Commentary
Volume 10:S8, 2021

Advances in Robotics & Automation-Open Access

ISSN: 2168-9695 Open Access

A Short Note on Autonomous Mobile Robot

Roxanne Hines*

Department of Electrical Engineering, Berehan University, Debre, Ethiopia

Description

An Automated Guided Vehicle (AGV), also known as an Autonomous Mobile Robot (AMR), is a portable robot that navigates by following along marked long lines or wires on the floor, or radio waves, vision cameras, magnets, or lasers. They are most commonly used in industrial settings to transport heavy materials around a large industrial building, such as a factory or warehouse. During the late twentieth century, the application of the automatic guided vehicle expanded.

The AGV can tow objects behind them in trailers that they can attached autonomously. The trailers can be used to transport either raw materials or finished goods. The objects can be placed on a conveyor made of motorised rollers and then pushed off by reversing them. Some materials like pulp and paper, metals, newspapers, and general manufacturing. In hospitals, materials such as food, linen, and medicine are also transported by AGVs.

An AGV is also known as a Laser Guided Vehicle (LGV). Others In Germany, the technology is known as Fahrerloses Transportsystem (FTS), and in Sweden, Lower-cost AGVs are commonly referred to as Automated Guided Carts (AGCs) and are typically guided by magnetic tape. The term AMR is sometimes used to distinguish mobile robots that do not rely on extra infrastructure in the environment for navigation (such as magnetic strips or visual markers) from those that do the latter are referred to as AGVs.

AGCs come in a variety of configurations and can be used to move products on an assembly line, transport goods throughout a plant or warehouse, and deliver loads.

Barrett Electronics of Northbrook, Illinois, introduced the first AGV to the market in the 1950s, and it was simply a tow truck that followed a wire in the floor instead of a rail. This technology resulted in a new type of AGV that follows invisible UV markers on the floor rather than being towed by a chain. The first such system was installed to deliver mail throughout the offices of the Willis Tower (formerly Sears Tower) in Chicago, Illinois.

Packmobile with trailer AGV

The technology has advanced over time, and today's automated vehicles, such as LGVs are primarily laser navigated (Laser Guided Vehicle). LGVs are programmed to communicate with other robots in an automated process to ensure product moves smoothly through the warehouse, whether it is stored for future use or sent directly to shipping areas. Today, AGVs play an important role in the design of new factories and warehouses, safely transporting goods to their proper location. An alternative to manual battery swap is automatic battery swap. It is possible that an additional piece of automation machinery, such as an automatic battery changer, will be required for the overall AGV system. When AGVs arrive at the battery swap station, their batteries will be automatically replaced with fully charged batteries. The removed batteries are then placed in a charging slot for automatic recharging by the automatic battery changer. The automatic battery changer monitors the batteries in the system and only removes them when they are fully charged. Other versions of automatic battery swap allow AGVs to swap batteries is while a battery swap system reduces the amount of manpower required to swap batteries, recent advancements in battery charging technology potentially allow batteries to be charged more quickly and efficiently.

How to cite this article: Hines, Roxanne. "A Short note on Autonomous Mobile Robot." *Advances in Robotics & Automation* S8(2021) : 012.

***Address for Correspondence:** Dr. Roxanne Hines, Department of Electrical Engineering, University of Berehan, Debre, Ethiopia; E-mail: Roxannehines34@gmail.com*

Received: December 08, 2021; **Accepted**: December 22, 2021; **Published**: December 29, 2021