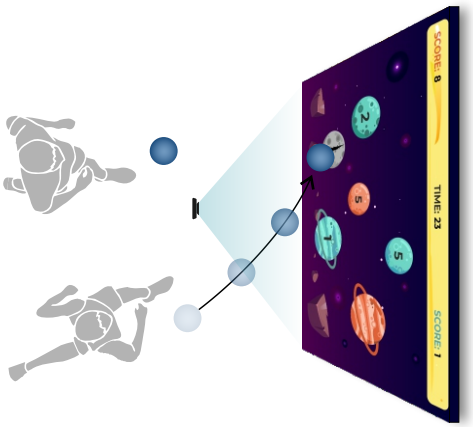
INTERACTIVE BALL-WALL &GESTURE CONTROL

INTERACTIVE BALL-WALL&GESTURE CONTROL CONTROL is a new product that offers schools, museums, science centers, sports clubs, and other institutions and organizations the opportunity to choose from of our interactive games or design your own game or quiz with your content. It allows one to carry out educational activities in a fun way. It works in two modes: „*INTERACTIVE BALL-WALL*" and „*INTERACTIVE GESTURE CONTROL*".

1 INTERACTIVE BALL-WALL

Interactive projection uses the interaction between the thrown ball and a projected image on the wall and thus simulates a mouse click. The Interactive ball-wall provides endless fun and is suitable for every age group.

the camera evaluates the touch location of the ball with the wall



2 INTERACTIVE GESTURE CONTROL

Control the screen with hand movements and simple gestures. Your hand fully replaces the mouse, and thanks to this technology even an ordinary static image on the screen can become interactive entertainment for visitors.

the camera evaluates hand movements and gestures

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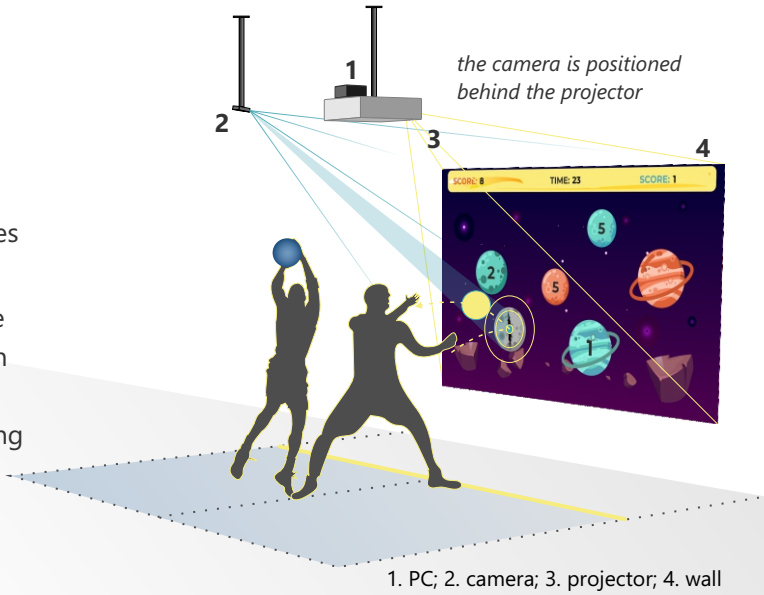
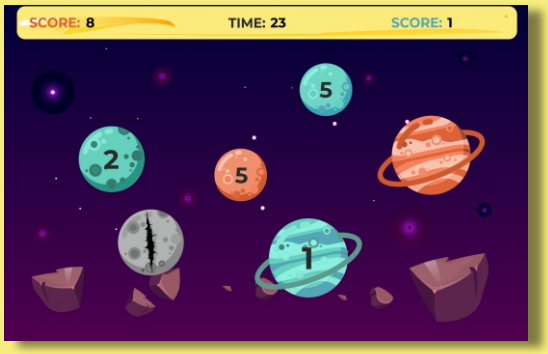
INTERACTIVE BALL-WALL

A small camera is pointed **at the projection screen** which registers the point of impact of the ball and simulates a mouse click.

Individuals and several teams can compete. The game can record multiple touches simultaneously. The visitor can choose from the games we offer or design his own. The interactive sports and game system is created for combining physical activity with digital games. Physical activity helps people adapt to a healthier lifestyle and connect fun with exercise.



1. PC; 2. camera; 3. projector; 4. wall

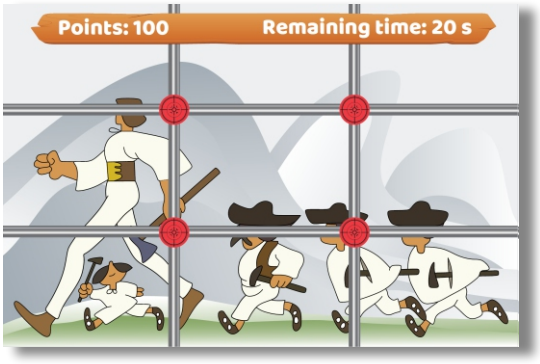


Game PLANETS

The task is to hit planets on the projection screen by throwing the balls. Each planet has its size difficulty directly assessed by the number of obtainable points. One or two teams compete.

Game FREE THE ROBBERS

Free the robbers by throwing balls onto the screen causing damage to the bars in the right weakened places of the prison cell. It is necessary to escape in time until the prison guard comes. One or two teams can compete.



QUIZ game

By throwing the ball onto the projection screen you can vote for correct answers in the quiz and compete between two groups or just try to get the highest score within one group. Possibility to edit questions within the quiz.

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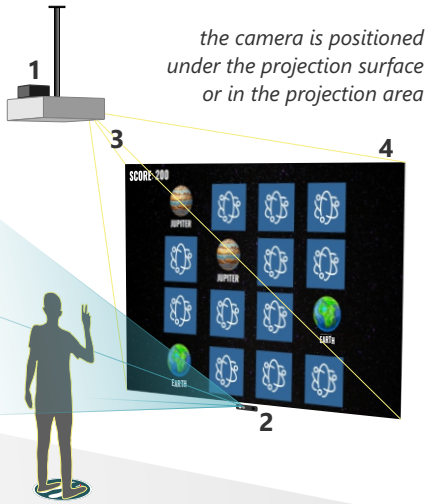
INTERACTIVE GESTURE CONTROL



the camera is positioned under the projection surface or in the projection area

1. PC; 2. camera; 3. projector; 4. wall

Hand movement is captured by a **small camera aimed at the visitor**, which identifies **hand movements**, as well as **pre-defined gestures**, with which it is possible to control the program on the screen. Visitors can choose additional information for the exhibited and projected exhibit or one of the many interactive games that will test their skills and knowledge.

The application reliably captures both **right-handed** and **left-handed** players, and an advanced algorithm prevents the game from registering others during usage.

Game QUIZ or PEXESO

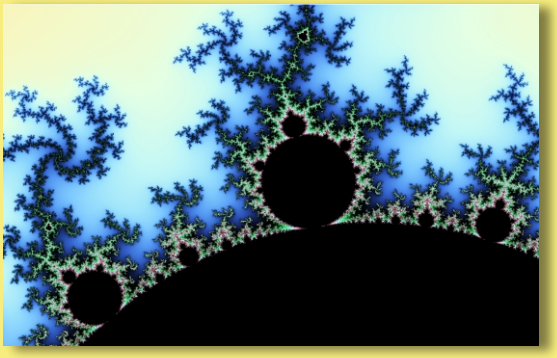
By moving your hands on the interactive surface, you can choose correct answers to the quiz or turn the cards in the boxes. It's possible to compete between two groups or just try to get the highest score within one group. The possibility to edit the content (questions in the quiz, pictures in pixels) according to the theme of the exhibition.

Panoramic tour

The visitor can move his hands around the panoramic tour, zoom, and select topics from the menu that lead to other virtual tour locations. As part of the tour, images, audio, text, and video data can be integrated as required.

The magic of FRACTALS

A fractal is generated on the screen which is possible to zoom, pan, and change with hand gestures. After scanning the QR code you can download the image of the currently displayed fractal.



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special mode: FRACTAL TREE

*The visitor stands in the designated place and starts with the selected gesture **generating fractals** based on a captured image of himself.*

FRACTAL TREE

By placing your hands and moving them, you create copies of yourself created on your hands. In this way, you can create a dynamic fractal tree that changes depending on your movement. Visitors in a fun way will understand the principle of generating fractals and their meaning in mathematics and natural sciences.

TECHNICAL SPECIFICATION

INTERACTIVE BALL-WALL

Recommended technical requirements:

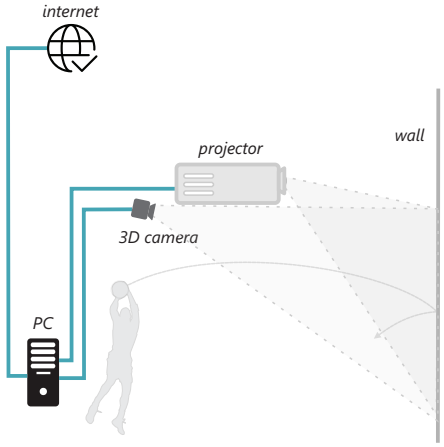
PC hardware:
processor 4-core @4GHz per core, RAM 8 GB (optimum 16 GB), GPU Intel Iris Xe/or AMD Vega 8 (optimal GPU with min. 2 GB VRAM – 1x HDMI-out), 256GB SSD, USB 1x3.0 for connecting a 3D camera.

3D camera:
The ideal range of from 0.5 to max. 6m, stereoscopic depth of field technology, depth recording (Depth) and RGB image, the field of view (FOV) for depth min. 85°x55°, for RGB component min. 85°x60°, output depth resolution min. up to 1280x720p when shooting min. 90fps, for RGB component min. resolution up to 1280x800 when shooting min. 30fps, a connector for connecting min. 1x USB-C 3.0, camera size max. 130x30x35mm, the possibility of installation in M4 or ¼-20 UNC thread

Projector:
laser projector, ultra-short projection distance, native resolution 1920x1080 (FullHD), brightness min. 4,000 lm, aspect ratio 16:9, image size min. 100-150", the distance between the projector and the projection screen surfaces - 30-40 cm, wall or ceiling mounting, built-in speakers, output min. 10 W. Inputs min. 1x HDMI

Internet connection

Space: min. 3 x 4 m



INTERACTIVE GESTURE CONTROL

Recommended technical requirements:

PC hardware:
processor 4-core @4GHz per core, RAM 8 GB (optimum 16 GB), GPU Intel Iris Xe/or AMD Vega 8 (optimal GPU with min. 2 GB VRAM – 1x HDMI-out), 256GB SSD, USB 1x3.0 for connecting a 3D camera.

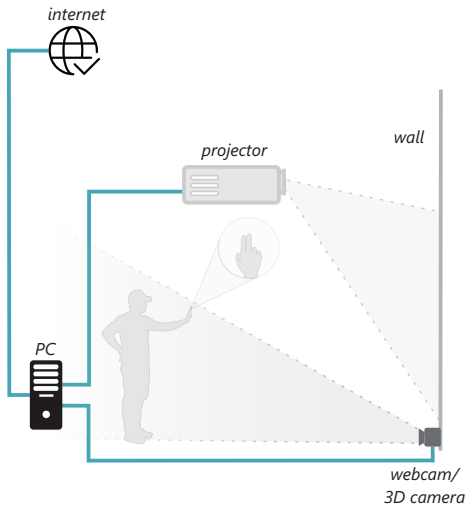
Webcam:
FullHD, autofocus, USB 3.0

(*In* FRACTAL TREE *mode , a 3D camera is used as in INTERACTIVE BALL-WALL)*

Projector:
laser projector, ultra-short projection distance, native resolution 1920x1080 (FullHD), brightness min. 4,000 lm, aspect ratio 16:9, image size min. 100-150", the distance between the projector and the projection screen surfaces - 30-40 cm, wall or ceiling mounting. Inputs min. 1x HDMI

Internet connection

Space: min. 2 x 3 m



Applications are online. In case of interest, it is also possible to generate an offline version

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