THE INTERACTIVE 360 DEGREE STEREOSCOPIC PANORAMIC VIDEO TECHNIQUE AND ITS USAGES IN VARIOUS FIELDS

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Abstract

the Development Research headed to competitively between design engineers, digital video cameras in major manufacturers, to access the shots combining the panorama up grow to 360 degrees from all sides, and between the interactive debates, and has achieved static image of great success, has made considerable strides brilliant toward the panorama of widening 360 degrees and interactive debates, but ultra interactive debates, and has had many employments in various areas, the producers of the video move quickly to cope with the qualitative changes and functional fixed images using video cameras prevalent among users of high image sharpness was the use of GoPro 16 cameras, atmosphere GOPRO stand designs its specialist Oddeesy mount able to obtain an interactive video spacious 360-degree, and therefore we must study the technical assistance developed the understanding of such technical revealed whether cameras use circuitously or cubic mount, to answer to thee main research: how can we get the most effective possible to produce interactive video materials visible from the movies and videos spaciously interactive 360 degrees in the field of tourism development and publicity for it through the electronic networking.

- **Keywords**:GoPro Hero4 Camera – Oddasy 360 – AutoPano – stereoscopic – e-tourism

INTRODUCTION

succession ancient civilizations in Egypt through its history, resulted in the successive civilizations a wealth of impressive effects in all areas of applied arts and architectures , with its creative designs, the skill of its industry, accurate and reflect the spirit of every age and cultural features, have been linked to the nice grounds features ofthe Egyptian environment to witness the magnitude of the vulnerability of Egyptians amazed geographically place, where the junction of the two continents which enlightened human civilization in Egyptian charming nature. Egyptian royalty was building their own civilizations on the banks of the Nile, which has created the agricultural environment, as well as the desert environment and the mountains and its Valleys, in addition to twoseaside. The nature which reflected the effective impact in the thought of the old Egyptian conscience, so they thought in the immortality, sensed the greatness of the Creator, so this thought will be reflected in the art of architectures, the splendor of their temples, with graves that they have placed in their care, which erected to their pyramids, which they wrote to the immortality.... Linked to the Egyptian history and religion is the Pharaonic civilization, the arts to Coptic civilization, arts and Islamic civilization and arts...so Egypt holds humanitarian treasures while being hunted became studied in the world and in all parts of the globe, and talk about Egypt will not end ... But this treasure humanitarian law has become deeply indebted to take care, despite the attention of both the Ministry of Culture, the Ministry of Tourism, the attention, including our great legacy that Egypt is not one of the first countries in the world tourist!!!!!!! This is what researchers were invited to

submit their work scientific and an attempt to employ technological innovations modern photography and television to publicize the restructuring and revitalization of the tourist.

RESEARCH PROBLEM

ON the basis of the foregoing, the formulation of the problems main question is:

How can get the most effective possible to produce motion materials from the movies and videos,interactive large panoramic 360 degrees in the area of tourism development, promotion and publicity through the electronic networking of different techniques.

RESEARCH OBJECTIVE

The research aims to reach production technologies High definition Video using GoPro camera 4 black in interactive manner make the scenes as inside the event to the unprecedented using Odyssey mount of 16 cameras together to give resolution up to 8k30,a professional film Resolution.

RESEARCH METHODOLOGY

Pursues research descriptive approach analytical work to describe the forms of tourism in Egypt and the ProfessionalGoPro black camera which producesHD videos about tourism in Egypt professionally and then analyze the possibilities of the camera to produce its forms with the characteristics of theprofessional video.

RESEARCH IMPORTANCE

listing the search, the advantages and the various ways to use interactive stereoscopiclarge panoramic 360-degreevideo to benefited of it in the presentation and tourism show areas with more interactivity thus not just convey form and manifestation place but also gives themobility beneficiary in the place as if the tourist is at the same time as the videographeras if they are in the same place.

RESEARCH LIMITATIONS

the research provides camera GoPro 4 black newest cameras produces the image quality of the high-definition up to professional 4k30, reviews the Odyssey rig mount of 16 simultaneous cameras together to give one 360-degree stereoscopic interactive video and considers the possibility of benefit to the review of the forms and types of tourism in the Arab Republic of Egypt and how includedno refund of those technical assistance in the proportion of tourism in Egypt.

RESEARCH QUESTIONS

1-what is the most appropriate type of tourism in Egypt to use the imaging system Stereoscopic panoramic 360 degreesin the production of propaganda film material forthem?

2 - What are the ways to be taken to increase the effectiveness of publicity visual material on the Internet to promote tourism in the Arab Republic of Egypt?

3-What technological foundations imaging system Stereoscopic panoramic 360 degrees?

4-The extent to which the camera achieved GoPro good results in videoStereoscopic panoramic 360 degrees?

5-led the developments that have taken place with the GoPro camera to increase the quality of the image produced high-intensity, which increases the power of the material for websites?

6 - How can benefit with the Stereoscopic imaging system spaciously panoramic 360 degrees in the production of visual materials lead to the development of the propaganda of domestic tourism and foreign affairs of the Arab Republic of Egypt?

7-What additions made available at Odyssey rig, The 16 a camera with GoPro4 cameras to increase the quality of the Image Stereoscopic panoramic views of 360degrees?

8-What additions made available for the use of panoramicvideo with GoPro4 cameras in the production of the Stereoscopic panoramicvideo,views of 360-degree interactive video?

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2.6. GoPro Camera memory stick

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(1) the founder of the GoPro camera in October 2001

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a photograph with the camera of 35 mm in Indonesia in 2002

pictures with modern Volkswagen car Volkswagen

GoPro 35mm film image

35mm GoPro Camera
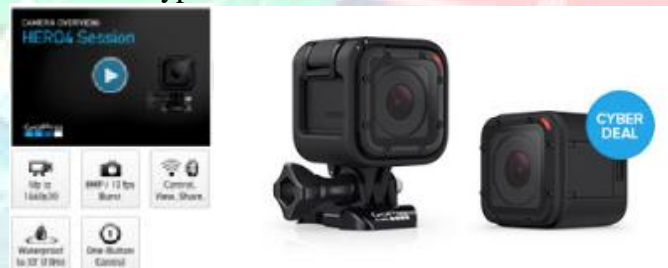
First GoPro Camera

GoPro Hero2 camera to shoot in 3D Video (front and rear)

GoPro hero 3+

types of hero4 GoPro Camera

GoPro hero4 session camera

GoPro Hero4 silver camera

GoPro Hero4 black Camera

Video Resolution	NTSC/ PAL	FOV	Screen Resolution
4K	30/25 24/24	Ultra Wide	3840x2160, 16:9
4K SuperView	24/24	Ultra Wide	3840x2160, 16:9
2.7K	48/50 30/25 24/24	Ultra Wide, Medium	2704x1520, 16:9
2.7K SuperView	30/25	Ultra Wide	2704x1520, 16:9
2.7K 4:3	30/25	Ultra Wide	2704x2028, 4:3
1440p	80/80 60/50 48/48 30/25 24/24	Ultra Wide	1920x1440, 4:3
1080p	120/120 90/90	Ultra Wide, Narrow	1920x1080, 16:9
1080p	60/50 48/48 30/25 24/24	Ultra Wide, Medium, Narrow	1920x1080, 16:9
1080p SuperView	80/80 60/50 48/48 30/25 24/24	Ultra Wide	1920x1080, 16:9
960p	120/120 60/50	Ultra Wide	1280x960, 4:3
720p	120/120 60/50 30/25	Ultra Wide, Medium, Narrow	1280x720, 16:9
720p SuperView	120/120 60/50	Ultra Wide	1280x720, 16:9
WVGA	240/240	Ultra Wide	848x480, 16:9

Table of Gopro capabilities

(15) shows the form of its forms to shoot successively at night with GoPro

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٢٩-٢٨ فبراير ٢٠١٦

مجلة
التصميم
الدولية

(16) GoPro camera hero4 and networking with mobile and remote

mark time during shooting

Accessories for use with the camera

The Backpack Gopro touch

herocast transmission

bacpac herocast

cube mount

Kolor application

Odyssey Rig mount

different types of memory cards for GoPro

Card Name and Manufacturer Part Number	HERO4	HERO3+ / HERO3: Black	HERO+ LCD / HERO+	HERO
SanDisk Extreme PLUS UHS-I 16GB (SDSDQX-016G-A46A - 16GB)	Y	Y	Y	Y
Samsung Pro UHS-I 16GB (MB-MG16DA/AM)	Y	Y	Y	Y
SanDisk Extreme PLUS UHS-I 32GB (SDSDQX-032G-A46A - 32GB)	Y	Y	Y	Y
SanDisk Extreme PLUS UHS-I for Action Cameras 32GB (SDSDQX-032G-AAAA - 32GB)	Y	Y	Y	Y
SanDisk Pixtor Advanced 32GB (SDSDQX-032G-AB46A)	Y	Y	Y	Y
SanDisk Extreme UHS-I 32GB (SDSDQXL-032G-A45A - 32GB)	Y	Y	Y	Y
Lexar 633x UHS-I 32GB (LSDMI32GBBNL633R)	Y	Y	Y	Y
Samsung Pro UHS-I 32GB (MB-MG32DA/AM)	Y	Y	Y	Y
SanDisk Extreme PLUS UHS-I 64GB (SDSDQX-064G-A46A - 64GB)	Y	Y	Y	N
SanDisk Extreme PLUS UHS-I for Action Cameras 64GB (SDSDQX-064G-AAAA - 64GB)	Y	Y	Y	N
SanDisk Pixtor Advanced 64GB (SDSDQX-064G-AB46A)	Y	Y	Y	N
SanDisk Extreme UHS-I 64GB (SDSDQXL-064G-A45A - 64GB)	Y	Y	Y	N
Lexar 533x UHS-I 64GB (LSDMI64GBBNL533R)	Y	Y	Y	N

Autopano application

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٢٩-٢٨ فبراير ٢٠١٦

ملتقى
التصميم
الدولي

Panotour viewer application

Mahmya Island, Hurghada Egypt Thomson Excursion - GoPro Hero 4 Black

GoPro HD: Red Sea Edition - GoPro's New Dive Housing

apart of Gopro movie about the pyramids

RESEARCH RESULTS

1. Many types of tourism in Egypt tourism,Cultural and religious environment safaris EntertainmentYachts, sports, therapeutic, conferences and festivals. All need to be filmed with special propaganda on the Internet and the use of the imaging system Stereoscopic panoramic 360 degrees of what are the ways to be taken to increase the effectiveness of publicity on the Internet to promote tourism in the Arab Republic of Egypt, In the production of materials for propaganda film material will be more effective in the films of tourist publicity recreational and cultural safari which suitable for an internet audience site and social communication.

2 - the use of the imaging system Stereoscopic panoramic 360 degrees to force high attracting, as well as the strength of the Image Impact more than interactive by making it one of the best ways to be taken to increase the effectiveness of publicity visual material on the Internet to promote tourism in the Arab Republic of Egypt.

3-The camera GoPro good results in Stereoscopic panoramic 360 degrees' videos where could communicate in connection with the imaging,broadcast through the free Wi-Fi or Bluetooth, worth of the 12-megapixelphotograph, 30 fps, and video quality up to 4k in 30 fps, it also persisted against water up to 40 meters.

4-UseingOdysseymount give resolution up to 8k30 giving 360-degreestereoscopicinteractive video.

5-The use of the HeroCast broadcasting gives direct broadcast and at the same time gives greater possibilities and angles.

6-Preferred to use Kolor, Autopano of special integrate video from the mountOdysseygainingaprofessionalvideo quality.

RESEARCH RECOMMENDATIONS

1. conversing visited by tourism to show the extent of the importance of production technologies Video Panorama Stereoscopic spacious 360 27500 produced by the Camera GoProHERO4, to adopt those technologies to increase the interaction of tourists inside and outside Egypt.

2. The tourism photography and videography are one of the most important types in photography and videography that must be adopted by the organizations and colleges teaching them to graduate generation of motion and still pioneer causing transferred quality in concept and form of tourism imaging in Egypt.

3. Faculty of applied artsbranch of photography, television and cinema, have to be attention to graduatephotographer'sand videographer specialists in the documentimaging,and to be one of the most important points of post-graduate Studies.

4. develop an integrated plan in the tourism ministry in e-tourism.

5. The provision of the means to be taken to increase the effectiveness of publicity for visual material on the Internet to promote tourism in the Arab Republic of Egypt.

6. follow and study the technological foundations of Stereoscopicimaging system, panoramic 360 degrees and its evolution.

7. The use of the imaging system Stereoscopic panoramic 360 degrees in the production of visual materials for the development of the propaganda of domestic tourism and foreign affairs of the Arab Republic of Egypt.

8. Gaining the benefit of additions made by Odysseymountand Kolor applications to increase the quality of thestereoscopic Image panoramic views with360 degrees.

CONCLUSION

Tourism's mass media interested and focuses on providing its product presentation in objective and interesting way at the same time, and address the audience masses mentality and feelings, the objectivity aim to influence and bring the desire for travel, tourism also aims to instill favorable values for tourism development both internally and externally.

video footage on the Internet are the most important media used for tourism development, and increase the effectiveness of these films that interactive property offered by stereoscopic panoramic wide 360 degrees video, which appeared from 2001 and developed imaging system rapidly using two cameras and then use the cube mount where imaging of the six sides , then the Odyssey jump mount , which holds 16 GoPro Hero 4 Black cameras, finally givesvideo quality of 4K30 HD, with interactive stereoscopic video. As well as the use of the herocast broadcast device gives direct broadcast revelation in the same shooting time and gives greater possibilities, angles, new places and unprecedented imaging. And using Kolor AutoPano video software combined video images out of odyssey mount will give a high quality video up to 8k30, as well as the use of Panoviewr software gives the ability to view and follow up stereoscopic video and moving image in interactive ways.

So we give tourists the interactivity to be in the field or in the ancient places without even going there, with this technology they can finally interact with the places or events going around freely as is he or she in the location itself, adding a new generation of an e-tourism perspective in the whole world.

Finally, our paper combined together the technology of interactive 360 degree stereoscopic video in the field of tourism to increase and in reach the tourism imaginary in Egypt throughout we analyzes both tourism in Egypt and GoPro Odyssey mechanism and describe how they will make a huge step toward conveying every single view, event or even historical places from Egypt to the whole world in an interactive way.

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