

A Survey and Design Implementation of the Elder's Outgoing Preference: The Local Bus System

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Abstract. In bus system, to provide appropriate services for passenger demand cannot be ignored. When the trend, low birth rate with senior citizens, is coming in our country, re-understanding bus passenger information needs and information behavior must be concerned in an being E-government. By information seeking (behavior) and participating observation the passengers, need and behavior are surveyed. After understanding the local bus system, the research suggests an information schema to solve the problem to fit the information meaning of the information seeking.

Keywords: Preference, Bus System, Information Seeking, Information Need.

1 Introduction

Since information delivery and immediately following nowadays as to existing bus system should have in response to change in the environment for new services and methods. Basically, the bus passenger demand and usage behavior are in consistency. The major behavior is nothing more than to go out wait a ride, on board, touch down destination, and get off the bus. If you consider the more intimate needs, of course, from the departure gate to reach the destination gate is the best. It is all the taxi service does. For the needs of today's senior citizens under physiology and mental from aging phenomena, how to help them on travelling is an E-government's responsibility. Application of scientific and technological strength of the Internet with some changes in the system would work in the environment and these demands could be fulfilled intimate on bus ride for the older.

2 Literature Review

2.1 Researches on Bus System

Previous studies [11][12][13][14][9][8]have revealed App, QR code, GPS and other Internet technology can be appropriately applied to the bus system, but really friendly

and caring, not a reasonable solution for the elderly on the user interface considerations. Remote areas where the bus does not match the cost-effectiveness has been developed in line with contemporary environmental consideration [6] [7].

2.2 Information Seeking

Bus information behavior covers the information needs, search, collect, organize, evaluate and use [10]. Kuhlthau believes that information needs are constantly revised, and will vary with changes in cognitive and constantly changing at all stages [3][4]. According to the extent Taylor described the needs as four [5]. Harter asks the essence of the original meaning [2]. Grover proposed eight stages that normal users seek mode [1].

3 Methodology

Participant observation is used to handle the problem and dig the information meaning, need, and behavior on the older area. Interview with a questionnaire also used to handle the psychological and physiological need of the older. Bus system is from the secondary data of the Government.

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4 Implementation

By using human one resident and ten action assistant, a total of six months in Ishioka region interact with participants. Particular focus is on the elderly community information needs and information behavior (Ishioka is a regional field of aging for the elderly). According to field situations understand the status of the local bus is not fulfilled completely. A case study in Longxing section of the area we found just two trips a day and it does not open on Saturday and Sunday. The main transport just provides students get on and off first. Time also caters for student-centered.

The residents are not taken into account at all. Most of the elderly in the ground based on agriculture, they always get up early to work and go home around 11:00 to rest, do not go outside ordinarily.

But organizing a major event in the field, uses the depth interview questionnaire to participants (62 samples), the information needs are most people are willing to participate in activities. In any public events, possible cause is that they have known each other. In the instruments that they come are walking, bicycles, electric cars, share a ride car or welfare organization and the initiative to provide public car carrier send dominated. Completely no public transport supports. Details and figures are as follow:



Fig. 1. Participants and activity 1: (Map Memory Puzzle)



Fig. 2. Participants and activity 2: (Dough)



Fig. 3. Participants and activity 3: (Kara OK)



Fig. 4. Participants and activity 4: (Body movements)



Fig. 5. Lunch together



Fig. 6. Transportation used



Fig. 7. Bus station name and stop sign



Fig. 8. Homepage of Bus Information System

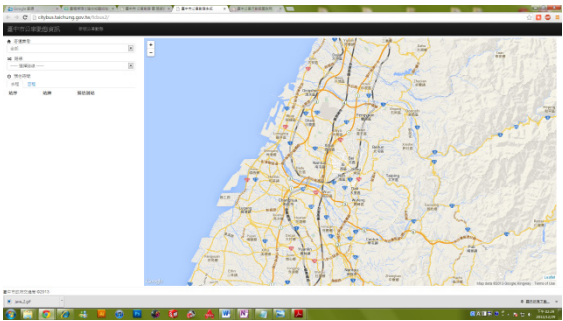


Fig. 9. Bus map and shift



Fig. 10. Operating interface on phone

5 A Remodel Schema for Free Ride

A remodel schema is built based on three parts, the free and warranty car providers, E-center, and passengers in local area. The schema is as following by flowcharts:

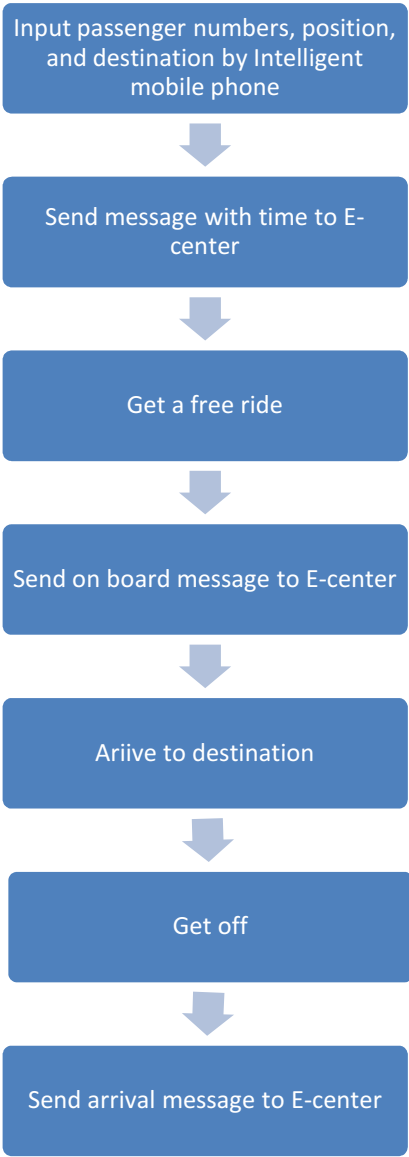


Fig. 11. Process of passenger side

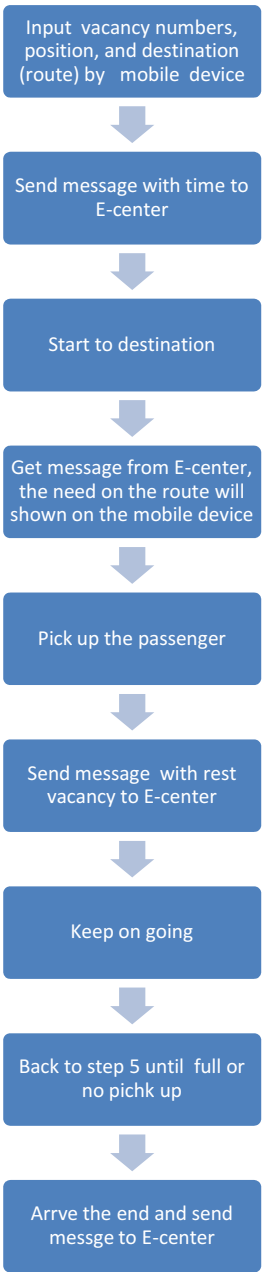


Fig. 12. Process of free provider side

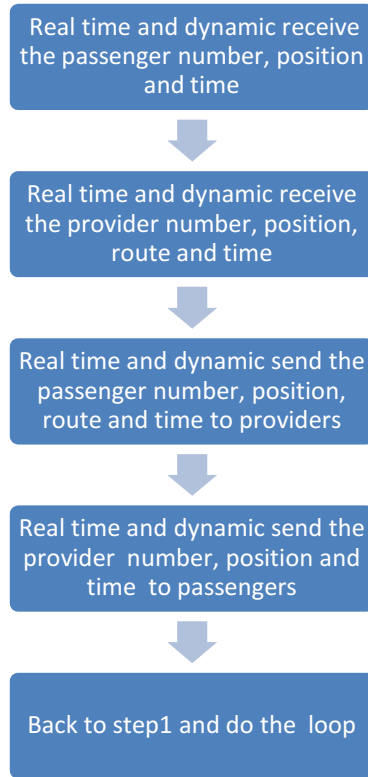


Fig. 13. Process of E-center

6 Conclusion

Because participant observation in the field (Ishioka) of height between the ground and the mountains, the bus is not cost effective results in relatively lower occupancy rates. An aging society with general needs push it needs to be re-considered. After studying information seeking behavior through in-depth interviews, learned that the elderly take a bus zone in Ishioka personality causality. In order to solve the elderly out by public instruments and to increase the chances of an elderly person to go out, we propose a ride by the dynamic real-time system schema, but it still rely on intermediate processing by E-government or non-profit agencies throughout the system. It is expected to solve the region needs to go out and increase the positive interpersonal interaction. But, the protection of personal safety and accident insurance needs further considerations. Engineering technology and network software are also need to be assessed.

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