

An Information for Smart Delivery Boxes

Project Proposal

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# Abstract

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# Introduction

As the population is increasing with time, trends of eCommerce are also increasing. Every shopping brand has almost spread over online shopping due to home delivery availability. It enables people to buy things from any available part of the world. With the time as number of users are increasing, some pros and cons are also coming to this field of area. Profits have increased as the number of buyers increased due to home delivery. On the other hand, delivery process is getting pressurized as many times, receiver of parcel does not available at destination. This increases the number of failed delivery attempts. Also, service providers are limited to certain areas and regions, this would be the hurdle in earnings as customers outside the region could not avail this facility. To tackle this, Japan has implemented Smart Delivery Boxes. Instead of getting delivery to residence, buyers can incorporate with Smart Delivery Boxes where service providers can deliver parcel and receiver will receive when he gets time.

With this not only the failed attempts decreased, but also users outside the region of service providers became eligible to get delivery spots inside regions of service providers.

# Goals and Objectives

Primary goals and objectives are as follows:

* Automate the whole delivery process
* Let sender and receiver track respected parcel
* Let sender and receiver finalize their destination box
* Securely deliver the required parcel to required receiver

# Scope of the Project

A smart delivery box will consist of some hardware components which include a Bluetooth enabled microcontroller, weighing sensor, barcode reader, keycard scanner and LCD display. Our main goal is to develop a system for that delivery box. It might be a web application or mobile application for users to manage business processes.

The sender will be the initiator of the process who will provide the receiver and destination details. The service providers will confirm the delivery details and assign the focal person (delivery person). He will automatically get the list of parcels he has to deliver. When he will lock the delivery box after placing parcel, receiver will get notified and he will receive his parcel. System will ensure that delivery will be successfully done. System will manage the state of delivery boxes. System will ensure that no illegal item will be deliver using delivery box.

# Initial Study and Work Done so Far

The first meeting with the industry focal person has been done and basic information about the project has been gathered. Done some related searches and made a BPMN model for client that how could be the one possible solution. Also, some work has been done related to initial design which included Entity Relationship Diagram, Use Case Diagram and User Classes. Image of a prototype of Smart Delivery Box has also been shared.

# References

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3. European Telecommunications Standards Institute, “Digital Video Broadcasting (DVB): Implementation guide for DVB terrestrial services; transmission aspects,” *European Telecommunications Standards Institute*, ETSI-TR-101, 2007. [Online]. Available: http://www.etsi.org. [Accessed: Nov. 12, 2007].
4. R. Hayes, G. Pisano, and S. Wheelwright, Operations, Strategy, and Technical Knowledge. Hoboken, NJ: Wiley, 2007.