# Smart Campus Map: (Sokpaluang Campus, National University of Laos)

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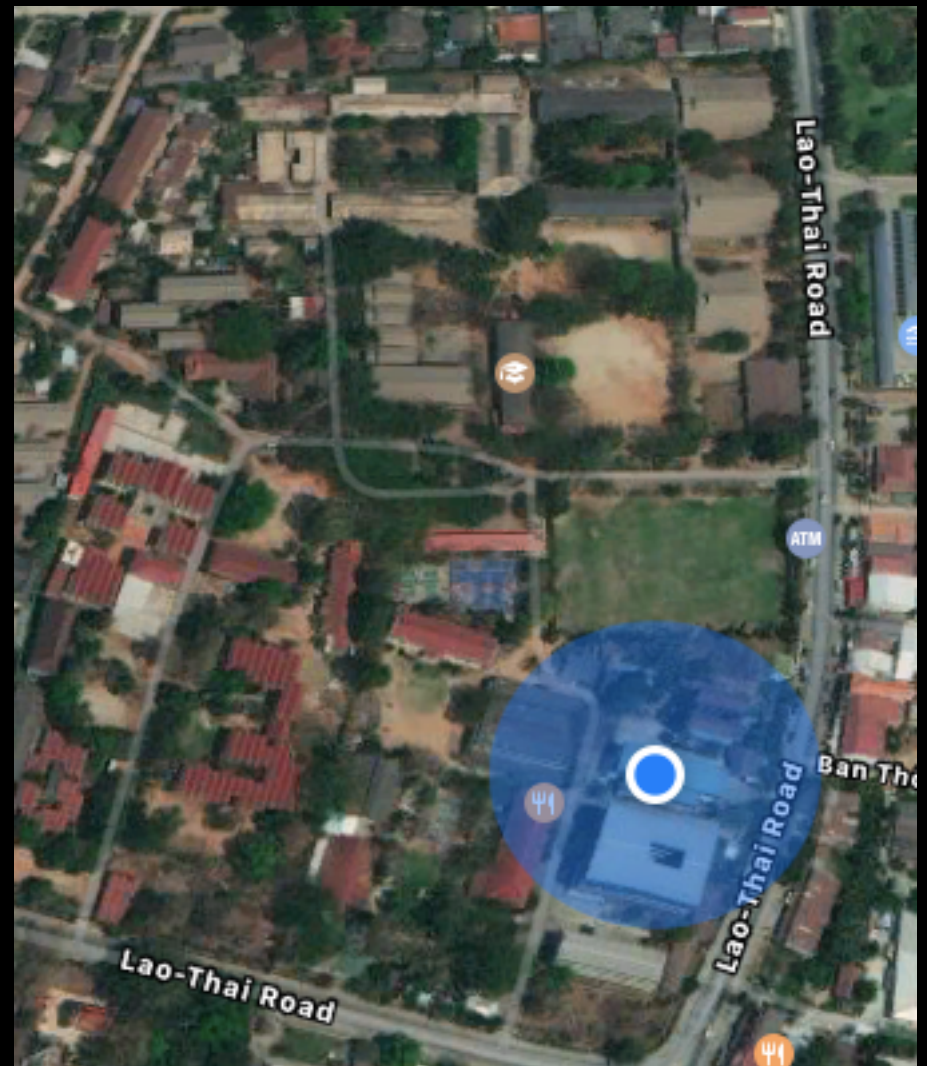
Faculty of Engineering

National University of Laos

# Outline

- Project overview

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# Project Overview (1/2)

- Faculty of Engineering (National University of Laos) is located at <span style="color:red">Sokpaluag Campus</span> which consists of more than 55 buildings spread over an area of 30,000 square meter campus.
  - Students and faculty staff in the campus can be quite a challenge to get around.
  - Even seniors or main faculty staff of the campus can get confuse when asked by people for direction to some obscure or remote location.
  - In addition, coming visitors can find difficulty to navigate the campus.

# Project Overview (2/2)

- One of the most popular digital maps is Google Maps [1], which is useable for mobile devices and web applications. It offers satellite imagery, street maps, 360° panoramic view of street, real-time traffic conditions, and route planning for travelling by foot, car, bicycle, or public transportation.

- However, with using Google Maps application is not enough for searching or exploring some specific location on campus to get more details of information that user want to know.

- There are numerous researches focusing on creating and developing of smart campus map to benefit the users for exploring the campus.

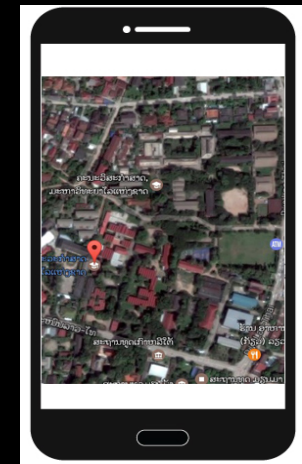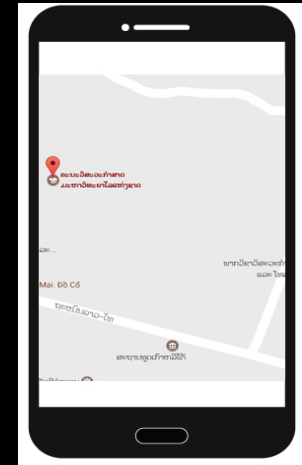  - Some research papers and reports are provided in [2], [3], and [4].

Figure 1: Viewing Sokpaluang campus map from Google Maps

# Our Proposal

# Introduction

- In this project, we propose a new smart campus map to resolve the problem. The proposed method includes several useful features that make navigating the campus easier.
  - Smart campus map gives an overall view of the campus and tells the current position of the user.
  - Smart campus map provides a smart search option for any keyword to search for any specific remote location as well as faculty members.
  - It provides information and explanation about the targeted search item.
  - It is able to inform the user about the information of special events taking place around the campus.

# Features (1/4)

- Smart campus map gives a user-friendly interface and overall view of the campus and tells the current position of the user.
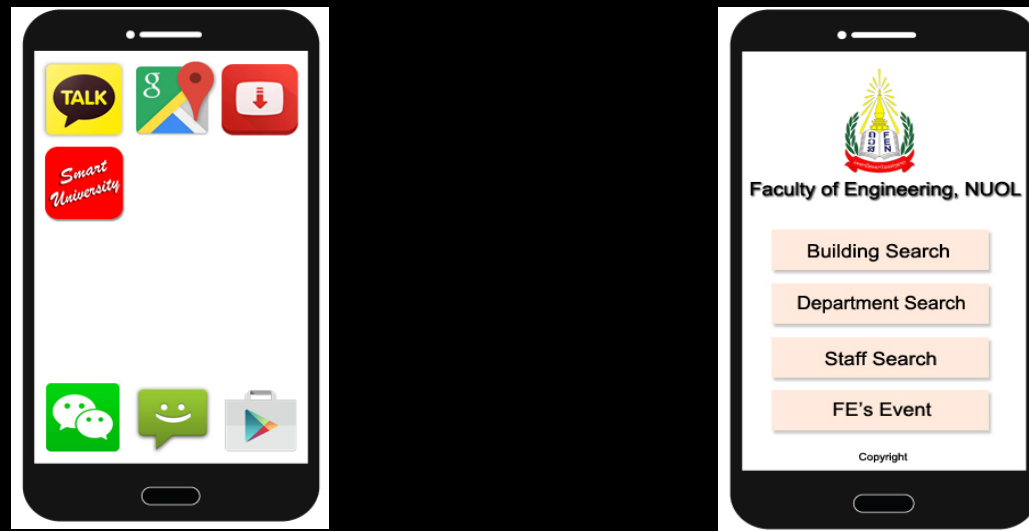


Figure 2: Sample of icon and main page of our smart campus map

# Features (2/4)

- smart campus map provides a smart search option for any keyword to search for any specific remote location as well as faculty members. Together with the result based on specific keyword, it provides directions to a chosen destination giving options for car and walking.
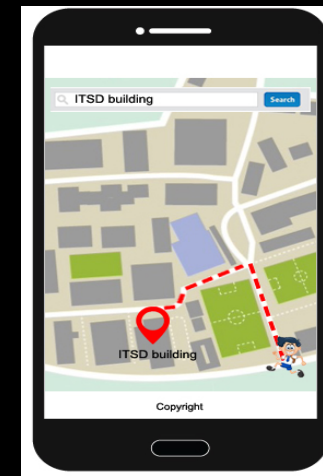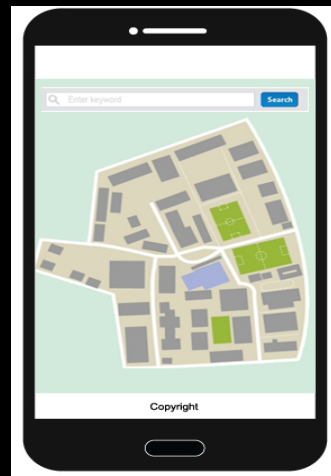


Figure 3: Sample of building search's result

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# Features (3/4)

- It provides information and explanation about the targeted search item.
  - In case of searching for the building, it will give the information about class room, meeting room, working room of faculty staff, and so on.
  - In case of searching for the department/division, it will provide information about an organization chart of the department based on the search keyword.
  - In case of searching for the people, it will tell some information such as working room and building, responsibility (lecturer or faculty staff), department of that person belonging.

# Features (4/4)

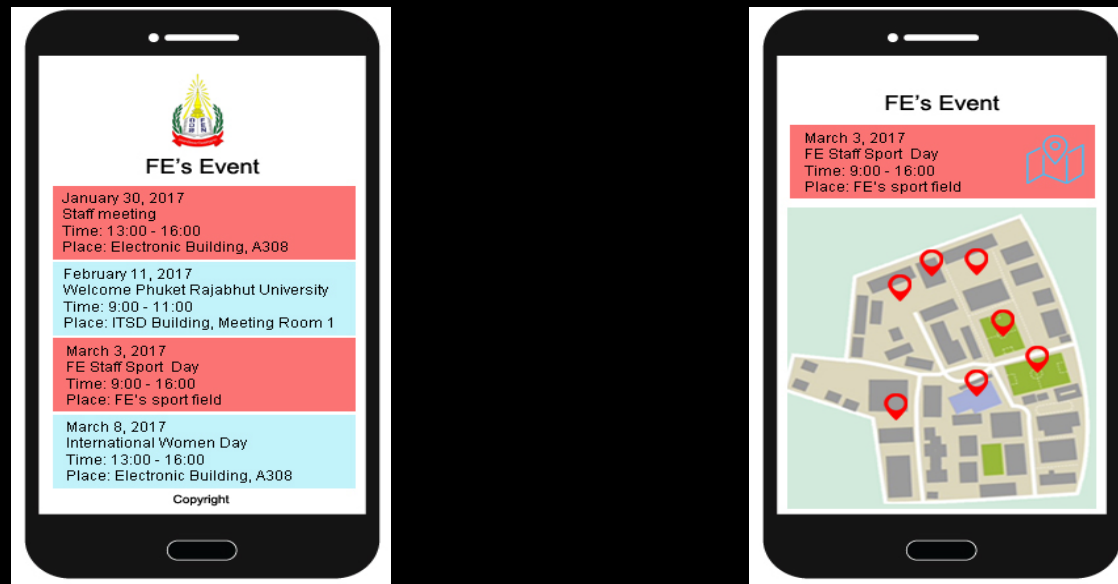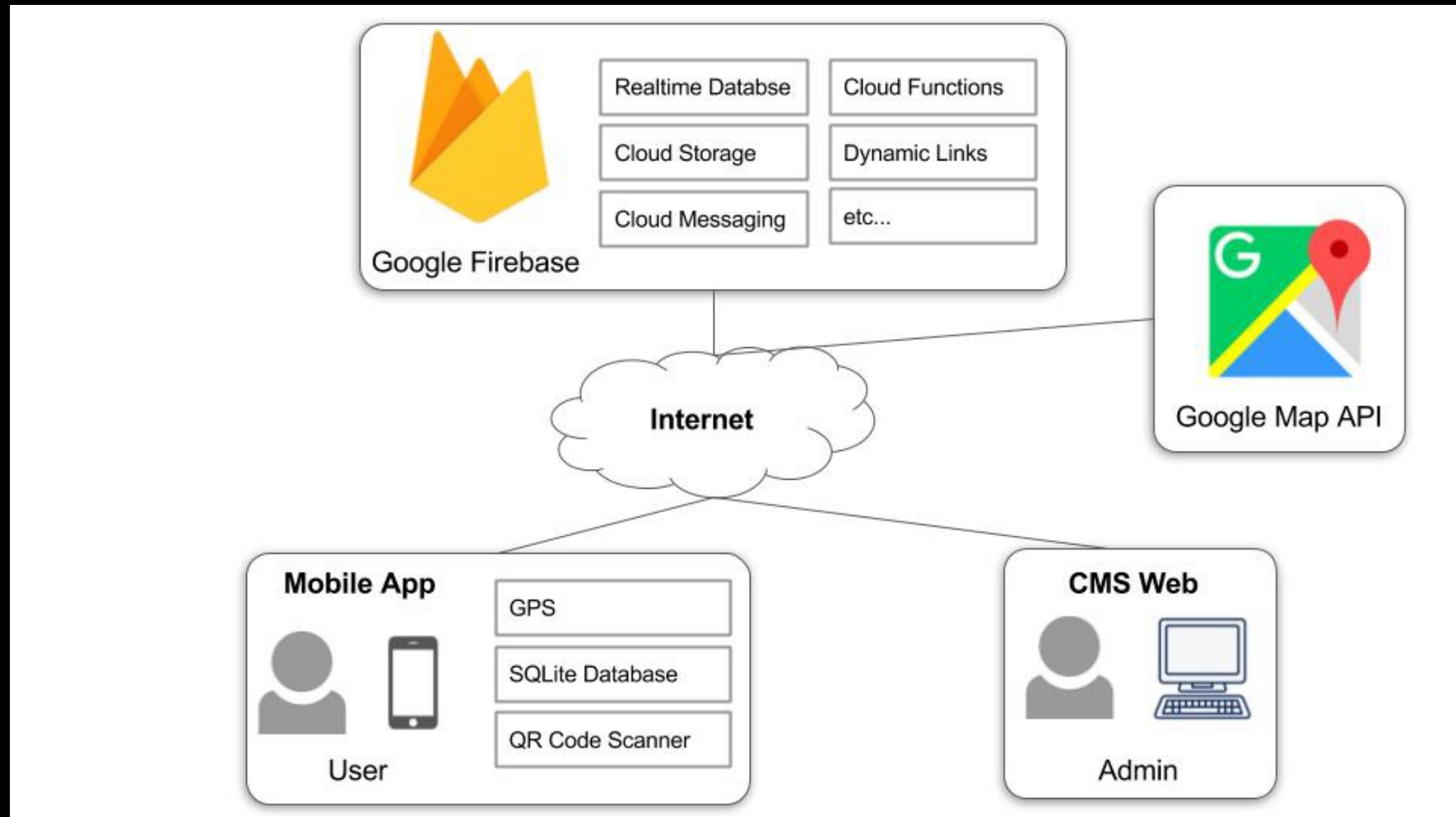- It is able to inform the user about the information of special events taking place around the campus.



Figure 4: Example of informing about the special event by our smart campus map application

# Target, Methods and Implementation (1/2)

## System overview

# Target, Methods and Implementation (2/2)

- At the beginning, our smart campus map proposal will be implemented as application running on smartphone, targeted on <span style="color:red">Android System</span>.

- The smart campus map application can be promoted through various ways such as information counter on each department, our faculty's website, free Wi-Fi logon page, brochure, etc. so that any user using Android smartphone can be easily found our campus map application, and then download and use it as their navigating system for exploring our campus.

# Intellectual Merit

- This proposed project (Smart Campus Map) will be developed by our project members and will be used by any people including lecturers, faculty staff, students, and visitors.
  - With the main features of our smart campus map will be greatly helpful for those people to explore the campus such as finding the specific location and person as well as its direction.
  - Further benefit with using our smart campus map, users will never miss any information about the special events taking place around the campus.

# Broader Impacts

- This project is not limited only to implement in the campus to benefit the users, but it can be implemented in the broader area to benefit the people as well.
    - In the university as a smart university map, in the city as a smart city map, etc.
    - In addition, this proposed method can be implemented in various languages (i.e., Lao and English version) and platforms (i.e., Android, IOS…).

# Members

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# References

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2. Shayan Nikoohemat (Technical University of Munich), "Smart Campus Map", November 2013.

3. SEOUL National University, "Smart Campus Map Application", http://www.useoul.edu/snunews?bm=v&bbsidx=123373&page=1, Accessed February 2017.

4. Smart Campus Map, https://gis-iq.esri.de/smart-campus-map/, Accessed February 2017.

# Thank you for your attention!

# Q & A