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Nuremberg – Info Positioning

GamesOnTrack - Positioning
We all know the GPS. It is an item you will find in almost every home, and new cars rarely drive without it. You find it in mobile phones, navigators and integrated in a great number of instruments to be used both practically and for amusement.

However, the GPS does not work indoors, and with a precision of 1 meter it is not good for anything inside a house. If you need to find something, if you need to follow something small that moves around or if you need to keep track of for instance a robot then you need more precision and faster tracking.

GT-Position from GamesOnTrack is that type of indoor GPS – even though the principle of the system works opposite the real GPS. Here the receivers are attached to the ceiling while the transmitter is attached to the moving object.
GT-Position measures a moving object 10 times a second and measures many different moving objects almost simultaneously. The system is based on ultrasound and radio communication together with a small central that collects data and sends it through a USB to a computer. This means that the system does not require any wires (apart from a possible power supply for the receivers)
A set of receivers can reach up to 8 meters with an accuracy of approximately 10 mm. However, by installing more receivers you can extend the area of reach, for example when using it in large rooms or hall.

We have installed GT-Position to help operating and control for example model trains, from H0 to G. A small transmitter is placed in a train, after which the first task is to let the train drive around the railway layout in order to outline the track on the computer. When the railway layout is outlined you can place more trains on the track and follow every train, each marked with a little flag, in real time on the computer.
Afterwards you can use the mouse to mark turnouts and different areas on the computer layout, which will function as “traps”. The traps are the traditional blocks in controlling trains. At all times GT-Position registers where the trains are and which trains are in what blocks. As a result it is possible with our very efficient automation system to control numerous trains and make sure that the next block ahead is always free before a train drives in to that specific block. You can also give specific commands to turn on sounds and lights for example to a train that approaches a railway crossing, so that it both breaks, whistles etc.
Further, you can insert virtual signals in the blocks, which on the computer will be marked with red and green colours and will make sure that the train stops, if the signal is red. It is also possible with voice control to set a virtual (or actual) signal to green, and let

the train keep on going. The system can also be used for automatic parking in a fiddle-yard or to pull trains around the railway layout one after another – without them crashing into each other.

For customers GT-Position is a dream. Other systems require a great number of electronic devices, cutting of the tracks, extra boosters for digital control, separate modules for feedback and a whole bunch of wires. And since no one is getting any younger you will probably prefer not to hit your head every time you get up from fumbling with wires underneath the railway layout – this you will avoid with GT-Position.
Additionally, what makes GT-Position incredibly efficient is the individual train control that alternatively would require either timetable drive or systems with IR-transmitters in all tracks - and those solutions require a lot of wires that are both expensive and needs to be moved around.

For some enthusiasts GT-Position for model trains has the weakness of requiring transmitters to be placed in the roof of the train in order for the ultrasonic component to have free access to reach the receivers. This means that a locomotive needs to be modified, and that can be hurtful to some people (as the train no longer will be genuine). That is also why we have developed transmitters that can be placed in wagons and run for more than 100 hours on 2 AA batteries.

GT-Position is definitely a future-oriented solution, which most importantly supports our vision to combine virtual reality, such as the Internet, games and chat, and the actual reality consisting of traditional toys like vehicles, trains and robots. With GT-Position it is possible to merge different layouts online, so that users can play with each other's moving objects and either play together or compete against each other in the virtual reality.
GamesOnTrack want to break with the general division of reality and virtual reality, and create a scenario where both children and adults can play their favourite games in the actual and virtual reality at the same time. We hereby prepare the way for users to manage both the actual reality and the virtual reality at the same time. Our experience tells us that the tasks, the intensity and the challenges does not become any less exiting when it is required to use both body and mind in play.

Welcome to an extended virtual reality – also for model trains