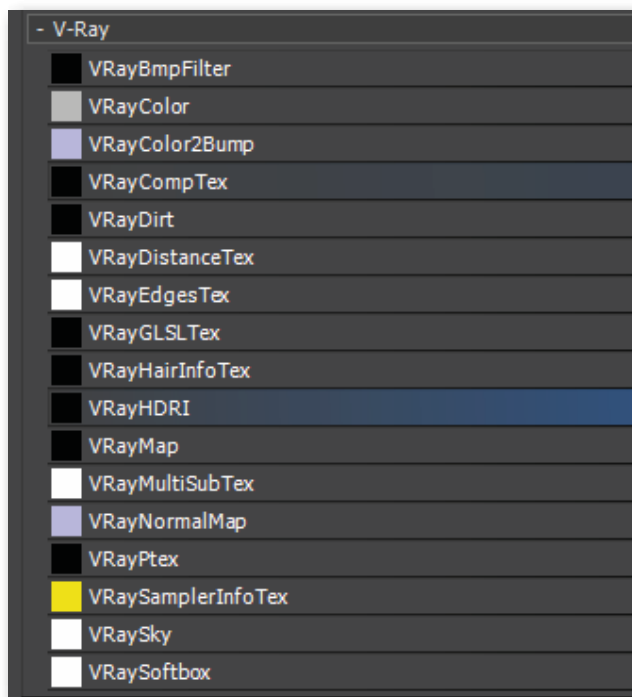


Figure 35. V-RayHDRI Map

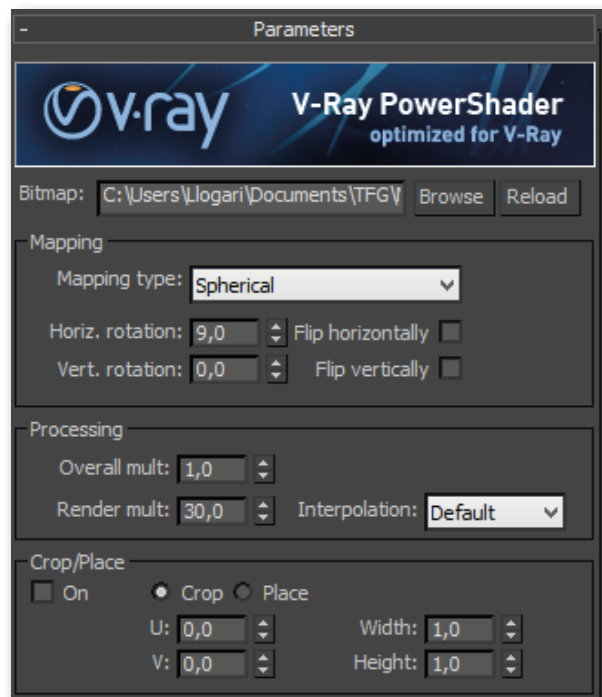


Figure 36. HDRI Setup parameters

## 4.5. Scene assets

### 4.5.1. Environment

Almost done by this part of the project, just missing one thing last thing, environment. To add it, I used a plugin under Creative Commons called "Itoo Software Forest Pack" that gives the possibility to add grass, trees, flowers and rocks to the scene easily. This plugin gave me the chance to add a great looking environment to the scene without having to model every single part of it, which was not the objective of this project. Some testing renders can be seen below.



Figure 37. Environment test 1





Figure 38. Environment test 2



Figure 39. Environment test 3

As stated before, this plugin adds to the scene either single objects or pre-created presets. One of these presets can be seen in the figure 38 where there it has already pre created the grass with the autumn fallen leaves on it. Other presets can be seen in the image below, such as: large grass, cut grass or daisy.



#### 4.5.2. Furniture

Mies Van Der Rohe's concept of design was not only based in the architecture. He had the thought that every object that was in the building must interact with each other and its surrounding space.

In order to do that, he designed special chairs for every building he designed. Furniture for the German Pavilion in Barcelona became one of the most popular and iconic designs of furniture he ever made



Figure 40. Crown Hall's furniture



Figure 41. German Pavilion's furniture



### • CG furniture

Since these pieces of furniture require a high amount of time of modeling and texturing, I decided to use previously modelled objects. These objects can be found at the following web address.

Web URL: "<https://3dwarehouse.sketchup.com/search.html?redirect=1&q=-mies&styp=m&btnG=Cerca&reps=1&hl=hu&ct=lc&start=84>"

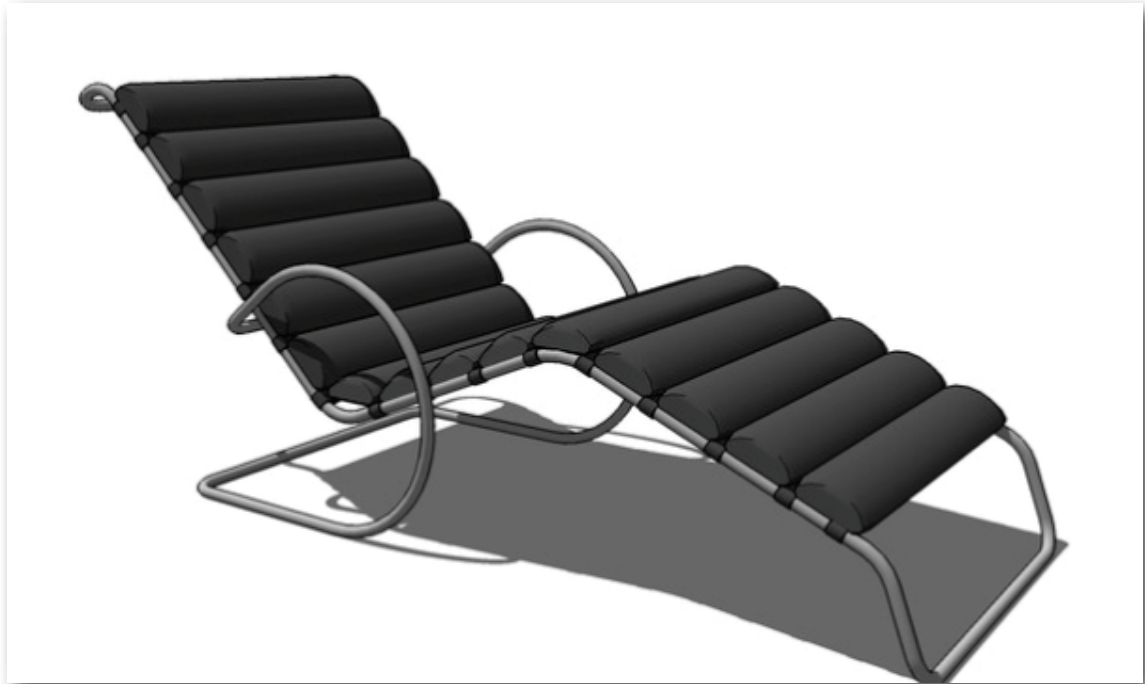


Figure 42. Adjustable Chaise Lounge 3d model

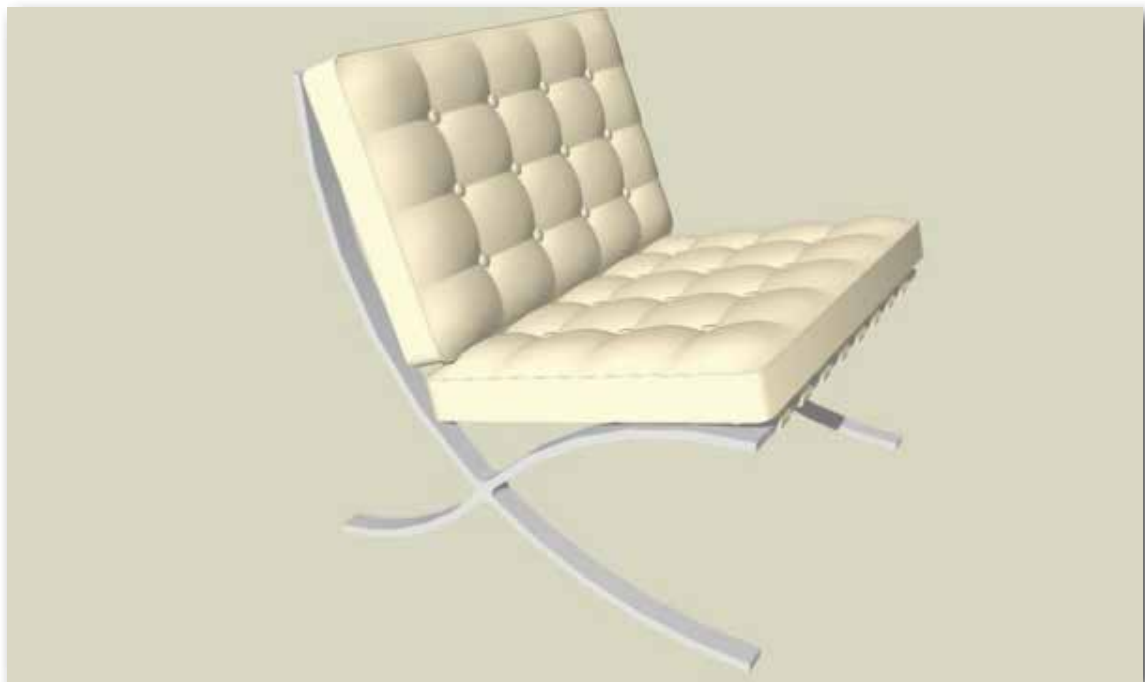
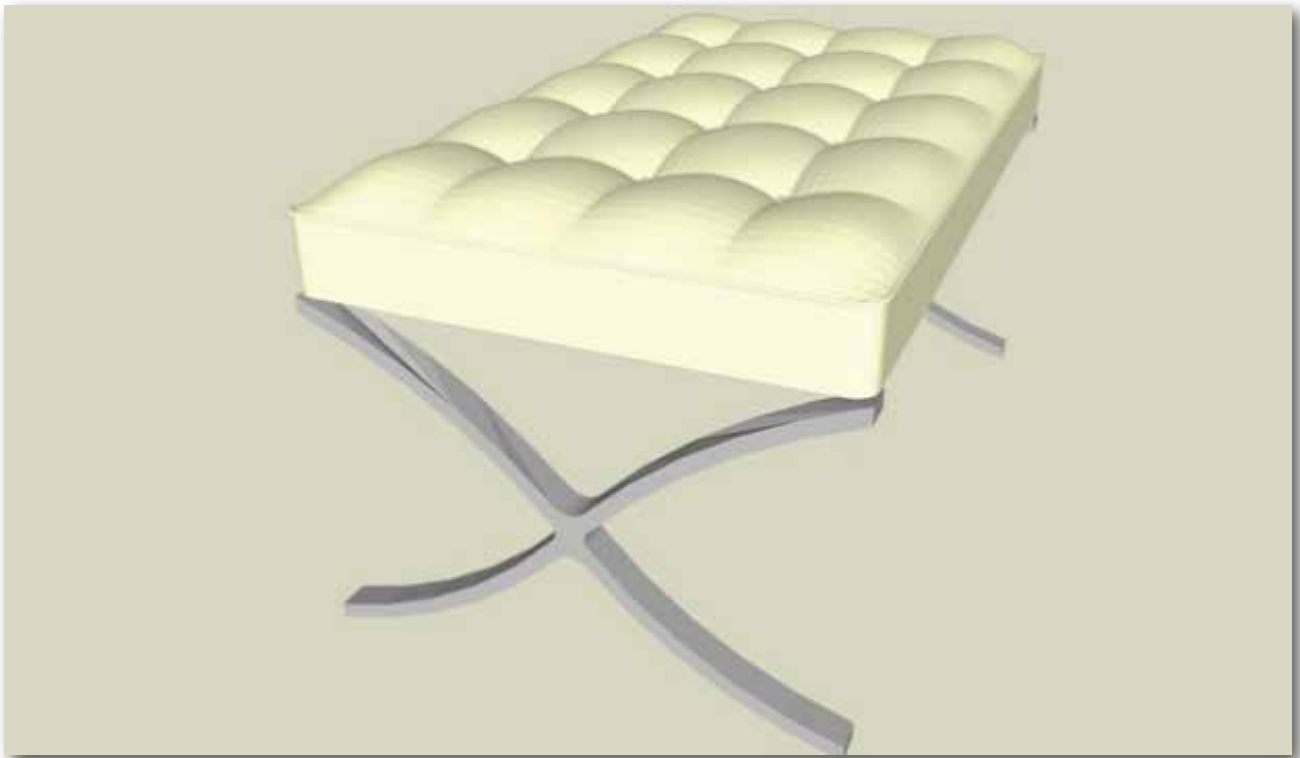


Figure 43. Barcelona German Pavilion chair





*Figure 44. Barcelona German Pavilion stool*



*Figure 45. Barcelona German Pavilion couch*



• **CG furniture final renders**



*Figure 46. Fransworth House's furniture*



*Figure 47. Fransworth House's furniture*





Figure 48. Tugendhat House's furniture



Figure 49. Fransworth House's furniture



#### 4.6. Final renders

##### • Crown Hall



Figure 40. Crown Hall render

##### • Fransworth House



Figure 41. Fransworth House render



• German Pavilion



Figure 42. German Pavilion render

• Tugendhat House



Figure 43. Tugendhat house render



## 5. Creating and editing the video

### 5.1. Planification

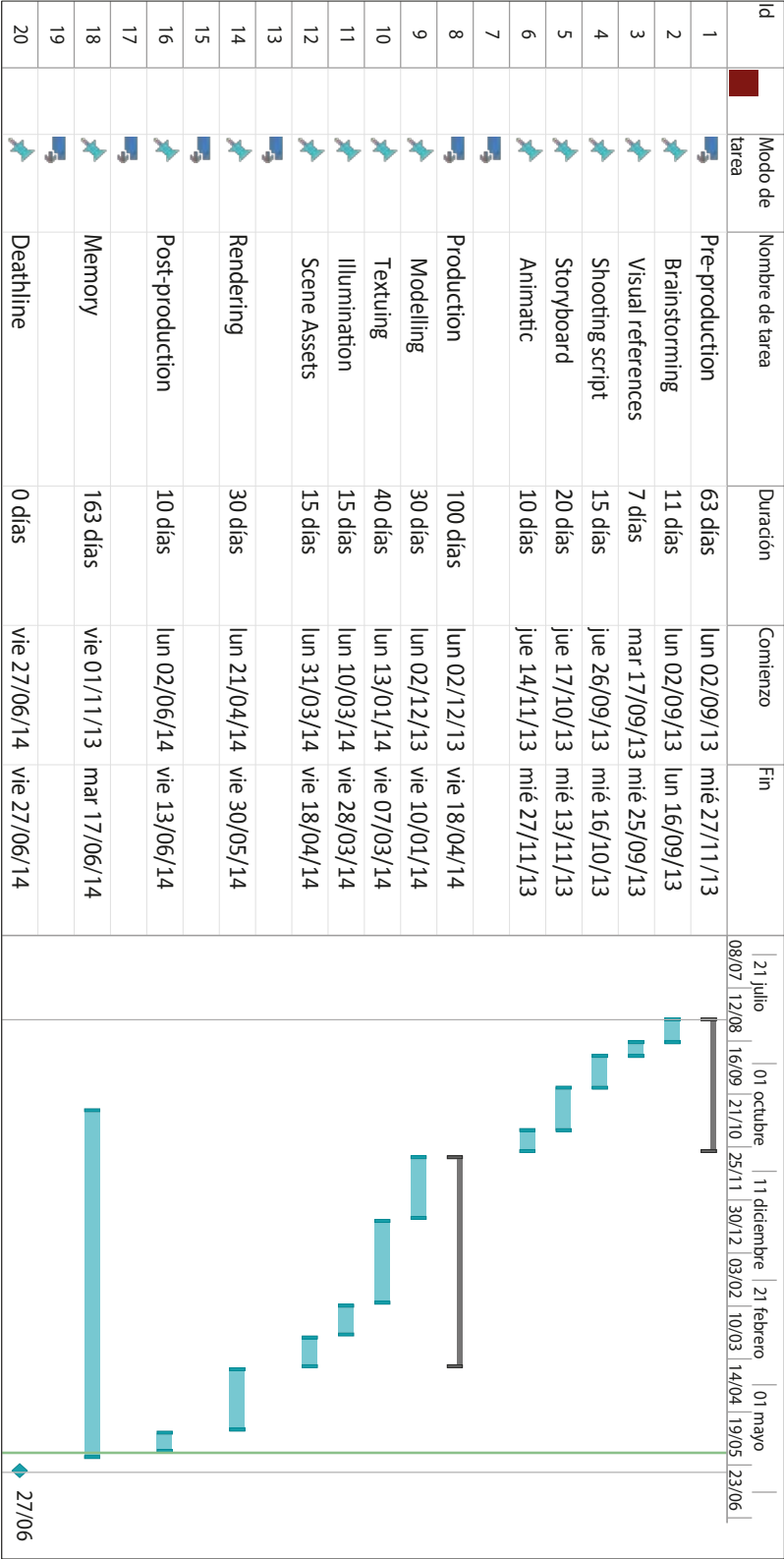


Figure 44. Gantt diagram



## 5.2. Shoot types

**Types of shoots depending on the distance between the camera and the subject photographed.**

**Great Wide** is a type of shoot that shows a large stage or crowd. It has a descriptive function and can also have a dramatic function when we want to represent the smallness or loneliness of the protagonist. They also tend to show landscapes.



**Wide:** A type of shot that shows a large stage, the characters are generally Length. Because the number of items that can be displayed on a general level, it is appropriate that the duration is wide screen so that the viewer can stand.





**American shoot:** Also known as three quarters is a type of shoot that was born in the American Western genre. It is characterized by the upper and lower limits coincide with the character's head and knees.

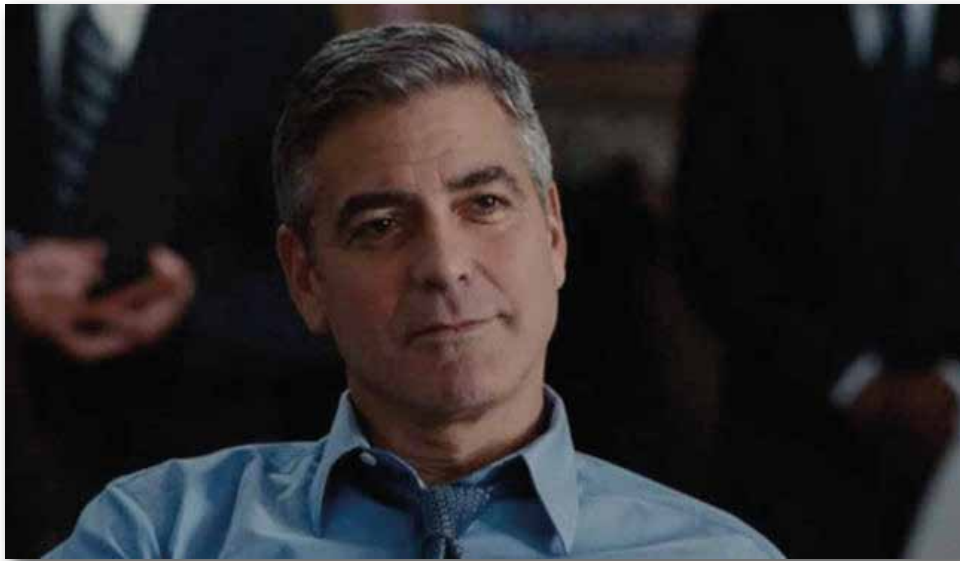


**Medium shoot:** This is a smaller frame that focuses on the character. Directs the viewer's attention to the object. The elements are differentiated groups better and people are recognizable and can even fill the screen.





**Spotlight:** Is the level of the entire face of the character including the shoulders. It is a more intimate level with the expressive character. The actor's face fills the screen.



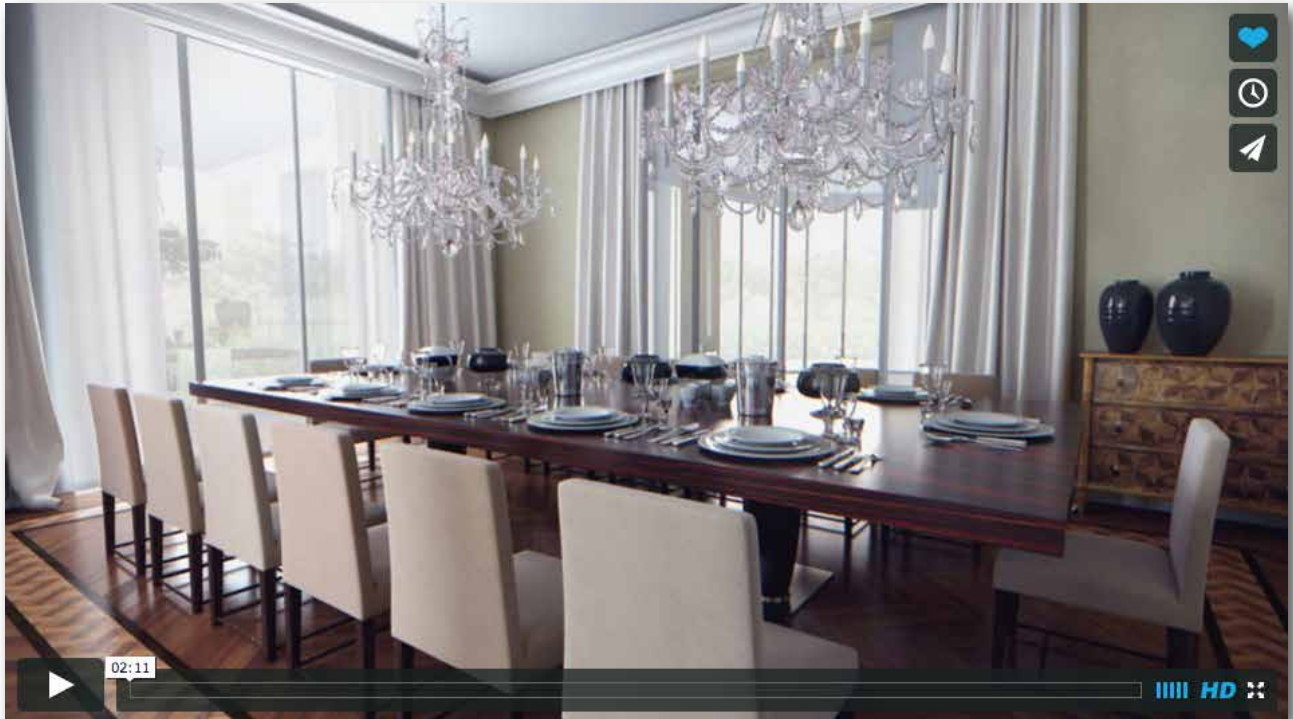
**Detail shoot:** Displays the detail of an object, an element serves to emphasize and highlight detail that the viewer will not go unnoticed.





### 5.3. Pre-production

#### 5.3.1. Visual references

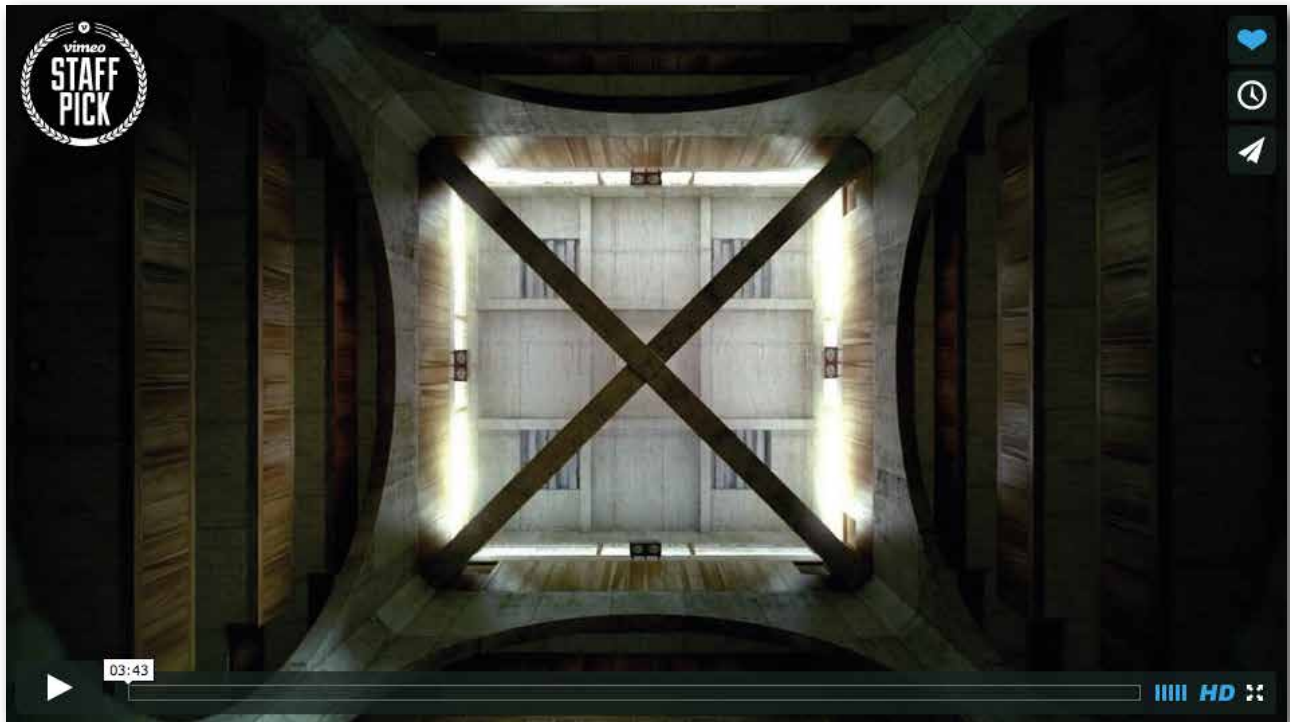


**Villa Cologny Architecture Visualization** - Studio Aiko Ltd. 3ds Max & Vray  
<https://vimeo.com/9799783>





**Crystal CG Architecture** - Crystal CG.  
<https://vimeo.com/63900047>



**Kahn's Exeter Short Film** - Alex Roman  
<https://vimeo.com/5407991>



**The Third & The Seventh** - Alex Roman  
<https://vimeo.com/7809605>



### 5.3.2. Shooting script

#### Scene 1. Sequence 1

Number	Type	Object	Description	Duration
001	Detail shoot	<b>Interior.</b> Farnsworth	<b>DAY.</b> Casting to a black image with a change of approach.	4s
002	----	----	---. Title with capital letters	3s
003	Medium shoot	<b>Interior.</b> Farnsworth	<b>DAY.</b> Lateral traveling of the interior of the building focusing details.	4s
004	Full shoot	<b>Exterior.</b> Clouds	<b>DAY.</b> Clouds time-lapse.	3s
005	Detail shoot	<b>Exterior.</b> Crown hall	<b>DAY.</b> Reflection of clouds through glass.	2s
006	Full shoot	<b>Exterior.</b> Crown hall	<b>DAY.</b> Lateral traveling around a corner of the building.	4s
007	Detail shoot	<b>Exterior.</b> German Pavilion	<b>DAY.</b> Zoom-in of the building reflection in the water.	4s
008	Full shoot	<b>Exterior.</b> German Pavilion	<b>DAY.</b> Lateral slow traveling focusing the building from the outside.	6s
009	Full shoot	<b>Exterior.</b> Tugendhat House	<b>DAY.</b> Fixed camera focusing tree moving in the wind.	2s
010	Full shoot	<b>Exterior.</b> Tugendhat House	<b>DAY.</b> Time-lapse of the building.	3s
011	Full shoot	<b>Interior.</b> Tugendhat House	<b>NIGHT.</b> Camera through the first floor.	5s
012	Detail shoot	<b>Interior.</b> Tugendhat House	<b>NIGHT.</b> Change of approach of the piano.	3s
013	Full shoot	<b>Interior.</b> Tugendhat House	<b>NIGHT.</b> Stairs of the building from above.	4s



### Scene 1. Sequence 2

014	Full shoot	<b>Exterior.</b> Farnsworth	<b>DAY.</b> Vegetation while it is raining.	4s
015	Full shoot	<b>Exterior.</b> Farnsworth	<b>DAY.</b> Images of the building in different seasons.	7s
016	Full shoot	<b>Exterior.</b> German Pavilion	<b>DAY.</b> Reflection of a drop falling into water.	2s
017	Detail shoot	<b>Exterior.</b> German Pavilion	<b>DAY.</b> Reflection of sunlight on one of the walls and the floor.	3s
018	Detail shoot	<b>Exterior.</b> German Pavilion	<b>DAY.</b> Approach of the sculpture of the German Pavilion.	2s
019	Full shoot	<b>Exterior.</b> Tugendhat House	<b>DAY.</b> Traveling horizontal from outside the building.	4s
020	Full shoot	<b>Exterior.</b> Tugendhat House	<b>DAY.</b> Zoom-In to the upper entrance of the building	3s
021	Detail shoot	<b>Interior.</b> Farnsworth	<b>NIGHT.</b> Traveling of the living room.	3s
022	Detail shoot	<b>Interior.</b> Farnsworth	<b>NIGHT.</b> Zoom-In of the couch of the living room and casting to black.	5s

### Scene 1. Sequence 3

023	Sequence	---	<b>DAY.</b> Composition of the 4 buildings done on the project in the same shot.	8s
024	Full shoot	---	---. Credits	5s

**Estimated total duration: 100 seconds (1:40 minutes)**



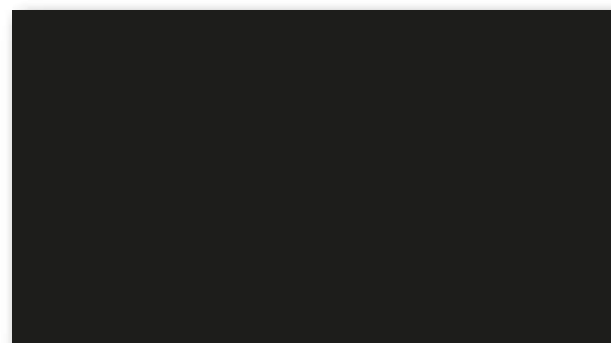
### 5.3.3. Storyboard













#### 5.3.4. Animatic

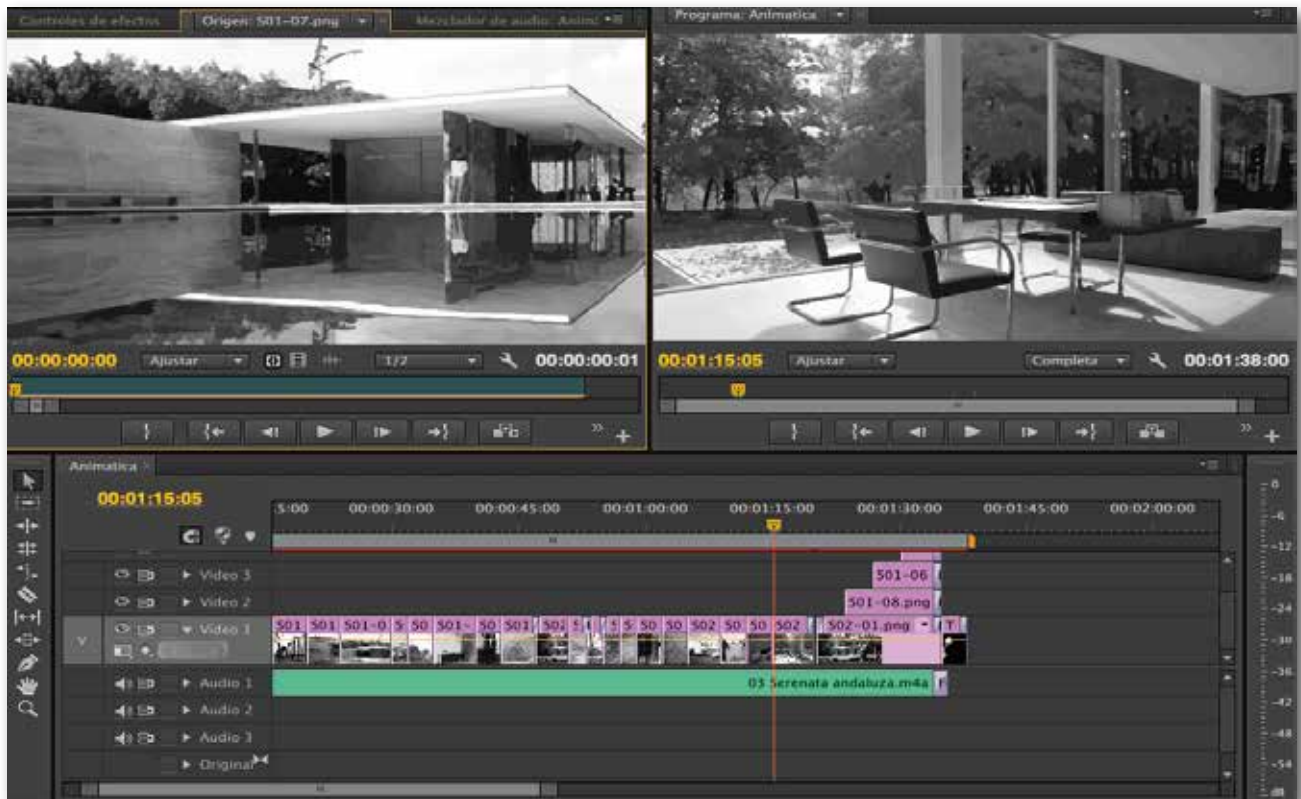


Figure 44. Animatic Premiere Project



#### A different view of Mies Van Der Rohe's Work - Animatic

<https://vimeo.com/89119953>



## 5.4. Post-production

### 5.4.1. Post-production editing

Before reaching this part of the project I have spent almost two weeks rendering all the shots needed for the project. All these shots were exported as sequences of \*.tiff images which were imported later on the premiere master.

Once I had all the shots imported inside Adobe Premiere, I decided to add all to the timeline in the order I had on the storyboard.

However, although I planned to do it in this way on the storyboard, the result was not that great. So I decided, to add some postproduction on it. First of all, I moved some shots to the right and left of the screen in order to make a composition of two or more images in the same shot. This effect can be seen on the image below.



Figure 45. Composition of several images

In addition, I also used black and white images in order to contrast coloured ones to give the film much more dynamism. Moreover, depth of field and changes of approach had also been used.

Last but not least, I have also used colour correction in all shots in order to uniform the colour gamma used in all the film. This procedure will be explained in the next paragraph.



Figure 46. Composition of several images



### 5.4.2. Color correction

Once I had all the shots placed into the timeline, I proceeded to homogenize all of them. To do so, I used three-dimensional colour correction and bright & contrast effects focusing on representing highlights, midtones and shadows into a warm colour palette.



Figure 46. Colour correction

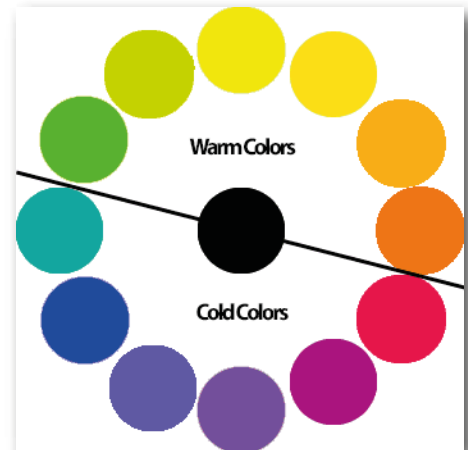


Figure 47. Colour palette

#### Why using a warm colour palette instead of a cold one?

I decided to use a warm colour palette in order to simulate old cameras from the early 20th century. The same period when Mies Van Der Rohe developed his work and thought impressive buildings that ended up as a reference for the Bauhaus movement.



Figure 48. Colour correction comparison



### 5.4.3. Audio editing

The audio, and specifically the music that accompanies the images, is a very important part in this project due it sets the pace of the video. This is the reason why I have taken into account, through the spectrogram, where the energy of the music is distributed.

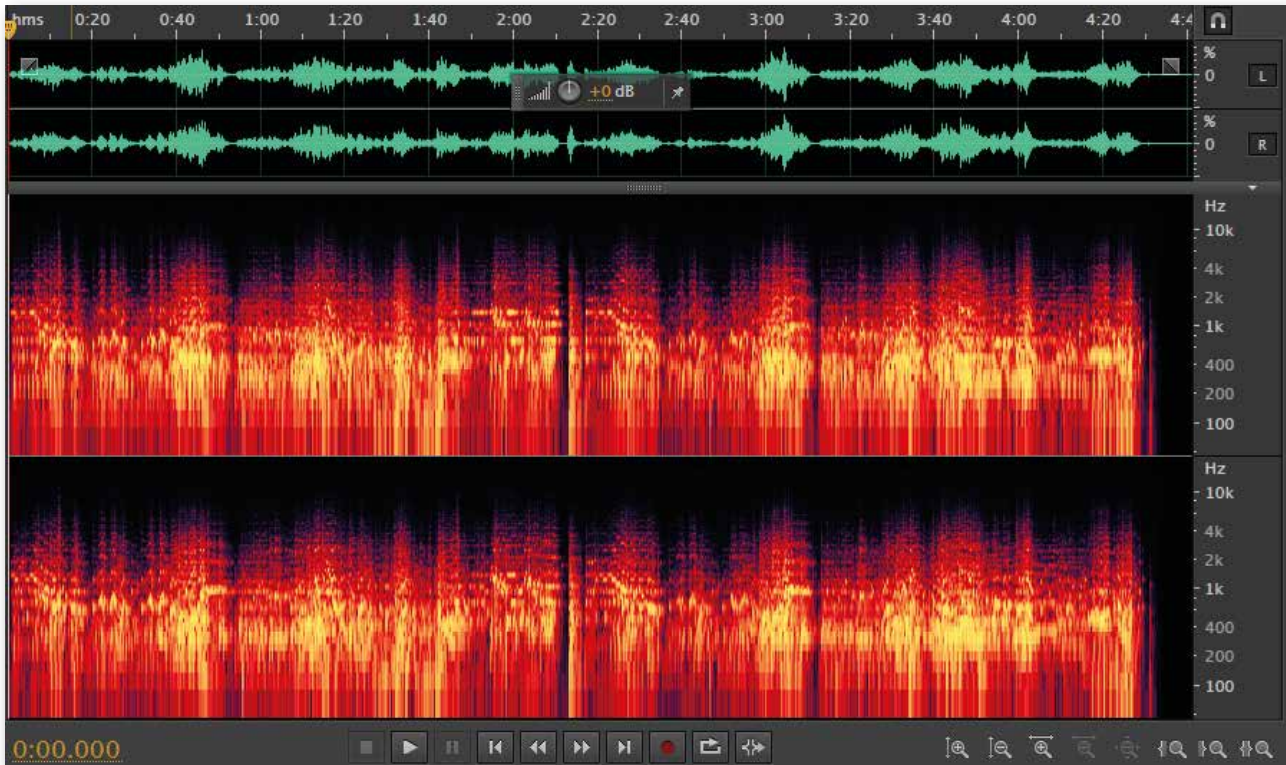


Figure 49. Music spectrogram

As it can be seen above, the music has energy uniformly distributed in all its duration. However, I was looking for music with a low volume at the start and the finish. Therefore, I applied an exponential gain filter in order to increase or decrease the volume of the music during the given time.

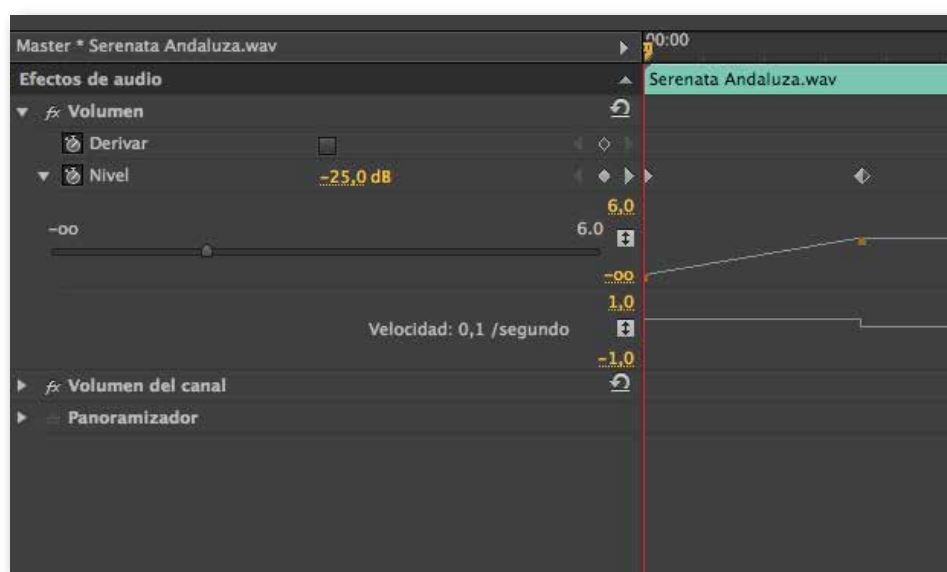


Figure 50. Music exponential ganancy effect



## 6. Final edited video

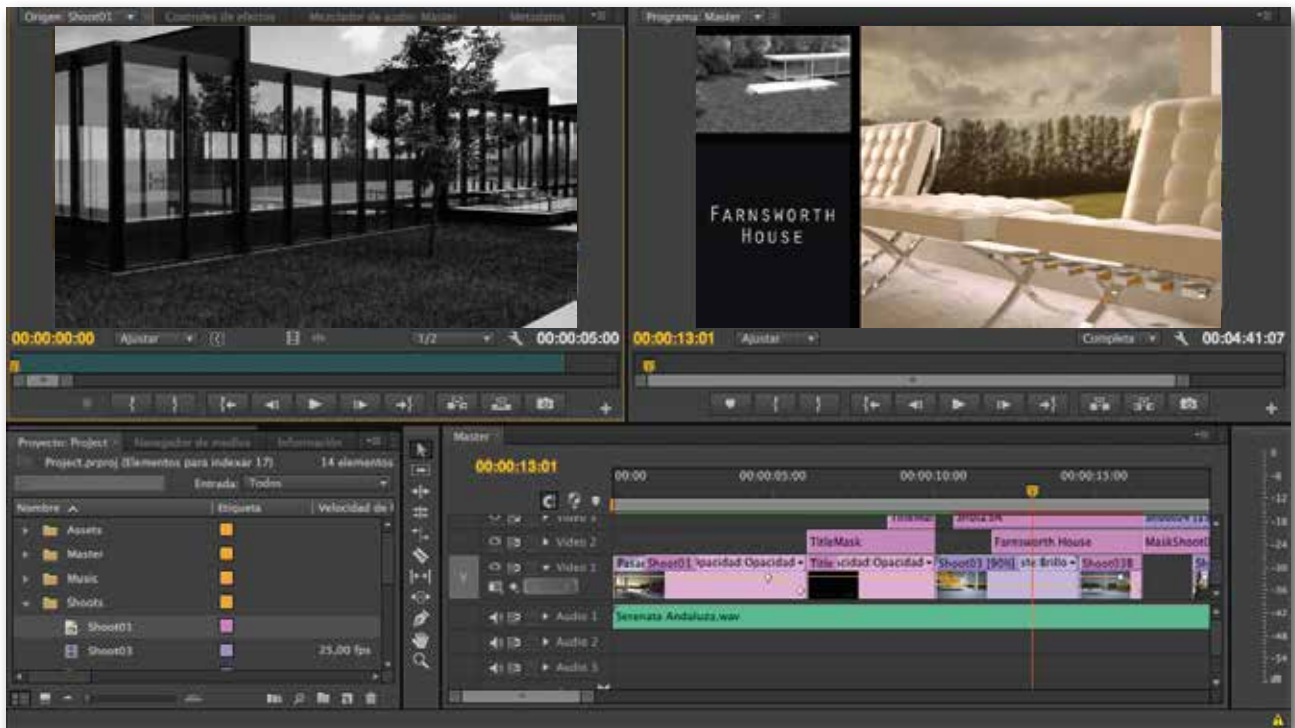


Figure 51. Final Premiere Project



**A different view of Mies Van Der Rohe's Work**

<https://vimeo.com/98365599>



## 7. Conclusions

After many hours of dedication and effort to get this project finished I can say that the result is similar to the idea that once I wrote in the presentation. Likewise, the idea I had in mind when I started to develop this project can now be seen in the final video that is accompanying this paper.

However, this work has been a challenge because of its technical complexity and the need of high computer processing. This has made the project-planning key, in order to deliver the results on time. Therefore, a good organization of the various stages of the project has been the key point to have time to do all the different stages of it.

Personally, I am satisfied with the results and I think that it fits the number of hours that must be dedicated to complete this project. However, the results could be improved in several aspects, but the realization of these extends the framework of this project. Therefore, they are relegated to a possible mid-term personal project.

Finally, I must add that it has been a very rewarding project due it is an area where one can see very clearly the changes that the project takes in all the stages of it.



## 8. Bibliography

### Electronic references

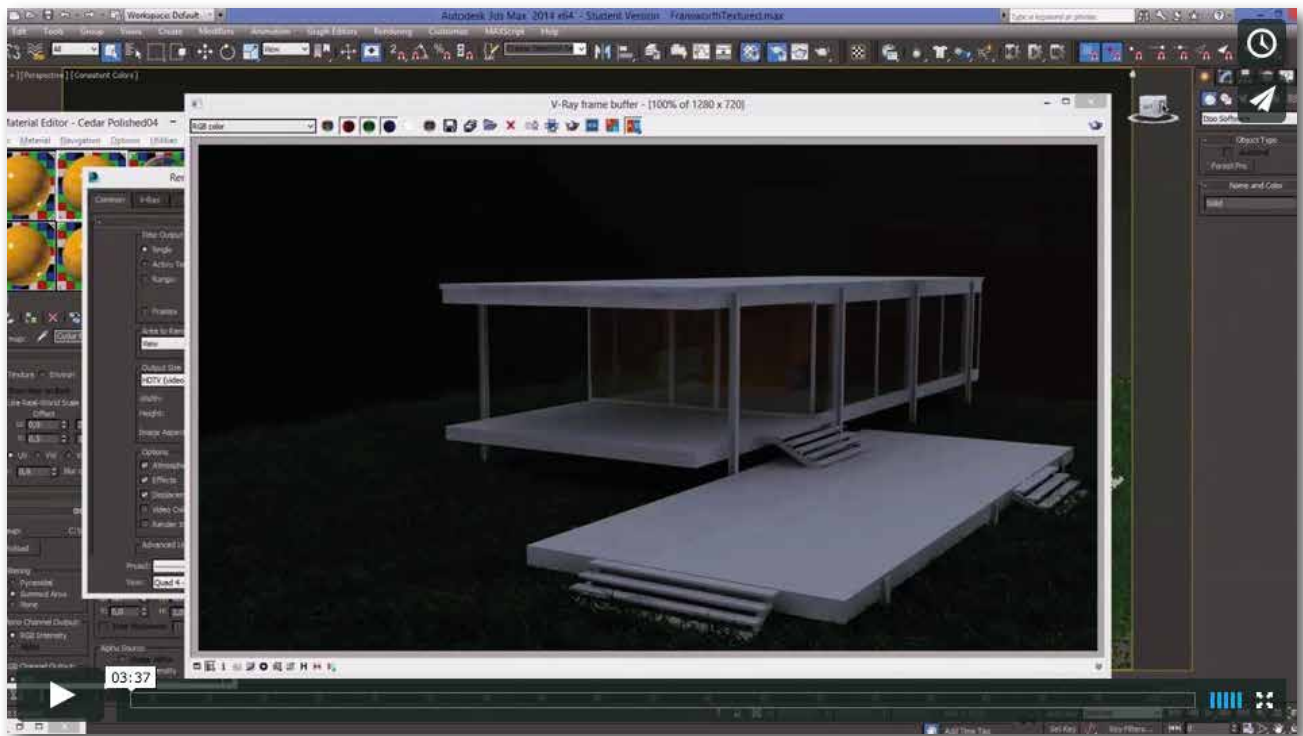
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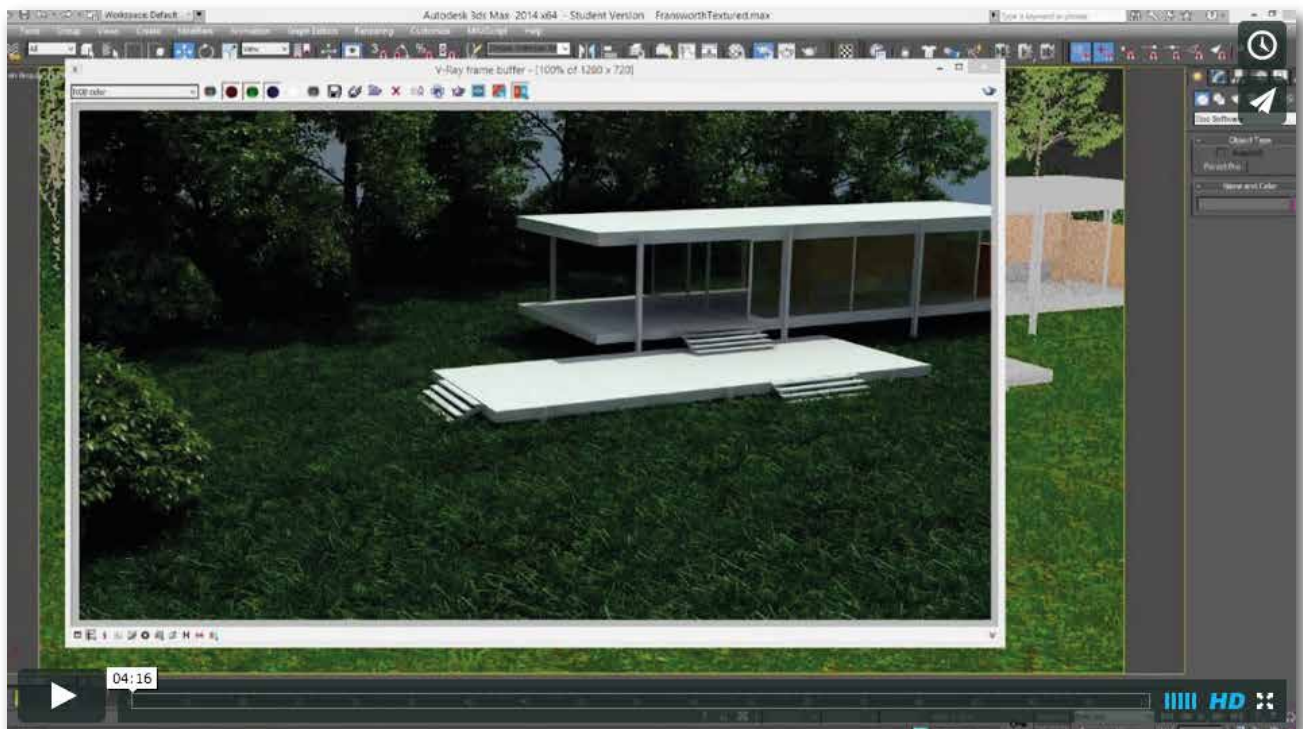
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## 9. Annexes



**Farnsworth House - CG Texturing** - 57' 30" Work TimeLapse  
<https://vimeo.com/78051747>



**Farnsworth House - Environment** - 74' 15" Work TimeLapse  
<https://vimeo.com/85678007>



# MANY THANKS!

