

# Mobile Apps to Provide Information for College Personnel and Students

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**Abstract**—Nowadays almost all college and students have mobile devices as smartphones or tablets. Thus, it is necessary for universities and colleges to have mobile apps to disseminate university information for personnel and students. This paper proposes mobile apps on both iOS and Android platforms to provide useful and essential information for interested parties. Such information includes news, events, videos, academic buildings, accommodations, restaurants, coffee shops, ATMs, and toilets. Moreover, it also supports personnel search based on their names to get their email addresses for further contact.

**Keywords**-mobile application, campus information, utility apps

## I. INTRODUCTION

Almost all campus staff and students have mobile devices with them almost everywhere and many of them use them often. In January of 2014, it has been reported that American people access the Internet via mobile apps more than via PCs [1]

This paper proposes the design and development of mobile apps on both Android and iOS to support useful information for staff and students on campus.

## II. RELATED WORK

There are several mobile apps on campus such as iStanford [1], Chulalongkorn Mobile [2] Naresuan University [3]. All of these apps are available on

Android and iOS platforms except Chulalongkorn Mobile which is available only on iOS.

iStanford has supported the most number of information categories. Chulalongkorn Mobile lacks of events and news features. On the other hand, Naresuan University has the features: viewing timetable, exam schedule, and grade result. iStanford and Chulalongkorn do not have such features.

Compared with those existing mobile apps, our proposed iKKU app has the easiest, the most beautiful and the most comprehensive maps which display restaurants, coffee shops, toilets, libraries, meeting rooms, ATMs, parking lots, shuttle bus stops, and hotels in Khon Kaen. Each category of information on the map can be chosen by clicking at the icons representing corresponding information.

## III. DESIGN AND DEVELOPMENT

We have designed iKKU API at <http://www.kku.ac.th/ikku/api/> to provide news and events to be displayed on mobile apps.

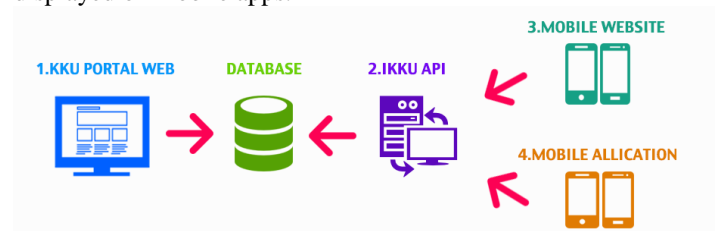


Fig. 1. iKKU mobile app design.

### A. KKU Web Portal

In Figure 2, we have developed a KKU web portal using PHP, MySQL and JavaScript to display news and events via KKU API [4]



Fig. 2. iKKU portal web.

### B. KKU API

KKU API is developed by using PHP. Figure 3 shows the result of calling KKU API hot news at <https://kku.ac.th/ikku/api>. The API response is in JSON format which is chosen over XML format because it is concise and easy to parse by using JavaScript.

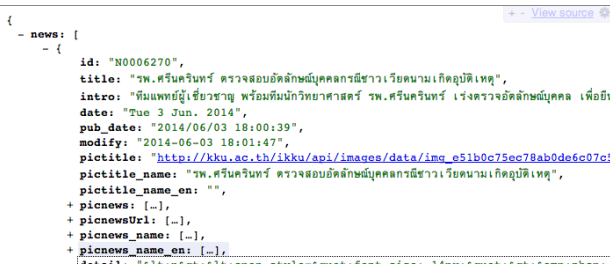


Fig. 3. KKU API

### C. KKU Mobile Website

It has been reported that 67 percent of consumers say they are more likely to purchase from a mobile-friendly website than they are from a website not optimized for devices other than desktop [5]. Thailand has 90 million mobile subscriptions among its 66 million people. The smartphone penetration rate is 36 percent, up 17 percent from last year [6]. Mobile marketing statistics 2014 has illustrated that there is an increase access for website traffic via their smart phones or tablets as shown in Figure 4 [7].

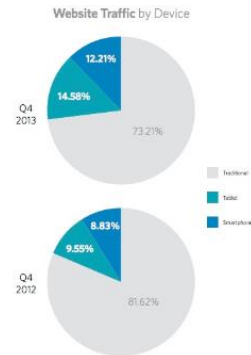


Fig. 4. Website traffic in Q4 2012 and Q4 2013.

Thus we have developed KKU mobile web site at <http://m.kku.ac.th>. When users type the URL address <http://www.kku.ac.th> from their mobile devices, the browser will be redirected to <http://m.kku.ac.th> automatically.

Developers have applied responsive web design to the website. Responsive web design is a popular web design approach because it helps viewers to experience easy reading and navigation with a minimum of resizing, panning, and scrolling—across a wide range of devices (from mobile phones to desktop computer monitors) [5]. Figure 5 shows KKU news content via KKU mobile website on a mobile phone. Pictures and characters are large enough for users to view news content easily on the website.



Fig. 5. KKU mobile website.

#### D. Mobile Application

In Figure 6, the left screenshot shows iKKU application on Android while the right screenshot shows that on iOS. These two applications are developed as native applications so that they offer the best user experience for a mobile device user.

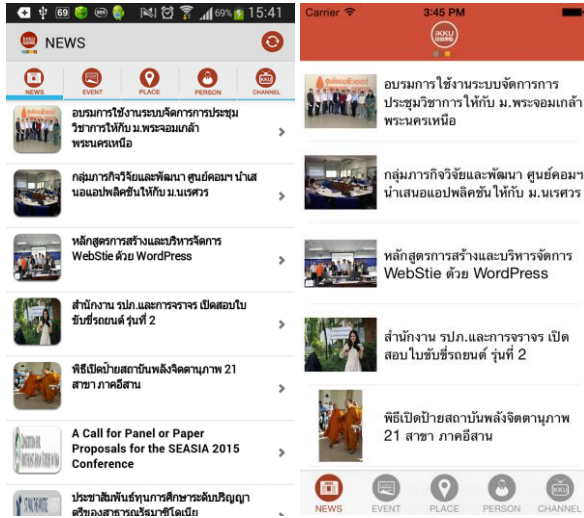


Fig. 6. KKU mobile application.

#### IV. EVALUATION

The iKKU app on iOS is available for free at <https://itunes.apple.com/us/app/ikku/id808648805?mt=8> while the one on Android is at <https://play.google.com/store/apps/details?id=th.ac.kku.computer.ikku>

The screenshots of the app are shown in Figure 7. The left screenshot shows the list of news, the center one shows the news content of the selected news.



Fig. 7. The news list and its content.

In Figure 8, the screenshot shows the dialog to share the news on Facebook.



Fig. 8. Dialog to share on Facebook.

In Figure 9, the left screenshot illustrates the list of events while the right one shows the details of the selected event.

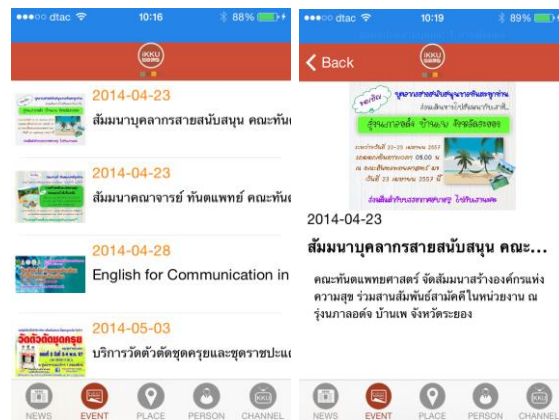


Fig. 8. The events list and its details.

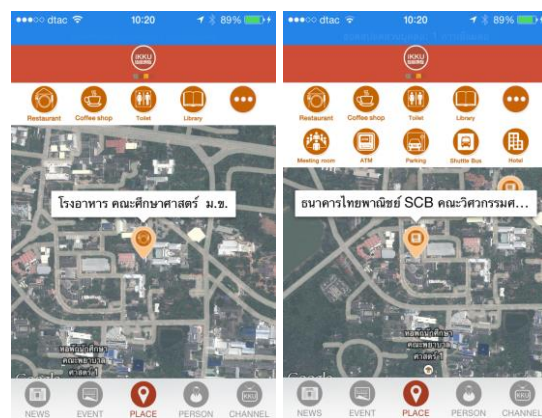


Fig. 9. Map of places on campus

In Figure 9, the left screenshot shows the information about restaurants after a user selects the icon Restaurant. When the user selects the pin of an interested place, the app shows the name of that place. The right screenshot has the second row of the icons to show more information such as ATMs.

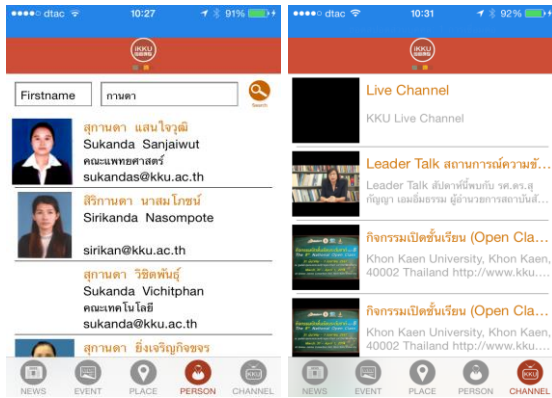


Fig. 10. Directory search and video channel

In Figure 10, the left screenshot shows personnel search contact by specifying their names to get their email addresses for additional information. The right screenshot shows the list of videos on KKU Channel.

Figure 11 shows the number of iKKU apps installed on mobile devices as of June 6, 2014.

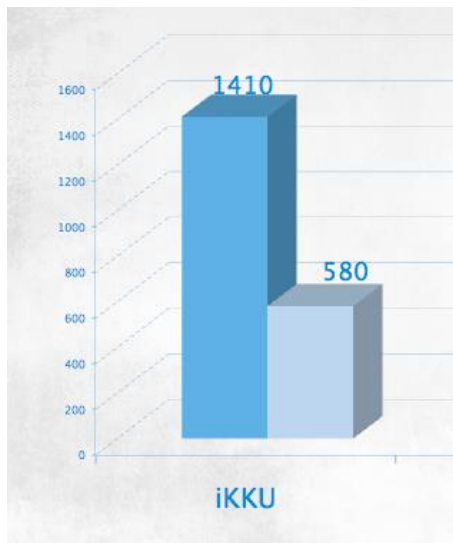


Fig. 11. Installed mobile apps

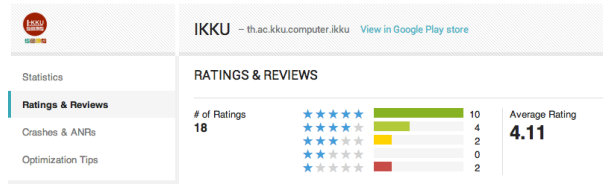


Fig. 12. Average rating of iKKU app on Android

The average rating of iKKU on Android is 4.11 from 18 users ratings as shown in Figure 12.

## VI. CONCLUSIONS

We have developed mobile apps on iOS and Android, which is called iKKU, that provide the information about news, events, places, videos, and directory search for KKU staff and students. In the future, we plan to develop the features that students can access their course timetable, exam schedule, and grades as well as library search.

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