

INDOOR POSITIONING SYSTEM FOR ASSISTANCE IN LOCATING OBJECTS IN THE AREA

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ABSTRACT

The life of working people is exhaustive, so on entering in the house; the habit of keeping things unknowingly is prevalent. Due to this it is resulting into search of the things being kept leading to a panic situation. Moreover, this can be also used to assist the elderly to find their articles and help them in avoiding panic situation. The elderly generally need assistance for finding their general things like their spectacles, their stick, etc., whereas the working people need this help for finding the keys of vehicle, which can be kept anywhere insanely. This article basically presents a idea for using the wireless Active RFID system for locating the objects in your house.

I INTRODUCTION

Now-a-days the number of people working down the line has increased tremendously. It is not only the case as even if working population has increased the workload on the shoulders of the people hasn't decreased. This has led to an increased mental stress on individuals leading to instability in all walks of their personal life right from the house to work table. This instability leads to abnormal habits of keeping things improperly and then wasting time to search them. Moreover this can help the Aged people in house for assisting them in finding their things. Aged person at your house searching for his spectacles is common site. So in this age of "WORK SICK" people we will not always be there to help the old adults each time. So to overall improve the living standards of the aged ones also the proposed will help us.

The proposed system will not only help them with such sort of assistance but also assist their family in keeping a track of their daily activity and may also help in case of emergency.

The need for such a sort of system is that use of camera for such use is undesirable as it might hinder one's personal life. This might also create some misunderstanding in the minds of aged people and create a problem in assisting them.

II PROBLEM DEFINITION

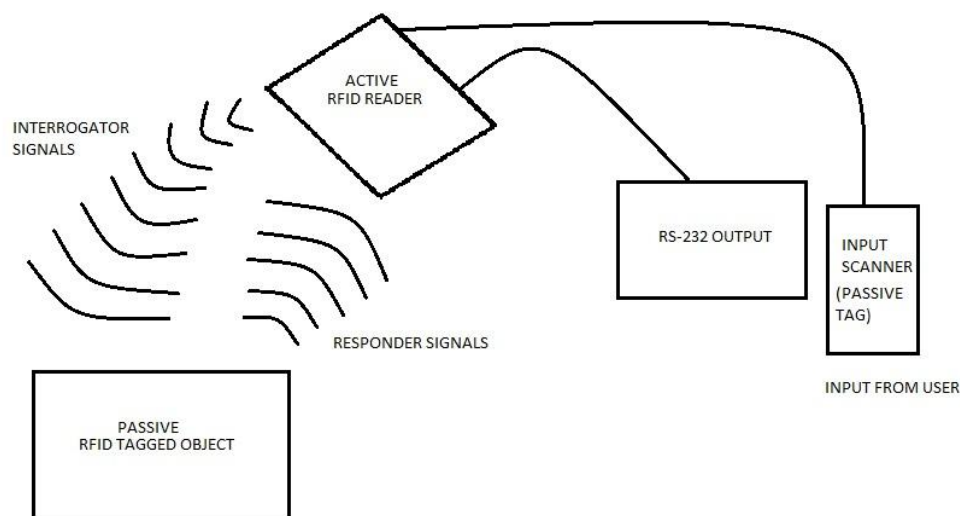
Mental and work stress, age factor are some of the components that lead to failure of remembrance of location where the things have been kept especially with the smaller things like the keys of vehicle, etcetera. The process of finding the things should be made easier and faster by automating it. This can lead to some amount of stress

and can affect your work. Thus this paper presents a concept of finding things which can make the process easier.

III ACTIVE READER AND PASSIVE TAG

IN the proposed system we use the Active Radio-Frequency IDentification to track a position of the object. We here use a system known as **ARPT (Active Reader and Passive Tag)**. The system has an active reader, which transmits interrogator signals and also receives authentication replies from passive tags of the system.

The system can be interpreted in the following diagram:



BLOCK DIAGRAM

In the above diagram as seen there is a; as mentioned above a passive RFID tag which we put on the objects present in the house that send the responder signals to the RFID reader. We also use a Active RFID reader which sends interrogator signals throughout.



RFID TAGS(PASSIVE)

So for finding a object the user may give the input of the RFID tag of the particular object which is tagged to the object. These tags are additional tags which can be as input to the system so that they can be scanned and using the OIN (Object Identification Number) they can be used to find the object.

The RFID can give output in various ways such as RS-232, RS-485, etcetera. So the given output can be given as a video or we can use buzzers in particular area of the house to buzz which can make the finding of the objects easier for the user.

For e.g. we can consider a scenario in which we arrive at home late in night and we kept the key of our vehicle accidentally on sofa, we may forget where we have kept the key; thus spending the time searching for the key the next day and getting late for office.

IV CONCLUSION AND FUTURE WORK

Thus we can use the given proposed system to construct the smart homes which can be used to find the different objects spread over the house. In the above scenario, the proposed system can also help us if the key of vehicle is tagged with the RFID Tag and if scanned can easily help us find the key thus saving our time for finding it.

For this the future work may include that the process may include the NLP which may also reduce the stress of scanning the additional RFID tag which would ease the process of finding the object.