Using Gamification to Provide for Transport Behavioral Incentives

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INTRODUCTION

Imagine you’ve been asked to sort a stack of paper forms. As you wade through the dozens of similarly colored sheets, your mind wanders. Boredom sets in. Eventually, you just can’t handle it any longer and so you grab your mobile phone and start playing Candy Crush.

Then it hits you: Isn’t this the same thing as sorting a stack of papers? It’s simply moving them around so they are all next to each other? Turning this process into a game with animation, ease of use, and immediate rewards transforms the mundane experience into something exciting, engaging, and, certainly, far more desirable.

Population growth and the growth of urban megacities have placed enormous burdens on transportation infrastructure, particularly the freeway systems that function as the backbone of the transportation networks in many cities around the globe. Transportation planners have sought to mitigate the congestion on freeways by providing options such as transit and carpooling, limiting the supply of parking, leading to increased cost, and increasing the price of using the freeway through various fees, and tolls. Some transport agencies work to reduce peak-period commute trips through various programs that provide for flexible employee schedules and work locations. While none of these actions address a structural deficit in capacity that exists, they are widely seen as partial solutions to the problem of congestion, often by providing options that did not previously exist.

These actions encourage a change in mode, route, and/or time of travel. In general, they act on users’ perception of known costs. Users recognize that they will save money on fuel and parking by choosing a different mode or working...
ROAD PRICING CHALLENGES
WHAT DRIVES PRICES?
ROAD PRICING GOALS

VS

[Images of different transportation modes]
WANNA HAVE FUN? PLAY GAMES!
WHAT'S THE POINTS?
PRICING PROBLEMS USING POINTS
PENALIZED OR REWARDED?
EQUITY!

BOOP!
HOW? AND ... WHICH STATION?

GAMIFICATION
The weekly commute game!

THE RULES
- Check-in location before leaving home & Check-out after reaching the office (i.e. defi no origin-destination)
- Use own vehicle (both odd plate last digit) on odd dates.
- Toll fee $12 if driving through freeway, No points.
- Use own vehicle with odd plate last digit on even dates. Toll fee $8 if driving through freeway. Lose points.
- Use alternative means (metro, public transport, Rideshare, ride with friend’s even last digit plate number) on even dates. Unlock a prize.

THE SCHOPE
- Incentivize means selection during weekly commute to work to reduce coastal freeway congestion.
- Drivers participate in weekly puzzle game, earning rewards, points and status for optimal choice of daily transportation means to work.

THE MONITORING
- Toll Gates
- Bluetooth Beacons
- Smart Card Reader
- Street Cameras

THE ACHIEVEMENTS & REWARDS
- Virtual Currencies
- Virtual Items
- Personalized Gifts
- Recognition in Social networks
- Badges
- Status

GAMIFICATION
The weekly commute game!
GOAL IS USED TO SPUR ACTION ➔ GOAL

**IMPACTS**
Increase awareness concerning impacts of choices

**INCENTIVIZE**
Incentivize specific and explicit social behaviors

**SOCIAL PARTICIPATION**
Drive participation in high-value social campaigns
LEVEL PLAYING FIELD
KEEP THE CONVERSATION MOVING!

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