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Architectural

The members of the Futuricity team decided that it would be important to research into current architectural abilities and how these techniques may be used in the future. Mark decided he would be best suited to carrying out the research for this part of the project.

- Futuristic Buildings
- Problems of living in space
- Can we get there?

Futuristic Buildings

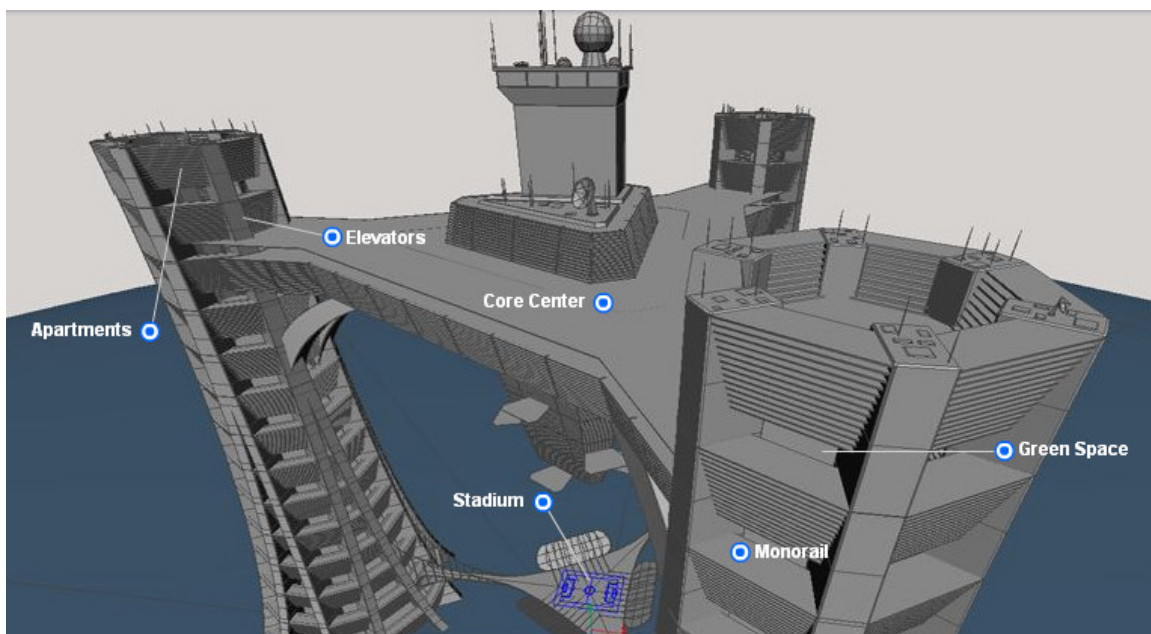


Image courtesy of the Discovery Channel

The technology required to build the city of tomorrow may well be with us today. Although the technology required to live somewhere as inhospitable as the moon may still be a way off, scientists are looking a little closer to home, to our skies. As with tower blocks in the 1970's it seems the answers to overcrowding could be cities suspended high above the earth, with all the facets of normal living located either above or below you.

There are already plans for such a city, to be located in Tokyo, Japan. The city stands on three pillars which are also used to house the apartments. Joined at the top and the bottom the vast, flat expanses would provide space for a stadium, airport or public areas like a park. A monorail would provide transport around the giant structure. During rush hour it is predicted that as many as 100,000 people would need to move around the complex. The monorail would spiral around the perimeter of each of the pillars allowing people to travel quickly and conveniently to their destination. Once commuters arrived at the pillar they required they could move up or down on the high-speed triple-decker elevators. The carriage is capable of travelling the full length of the building, some 3,300 feet in little under two minutes.

The city would be able to house approximately 35,000 people in apartments mounted inside the legs of the giant free-standing structure. As the building will be constructed from the ground up residents would be able to move in as soon as their apartment block was completed, there would be no need to wait for the entire complex to be finished.

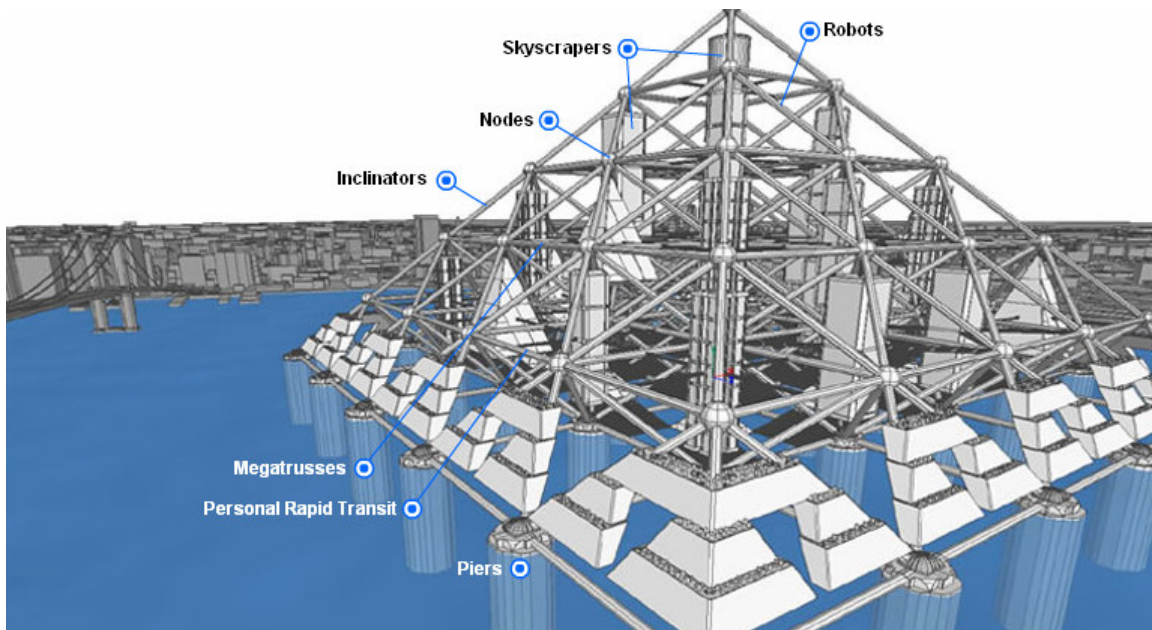


Image courtesy of the Discovery Channel

Another possibly solution to our lack of space in some cities is to build in the water adjacent to so many cities around the world. This would result in the obvious arguments about defacing the landscape but the technology is there to make it possible. In the image above the 'pyramid' sits on struts that suspend it just above the water level. These can be raised or lowered if the water in which the structure is built is tidal.

The whole system would be constructed on a series of hollow, interconnecting tunnels through which personal transport pods could be driven. There would be points throughout the city, called nodes, that would allow these pods to change direction and for their passengers to alight. The pods themselves would be entirely computer driven with the passenger simply entering their required destination before departure.

Power for the city would be provided by giant 'Megatrusses' situated throughout it. These devices would effectively be large movable joints, they could be designed to harness the current of the water in which the city sits and to turn that movement into electricity, thus powering the city.

Inside the cities structure it would be possible to build skyscrapers that are attached to the skeleton at both the top and bottom, this would give the buildings incredible structural strength. The idea for this kind of building method was actually suggested during the 1980's when architects needed a way of designing large buildings in close proximity. It was suggests that they should all be connected via large beams to give them incredible strength.

Of course not all of this super-structure could be built by humans. Such an adventurous architectural project would need to be completed by robots. They would build the pyramid from the bottom up, able to reach places that it would be too dangerous for humans to attempt. Once the structure was complete they would remain in place to carry about any required maintenance, which they could do twenty four hours a day.

Problems of living in space

The structures that have been mentioned so far are simply suggestions of what science may enable us to produce in a relatively close future. The unanswered question is whether or not it would be possible for humans to live on the moon, or even further a field. Could life be sustained on Mars? The problem with any kind of space travel, or indeed living in space for a prolonged period of time is the increased radiation to which the individuals are exposed. Even astronauts on the relatively short Apollo missions reported seeing solar flares in their retina and later on many of those astronauts have developed cataracts.

The problem is that scientists don't know exactly how much radiation there is in space and also how much the human body can handle. The key to being able to explore these far off planets is being able to develop the technology to shield us from that radiation. NASA believes that plastic may be the answer.

Polyethylene, the same material used to make household rubbish bags, can

absorb 20% more radiation than aluminium, the standard material used to make space craft. It is also much lighter allowing craft to travel faster and further on the same amount of fuel. There are also some scientists who believe that it is the fuel itself which may be the answer. Liquid hydrogen absorbs two and a half times better than polyethylene – could we see astronauts of the future living in quarters that are surrounded by the fuel that is powering them?

Even when the problem of radiation is solved there are other issues which still present a challenge to humans. The primary concern of scientists is how we will recycle the naturally occurring substances found on earth but not on other planets. Water is a primary example of a resource on which we rely but is not found anywhere other than earth.

Astronauts on the International Space Station are able to recycle the water that they use, right down to the condensation from their breath. In many cases the quality of the water that is produced from this recycling process is better than that which most people drink on earth. However in a city sized environment such recycling would be difficult and would require a massive amount of power. It is likely that if a community was created on a planet other than earth then regular deliveries of water would be required, accompanied by recycling of the water already on the planet.

Despite these problems scientists from the European Space Agency believe that we could see 'moon colonies' within twenty years. "We believe that technologically it's possible," the project scientist on Europe's first Moon mission, Smart-1, told BBC News Online. "But it will depend in the end on the political will to go and establish a human base for preparing for colonisation of the Moon or to be used as a refuge for the human species."

The unmanned Smart-1 craft, which is due to be launched in early September, is flying to the Moon to demonstrate that Europe has the technology for future deep space science missions.

Its main form of propulsion is an ion engine powered by solar-electrical means rather than conventional chemical fuel.

"The Moon could be used as a test bed for future human missions," says Sarah Dunkin, a leading British scientist on the Smart-1 project. "To actually live on another world would be quite a test of technology as well as human physiology. We don't know what the long-term effects of living in a low gravity environment would be."

Can we get there?

So with all the problems associated with living on a planet other than Earth would anyone really want to? The Artemis Project believes so. In a project expected to cost US\$1.41 billion they plan to create a base on the moon which anyone can visit. The project believes that it can make US\$5 billion from what they term the 'entertainment' value of the moon. They also foresee other revenue streams including box office receipts from the film that will be made about their challenge to get to the moon.

Although the Artemis project is an obvious pipe dream it proves that there are people who have a desire to travel to the moon, and people who will want to live there, if only for the money that can be made from it. Human endeavour is only limited by the technology that we currently have, and that is improving all the time. It is undoubtedly the case that once it becomes feasible people will want to at least travel to other planets, if not live on them for any length of time. The recent explosion in the number of so called 'space tourists' goes to prove that if you have the drive and the capital then almost nothing is impossible.

Futuricity

Looked at current research, theories and events that could one day lead to colonising the moon, due to our project being entirely based around a fictional city built on the moon, Gemma looked at similar structures on earth, as well as theories into this actually being developed in the future. She also looked at current research, theories and events that could one day lead to colonising the moon.

Main topic: The Eden Project

Considering the main idea for Futuricity is that the human race has successfully installed a self sufficient colony on the moon, the Eden project seemed a good area for ideas.

However, initial research into the Eden project showed little about self sufficient colonies and more about plants and greenhouses. The project brought together thousands of species of plants from the three main climates from all over the world. The site is divided up into 3 'Biomes'; the Humid Tropics Biome, the Warm Temperate Biome, and the Roofless Biome which covers the local temperate climate in Cornwall.

The main appealing characteristic of the Eden project in relation to Futuricity is the structure. Although it may look flashy and futuristic, the domes do actually

have a purpose; they act as giant greenhouses, enabling hundreds of tropical plants to be grown and nurtured in the UK successfully. This process would be a major part of a colony on the moon- space is cold and a means of generating and storing heat would be essential to life. There is no reason why greenhouseing would not work on the moon, it would work the same way as it does on earth: the sun heats up the ground, which heats the air above it, which rises and is trapped by the greenhouse. On the surface of the Earth, even the Eden project needs extra controls for a consistent climate, by means of air vents when it is too hot, and heating when it is not warm enough. This is due to varying amounts of sunlight that reach the UK due to weather conditions. This should not be such an issue on the moon, as there is no atmosphere for weather to happen and the sunlight cover would be reliable, however the warmed land and air may not be enough to sustain the heat overnight. Another issue would be the daytime and nighttime lengths.

Looking at the structure, it is easy to see it is no normal greenhouse; each 'panel' is a bubble, rather than a plate of glass or plastic. The material they actually used is something called ethyl tetra fluoro ethylene (ETFE) foil which weighs less than 1% of the same volume of glass. The reason for the pillows is a lot of extra insulation without losing any of the direct sunlight and they have been developed to be adjustable. This means that on cold days when more insulation is needed, more air can be pumped into them, and on hotter days they can be deflated. This probably extends to overnight, when they would need more insulation to keep up the temperature.

Location is not important for these structures, the designers of Eden described them as “Giant bubbles that can be set down just about anywhere”. The entire site is ‘nestled’ in a crater, which would also be ideal for a colony on the moon, however a much larger structure would need to be constructed. The initial ground composition of the crater was clay, which wasn’t nutritious enough to support much plant life. They enriched it by combining it with composted green waste. Again this system would be viable for a colony on the moon, as all organic household wastes would be recycled and used to produce the next season of food adding to the viable self-sustainability.

Secondary topic: Moon Colonisation

According to the BBC, humans could be living in a colony on the moon within the next 20 years. This is a lot quicker than assumed, however it is mentioned to be an “outpost for visiting astronauts” and a “human base for preparing for colonisation of the moon” rather than an entire moon city. It appears the delay in such an achievement is a combination of funding and support. A project of this scale would require international co-operation, which would be difficult.

The San Francisco Chronicle has an interesting topic in the Open Forum, where Scott Sheppard discusses the possible future of Space Exploration. In his opinion, the enthusiasm for such projects had died down a lot since the Space Race as a result of the Cold War. Also, as current knowledge stands, the

economic benefits from colonising the moon, at least residentially, as Space Tourism is still a viable business. If the situation were different, and at least one of the other planets or their natural satellites had the potential for economic benefit, a chain reaction of space exploration would occur. In colonising the first planet, the human race would gain huge technological advancements in space travel, opening up the opportunity for the next move in space colonisation. After we had progressed through all of the valuable planets in our solar system, we would begin to look for another star, with a system with beneficial planets. As our solar system is, there is nowhere that would benefit capitalism, and Scott Sheppard says our quest for Space Exploration is stunted because we have hit the question, "Where do we send humans next?" He compares the situation to that of Antarctica. Even though the continent was discovered nearly 100 years ago, there are still no permanent domestic human colonies. There are research centres and a handful of scientists, some more permanent than others, but because there is no economical benefit from living in Antarctica, it just hasn't happened. The same can be true for the moon: research centres and scientists but no residential citizens.

One of the reasons for the lack of economical benefits is the deficiency in heavy metals. This is due to the collision process that actually formed the moon. In looking for platinum group metals (PGMs), there is a Wingo theory that such metals would be found on the moon, as a result of asteroid impacts and their debris. Until recently it was believed that most of the asteroid would vaporise on impact. However using modern computer modelling and instances of asteroids

falling on earth, a significant portion of material survives. As the moon has much lower gravity, the impacts would be slower and elements of the asteroids more likely to survive. The significance of PGMs is platinum's thermodynamic properties which enable it to be used in producing fuel cells.

As for resources, very recently the Hubble Telescope has been used to identify minerals on the moon which could be used as a source of oxygen. Scientists examined 'high-resolution ultra-violet' photographs of the moon's surface for the first time. The mineral found is ilmenite, which is described as a form of titanium oxide, from which oxygen can easily be obtained using chemical and heat processes.

The Beijing Lunar Village Aeronautics Science Co Ltd have started selling acres of land on the moon. For the equivalent of \$37, you will be presented with a certificate of property ownership for an acre of land on the moon, including rights to the land and minerals up to a depth of 3km. The chief executive of the company says "We define it as a kind of novelty gift with the potential of unlimited increase in value" and claims to have found a loophole whereby individuals and corporations may own land on the moon even though governments may not.

Software

The members of the Futuricity team decided that it would be important to research into software applications that are key to the project's success; without these applications the members of the Futuricity project will not be able to produce a product to the level of professionalism required. The Members chosen of the Futuricity team to researched into the following applications were Bryon and Adam.

- Adobe Premiere Pro
- Adobe Aftereffects
- Alias Maya
- Adobe Encore

Premiere Pro

This project will require extensive amounts of video editing to produce the final product. *Adobe Premiere Pro* is the package which Bryon has decided to use to edit all raw video footage. *Premiere* is a powerful editing tool, which has the capability of producing high definition video to broadcast standards. Although the application is rarely used by broadcasting productions, the application is respected by most corporate companies.

Premiere has a clean and clear interface, which can be easily used by people of all skill levels. The application can import a wide range of video, audio and graphical formats so that the user can edit, arrange and manipulate such elements on visual timeline. *Premiere* also has a capture function built in, this allows the user to capture video from devices such as DV cameras and Players with a fire wire interface.

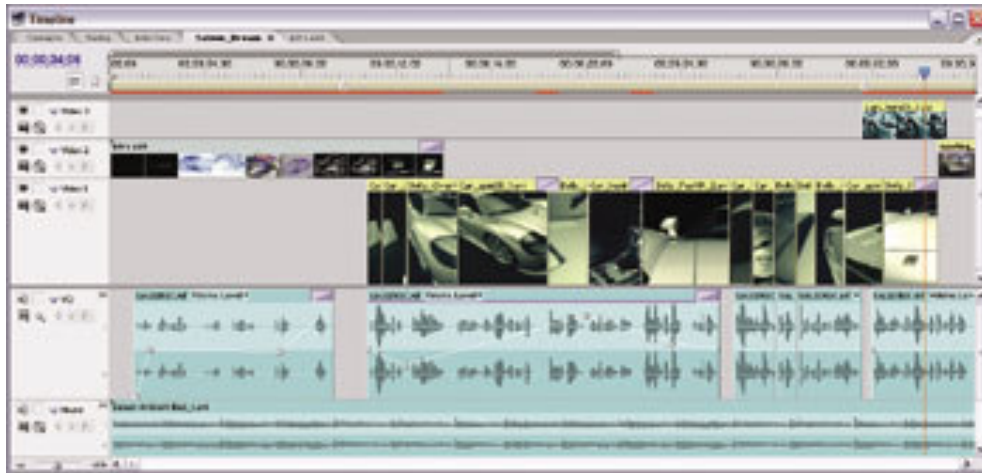


Image courtesy of the Adobe's Website

After the user has imported the elements he / she requires, *Premiere* has features to enhance the users footage with effects, (such as transitions) to give smooth transfer between video clips. It also includes the use of filters to change the appearance of the video content, and title to add elements of text to the video production.

Premiere incorporates audio mixing and sound effect controls which are adequate features for small video production. This however would not be considered for use by large video productions which require use of a specialist sound application for preprocessing.

Once the user is satisfied with the final product, *Premiere* has the ability to export the finished video into a number of different formats such as DVD; once rendered

in this format the data is ready to be written onto a DVD disc, which can be played in any DVD device. The user can then choose to export the data back down the fire wire interface to create video tape recordings. *Premiere* can also render video files with a number of video compression techniques suitable for internet and network streaming.

Adobe Encore

The Final project will be produced on an Interactive DVD Disc. *Adobe Encore* is the authorware package which Bryon has decided to use to produce the interactive DVD menu system, and which will allow the user to navigate around the DVD content. The fundamental advantage to using *Encore* is the user can quickly compose the design of the DVD project as the user using drag and drop editing to produce outline picture, then enhances the design with the advance tools to produce the final product.



Image courtesy of Adobe's Website

Encore provides serious professional DVD authoring. The built in menu system, (which is fully integrated with Photoshop) is ideal for creating professional

interactive DVD menus. This is achieved by creating the menu's graphical content in Photoshop, after which it can be fully manipulated once imported in *Encore*.

Alike to *Adobe Premiere*, this package has timelines, which are automatically created for clips that the user can drag and drop onto a menu. In this timeline of a particular video sequence the user can add up to 8 audio streams and 32 subtitle streams to the same clip.

Encore has a monitor feature that allows the user to play the contents of the timeline. The timeline can also be used to set up the chapter points within each clip and so once the user has set chapter points, the user will be able to jump directly to the different points in a video clip. *Encore's* navigation controls not only provide the ability to specify links to specific buttons on a menu, but also to specify links to chapters in a clip. This enables the user to make global changes to settings and links across the entire project, instead of having to manually step through all the menus to make individual alterations.

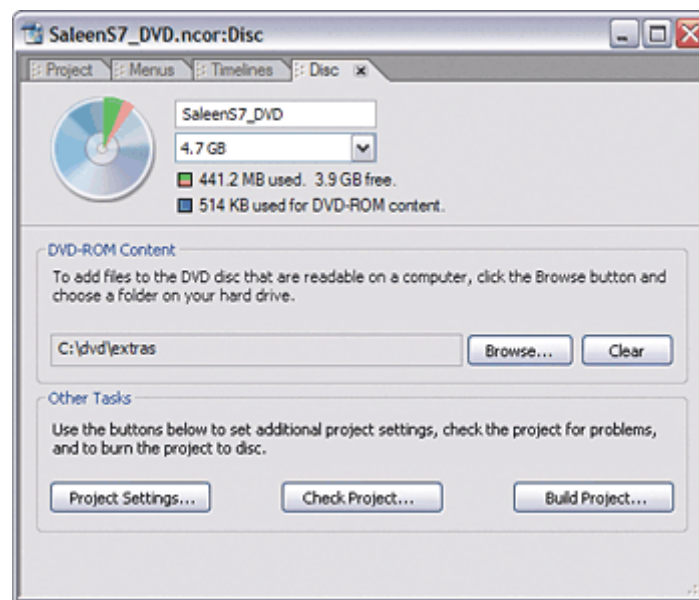


Image courtesy of Adobe's Website

Encore is an extremely user friendly application which uses a link concept, that allows the user to setup the navigation by naming an asset that the user has already imported. This link concept is very quick and easy to understand for new users to *Encore* whom are normally bombarded with script language when programming a DVD. In this way, the user can reuse assets on a disc but also link a destination of the next asset when the clip finishes. There is a First play feature which allows the user to choose what is to be displayed first, when the disc begins to play.

When the user has devised the final product, all the assets (DVD Content) have to be transcoded. If they are not already in DVD compatible format, transcoding is long task for the computer to conduct, and so the user must schedule a break while the transcoding is running. Once the transcoding is completed the user has the choice to burn the final product to disc or to save it onto the hard drive as an image file, ready to produce at a later date.

Alias Maya

Adam's portion of the project will be done almost entirely in *Alias' Maya* software with which he will model, animate and render multiple 3D scenes on which actual people will be composited.

Adam has many constraints to work around and the largest of these is the dynamism and parameters of a shot as we do not have a way to sync a Camera in Maya with an actual camera filming people. Adam will need to keep the shots reasonably simple so that the people can be composited onto the shot in a realistic way.

To learn and realise these constraints Adam will have had to do a number of preliminary renders and work alongside Bryon Homer in order to see how far we can push the 3D and real life combination. In doing this we came to the conclusion that scenes within *Maya* can have camera movement but only in 1 direction per scene and at a uniform pace otherwise it is impossible to make composition sync up exactly and the end result is a very amateurish movie. With this in mind we have been adapting shots to have more movement which ensures the audience is kept interested even if the camera remains still or is very limited in its movement. Another way to overcome this is to use shorter scenes of under ten seconds in order to maintain dramatic effect.

A large part of Adam's job involves the design and construction of futuristic objects such as buildings and cars. As we cannot foresee the future it is very hard to predict what everything will look like. This is a double edged sword as we can use our imaginations as much as possible and never be questioned on the technicality or feasibility, as for all we know the future may be able to support any wild or crazy ideas we come up with. On the other note we have no plans or images to work to and that in a lot of cases this means we have to work a lot harder to try and create very realistic looking buildings and objects from scratch.

With this in mind I have decided to try and implement contemporary factors into the project as this forms a good basis in regards to interaction between the actors involved and the objects. The best example is the Spaceship which Adam has already created which represents an executive jet which delivers the Prime Minister to Futuricity. It has standard features such as a cockpit, engines and wings yet it looks far more advanced than anything we have today. I was able to achieve this with the use of flowing curves and lines which are a running theme in many movies and computer games for futuristic spacecraft. This also helps the audience to relate. Films such as Star Wars, Minority report and Blade runner are excellent examples of this. They adopt futuristic settings and ships which resemble contemporary designs yet use different shapes and styles especially sleek lines and flowing curves. These help to represent the speed of these ships which is another attribute that is emphasised by the future. Mans constant dream of going faster can be visually represented by "fast" looking spaceships. Fighters jets such as the F-16 Fighting Falcon and Eurofighter typhoon are able to fly fast due to their aerodynamic shapes and therefore anything Adam creates which is designed to fly or drive fast should adopt similar characteristics. A relatively new concept is the use of canards (smaller wings ahead of the main wings) on current fighter jets such as the typhoon and Rafael is a feature Adam has implemented as they are fairly new design they represent aircraft designs to come.

Adam has adopted the use of solar panels, after some research on the BBC website I found several articles on solar panels as a power source. I feel that the inclusion of solar panels on cars, spaceships and buildings helps to represent a cleaner more environmentally aware future which helps to show the audience how much mankind has progressed past the need for fossil fuels.

Adobe Aftereffects

This project will require large amounts of green screen to composite real video on CG Animation produced by Adam in *Maya*. *Adobe Aftereffects* is the package which Bryon has decided to use to composite video footage. *Aftereffects* is designed for the most demanding production environments, which combines the core 2d real video image, and 3d compositing animation.

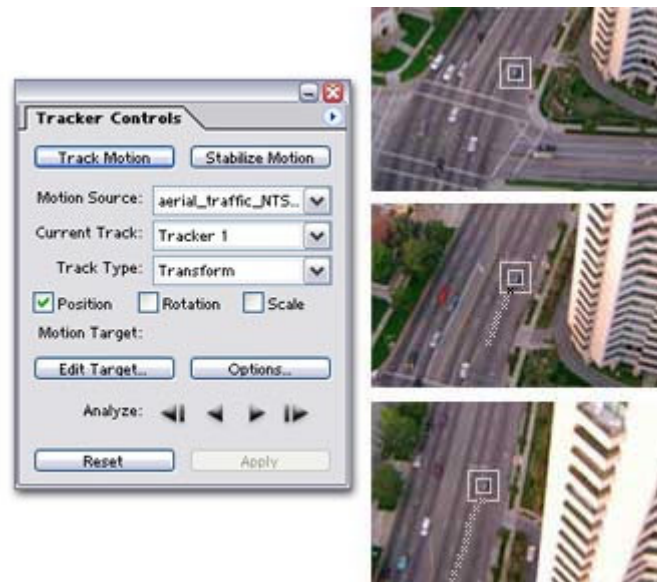


Image courtesy of Adobe's Website

Aftereffects has a powerful motion tracker to lock-on any element with fast accuracy to allow the user to track change in scale, or just horizontal or vertical movement; this means that the user has the capability of tracking 3d animation to real video shot to complete the feel of realism, making the audience think that the object is really there.

Another timesaving feature of *Aftereffects* is its ability to allow the user to import multi-layered images from Photoshop, one layer at a time. Each layer can be manipulated separately to achieve a highly complex orchestration of moving, changing elements.

Another key feature that is useful in *Aftereffects* is the mask technique. The masking effect is used to tidy up the footage, by removing the video information which is not in the mask. This mask can be changed for every frame to suit the new situation giving the user the best result.

The Advanced particle system gives the user the chance to simulate explosions, lighting, and other powerful particle systems. The user can also add behaviors such as repel and gravity to the animation, to the extreme that even text can be affected by particles!

Other features include multi-composites, keying - this allows the computer to mask anything to do with colour key information which has been chosen by the user, so as to only leave the important elements in the video footage, ready to merge with the real video footage.

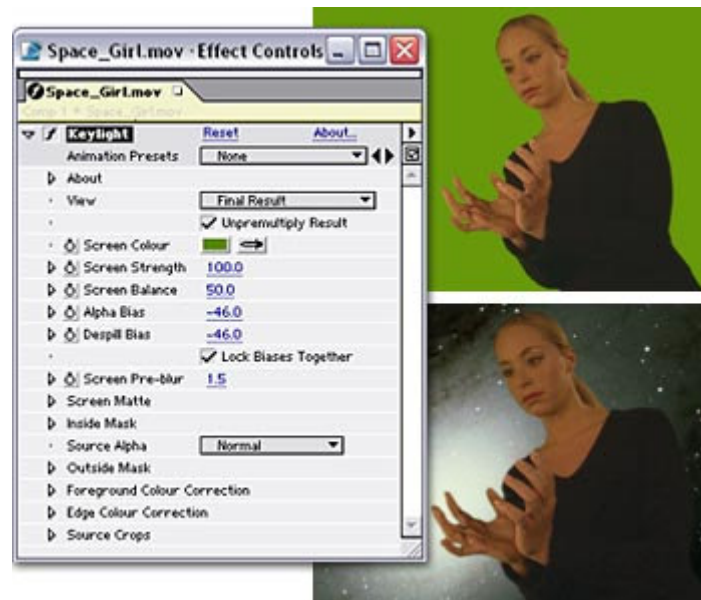


Image courtesy of Adobe's Website

Conceptions of the Future

The members of the Futuricity team decided that it would be important to research into three common conceptions for the future as portrayed in multiple films, books and video games.

- The Wasteland
- The Dark City
- The Utopia

The Wasteland

This is where the culture and design has been lost and people have reverted back to a more primitive form of life amid the ruins of the world. Features include rusted and decaying buildings and cars.

The Madmax films are indicative of this as are the fallout series of computer games.

We decided this idea was too bleak and we could not let our imagination run wild, also it is very cliché and usually lacking in people probably through some form of disaster. We want as many people as possible for the final movie to create the impression of a busy and culturally advanced civilisation.

The Dark City

This is a technological advanced civilisation with hundreds of people in close quarters within massive hulking skyscrapers. It is a very depressing view in many ways as it shows that the worst human traits have prevailed.

Bladerunner is an excellent example.

This idea has more merit yet it is very depressing and as a group we felt that we would like to present a more upbeat project with some black comedy elements and a reasonably upbeat storyline. For these reasons we decided that this was not the right path to go down.

The Utopia

This is a technological advanced civilisation where glass structures and chrome play an important role, plant life has developed and lives symbiotically with humans. It is an upbeat vision of the future.

We went for this idea as it gave us more to play in regards to the elaborateness of the buildings therefore we can use our imaginations more.

Large glass buildings with interesting shapes are prominent in the city of the future and luckily this trend has been adopted by many contemporary cities such as London and Singapore. Skyscrapers instead of being just giant concrete boxes now have style and flowing lines and are often made to mimic plants and natural forms. As such the buildings Adam will create will reflect nature heavily from snowflakes to leaves to sand dunes. Ivy growing up trees and walls is very soothing to look at and aesthetic pleasure is a goal in Futuricity so incorporating such shapes will help to show the city in its full glory.

Futuristic Science Fiction Films

In discovering different ways to present the future, the members of the Futuricity team actively researched three futuristic science fiction films. The research was undertaken by Bryon who viewed three films and then produced a write-up upon each film, to express any important points noted. The following films specifically identified in the research included:

- Fifth Element
- Star Wars – Return of the Sith
- Lost in Space

Fifth Element

The first film, *Fifth Element*, is about all life on earth being threatened by a being of pure evil, but there is light, a secret priest hood present on earth in order to keep the secret of an alien race with the only weapon, the fifth element, able to destroy this evil.

The story unfolds from different points of view at an exhilarating pace and closely follows the footsteps of the hero, Korben, as he continues to wipe out the bad guys in protection of Leeloo, whilst in search of the four precious stones which encase the other four elements needed to combine and use the fifth element as the weapon against pure evil.

The special effects created are amazing, comprising of a modern city, with flying cabs, futuristic design buildings, new technology dotted about the scene to give the audience a realistic future perspective. The best scene of the film is said to

be the combination of the Diva's performance with Leeloo's fight. These parallel scenes run simultaneously and are totally synchronized. One must consider the ample time that must have been inputted into the choreography of action with the music.

In conclusion, *Fifth Element* is the best science fiction film of 1997. Heavy research must have been carried out before its production so as to enable the producers to provide the audience with a realistic reality of the future. The CG graphics for the modern future city are excellent, even real objects such as the cockpits for vehicles within the film such as Dalla's cab, Zork's space craft are carefully designed with video screens, interactive talking computers, automatic doors the list goes on.

Star Wars – Return of the Sith

The Second film *Return of the Sith* is the sixth film of the *Star Wars* saga, (technically number 3 in the series). This film focuses on the character Anakin Skywalker and his transformation from Jedi knight to Dark Vader. The first scenes of *Star Wars – Return of the Sith* are truly amazing with an action package beginning sequence with lots of CG battle ships above city planet Corusant.

The final light sabre scene in star wars – *Return of the Sith* is between the two main characters Obi - Wan and Anakin which was absolutely mind blowing. Compared with the last fighting light sabre scene in *Return of the Jedi* of which the effects were manually inputted (i.e matt painted), this battle was largely composed using up to date technology incorporating the use of CG graphics, animation and the processing power of computers. In comparison of these two scenes one finds that the use of CG graphics has yielded the previous battle scene as less realistic, for light saber beams are less crisp. This scene is also very well choreographed that it worked and proves to possibly the best light sabre fight scene in the series compared to *Return of the Jedi*. The best part is

that the audience finally understand why Anakin becomes Darth Vader and this scene makes the audience tingle.

Star Wars III – Return the Sith in my opinion is mind blowing; full of dark action and with hints of humour and it is definitely the best prequel. The graphics that are used in this film are amazing not surprise considering the birth of Pixar from the same company, the futuristic planet has massive hulking skyscrapers dotted about the scenes composed as Futuristic Architecture. Although the story talks of a galaxy far far away, this film tells of a possible future not too unrealistic from our own. The *Star Wars* films give the audience a sense of a possible future as well as keeping a proportional sense of reality. For instance many of the creatures are highly more technologically advanced compared to the human race, yet the films portray what it could be like for humans, when technology has developed, for humans to travel at the speed of light.

Lost in Space

The third film *Lost in Space* is set in the year 2058. The audience is immediately made conscious of the time in which this film is set, as the year is listed in the very first scene. The inhabitants of Earth are rapidly depleting resources all countries in the world have put aside their differences and have decided to work together in other resources, using a theory developed by scientists called warping space. The plan is to send a ship called Alpha One where the team can build a Hypergate, a Hypergate on earth has already been constructed, once the gate situated at Alpha one has been constructed ships will be able to instantaneous jump to Alpha One's solar system.

It also has a lot of good special effects and one of the best Dolby Digital 5.1 surround sound tracks. At "theatre volume", expect your powered subwoofer to "bottom out" a few times. The sounds in the rear channels, like in the fine opening battle scene, augment the main sound track at appropriate times. It is a

fantasy, involving things the audience don't yet know if are possible - time travel, deep space travel, suspended animation, and travel through warped space. Much of this is based on sound science, or at least peripherally to sound science.

The DVD menu that first pops up is designed like the cockpit of a futuristic space ship, with futuristic music. There are a number of nice "extras", including cast, trailer, deleted scenes, building special effects, the future of space travel, two different audio commentary tracks, a feature on the mid-60s "TV years".

An important nice touch to the film is the use of computer voice recognition, not to mention the excellent CG graphics of the alien Monkey, which superimposes the entirety of the character so well that the audience believe it to really exist in the scene. The circle computer display is very well crafted, including all the scenes of the family still on Earth. The producer's retain a positively futuristic reality by composition of modern architectural designs, (such as the presence of glass), and presenting to the audience with micro gadgets and portable technology (such as the penny webcam, Will's robot, and Don West's armour which builds around his face as he goes in battle). In all, a very innovative and radical science fiction film for 1998.

Sources

Mark Perry

The Discovery Channel (www.discoverychannel.co.uk)

NASA (www.nasa.gov)

European Space Agency (www.esa.int)

BBC News (<http://news.bbc.co.uk>)

The Artemis Project (www.asi.org)

Google Search Engine (<http://www.google.co.uk>)

Bryon Homer

Google Search Engine (www.google.co.uk)

Earth's Biggest Movie Database (www.lmdb.com)

Adobe's Website (<http://www.adobe.co.uk/motion/main.html>)

Computer Video (<http://www.computervideo.net/dec03-1.htm>)

Pc Plus (<http://www.pcplus.co.uk/reviews/default.asp?>)

Pugh (<http://www.pugh.co.uk/Products/adobe/premierepro-1.5.htm>)

Adam Hawkins

Alias Maya (<http://www.alias.com>)

Google Search Engine (<http://www.google.co.uk>)

Gemma Ison

Space Review <http://www.thespacereview.com/article/479/1>

BBC News <http://news.bbc.co.uk/2/hi/science/nature/3161695.stm>

Science Fiction Gate –

<http://www.sfgate.com/cgi->

[bin/article.cgi?file=/chronicle/archive/2005/10/10/EDG4PDMU7B1.DTL](http://www.sfgate.com/cgi-bin/article.cgi?file=/chronicle/archive/2005/10/10/EDG4PDMU7B1.DTL)

Fact Monster:-

<http://www.factmonster.com/fmnews.html?duration=1d&start=2005-10-24>

Chinadaily :-

http://www.chinadaily.com.cn/english/doc/2005-10/24/content_487321.htm

Metals Reviews :-

<http://www.platinummetalsreview.com/dynamic/article/view/49-1-16-20>

How Stuff Works

<http://science.howstuffworks.com/eden1.htm>