ATLAS II
ADVANCED TRAVEL LOGGING APPLICATION FOR SMARTPHONES
Atlas project is a major research initiative at the Transport group of the University of Queensland (UQ), Australia, aiming at facilitating sustainable transport planning and infrastructure development for a greener future. Atlas II for iPhone is an intelligent application developed specifically for Atlas project to assist research teams with accurate, easy and affordable means of data collection for transport planning. Currently, governmental authorities collect data about the travel behaviour of households using paper, phone or web-based surveys in which a member of each participating household completes the questionnaires on behalf of the other household members. The questionnaires often focus on the frequency, mode and purpose of the trips performed by each household member along with the origin, destination, length and duration of these trips. This data plays an important role in planning sustainable transport infrastructure which can address the needs of future generations and also relies more on greener means of transportation such as walking, riding and public transport. However, the currently used methods of data collection, are inaccurate, costly and hard to perform quickly and frequently. The main objective of Atlas II is to automatically record individuals' trips when it is running on their phones, without an unnecessary interaction with participants or an interference with the ordinary phone usages. It just requires a minimum level of participants' cooperation to specify the mode and purpose of their recorded trips and upload them on the Atlas servers at the end of each day. Since Atlas II is installed on individual participants' mobile phones and uses GPS/GSM signals to track their trips, the resulting data is easy to collect and aggregate. Furthermore, it captures accurate, real trip data instead of asking people to recall their trips over a past period of time, as it is done in the traditional methods. The collected data can significantly improve our understanding of the travel behaviour of people in each region which in turn, assists local councils and transport authorities to revise and accurately plan for a sustainable transport system.
Atlas II is developed to work on iPhone 4 and 5, relying on the last advanced developments of iOS 7. GPS, GSM and Wifi signals are used by Atlas II to automatically detect users' trips and record the trips' data in the background, without user interactions. Different algorithms are implemented in Atlas II to significantly reduce the app's battery consumption and eliminate fake trips, while it is recording the trips. The app is also capable of demonstrating different surveys which can be created at any time on the app's server to collect users' feedback when required. The users can review their travel history on the phone or through a dedicated web portal which provides them with details and useful summaries of their everyday trips. Ease of use and usefulness are considered at their highest possible level to encourage users continue participating in the studies.
As an active research team in Australia and New Zealand, we invite all interested individuals who are happy to assist us in the research on sustainable, green transport development to install Atlas II on their iPhones and participate in our trans-boundary studies. Atlas II can be installed on every iPhone through its dedicated page on App Store. The updates are posted regularly on App Store to improve the functionalities of the app and are available to those who have the app installed on their phones.
Atlas project and all relevant applications such as Atlas I and Atlas II comply with the Australian, New Zealand's and UQ's codes of conduct and ethical research. Users’ data are uploaded on the secure Atlas servers, only when you confirm to at your convenience. One can always decide to delete his/her records (whether uploaded or not) for each single day of participation. The data uploaded on the Atlas servers are not related to any recognisable personal information. It is only used for research and development purposes and helps the research team to better understand the dynamic nature of people's travel demands in each participating region. Your participation provides the researchers and practitioners with a way to get significant insights to forecast, develop and maintain our everyday transportation system.