**3D Stop-motion Animation** **https://www.youtube.com/watch?v=2oKNcAenEJo**

**Stop motion** (also known as **stop frame**) is an [animation](http://en.wikipedia.org/wiki/Animation) technique to make a physically manipulated object appear to move on its own. The object is moved a bit between individually photographed frames, creating the illusion of movement when the series of frames is played as a continuous sequence. Dolls with movable joints or [clay](http://en.wikipedia.org/wiki/Plasticine) figures are often used in stop motion for their ease of repositioning. Stop motion animation using clay is called [clay animation](http://en.wikipedia.org/wiki/Clay_animation) or "clay mation".

3D stop-motion animation has two distinct stories:

-The first is the largely European tradition of short stop-motion films made by individual artists, and stop-motion series principally made for children`s television.

-The second, and predominantly Hollywood tradition, is the ‘invisible’ history of stop-motion animation as a branch of special effects for feature length films. Willis O`Brien groundbreaking stop-motion animation in King Kong (1930) proved profoundly influential on generation of film-makers; he employed ’rear projection’ system which combined background live action with foreground miniature animation.

3D stop-animation has got two principal approaches using either: puppets / clay models or objects / artefacts

 Clay Animation

It offers a possibility of working with an ‘everyday’ material and fashioning work, which demonstrates the ‘hands-on’ nature of the process. The presence of the human hand gives the work itself a sense of being ‘made’- clay animation is the most obviously “artisan” animation.

Eric Fogel, a co-executive producer of Celebrity Deathmatch speaks about clay animation:

“ I had worked with clay a lot in the past and I knew that within the timeframe available that it would slow us down tremendously. So we had a model shop create foam latex versions of the clay puppets and it proved much more efficient. We still used clay heads to sculpt the good expressions and get the exaggerated reactions that we wanted, and when we wanted to do extreme reactions, we made a series of replaceable heads and actually sculpted the expressions into a series of six heads, sometimes combining these heads with a digital morph.

Later on , we went on to use resin heads to preserve the look of clay and reduce the weight of the head so it would not keep tipping over, but we kept the area around the eyes soft so that we could still sculpt there and widen the expressions. We also manipulate the eyebrows and change the mouth: these are the only things that are moveable on the heads”

And he continues:

“ We are using the same technology as we were when we started off- we use Adobe Premiere to capture the animation and Adobe After Effects to apply the digital effects. These are off-the-shelf software packages. To improve the look, we are using different kinds of software to improve the visual impact of the work, and I am always looking for shots that we can enhance digitally, to make them more memorable, and ways to enhance the animation.”

Time and Material

Having committed to stop-motion, it was clear, that for the fast turnaround required for a television series, it would be necessary to eliminate clay as the wear and tear was extensive, and the damage of the characters meant time-consuming necessity of re-sculpting. Having addressed the issue, the team making the show, some 20 full-time animators, worked on 15 sound stages, producing 10 seconds of animation per say, and a half-hour show in five weeks, sometimes using elaborate wire systems for flying characters that echo the full scale use of similar processes to create spectacular imagery, drawn from ‘King Kong’ cinema, in live-action works like ‘The Matrix’ and ‘Crouching Tiger, Hidden Dragon.’

*Some technical terms have been used in the aforementioned fragments. Match them with their definitions*.

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| 1.turnaround | a. to transform an image by computer |
| 2. to morph | b. lightweight, soft substance which is used in [masks](http://en.wikipedia.org/wiki/Masks) and [facial prosthetics](http://en.wikipedia.org/wiki/Facial_prosthetic) to change a person's outward appearance |
| 3.of –the –shelf software | c. loss, damage, or depreciation resulting from ordinary use and exposure. |
| 4.tear and wear | d. time of loading and unloading |
| 5. foam latex | e. software which is not pirated., legally purchased from the store. |