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# Integrated Platform for Efficient Handoff of Products to Customers

## Background

A common issue in the retail sector is inefficient handoff of items to customers. In particular, large food and coffee chains have inefficient processes around communicating with customers and delivering goods to them. The expectation of fast and trackable delivery of items is rapidly increasing, with options like same-day shipping becoming increasingly common for online retailers. However, for brick-and-mortar stores, a similar solution does not exist.

Some retailers opt for alphabetically organized shelves and "pickup" counters. Neither solution scales to multiple orders—both require the customer to physically go through each item and find if it was made for them, which is both unsanitary and inconvenient. If the item is not found, the customer will ask an employee where their item is and if it has been prepared yet. This lack of transparency is inefficient and time-consuming for both parties. To add to this, employees typically have to announce the customer's name when an order is ready, which can be chaotic in a busy store. Lastly, when there are inefficiencies in this process, corporate leaders have no way of tracking performance on a store-to-store basis; if a store consistently has items sitting out for a long time and does not communicate well with customers, there is currently no way of identifying and correcting the issue. Thus, a more streamlined item handoff system is desired.

## Invention Description

Researchers at Arizona State University have developed a smart handoff integrated platform that includes a display system in communication with a tracking system for tracking items to be handed off and displaying pertinent information to the customer. In some embodiments, the display system is a table-like platform that can support the item. The tracking system observes a location of the item on the platform and communicates the location of the item to the display system. The display system uses the location of the item to display an indicator near or around the item such that a customer can see the item on the platform as well as pertinent information displayed near or around the item.

The smart handoff integrated platform further includes one or more auxiliary systems including a secondary display to communicate order information or queue

information to employees and customers.

A video demonstration of this technology can be viewed here:

<https://streamable.com/9j3zsb>

#### Potential Applications

- Merchandising and tracking of retail accessories
- Customer-facing item pickup stations
- Management of production logistics such as the loading/unloading of goods
- Interactive advertising, teaching, and command center modules
- Games

#### Benefits and Advantages

- May substantially improve item handoff experience for both business and customer
- Provides new sources of data on retail operations performance
- Adds a unique interactive element to digital media
- Table-like display presents opportunities for digital advertising

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