Campus Navigation with Information System

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EXECUTIVE SUMMARY

The study's purpose was to implement a navigation system developed in a mobile application. This application acts as a road map to all different areas and information within the school. It leads students to experience the new way of searching to schedule a room most easily. Part of this research is to develop a system that will resolve the students' problems in guiding them to the exact location of a specific area. The navigation systems view and allow users to find their way speedily and effortless. These systems are best used when exploring the campus and searching the assigned schedule. The navigation system ensures that each piece of information in the application is accurate.

Keywords: Campus Navigation, Mobile Application



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INTRODUCTION

With the launch and increase in mobile phone sales over the last few years, people are using mobile applications to get their work done, which makes their lives easier. Mobile applications comprise various categories such as Entertainment, Sports, Lifestyle, Education, Games, Food and Drink, Health and Fitness, Finance, etc. It is highly invented to give a big impression to science and especially to all people who engage in this intangible application. Software expounds someone's imagination when it is badly needed; it allows users to interact audibly and clearly. Its purpose is to show justice on how and why technology existed to invade the people's ideas and oneness of broadening imagination.

People learn how to communicate with others when anyone needed to talk with them because of technology. Another allowance of time is being saved, convenient with all users, and giving detailed graphics to interact with them sophistically. Several inventors are still searching for unique inventions that will make the life process easier, impacting all people.

Fishbone Diagram

Figure 1: shows the central problem of the system, which is represented by the fishbone diagram, and this application is not getting complete.

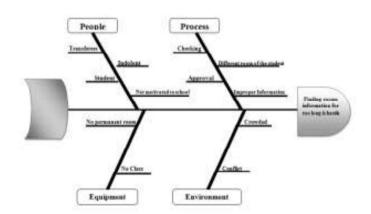


Figure 1 Fishbone Diagram

Functional Decomposition Diagram

Figure 2 shows the Functional Decomposition Diagram; it's structured the system's features, which CNAI have the details, map, rooms, and offices.

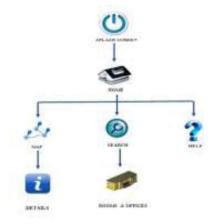
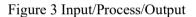
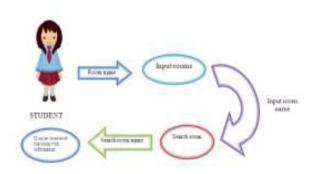


Figure 2. Functional Decomposition Diagram

Input/Process/Output

It explains that when a user can view the information and search the rooms of the schools.

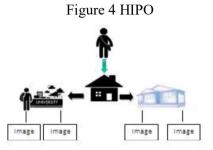




HIPO

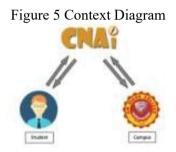
Figure 4 shows the search directly in the CNAI and finds either the rooms or offices' location.

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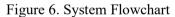
Context Diagram

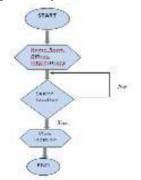
Context diagram explains the system named CNAI, in which the UMDB and the students are the beneficiaries.



System Flowchart

This flowchart is all about when you open the application you can view the resources, offices, information's and search location and view location.



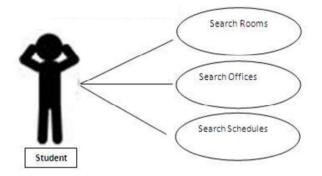


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Use Case Diagram

Figure 7: show that a set of use cases should describe all possible interactions with the system.

Figure 7 Use Case Diagram



Network Topology

In this figure, the system shows that Android uses Bluetooth connectivity to transfer the application.

Figure 8 Network Topology



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Conclusion

The CNAI application gives the user the exact location of the different facilities inside the campus for the fastest way. This application will help the transferee and the new student have trouble with their room's number and the teacher schedule. As a result of all of this, the user answered some of the qualifications. This mobile application can be used for those who have an android phone. It is easy to use for the user. It is a figuring out the position and location.

Recommendation

For the researcher, future researcher, and the students through the Department of Education and Information technology that will adopt and benefit from the study, it is recommended that software development is a combination of reprogramming and reconstruct the programming specification based on the necessities of material, the new student and the transferee is the beneficiary of this application it help them and asses the location in every room and also the teachers schedule and information, every room has different teacher and subject, and it was also changing by alternate or swapping. To review the system, conduct studies of its feasibility on a national or regional scale, modify programming specifications and requirements, and improve the overall system for it to be fool-proof and more comprehensive.

REFERENCES

- Allen V. Estabillon, (2013). DENR-12 sets land survey for greening program.http://www.mindanews.com/top-stories/2013/02/10/denr-12-sets-land-survey-for-greening-program/
- Business Wire [New York] 25 Jan 2012. HARMAN Ranks as Top Tier 1 Supplier of Auto Navigation Systems among the Ten Best Factory Installed Systems http://search.proquest.com/docview/917864355/1EC8AE5A1FB457CP Q/30?accountid=31259#
- Davao road map, Davao GPS navigation, Davao satellite view, Defense & Aerospace Week (Sep 4, 2013): 330. Aerospace and Defense Companies; Patent Issued for Systems and Methods to Incorporate Master Navigation System Resets during TransferAlignment.http://search.proquest.com/docview/1428335876/97 6E9D6241C64079PQ/20?accountid=31259#

- Entertainment Close Up (Apr 18, 2015). MarketandMarkets: Flight Navigation Systems Market to Reach \$15687.22 Million by 2020.http://search.proquest.com/docview/1673904147/1EC8AE5A1FB 457CPQ/33?accountid=31259#
- Groves, Paul D. The Journal of Navigation 67.2 (Mar 2014): 311-326. The Complexity Problem in Future Multisensory Navigation and Positioning Systems: A Modular Solutionhttp://search.proquest.com/docview/1496771107/1EC8AE5A1 FB457CPQ/17?accountid=31259#
- Hahn, Patrick; Oezdemir, Semih; Komp, Martin; Giannakopoulos, Athanasios;
 Heikenfeld, Roderich; et al. PLoS One 10.7 (Jul 2015). A New Electromagnetic Navigation System for Pedicle Screws Placement: A Human Cadaver Study at the Lumbar Spine: e0133708http://search.proquest.com/docview/1700107746/976E9D624 1C64079PQ/38?accountid=31259#
- Health & Beauty Close Up (Aug 18, 2014). Research and Markets Adds Report: Surgical Navigation Systems Market - Global Industry Analysis, Size, Share, Growth, Trends and Forecast, 2014 – 2020.http://search.proquest.com/docview/1553682853/1EC8AE5A1FB 457CPQ/29?accountid=31259#
- JM Tuazon Information Technology and Services Professional. (2015) https://ph.linkedin.com/pub/jm-tuazon/a1/701/9a2
- Journal of Engineering (May 6, 2015): 7862. Mitac International Corp.; Patent Issued for Navigation Apparatus Capable of Providing Real-Time Navigation Images http://search.proquest.com/docview/1676429220/976E9D6241C64079 PQ/12?accountid=31259#
- Li, Shuang; Lu, Ruikun; Zhang, Liu; Peng, Yuming. The Journal of Navigation 66.4 (Jul 2013): 605-623.http://search.proquest.com/docview/1354390044/976E9D6241C64 079PQ/23?accountid=31259#
- Liu, Shifei; Atia, Mohamed Maher; Karamat, Tashfeen B; Noureldin, Aboelmagd. The Journal of Navigation 68.2 (Mar 2015): 253-273. A LiDAR-Aided Indoor Navigation System for UGVs

http://search.proquest.com/docview/1651953232/976E9D6241C64079 PQ/33?accountid=31259##

- Liu, Jia; Zhang, Yumin; Guo, Lei; Gao, Xiaoying. International Journal of Intelligent Computing and Cybernetics 6.3 (2013): 216-231. A multiobjective antidisturbance robust filter for SINS/GPS navigation systems http://search.proquest.com/docview/1425425157/976E9D6241C64079 PQ/34?accountid=31259#
- Liu, Jia; Zhang, Yumin; Guo, Lei; Gao, Xiaoying. International Journal of Intelligent Computing and Cybernetics 6.3 (2013): 216-231.http://search.proquest.com/docview/1425425157/1EC8AE5A1FB4 57CPQ/15?accountid=31259#
- Manstad-Hulaas, Frode, MD; Tangen, Geir Arne, MSc; Gruionu, Lucian Gheorghe, MSc, Ph.D.; Aadahl, Petter, MD, Ph.D.; Hernes, Toril A N, MSc, Ph.D. Journal of Endovascular Therapy 18.2 (Apr 2011): 230-40. Three-Dimensional Endovascular Navigation with Electromagnetic Tracking: Ex Vivo and In Vivo Accuracy http://search.proquest.com/docview/865653733/976E9D6241C64079P Q/9?accountid=31259#
- Pan, Chao; Deng, He; Yin, Xiao Fang; Liu, Jian Guo. Biological Cybernetics 105.3-4 (Oct 2011): 239-52 An optical flow-based integrated navigation system inspired by insect vision http://search.ProQuest.com/doc view/910094319/976E9D6241C64079PQ/6?accountid=31259#
- PR Newswire [New York] 02 Feb 2012. China Car Navigation Industry Report, 2011 http://search.proquest.com/docview/919190646/976E9D6241C64079P Q/18?accountid=31259#
- Ulmon GmbH Manila Travel Guide and Offline City Map (2015) https://itunes.apple.com/ph/app/manila-travel-guideoffline/id808198128?mt=8
- Zhang, Lei; Xu, Bo. (Mar 2015): The Journal of Navigation 68.: 367-382. Navigation Performance of the Libration Point Satellite Navigation System in Cislunar Space

http://search.proquest.com/docview/1651953265/976E9D6241C64079 PQ/10?accountid=31259#

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