


Chapter 5

Mobile Computing in the Developing World: A Case Study of the Fisherwoman App in Tamil Nadu, India

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ABSTRACT

Nagapattinam is one of the main places for the catching and export of fish in Tamil Nadu State, in the south of India. In the local markets, fisherwomen buy fish, which are then sold in the streets as well as door-to-door. These “street selling fisherwomen” face various difficulties, including means of transport, carrying heavy fish baskets, and challenges in fish selling during sickness. To overcome these problems, a project was set up with support from the Tamil Nadu State Council for Science and Technology to develop a mobile app with native (Tamil) language to simplify the different processes involved in fish selling. Special features, like adding fish detail using images, voice-based searches on market conditions, and location tracking for the delivery of fish, are helping the fisherwomen to reduce the complexity of the selling process. This chapter provides detail on this project, examines the benefits, and discusses the difficulties encountered in the adoption of the mobile app, which is enabling fisherwomen to boost their revenues and improve their quality of life.

INTRODUCTION

Tamil Nadu has a coastal length of 1076 km stretching along the Bay of Bengal, the Indian Ocean, and

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the Arabian Sea (Ramesh et al., 2008). Marine fish production is more than 500,000 tons and contributes to the livelihood of a million marine fisherfolk. More than 34% of adult women are involved in marine fish production (Department of Fisheries, 2020). The coastal length of Nagapattinam district is 187 km, which is one of the longest coastal districts of Tamil Nadu. In this district, more than 53 villages are involved in marine fishing and contain many worship places belonging to different faiths. Vailankanni, which is very near to Nagapattinam, is one of the popular shrines of mother Mary and is also known as the “Lourdes of the East”, attracting thousands of pilgrims every day (Nagapattinam, 2021). The majority of women are involved in fish auctioning and selling in the Nagapattinam district in some way. A certain number of fisherwomen sell fish in the markets and others are street sellers, selling door-to-door. Different age groups are involved, but most of the fisherwomen are aged between 20 and 60. Each of these women sell a minimum of 5 -12 kgs of fish, depending on their physique and general health (Figure 1). In the Nagapattinam district, some fisherwomen are over 60 years old, selling 7 - 9 kg of fish per day (Karthikesan et al., 2019). The overall aim of the project discussed in this chapter was to understand the difficulties of fisherwomen in the selling of fish, and to provide a technical solution to simplify the process.

Figure 1. Fishing harbour at Karikal: the loaded fish baskets of fisherwomen



In recent years, mobile applications have been developed for a range of different business domains. The number of mobile phone users in developing countries like India has grown rapidly. Staesser (2018) reported that in the previous decade, the number of mobile phone users worldwide had grown to four billion, with 37 percent of that growth occurring in developing economies. This includes accessing social media applications, agriculture management, train ticket booking, liquefied petroleum gas (LPG) refill cylinder booking for household purposes, different kinds of travel booking, banking services, and insurance payments. As Yanes (2020) notes, “in poorer regions, mobile technologies have become an opportunity to boost economic, health, educational and technological development” (para. 2). Mobile

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