
XR-PRO
INTERACTIVE STUDIO

Among the huge number of modern technologies that can make our lives better, virtual and augmented reality technologies stand alone. They allow solving previously impossible tasks in such areas as marketing, industry, construction, medicine, education, games and many others.

Why we are called XR

Today, there are three main types of realities, in addition to the physical: virtual reality (VR virtual reality), augmented reality (AR augmented reality), mixed reality (MR mixed reality).

For simplicity, all these technologies are combined into one term – XR. Our team is an experienced developer of virtual, augmented and mixed reality. That's why we're called XR. And XR is what we do.

Implemented cases:

1. Development of the training center with application of VR technologies

for personnel training and professional retraining

Customer: PJSC «Tatneft'»
(Almetyevsk, Russia)

First development stage:

Implementation of scripts processing in accordance with provided work flow charts.

Model analysis of equipment and appliance tools in accordance with provided manufacturer's specification and description.

Second development stage:

1. Training simulator imitates the work of two mechanics on the operating platform.
2. Misoperations lead to development of the scenario with shocking elements (imitation of traumatizing, ignition, etc.), or to additory complication of scenario depending on types of errors.
3. Inclusion of technical and operating problems in scenarios, adjustment of scenario by the instructor.
4. Adjustment of meteorological conditions and time of day.
5. Realization of the instructor's possibilities to observe scenario «from either direction», put on hold, issue instructions and notes.
6. Implementation of processes visualization in VR concerning processes occurring in a well during performance of processing steps with preset parameters.
7. Formation of custom report on scenario passing as of each participant, with all faults and advances.
8. Creation of database with history storage concerning passing of scenarios by each participant.


USE SIDE GRIPS
TO GRAB OBJECT

2. Development of training center with the use of VR technologies

for professional retraining and professional retraining in a number of technological processes connected with meat processing and pig complex service

Customer: «Rusagro»
(Moscow, Russia)

First development stage:
The VR App designed for training of staff that in point of farrow system at pig complex

Description:

The participant stands beside breeding pig. Informative prompt with tasks:

- To switch on thermo heated carpet and IR lamp;
- To check climate in section (Climate actuating devices are illuminated).

Task for the participant – test sensors against the required norms of indicators, (informative prompt with standards).

Beginning of the farrow.

Task for the participant: to exempt the pig from placenta, rub off, roll in in unwatering bedding (funiculus is not truncated), to put under the breeding pig's mamilla, (there will be a list with operating procedures on the screen). Each executed operation is marked off with a green tick.

Second development stage:

1. Development of the VR App for training of staff.
   Concerning following types of works:
   - Medical round and survey;
   - Feeding and watering;
   - Ultrasonography.

2. Development of the VR training simulator with practicing of actions connected with fire breaking-out and other emergency situations at the meat-processing enterprise.

3. Development of the AR application for remote training of experts in process of assembly and to repair of the equipment on meat-processing factory.

3. Development of client-side of the client-server system of interactive quests in augmented reality (AR) working on the IOS operating system

Customer: KOMNATA QUEST
(London, Great Britain)

Description:

The App interviews server and receives the task in reply.

On the basis of the received task, actions of multimedia content's loading from server or start of the game AR-interactive are performed.

First development stage includes creation of AR-interactive:

1. "Way". There are drawn steps on a floor that conducting to the place in location. The point is specified by GPS coordinates. The task is complete upon reaching the point by user.
2. "Message". The inscription is printed on the screen, with an opportunity to close it. And then a task is considered to be complete.
3. "Media". Media content is placed in space: photo, video or 3D model without animation. Location of an object is defined by coordinates concerning user or it is attached to the visual tag. The task is considered to be complete in case of pressing on the object or upon the expiry of the timer. An opportunity to load tags additionally. In some quest the signboard the shop or the monument's plate could be a tag.
4. "Question". There is a question on the screen and from two to four possible answers are offered. The task is considered to be complete on pressing any of the options.
5. "Gesture". There is message with the picture on the screen, specifying what gesture it is required to be entered. The user closes the message and enters gesture then the task is considered to be complete. The catalog of possible gestures is available in the App and cannot be changed.

Second development stage:

Development of additional AR – interactive connected with interaction of user with 3D characters.

4. Development 4D App with the use of virtual reality on fire-fighting operations connected with wild fire

Customer: Ministry of Emergency Situations (Moscow, Russia)

Description:

3d animation with the visibility in 360 degrees was developed for this project.
The visitor of an exhibition put on the VR Helmet and observes how the helicopter tackles a fire in wild forest.

For increase of presence effect the platform was equipped with special heaters, which were located in safe distance over the head, and water atomizer, which was located over the head too at the top of the platform.

When the fire is gaining in animation, heaters are switched on incrementally.
As soon as the copter rushes up and dumps water for fire-fighting operations, water atomizer comes on. Its high-pressure stream is directed on the person's head.

5. Demonstration of housing estate's advantages
by means of VR technologies

Customer: Management Company Unistroy (Kazan, Russia)

Description:

The App is made as interactive on-line walk within the walls of the future housing estate, with the benefit of VR Helmet.

Using this App it is possible to move to any point of an object, to study pointedly the architecture of housing estate and its building surrounding grounds.

The user can look at leveling of apartments with a possible variant of decoration, and also to adjust colors and textures of decoration on his own account, suited to every fancy.


V:
OK

6. Development of software application

for management of holographic content on the Hololens MS platform for visual test of deviations concerning factual dimensioned and geometrical parameters of critical structures from their project (target) spatial and geometrical parameters

Customer: IBCON
(St. Petersburg, Russia)

Description:

- Database design and its filling for the subsequent testing of the system's prototype.
- Development of the user-authentication system.
- Development of the data access system.
- Development of the committing changes system.
- Development of the Web-control board connected with server.
- Development of user authorization in Hololens App.
- Development of interaction module with server.
- Module development concerning Read/Write attributes.
- Module development concerning fbx-download on the device.


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