

# Angel Delivery: Building a Crowdsourced Express Delivery Lifestyle Service Platform with Big Data and AI (Postprint)

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## Abstract

The convergence of mobile internet, big data, and artificial intelligence is accelerating unprecedented transformation across traditional industries, catalyzing novel business models. In this era of shared resources—exemplified by bike-sharing, car-sharing, and shared accommodation—Chongqing-based technology enterprises are pioneering innovative logistics solutions. Through a “mobile internet + Angel Stations + physical merchants + crowdsourced delivery” model, Angel Delivery integrates user res...

## Full Text

### Preamble

#### Angel Delivery: A Big Data + AI Enabled Crowdsourced Logistics Platform

The convergence of mobile internet, big data, and artificial intelligence is accelerating unprecedented transformation across traditional industries, catalyzing novel business models. In this era of shared resources—exemplified by bike-sharing, car-sharing, and shared accommodation—Chongqing-based technology enterprises are pioneering innovative logistics solutions. Through a “mobile internet + Angel Stations + physical merchants + crowdsourced delivery” model, Angel Delivery integrates user resources to achieve more precise and rapid express services, creating a sharing-economy paradigm for the courier industry.

Angel Stations function as integrated offline service hubs that combine package collection and distribution, new retail, e-commerce fulfillment, artisan services, commission services, and public welfare functions. Existing courier outlets and brick-and-mortar stores can directly participate in the platform as service providers, becoming shipping and transfer agencies for both merchants and

users. These stations are widely distributed across cities, counties, districts, towns, townships, streets, villages, and residential communities. The central platform manages comprehensive data exchange, business logic processing, interface construction, and data applications. Leveraging its proprietary crowd-sourced delivery system, Angel Delivery provides rapid mobile e-commerce fulfillment for enrolled physical merchants, achieving two-hour same-city delivery (or cross-city delivery within several hours) for new retail services.

The platform employs a merchant-to-user approach combined with merchant-station collaboration, utilizing big data analytics to automatically identify the nearest Angel Station, optimize delivery routes, select appropriate vehicles, and match available social travelers. Delivery personnel, ride-share drivers, freight vehicles, and even airline or high-speed rail passengers with spare time and capacity can accept orders directly through the platform, collecting packages from stations or offline merchants for delivery. When users submit delivery requests, the platform automatically geolocates their position and notifies the nearest station or delivery agent to collect items from the merchant. Items are then transported to the next designated station or directly to the recipient, with users able to track delivery progress in real-time through the platform.

Angel Delivery is currently establishing partnerships with provincial and municipal subsidiary partners and recruiting station operators across various urban and county districts. Embodying a spirit of sharing, the company is deploying Angel Stations to every corner of the nation. Through the support of local partners and station operators, Angel Delivery extends its new retail services within a 1000-meter radius of users. Participating merchants gain access to same-city e-commerce sales and expedited delivery services. Regional Angel Stations assist surrounding merchants with product information uploading, e-commerce marketing support, and rapid delivery capacity scheduling. To join the new retail services, merchants need only provide copies of relevant business qualifications and approval documents to their local Angel Station, which will then activate their online business permissions.

To ensure service quality in crowdsourced delivery, Angel Delivery implements information verification, secured transactions, and standardized protocols, while establishing a comprehensive review and reward-punishment mechanism to strengthen service guarantees.

In the sharing economy era, Angel Delivery integrates diverse resources—including travel, time, services, and materials—to build a comprehensive crowdsourced logistics and lifestyle service platform, achieving optimal resource allocation and precise, timely delivery services.

*Note: Figure translations are in progress. See original paper for figures.*

*Source: ChinaXiv — Machine translation. Verify with original.*