SOUTHERN FEDERAL UNIVERSITY
SFedU
ROSTOV-ON-DON · TAGANROG

«EXPONENT» LLC

«Sixth Sense»

Navigation system for visually impaired and blind people

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Computer
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Security

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«EXPONENT» LLC

The problem being solved

Ensuring unhindered access of disabled people to social, engineering and transport infrastructure facilities

The complex is a technological and effective addition to existing solutions or their complete replacement

System features

Radar tags based on BLE technology

- programmed to build a dynamic route
- placed indoors and on the territory of the object

Does not damage the surface

- small-sized radio tags are installed on any surface without damaging it
- tags can be non-volatile or connected to an electrical network

A Sixth Sense application with a single database of objects

- is a free mobile application with a voice navigator that dynamically builds a route
- warns about obstacles on the way, accompanies the user to the end point

Adaptive algorithm

- builds a route depending on the current position of the user and the specified route

instruction

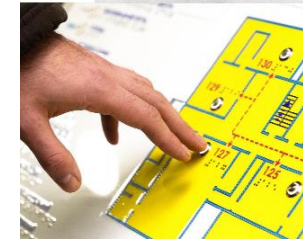**navigation**

about us

Download and use the Talkback function

Contrast marking
It is designed for marking doorways, wall surfaces and floors for better orientation in social buildings for people with visual dysfunction

Mnemonic scheme
It is a special relief plan of a room or territory that provides simultaneous display of visual and tactile information

Tactile tile
It is a system of textured indication of the earth's surface to help pedestrians with visual impairment orient themselves in space

Operating principles

It allows visually impaired and blind people to move not only indoors, but also in urban conditions, between cities, if there is an installed system.

◉ radio tag

route building
- the user selects the institution and the end point of the route
- does not require an internet connection or GPS/GLONASS

navigation
- falls within the range of the place tag on the object
- the app notifies the user with a voice message

following
- the user begins to follow the route using voice prompts
- the user can change the endpoint at any time
- the system works in all directions - in and out