

# IMAGE PROCESSING OR HOW TO LOOK LIKE VIRTUAL MAN? (ONTOLOGICAL ASPECT BASED ON COSPLAY)<sup>1</sup>

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## Abstract

New information technologies have quickly filled the life of modern man. Now we just can't imagine our life without gadgets, computers, cell phones, internet etc. All this modern information technologies are the base of new virtual reality. Virtual reality is a type of a reality created by using information technologies and human imagination. Moreover such type of virtual reality penetrate into the culture of modern man, creating new cultural phenomenon, one of this is the phenomenon of the cosplay. Originally from Japan, now cosplay is popular all over the world, and the main aim of the cosplay is recreate the personage from the virtual world in the real one, by using special costumes, attributes and of course special photography technique.

The main scope of our paper is analysis what means often the use the photographers to create an image of unreal hero on the photo with the help of a model or cosplayer. We analyse the effects of such photo, and the interception between the real man (model) and a hero.

**Keywords:** ontological, virtual world, cosplay, image processing, filters, photo, photographer, photo manipulation.

## 1 INTRODUCTION

Modern information technologies has made it possible to process any kind, quantity and quality of information. Graphic type of information, which is represented by various kinds of images (black and white, full colour, grayscale, etc.) becomes for the individual not only a source of relevant information, but also the object of manipulation. Modern graphics, falling into the hands of experts (or even lovers) undergo significant changes beginning from colour correction, finishing collage or complete portrayal of images from 2 -D to 3 -D. Processing is carried out both in commercial (advertising, business model, etc. ) and non-commercial purposes. All this was become possible because of the development of information technologies, which led to the fact that any person having a gadget (camera, laptop, tablet, smartphone) can become a freelance artist – photographer. Despite the apparent progressivity of technologies and art, in this phenomenon has a deep ontological significance.

## 2 THE PURPOSE AND METHODOLOGY

The scope of our research is to study the photo procession from the ontological point of view on the example of the phenomenon of cosplay. However, before proceeding to a detailed examination of this phenomenon, we would like to identify a few basic concepts in the framework of which, we will conduct our research. First let's define the basic term which the image is. Beneath the image we understand a matrix, of square pixels (picture elements) arranged in columns and rows. The next important term for us will be the concept of image processing. This term is understood differently by various authors. So, Vinay Kumar and Manas Nanda define the image processing as «the use of computer algorithms to perform image processing on digital images» [1]. Another Indian researcher K.M.M. Rao determine the image Processing as «a technique to enhance raw images received from cameras/sensors placed on satellites, space probes and aircrafts or pictures taken in normal day-to- day life for various applications» [2].

In this study, we will follow the definition Dr. Nidaa F. Hasaan, which determines image processing as a «computer imaging where application involves a human being in the visual loop. In other words the image are to be examined and a acted upon by people» [3], [4]

The major topics within the field of image processing include:

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1. Image restoration.
2. Image enhancement.
3. Image compression.

In our study, due to the scope of our research, we will examine properly the second field, the field of image enhancement. Reflecting on image processing, we have to determine the types of users that are directly linked to it. Thus, Russian scientist L. Yaroslavsky identifies three types of users:

- « 1) «Collective» user (as in commercial photography, TV broadcasting, Multimedia);
- 2) Expert user (as in air and space photo reconnaissance, radiology diagnostics, etc.)
- 3) Automatic devices (computer vision)» [4].

In this paper, we will appeal to the first type of user that is to photographers, both amateurs and professionals. And the last term which we will use in the frame of our work, is the term of cosplay.

The term "cosplay" is derived from the English "costume-play". Many people relate cosplay to the theater or ball - masquerade, although this is not entirely true. Cosplay implies transformation into Japanese anime characters (films), manga (books), computer games, as well as attempts to "try on" the image of the typical representatives of national culture (samurai, geisha, emperors) . Although initially there was only Japanese cosplay culture phenomenon (cosplay initially was based only on manga and anime), cosplay now become more popular in the U.S., Europe and Russia. It was an American proposes to cosplay Disney cartoons, comics and American and European movies. Definition cosplay as a masked ball is only partly true, because cosplay can be as massive as isolated phenomenon. Mass cosplay usually occurs at various festivals (cosplay - con) and "party", the unit happens on photo shoots. In many countries, cosplay began to emerge along with the communities of Tolkien fans and science fiction, and only in the XX century, it developed as an independent movement. In Japan, cosplay has become part of the national culture, and cosplay show takes place on different kinds of presentations, film festivals (especially anime festivals), national and children's parties. The cosplayer not only recreates the character in the current reality, but also seeks to partially recreate his era, the time in which he lived, by means of modern reality.

### 3 PROBLEM SOLUTION

Much cosplay depends on the skill of the photographer. Since most photographers when processing images try to save and recreate the proportions anime characters, which often are not peculiar to living people. This primarily refers to the hair color and size of the eyes, which are a kind of symbol of anime character and some kind of indicator of its morals and ethics features of the character (see picture 1). To create this kind of effects, the photographer uses filter and plastic correction (usually a correction is made in the special program such as Adobe Photoshop and Adobe Lightroom). Eye color or hair color can also be changed ( if cosplayer didn't use lenses) by the imposition of a new color layer, or can be painted with special brushes.

Moreover , the creation of puppet appearance is due to skin color correction filters. Often it is clarified so that it seems porcelain. Such clarification again dictated by the original of the character. For the treatment of skin even created special filters series «Imagenomic» and «Portraiture». Through this filter skin can be blurred, cleaned from sound effects created by the camera and the environment, and the effect is achieved perfect doll skin.

In addition to the color of eyes changing, hair and skin, often the photographer adjusted figure model and its suit cleaned folds, corrected color, shape parameters are changed (which again achieved using plastics).

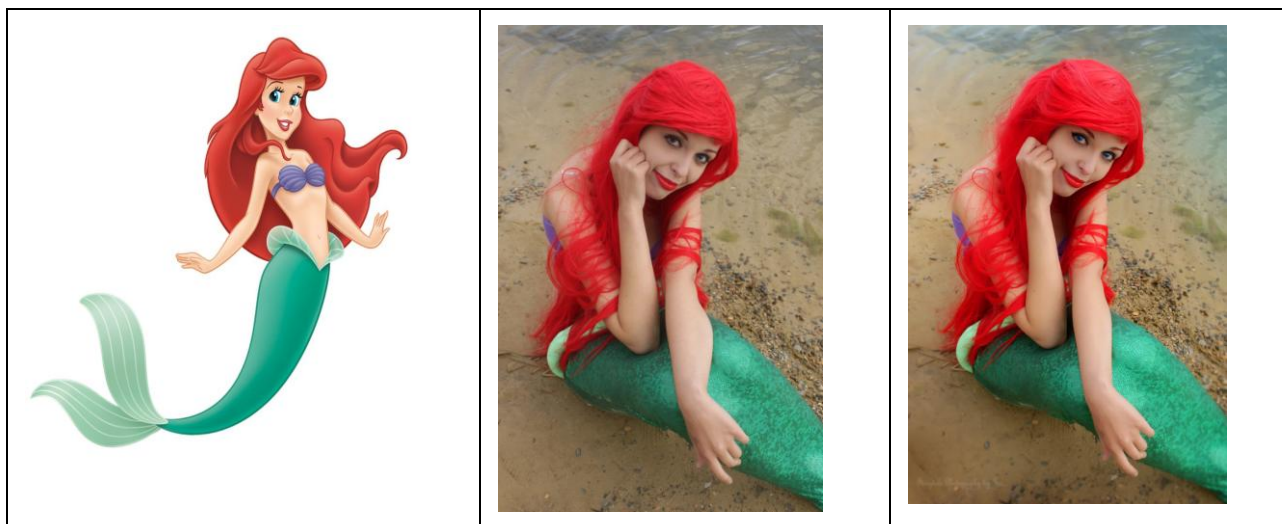
All this leads from a real human proportions to their approximation to the required maximum of the animated version. Person ceases to be totally the character from the screen. At the first stapes this is achieved by transmitting emotions and his character and the creation of his costume and paraphernalia, but the maximum effect of the merger of man and his hero takes on a photo shoot when the photographer selects the ideal place for shooting as close to the animated version.

Undeniable fact that the character has his own fictional space, and therefore a place cosplayer and photographer must make certain references, choosing a place to exercise your cosplay. For example, Agraba princess Jasmine cosplay usually either a fountain or on the beach or at a building in Arabic style, i.e. in places somehow brings us to the mysterious East, rather than, for example, in modern, newly built skyscraper. In the latter case, the spatial discrepancy would burst connection between the hero and his habitat and complicated character recognition and makes the whole cosplay meaningless and absurd. Data connection is so strong that cosplayers and photographers try to pick up as close as possible to capture the environment, paying special attention to it. After all, even if the suit is made qualitatively character, and cosplayer will play it correctly, properly chosen location can spoil the impression of the work.



**Picture 1:** More bigger the eyes of the character are, the kindest it is.

To create this kind of filter effects used plastic (usually a correction is made in the program)



**Picture 1:** Original Disney character

**Picture 2:** Photo without processing

**Picture 3:** Photo with filters and colour correction.

#### 4 CONCLUSION

Thus we can conclude that in the image processing, photographer tries to make the image of cosplayer as close as possible to the image of screen character. It becomes possible due to changing the condition of his complexion, corrected in a special program disadvantages of the costume, treating the environment and creating anime atmosphere. However, in some cases, the photographer changes the picture and the person so, that he had little in common is with a real person, and is more like a display template.

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