さいたま市コミュニティサイクルの休日利用を拡大するシステム
The system that expands holiday usage of Saitama city Community Cycle

システム工学特別演習2班
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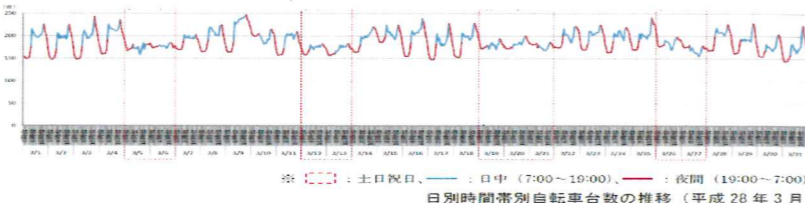MF17052 永井澪　　　MF17054 萩原杜子　MF17061 星七海　BQ15082 吉田耕佑

Background・Objects

◆ Community Cycle in Saitama city

· Introduced for improving convenience and migration of short distance travel, Strengthening cooperation with the city center. It is used for commuting, going to school, cycling and shopping.

· Problems : There are few users in daytime and holiday and used biased toward commuting.

日別時間帯別自転車台数の推移（平成 28 年 3 月）
※ 土日祝日、　　日中（7:00～19:00）、　　夜間（19:00～7:00）

【Object】 Expands holiday usage of Community Cycle

◆ Target

· Because Omiya station has good access from metropolitan area and because of the concentration of multiple routes, it is convenient to access from various place in Saitama city, so it is thought there are many potential users.

→ Targets are families and young people who have come to sightseeing and leisure.

System configuration

◆ Application overview
"Smart phone × Community Cycle"
Have the community cycle enjoyed by users.

◆ Running art
"Running art" → Drawing a route on the map using the GPS function
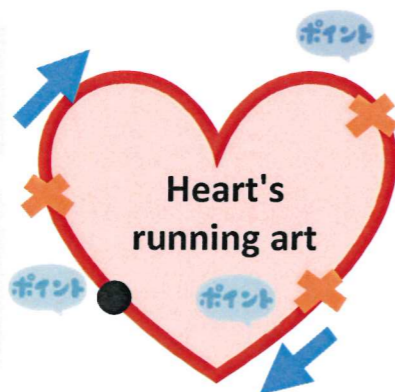Events that collect points while creating running arts hold on Saturday and Sunday.
→ Convert points as coupons

Running art event example

Point GET as it passes through a certain point
Example) 30% art completed

Achieving the hidden mission in art points GET
Example) take a picture with mascot and uploads it to SNS

Heart's running art

Mission example
Buy the "Saika no hoseki"
Go to "Bonsai village"
Take a picture with the mascot and post to SNS

◆ Bicycle dedicated to running art
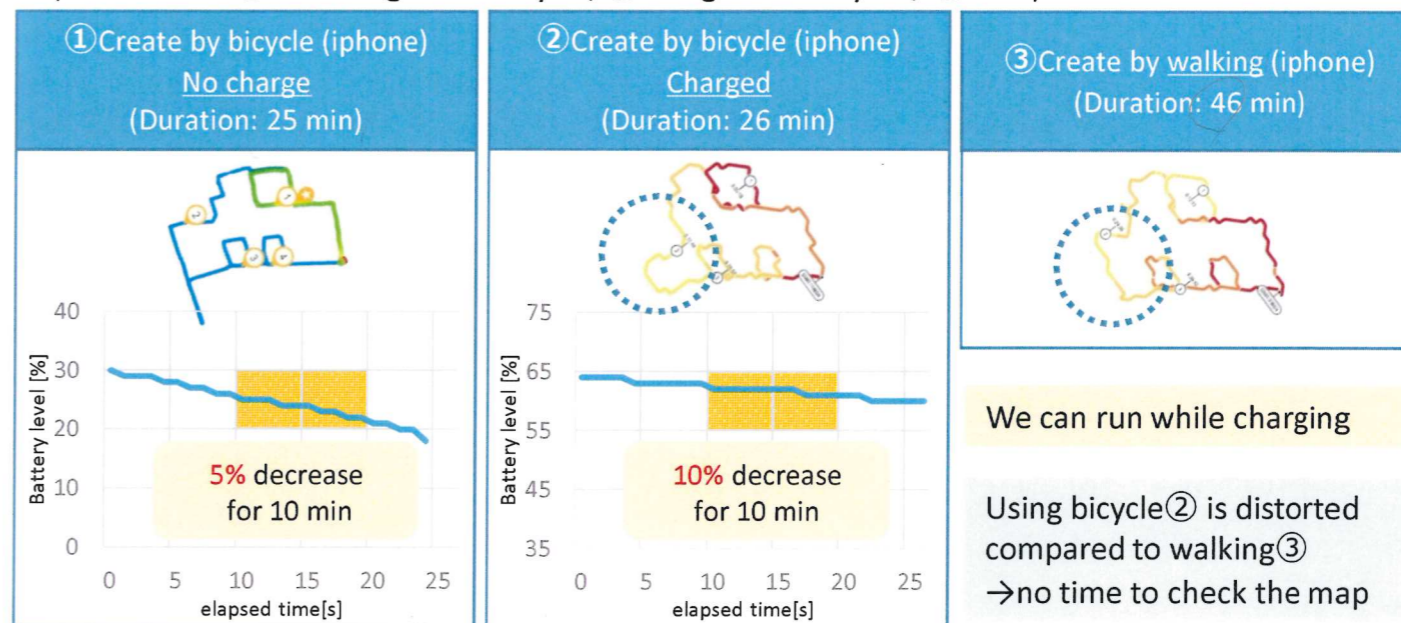
Chain is a power generator
→ Charge the smartphone

Smartphone cover
→ for voice guidance
→ for waterproof

Experiment

◆ Actual experiment for running art
(3 condition : ① No charge with bicycle, ② charge with bicycle / ③ walk)

① Create by bicycle (iphone) No charge (Duration: 25 min)	② Create by bicycle (iphone) Charged (Duration: 26 min)	③ Create by walking (iphone) (Duration: 46 min)
Battery level [%] 5% decrease for 10 min	Battery level [%] 10% decrease for 10 min	We can run while charging
elapsed time[s]	elapsed time[s]	Using bicycle② is distorted compared to walking③ →no time to check the map

Summary

Object : System that expands holiday usage of Saitama city community cycle
　- Combination of community cycle and smartphone
　- Proposal of a system that can enjoy running art

【Benefits】 Visitors to Saitama city and popularity UP!

◆ It is possible to plan various events using this system

◆ Effectively use time for a long time with running art
Expansion of leisure use → expansion of use on weekends and daytime

◆ By distributing coupons,
· users can enjoy Saitama city and facilities · visitors to stores UP!

⇒ "Have the user enjoy Saitama City!"