**ASSET VISIONER AND AUDITING SYSTEM**

**SYNOPSIS**

**INTRODUCTION: -**

In any organization, company asset management is a big and tedious task. Usually they do this manually. Recently, High-Definition video cameras have become more accessible and are being used for data capture in asset management systems. These types of camera provide more pixel data regarding assets appearing further away and it would be useful if we could take advantage of this extra data. In this project, we are interested in the asset detection stage of asset management systems. This asset detection can either be performed manually by users, or automatically, which increases the whole system’s efficiency. Object recognition methods are an obvious choice for the automation of asset detection. Since, these methods can be trained to perform detection of assets in the captured data. One application of being able to find assets at all distances (including far distances) is the determination of sighting distances. That is, organizations can determine how far away their assets can be seen. This is especially important. But, to perform this type of asset detection, methods are required which perform distance-invariant asset detection.

Asset management systems allow organizations to efficiently store data pertaining to the physical location of important assets. Asset detection is a key component of such systems, the automation of which greatly increases efficiency and for which object recognition techniques are an obvious choice. Hence, this project presents a literature survey covering the different methods applicable to distance-invariant object recognition.

**OBJECTIVE:**

The main objective of this project is to identify which are all the assets missing from an organization, company etc. and to audit them.

**EXISTING SYSTEM:**

In any organization, the asset management is usually a tough task to manage. Usually assets are maintained manually, checking of the assets are also done manually. It involves trained people for performing the checking of assets. In general, a method’s performance decreased with increasing asset distance. There is no accuracy in this system. This system is manual and takes lot of time. Sometimes the asset might have been stolen, but it might not come into picture until asset is checked manually. Hence, there is a delay in noticing the missing/ stolen asset. There is no effective or accuracy in this system.

**PROPOSED SYSTEM:**

Asset management systems provide the tools to perform the data collection, storage and presentation. The imaging sensor and positioning equipment data is synchronized and stored in a database. A post-processing asset detection step allows the detection of assets. This project has presented a survey of object recognition methods, applicable to the task of automatic asset detection in asset management systems, where assets may appear at any distance. This system is effective and accurate. It reduces manual stress, time and is cost effective too.

**Features of proposed system: -**

1. Scale-Invariant Object Recognition Objects which are different distances away appear as different sizes (or scales) in captured images.

2. Distance-Invariant Object Recognition We make the distinction between scale-invariant and

distance-invariance as; distance-invariant methods utilize specific information regarding the expected distance of an object, whereas, scale-invariant methods are only concerned with size.

3.Active Vision: The previous methods which have been described are all applicable to fixed camera systems. However, active vision methods employ non-fixed cameras systems to enable object recognition of both near and far objects.

**SYSTEM REQUIREMENTS: -**

* Machine with 4GB RAM
* Camera
* TensorFlow or YOLO