9. SUMMARY

Thus far, we have given an overview of what a MV system entails, briefly highlighted the premises to such innovations and in doing this we touched on some non-industrial applications of the system (security and traffic automation). Furthermore, we highlighted the various requirements of a MV system, drawing attention to how applications could easily be modified or optimised by tweaking very simple components. Explaining that while it is easy to mistake CV for MV, for a task where the image of a coin is to be analysed, a CV approach would begin with a Jpeg file while a MV approach would start from the physical representation of the coin in question and how the image of this coin is collected.

Over subsequent chapters, we have dived into a concise description of our employed apparatus (Cognex IS7905C-373-LAB), detailing some specific features and industrial applications before giving an overview of its CIE software. This section concluded with a pedagogical description on how to connect this apparatus and navigate through creating a task on this software. Afterwards, a description of a CAD model for the proposed camera stand along with pictorial representations were made. Some mathematical tools were employed to give theoretical empiricism of the integrity of design.

Having done some theoretical work, it was time to take our work to the laboratory for empirical results. To this end, some main functions of our apparatus were tested, and these results analysed with pictorial representation where necessary. These results were then used to draw some conclusion and where necessary recommendations.

At this junction, an economic analysis of the MV project was done, considering an alternative to a MV system (human labour) and comparing the costs of both over a three (3) year period and at the end of this analysis, we made educated conclusions that the MV system is more efficient and economically advantageous than the employment of human labour.

Other conclusions and/or recommendations include.

- Natural light should be as controlled as possible to improve results.
- When faced with performance faults, a mechanical/physical approach should take precedence in solving this MV problem.
- The current setup in the FMS laboratory at Tallinn University of Technology is not ideal for the Cognex camera as there is an excess of natural light.
- The camera stand has been designed for variable use in case the location changes.
- It is cheaper to use a MV system than to employ human labour.

In conclusion, it is important to iterate that all tasks and experiments were done to the utmost of accuracy the condition surrounding the performance of there experiments would allow and though the setup was not ideal, the results obtains and put forward there in were accurate to 90 percent (90%) at least in all cases.