

Содержание

-Вступление

-MotionCapture in «Lord of The Rings: Two Towers» and «Polar Express» (five roles of Tom Hanks)

-чистое ручное компьютерное моделирование в «Ratatouille» (чистое моделирование дает красивую картинку)

-наложение кадров в фильме «Легенда» (2015)

-как зббивали усы супермена (временные и денежные затраты на рендеринг кадров)

-создание полной компьютерной модели лица (финал «Форсаж 7»)

-Заключение

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Hi everyone. Thanks for coming. What I'd like to speak about is the most interesting and the most used computer technologies in cinema.

Ok, let's start with a role of computer technologies in cinema.

>> click [2]

Nowadays cinematograph is a huge market with big players and serious competition. To reach a high level of quality you need to invest a lot of resources, so it's not secret for no one, that the film budget may exceed several hundred million dollars. This high level is usually achieved through the use of modern computer technology.

Now I want to turn to motion capture technology.

>> click [3]

Motion capture is a very popular technology that use system of sensors and points attached to real object for build computer vector model of it. It transfer, position and movements of object in real time to computer. This approach allows you to simulate the real behavior and facial expressions of people.

>> click [4]

Famous successful movie with using motion capture is "Lord of the Rings: Two towers", where motion capture software wrote up face emotions of actor Andy Serkis.

>> click [4]

[pause]

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As well as the same cartoon was "Polar Express", where by the way Tom Hanks has played 4 roles.

What about picture quality?

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The most beautiful image we get when movie are fully presented in computer vectors model without motion capture or with motion capture of highest class. Calculating such animations requires a lot of computer power, as well as motion capture. [It's "Ratatouille" made by Pixar animation studio.] For example to render one minute of "Ratatouille" on your home PC you will need several weeks. That's why ordinary computers do not do this. It is trusted to do cloud computing with ultra multi core processing.

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An interesting reception of overlaying frames was used by the director of "Legend" Brian Helgeland.

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To stage a scene with two twin brothers in the frame, actor Tom Hardy had to play the same scene twice in different roles.

Let's now look at "Rationality" question.

[Question] Any body watched "Justice Ligue"?

>> click [9]

To shave a mustache of Superman in "Justice Ligue" guys from "Warner Bros." spent \$25 million. As a result got it:

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And other noname guys from noname company ("Deep Fakes Club") using a computer for \$500 and free software for artificial intelligence made exactly the same better and faster.

>> click [11] (video)

>> click [12]

By the time of the shooting of movie "Fast and Furious 7" actor Paul Walker died. Filmmakers had to create a model of Paul using artificial intelligence, recording previous scenes with an actor, as well as brother Paul Cody and manual edits of course.

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I'd like to finish by saing that all approaches are good and suitable for appropriate cases. The main thing is to do high-quality content.

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Thank you for listening so attentively.