Bikeware: Have a Match with Networked Bicycle in Urban Space.

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1. Introduction

Bikeware is a social media that provides user with urban pleasure. It is a networked bicycle which user can enjoy a race match with other members in urban spaces. User doesn’t have to get together in the same time, by uploading the data during the race. User are able to experience matches with competitors who participated in past races in real time.

In Bikeware, the strategy of a match and knowledge of the local area stands superior to simple physical strength. Only the starting and finishing points are assigned in the race. Users can seek their own route that leads them to the destination faster than others.

2. New pleasure in the city

In Japan, bicycle is both a casual and common tool for transportation in cities. Many people use bicycle for commute or shopping. Bikeware enhances these social experiences in urban spaces from two aspects: relationship and contextualization.

First, Bikeware empowers a virtual communication in urban spaces. Web technology have developed virtual communications such as e-mail and SNS. Bikeware can expand it to physical and urban world, since Bikeware enables networked matches in physical space. People will be able to communicate with many people on the courses by their activity and presence.

Secondly, with Bikeware, any road in the city can become a race course and hold another context. Local train station may become a start point or an end point; uphill roads may act as obstacles to lose time. Spaces to which we ordinarily don’t pay attention will become a meaningful place. Any town and any space could become a place filled with pleasure.

Bikeware is an alternative way to design urban environment. Currently, architectural and polical means are the major measures for such activities. Experiences from Bikeware are totally novel from the experience provided before.

3. Prototype

The prototype of Bikeware has GPS, 3D acceleration sensor, speed sensor and network. Bikeware downloads all of the match data from the internet by connecting to the network. When user reaches the starting point, Bikeware alerts the user and indicates the location of the finishing point, number of entrants and lap time. User can choose to participate in the match or not and the race will start. During the race, time for the race and distance to the end point are calculated. Users can see their ranking after each race and have matches with other users who joined past races as if they are competing in real time. When the user arrives at the finishing point, the race record is saved and the final ranking will be indicated. If the device is connected to the network again, the data of the match is uploaded to the internet.

4. Related Works

Motor bike was the focus for the project called Hockman [Esbjörnsson and Östergren, 2003]. It achieves a new value on urban pleasure by passing other friend on the street. Bikeware also uses interaction towards the city and bring a merit. In Bikeware, place can get an additional context and the relationship is created from that new context. Also communication is not the only pleasure in Bikeware. User will find the pleasure through the city, exploring the route and finding a match.

5. Future works / Conclusion

The goal for Bikeware is to design a new form of social relationship and urban lifestyle on the existing urban infrastructure with interactive technologies. We are preparing a web page for Bikeware. Through the web page, user will be able to select starting points and finishing points and create new matches. It will also enable users to check where races are being held, as well as the records of past races. With both device and web, Bikeware enhances the value of the activities in the urban spaces.

The prototype which we made has an acceleration sensor and is capable of setting local rules. This application is not only designed for entertainment purposes, as it can provide a variety of experiences. Bikeware will be a novel tool to design and enhance the value and experience in the urban society.

Acknowledgments

This project is granted by CREST, JST.

References