

Indoor Evacuation System With Smartphones That Helps Evacuees In a Blacked Out Building

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1. Introduction

When a disaster happens, people in a building have to escape as quickly as possible.

However, **Power failure** may occur and prevent people from escaping.



Blackout



Hard to see emergency signs



Darkened passages with danger of falling

As a result, people take long time to escape and are in danger of losing them lives.

2. Our proposal

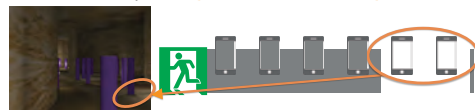
Our research group has proposed an **indoor evacuation system that utilizes people's smartphones**



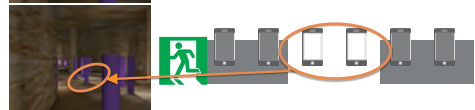
Our system provides information of the evacuation routes and illuminates the passages around people at the same time.

- Illuminates passages by **turning smartphone's lights on**
- Indicates evacuation routes by **making each smartphone's light blinks**

Time #1



Time #2



Time #3



The flow of light along an evacuation route

3. Future work

In order to implement our system, an **indoor positioning method for smartphones** is needed.

A method that **finds the most appropriate evacuation route** is also needed.