



**Institute of Transportation,
Ministry of Transportation
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Press Release on May 19, 2017

Please release immediately.

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A Good Helper to Explore the Taxicab Industry

Obtaining deep and valuable information about the taxi industry is one of the major missions of local administrative authorities. As such, the Institute of Transportation (IOT) has developed an “Analysis Platform for the Taxi Industry” to accomplish this mission in an efficient and effective way. With this platform, useful and latent information is mined from big data, and serves as the foundation for relevant taxi administrative management and policymaking.

The traditional way of collecting taxi industry data is based on questionnaire surveys. These surveys require tremendous amounts of resources and thus can only be conducted on a small scale. How to collect accurate and realistic data in an efficient way is thus an important issue.

By adopting the well-accepted Arduino single chip controller, IOT and NCTU jointly developed a low-cost device which is able to download operating data for each trip from new-style taxi meters. Fifty sets of devices were produced and used to collect real data from 3,000 taxies from the Taipei metropolitan area. These devices are also used by the Bureau of Standards, MOE, and the New Taipei City government to meet their data collection and administrative goals.

The platform is capable of performing relevant analysis when the collected data is uploaded. It can also calculate a set of indexes that reflect the entire taxi industry. In addition, the major functions of his platform also include: hot spot

analysis, taxi corridor analysis, and operation zone analysis.

This platform is not only useful for administrative authorities but also for the taxi operators as long as enough data is collected. With the help of the information generated from this platform, operators can look deep into operation issues and adjust accordingly with the aim of creating more income for both drivers and operators.