Use of Tangible Holograms in Education & Communication

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ABSTRACT Media technologies have evolved through the past few years. This research is on developing the hologram technology to the next level. With using fem to second laser, this technology will help individuals in using their personal devices and will contribute significantly in scientific laboratories. It will affect the way people communicate with each other, especially with visual communication. The hologram also can be used in filming and in editing films. This technology will achieve better time management, easier handling with the editing software programs. It can be used as a creative educating method for children at home or in schools, because the hologram will be able to get the child's attention and will allow them to interact more in class. Therefore, directors, teachers, scientists, children and individuals can use this in their daily life.

***Key words*:** tangible holograms.

1. Introduction

Holography

Holography is a photographic strategy that records the light scattered from an item, and after that resents it in a way that seems three-dimensional. Multi-dimensional images appear in motion pictures, for example, "Star Wars" and "Iron Man," however the innovation has not exactly got up to speed to film enchantment — yet Different sorts of multidimensional images have been made throughout the years, including transmission visualisations, which permit light to be radiated through them and the picture to be seen from the side; and Rainbow 3D images, which are utilised for security purposes — on charge cards and driver's licenses, for instance.

How Holography works

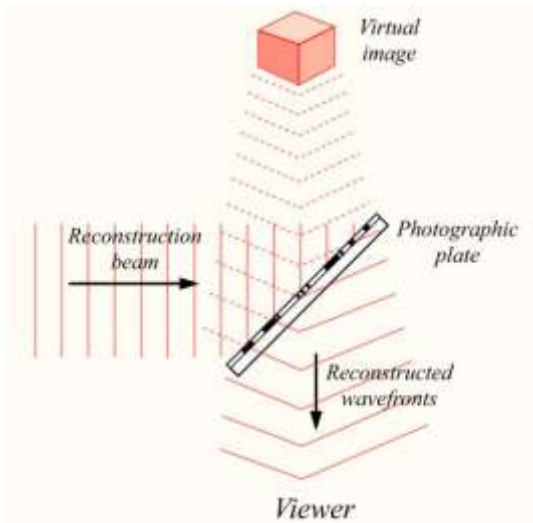
To make a multi-dimensional image, you require an object (or an individual) that you need to record; a laser shaft to spark upon the item and the recording medium; a recording medium with the best possible materials expected to elucidate the picture; and a transparent environment to enable the light beams to intersect.

A laser beam is part of two identical beams and diverted by the utilization of mirrors. One of the split beam, the brightening shaft or protest bar, is coordinated at the item. A percentage of the light gets reflected off the object onto the recording medium.

The second bar, known as the reference beam, is coordinated onto the recording medium. Along these lines, it does not conflict with any symbolism that originates from the object beam and organizes with it to make a more exact picture in the 3D image area.
The two shafts cross and meddle with each other. The interference is what is engraved on the recording medium to reproduce a virtual picture for our eyes to see.

The recording medium, where the lights meet, can be comprised of different materials. A standout amongst the most widely recognized utilized with

multi-dimensional image creation is photographic film, with an additional measure of light-responsive grains. This will allow the resolution to be higher for the two beams, making the picture look substantially more sensible than utilizing the silver halide material from the 1960s. [Fig.1] shows the reconstructing of a hologram. [1]



[Fig.1] Reconstructing a hologram

2. Using Holograms in education

As of late, a visualization DIY have spread through the web, individuals of all ages have begun making their particular small scale multi-dimensional image. The author came up with the idea of making a hologram and to use it for the purpose of children education.

Firstly, The class should have a screen, transparent shine-less fabric screen. A Projector mounted in the ceiling with a 45° angle.

The idea is to make an inventive 3D based software or a program, with all of the required information for lessons of the class.

Mount touchpads, to each students table and connect them to the computer that uses the program and projects on the screen.

Getting the attention of youngsters is hard these days, this basic strategy will permit them to interface with the 3D pictures before them. It will give them the capacity to take part, have a fabulous time and therefore they will retain the lesson simpler. [14]

3. Using holograms in communication.

In the next few years, humanity is go-ing to go through a change, rather than to make a plunge the computerized world, it is going to make a plunge ours.

Although holograms are still static, Many uses of 3D image presentation have occurred over the past few years, giving the impression of a true hologram as seen in [Fig.2].

[Fig.2] Jessica Yellin was in Chicago while talking to anchor Wolf Blitzer in the CNN studio in what was pitched as a hologram. Almost.

The problem is not with the technology that we have; the problem is with the devices that display this digital information to us. The idea is to create this new ' reality ' in a way that extends to the human experience.

To make the hologram portable, creating special glasses with a small hardware on them, that allows the person that is wearing these glasses to see a full desktop in front of them. To control it with just making gestures with their hand, just like as if they are touching a touchpad or a touch screen.

The ' smart ' glasses will have a sensor display, location awareness, sound detection, and it will completely be controllable by the person wearing it, just like a personal assistant.

[Fig.3] A picture to demonstrate how the user will see the holographic images while using the glasses.

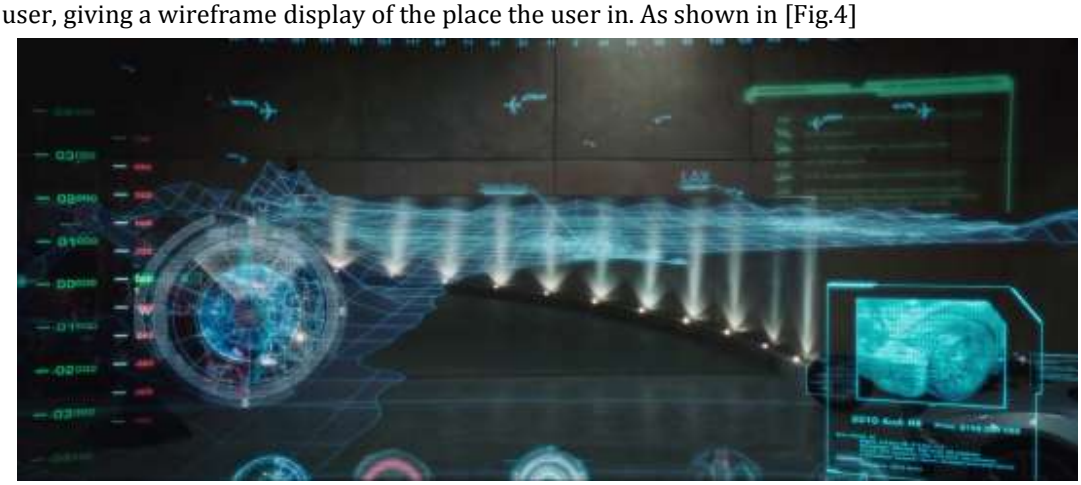
3.1 Uses of the glasses

It will also make it easier to share information among each other, for intense, the person would call a friend that the user needs their help with something, let's say a photo editing tip. Just dial their number with the transparent 3D display that the person using the glasses will see through it, call them up, pull out the picture with their fingers and showing them, they can take it as if they were in front of the person and took a physical thing from their hand.

Then they can edit it as the user will be seeing it being edited, and then grabbing it back the same way they got it from the user.

3.2 location awareness

Because the glasses will pretty much act as the user eye's, it will provide a laser scanning of the area around the user, giving a wireframe display of the place the user in. As shown in [Fig.4]



[Fig.4] A shot from the movie Iron man (2008) showing Tony Starks's POV while wearing his suit.

Along these lines, the client will have a perusing of the location they are in, which will allow the glasses locate and direct the user to the desired destination. [6]

3.3 Recognition

The glasses will have a face-recognition software as well as books-recognition. If the user wanted to read a book or listen to a book. The glasses will automagically search for the book online by just scanning it when the user looks at it. This will save the time of searching online.

The face recognition software will allow the user to know light information of the person they are talking to, as their social media pages or their names.

4. Users of this technology

Every person can use this 3D holographic displaying glasses, from children to elders, especially creative persons. This glasses will save much time for architects, interior designers, scientists, editors, and filmmakers.

The holographic images will provide a fast response. Therefore, it will save time; it will not need rendering because it is just a light.

5. Conclusion

Humans and technology are in constant developing statues, as time keeps going, our need for technology is inevitable, and it is an integral part of our lives that will never stop changing towards the best. Giving this few simple idea's from the author on how to use or to develop a portable hologram for the use of the masses is just a small step in the vast sea of digital information.

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