**Background**

Although smartphones have stretched the boundaries of socializing, they can be a distraction in co-located social interactions.

**Research Objectives**

- Improving the quality of co-located social interactions by encouraging smartphone usage limitation
- Lock n’ LoL - an app which helps users to collaboratively manage their smartphone usage by providing synchronous social awareness

**Lock n’ LoL: Mitigating Smartphone Disturbance in Co-located Social Interactions**

Minsam Ko, Chayanin Wong, Sunmin Son, Euigon Jung Uichin Lee, Seungwoo Choi, Sungho Jo, and Min H. Kim

@ KAIST

**Preliminary Studies**

- Online Survey (N=49)
- Interview (N=7)

**Lock n’ LoL Design**

- Iterative Prototyping Process

**Lock n’ LoL Points & Level**

- Analyze your socializing activities and stay motivated

**Socializing Mode**

- Locking phones to limit usage together
- Elapsed Time
- Socializing Mode
- Time Together
- See how much time the user spent with each of his/her friends

**Temporary Use Mode**

- Asking/permitting to use temporary

**Contexts of Use**

- Eating with friends
- Meeting in a small group
- Chatting at a cafe

"I used this app so that I won’t be distracted by my smartphone while studying for the final exams..." (P2)

**Future Work**

- Synchronous awareness by sharing detailed usage information (e.g., app usage in the temporary use mode)
- Current status visualization
- Excusable app usage for apps that do not disrupt co-located social interactions (e.g., camera, dictionary)
  - Users may decide which apps to excuse / Automatic recommendation based on logged usage data

**Points & Level**

21% Strongly Disagree
9% Disagree
14% Agree
59% Strongly Agree

**Q. I was disturbed by smartphones while socializing.**

**Q. When do smartphones disturb socializing?**

"I unconsciously check personal message notifications..." (P2)

"I habitually use the smartphone to resolve for awkward silences and idleness." (P5)

**Q. When are smartphones good for socializing?**

"...to search for recent fashion trends and go online shopping with friends." (P3)

"...I play smartphone games with my friends to get along." (P7)

**Pilot Study**

- Interviews (N=20)

**Socializing Mode**

- The benefits of limiting smartphones were greater than its inconveniences while socializing.
- "...we had initially locked the phone for a better time together."

**Temporary Use Mode**

- Coped with inconveniences from completely locking smartphones during social interactions
- "I was able to bring interesting topics into the conversation while other phones stayed locked."