

ARKITEK



STUDIOS

Visual content for science and technology™

A brief description of the animation
process.

The production of an animation is a collaborative effort between you the client and Arkitek Studios. For this process to work smoothly, it's usually best to follow a series of time-honored steps or phases, to achieve the best results.

It begins with an exploratory stage where both parties discuss what the client wants to have visualized. Then we create a treatment, which is a brief written explanation of what the animation would look like, and a proposal, which details the steps we'll take to build that animation, as well as a proposed bid and cost breakdown.

Following approval of the treatment and proposal, we create a series of storyboards, simple drawings that show the basic sequence of events in the animation.

Once you have approved the storyboards, we begin production, detailed in the following slides, and culminating in the finished movie.

Relax. This can be a lot of fun.



Treatment

A treatment is an idea in writing of what we think might work for your project.

Proposal

Here we outline all the steps required to build a computer graphics animation, starting with the initial script and ending with the final output to you, the client. In addition, we submit an estimate bid.

We also discuss the intended purpose of this project, whether for use as speaker support, website animation, or other (i.e. broadcast, kiosk, CDROM, etc).



The Treatment – the story

Here we outline the basic storyline, as well as a proposed sequence of events that tell that story.

Treatment

We'd like to present a treatment for an animation to describe the products or processes in question, as an explanation for investors and analysts.

What follows is a brief example of part of an outline for a storyboard. The times are approximate, and they would change, depending on what the script calls for.

Intro	Action	Time
<i>Scene 1</i>	Picture fades up to reveal logo. [CG]	5 seconds

The environment	Action	Time
<i>Scene 2</i>	Transition out of logo into a scene of a DNA floating in a sky background. A page with an overview drawing appears over the DNA...	5 seconds
<i>Scene 3</i>	...turns into an assembly drawing. The camera pulls back to reveal	9 seconds
<i>Scene 4</i>	...an environment of a cell. The drawing is contained within a computer screen. Camera continues to pull back to reveal a copier, which is making RNA copies.	12 seconds
<i>Scene 5</i>	Cut to another angle of the assembly machines working with the RNA plans. Building blocks roll down a conveyor belt and are hauled to the outside wall of the cell for construction.	10 seconds



The Proposal – How the animation is built

Script/Storyboards	Time	Amount
The process begins with the verbal, or voiceover script, that will drive the visual development of the storyboards. Once the script has been approved by all, work begins on the storyboards.	1-3 weeks	\$\$
Voiceover	Time	Amount
When the storyboards are defined, a scratch voiceover track is recorded, so that we have a timeline to follow when animating.	1-3 days	\$\$
Modeling and Animation	Time	Amount
The process includes designing the overall look of the piece, then modeling each object that will appear in the various scenes. Then preliminary motion tests are rendered for approval of animation and camera angles. These tests are done with default materials, sometimes wire frame if the scene is very large. Then materials and textures are applied to each object, lighting is defined, and the scene is rendered out to test for any bugs.	4-12 weeks	\$\$
Compositing and Rendering	Time	Amount
Final elements are rendered and composited along with the final voiceover.	1-3 weeks	\$\$
Post Scoring	Time	Amount
Music will be scored, produced and fit to the composited animation. (Music done concurrently with other production work).	1-2 weeks	\$\$
Final Output	Time	Amount
The project is rendered out at a resolution of 720 x 540 pixels. It can then be output in a variety of formats, including DVD, D1-broadcast, CD-ROM, QuickTime, AVI, Real Player, MPEG-1, MPEG-2, as well as other formats.	2-5 days	\$\$

The Production Cycle – Sample timeline

Here's a visual way to look at the production cycle, to give a better understanding of our process. Some things overlap during production, so that the project finishes on time.

SAMPLE TIMELINE

Week	1	2	3	4	5	6	7	8	9	10	11
Script/Storyboards	Production	Production	Signoff	Production	Production	Production	Production	Production	Production	Production	Production
Voiceover	Production	Production	Production	Signoff	Production	Production	Production	Production	Production	Production	Production
Modeling and Animation	Production	Production	Production	Production	Production	Production	Production	Production	Production	Production	Production
Compositing/Render	Production	Production	Production	Production	Production	Production	Production	Production	Production	Production	Production
Post Scoring	Production	Production	Production	Production	Production	Production	Production	Production	Production	Production	Production
Render Output	Production	Production	Production	Production	Production	Production	Production	Production	Production	Production	Production

Production

Signoff

During each signoff phase of the project, we will need approval of what has been done to date in order to continue.

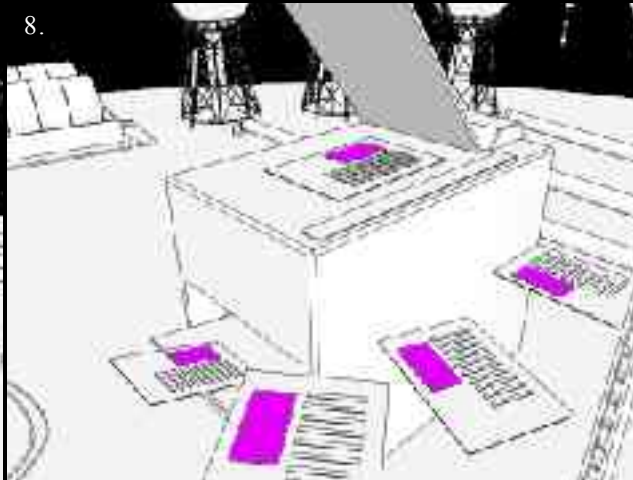


7.

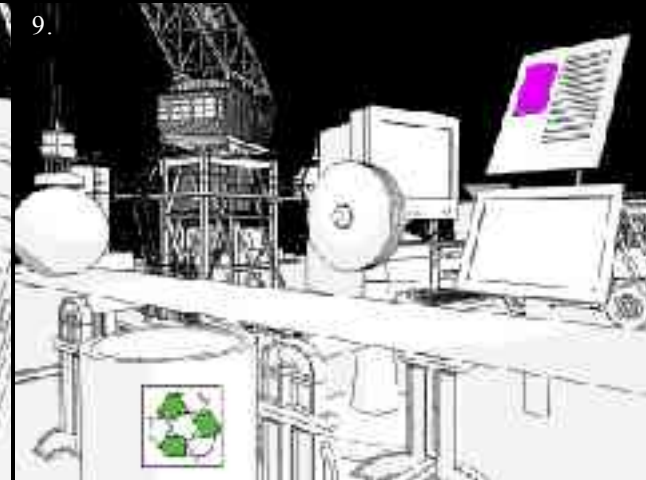
Storyboards



8.



9.



Rather than work directly from the master copy, which is recorded in DNA, the cell runs off disposable copies written in a different material, RNA.

The cell will use this disposable blueprint to make the protein.

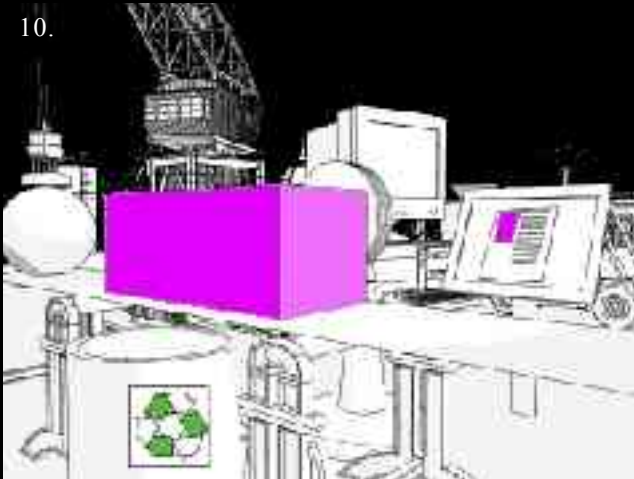
These instructions are handed to machines – called ribosomes.

Continue dolly back. Slow pan of scene with RNA info transmitted to copier.

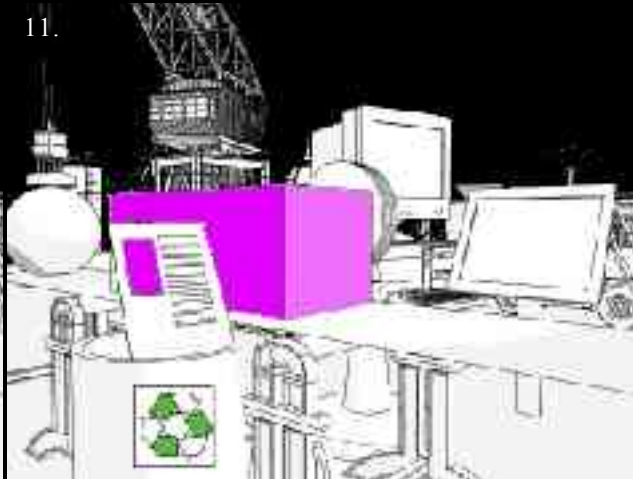
Cut to copier making copies, copies flying off to ribosome machines.

Follow one copy to zapper, camera slowly trucks left. Plans feed into reader connected to zapper..

10.



11.



12.



GENEWARE

The ribosomes read the instructions and begin to make the protein it codes for...

...afterwards, the instructions are recycled.

LSB has invented a technique in which cells read blueprints that we give them, so that they can make proteins to order. This unique technology is called Geneware.

Camera continues to truck left. Zapper makes protein

Camera continues to truck left. Instructions discarded in recycle bin.

Zoom out to full cell field.

Script

Even if your animation doesn't have voiceover, it's still essential to have a script to work from, so that each section of animation lasts the appropriate amount of time.

Sample script:

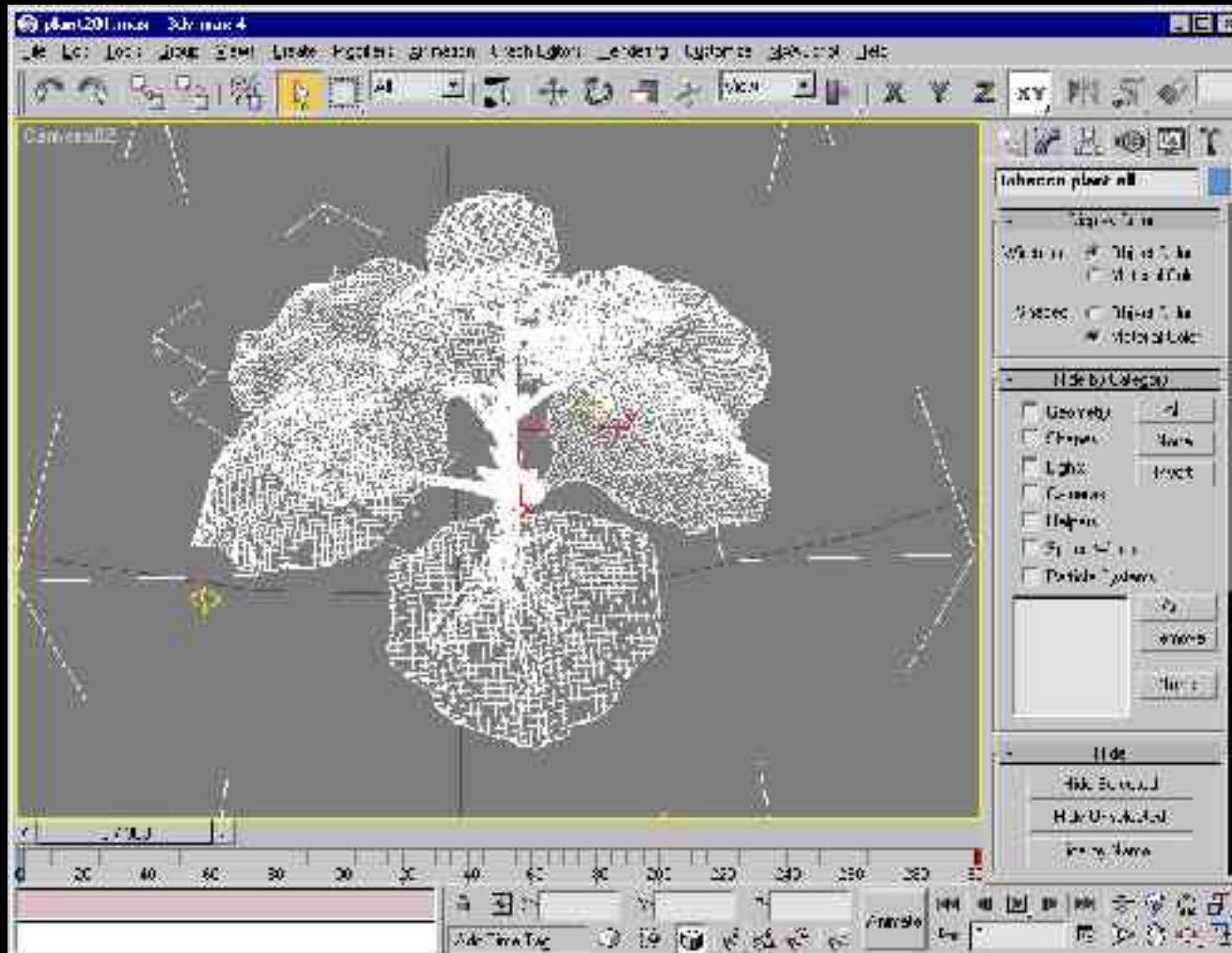
- Throughout human existence, man has sought to map the world around him. Now he has succeeded in mapping himself.
- Scientists have finally decoded the entire human genome, providing us with precise details of the 40,000 plus genes that define our species.
- Each of these genes is like a blueprint – which contains the plans for a particular protein.
- Every cell in our body has a full set of these blueprints, and refers to them for instructions on how to make the protein it needs.
- Rather than work directly from the master copy, which is recorded in DNA, the cell runs off disposable copies written in a different material, RNA.
- The cell will use this disposable blueprint to make the protein.
- These instructions are handed to machines – called ribosomes. The ribosomes read the instructions and begin to make the protein it codes for afterwards, the instructions are recycled.
- LSB has invented a technique in which cells read blueprints that we give them, so that they can make proteins to order. This unique technology is called Geneware.
- The first step is to prepare the work order. A disposable RNA blueprint is manufactured for the protein we want to build. – for instance, a therapeutic drug.

etc.



Modeling/Animation – Phase 1: modeling

Once the storyboard and script have been approved, we begin modeling the various parts. Typically we use either Discreet Max or Avid SoftImage, two well-known 3D software packages, to build them.



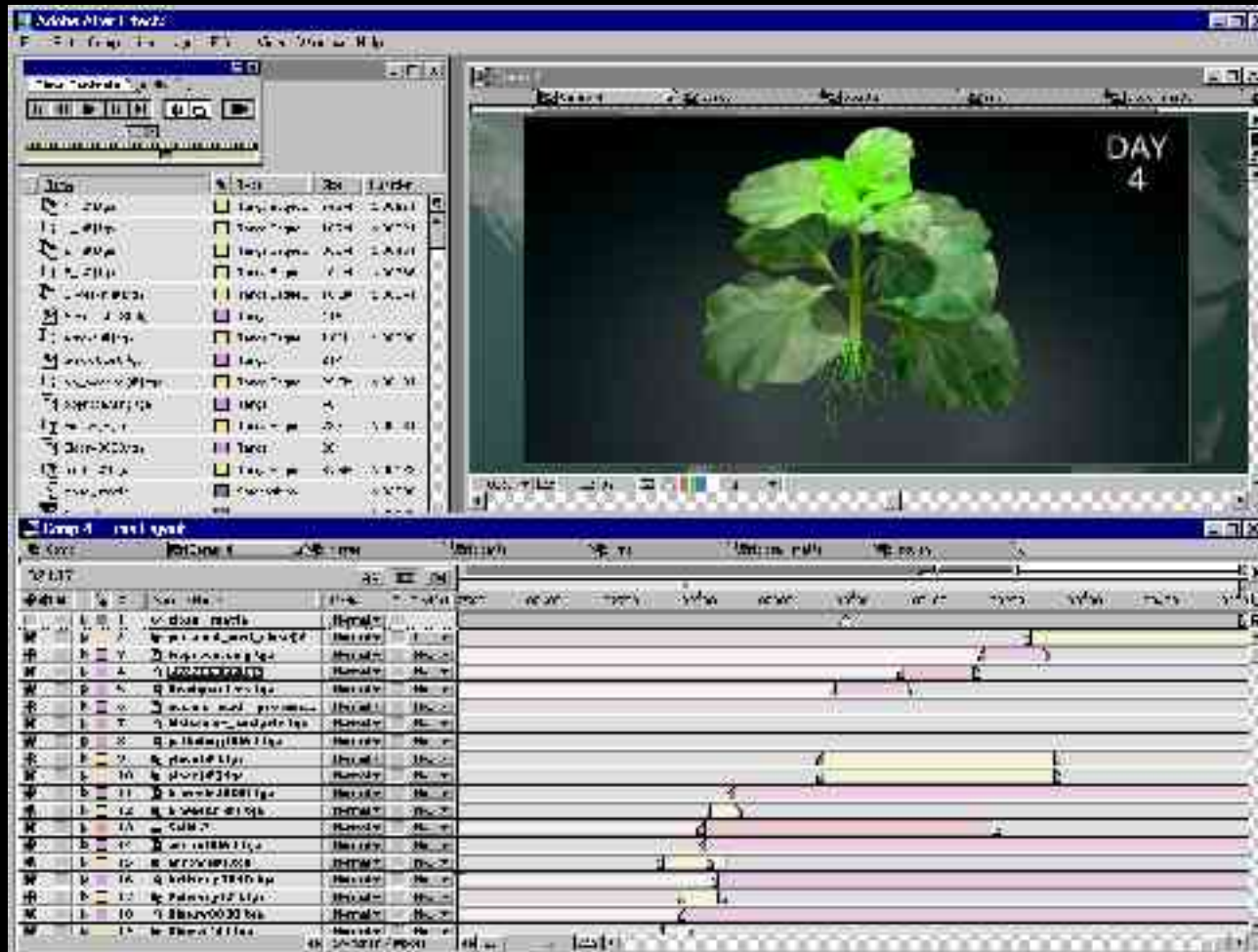
Modeling/Animation – Phase 2: textures, lights, camera, animation

Next we apply textures and lighting, as well as camera moves and object animation, to create each scene.



Compositing and Rendering

While building the scenes in 3D, we're also separately recording the voiceover and any background music. These are then married to the rendered animation frames in a composite program like AfterEffects.



Final Output

The final output can be to a number of formats, and the cost of the animation thus amortized over time and over multiple platforms.



Speaker support
Broadcast
CD ROM
The net
Print
Tape

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