CHAPTER 8

CONCLUSION

The thesis brings us to a conclusion by discussing various issues on Intelligent Manufacturing System. In the first phase we are able to develop a framework for knowledgebase creation using Neuro Fuzzy approach. The expert system inference engine understands the creation of knowledgebase which starts by translating information from decision tree into a language. It is to locate the solution to a composite problem by using reasoning techniques about the knowledge as an expert does and it emulates the decision making ability of a human expert system. Chapter 4 discuss about generation of Expert System using Back Propagation Learning Network. The weight changes in Neural Network are determined by Fuzzy Inference Rule. Finally a Matrix showing the Cartesian product of Resources versus Process are being created. Second phase deals with Multi Objective Intelligent manufacturing System using knowledge creation and factor of Production. It consists of three phases. Model Building, Decision Making and Optimization. When the problem related to optimization involves situations where we have more than one objective function and the finding of best amongst the available most favorable solutions is called the Multi Objective Optimization starting with Intelligent manufacturing system. The feature deals with all the technological and geometric information of each feature. The Decision Makers provides the necessary solutions to the above problem, then decision rules are used by Heuristic solver. The goals are prioritize according to the relational operator, the ranking of whole population based on relationship theory.

Finally, a relationship between Maximize Profit Perception and Knowledge creation is derived. The knowledge generated by the Heuristic solver is being desired through “Factor of Production” leading to generation of trade off between vector of decisions like L,R,K and S which can be controlled by the user vector of external impact not under users control along with set of feasible decisions. Chapter 5 provides a brief overview of
Decision Maker and Pareto optimal. The optimization graph of given solution vector for production function is considered. Chapter 6 to determine optimal configuration of multi state a new multi objective algorithm is present. On availability analysis the multi state and multi task systems are based. Through the configuration we can measure the performance of manufacturing system. The solutions to the given problem are a set of all proficient solutions that give us a trade off among the numerous distinct objective function that are considered. We have developed a Tool in which a case of Mobile handset manufacturing process is considered by setting on the priorities and weights. Once the user has entered all the details he will be provided with the Feasibility status as well as the Priority for Machine scheduling. It also provides the economic comparison with the previous product launched in market so that one can determine the profit on that product.

The expert system uses multi-objective optimization evolutionary algorithms to determine any multi state; the multi task production system used should be based on the availability analysis. The configuration of a manufacturing system greatly influences its performance. Availability is utilized in reference of multi task production systems for the selection of the vital configuration that will take advantage of the possibility of meeting the desired specimen. It solves the problem of optimization which was occurring in previous models. It also keeps the budget and estimated production cost in mind and calculates the result i.e. order of the machines in the priority manner without causing them the damage.

This problem solved by a template of reliable solutions that will provide a trade-off among the various available objective functions. Accuracy provided by this expert system that does all the thinking for human based on pure calculations and zero assumptions makes it worthwhile software for any company to consider. It is also advantageous as on the basis of older versions of the product, it can calculate the profit or loss that a company may endure because of the added characteristics to its new product. It also shows the economic comparison charts between the older and newer versions and how by manufacturing a newer product will profitable.

FUTURE SCOPE
In future we would like to extend our work on emotional aspects of product design and correlation with multi objective optimization principles.