Cargo Drone Shipping Container Loader/Unloader

Cargo Drone Shipping container that shortens the time it takes to load and unload cargo ships in half.

Contents

Description

Load and unload cargo ships more efficiently than with cranes. The time it takes to unload a cargo ship could take up to 30 days utilizing cranes and cranes are limited to being close to the shore. Every minute the ship is sitting outside of the pier not being unloaded or loaded money is lost. What if there was a way to reach cargo ships while they are near land but not necessarily docked in the pier.

Problem

Every minute the ship is sitting by the pier not being loaded or unloaded, money is lost. Ships traveling are to their destination are making shipping companies money. The time that it takes to unload a cargo ship varies significantly and can take up to 30 days. This is a result of a variety of factors. Timing of when ships arrive, limited pier access and the time it takes for crane operators to safely move all the cargos to the shore for inspections.

Solution

Currently gas powered drones have a capacity of carrying 5 ton load which cover most dry containers and have the ability to operate for 50 minutes. There could be multiple drones that are flying different routes concurrently to service ships that are not docked on the pier.

Docking could be expanded to other area of the pier from just where the cranes could reach.

Jeff Bezos of Amazon is focusing their efforts on commercial door to door delivery of products to end consumers from the distribution center. The focus of this problem is the leg of transport of containers to the distribution centers. The earlier leg of transport could be achieved by flying containers directly from the ship to the delivery 18 wheeler truck. Alternately, from the 18 wheeler truck unloaded and shipped via drone to the consumers home or business.

http://www.popularmechanics.com/technology/infrastructure/g2787/unloading-the-worlds-biggest-container-ship/

http://www.quora.com/How-long-does-it-take-to-unload-a-cargo-ship-at-Los-Angeles

http://www.vantagefreight.com.au/wp-content/uploads/2013/01/Container-Dimensions.pdf

User or Customer Base

Increasing efficiency from taking the containers off cargo ships quicker with drones allows for more ships to enter the limited number of piers. Ships spend more time traveling than being idle and waiting to be unloaded or loaded.

Competition

There currently are no competitors in this space from the research that we have found.

Unique Value Proposition

First mover advantage. Increasing efficiency from taking the containers off cargo ships quicker with drones allows for more ships to enter the limited number of piers. Ships spend more time traveling than being idle and waiting to be unloaded or loaded. Shipping companies would concievably pay more to have a quicker ability to load and unload their ships so they could make money transporting.

Channels

Piers across the world would be the consumers and specialized selling practices to each pier would be required. Possibly utilizing shipping companies as a conduit to promote sales to the piers for a premium.

Cost Structure

The production of the gas powered cargo drones would have to be under a price point that would be less than or equal to operating and maintaining the cranes. Alternately, if there could be a premium cost for convenience in comparison to the cranes.

Revenue

The sale of each unit could produce a 40% margin if produced under the price point below the cost of what a crane costs to build. Additionally support, service and repair could be offered for the cargo drone units.

Success Metrics

Once one unit is built, it could be used to demonstrate the potential of many cargo drones. Contracts could be established with piers prior to the production which would reduce the risk of production.