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College of Imaging Arts and Sciences
in candidacy for the degree of
Master of Fine Arts

**MOARABISQUE: THE ESSENCE OF ARABIA; A MOTIONGRAPHICS PIECE THAT
PROMOTES THE DIVERSE SAUDI ARABIAN ARTS AND CULTURE**

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Abstract

Moarabisque: The essence of Arabia is an "Arabian custom designed motion graphics series". This Series is inspired by the diverse geography, architecture, arts, and culture of the Arabian Peninsula.

These series are merged together as a cohesive motion graphics piece that visually reflects and promotes the varied Arabian culture through arts, architecture, music, and Islamic iconography.

The final motion graphics video will introduce a series of visual icons that are of vital importance to religious and cultural values of Muslims; especially the Arabic nation. These icons delineate the characteristics of the Arabian culture; an Islamic civilized culture that emerged from the Arabian Desert and is visually rich in arts, architecture, and heritage.

My thesis is an endeavor to implement motion graphics as an effectual multimedia tool. This tool will visually reflect and promote the inimitable culture and distinctive art of Saudi Arabia. The thesis comprises four distinct motion graphics videos. These videos will visually showcase various aspects and sceneries of the Saudi architectural heritage, artistic aura, and cultural ambiance to the intended audience. This will help them establish a strong sense of visual awareness towards not only my culture but also the aesthetic values surrounding it.

Thesis URL

<http://www.wailalhamid.net>

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1. Introduction

Motion graphics is one of the most ingenious artistic tools available to visual designers. The realm of motion graphics is relatively recent. This area of interest has evolved as a new transfixing form of 'Computer Generated Graphics Design' that utilizes time based imaging and audio, not only to visually convey a message to an intended audience but also to serve as a promotional multimedia tool.

The dynamic effects of this realm can be seen within every aspect of our daily digital life, including a strong presence in television, Internet, entertainment, and commercial shows. These aspects have had huge technological advancement in today's digital age.

As a visual designer with an Arabian origin and immense passion for motion design, I strongly believe that media has misrepresented my culture. It has neglected its rich artistic and architectural heritage.

Therefore, I believe that it is my obligation to utilize my abilities and creativity to create an appropriate and warranted image of my culture, and to promote the true visual essence and aesthetical values of the Saudi traditions.

The most fundamental question for me as a motion graphics designer is that how can computer graphics in general and motion graphics specifically be used effectively to promote the true essence of Arabian culture and to resolve any misconceptions about it?

1.1 Inspiration

Various reasons have inspired me for choosing this topic as a thesis subject. The first reason is an appalling fact i.e. the existence of people who still believe that the Middle East is nothing but a third world developing nation, with neither a sophisticated visual culture nor a rich aesthetic artistic heritage.

The second reason is the strong influence of the Arabesque art on the realm of universal visual design and Arabian graphical arts. The art of Arabesque has a strong presence in many aspects of the Arabian culture including architecture. This visually sophisticated decorative art is considered to be one of the most important artistic heritages of the Arabian culture. It is thought of as a strong indicator of the advancement and civilization of this culture in the fields of arts and mathematics.

This art is based on implementing abstract geometrical shapes such as hexagons, circles and rich ornamental patterns by visually arranging them in a mathematical symmetrical order with an elegant visual style.

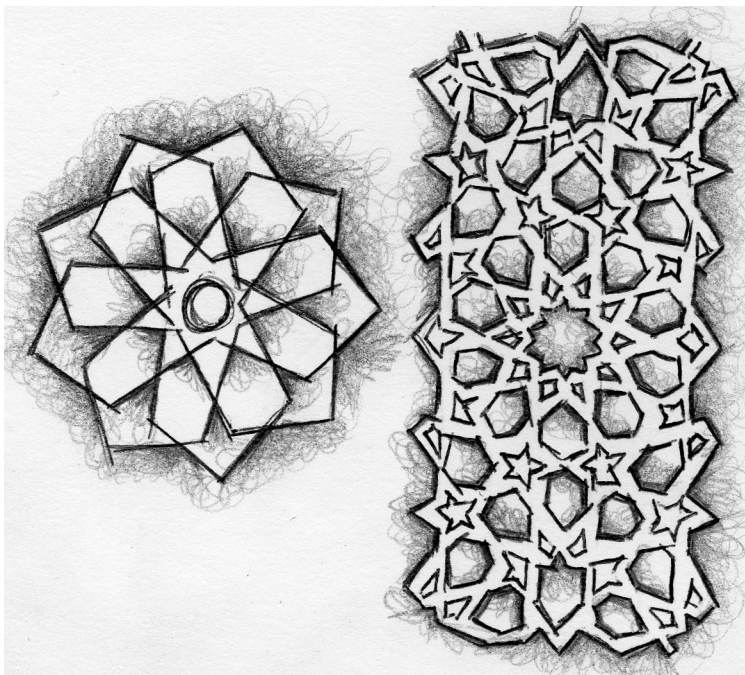


Figure 1.1.1
Geometrical development of an Islamic star pattern

The third and final reason is the lack of the art of Arabesque and contemporary Arabian motion graphics videos that promote the Arabian culture.

Moreover, there are very few Arabian motion graphics designers who implement the art of Arabesque in their motion design to reflect the diverse sceneries of the Arabian culture and to visually communicate the surrounding heritage.

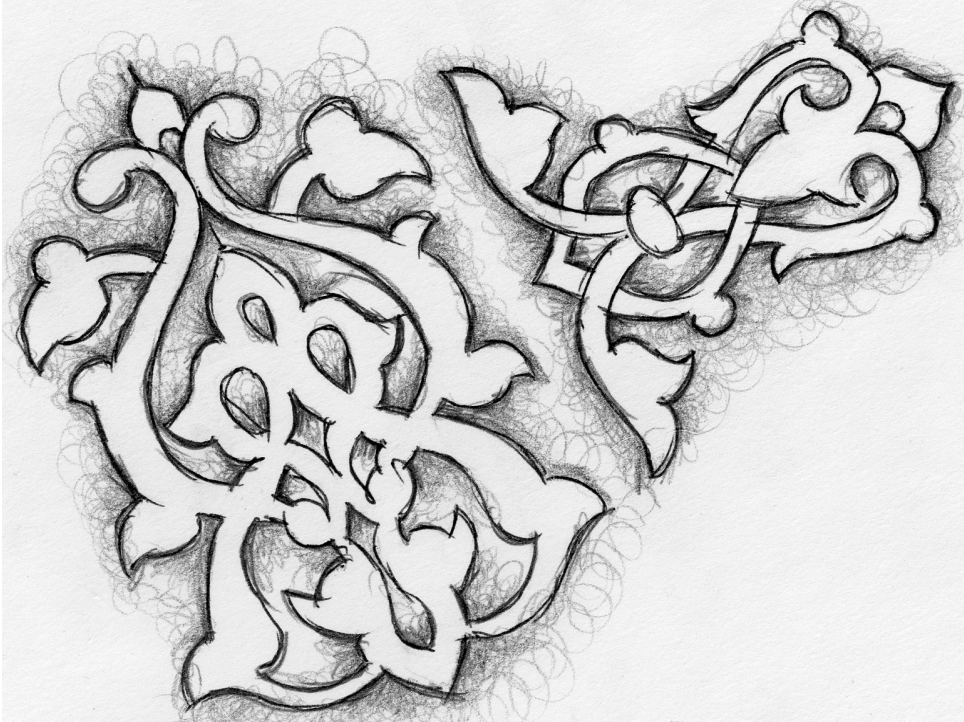


Figure 1.1.2
Floral Arabesque pattern design

All such reasons have inspired me to design motion graphics as a great cause i.e. promoting my culture by advancing it visually through an impressive implementation of the art of Arabesque in my motion graphics video. This art will act as a visual transition tool encompassing the diverse sceneries of my culture and will establish a robust sense of visual awareness about the Arabian arts and heritage.

1.2 Thesis Scope, and Research

1.2.1 Thesis Scope

Due to the diverse geography, sceneries, and culture of the Arabian world, the main thesis scope will focus on capturing the cultural and artistic essence of Saudi Arabia visually.

Saudi Arabia is the largest country in the Arabic Islamic world. It holds a vastly significant value to billions of Arabs and Muslims across the globe. The kingdom of Saudi Arabia encompasses the holy city of Mecca - the religious capital of the Muslim world, and the core of the Islamic religion.

Moreover, Saudi Arabia is the origin of many Arabian-Islamic sciences and numerous Arabian graphical arts such as the art of Islamic calligraphy, Arabesque, and traditional Islamic architecture.

Therefore, this thesis will visually showcase these numerous heritages by implementing various visual icons that reflects their physical features. It will start with the introduction of the Astrolabe element and will conclude with the traditional Islamic architecture and its surrounding artistic heritage.

1.2.2 Thesis Research stages

Live case studies of the kingdom of Saudi Arabia were conducted for development of both the thesis concept and the content. These case studies included multiple trips to Saudi Arabia for making close observation and to study the diverse sceneries, Islamic architecture, and artistic culture of the kingdom.

Moreover, these trips were carried out to acquire custom made musical soundtrack to enhance my motion graphics piece, and to get introduced to many features of the Arabian culture arts, and heritage.

Therefore, the following are the developed research stages organized in an order that is based on the various trips I made to the kingdom of Saudi Arabia.

First Stage: The art of Arabesque and Islamic patterns

Second Stage: The Astrolabe

Third Stage: The Arabian Desert and architectural ruins

Forth Stage: The holy city of Mecca

Fifth Stage: The traditional city of Jeddah

1.3 The art of Arabesque and Islamic patterns

In ancient times, the people of Saudi Arabia possessed a strong and unique identity based upon the religion of Islam. Saudi Arabia is an Islamic modern conservative nation that adheres to Islam and honors its Arabic heritage and tradition.

This country has a rich culture shaped by its Islamic heritage. For instance, Saudi Arabia has a historical and prestigious geographical location as the birthplace of the Islamic religion and the abode to the holy city of Mecca.

One of the most valuable inherited artistic heritages of this culture is the art of Arabesque and Islamic patterns. Both of these arts have a strong presence in Islamic architecture especially mosques. The art of Arabesque, “The abstract and complex ornamental design of intertwined floral, foliate, and geometric figures”, is an ancient Islamic art that dates back to the early beginning of the seventh century.

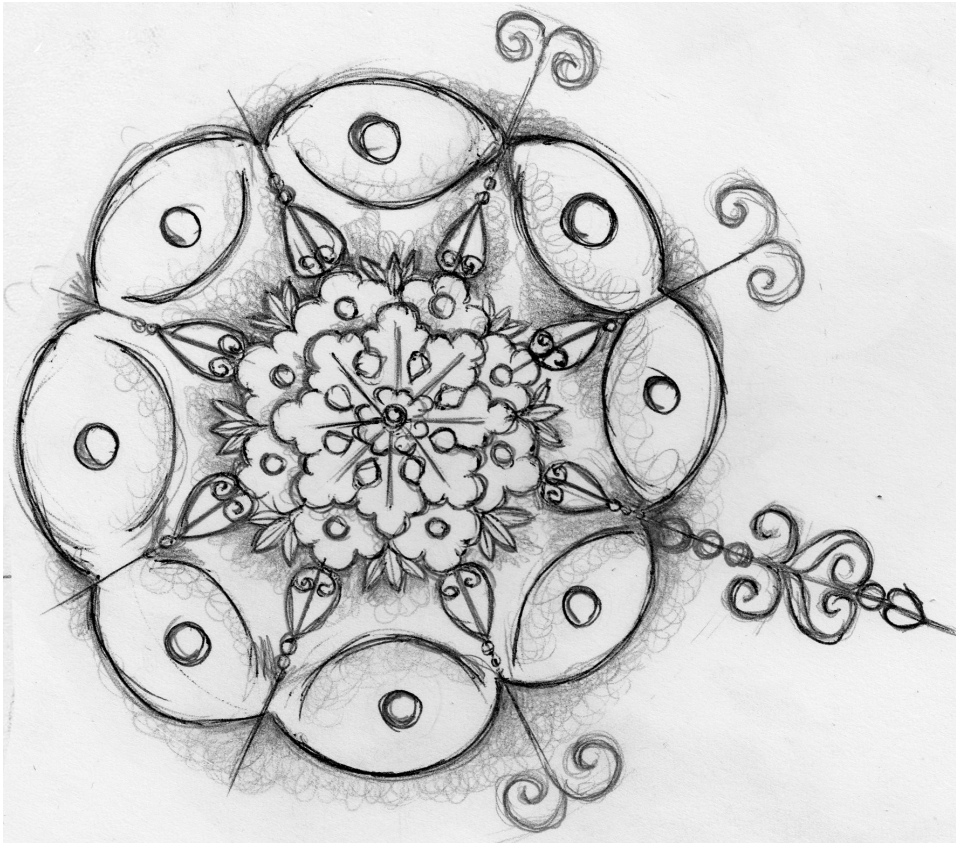


Figure 1.3 .1 Circular Islamic floral ornamental design.

The Seventh century marks the birth of the Islamic religion in the Arabian Peninsula. This period saw the development of new form of arts based on visual portraying of intricate patterns, and Arabic calligraphy, rather than an implementation of human figures that are forbidden in both the Islamic religion as well as the inherited art.

The second Islamic art form that is quite similar to Arabesque in terms of the aesthetic values and complexity is the art of Islamic patterns and ornaments.

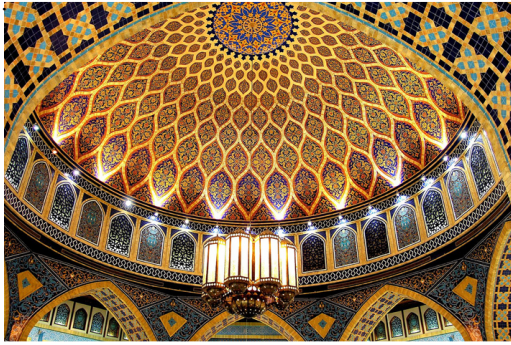


Figure 1.3.3 Intricate Islamic geometrical patterns found within a mosque in Saudi Arabia.

Source: <http://saudiembassy.net>



Figure 1.3.4 Detailed close-up of a typical Islamic pattern found within a mosque courtyard

Source: <http://saudiembassy.net>

The art of Islamic geometrical pattern is based on the usage of abstract geometrical shapes such as squares, circles, and octagons placed on a grid system and constructed by using a geometric compass to produce intricate geometrical symmetrical shapes such as the eight pointed Islamic star.

Both of these graphical arts define some of the various features of the Arabian culture a sophisticated civilized culture that is visually rich in the realm of graphical arts

1.4 The Astrolabe

The Astrolabe is one of the most important inherited elements of the Arabian culture and sciences. This element defines the Arabian culture being associated with a nation that uses the Islamic lunar calendar to determine their way of living.

The people of the Arabian Peninsula use the Astrolabe to determine the beginning and end of each lunar calendar month. They use the knowledge of the physical location of the moon and its various stages of development from crescent to the full moon.

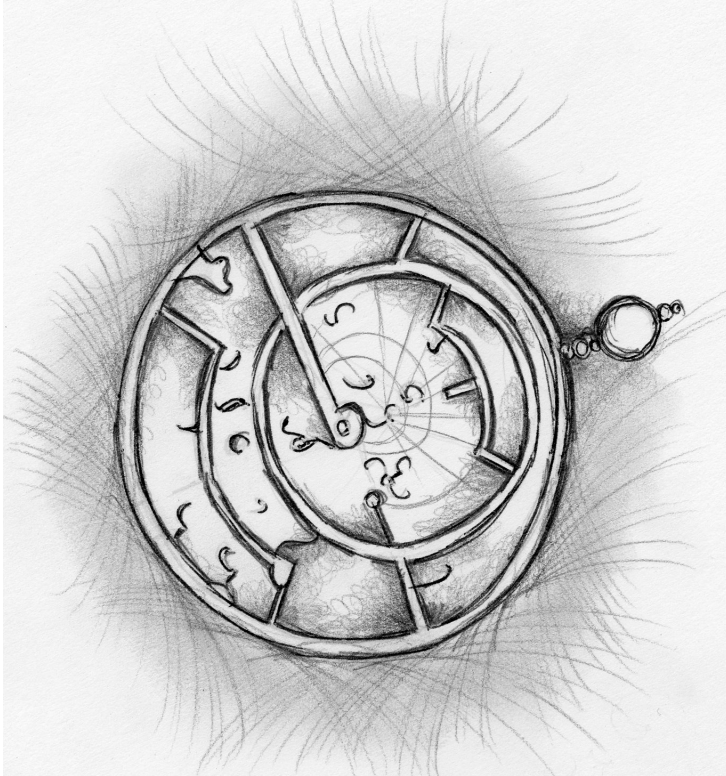


Figure 1.4.1 an 18th century Islamic astrolabe

One of the most important Islamic calendar months for Muslims is the holy month of Ramadan. It is visually marked by the usage of the Astrolabe.

In the holy month of Ramadan, from sighting the crescent of this month, many Muslims abstain from eating and drinking from dawn till sunset. This religious obligation is being performed by billions of Muslims every year to share the feelings of those who are deprived from the simple goods and joys of life.

Moreover, the Astrolabe is an ancient Islamic celestial element that is being used by many Muslim Astronomers to predict the physical location of the stars, sun, planets, and most notably, the orientation of the Qibla.

The Qibla is direction of the holy mosque situated within the city of Mecca. Billions of Muslims head towards Qibla when performing their five prayers daily by perceiving the orientation of Qibla through the physical coordinates of the Astrolabe.

1.5 The Arabian Desert

The kingdom of Saudi Arabia has a unique Bedouin culture that has emerged from the Arabian Desert. This Desert, also known as “the Empty Quarter”, is one of the largest sand deserts in the world. It encompasses most of the Arabian Peninsula.

Moreover, this desert is the home to many Bedouin tribes who reside in the Arabian Peninsula. These tribes date back to early time era as 312 BC. They came from all over the peninsula. While residing in the Empty Quarter, they have established the preliminary foundation of the Arabian arts and architectural civilization.

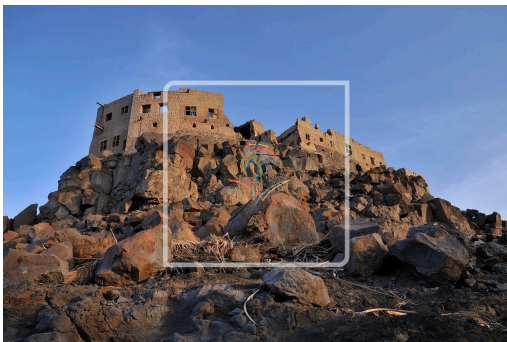


Figure 1.5.1 panoramic view of the Najd district desert in Saudi Arabia

Source: <http://photos.scta.gov.sa>



Figure 1.5.1 panoramic view of the Hail district desert in Saudi Arabia

Source: <http://photos.scta.gov.sa>

One of the most important architectural ruins of this desert that still exist today is the ancient city of “Mada’in Saleh”. This ruin, which is built on the mountains of the northern parts of the kingdom, is one of the most valuable historic architectural heritages of Saudi Arabia.



Figure 1.5.3 close-up of a traditional gate found within the desert ruins in Saudi Arabia

Source: <http://saudiembassy.net>



Figure 1.5.4 close-up of maiden saleh desert ruins found in the southern region of Saudi Arabia

<http://saudiembassy.net>



Figure 1.5.5 close-up of the Masmak desert fortress found in central Saudi Arabia desert

<http://saudiembassy.net>

These ruins also possess immense value in the Islamic religion as they were mentioned in the holly Quran; “They used to carve secure homes out of the mountains”. The inherited artistic style from these tribes that is strongly found in these ruins trace its roots to the earlier byzantine period. It serves as a strong indicator of ancient civilization of the kingdom both from an artistic as well as an architectural point of view.

Moreover, these ruins define a significant feature of the Arabian culture- an ancient civilization that emerged from the Arabian Desert and has a rich architectural heritage.

1.6 The holy city of Mecca

The greatest influence of Saudi Arabian culture is from the Islamic Religion. This feature defines it as a unique and inimitable culture. Moreover, the religion of Islam is considered to be one of the world's great monotheistic religions,

The religion of Islam was spread from the holy city of Mecca - the place where the late prophet Mohammad “peace be upon him” was born. Therefore, from a religious and historical point of view, Saudi Arabia in general, and the holy city of Mecca specifically, hold a special place in the Islamic world.

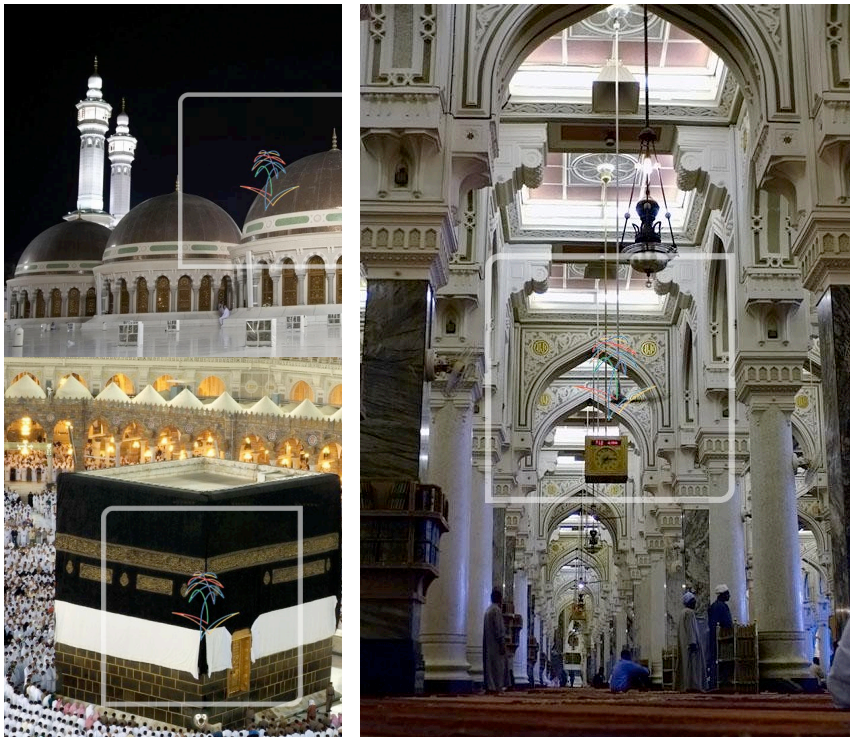


Figure 1.6 different views of the holly mosque, and holly Kaaba in Mecca, Saudi Arabia

Source: <http://photos.scta.gov.sa>

The holy city of Mecca encompasses the Islamic world’s most sacred shrines i.e. the holly mosque “Al Masjed Al Haram”, and the holly Ka'abah, “the house of God (Allah)”. Both of the holy mosques and the holly Ka'abah represent the iconic symbols of the Islamic religion, and the Saudi Arabian culture. Billions of Muslims turn devoutly to the direction of Mecca in their daily five prayers all across the globe.

Moreover, Mecca is the place where billions of Muslims perform their daily sacred spiritual worship such as the daily five prayers and pilgrimage. It is also the home to ancient Islamic arts and architecture.

Therefore, establishing a sense of awareness about the importance of Mecca, its Islamic heritage and its surrounding Islamic history and culture is crucial for understanding of the history and culture of Saudi Arabia.

1.7 The traditional city of Jeddah

Jeddah is an ancient traditional city located in the western region of Hejaz in Saudi Arabia. This city is located within eighty miles outside the holy city of Mecca. It has a strong correlation with Mecca from both a religious as well as an economical point of view.

The city of Jeddah has developed centuries ago as Saudi Arabia's strongest economical port with a dynamic location on the banks of the Arabian red sea. This crucial geographical location defines it as an Islamic commercial center of the Middle East.



Figure 1.7.1 close up of the old city of Jeddah traditional residential building design.

Source: <http://photos.scta.gov.sa>



Figure 1.7.2 close up of the old city of Jeddah window architectural design found within residential buildings.

Source: <http://photos.scta.gov.sa>

Moreover, the city of Jeddah act as a major gateway to Mecca for thousands of pilgrims coming from all across the globe to perform their sacred Islamic rituals. These pilgrims settle in Jeddah infusing their own cultural identity, arts, economical background, and culture with the Saudi Arabian economy, culture, and arts.

This infusion of diverse cultures, economy, and arts has resulted in an establishment of a well-developed economical city with a rich and unique Islamic architectural heritage and visual arts. Jeddah is a city with eclectic Islamic arts and architectural heritage with its artistic roots tracing back to the cultural backgrounds of numerous pilgrims coming from Africa, Central Asia, Southeast Asia, Europe and the Middle East.



Figure 1.7.3 close up of the old city of Jeddah traditional architectural heritage, found within the western region of Saudi

Source: <http://photos.scta.gov.sa>

2. Review of Literature

There are currently no motion graphics videos these days to further the Saudi Arabian culture. Moreover, there are a few Arabian motion graphics designers who implement the art of Arabesque and traditional Islamic architecture to visually promote their culture. Therefore, the selected literature survey is based on establishing strong historical visual references of the Saudi Arabian culture, Arabian graphical arts, and Islamic architecture.

2.1 Saudi Arabian heritage and Islamic Architecture

The heritage of Saudi Arabia derives from the holy book of Quran - the rich linguistic of the Arabian language and the Bedouin culture. Therefore this heritage strongly manifests its self in various artistic forms inspired from the Arabian Calligraphy, Arabian Islamic ornaments, Islamic architecture, various sceneries of the Arabian dessert, and the Bedouin culture.

The art of Arabian Calligraphy has a strong correlation with the Saudi Arabian heritage. This art has a strong presence in the holy book of Quran, the majority of artworks, craftsman ship found within the walls, doors, and domes of the mosques.



Figure 2.1.1 close-ups of an Islamic calligraphically element found within the religious buildings of Saudi Arabia

The Bedouin culture of Saudi Arabia has a dominant presence in every aspects of the Saudi heritage. For centuries, the Bedouin tribes have come from different corners of the Arabian Peninsula and settled in the Arabian Desert.

These Bedouins played a major role in developing the Saudi culture and establishing the first Saudi state with the help of King Abdul-Aziz Al Saud who is the founder of modern Saudi Arabia today. The most remarkable visual features of the Bedouin culture are found within the diverse sceneries of the Arabian Desert.



Figure 2.1.2 close-up of an old gate in al dareiya fortress in the Najd desert in Saudi Arabia

Source: <http://photos.scta.gov.sa>

The red sand dunes, rocky terrains, mountains, and Arabian palm trees have played a major role in developing the Saudi culture from an architectural and artistic point of view. The architectural ruins of the Najd district and madien Saleh are the most important heritages of the Saudi Arabian Bedouin culture.



Figure 2.1.3 different views highlighting the traditional architectural ruins, and heritage found within the jandreaia desert district in Saudi Arabia

Source: <http://photos.scta.gov.sa>

These ruins illustrate a strong visual example of the architectural style and civilization of the historical era of the kingdom development manifest in its art and architecture.

The Architectural heritage of Saudi Arabia is diverse. It is highly influence by the Islamic religion. The style of this heritage encompasses various architectural styles infused from all across the Muslim world such as Morocco, Turkey, and India.

The Islamic architectural heritage of Saudi Arabia is found within four major structural elements: mosques, tombs, forts, and palaces.

The mosques, and palaces are the most commonly found Islamic structural elements within the kingdom of Saudi Arabia .The mosque, "House of Allah", is a sacred place in both the Saudi and Islamic society, It encompasses hundreds of Muslims daily performing their daily five prayers. The most important architectural elements of the mosque are both the domes, and Minarets.

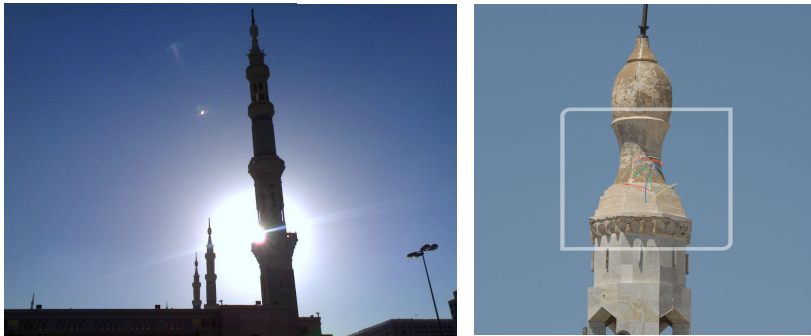


Figure 2.1.6 Close of the minarets of the holly mosque in Medina Saudi Arabia.

Source: <http://saudiembassy.net>

Source: <http://photos.scta.gov.sa>

The Minaret is an Islamic structural element with a tall spire and a crown molding covering its upper part. This Islamic architectural element is found commonly within the Saudi Islamic society and it's located adjacent to the mosque.

This Islamic architectural element holds a strong significance value in both the Saudi and the Islamic society. The minaret serves as a strong visual icon of the Islamic religion. Moreover, the call of the daily five prayers that is heard from all over the city is being given from the top of the minaret.

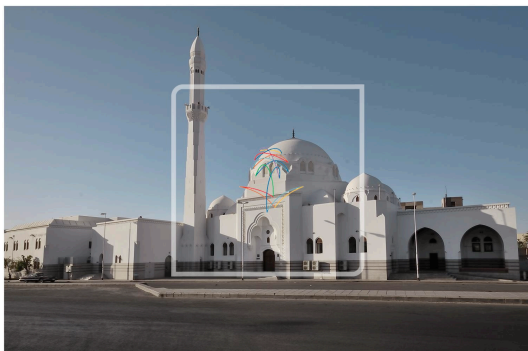


Figure 2.1.6 Close of the grand dome of the qubaa mosque in Medina Saudi Arabia.

Source: <http://photos.scta.gov.sa>

2.2 Islamic Religious icons and symbols

The kingdom of Saudi Arabia has an Islamic culture that is established on the five pillars of the Islamic religion.

The five pillars of Islam are: fasting in the holy month of Ramadan, performing the daily five prayers, Hajj” i.e. performing the pilgrimage to the holy city of Mecca once in a lifetime”, almsgiving to the poor who are in desperate needs, and the Shahada” i.e. testifying that there is none worthy of worship except God and that Muhammad is the Messenger of God.

Each of these pillars has their own visual and symbolic icon. These icons differentiate each pillar from another and mark the beginning and the end of their rituals within the Islamic lunar calendar.

These pillars and their sacred rituals have a strong presence in both the Islamic and Saudi Arabian society.

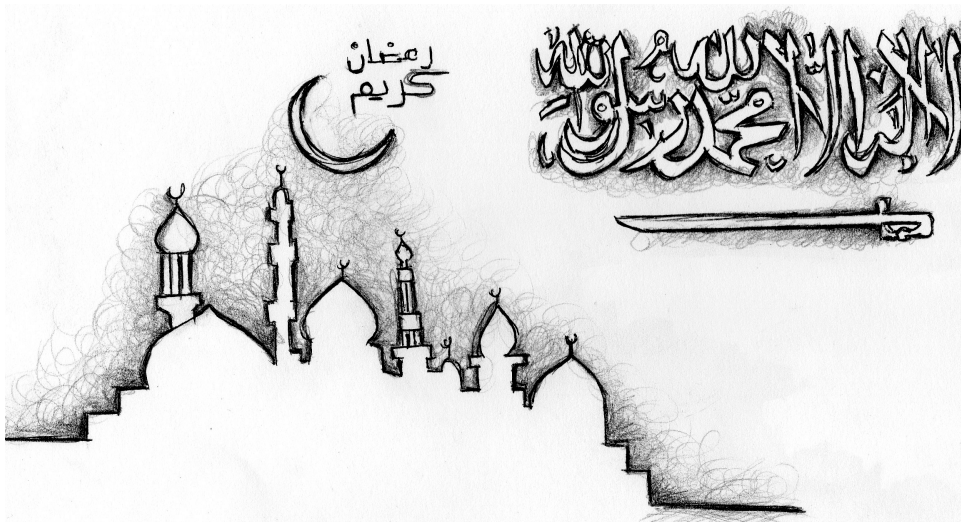


Figure 2.2.1 diverse visual icons of the holy month of Ramadan, and the Islamic creeds found within various Islamic architectural elements in Saudi Arabia.

The holy month of Ramadan is the strongest pillar of the Islamic religion that has a dominant visual presence within the Saudi society.

Millions of Muslims across the globe fast the holy month of Ramadan upon the sighting of the first crescent of the ninth month of the Islamic lunar calendar. During the month of Ramadan, millions of Muslims fast from sun rise till sunset and they stop the fasting process upon the sighting of the final crescent of the month of Ramadan.

The crescent is the first iconic symbol that holds a strong significance in the Saudi Arabian culture.

This celestial visual element defines the Saudi Arabian culture as an Islamic lunar-based one. Moreover, the crescent is used to emphasize the characteristics of the architectural building of Saudi Arabia being Islamic and a sacred spiritual physical place for worship. The crescent is found everywhere within the Saudi culture, from the top of the mosques domes to ornaments, and traditional in Islamic craftsmanship.

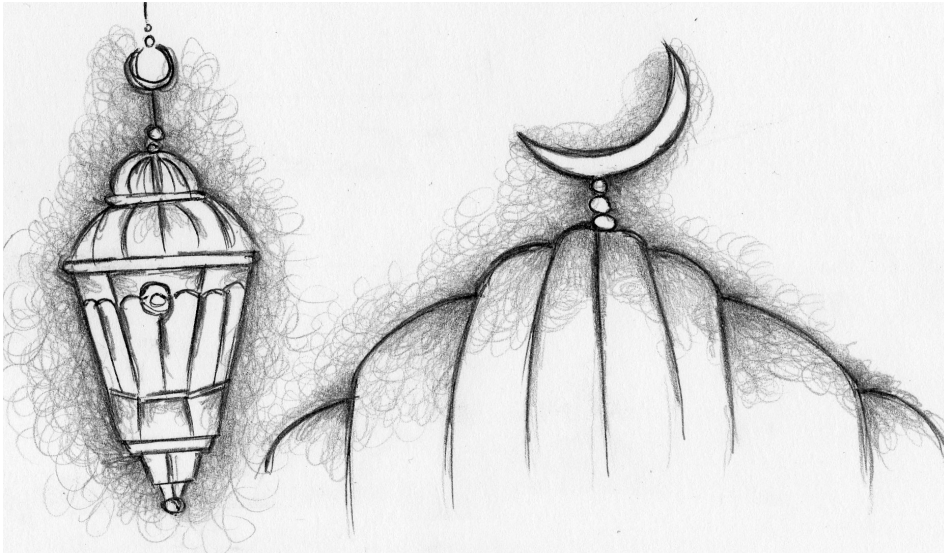


Figure 2.2.2 diverse crescent elements found within various Islamic architectural elements in Saudi Arabia.

The Islamic star is the second iconic symbol that has a strong presence in the Saudi culture. This symbol has a strong correlation with the Islamic crescent and it was used to give a strong visual identity to Saudi Arabia as an Islamic nation.

Moreover, this iconic symbol is strongly implemented within the Islamic arts and architectural elements to emphasize the leading role of the kingdom of Saudi Arabia as the center of the Islamic world.

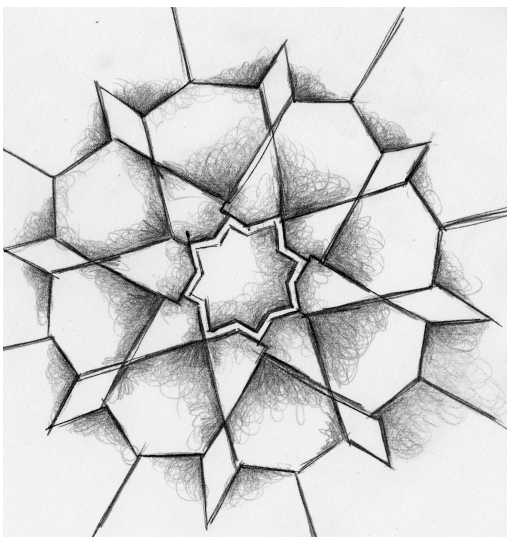


Figure 2.2.3 Detailed close-up of a typical Islamic pattern found within a mosque floor design in Jeddah Saudi Arabia

3. Process

While Saudi Arabian architecture and culture are acknowledge their past, Saudi culture is dynamic, eclectic and diverse. This culture has an eclectic architectural and Islamic artistic heritage infused from all across the Islamic world. Therefore, I choose to design my motion graphics video in a visual style that captures the essence of this culture. My primary areas of emphasis will be the aesthetic Islamic arts”, the art of Arabesque, and Islamic geometrical patterns” as a visual transitional tool through the diverse sceneries of this culture.

Furthermore, the visual style of this thesis will encompass the architectural heritage of the kingdom of Saudi Arabia. This style will be designed in a sophisticated modern style that is inspired from the tradition. This motion graphics video will encompass the main Islamic symbols and the visual icons that define the Saudi culture as being Islamic.

Therefore, my main design concept is to create a visually rich motion graphics video that reflects the culture of Saudi Arabia through Islamic architecture i.e. Islamic art with an implementation of a custom designed Arabian soundtrack to capture the essence of this culture and establish a solid sense of artistic appreciation to the art of this culture.



Figure 3. Close-ups of the different scenes of the final motion graphics video highlighting the diverse sceneries of the Saudi Arabian culture

3.1 The Astrolabe: Thesis Prologue (Size 720x480, length: 10 Seconds)

The opening sequence of my motion graphics video starts with the visual introduction of the Astrolabe tool and its primary function as an Islamic celestial instrument used to determine the location of Mecca and the beginning of the holy month of Ramadan. This tool has a strong presence within both the Islamic and the Saudi Arabian culture.

This opening sequence portrays the historical aspects of the Saudi Arabian culture as an Islamic lunar culture that has emerged from the ancient Arabian Peninsula.

3.1.1 The Astrolabe design concept

The design concept for the thesis prologue is to implement the Astrolabe as an Islamic mechanical instrument that is being composed from various mechanical elements. These elements have a strong presence within the Saudi culture and the Islamic religion.

Moreover, the collective elements are composed within a dynamic motion design approach. This approach starts with the rotation of the Islamic star to emphasize the characteristic of the Saudi culture as being Islamic and end with the final composed Astrolabe instrument.

These diverse elements are being selected from the Islamic heritage of Saudi Arabia and they are the Islamic geometrical star, the Islamic crescent, the intricate patterns of the Arabesque art, and the Qibla i.e. "An Islamic prayer compass"

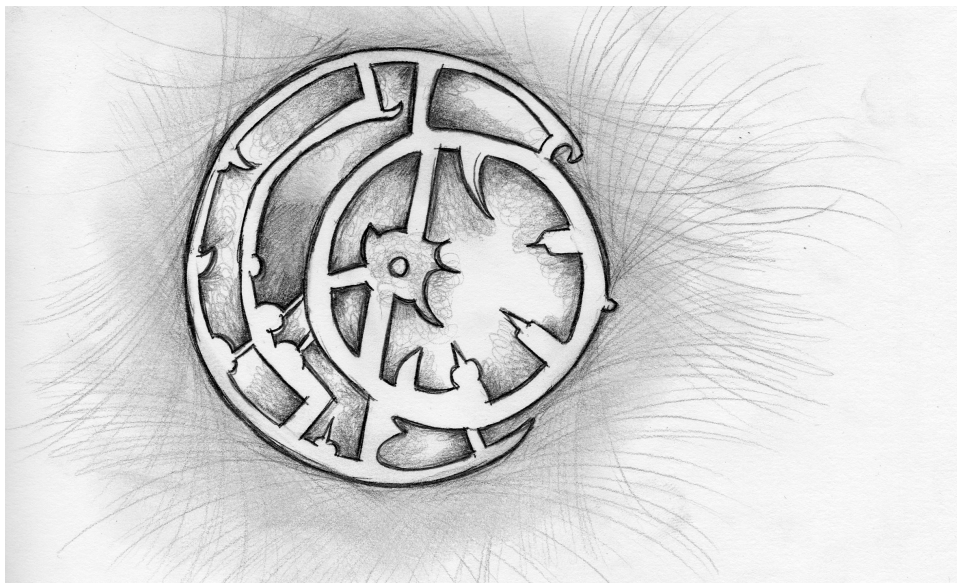


Figure 3.1.1 Close-up of the inner section of an ancient Islamic astrolabe found within the Saudi Islamic heritage

These mechanical objects are composed gradually to emphasize the visual details of each element and to establish a focal point for the audience to carefully observe the essence of its artistic features.

The whole ten seconds introduction clip of the Astrolabe takes the audience into an epic visual journey; a journey that highlights the Islamic science of astrology and the history of Saudi Arabia.

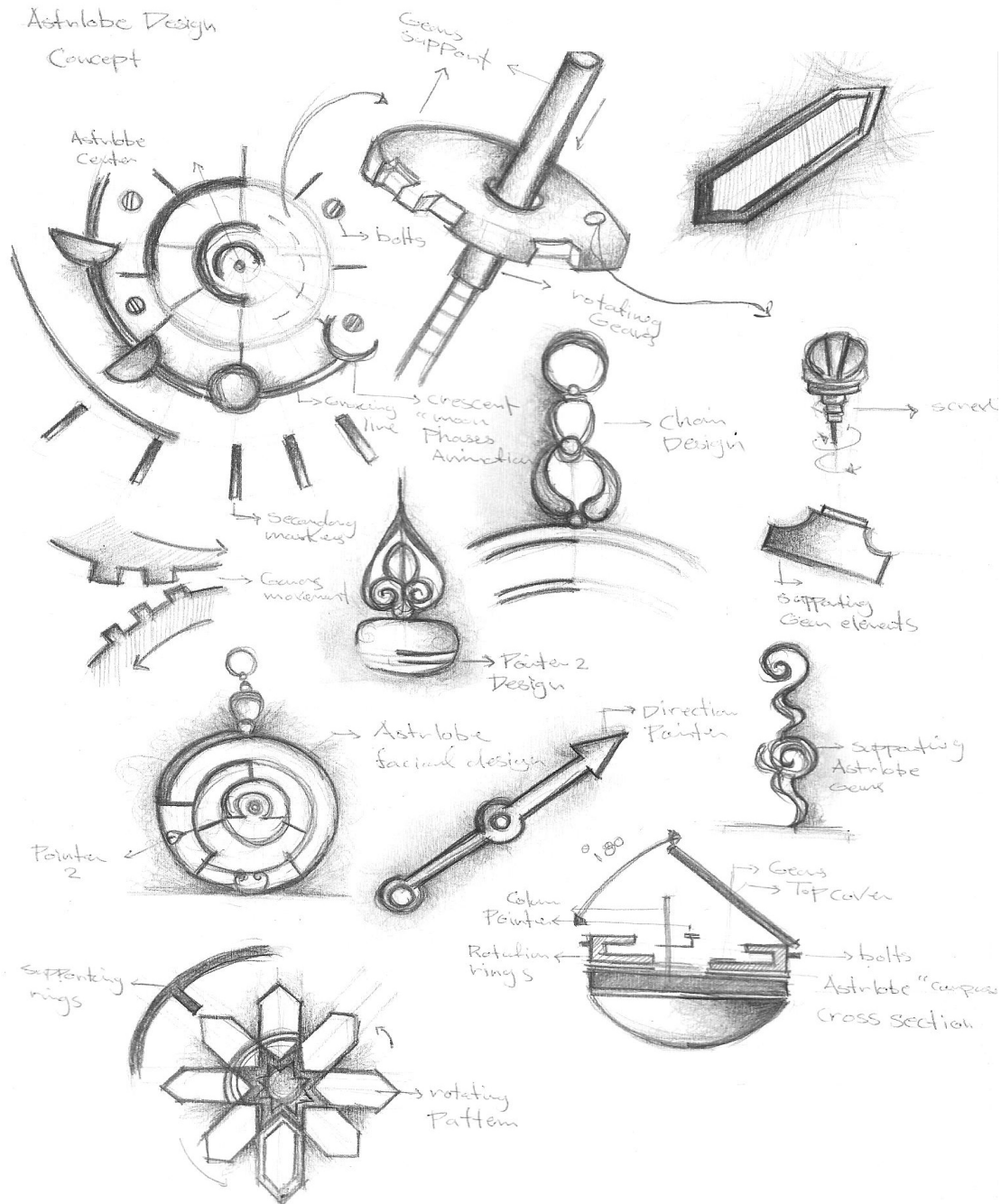


Figure 3.1.1.3 Detailed sketches of the initial design concept for the Astrolabe, and the thesis opening sequence

This journey starts with a subtle movement of camera rotation, and gradually builds up the anticipation by swift camera movements of zooming out from various mechanical elements. These elements are continuously evolving from the center of the Islamic star to the center of the final composed Astrolabe.

Moreover, my design concept was to introduce the astrolabe as ancient time traveling instrument through the different sceneries of the Arabian culture.

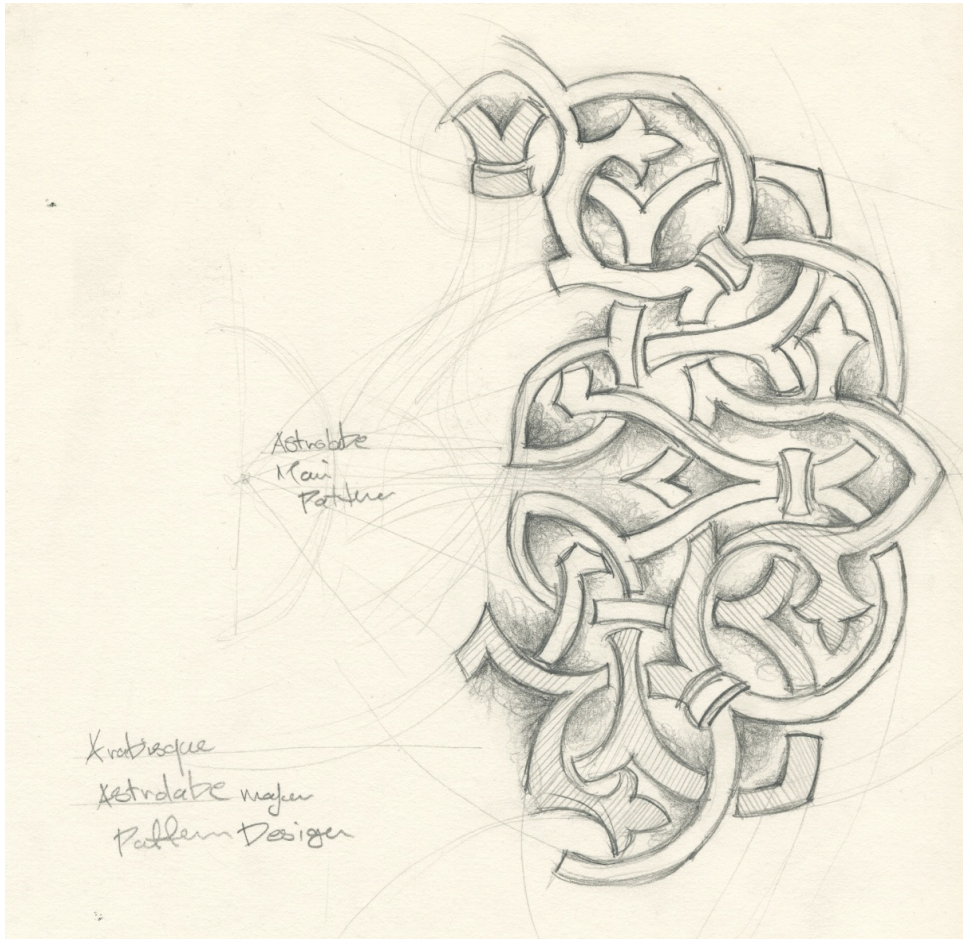


Figure 3.1.1.3 Detailed sketch of the major Arabesque pattern that was implemented in the design process of the Astrolabe.

3.1.2 The Astrolabe graphics creation process

For the creation of the Astrolabe, I chose a mixture of different design media, for instance, numerous hand drawings, two dimensional vector images, three dimensional graphics, and stock images. I started the design process with sketching my own design of the Astrolabe that was inspired from various Islamic and Arabic elements.

These elements have a very complex mechanical and organic form and composition. Therefore, I started drawing these elements in Adobe Illustrator as victor images and then imported them into Autodesk Maya with the usage of the “bevel plus” tool, Nurbs, and polygonal modeling to physically create them within the three dimensional space.

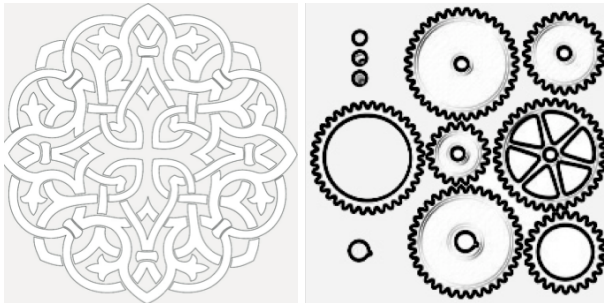


Figure 3.1.1.4 close-up of the designed elements that were implemented in partially developing the Astrolabe



Figure 3.1.1.5 Detailed map of the ancient Arabian Peninsula that was implemented in the thesis opening sequence

Source: <http://istockphoto.com>

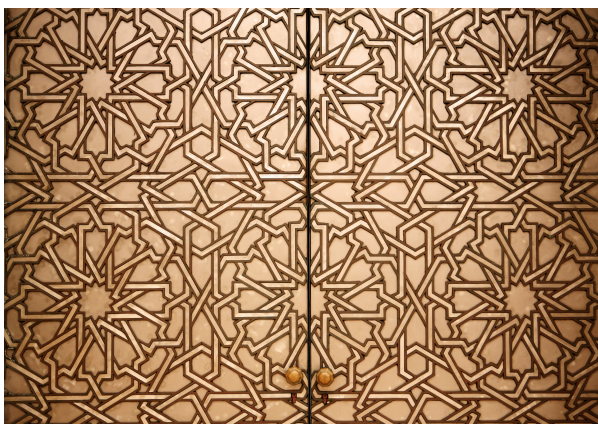


Figure 3.1.1.6 Detailed Arabesque pattern of an Islamic door that were implemented in the thesis opening sequence

Source: <http://istockphoto.com>

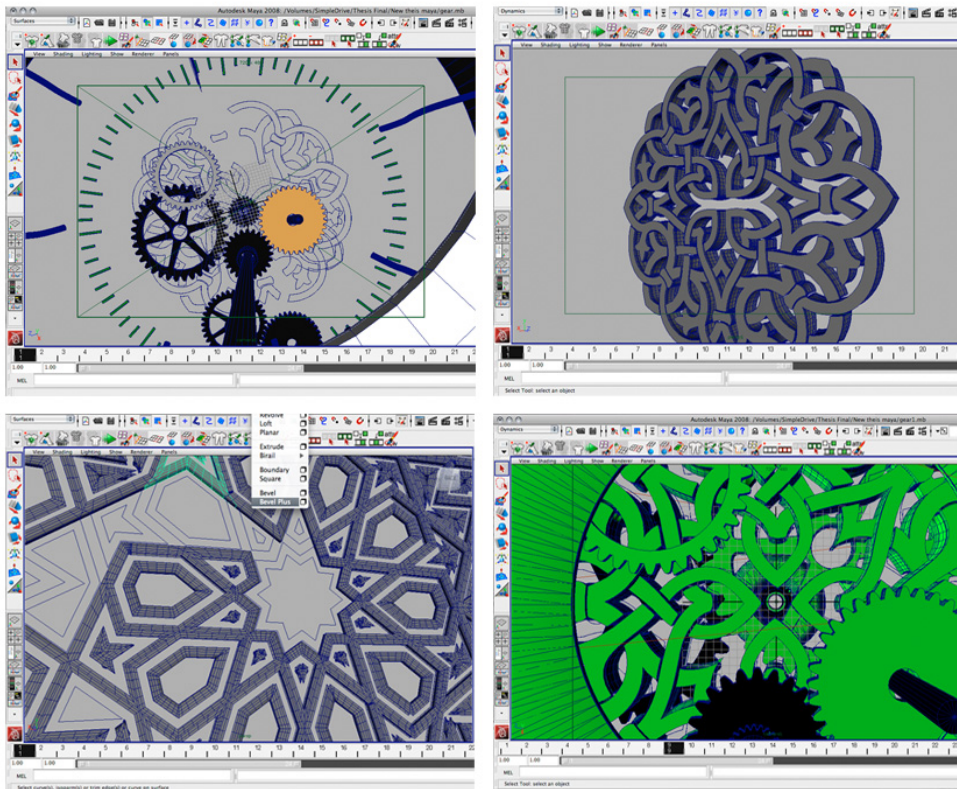


Figure 3.1.1.7 Screen capture of the diverse three-dimensional developing stages of the Astrolabe within Autodesk Maya

3.1.3 Compositing and visual treatment

Different renders, and production passes were implemented in developing the final visual look of the Astrolabe. This look was achieved by rendering two different render passes in Maya.

The first pass is an ambient occlusion pass to enhance the soft shadow and details of this instrument. The second pass is a color pass rendered as image based lighting and final gathering with a high ray tracing value to maximize the reflectivity of the golden materials of the Astrolabe.

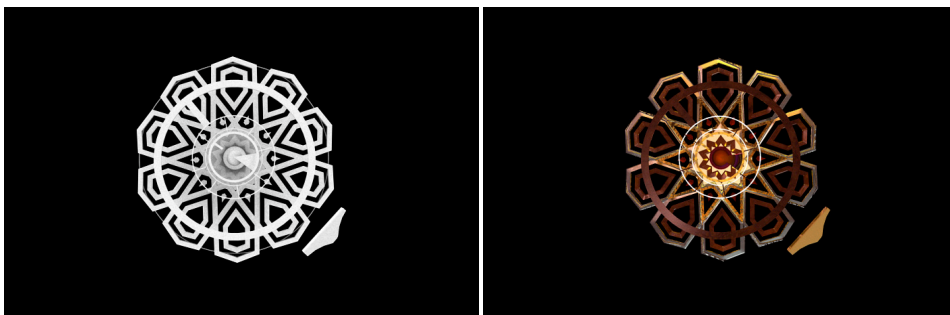


Figure 3.1.3.1 two render passes generated for the Astrolabe element an ambient occlusion, and a color pass rendered with Maya Final Gathering, and image based lighting

These different passes were later composed in Adobe After Effects with an intensive postproduction visual treatment.

This treatment encompasses the application of extensive color correction, Colorama, hue and saturation adjustment, curves adjustment, applying multiple color solids with different blending modes, and compositing them on top with these render passes.

Moreover, additional third party plug-ins were implemented such as Trap code Shine, Particular, and Star glow to enhance the visual look as a high-end broadcasting style and to add particles visual effects to the motion piece

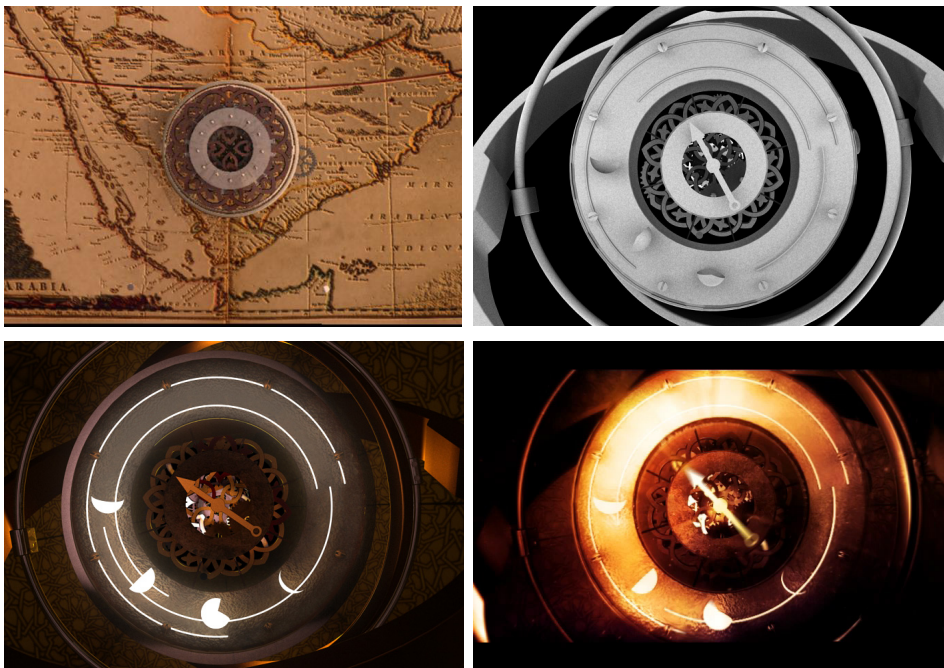


Figure 3.1.3.2 close-up of the diverse render passes that were created for the Astrolabe and the final composited intense visually treated scene of the Astrolabe

3.1.4 Color scheme

My color scheme selection for the thesis intro scene is inspired from the colorful sceneries of the Arabian Desert and Arabian culture.

Therefore, I chose various sepia color schemes with some gold and beige colors to enhance the contrasts of the visual composed elements.



Figure 3.1.4 the major color scheme palate that was used for the Astrolabe scene and it's various design elements.

I chose this color scheme to add a flavor of ancient history to the Astrolabe, the background visual elements, and also to reflect the colors of the Arabian Desert terrains and sand dunes.

Moreover, I chose a combination of gold and beige colors to add a sense of visual contrast and luxury to the visual elements. The golden and beige color scheme has a strong presence in the Saudi visual culture. It metaphorically reflects the colors of the Sun and its rays

3.1.5 Visual effects

A variety of effects were implemented within the thesis-opening scene. These effects were used to strongly emphasize the birth of the Islamic civilization from the center of the Arabian Peninsula and the Astrolabe. These effects establish a central focal point within the visual composition and visually reflect the celestial features of the Astrolabe.

I have used Adobe Aftereffects "CC Star Burst", and Trap code "Particular" to generate subtle particles simulation within the Astrolabe physical space. I have also used "Lens Flare" to establish a focal point within the center of the visual composition to enhance the secondary motion elements forming from the center of the Astrolabe.

The shining effects were achieved by using Trap code "Shine", "Star glow", "CC Light Burst", and "CC Star Burst" applied on multiple adjustment layers with various blending modes.

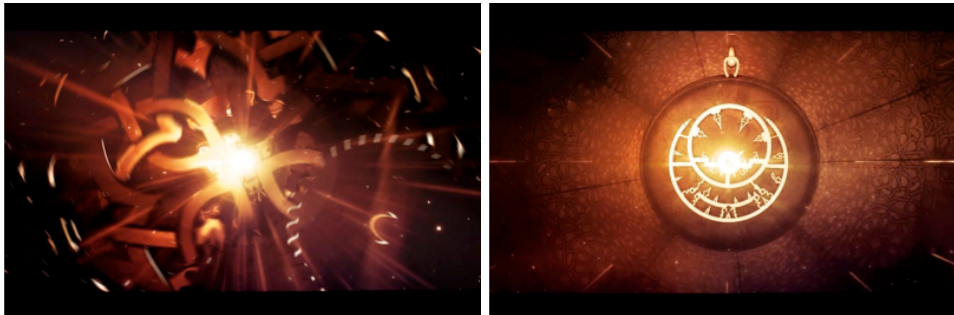


Figure 3.1.5 still frames of the Astrolabe opening sequence highlighting the intense usage of Trap code "Particular" and "Shine" visual effects.

3.1.6 Motion design concept

My motion design concept for the thesis introduction scene was to implement a dynamic camera movement, rotation, tracking, and secondary overlapping animation of scale and rotation to give the intro scene an epic feeling.

The camera motion is synchronized within the custom designed soundtrack. This soundtrack starts with the ticking sound of a clock and gradually fades out to the Arabian music as the anticipation builds up to the final Astrolabe resolution.

The sound of the clock metaphorically symbolizes the beginning era of the Saudi Arabian culture and civilization.

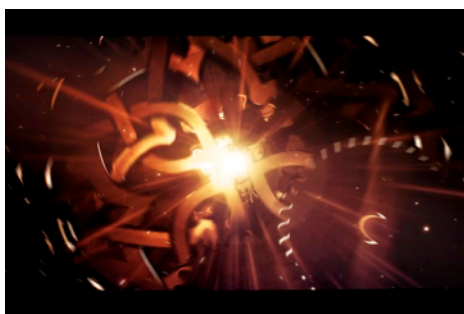
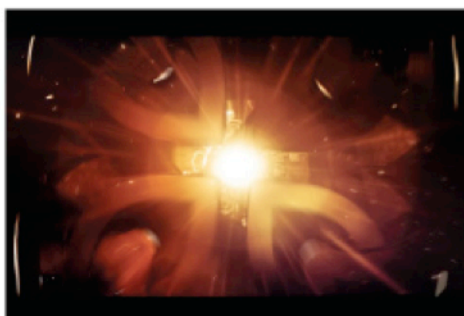
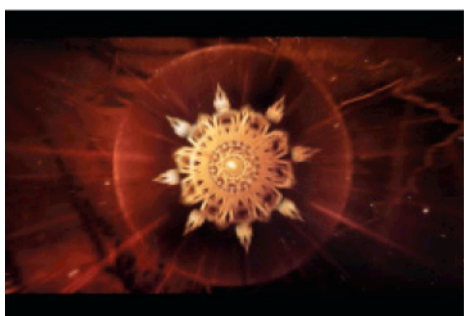
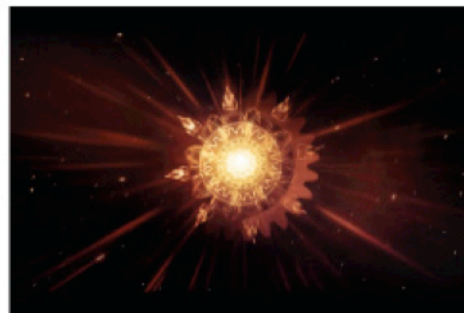
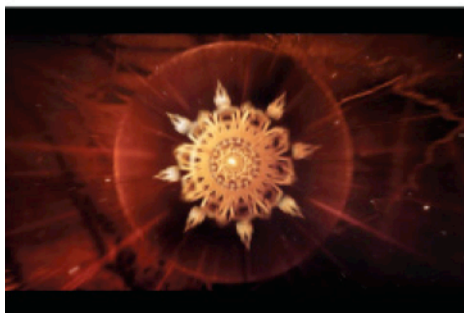
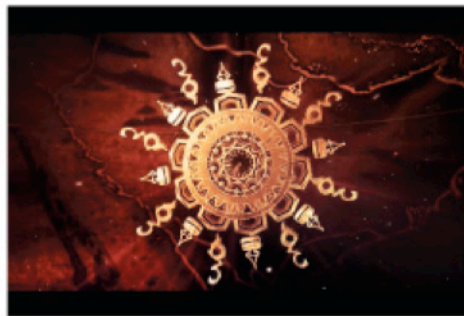
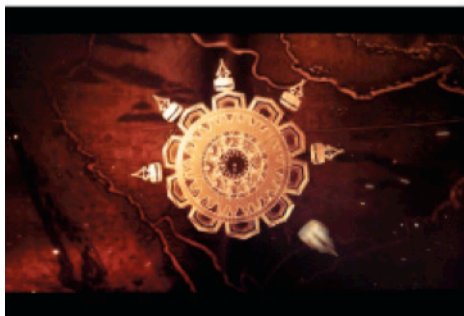
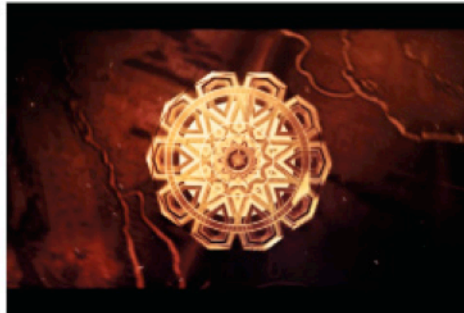
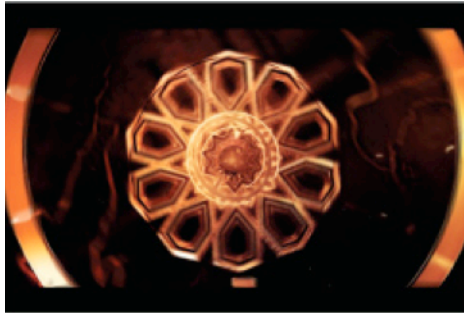
Therefore, the animation starts with a camera rotation fading from a black background to an ancient historical map of the Arabian peninsula. This map has the Islamic star pattern centrally placed on it to emphasize the leading role of Saudi Arabia as the center of the Islamic world.

This pattern encompasses various mechanical elements that emerge from both the center of the pattern and outside the camera resolution gate in a motion that reflects the construction of the clock mechanical parts.

When these elements finish emerging and forming the initial part of the Astrolabe, the Arabian music fades in with a strong drum ambient sound. This sound builds the anticipation to the final composed astrolabe and initiates extreme zooming camera motion from the center of the first part till the end of the astrolabe.

The overall motion of the introduction scenes have calm and smooth moments. Then the burst of speed divides the time into multiple parts and visually engages the audience in a journey through various sections of astrolabe. This gives a strong visual beginning to the thesis motion graphic.

3.1.7 Style frames



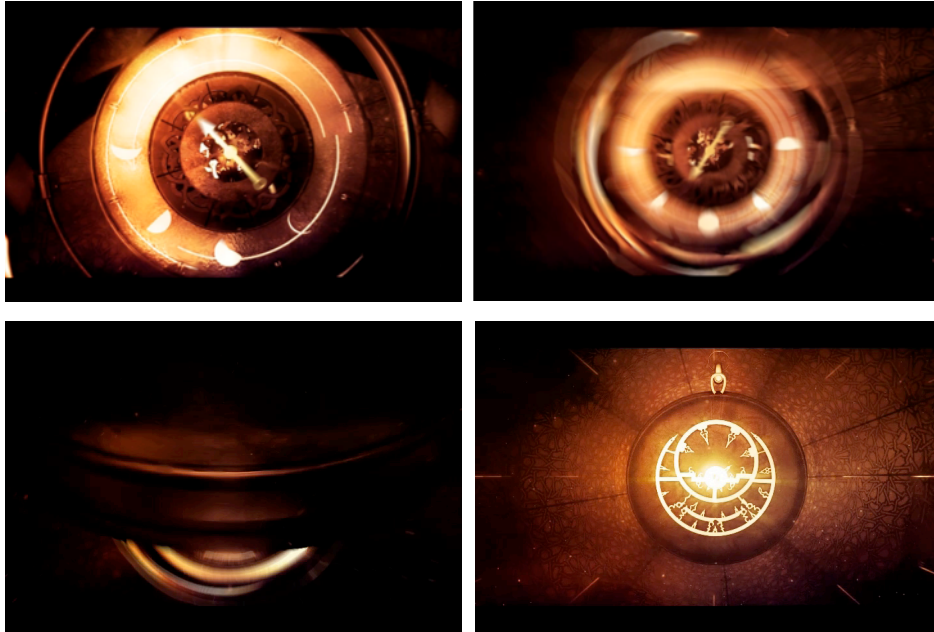


Figure 3.1.7 Style frames of the thesis Astrolabe opening sequence

3.2 The Arabian Desert (Size 720x480, length: 15 Seconds)

The second sequence of my motion graphics video encompasses the diverse sceneries of the Arabian Desert and its inherited architectural heritage and artistic civilization.

This scene defines the Arabian Desert as the major geographical place from where the Saudi Arabian culture emerged. This desert encompasses primary culture and architectural heritage of the Bedouin tribes who have resided in the Arabian Peninsula and played a major role in establishing today's modern Saudi Arabia.

This scene highlights the Arabian Desert's diverse geographical nature and the architectural heritage of Saudi Arabia. It emphasizes the characteristic of this heritage as being Islamic with Bedouin origins.

3.2.1 The Arabian Desert design concept

My design concept for Arabian Desert scene is to visually introduce the Arabian Desert as the birthplace of the Saudi Arabian culture and the Islamic architectural heritage.

Therefore the opening scene for this motion section starts with the sun rising from the dark physical space of the Astrolabe to the bright sky of the Arabian Desert. The ancient architectural ruins emerge from the sand dunes of the desert.

These Architectural ruins have an eclectic architectural style inspired from the diverse traditional Islamic architecture of the kingdom of Saudi Arabia. They dynamically emerge from the sand dunes of the Arabian Desert.

As these architectural building continue emerging from the sand dunes, various Islamic architectural elements are being constructed from them to form an ancient Bedouin city that has rich Islamic architectural features.

The design concept for this city was to implement the Islamic pattern, for instance, a crescent shape within the visual layout of the city planning to strongly emphasize the Islamic architectural features. It helped indicate major features of the Saudi culture having roots in Islam.

The overall scene of the Arabian Desert was created to visually reflect the development of the Saudi culture and the construction of the Arabic civilization from within the Arabian Desert.

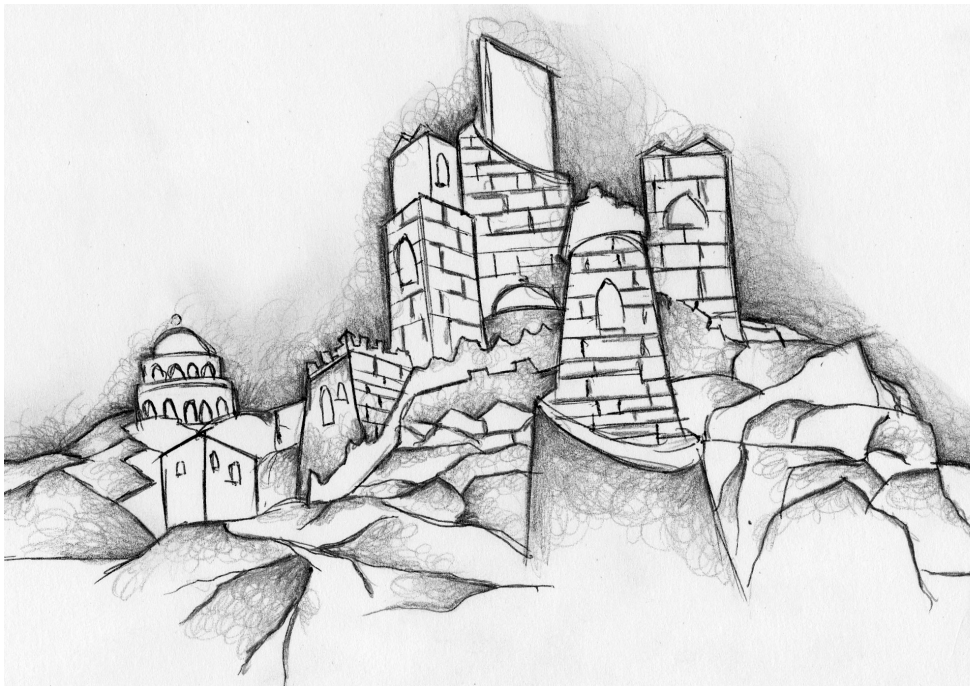


Figure 3.2.1.1 detailed sketch of the initial design of the Arabian Desert city ruins layout

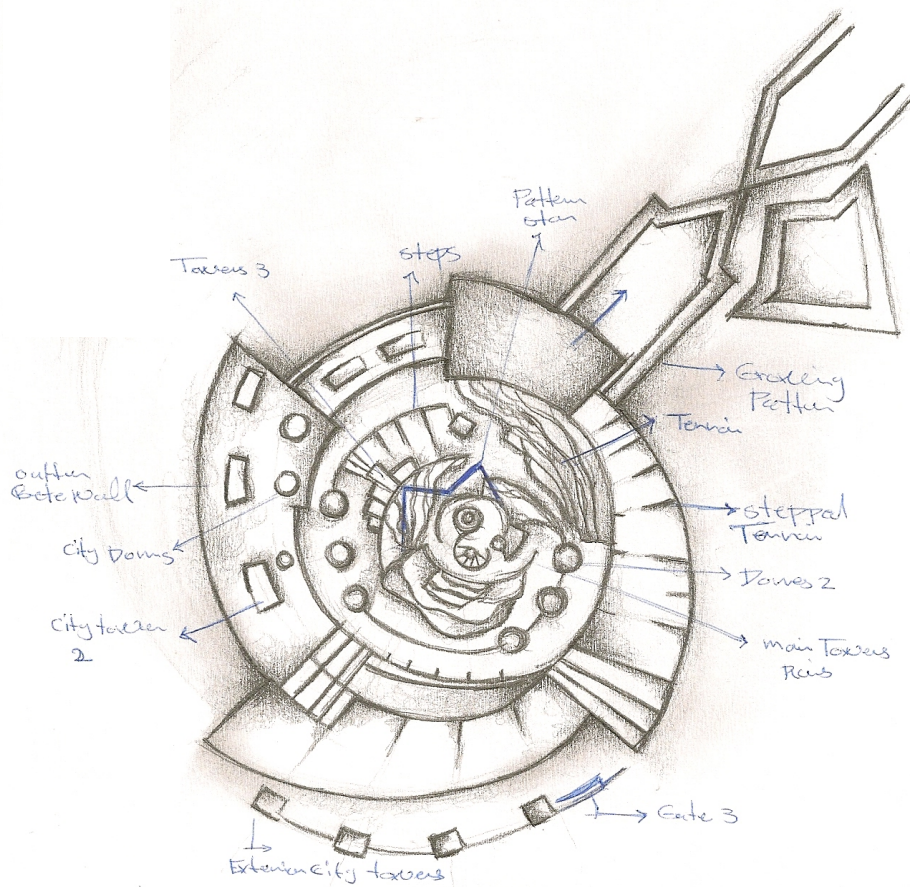


Figure 3.2.1.2 detailed sketch of the initial design of the Arabian Desert city ruins

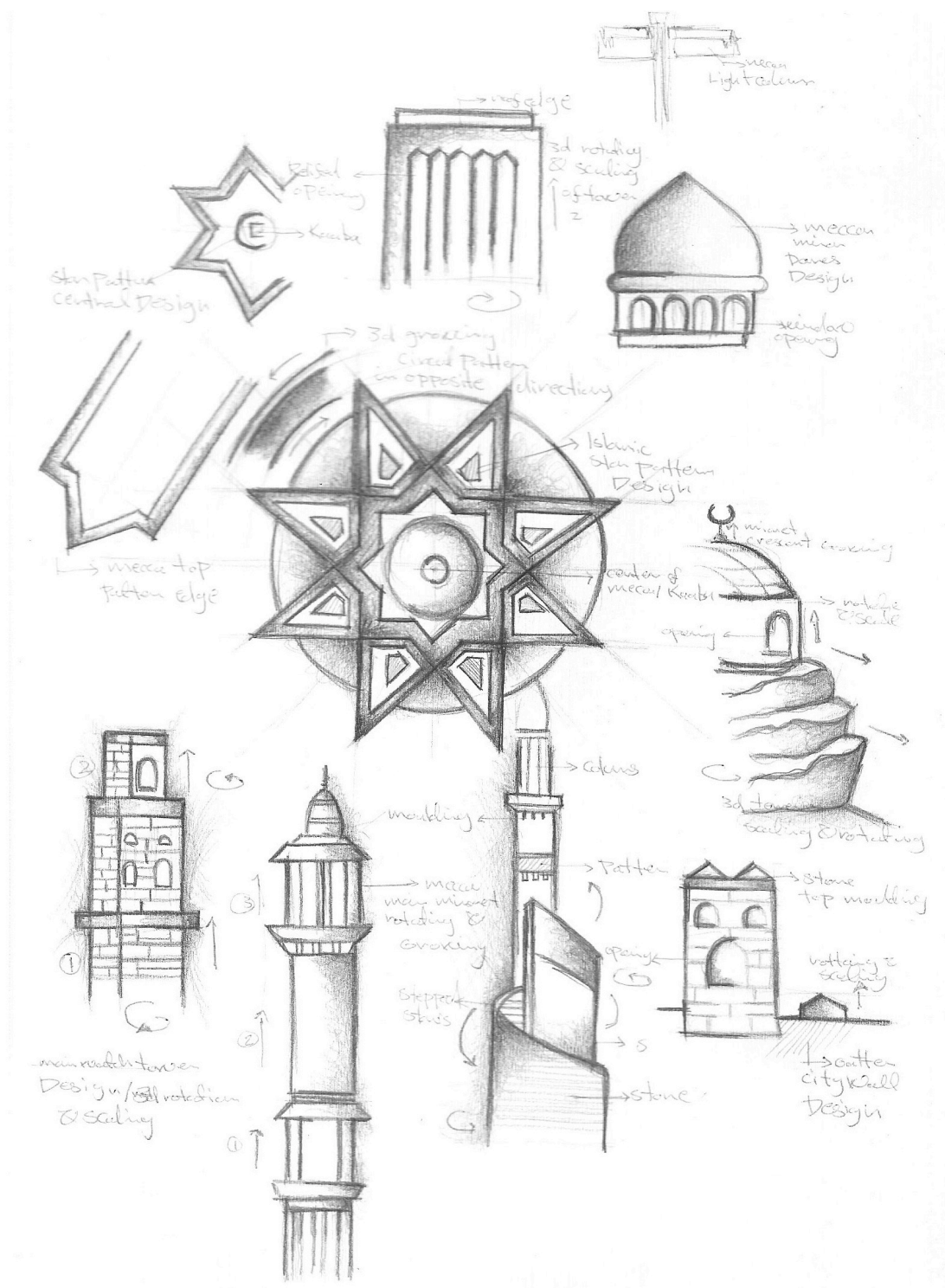


Figure 3.2.1.3 Detailed sketch of the diverse architectural elements designed for the Arabian Desert scene

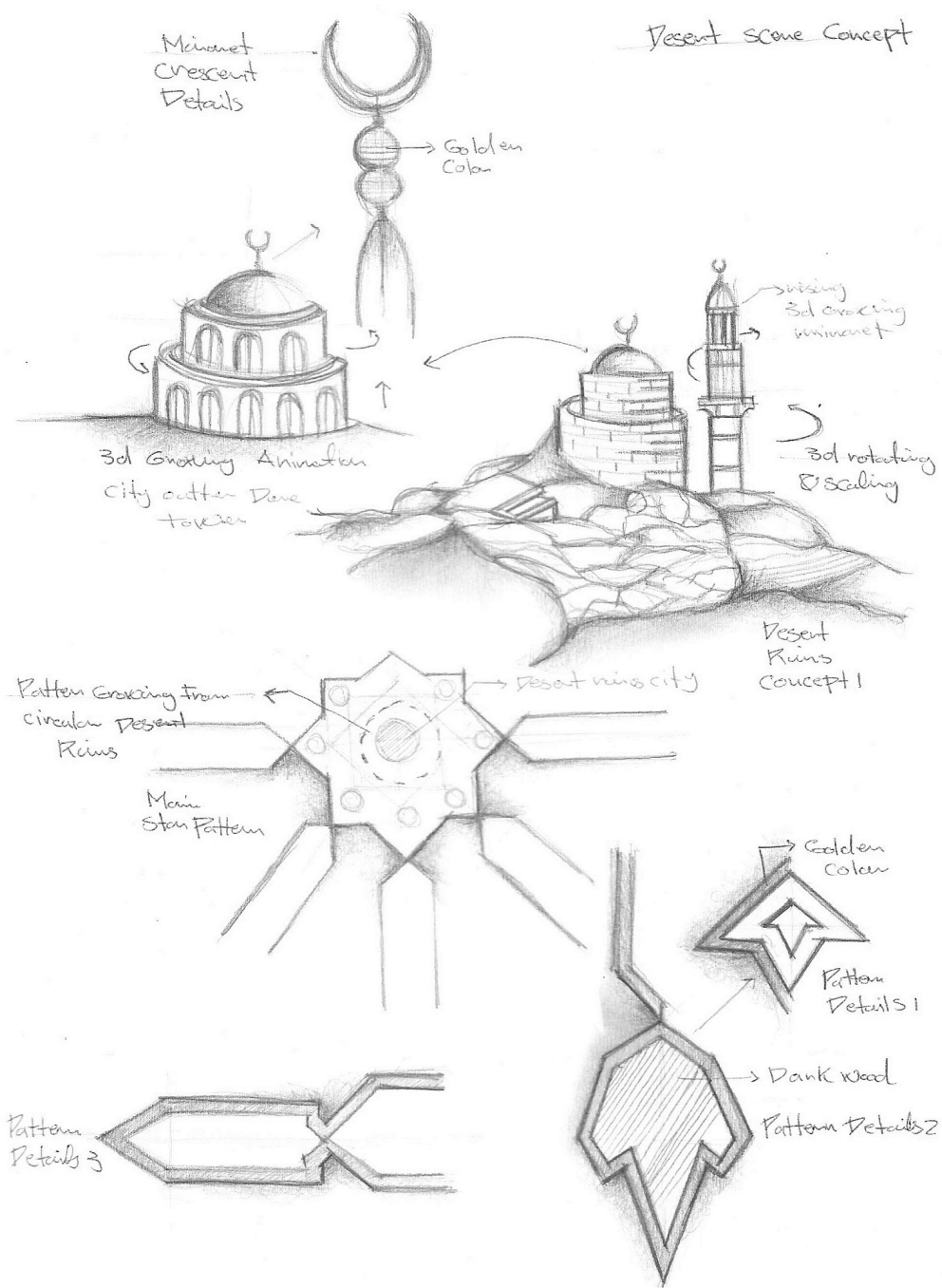


Figure 3.2.1.4 Detailed sketch of the diverse architectural elements, and pattern designed for the Arabian Desert scene

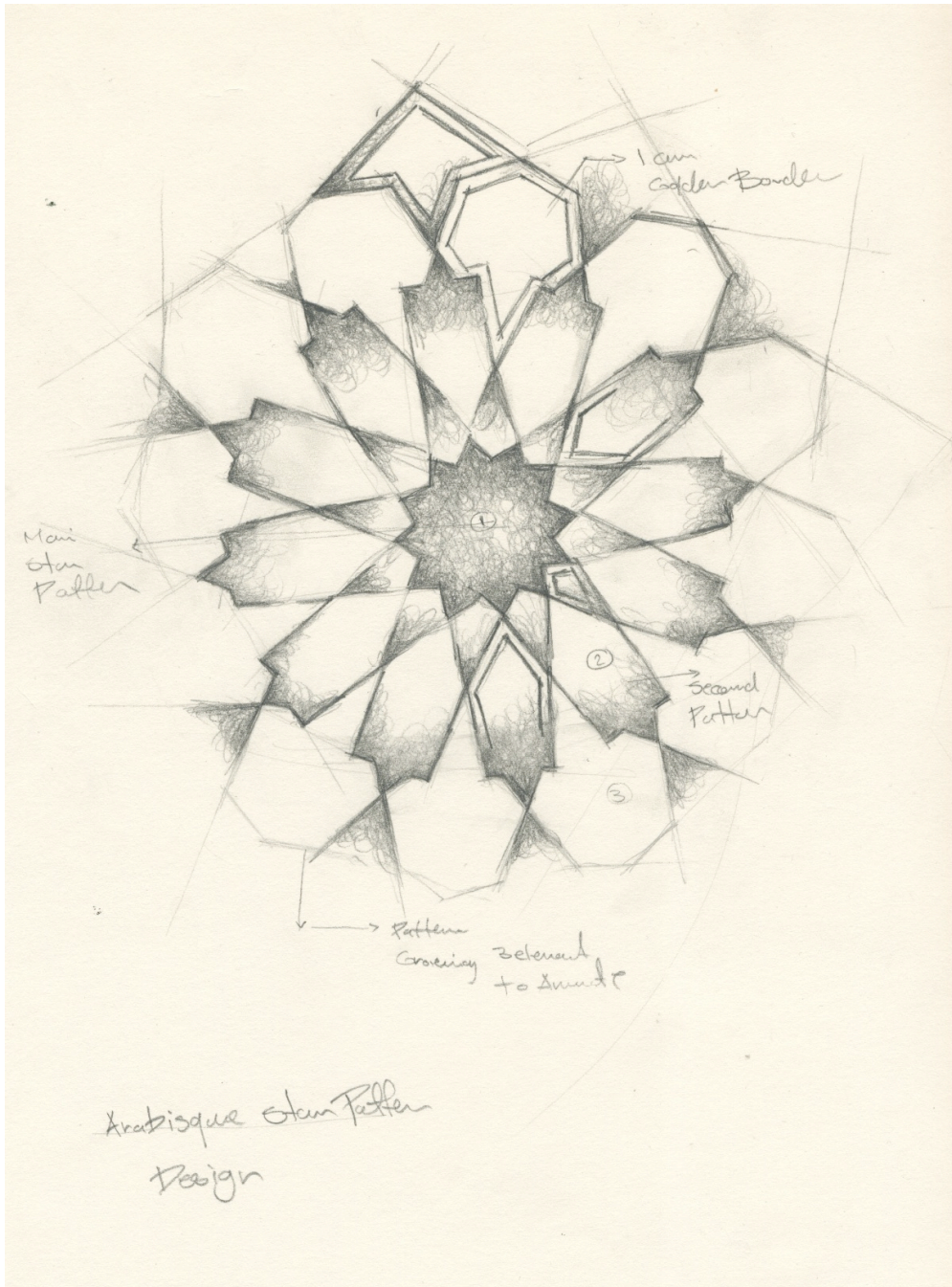


Figure 3.2.1.5 Detailed sketch of initial Arabesque pattern design for the Arabian Desert scene

3.2.2 The Arabian Desert graphics creation process

The initial graphics that were created for this motion graphics scene were a mixture of two dimensional vector images and three-dimensional graphics. These graphics were going to be animated with Adobe After Effects but later were changed due to the limited possibilities of the camera animation within Adobe After Effects.

Therefore, newly designed three-dimensional graphics were created from scratch using both Adobe After Effects and Autodesk Maya. These graphics encompass polygon models of the architectural ruins, desert terrains, and Islamic patterns.



Figure 3.2.2.1 first design direction initial style frame designed for the Arabian Desert scene



Figure 3.2.2.2 second design direction style frame of the Arabian Desert scene

The Islamic star pattern and ornament were created with Adobe Illustrator two dimensional vector graphics and then was later imported into Autodesk Maya as an outline. They were modeled by using the “Bevel Plus” tool to physically create it within the three dimensional space.

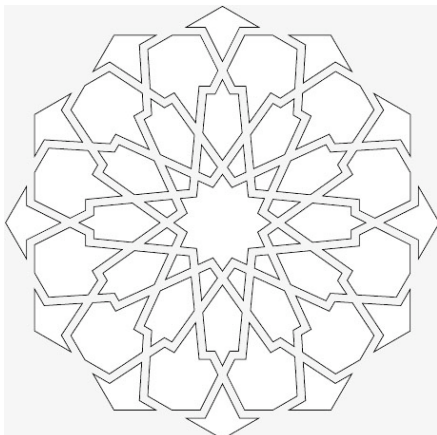


Figure 3.2.2.3 detailed vector illustration of the Arabesque pattern designed for the Arabian Desert scene.

The desert terrains were created in Autodesk Maya from a basic polygon plane. This plane then was later sculpted and deformed with the “Sculpt Geometry Brush” tool implementing the push, and pull tool that defined the hills and dunes of the terrain. Later these terrains were converted to a subdivision model to refine the details and give the terrain a smoother look.

Moreover, using the “CV Curve” tool created the ground, and city walls of the ruins. They were then were lofted and converted to a sub division model to enhance the details.

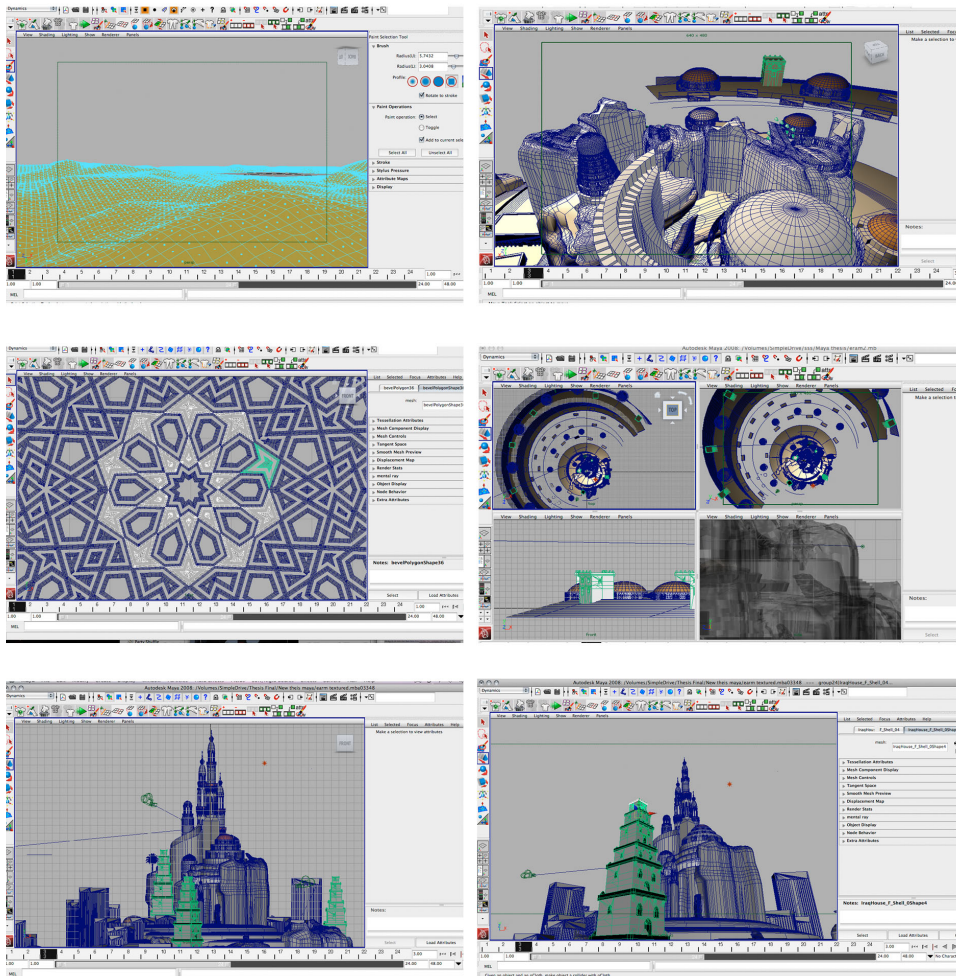


Figure 3.2.2.4 Screen captures of the diverse three-dimensional developing stages of the Arabian Desert scene within Autodesk Maya

The Islamic star pattern and ornament were created with Adobe Illustrator two dimensional vector graphics and then was later imported into Autodesk Maya as an outline. They were modeled by using the “Bevel Plus” tool to physically create it within the three dimensional space.

3.2.3 Compositing and visual treatment

The final visual look of the Arabian Desert Scene was achieved by composing separate render passes of the desert three-dimensional scene.

These passes encompass an ambient occlusion pass, a color pass rendered with the new Maya 2008 Physical Sun and Sky rendering engine and a separated background rendered pass. Later on, these pass were imported into Adobe After Effects and went under extensive postproduction process.

The post-production process encompasses color correction and grading achieved by applying a variety color correction tools, curves adjustment, hue and saturation, photo filter, levels adjustment, and applying multiple solids with different colors and blending modes.

These color correction effects were applied on multiple adjustment layers and were composited with various blending modes.



Figure 3.2.3. Close-up of the diverse render passes that were created for the Arabian Desert scene and the final composited intense visually treated scene of the Arabian Desert.

Moreover, a variety of effects were implemented to emphasize the feeling of the daylight, and sunny desert such as the implementation of “CC Light Sweep”, and “Glow”. They enhanced the daylight feeling of the desert scene and the shining ray of light. Also third party plug-in effects were implemented in developing the final sophisticated visual look by the usage of the Trap code “Shine” effect. These effects were applied on various adjustment layers that were composed with different blending modes.

3.2.4 Color scheme

My color scheme selection for the Arabian Desert scene was based on a choosing a color palate that reflects the diverse contrasting colorful sceneries of the Arabian Desert. It ranges from the orange sand dunes and the brown mountain terrains to the golden architectural Bedouin ruins of the Arabian Peninsula.

Therefore, I chose a mixture of sepia tones color scheme as the primary colors along with a mixture of golden and greenish complementary colors. The mixture of these harmonious primary and complementary colors enhances the visual style of the scene and adds a sense of a traditional Arabian visual luxury to the physical environment of the Arabian Desert.



Figure 3.2.4 the major color scheme palate that was used for the Arabian Desert scene and it's various design elements.

Moreover, this color scheme serves as a strong visual transitional tool from the dark colors of the astrolabe scene to the bright warm colors of the Arabian Desert to emphasize the beginning of the merging of the Arabian culture from within the Arabian Desert.

This color scheme strongly visualizes the beginning era of the architectural development from the Arabian Desert, and geographical role of this desert as the birthplace of the Saudi Arabian culture.

3.2.5 Lighting and materials

Due to the architectural nature of Arabian Desert scene, I chose to render it with the new Maya 2008 physical Sun and Sky rendering engine. This rendering engine results in very sophisticated architectural visualization visuals. These visuals have the major features of a photorealistic image in terms of the quality of overcasted shadows and the accuracy sun lighting calculations, and directions.



Figure 3.2.5 Detailed close-up images of diverse architectural textures used for the Arabian Desert scene

Source: bought texture library from www.3dtotal.com

Therefore, I choose to render the desert scene with this rendering engine to visually capture the realistic details of the desert and the surrounding ruins and physically simulated it.

This rendering engine performs its best possibilities when the proper textures, and materials are assigned the three dimensional models.

Therefore, my selection for the textures is based on actual realistic photographs of the Arabian sand desert and the stone materials of the terrains. Moreover, I chose the Maya architectural materials that worked effectively with this rendering engine. This effort resulted in developing a very sophisticated architectural visualization.

3.2.6 Motion design concept

My motion design concept for the thesis scene was to introduce the Arabian Desert the major geographical birthplace of the Saudi Arabain culture.

Thefore, this scene starts with a dynamic camera rotation of the anicent ruins of the arabian desert. As further the camera rotates, the more the architectural buildings emerge from the dunes of the arabian desert.

These buildings are in a dynamic motion of scaling,rotating, and positionig. This movement metapohrically represents the birth of the islamic architetcural heriatge from this desert, and the birth of a new era that encompasses the arabic civlization and its inheritated architectrual and artsitic heritage.

When these building finsihed emeging from the ground various islamic architectural elemnts are being constructed from them to finisit the construction of the old city.

Later on, the camera starts tracking out of the old city, with a flowing animation that reveals an areial view of the radial layout design of the city.

Later, the scene concludes with a major islamic star pattern emerging from the center of city and recsing the architeurual ruins beneath it. To emphasize the central and major role of the islamic relgion and the major feature of the saudi arabian culture and heriatge, the scene serves the perfect purpose.

3.2.7 Style frames



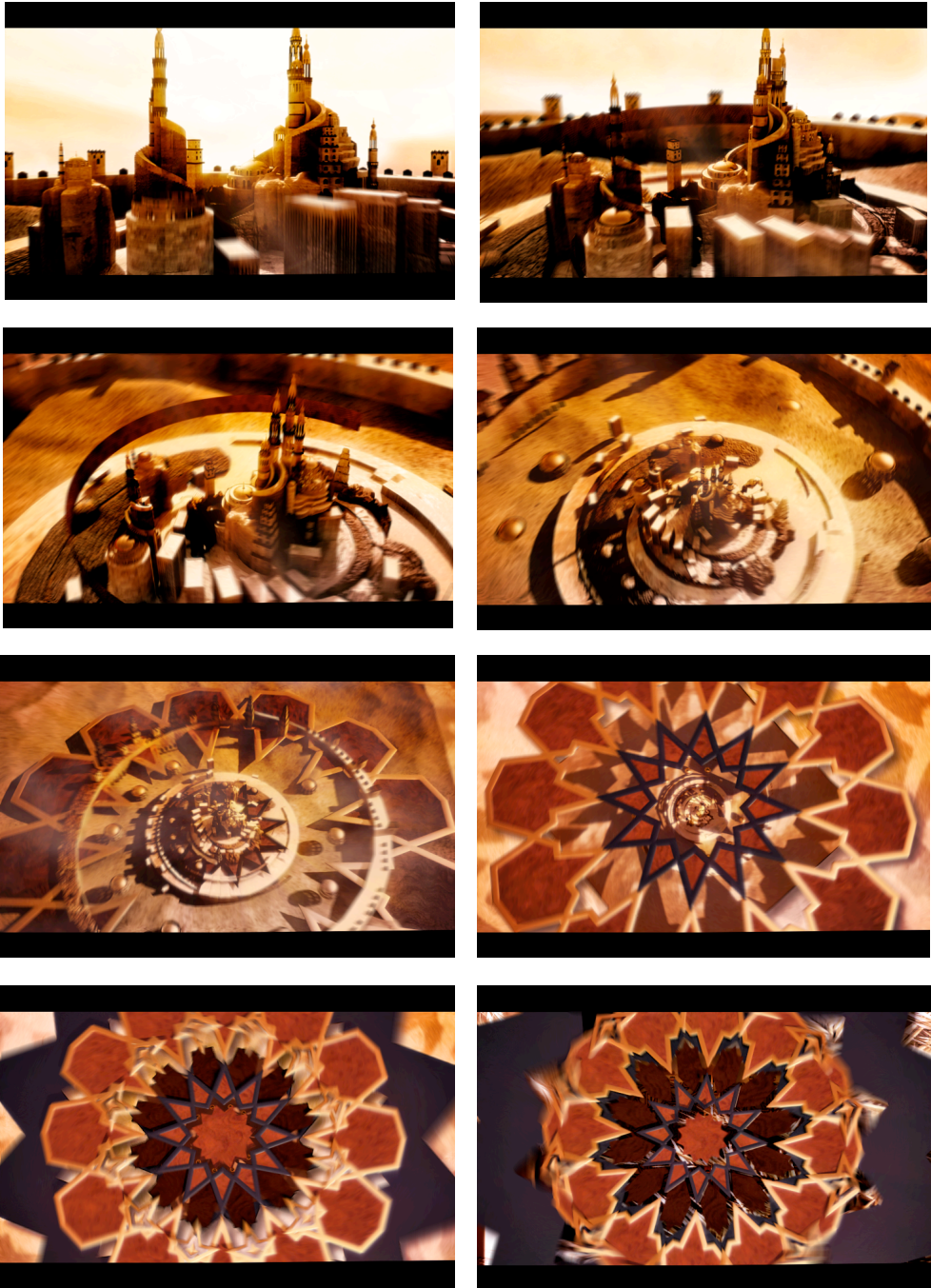


Figure 3.2.7 Style frames of the thesis Arabian Desert scene sequence

3.3 The Holly city of Mecca: Thesis Core (Size 720x480, length: 11 Seconds)

The scene comprising the holy city of Mecca can be considered as the core of my motion graphics animation. The previous scenes served as introductory scenes that built up the anticipation to this motion graphics section.

This scene highlights the physical architecture and artistic features of the most valuable city to billions of Muslims worldwide. Moreover, this scene visually introduces the spiritual religious role of the holy city of Mecca as the birth place of the Islamic religion, the late prophet Mohammad "peace be upon him" and the central Islamic capital of the Arabic, and Muslim world.

3.3.1 The Holly city of Mecca design concept

My design concept for this motion graphics scene was to visually introduce the holy city of Mecca in an anticipated dynamic approach that reveals the mystical features and spirituality of this holly place.

Therefore, the opening scene of this motion graphics section starts with an Islamic star pattern centrally located within the visual composition. This pattern is being deconstructed into smaller parts and creates a central Islamic star shaped visual tunnel. This tunnel leads to a traditional Islamic architectural gate.

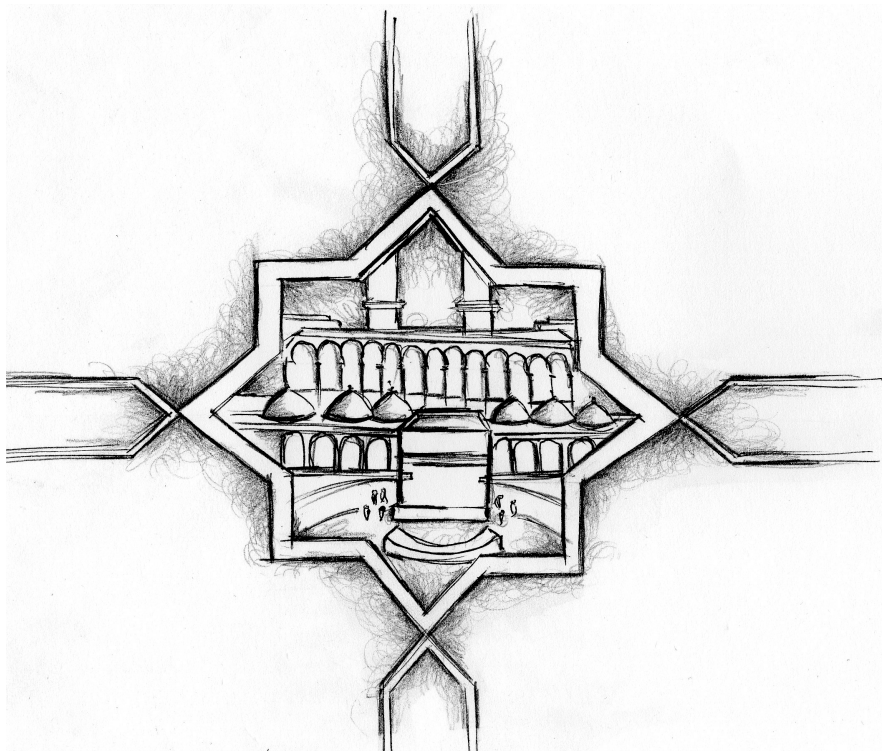


Figure 3.3.1.1 detailed sketch of the initial design of the holly city of Mecca scene

The design of the Islamic gate encompasses rich visuals of the Islamic art and its architectural details such as the pointed Islamic arc, Islamic style columns, and gate moldings.

Moreover, this gate encompasses various visual and physical elements that reflect the Arabian culture such as the Arabian palm tree, the art of Arabesque, and the traditional Islamic patterns, and ornaments.

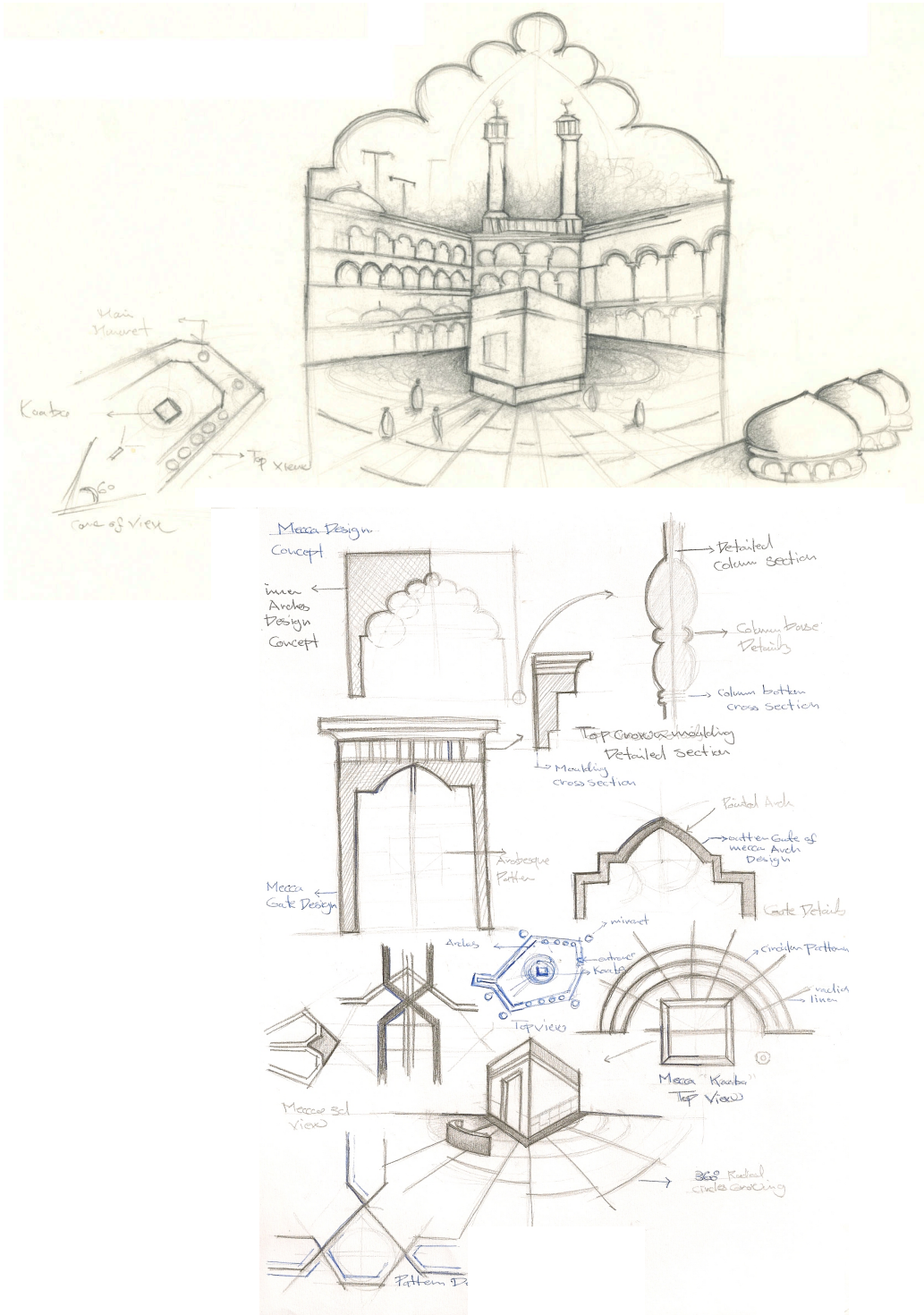


Figure 3.3.1.1 Detailed sketch of the diverse architectural elements, and pattern designed for the holly city of Mecca scene

The implementation of the gate within the beginning of this scene is intended to serve as a visual transitional tool from the realm of the Arabian Desert to the mystical spiritual realm of the holy city of Mecca.

The animation of this motion graphics section starts with the doors of the Islamic gates being opened and revealing gradually. This reveals only a glimpse of the holy city and its architectural features.

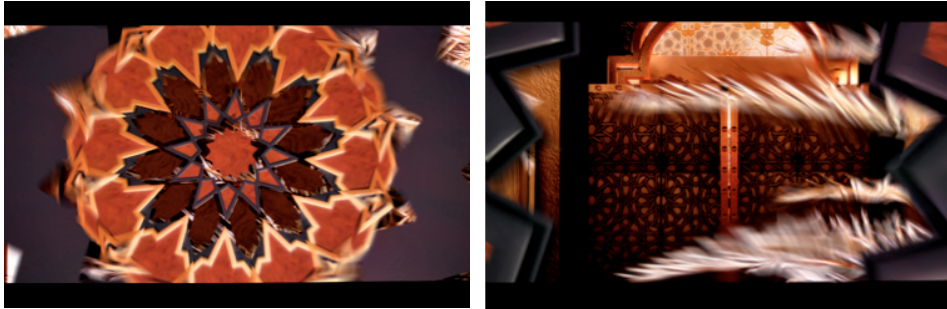


Figure 3.3.1.3 still frames for the opening sequence of the holy city of Mecca scene

As the doors of the gate opens, the camera starts zooming in gradually towards Mecca passing through various architectural elements that enhance the visual transition by setting the mood through the dramatic change of lighting scheme and visual elements.

The animation of this scene reaches its climax with the camera passing through the center of an Islamic star pattern revealing the scene of the architecture of the holy mosque and the holy Kaaba, “The House of Allah”, emerging from the ground of the holy mosque.

This scene lasts for a few seconds. It highlights the spirituality of this holy place and the peaceful doves flying in harmony above it. It concludes with the camera starting to fly above the holy Kaaba highlighting the circular patterns around the Kaaba and emphasizing the central role of Mecca as the Islamic religious capitol, and religious worship place of Hajj where billions of Muslims circumambulate the holy Kaaba during pilgrimage.

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3.3.2 The Holly city of Mecca graphics creation process

The graphics creation of the holy city of Mecca implemented gathering a rich visual collection of architectural case studies, aerial views, and blue prints of the holy city of Kaaba, and the holy Mosque.

These visuals were very crucial to the development of the three dimensional graphics of Mecca, and they provided the accurate architectural measurements, and proportions of the holy mosque, and holy kaaba.

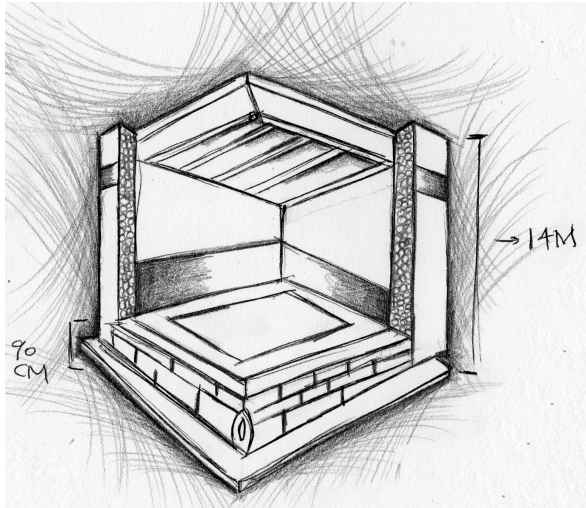


Figure 3.3.2.1 Detailed architectural dimension of the holly Kaaba.

Later on a series of two dimensional vector graphics of Mecca architectural elements were created with Adobe Illustrator. These graphics encompass the design of the Islamic star pattern, the pointed Islamic arc, and the arced corridor of the holly mosque.

These graphics were later imported into Autodesk Maya and were modeled into a three dimensional polygon models using the "Bevel plus" modeling tool.

The architectural elements of the holly mosque of Mecca such as the holly Kaaba, minarets, domes, and floor patterns were modeled using a combination of both nurbs modeling for the circular floor patterns, and polygonal "spheres, cubes, cylinders" modeling for the majority of the architectural elements of Mecca such as the main minarets, lighting fixtures, the kaaba, and mosque domes.

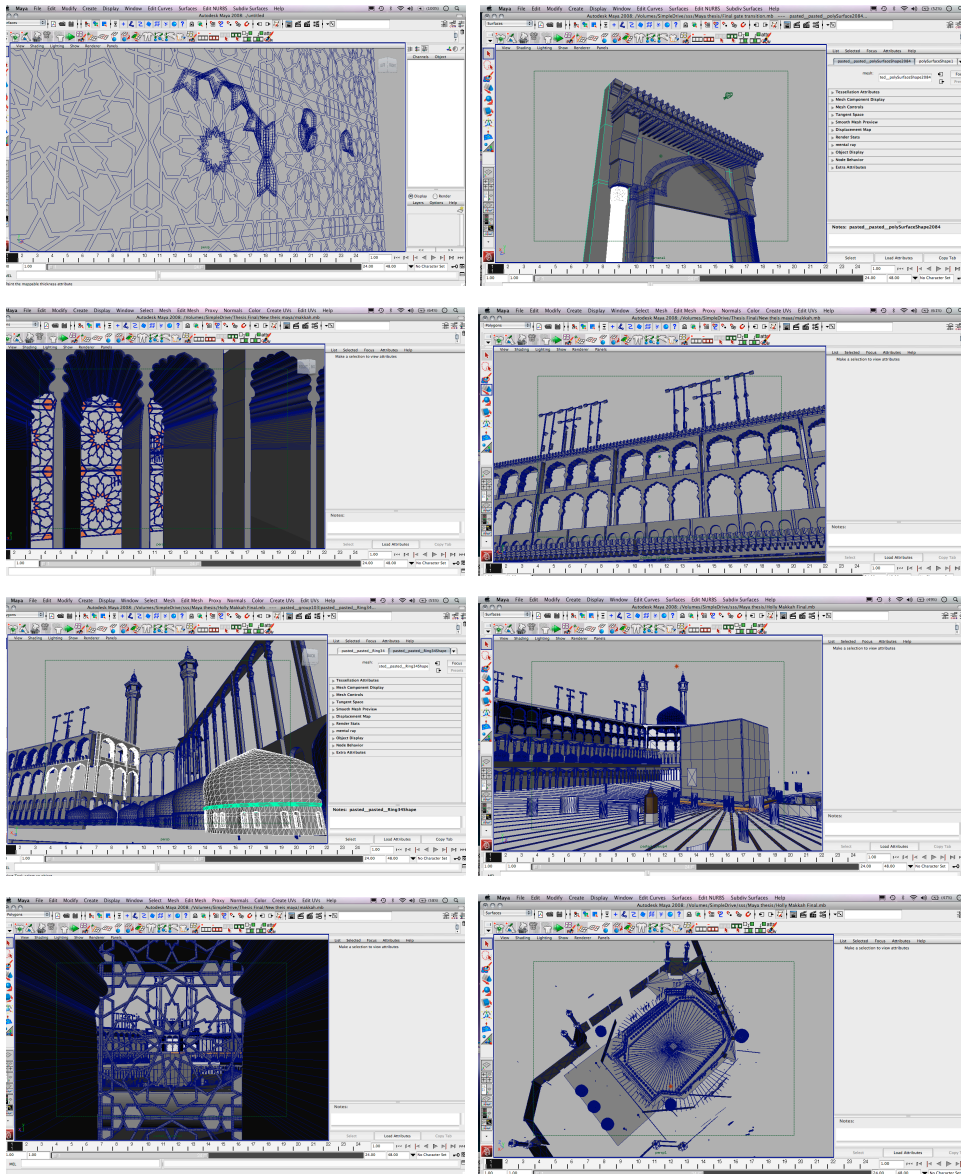


Figure 3.3.2.2 Screen captures of the diverse three-dimensional developing stages of the holly city of Mecca scene within Autodesk Maya

The flying doves graphics were created in Adobe After Effects using the Trap code “Particular” third party plug in, in creating these dove graphics I create two solids layers with a size of 25x25 pixels and formed them into a shape that represents the wings of the doves by using masks, later these solids were animated by using expression to simulate the natural movement of the flying doves, later these solids were composited into a single composition with the Trap-code “Particular” effects applied to it a custom layered particles which generate the flock of doves flying above the city of Mecca.

3.3.3 Compositing and visual treatment

Due to the complex scenery details of the holy city of Mecca and its diverse enormous architectural elements, the scene was divided into smaller sections with different render passes of each section.

The smaller section encompass a scene of a traditional style Islamic gate design, The holy mosque, the Islamic star pattern, each of these scenes were rendered with two different render passes; an ambient occlusion pass, and color pass rendered with Autodesk Maya 2008 physical sun and sky rendering engine.

The new physical sun and sky plug-in was implemented heavily within this scene to physically simulate the natural daylight feeling of the environment, and to create realistic shadows which adds a sense of photorealism to the scene.

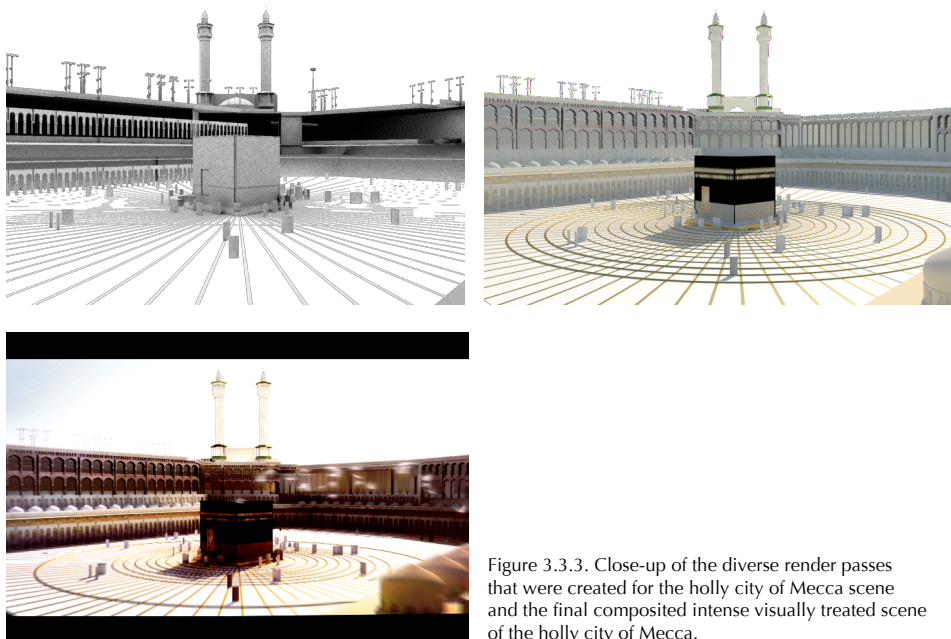


Figure 3.3.3. Close-up of the diverse render passes that were created for the holy city of Mecca scene and the final composited intense visually treated scene of the holy city of Mecca.

The overall rendered passes were then imported into Adobe After Effects and went under extensive postproduction, and visual effects process.

The postproduction process encompasses compositing multiple solids with different colors, and blending modes on top of the rendered passes. Moreover, multiple adjustment layers that have various color correction, and color grading effects were composited on top of these passes.

These adjustment layers were composited with different blending modes to achieve the desired visual style. The effects that were implemented within these layers are curves adjustment, levels adjustment, photo colors, hue and saturation.

Moreover, a number of visual effects were implemented within this scene by such as “CC Light Sweep”, and “Glow” which enhanced the daylight feeling of the scene, and the shining ray of light.

Also third party plug-in effects were using third party visual effects plug-in such as Trap code “Shine” and “Particular”, both of these effects were used to polish the visual style of the scene, and generate the particle based flying flock of doves.

3.3.4 Color scheme

My color scheme selection for the Holy city of Mecca scene was based on choosing a color palate that reflects the religious, and spiritual role of Mecca as the capital city of the Islamic world, and the birthplace of the Islamic religion. Moreover, I wanted to reflect the visual luxury of the architectural elements of this place.

Therefore, I choose a mixture of different color tones including emerald green tones, off white tones, golden tones, bright sepia tones, and teal color tones.

Each of these tones is inspired from the physical elements found in the holly city of Mecca, and the holly mosque.

The diverse sources of these colors are inspired from the golden color of the art works in Mecca, the white colors of the mosque marble floors, the yellowish sepia of the mosque Islamic arcs, the green of the mosque minarets and palm trees, the off white of the mosque domes, and the bluish teal of Mecca skies.

These contrasting colors visually reflect the city of Mecca, and introduce it as a mystical spiritual place of worship that have a luxurious visual architectural and Islamic heritage, and enhance the importance of this scene the core of my motion graphics thesis.



Figure 3.3.4 the major color scheme palate that was used for the holly city of Mecca scene and it's various design elements.

3.3.5 Lighting and materials

Due to both the geographical and architectural nature of the holy city of Mecca as the birthplace of the Islamic religion, and the home of the holly mosque, and the holly Kaaba, I choose to render this scene with the new Maya 2008 physical Sun and Sky rendering engine. This rendering engine results in a very sophisticated photorealistic architectural visualization, these visualization have the major features of a photorealistic image in terms of the quality of overcastted shadows, and the accuracy sun lighting calculations, and directions.

By using this rendering engine along with real photo textures of Mecca architectural elements, I was able to capture the realistic details of this city, and its architectural elements, and therefore highlighting the major features of this scene, and enhancing its importance as the major core of my motion graphics thesis.

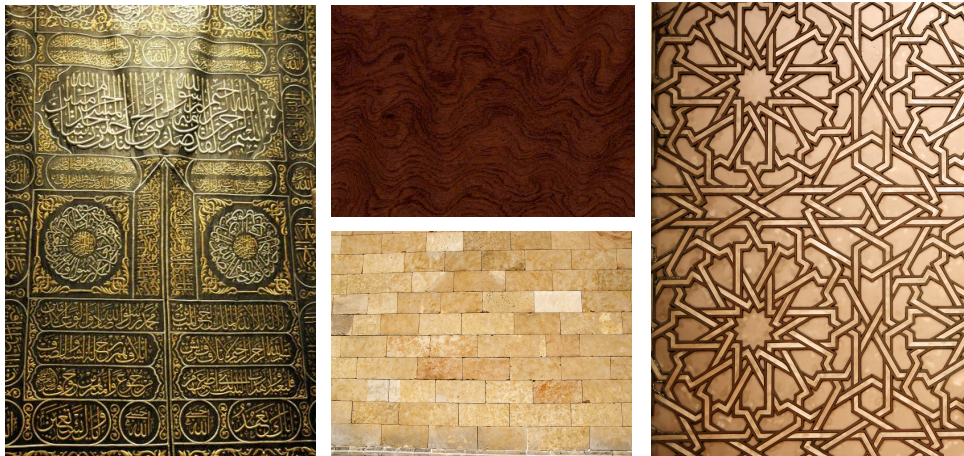
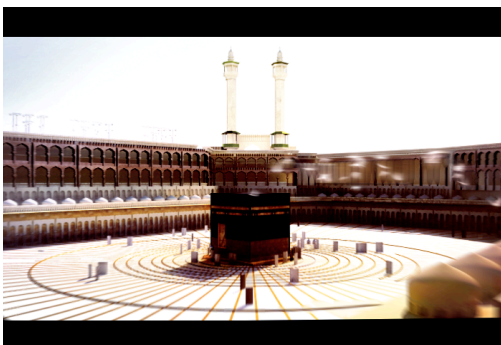
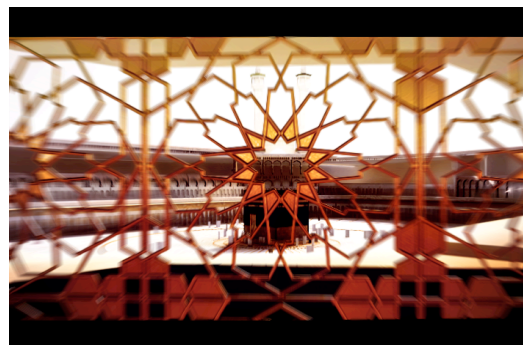
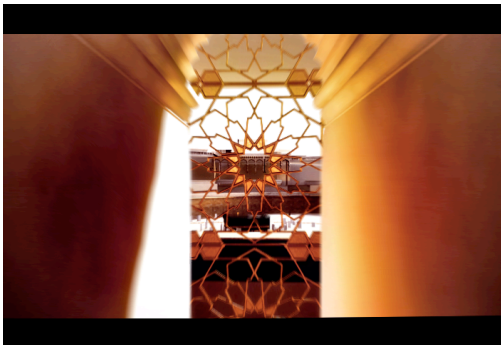
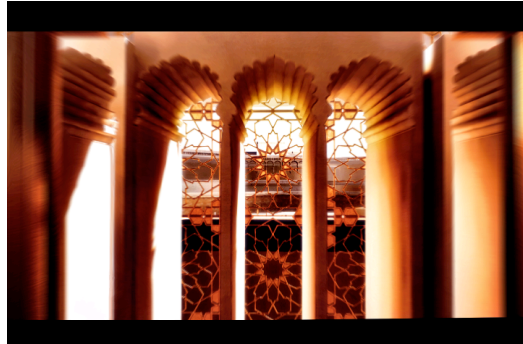
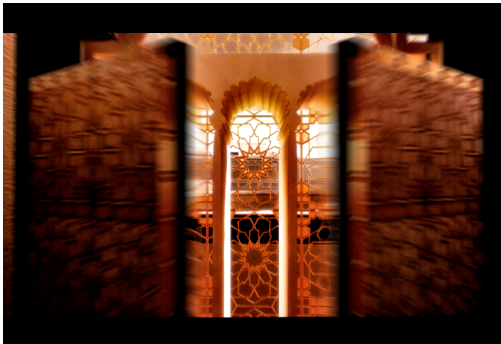


Figure 3.3.5 Detailed close-up images of diverse architectural textures used for the holly city of Mecca scene

Source: bought texture library from www.3dtotal.com

3.3.6 Style frames



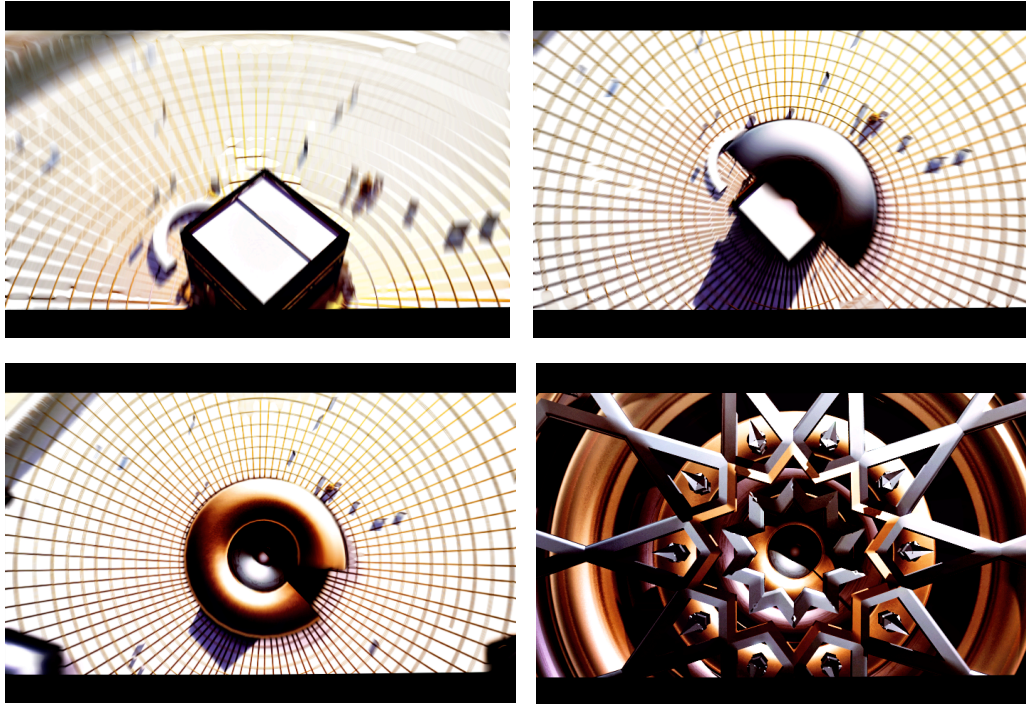


Figure 3.3.6 Style frames of the thesis holly city of Mecca scene sequence

3.4 The Traditional city of Jeddah: Conclusion (Size 720x480, length: 27 Seconds)

The motion graphics thesis concludes with the scene that encompasses the traditional city of Jeddah.

This scene highlights the rich architectural and Islamic heritage of the city of Jeddah, and was implemented to visually emphasize the strong correlation between the Islamic religion, and the inherited Saudi Arabian arts, architecture, and culture.

The city of Jeddah scene encompasses enormous visual details and intricate artistic visual elements that were heavily implemented into this scene to visually enrich this scene, and define it as the final major scene of my thesis motion graphic animation.

This conclusion was designed to visually celebrate the arts, culture, and architectural heritage of Saudi Arabia. This conclusion bonds all of the previous motion graphics scenes together as a one cohesive motion graphics video, and highlights the essence of the Arabian culture.

3.4.1 The Traditional city of Jeddah design concept

My design concept for the traditional city of Jeddah scene is to visually introduce the city of Jeddah as the core capital of the rich Saudi Arabian culture, arts, and the Islamic architectural heritage.

The city of Jeddah holds a strong significance to the Saudi Arabian culture for its strategic location next to Mecca, and its role as the economical capital of Saudi Arabia

Moreover, the city of Jeddah has a strong correlation with the Islamic religion, this correlation strongly manifest itself in the form of graphical arts, culture, and architectural heritage. Therefore, my design concept is intended to reflect this correlation through designing the layout of this city on the shape of an Islamic star.

This layout strongly emphasizes the correlation between the Islamic religion, and the Saudi culture through architecture. For, the major architectural structure on this layout is the mosque.



Figure 3.4.1.1 Detailed sketch of the initial architectural design of the traditional city of Jeddah scene

The mosque has a very important significant to the Arabian, and Islamic culture. Therefore, my design concept was to centrally place the mosque on the center of the city layout, and from the mosque the rest of the city architectural buildings “residential buildings, market” emerges.

The Islamic shaped city layout metaphorically represents the important role of the mosque as a religious icon in the Saudi culture, and the development of the various forms of the Saudi culture, and social life around it.

Moreover, the visual element of Islamic crescent was strongly implemented within this scene to visually enhance the Islamic features of the city of Jeddah, and to metaphorically represent the time period of the holy month of Ramadan as a visual element the correlate the scene of the city of Jeddah with religious previous scene of the holy city of Mecca.

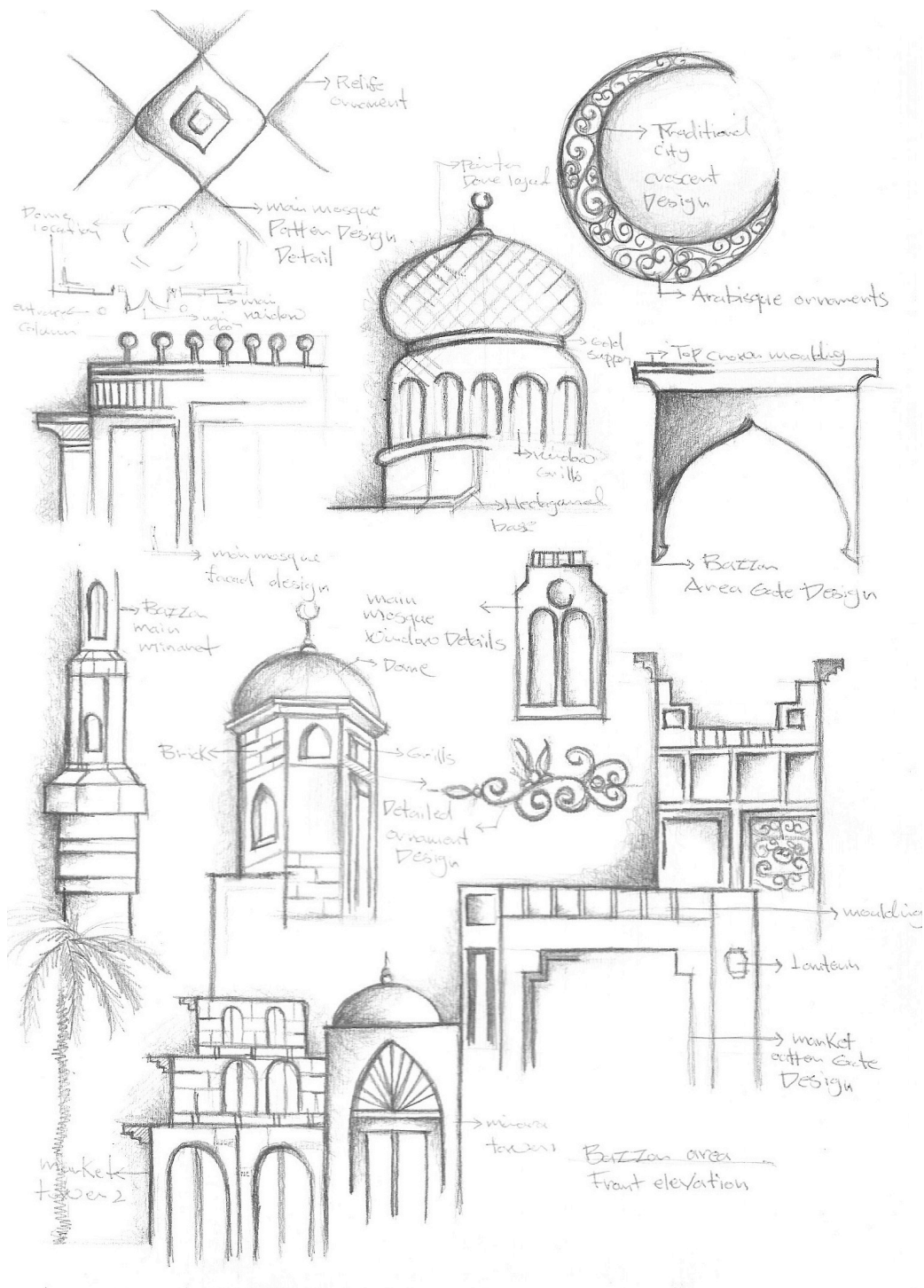


Figure 3.4.1.2 Detailed sketch of the diverse architectural elements, and pattern designed for the traditional city of Jeddah scene

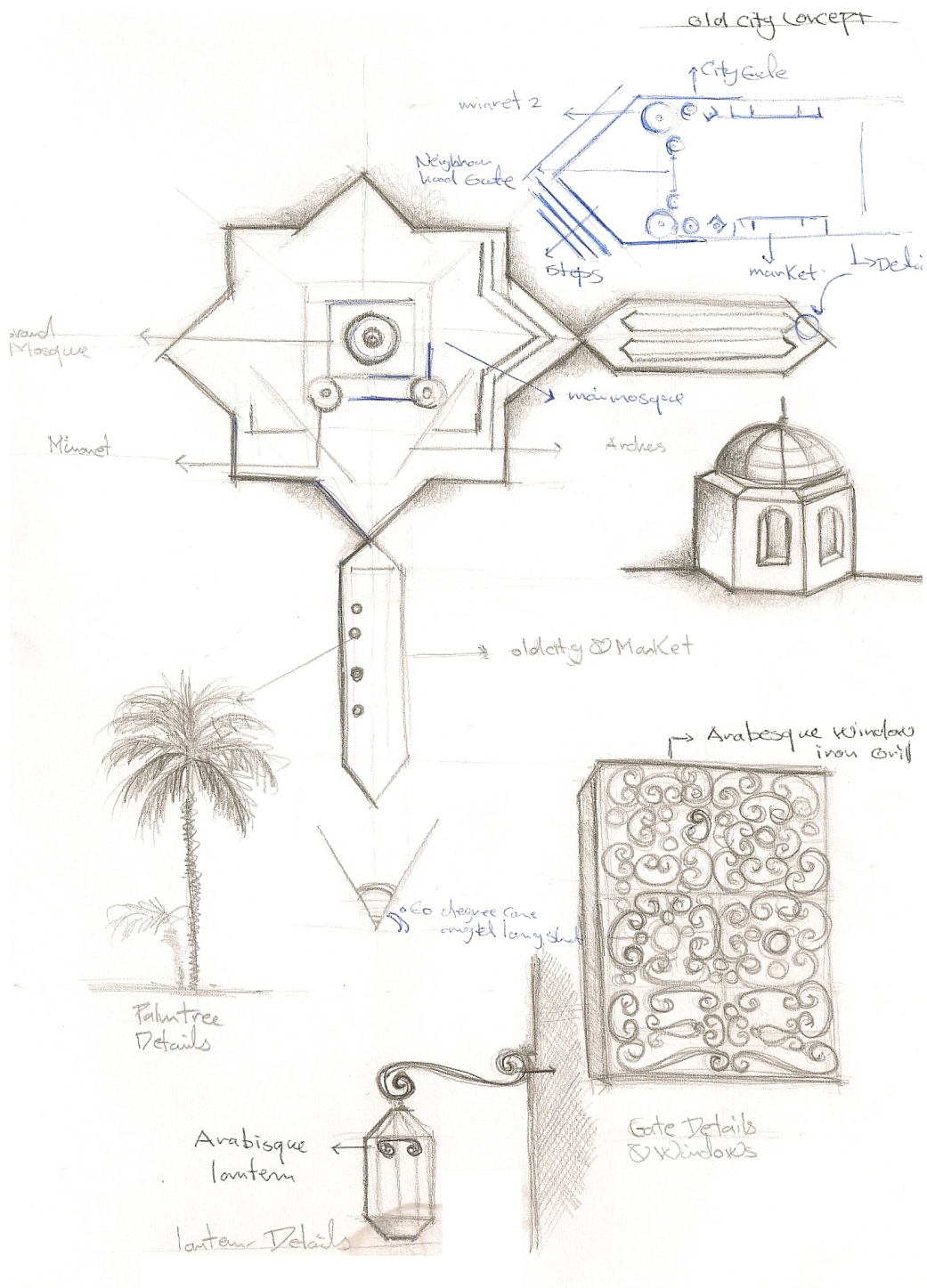


Figure 3.4.1.3 Detailed sketch of the diverse architectural elements, and pattern designed for the traditional city of Jeddah scene

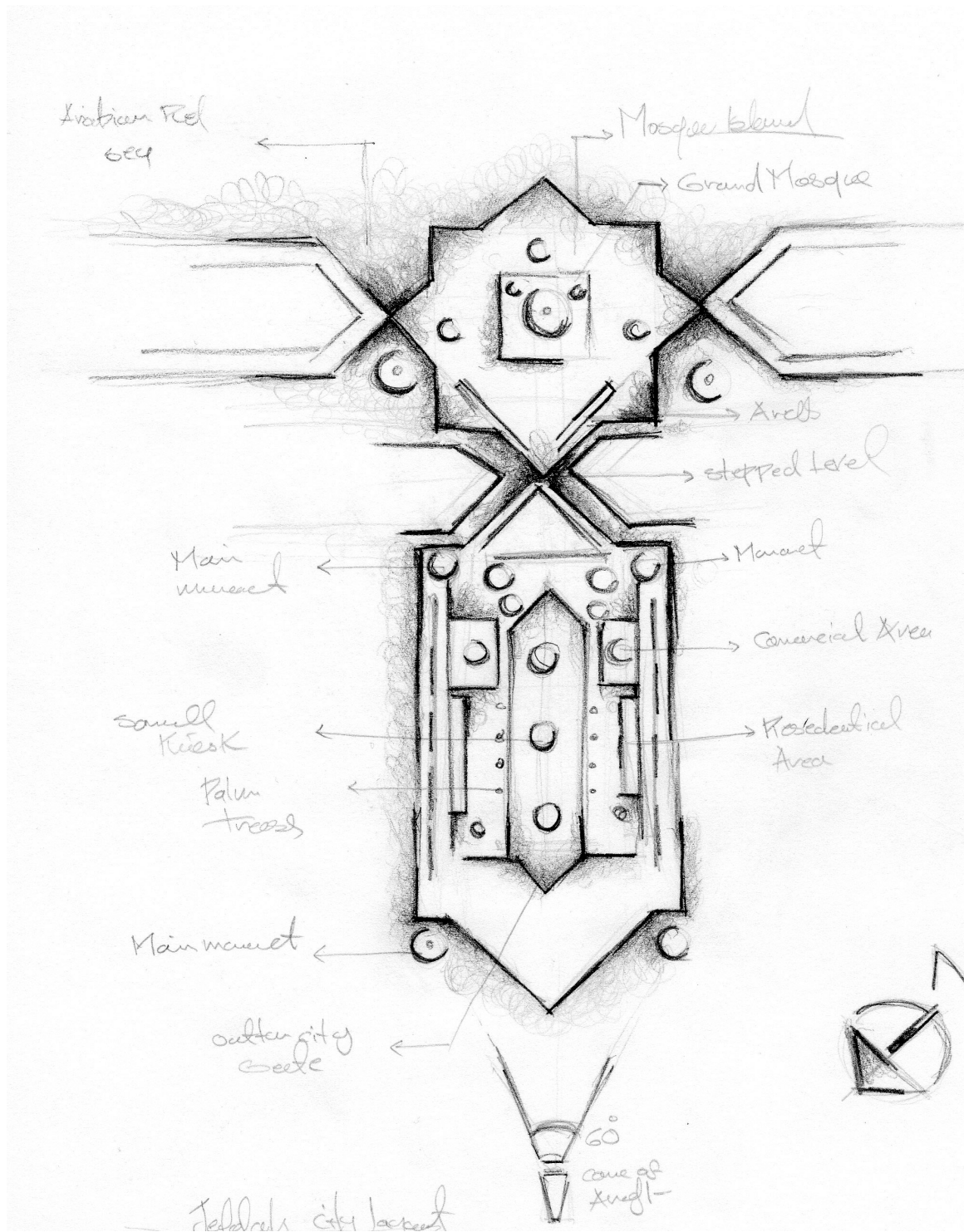


Figure 3.4.1.4 Detailed sketch of the traditional city of Jeddah top architectural layout planning



Figure 3.4.1.5 Detailed sketch of the traditional city of Jeddah front city architectural elevation, and gate facade

3.4.2 The Traditional city of Jeddah graphics creation process

The graphics creation process for the traditional city of Jeddah implemented extensive architectural studies of the city of Jeddah, and creating an enormous architectural structures, and both two dimensional vector graphics and three dimensional graphics.

The two dimensional vector graphics were created in Adobe Illistartor and they encompass the design of a traditional islamic crescent, and the design of an ancient islamic star pattern. Later on these vector graphics were imported into Autodesk Maya as vectors outline and were converted into three-dimensional polygonal models using the “Bevel Plus” tool.

The three dimensional graphics encompass an extensive collection of an architectural structures that are found in the traditional city of Jeddah.

These structures encompass the grand mosque, the old souk “traditional bazaar, and its surrounding residential buildings.

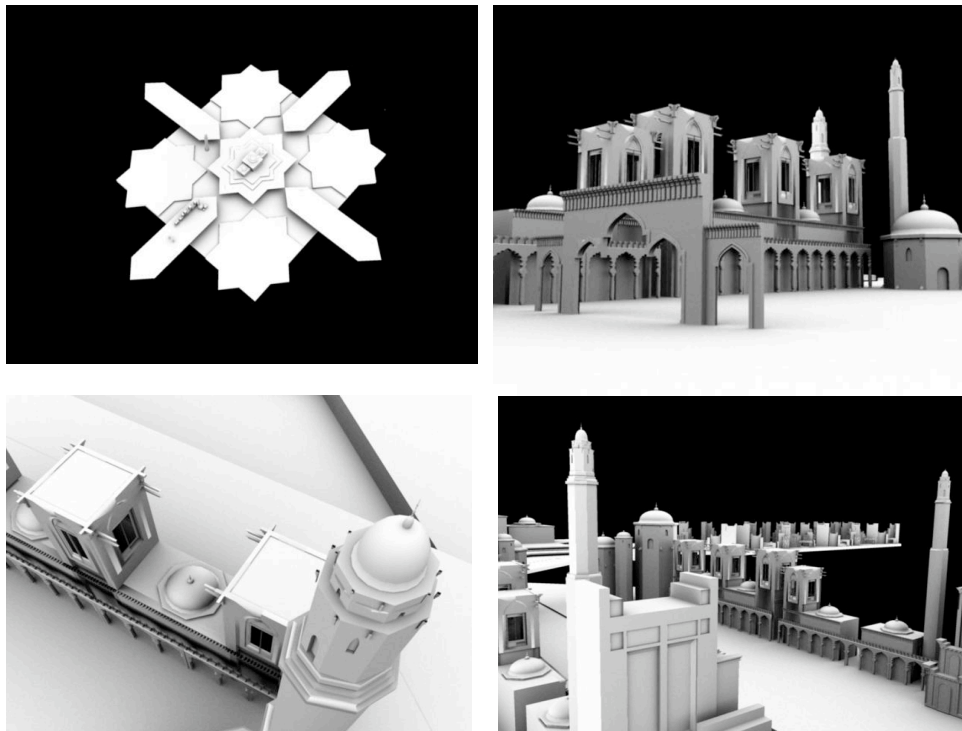


Figure 3.4.2.1 Initial three dimensional development stages of the traditional city of Jeddah created by Autodesk Maya

These architectural structures were mainly created in Autodesk Maya by using various modeling methods such as Nurbs, and polygons with different primitive shapes “spheres, cubes, cylinders” that went under extensive modeling operations “conversion from Nurbs to polygons, extrusion, split polygons, lofting, Booleans, lattice deformation” to achieve the fine detailed final architectural forms.

Moreover, some of the graphics in this scene were achieved by using a combination of both stock images, and stock videos that were collected with the help of the Saudi Arabian embassy in Washington D.C, while the others were collected by buying a non copy righted textures library.

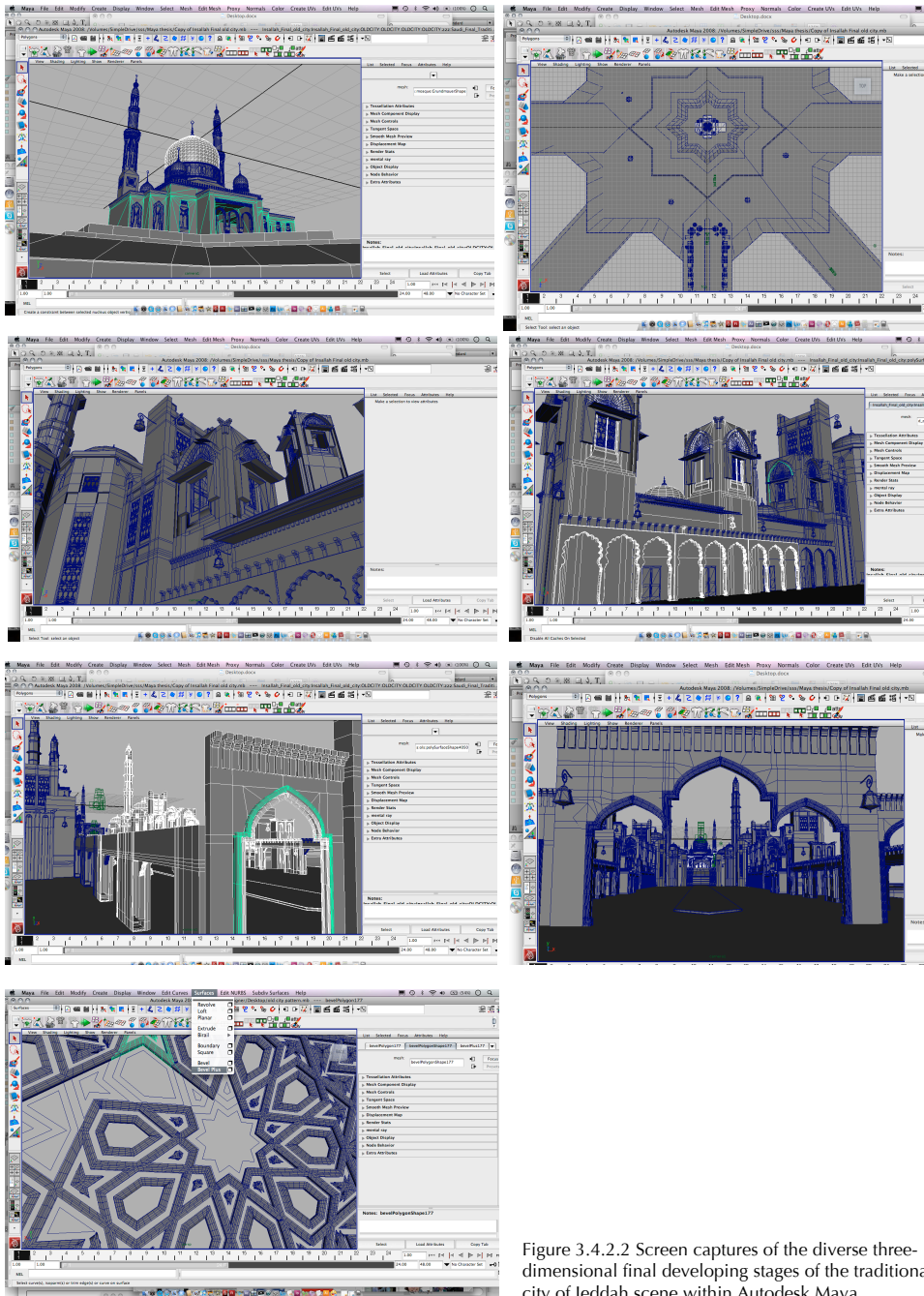


Figure 3.4.2.2 Screen captures of the diverse three-dimensional final developing stages of the traditional city of Jeddah scene within Autodesk Maya

3.4.3 Compositing and visual treatment

An extensive postproduction process was implemented to achieve the final visual look of the traditional city of Jeddah Scene.

This process encompasses separating each visual element within the scene into separate different render passes, each of these visual elements were separated to reduce the rendering process time, and to solve the problem of the Maya scene being crashing due to the big files size.

The separated render passes encompass an ambient occlusion pass to enhance the shadow and architectural details, a color pass rendered with Maya physical sun and sky to simulate a photorealistic architectural visualization, and a background pass that encompass a stock video of an Arabian desert clouds and sky rendered in Maya.



Figure 3.4.3. Close-up of the diverse render passes that were created for the traditional city of Jeddah scene and the final composited intense visually treated scene of the traditional city of Jeddah

All of these render passes were then imported into Adobe After Effects and went under extensive visual effects, and color correction processing.

The color correction processing encompasses a applying multiple color solids with different blending modes, and multiple adjustment layers with various color correction effects applied on them.

The color correction effects that were applied on the adjustment layers include curves adjustment, levels adjustment, brightness and contrast, hue and saturation, photo filter, and three colors toning.

The adjustment layers were later composed along with the color solids over the rendered passes with different blending modes.

The visual effects of this scene encompass the implementation of third party plug in such as Trap code "Particular" and "Shine", these two effects were strongly implemented to generate the flock of flying doves, and to add a colorful shining effects to the architectural elements, and the sky background.

Moreover, a variety of effects found within Adobe After Effects were applied such as "Lens flare" to enhance the lighting effects of the architectural lanterns, and also "CC Light Sweep", and "Glow" were implemented to define the direction of the light rays, and to enhance the general lighting effects of the scene.

All of these effects were multiple adjustment layers, and were composed with different blending modes to achieve the desired visual style.

3.4.4 Color scheme

My color scheme concept for the traditional city of Jeddah scene was based on choosing a color palate that metaphorically reflects the religious mystical features of the holy month of Ramadan, and the end of the fasting spiritual process during the sunset, and night dawn time.

The color scheme concept is also based on adding a strong sense of sophisticated visual luxury to this motion graphics section and strongly defining it as the major anticipated thesis conclusion by differentiating it from the previous motion graphics scene through colors.

Therefore, I chose a color scheme of different tones of violet, light orange, gold, beige, and dark navy blues.



Figure 3.4.4 the major color scheme palate that was used for the traditional city of Jeddah scene and it's various design elements.

These color combinations are inspired from different visual sceneries found in the Saudi Arabian culture, from the golden colors of the arabesque iron art works, the violets of the Arabesque patterns and sunset, the blues of the mosque tiles, and the orange of the sand dunes.

Moreover, this eclectic color scheme combination reflects the physical feature of the traditional city of Jeddah as the celebrated cultural capital of Saudi Arabia, a place where rich architectural heritage, Islamic arts, and traditional Arabian culture are merged harmonically together.

3.4.5 Lighting and materials

Due to the major importance of this scene as the conclusion of my motion graphics thesis , and as the cultural city of Saudi Arabia with a rich inherited islamic architectural heriatge, I chose to render it entirely with the physical Sun and Sky rendering engine to enhance the architectural details of this city, and to create a very sophisticated photorealistic architectural visualization.

The resulted architectural visualization have the major features of a photorealistic image in terms of the quality of overcastted shadows, and the accuracy sun lighting calculations, and directions.

By using this rendering engine along with real photo textures of diverse Arabesque patterns, and art works found within the city of Jeddah architectural structure elements I was able to capture the realistic details of this city, and its architectural elements, and therefore highlighting the major features of this scene, and enhancing its importance as the major thesis conclusion scene.



Figure 3.3.5 Detailed close-up images of diverse architectural textures used for the holly city of Mecca scene

Source: bought texture library from www.3dtotal.com

3.4.6 Motion design concept

My motion design concept for the thesis scene was to emphasize the strong correlation between the traditional city of Jeddah and the Islamic religion with its inherited arts, architecture, and culture.

Moreover, I wanted to introduce this scene as the major anticipated conclusion section of my motion graphics video, and define the strategic role of this city as the cultural capital of Saudi Arabia.

Therefore, the animation of this scene starts with a dynamic swinging camera movement with a focal point fixed on the Islamic crescent, this crescent metaphorically represent the holly month of Ramadan, and the sunset time period.

The camera then starts zooming out from the crescent reviling the central grand mosque to emphasize the correlation between the Islamic crescent as an iconic Islamic symbol and the mosque an Islamic architectural structure.

Later on the camera presume its animation by zooming out from the grand mosque to the outer city walls of Jeddah, while zooming out diverse symmetrical architectural structures continue emerging from the ground establishing the residential, and commercial architecture of the city, and defining the main city skyline.

This motion graphics section conclude with the implementation of an intricate arabesque pattern being formed within the center of the composition concealing the city of Jeddah behind it and visually replacing it with a colorful Islamic geometrical pattern background that encompass the main title of my motion graphics thesis: Moarabsique the essence of Arabia.

The implementation of the main thesis title in the end of this motion graphics video strongly bond all the previous motion graphics scenes together as a one cohesive motion graphics video that reflects the true visual essence of the Saudi Arabian culture through arts, architecture, and religion implemented into an epic visual journey of the diverse Arabian culture sceneries from the daylight to the sun set.

3.4.7 Style frames

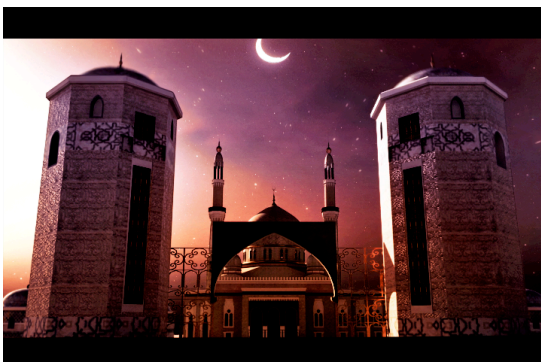
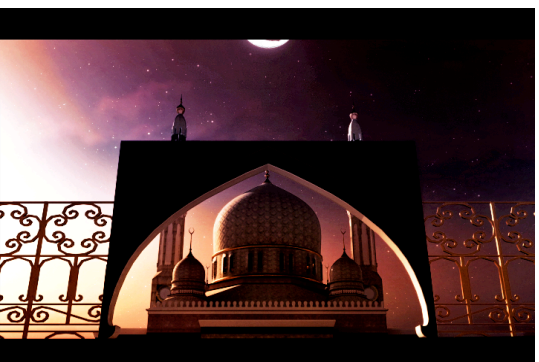
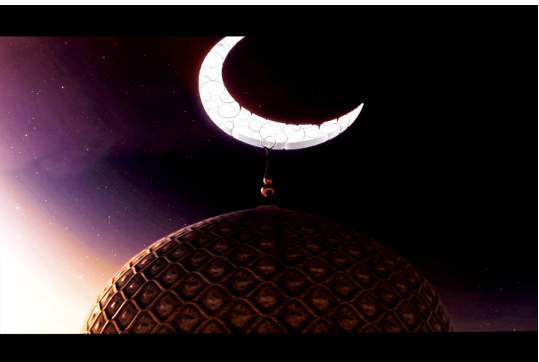
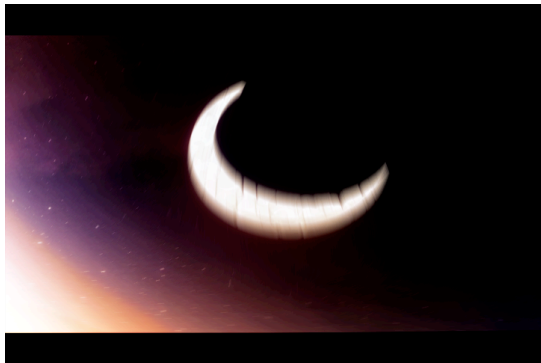
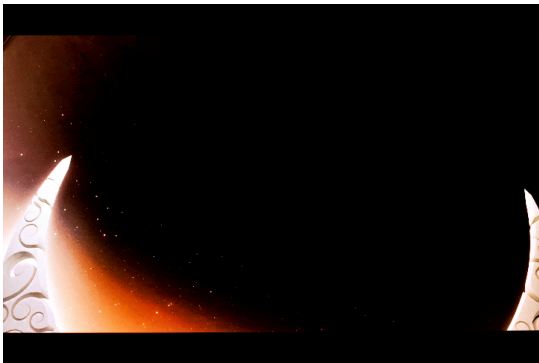
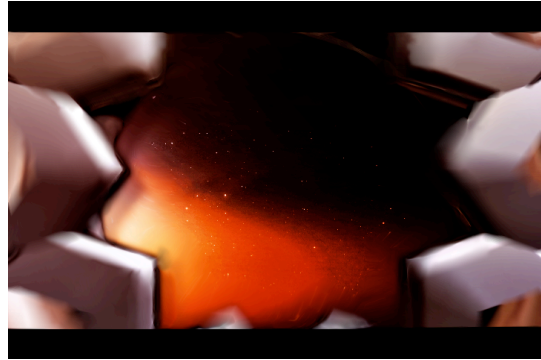
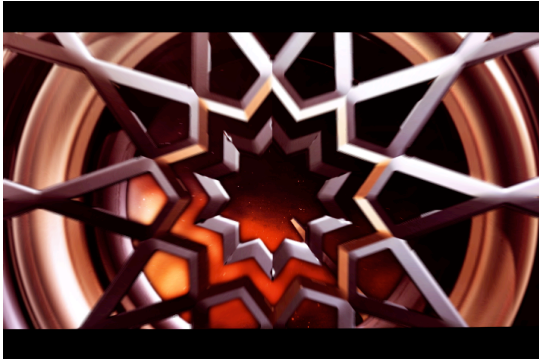




Figure 3.4.7 Style frames of the thesis traditional city of Jeddah scene sequence

4. Summary

The overall thesis was an enormous challenging Motion graphics project that went under multiple design directions and development from an initial proposed custom video footages of the Saudi Arabian culture to a final fully three dimensional motion graphics project that was created from scratch.

This thesis was going to be a motion graphics video with a length of 1.30 minutes reflecting both the traditional, and modern Arabian culture, but later was reduced to a one-minute video that only reflects the traditional Arabian culture.

The decision for reducing the length of the thesis motion graphics video was due to the intensive time consuming render process for some parts of the Maya scene files were crashing, while others were took an average of four hours per frame to render, which made impossible to implement the final scene of the modern Arabian culture into my motion graphics thesis.

The creation process for this project encompasses regular feedbacks on a daily basis from my committee members through both individual, and group meetings.

On these meeting many suggestions were mentioned regarding the development of the visual style, rendering process, the animation style, synchronizing the animation with the audio soundtrack, and how to combine the separated motion graphics sections into a one cohesive motion graphics video.

Moreover, in the thesis development stage, I have received numerous feedbacks from friends, and different individuals regarding the refinement of the architectural design of my thesis projects, adding more architectural details, implementing additional motion graphics scenes, and adding more color schemes and visual effects.

All of these feedbacks, and suggestions were taken into consideration, and were applied to my final motion graphics video.

After completing my motion graphics video, I have tested it on a group of audience that encompasses a friends, colleagues, and faculty members to receive feedbacks.

The given feedbacks were a strong and positive; the majority of the audience expressed their admiration to this motion piece and the appreciation of its beauty, aesthetical values, and the amount of visual details that were implemented, and establishing a visual awareness of the aesthetics of the Arabian arts, and culture, which supported my major thesis statement.

Moreover, these audiences expressed their feelings, and opinions that they weren't concerned, or bothered about the final motion section of the modern Arabian culture pieces not being implemented within the final motion graphics video.

5. Conclusion

The major purpose of my motion graphics thesis is to create a custom designed Arabian motion graphics video that will be implemented as an effective multimedia tool to visually promote the diverse Saudi Arabian culture through arts, architecture, and religion with a strong implementation of the art of Arabesque, and Islamic pattern to enhance the visual style of the motion graphics video.

Therefore, I started the design process by establishing a live case study of the Saudi Arabian arts, and culture, which included various trips done to the kingdom of Saudi Arabia to closely observe, and study the architectural, and artistic heritage of the Saudi Arabian culture.

Moreover, I have established strong visual references on the art of Arabesque, Islamic geometrical patterns, and traditional Islamic architecture. Through the research that implemented both of the live case studies, and the solid visual references I choose to strongly incorporate the art of Arabesque, and Islamic pattern in my whole motion graphics thesis to visually enrich the motion graphics video, and to use it as a strong transitional visual element through the diverse sceneries of the Arabian culture.

Based on the established research, and case studies, I have developed a series of four different motion graphics videos, these video visually reflect the diverse sceneries of the Arabian culture through arts, architecture, and religion. Each of these video reflects a specific aspect of the Saudi Arabian culture starting with the birth of this culture as a lunar based, its merging from the Arabian desert, its Islamic core in the city of Mecca, and its artistic core in the city of Jeddah.

Later on these motion graphics video were composed into a one cohesive motion graphics video with a custom designed soundtrack that reflects the diverse sceneries of this culture.

The final combined motion graphics video engages the audience in an epic audiovisual journey of discovery of the mystical aspects of the Saudi Arabian culture through various time periods.

While engaged in developing this thesis I have learned valuable knowledge, and a set skills "compositing, motion design, visual effects"... that are required from motion graphics designers in today's competitive job market

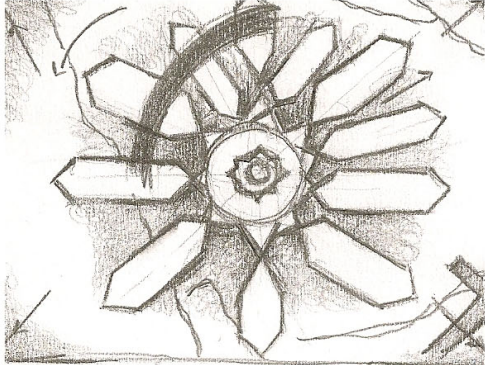
This knowledge, and set of skills made grew both mentally, and artistically as motion designer, and I plan to use this knowledge, and skills in my upcoming carrier life.

I have also learned how to effectively implement motion graphics as an effective multimedia tool to increase the visual awareness about various cultures including mine, and this kind of big scale projects is usually a teamwork project.

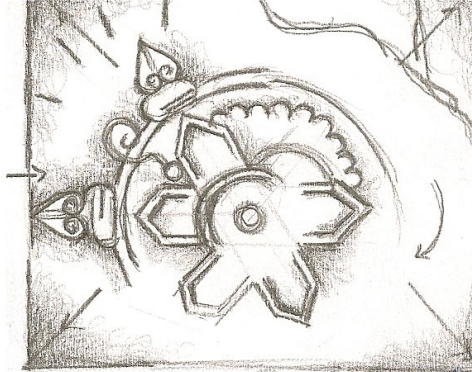
All in all this projects was a very complex, and challenging one that raise many technical difficulties I managed to solve, and completing this project in its current final form took great efforts, strong dedication, and continuous hard working to achieve it.

6. Appendix A "thesis story boards"

① Rotating Bel Patun
Framing the Astutobe



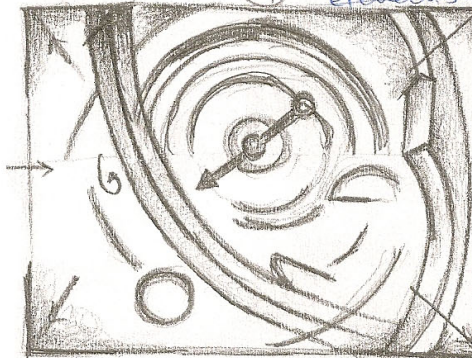
② Composed elements
Are assembled



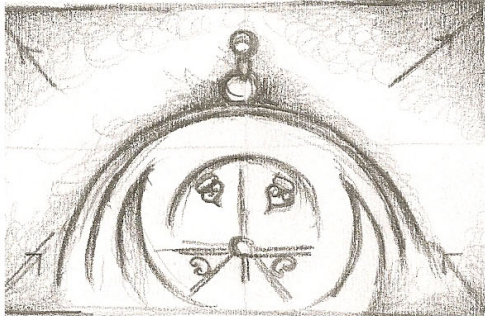
③ Detailed Zoom-out
with Flare

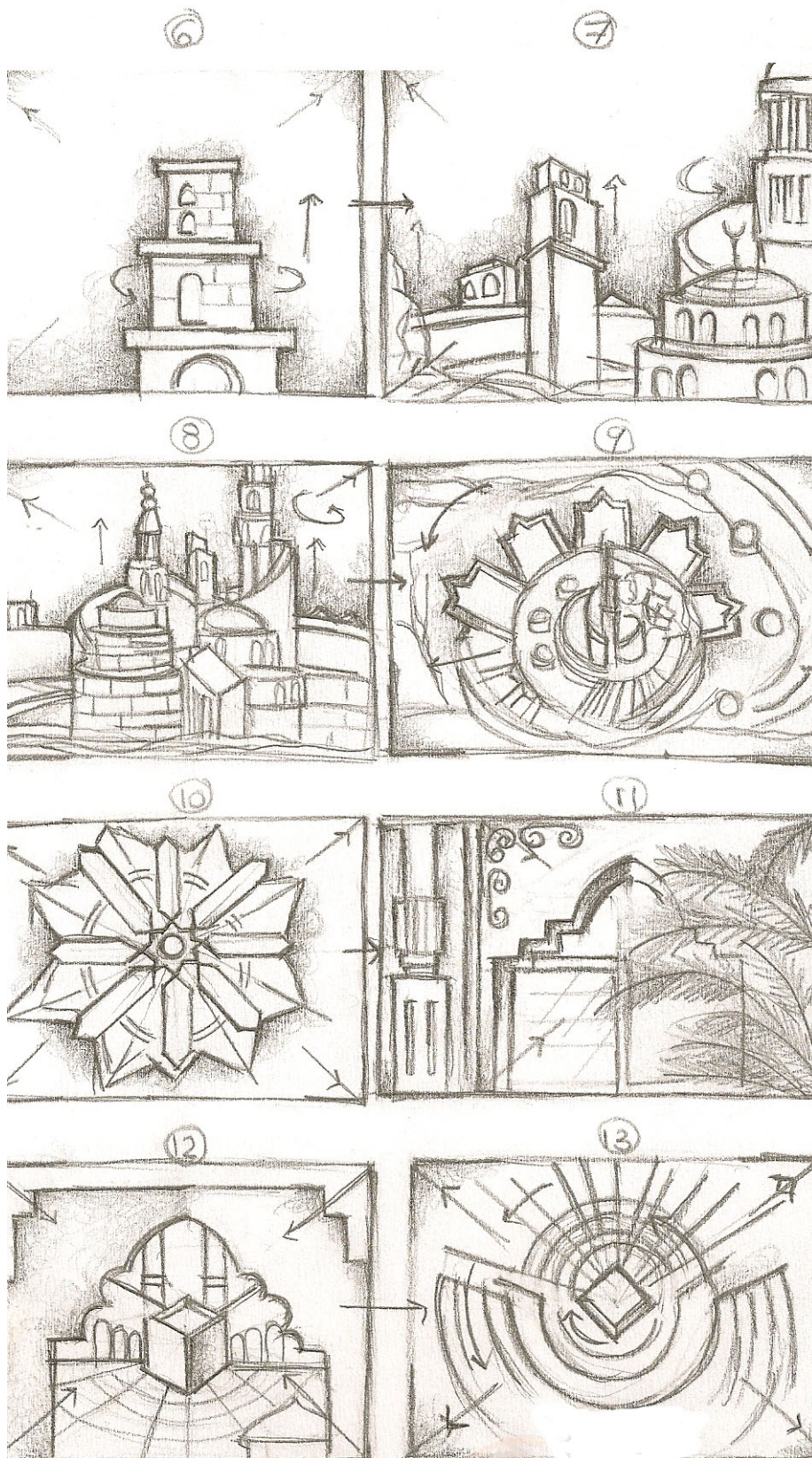


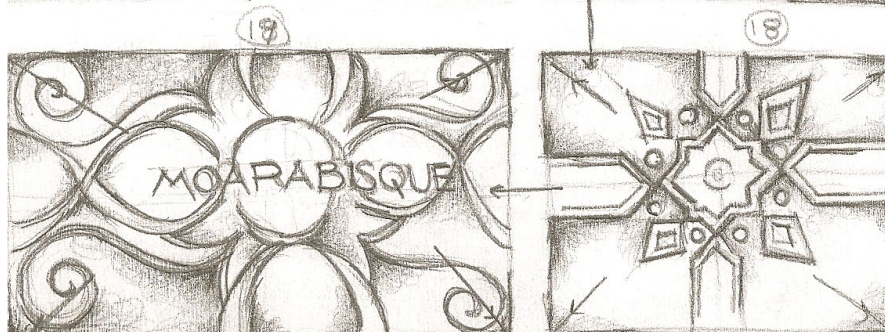
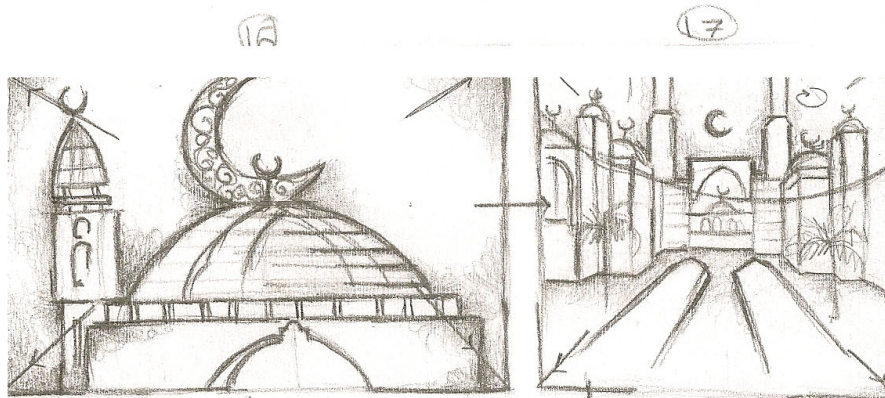
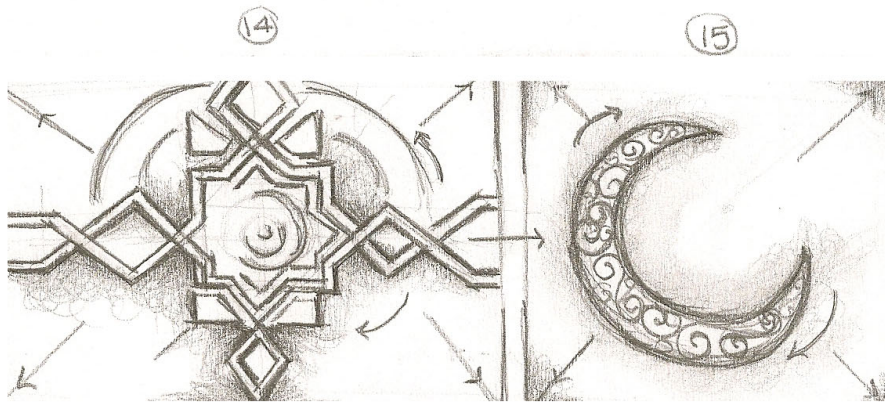
④ Zoom out of
elements



⑤ Zoom out from
Astutobe







6. Appendix B “thesis proposal”

Thesis Proposal for the Master of Fine Arts Degree

Rochester Institute of Technology
College of Imaging Arts and Sciences
School of Design
Computer Graphics Design

MOARABISQUE: The Essence of Arabia; a motiongraphics peice that promotes the diverse Arabian Culture

Submitted by: Wail Al Hamid

Date: May 20, 2008

Thesis Committee Approval:

Chief Adviser: Assistant Professor Dan Deluna, Computer Graphics Design

Signature of Chief Adviser

Date

Associate Adviser: Assistant Professor Shaun Foster, Computer Graphics Design

Signature of Associate Adviser

Date

Associate Adviser: Associate Professor Chris Jackson, Computer Graphics Design

Signature of Associate Adviser

Date

School of Design Chairperson Approval:

Chairperson, School of Design: Patti Lachance _____

Problem Statement / Background

Motion graphics is one of the most ingenious artistic tools available for visual designers.

The realm of motion graphics is relatively a new one. This realm has evolved as a new Compelling form of computer generated graphic design, which implements the usage of time Based imaging, and audio to visually convey a message to an intended audience, and to serve as a promotional multimedia tool.

The dynamic effects of this realm are found within every aspect of our daily digital life including a strong presence in television, the Internet, entertainment, and commercial shows. These aspects have advanced technologically in today's digital age.

Therefore, the realm of computer generated motion graphics has also been influenced by this advancement. This influence is strongly shaping the way we view, comprehend, and analyze things around us including our perception towards various cultures. The majority of people tend to better understand other cultures through visual medium such as commercials, ad campaigns.

Therefore, when it comes to motion graphics some might believe that it project a clear image regarding our world and the diverse cultures surrounding it. However, when it comes to certain issues the projected image is opaque. Entertainment, music videos, and commercials are some of the major motion graphics elements that played the biggest role in Putting together this opaque image.

The question that arises for us as visual designers is how can we implement our skills, creativity and knowledge to clear such a distorted image, and to promote the true characteristics of any culture? Computer graphics is a substantial tool that if used properly can re-project an unbiased image, and promotes the true essence of media misrepresented cultures.

As an Arabian individual I strongly believe that the media has misrepresented my culture, neglecting it rich artistic and architectural heritage. Therefore, I feel that it's my obligation to utilize my abilities, and creativity to build a proper and just image about my culture, by promoting the true essence of my culture through creating a custom designed motion graphics video with an Arabian artistic style.

I am a visual designer with an Arabian origin, and a strong passion for motion design. Therefore, the central question for me is how can computer graphics in general, and motion graphics in specific can be used effectively to promote the true essence of the Arabian culture, and resolve any misconception about it?

Scope

The main concentration of this thesis will strongly relate to the field of motion graphics, Three-dimensional digital graphics, and computer generated architectural visualization. Moreover, the final thesis product is going to be a series of four Arabian style motion graphics animations merged together as a one cohesive motion graphics video. These series will visually reflect the diverse scenery, artistic heritage, Islamic religious icons, and essence of the Arabian culture. The first scene of the thesis will introduce the Astrolabe which is an Islamic celestial element used to determine the Arabic lunar calendar, and the orientation of the holy city of Mecca.

The second scene showcases the Arabian Desert, and it surrounding architectural ruins to emphasize the characteristic of the Arabian culture; a one that has merged from the Arabian Desert.

The third scene introduces the holy city of Mecca: the core of the Islamic religion, and the Arabian culture.

The final scene of the thesis will encompass a traditional Arabian city design to illustrate the strong correlation between the Islamic religion, the Arabian arts, and architecture.

The overall merged motion graphics scenes will help to promote the diverse Arabian culture, and increase people awareness towards various my cultures, through arts, architecture, and religion.

Literature Survey

There haven't been any motion-graphics pieces yet designed to effectively communicate, and promotes the Arabian culture. Moreover, there are very few Arabian motion-graphics designers who implement the Arabian graphical art, and Islamic geometrical patterns to communicate their messages, and inform others about the Arabian culture. Therefore, the literature survey will implement establishing rich references on the effects of media on cultures, and solid visual references on the art of Arabesque, Arabian graphical arts, and the traditional Arabian Islamic architecture.

Biagi, Shirley. *Media/Impact: An introduction to mass media*. Wadsworth Publishing, 1992.

Long, David . *Culture and Customs of Saudi Arabia*. Greenwood Press, 2005.

Boutros, Mourad. *Arabic For Designers*. Mark Batty, 2006.

Bourgoin, J. *Arabic Geometrical Pattern and Design*. Dover Publications, 1973.

Project Description / Methodology

For this thesis the following will be implemented to support my thesis statement of how motion graphics can be used effectively to promote the Arabian culture, and to increase people awareness towards my culture.

- Live case study of Saudi Arabia: various trips to the holy city of Mecca, and Jeddah to study the architectural, and artistic heritage, and to collect custom made soundtracks.
- The Islamic Arabian graphical arts (Calligraphy, and geometrical patterns) done by using Adobe Illustrator, and Autodesk Maya, to explore the artistic culture of my country.
- Detailed three-dimensional city of Mecca (the core of the Arabic Muslim world, and the Islamic religion) done by using Adobe Illustrator, Autodesk Maya, Adobe Photoshop.
- The Astrolabe (an Islamic celestial instrument, which is used to determine the lunar calendar) done by using Adobe Illustrator, and Autodesk Maya, to define the Arabian Culture as a one that is based on the lunar calendar.
- The Arabian desert/architectural ruins (the birth place of the Arabian culture) done by using Adobe Illustrator, and Autodesk Maya, to explore the merging of the Arabian culture from this primitive environment.
- The traditional city of Jeddah (the strong correlation between Islamic religion and Arabic arts, and architecture) done by using Adobe Illustrator, and Autodesk Maya, to define the Arabian culture as an artistic religious one.

Limitations

Due to the diverse nature of the Arabian Islamic world, and culture, and due to security issues, it will be difficult to visually capture, and encompass the majority of this world arts, and culture. Therefore, this thesis will focus on visually capturing, and implementing a detailed study of the kingdom of Saudi Arabia (the arts, architecture, and Islamic religious icons). For, Saudi Arabia holds a strong value to billions of Muslims worldwide as the Islamic religious capital, and as a home to many rich, and unique Islamic artistic heritages.

Implications of the Research:

When presenting this thesis various people will better understand the nature of my country visually, and the rich artistic, and architectural heritage of the Arabian Islamic world. This understanding will help to reshape their perspectives, and resolve any miss-conception they used to have about the Arabian culture as a primitive one.

Moreover, this thesis will visually promote the Arabian culture as a civilized one with a rich, and beautiful artistic heritage. The thesis will also explore the effects of multimedia on cultures in the fields of Computer Graphics Design, and motion graphics by establishing a solid ground for Computer Graphics Designers, and motion designers to implement their talents, and creativity, and utilize it as an effective tool with a greater goal of promoting cultures effectively.

Moreover, this thesis will encourage various people to respect the Arabian culture and appreciate the aesthetic values of its art.

For, the main question this thesis will raise is how can visual designers implement motion graphics effectively as a strong visual communication tool to promote other cultures?

Marketing Plan

When this thesis is completed the following professional organizations will be addressed to test my thesis, and support my thesis statement on how can motion graphics be used effectively to promote other cultures?

www.motionographer.com

www.siggraph.org.

www.graphiccompetitions.com/animation

www.commarts.com

www.vimeo.com

Target Audience

Male and Female audience

Age

15 years and above

Educational Level

High school and above

Motivational Level

A new experience in using motion graphics as a cultural promotional tool

Experience with Thesis Subject Matter

Educational, and entertainment.

Personas

Khalid

Khalid is an international student with an Arabian origins studying in the US.

He is taking multidisciplinary courses that focus on cultural, and social studies.

While engaging in social activities and establishing friendship with his fellow American classmates he has noticed the lack of interest, and social awareness about the Arabian culture, and its artistic, and cultural heritage. Therefore, he gathered his American friends and showed them the Arabian culture motion graphics video. After being viewed by his friends, a strong sense of awareness, and appreciation to the aesthetic Arabian culture, and its artistic heritage has been established.

Tom

Tom is both a creative director and a special events planner at a leading ad agency in Europe.

The city where he works is hosting an international conference, and exhibition on cross cultural celebration, and there is a section installed for the Arabian culture.

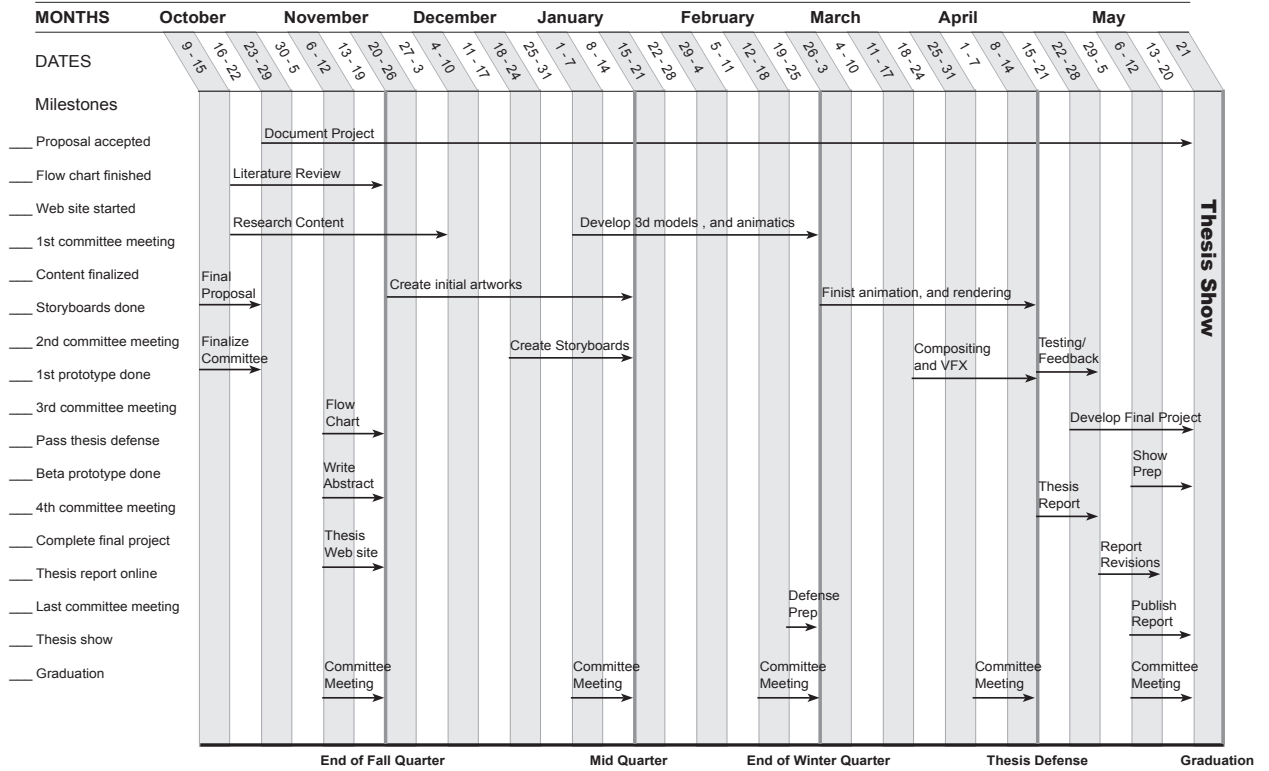
He was appointed the task of organizing, and designing promotional materials that promotes the Arabian culture. Therefore, he chose to install interactive large displays that showcase the motion graphics video. After being installed, the flow of visitors to the Arabian culture section has increased, and a positive feedback of a sense of admiration, and appreciation to the Arabian art, and culture were given.

Software and Hardware Requirements

- Macintosh G5 / P.C with at least 2.2 GHz Intel Core 2 Duo
- P.C (XP) or a Mac (leopard).
- 2GB ram memory.
- At least DSL Internet connection

Thesis Timeline
by Wail Al Hamid

MOARABISQUE: The Essence of Arabia; a motiongraphics peice that promotes the diverse Arabian Culture



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Arabic Art in Color

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By Ben Wittner & Sascha Thoma

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By Geoffrey King

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Motion Graphic Design: Applied History and Aesthetics

By Jon Krasner

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Mental ray for Maya, 3ds Max, and XSI: A 3D Artist's Guide to Rendering

By Boaz Livny

Livny, Boaz. Mental ray for Maya, 3ds Max, and XSI: A 3D Artist's Guide to Rendering. USA; Sybex Publication, 2007.

Internet Resources

Islamic geometrical pattern and ornament construction

<http://catnaps.org/islamic/geometry.html>

Holly kaaba architectural details and measurements

http://www.ezsoftech.com/hajj/hajj_article5.asp

<http://en.wikipedia.org/wiki/Kaaba>

The art of Arabesque, and Islamic graphical art

<http://en.wikipedia.org/wiki/Arabesque>

<http://www.moresque.com/>

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