What is CATrain?

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CATrain is a program, with which digital model railway facilities can be sketched, simulated and controlled. Best the possibilities can be explained by CATrain, if the steps are specified, in order to let to CATrain a model railway facility steer.

- The appropriate hardware must be developed and attached to the plant. this hardware consists of plates to solders, more details is described in program documentation.

- In the program everything begins with a new layout.

- In the mode "Layout Design" is provided the schematic track control diagram inclusive switches, signals, detectors, upward gradients, railroad overpasses, bridges, tunnels etc. on the screen. It does not depend on a 1:1 illustration of the route network, but only that all connections are drawn in. The proportions of the individual sections are adapted in the next step. Detectors should be used by the way only, if a plant is to be really controlled - otherwise the program could react sometimes somewhat strangely...

- Now change into the mode "signals,turnouts and rail sections". There now its clear address is assigned to each magnet article. Here also the decision is made whether the program may steer this magnet article automatically or only 'manually', thus only by click the user. The track sections can be adapted now also in your length. A section, which is large in the layout only 3 fields, can be large in reality approximately 15 fields, therefore the length on fifteen is adjusted. Since the distance is also very kurvig, the maximum speed is throttled here by fictitious 310 Km/h on 100 Km/h. Later a course on this part of the distance drives slows down it its speed and accelerates afterwards again automatically.

- Now the individual courses should be defined. Each locomotive knows its own acceleration profile, the locomotive address, the number of railroad cars, the maximum speed, which is assigned to color and a speaking name.

- Depending upon size of the plant and/or according to the own needs it would be too laborious to keep all courses continuing in motion. Which is now thus still missing, automated travel distances for the individual courses are, so-called routes. For example now a route for shuttle traffic on a hilly stretch is provided. The course drives off in the main station, brings in on the valley station on track 1 and waits for the fact that from the mountain station a further course brings in on track 2. Then it drives the distance highly to the mountain station, waits there above 20 seconds, drives again the mountain down, holds in the valley station for 10 seconds track 2 and drives then again into the main station, where it waits again 20 seconds, before it makes itself again toward valley station on the way. This route two courses assigned and already is provided a simple pendulum enterprise.

- Now still the further existing courses are positioned on the track plan and the genuine enterprise can loose-go. In this CATrain constantly examines whether it evtl. to collisions to come can and stops if necessary the appropriate courses immediately. Otherwise acceleration and brake applications are simulated, in order to arrange the course movements more realistic. Courses can drive also in the block section procedure, i.e. as long as on the distance after a signal a course is, the signal remains red. Only if the distance is free and is on the distance before the signal a course, the signal

on green changes.

If you try CATrain out simply a little, open the provided layouts and you try a little around. There is much that was not described here.

CATrain runs starting from version 2.0 under Microsoft Windows© 2000 & XP.