Holographic Geo-location

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***Abstract*—**The new way of GPS tracker would be upcoming in the future days that is **Holographic geo-location**. By the concept of Holographic geo-location a new way of tracking and showing the location in a holography view. By this concept human can experience a real view of any location through hologram machine where person want to visit. This concept will give view of location in a 3d hologram format that is the image would look like as it is really exist but it would b a virtual dummy of a real object. This concept uses all new technology like hologram stereogram's, GPS navigation device and system to have hologram machine.

Keywords: Holographic geo-location, hologram stereogram's, GPS device, 3D virtual Object.

I. INTRODUCTION

In this 20th century to search any location people use the help of the map. There are many applications which help the user to search any destination from their location. Even there are mapping system use for the security purpose like tracking a location of any criminal with the help of the geo-location service.

With the help of the geo-location any people can easily find the desirable place they want to go, but sometime even though having a map people get confused where to go because sometime due to confusion of the road. Today's geo-location doesn't give proper view effect in a mapping system so that the people can easily move to their destination without any problem.

So here comes a new idea of a mapping system that is **Holographic Geo-location.** This mapping system helps the user to get a holographic view of a geo-location map. This system will provide a 3d model view of every object in the map such that it looks like real object. As human memory is good it always keep in mind the object easily so when a user use Holographic Geo-location service for search any location then it will provide a holographic view of every single object along the way from source to destination such as shops, buildings, towers, lane name etc.

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II. COMPONENTS OF THE SYSTEM

A. *Hologram stereograms(HS)*

Holographic stereogram's are popular autostereoscopic display devices with a strong visual impact. They implement the idea of displaying a 3D scene by using stereo-images and the property of the holographic medium to record 3D wavefront through interference and to reconstruct it by diffraction. The underlying technology behind the HS stems from the off-axis display holography and the autostereoscopic approaches in lenticular and parallax barrier displays. This technology allows high-quality quasi-holographic 3D imaging of large objects. To make a HS, a sequence of 2D images of the scene is incoherently acquired from multiple views. The directional information carried by these perspective images is processed to form parallax-related images which after displaying on a projection screen are recorded onto a holographic photo-sensitive material by a coherent source in a two-beam recording scheme. The parallax-related images modulate the intensity of the object beam. The whole hologram is divided into elemental holograms which are sequentially exposed to the parallax-related images. Illumination of the fringe pattern recorded in the hologram for reconstruction of the 3D scene ensures spatial multiplexing of the perspective views.[1]

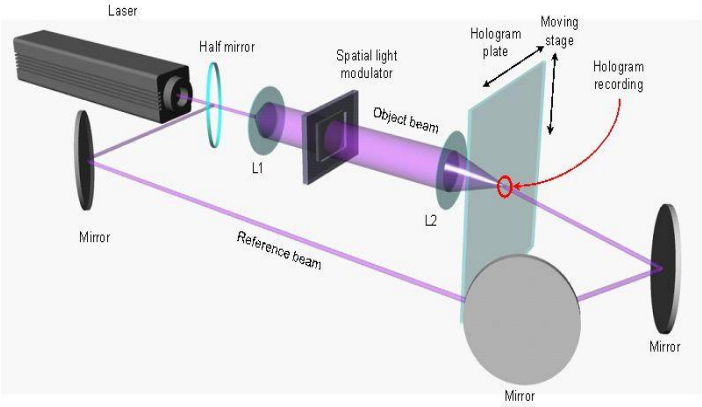

Figure1.1:Schematic of the holographic stereogram printer.[1]

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Stereoscopy reduces substantially the huge amount of information encoded in a hologram, since this information is recorded from a finite discrete set of viewpoints. The bandwidth of the HS, which presents a sequence of discrete apertures to the viewer, is reduced through a predetermined viewing scope by the HS viewing window. Each aperture yields information for a single 2D image of the scene. The viewer's left and right eyes observe different perspectives of the scene, as viewed from different directions, so the viewer perceives stereoscopic vision due to the binocular parallax. When the viewer moves from one image to the other, the motion parallax is observed at discrete steps. [1]

Figure1.2: hologram viewing device. [3]

B. *Global positioning system(gps) navigation device*

A GPS navigation device is a device that accurately calculates geographical location by receiving information from GPS satellites.[4]

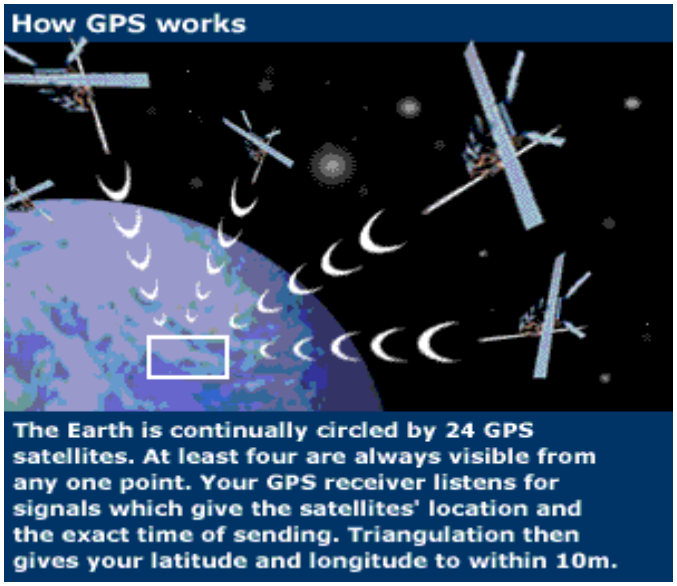

Figure1.3: GPS working. [2]

III. WORKING OF HOLOGRAPHIC GEO-LOCATION

Holographic geo-location concept is a new way of representing a mapping system in a holographic view. In this when a user want to visit a desired location which person don't know about then person will just mention the location in a search option then the GPS device will search for the location, if the location is been found then the GPS device will send the receiving signal to the hologram stereogram for displaying it. The hologram stereogram will take a sequence of 2D images of the scene is incoherently acquired from multiple views and display the image in a 3D form. The 3D image view of a location from HS will be in such a way that it would look like real object but it would be virtual object. This system will be so powerful that it will even show the exact position of the place that is if the searched location is of any commercial building then the system will exactly show which floor and wing to go in a 3D model object by making a read mark sign.

Now user can easily know about the place where person want to go.

A. *Advantages of Holographic geo-location*

- It gives a 3d virtual view of real object.
- It is a user friendly system.
- It is a less memory consuming device.
- It is a time saving system since it helps the user to get the location or to trace the object in a fraction of minutes.

B. *disadvantages of Holographic geo-location*

- To search a location it requires a high speed internet network connection.

IV. SYSTEM USAGE AREA

- It can be used in the wild life project were it would help to search an animal in a big forest area, with the help of this it can easily trace an animal and show the location where exactly the animal is, this all would shown to them in a virtual 3D view.
- It can be used in railway trains were it would give the driver a virtual 3D view of a railway lines of ahead destination; this would help to stop any future accidents.
- It can be used to see the disaster area and to know and calculate the amount of destruction from being in one place.
- It can be used in car system to locate the area and to see ahead view of road.

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Conclusions

The Holographic geo-location system would bring a new way of viewing the mapping system in a 3D virtual in future

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