

New Technologies in Park Design

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Abstract

The modern amusement park is a unique, high-tech complex of cultural, recreational, sports, health and recreational facilities, allowing human experience, thanks to the use of VR technology.

Keywords: project, innovation, park, immersion, virtual reality, archaeology, city, 3D modelling, virtual reality park.

Introduction

It is known that a huge number of people in the modern world annually choose amusement parks to get vivid emotions in their journey into the world of relaxation. For example, Disneyland Paris is visited on average by about 12 million people a year. And this entertainment industry is designed to surprise both children and adults. Therefore, the popularity of Disneyland in the world does not weaken. The modern entertainment industry combines various areas of cultural, recreational and recreational activities, primarily related to the production of entertainment equipment, as well as modern entertainment technologies aimed at achieving an unforgettable atmosphere of celebration, joy and happiness [1].

The presence of modern entertainment equipment and amusement equipment speaks of the main feature of the park - the amusement park. Attractions used in parks make it possible to artificially create those sensations that evoke a variety of emotions in the visitor: fear, pleasure, the feeling of flying, overload, etc. The number of such amusement parks has not decreased over the years. Islands of Adventure Universal in the USA, Europa Park in Germany, etc. The entertainment industry today is one of the most technologically advanced, capital-intensive, rapidly growing and developing sectors of cultural and leisure activities.

The most complex engineering projects, multimillion-dollar investments and grandiose construction projects result in a "sea of adrenaline" for visitors.

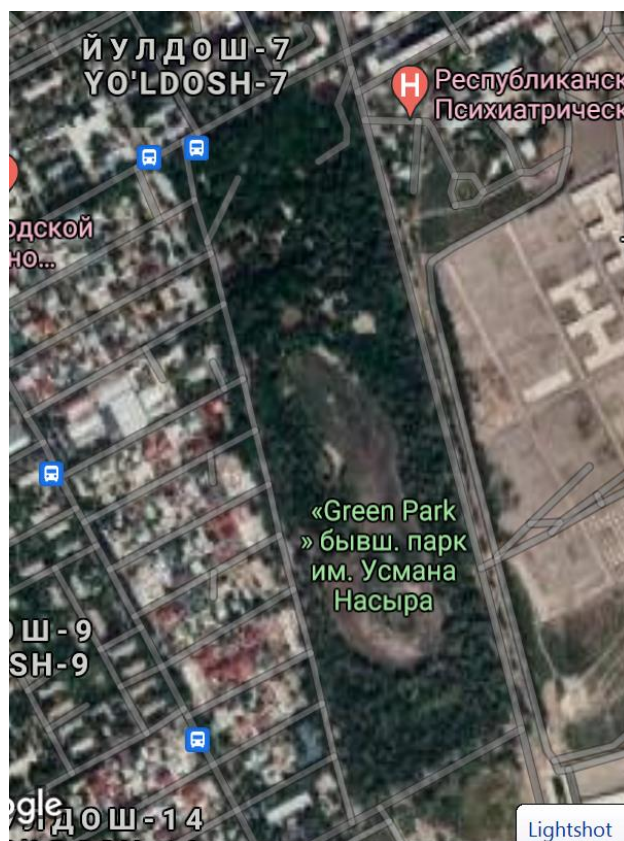
The entertainment industry holds the most impressive records for speed, altitude, acceleration and cost of projects. But at the same time, these records are also the most short-lived: the viewer, hungry for strong emotions, constantly demands new spectacles and entertainment [2]. But much of what is in demand today loses its relevance over time. Therefore, I would like to dwell in more detail on those important aspects that today must be taken into account when organizing city parks. And this, first of all, is the creation of a virtual environment for psychological immersion (immersion) in the events of the historical past.

As an example, we can cite a project being developed for the renovation of one of the parks in the Sergeli district of Tashkent.

The concept of the project is based on the union of "virtual reality" technologies with park design. Augmented and virtual reality technologies have appeared recently, and the



terminology has not yet settled down. Wikipedia gives the following definitions: virtual reality (VR, virtual reality, artificial reality) is a world created by technical means, transmitted to a person through his senses: sight, hearing, touch, and others. Virtual reality simulates both exposure and responses to exposure. To create a convincing complex of sensations of reality, a computer synthesis of the properties and reactions of virtual reality is performed in real-time. But virtual reality should not be confused with augmented reality. Their fundamental difference is that virtual reality constructs a new artificial world, while augmented reality only introduces individual artificial elements into the perception of the real world.



The project under development is located in the Sergeli district, on the Yangi Hayot massif between the streets of Kanora, Maghreb, and Davlatabad. This is the former park. Usman Yusupov.

Its area is more than 4 hectares.

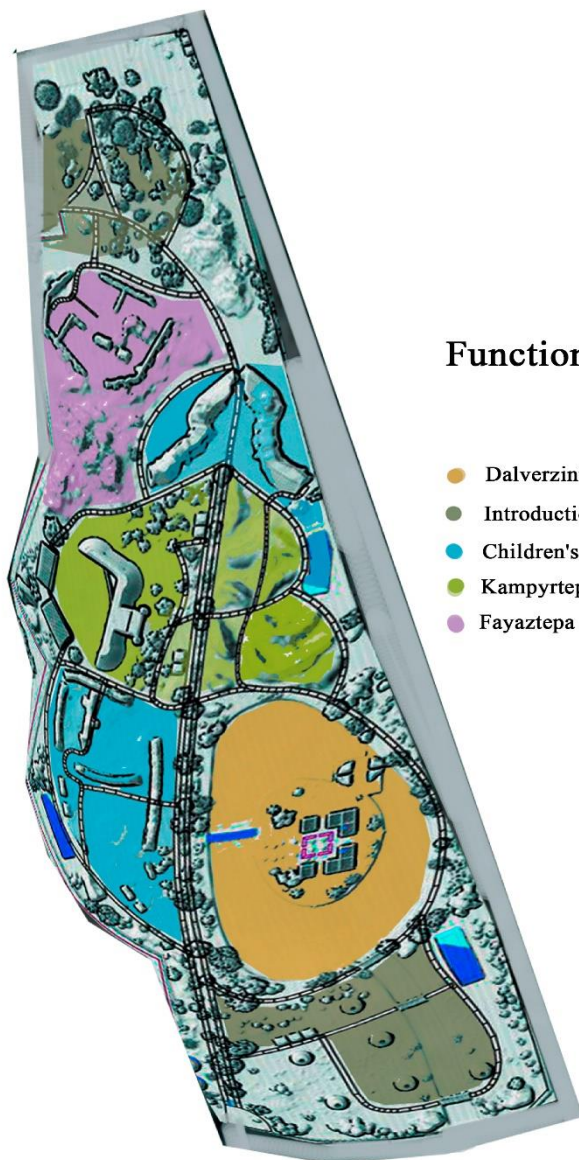
The park is richly landscaped but attracted attention because, in the centre of the green zone, there is an abandoned dry lake. It is its territory that should form the “zest” of the general concept of the territory.

Uzbekistan is a country on whose territory the most ancient civilizations and cultures arose and developed, many of which received the first impulse of their development here.

Of the more than 7 thousand unique historical monuments and examples of unique architecture, many have come down to us in the form of archaeological finds. Restoration of their original image was possible only through pencil drawings of scientists - researchers and modern 3D modelling.



But all these settlements, city-states, were filled with life, the work of artisans, creators of beautiful architecture and works of art. In such a park, thanks to virtual reality animation technologies, visitors can not only see individual images of the life and life of people from past eras but also “walk the streets of virtual historical cities, enter houses, feel like they are in a distant time of past eras.”



Functional zoning plan

- Dalverzintepa settlement zone
- Introduction area at the entrance
- Children's zone
- Kampyrtepa settlement zone
- Fayaztepa settlement zone

In fact, this is a VR park or a virtual reality park. For the first time, as an experiment, VR Park Tokyo was opened in Tokyo, Japan, in the homeland of most technological innovations, offering its visitors the opportunity to immerse themselves in extreme adventures, amazing worlds and fantastic universes. The problem lies in the combination of 3 hypostases: entertainment + knowledge + test.



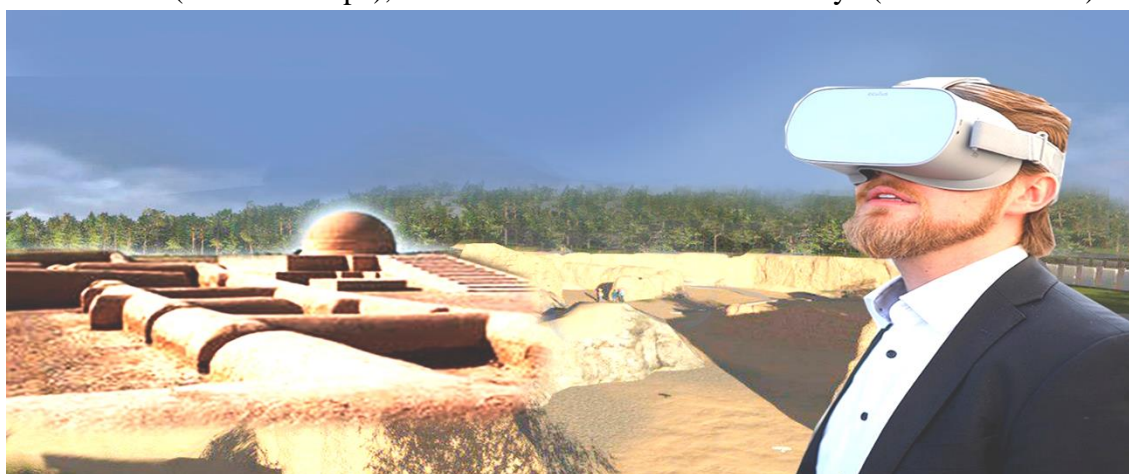
In December 2016, the government of Uzbekistan adopted the following document: 12/06/2016 (printable version) "On measures to ensure the accelerated development of the tourism industry of the Republic of Uzbekistan".

In this regard, the adoption of the Decrees of the President of the Republic of Uzbekistan is aimed at ensuring the accelerated development of the tourism industry, giving tourism the status of a strategic sector of the economy, turning it into a powerful tool for sustainable growth of the country's economy, effective use of the tourism potential of the regions, increasing the role of tourism in improving the level and quality of life population [2,3].

As a tourist component, the park of my project is an "archaeological park" with an imitation of iconic already excavated settlements.



Taking into account all of the above, my project of the park will be displayed models of iconic archaeological sites located on the territory of Uzbekistan, talking about the theory of the origin of world culture here: Buddhism (Fayez-tepa), ancient settlements of pre-Islamic culture - Zoroastrianism (Dalverzin-tepa), ancient settlements in Surkhandarya (Alexandria Oka).



In the photo: a copy of the excavations of the settlement "Dalverzintepa"

The walking landscape of the park will outwardly recreate the current appearance of archaeological excavations, and "glasses - tablet or helmet - augmented reality" immerse visitors in the real world of past eras, reconstructing the original appearance. These



technologies make it possible even to "fly up", to see from above the territory of the settlement - the remains of ancient civilizations. In such a park, themed game quests can be organized. The reconstructed natural complex of the archaeological park is considered in the project as a unique part of the historical landscape, maintaining a healthy environment, clean soil and biodiversity of the plant world, which must be preserved and, if necessary, restored. The following decrees of the Government of the Republic of Uzbekistan testify to the high relevance of such parks:

- The State Program for the implementation of the "Strategy of Actions in the Five Priority Areas of Development of the Republic of Uzbekistan in 2017-2021" in the "Year of Youth Support and Public Health Promotion". Decree of the President of the Republic of Uzbekistan, No. UP-6155, date of adoption 03.02.2021, effective date 04.02.2021.
- On measures to develop the spheres of education, upbringing and science in the new period of development of Uzbekistan. Decree of the President of the Republic of Uzbekistan, No. UP-6108, Date of adoption 06.11.2020, Date of entry into force 07.11.2020
- "Approval of the Program for the Development of Landscape Design in the Republic of Uzbekistan" dated August 13, 2013 No. 223

So, the project under discussion is dedicated to the renovation and the creation of an archaeological park of augmented reality in the Tashkent region. The park is turning into a tourist attraction, the creation of which will enable visitors to the park to get acquainted with the ancient history of Uzbekistan. As President Shavkat Mirziyoyev noted in his Address to Parliament, the development of digital technologies is one of the main priorities for the coming years.

To this end, a large-scale program "Digital Uzbekistan - 2030" was developed, which provides for a radical digital transformation of the Republic over the next decade.

This will be a unique project, its area will be about 10 thousand square meters. m. It will be for the young to a greater extent. Firstly, it will be a complete immersion with the help of modern VR and AR technologies in well-known historical periods.

Secondly, it will be a unique experience of physical activity - getting out of various situations, labyrinths, and quests.

Thirdly, it will be specialized trade and food, which will be connected with films, with heroes. The development of virtual reality (VR) technology has given impetus to the emergence of new entertainment centres - VR Park and VR Zone.

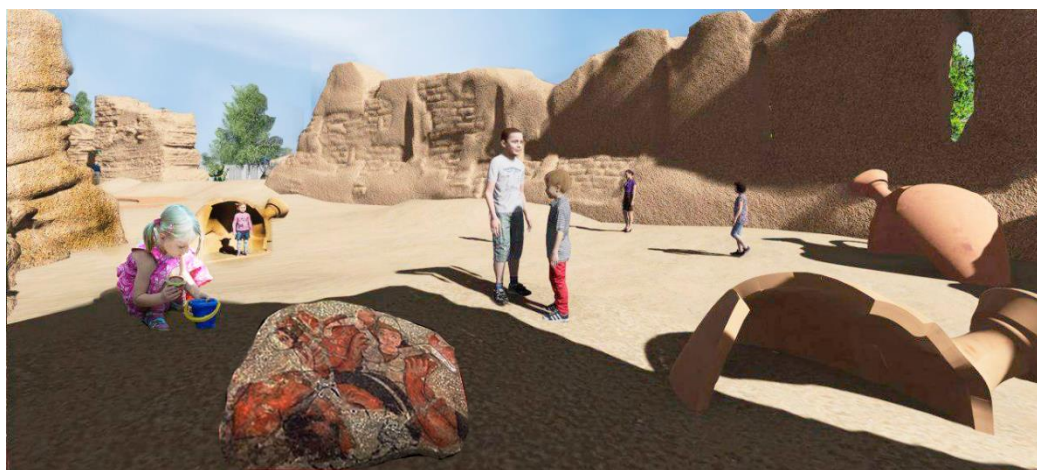


The Pilgrim mobile application uses augmented reality to recreate lost architectural monuments and historical events. It can give tourists and residents of the Sergeli district of Tashkent a unique opportunity to see with their own eyes the most beautiful buildings that were created, but destroyed many centuries ago and will never be fully restored.



To immerse yourself in virtual reality, you need to use the so-called immersive headset. The information provided by a VR device can include an image, sound, as well as tactile sensations, smell, and even taste.

In the project of this park, there are also corners for children to play. Here, on sandy soil, young visitors to the park can feel like young archaeologists. In this zone, you can find decomposed samples of jugs, columns, capitals, and fragments of wall paintings of the palace in Varakhsha.



So, this article presents a story about the project of an archaeological park, where you can understand Uzbekistan as a state with a great history, part of which can be realized by the example of the imitation of the excavations of the ancient settlements of Surkhondaryya, which holds many secrets, some of which are gradually revealed, thanks to hard and painstaking work scientists - archaeologists and historians.





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