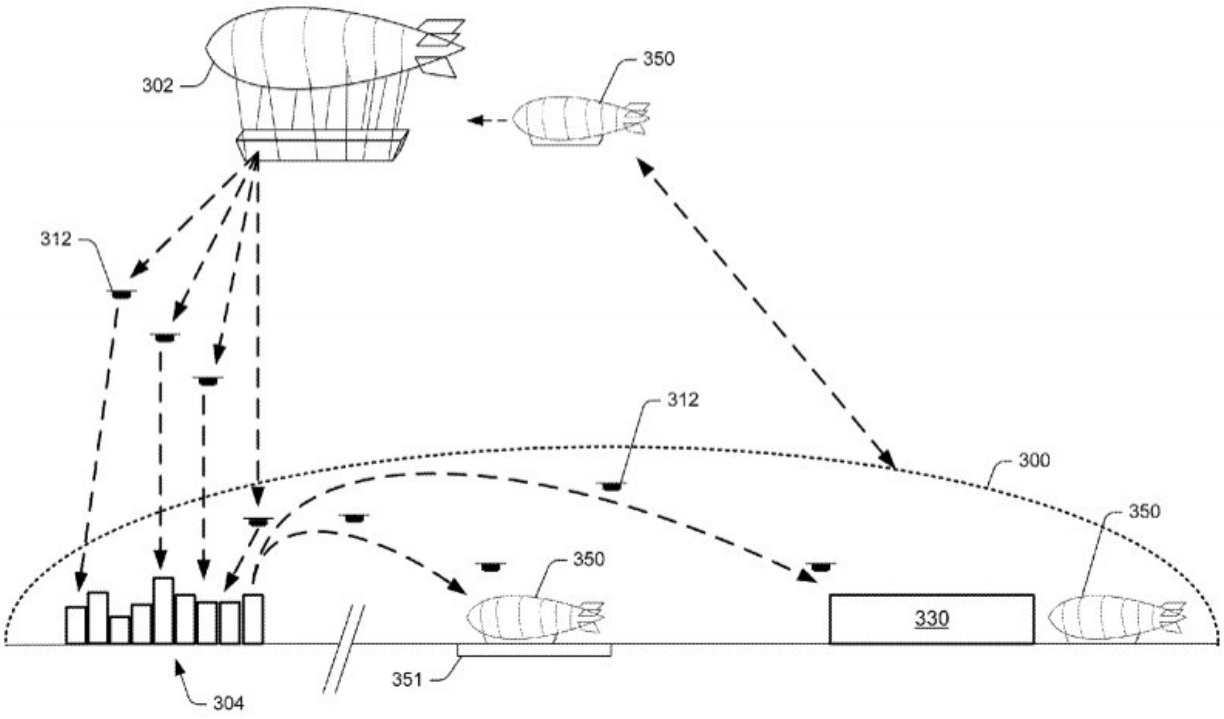
Amazon looks at airships as fulfillment idea in patent filing

December 30 2016, by Nancy Owano



Credit: United States Patent 9,305,280

(Tech Xplore)—Amazon has come up with a neat idea. Whether the idea will ever come to pass as a real move is not certain. However, CB

Insights noticed a patent filing where Amazon was suggesting the AFC approach to deliver items ordered. AFC, or airborne fulfillment center, goes into its patent filing title.

"Airborne fulfillment center utilizing unmanned aerial vehicles for item delivery" was first filed back in December 2014. As the BBC noted, "It is not clear whether the filing is a plan for a project that will be realised or just a proof-of-concept."

Amazon was referring to a deployment of delivery drones via these warehouses. The drones would deliver goods from warehouse to the ground.

Why? How would that benefit Amazon? How would it benefit customers?

The combination of drones and aerial centers could make deliveries of goods more quickly. Reports said the goal would be reductions in two forms. The idea would be to cut down on power consumption with each delivery and reduce waiting times.

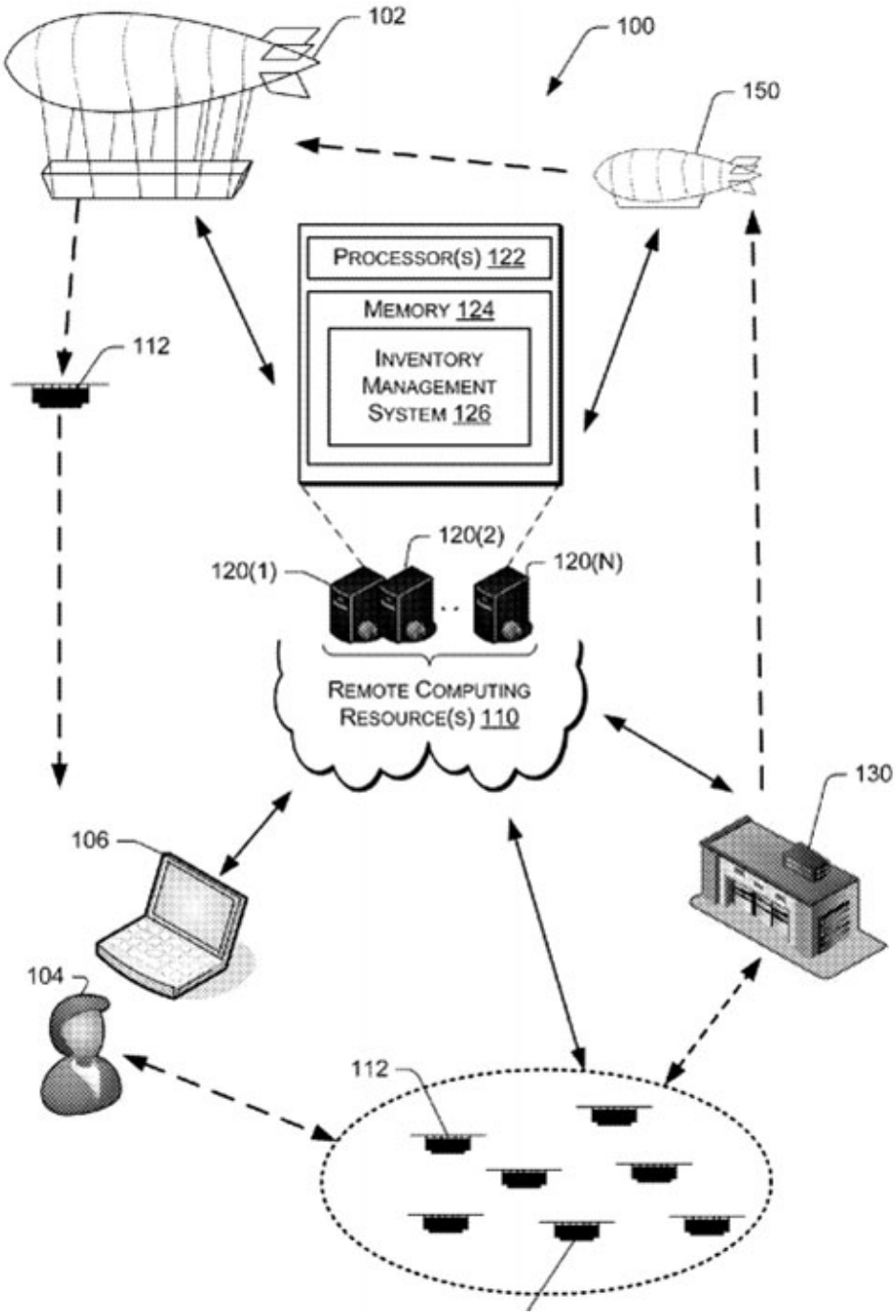
The patent discussion addressed the power savings, saying that the AFC may be a fulfillment center supported by and/or incorporated into an airship. "An airship, or dirigible, is a type of aerostat or lighter-than-air aircraft which can navigate through the air under its own power. Airships gain their lift from gas that is less dense than the surrounding air, such as helium or hot air."

The patent made the case on reduced power. "By utilizing an AFC for the storage and delivery of items using UAVs, the power required to complete an item delivery is substantially reduced. Rather than the UAV having to operate at power from the time it departs the materials handling facility to the delivery location and back to the materials

handling facility (or another location), the UAV may be deployed from the AFC and descend under the forces of gravity toward a delivery location using little to no power. Only as the UAV approaches earth does it need to fully engage the UAV motors to maintain flight and complete delivery of the item."

Mariella Moon, associate editor, *Engadget*, said the idea would also involve the "big floating warehouses" appearing near crowded areas and happenings such as sporting events. She said Amazon envisioned deploying drones "to people attending music festivals or championships."

Gizmodo also said the idea may be used in places "where lots of people have suddenly gathered, like a sports event or music festival, to help deliver things like food and souvenirs."



Credit: United States Patent 9,305,280

Anmol Sachdeva, *The Tech Portal*, also noted a goal of creating "a mesh

-like aerial delivery network"

Michael Nunez, *Gizmodo*, said, "The patent also describes how 'shuttles,' or smaller airships, could be used to transport workers to and from the airborne warehouses."

According to the patent filing, "For example, the AFC may be an airship that remains at a high altitude (e.g., 45,000 feet) and UAVs with ordered items may be deployed from the AFC to deliver ordered items to user designated delivery locations. As the UAVs descend, they can navigate horizontally toward a user specified delivery location using little to no power, other than to stabilize the UAV and/or guide the direction of descent. Shuttles (smaller airships) may be used to replenish the AFC with inventory, UAVs, supplies, fuel, etc. Likewise, the shuttles may be utilized to transport workers to and from the AFC."

More information: Airborne fulfillment center utilizing unmanned aerial vehicles for item delivery, United States Patent 9,305,280, Berg, et al.