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Facial animation through reverse engineering of actions to thought processes

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I propose a way where facial animation for characters are often derived as a results of reverse engineering from the ultimate action on the storyboard to the thought train driving the action. For this process, we classify actions into conscious, subconscious and unconscious actions, and derive the lesser obvious subconscious and unconscious parts resulting in the conscious action. we start by analyzing things at hand, and the way it applies to every character in it. Then we use the storyboards to know the first action of the character. Here we study the face of the character, i.e., his expression, and therefore the visual communication , i.e., the road of action and therefore the pose. Then we proceed to research the possible references to the past of the character that would drive the action. Here, we attempt to reason things he may need seen or heard and his own internal reasoning that cause his interpretation of things and therefore the consequent action. Finally we derive the inner monologue of the character that drives the action. Once we finish the reverse engineering from the action within the storyboard to the thoughts and emotions, we map the attention darts, blinks, eyebrow movement, leading actions and its required anticipations within the time-frame stipulated by the storyboard. This method of reverse engineering-based animation leads to greater cohesive acting throughout a movie , and creates greater connect with the audiences.

Computer facial animation is experiencing endless and rapid climb since the pioneering work of Frederick I. Parke in 1972. this is often partly thanks to the increasing demand of virtual characters or avatars within the field of gaming, filming, human computer interaction and human machine communication. The face is one among the channels in expressing the affective states. it's complex but flexible three-dimensional (3D) surfaces. To present the face onto a computing system may be a challenging task thanks to several goals to be achieved. consistent with Deng and Noh, the most goal in facial modelling and animation research is to develop a high adaptability system that makes realistic animation in real time mode where decreasing manual handling process. Here, high adaptability refers to the system that's easily adapted to any individuals" face.

Various approaches are proposed by the research community to enhance the performance of facial animation in several aspects. Some claims that an honest facial modelling and animation involving the way to lip synchronisation and the way to use the eyes, brows and lids for expression. Others believed that a facial model should include other attributes like surface colours and textures. Computer facial animation isn't a replacement endeavour because it had been introduced since 1970s. However, animating face still presents interesting challenges due to its familiarity because the face is that the part wont to recognize individuals. Facial modelling and facial animation are important in developing realistic computer facial animation. Both modelling and animation depends to drive the animation. the 2 most generally used computer facial animation systems are those supported premodeled shape interpolation and therefore the ones supported cluster or lattice deformations. Most of the facial systems today are a mixture of both.

The state of the art in facial animation software may be a muscular structure combined with shape interpolation. this type of system isn't widely used due to the shortage of obtainable commercial technology as most of the currently existing systems are proprietary.