URINVENTORY: MOBILE INVENTORY FOR EQUIPMENT TRACKER

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ABSTRACT

In institutions managing equipment tracking and navigation poses a significant challenges due, to the complex and an expansive nature of the buildings in campus. The study focussing on the buildings at UiTM Seri Iskandar where one could clearly see how challenging it is to find your orientation and equipment given complex building layouts. With this in mind, we introduced URInventory as a mobile inventory system that was designed to streamline equipment management and provide an improved experience for the user. Ten buildings were targeted for the initial phase on the UiTM Seri Iskandar campus to collect and convert data in this project. We developed GIS floor plans and 3D representing exact room layout, with dimensions of devices placed in the facility using Android Studio, AutoCAD (Architectural Design), Sketchup along with plugins for excel file accumulation which was possible to synchronize related data points on Google Earth Pro, ArcGISPro or google map. The models were then merged into a broad yet unthriftily geospatial database, which came equipped with GPS coordinates and equipment inventories tracker.This database served as the backbone to support for the URInventory mobile system. The background duties of URInventory demonstrated a great improvements in accuracy and efficiency. Users were able to locate the buildings with a positional accuracy of 1 meter, and the time required to find equipment was reduced by the efficiency of the

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CHAPTER 1

INTRODUCTION

1.1 Background of Study

It can be overwhelming to remember and to keep track of each equipment in each buildings with many rooms and floors just in one building. The sheer volume of items and spaces makes it difficult to keep track of everything and people always forget about everything they've done in their life. Human memory is not always reliable, especially for details. People may remember general layouts but struggle with specific details like the exact number of items or their locations even if it's a big location of buildings. This research was conducted because most people have always found it difficult to locate the exact location that they've never been to or in unfamiliar buildings and to keep track of the building equipment inside of them. We have always found the UiTM Seri Iskandar buildings to be extremely large and expansive, which is why we decided to create a mobile inventory that are called "URInventory: MOBILE INVENTORY FOR EQUIPMENT TRACKER." We expect that by using spatial data technology and our knowledge that we've gained from timesto times by attending lecture classes and the experience we gained from our geospatial technology to create a mobile inventory, a make room location, reservations, and equipment tracker, we will improve the user experience and make it easier for either new students or any user to get settled on building facilities. We have started the project with an emphasis on obtaining