Japanese grocery chain testing remotely controlled robot stockers

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Credit: Telexistence Inc.

Japanese grocery chain FamilyMart has teamed up with Tokyo startup Telexistence to test the idea of using a remotely controlled shelf stocking robot named the Model-T to restock grocery shelves. On its website, Telexistence describes the robot as a means for addressing labor shortages in Japan and also as a way to improve social distancing during the pandemic.

The Model T robot is approximately seven feet tall, and has a wide range of motion, which allows it to turn, grab, lift and place products on a shelf. A pilot project has already begun in one of the chains' stores. The robot is controlled by a human "pilot" who dons virtual reality gear from a remote site, such as their home. The pilot controls the action by using her arms, legs and hands. The pilot must carry out every operation performed by the robot—it has no built-in intelligence.

Representatives of Telexistence explain that the purpose of the robot is to allow a single worker to service multiple stores from a remote location. Not only will this save labor costs for the stores involved, it will also provide more protection for customers and store employees. The robots would replace living human beings who might be carrying the SARS-CoV-2 virus. The company also released a video on YouTube showing the pilot and robot working together to load drink bottles from a cart onto a store shelf. The action is clearly much slower than a human working physically in the store, but the researchers assume that a human piloting such a robot would become more proficient over time, speeding up the work.

In the pilot project, the robots will only be used to stock PET plastic bottles, but Telexistence has plans to expand its abilities as soon as the robot proves capable with its limited role. They next plan to have it stock rice balls, sandwiches and other items that seem practical. Current plans call for placing Model T robots in 20 FamilyMart stores over the next two years. Notably, the system will enable people to work who might not otherwise be physically able to stock shelves, whether due to injury, disability or other limiting factors. The robot should also allow people to stock without growing physically tired or to stock items that would normally be too heavy for them to lift, benefiting female stockers.

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