CLAIMS

1. An operation control system comprising a ground system and an on-train system, the ground system being configured to be able to communicate with trains running on tracks, the on-train system being installed on each of the trains, wherein

the ground system comprises:

a first generation unit configured to generate one or more first run curves predicted for one or more second trains each likely to be a preceding train or a following train with respect to a first train;

a second generation unit configured to generate a second run curve for the first train based on the first run curves, the second run curve preventing the first train from being influenced by and influencing running of the second trains; and

a third generation unit configured to generate navigation for causing the first train to run in accordance with the second run curve,

the on-train system comprises a presentation unit configured to present the navigation,

the ground system further comprises a calculation unit configured to calculate, based on the first run curves, a target time at which the first train passes a certain position, the target time serving to prevent the first train from being influenced by or influencing the second trains,

the second generation unit generates the second run curve, based on the certain position and the target time, and,

when the second train is the preceding train and when a front-end of the first train is not allowed to enter a

second position until a rear-end of the preceding train passes a first position, the calculation unit specifies the second position as the certain position and calculates the target time in a manner that a time length needed for the first train running at the highest permitted speed to stop before entering the second position is added to a time at which the rear-end of the preceding train is scheduled to pass the first position, the second position being located behind the first position.

2. The operation control system according to claim 1, wherein, when the second train is the following train and when a front-end of the following train is not allowed to enter a fourth position until a rear-end of the first train passes a third position, the calculation unit specifies the third position as the certain position and calculates the target time in a manner that a time length needed for the following train running at the highest permitted speed to stop before entering the fourth position is subtracted from a time at which the front-end of the following train is scheduled to enter the fourth position, the fourth position being located behind the third position.

3. The operation control system according to claim 1, wherein, when the first train runs on a main track of a train-stopping station to overtake one of the second trains that has stopped on a subsidiary main track of the train-stopping station and when a front-end of the first train is not allowed to enter a sixth position until a rear-end of the one of the second trains passes a fifth position on the subsidiary main track, the calculation unit specifies the sixth position as the certain position and calculates the target time in a manner that a time length needed for the

first train running at the highest permitted speed to stop before entering the sixth position and a time length needed to set up a course of the first train are added to a time at which the rear end of the one of the second trains is scheduled to pass the fifth position, the sixth position being located before entrance into the train-stopping station.

4. The operation control system according to claim 1, wherein, when the first train runs on a main track of a train-stopping station to overtake one of the second trains that has stopped on a subsidiary main track of the train-stopping station and when the one of the second trains is not allowed to depart therefrom until a rear-end of the first train that has passed the train-stopping station passes a seventh position, the calculation unit specifies the seventh position as the certain position and calculates the target time in a manner that a time length needed to set up a course of the one of the second trains and a time length needed for the one of the second trains to depart after signal indication permitting the one of the second trains to depart is given are subtracted from a time at which the one of the second trains is scheduled to depart.