Raden Agoeng Bhimasta
Pablo López Diéguez
Shao-En Lin
Li-Cheng Pan
Shang-Chi Tu

國立清華大學 NATIONAL TSING HUA UNIVERSITY

Institute of Service Science
X
Institute of Information Systems and Applications

MooDoor

An Interactive Door with Emotion Display to Strengthen Social Capital and Community Resilience

Introduction

In the last decade, many countries suffered from natural disasters which caused catastrophic losses. Governments should be able to establish well infrastructures in preparation for disasters. However, relying on such physical infrastructure development alone is often not sufficient. Instead, cities are advised to invest more in community resilience which bonding, bridging and linking can be beneficial for disaster recovery. Nowadays, cities are now evolving toward “citizen-centric smart city” by using technologies to empower citizen participation. Governments position themselves as a community builder that helps fostering trust, harmony and happiness. Such a concept opens up innovative proposals for building community resilience by strengthening social capital.

Our study explores an innovative smart city technology that strengthens social capital and subsequently leads to stronger community resilience against the shock of natural events. In this poster we proposed MooDoor, an interactive door that promotes neighborhood bonding and fosters collective action to respond to natural disasters, focusing on the earthquake scenario.

Design of MooDoor

Why door?

Laying on the redesigning architectural structure strategy, we considered a door as an interesting medium to strengthen social capital.

Door as a bridge between two worlds

A closed-door prevents others to invade our personal space and could isolate us from the outer world. Opening the door may be seen as a sign for others to come.

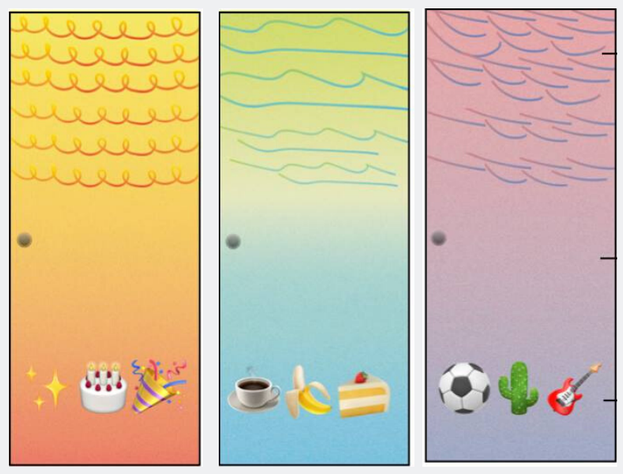
Door as communication medium

In many occasions, we may leave some notes as a way to communicate with others. Shops may put “come in, we’re open” signs or we may put “don’t disturb, please” in our doors. In this way, the mechanism provides opportunities to interact with others.

Customized door as a way for self-expression

In some cultures, people decorate their front doors and use them as a mean to express themselves. They may change the color, put messages or add other decorative elements, making the door attractive to others.

Design Feature



MooDoor, a physical door with embedded digital display. Using combination of colors, patterns, icons and emojis, it serve as a tangible self-expression media, aiming to promote social engagements

Usage Scenario

Mood Mode



(1) User can change the display of MooDoor.
(2) The outer side of MooDoor will change accordingly.
(3) A neighbor passes by and seems surprised by the rugby player icon.
(4) Initiating a physical, social interaction.

Alert Mode



(1) MooDoor display message sent by government.
(2) User report the current condition.
(3) MooDoor act as an exchange platform.
(4) MooDoor help to navigate rescue team to where the help is needed.