HiCAS (HIGHWAY CONTEXT AWARENESS SYSTEM):

Information Delivery On Highway Facilities – A Preliminary Study

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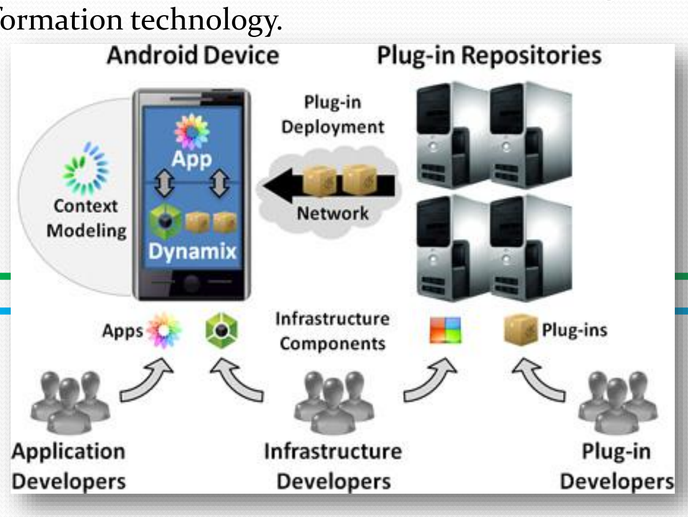
HiCAS Project
Construct Research for Malaysian Highway

INTRODUCTION Context information is the information that documents the relationships of the content Information to its environment. Storage of such information can define how effective the deliverance of retrieving information. This research tries to create an on-time alert information for highway user comfort and safety measures in supporting their pleasure journey. Computer application basic inputs, such as keyboard strokes or pointing devices, supply only limited information about the surrounding highway environment, and it is not suitable for highway user to attempt the same technology. HiCAS is an attempt to reduce illiterate highway users and produce a core ideas on the approach of educating the highway user through context information technology.



PROBLEM STATEMENT The necessity of context information grows as applications need to adapt to the environment in which they are used, and for that this research attempts to develop a prototype that can deliver important and useful information to the highway user through the milieu of context technology. In Malaysia, the current technology that are being use is not prompt enough to say that the awareness of using highways is properly conducted. The early road usage awareness only applies for the urban signage and knowing road signs, and never the tentative measures that need to be taken during highway cruising. The research conducted in hope that this adaptation increases the awareness and makes sure that the results are well adapted to the specific circumstances; to ensure the deliverance of highway information fast.

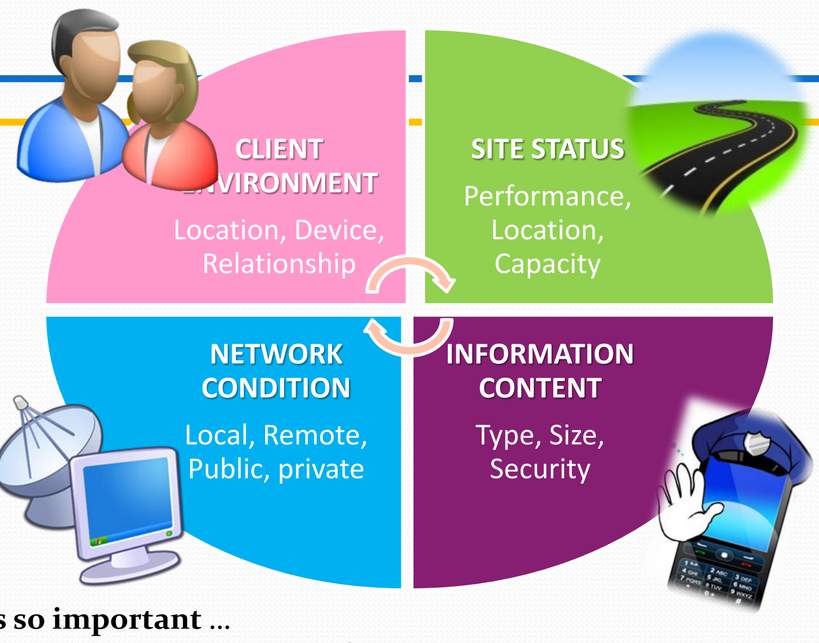
OBJECTIVES The main objective of context-aware computing is the development of applications that helps with the deliverance of information on highway , without being limited by usual input devices, acquire and use context information to better adapt to the circumstances in which interactions between the repositories of important highway information and telecommunication satellite and retrieved via a text message on mobile phones.

Other objectives that can be contributed through the path of this research are;

1) To provide a humanize attribute for sharing highway facilities and information.
2) To address the changes in increasing need of highway context awareness information circle.
3) To ensure the safety, comfort and ease of national roads and expressway facilities.

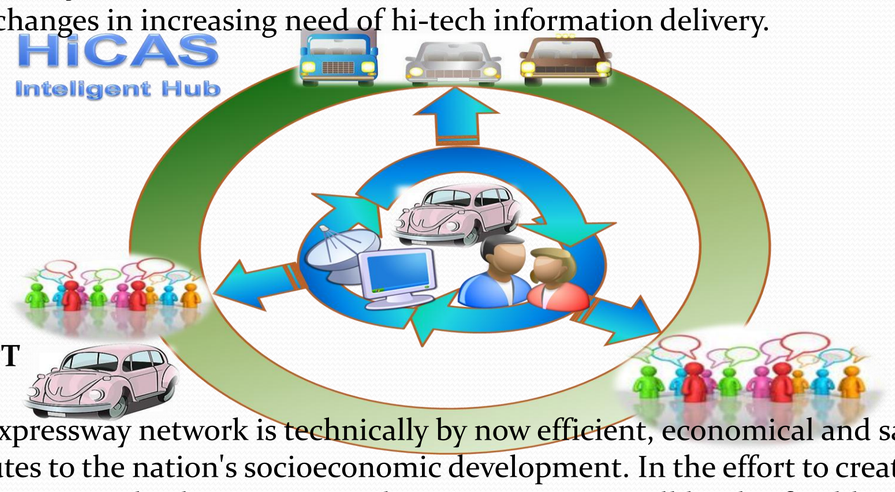
COMMERCIALIZATION POTENTIAL Potentially relevant concepts to be used by systems designers for the development of Highway Information deliverance devices/ signals through mobile phones.

ACKNOWLEDGEMENT First and foremost our thanks goes to Allah SWT that give us life, giving us the patience and lighten up our mind in conducting the research together. Our deepest and sincere thank you goes to all that involves in constructing the ideas for this project, generally the people of Faculty of Architecture and Build Environment of TWINTECH International College of Technology and Faculty of Information Management, Universiti Teknologi MARA. Our gratitude also dedicated especially to our best-halfs that have been and always will be our inspirations and backbones, our husbands, daughter, and extended family members. A special thanks goes to the organizations that opened up to us and giving us the opportunities to conduct the research; 1) Projek Lebuhraya Utama Berhad (PLUS), 2) Highway Planning Unit, Ministry of Works Malaysia, and also 3) Highway Authority of Malaysia (Inc.).



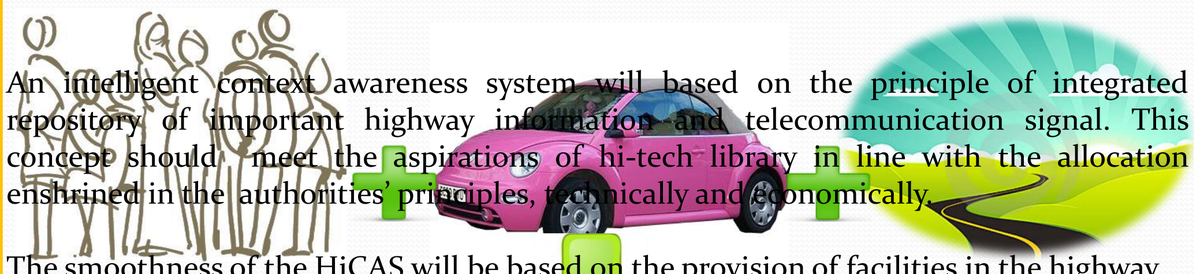
HICAS is so important …

- ✓ to support the government transformation programme towards vision 2020 in the NKRA's no.6, to join forces with transformation of urban public transport programme.
- ✓to support the concept of one Malaysia people first performance now, in challenges of transformation progressive society, oriented toward modern science and technology.
- ✓to support the highway planning unit, ministry of works Malaysia in their objectives no. 1 and no. 5.
- ✓to support the highway authority of Malaysia (incorporation) in their objective no. 1 and the client's charter no 1.
- ✓to accommodate an attribute for sharing highway facility information among user and service the authority.
- ✓to address the changes in increasing need of hi-tech information delivery.



HI-CAS CONCEPT

National roads / expressway network is technically by now efficient, economical and safe as well as contributes to the nation's socioeconomic development. In the effort to create Malaysia expressway networks that is more resilient in overcoming all kinds of public infrastructures challenges brought about by globalization, including socialistic, economical and political, some intelligent context awareness linkage need an improvement.



An intelligent context awareness system will based on the principle of integrated repository of important highway information and telecommunication signal. This concept should meet the aspirations of hi-tech library in line with the allocation enshrined in the authorities' principles, technically and economically.

The smoothness of the HiCAS will be based on the provision of facilities in the highway system and implemented independently by the system itself. This fact has a mechanism in which the operations system must satisfy the needs of all operation groups through their own representatives.

Driver Behavior

The Malaysian concept seeks to strengthen relationship and cooperation among the Authorities in this country as the main instrument to thwart the various threats and challenges that may disrupt the sanctity of government and economic transformation programme. This Hi-CAS concept, if applied by all concerned, is also able to turn Malaysia national roads / expressway network into a more safe, peaceful and efficient land public transport network in every endeavour that will be respected by the world over.

HUMANIZE ENVIRONMENT

Current dissemination information globalization challenges sweeping the world require the reassigning of science and technology so as to not be excluded or isolated from the speed of development or become victims of oppression by certain quarters.

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