AGVs detect surroundings and move autonomously on optimal routes

AGV route optimization via Digital Twin

Background and Technical Challenges

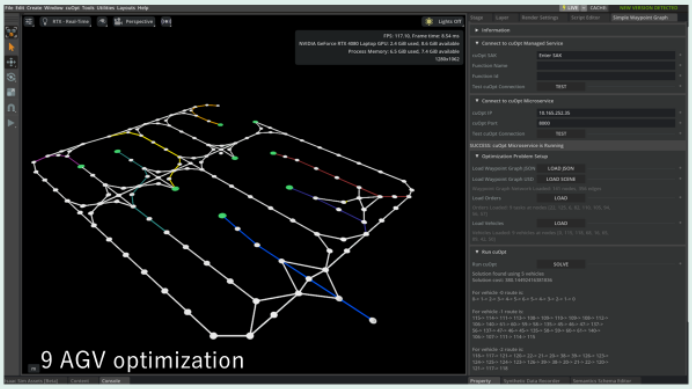
In manufacturing, AGVs, workers, and equipment interact in complex ways. To optimize operations, it is essential to replicate the physical environment as a digital space for accurate visualization and simulation of key components.

自動フォークリフトによる倉庫および
工場現場の業務革新
Reinventing Warehouse and Shopfloor Operations with Automated Forklifts

トラフィック管理プラットフォーム
Digital Twin–based AGV traffic control platform

Digital Twin | Connectivity | Automation

エッジからクラウドベースの交通管理プラットフォーム、プライベート 5G までワンストップで提供
One-stop delivery from edge to cloud-based traffic management platforms and private 5G.



最適化プロセス Optimization Process

1. センサーがAGVの走行ルートを常時監視
通行の妨げとなる要因をリアルタイム検知
LiDAR sensors monitor AGV routes and detect obstacles in real time.
2. 走行中のルート状況を経路最適化アルゴリズムに送信
Route data is sent to an optimization engine.
3. 経路を即座更新し、効率的なルートを再配分。
Routes are updated instantly to minimize delays and improve flow.

R&D Goals and Outcomes

In warehouse operations, enabling AGVs to move autonomously can improve efficiency and help address labor shortages.

Key Technologies

01 Core Technologies

Construction of a digital twin through 3D modeling of the physical space using sensing technologies and route optimization via simulation algorithms.

02 Key Differentiators

One-stop provision of an edge-to-cloud traffic management platform, including private 5G connectivity.

Use Cases Manufacturing

R&D phase Business

【Exhibitors】
NTT DATA Group Corporation, Technology and Innovation General Headquarters, Innovation Technology Department
【Contact】
Innovation Center PR Representative

【Co-exhibitors】
-

【Related Links】
VimeoNTT 2411 - Hyster Yale - Full Version D1