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January 2022

DRIVERLESS TRANSPORT VEHICLE WITH SITUATIONALLY ADAPTED SPEEDS

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Recommended Citation

Unger, Axel, "DRIVERLESS TRANSPORT VEHICLE WITH SITUATIONALLY ADAPTED SPEEDS", Technical Disclosure Commons, (January 31, 2022)
https://www.tdcommons.org/dpubs_series/4866



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DRIVERLESS TRANSPORT VEHICLE WITH SITUATIONALLY ADAPTED SPEEDS

Initial situation:

In a modular assembly system, employees work at assembly stations and the workpieces are moved from one station to the next by a driverless transport system. For different product types with different assembly priorities, there can be different routes through the assembly system. Because employees and vehicles are in a shared space, the vehicles must be designed to be safe for people. They must be able to recognise people safely and also stop safely if a person moves in their path. This also results in vehicles moving at walking speed in such a system.

Solution:

The new idea now is to increase the speed wherever there are no people. This can be permanent, in which case these areas can be marked accordingly or closed to passenger traffic. But it can also be temporary, for example if no people are there during normal working hours because they are tied to their workplace. During break times, however, these areas can very well be used by people. In the break times, these areas must then be adapted again to the personal-safe driving style. This is also less critical, as usually only the current driving task is completed and the break is longer than the driving time even at reduced speed.

These temporary areas with increased speed may have to be additionally monitored with scanners to make sure that no people are actually there. If people then inadvertently or unauthorisedly run into this area, then the speeds of the vehicles must be reduced again.

Advantages:

- With increased speed, driving jobs can be completed more quickly and fewer vehicles have to be used.