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GamesOnTrack Voice control technology

In cell phones voice control has been an option for some time, however very few people use it. The problem is that you have to enter your commands and train the device in your personal language and voice.

GamesOnTrack is different. We use already recorded speech databases where all words in this particular language are recorded several times by 1000-4000 people. Then we train and build the phonetic models of all the words we use in our command language. By means of our intelligent command syntax, our own adjusted end point detector, and a strong garbage collector we have managed to achieve voice recognition with around 90 % accuracy. Our users are free to select their own numbers and naming of trains, sounds, lights, engines etc. We can extend our solution to language areas (countries) just by buying databases, train them, and we are ready with a new language. Extra programming is not required.

Speaking with - or commanding - your models, toys, engines, trains etc. sounds like a strange way of operating. However, it provides a lot of possibilities compared to existing wheel, knobs, joy-stick, and button operation. Particular in model train environments are you addressing multiple trains, multiple switches, multiple tracks etc. In this context the voice and a floating command language which can name them all is superior. There is no need for shifting display, register, buttons etc. and first and foremost you can keep your eyes on the layout, where it all happens. A big advantage is that many disabled people can use headsets in stead of fingers to play with model trains

This also holds for controlling robots and complex moving trucks, tanks, etc. The more engines, the more functions, the more interaction you need the worse the traditional UI operating methods become. There are too many buttons and it all gets too confusing. A strict and clean language with a good command and naming convention is superior. How many remote controllers do we actually manage to use?

The disadvantage of voice control is first and foremost to ensure recognition. We cannot ensure 100 % accuracy, but we can come close, and we can control noise and garbage. Nothing can substitute a large red panic button. No speech can be formulated faster than what it takes to press the “stop all” button. The new Märklin CS II controller has a big red button. GT-command has a panic button (F12), too, which stops all moving trains without discontinuing the power. In our opinion voice control will not substitute button

control or pen control completely. It will still be there in the form of buttons, keyboard, mouse or the like. However, voice control is superior when things get complicated.

Some exercise is required to voice control your trains. Speech is connected with intelligence and brain activity. Face muscles must be moved in order to turn the command into activity. Most people need approx. one second. That is more than it takes to press a button. As soon as we use intelligence to shift register, move trains to other buttons or to find other displays, we use far more than one second compared to only speaking the command. The current controllers for most complex toys require our eyes, our intelligence and hands on the control buttons to make things happen. With voice control we train our memory and brain and in this way voice control is superior when complexity and pressure increases, but still we can keep our eyes on the layout.

GamesOnTrack A/S is based on many years of Man Machine interface experience. Next year we will launch a forward thinking command structure which will make voice enabled control of model railways and robots even more powerful. And which will further enable games.