Visual Analysis of Multiple Route Choices based on General GPS Trajectories

ABSTRACT

There are often multiple routes between regions. Drivers choose different routes with different considerations. Such considerations, have always been a point of interest in the transportation area.

EXISTING SYSTEM

Studies of route choice behaviour are usually based on small range experiments with a group of volunteers. However, the experiment data is quite limited in its spatial and temporal scale as well as the practical reliability.

DRAWBACKS

- Route choice behaviour are usually based on small range experiments
- Data is quite limited in its spatial

PROPOSED SYSTEM

In this work, we explore the possibility of studying route choice behaviour based on general trajectory dataset, which is more realistic in a wider scale. We develop a visual analytic system to help users handle the large-scale trajectory data, compare different route choices, and explore the underlying reasons. Specifically, the system consists of: 1. the interactive trajectory filtering which supports graphical trajectory query; 2. the spatial visualization which gives an overview of all feasible routes extracted from filtered trajectories; 3. the factor visual analytics which provides the exploration and hypothesis construction of different factors' impact on route choice behaviour, and the verification with an integrated route choice model. Applying to real taxi GPS dataset, we report the system's performance and demonstrate its effectiveness with three cases.

ADVANTAGES

- We explore the possibility of analyzing multiple route choice behaviour based on general GPS data.

- We develop a visual analytic system to explore the route choice behaviour with real GPS data.

SYSTEM REQUIREMENTS

- **H/W System Configuration:-**

- Processor - Pentium –IV
- RAM - 4 GB (min)
- Hard Disk - 20 GB
- Key Board - Standard Windows Keyboard
- Mouse - Two or Three Button Mouse
- Monitor - SVGA

- **S/W System Configuration:-**

- Operating System : Windows 7 or 8 32 bit
- Application Server : Tomcat5.0/6.X
- Backend coding : Java
- Tool : Virtual Box
- Environment : Ubuntu
- Technology : Hadoop