Chapter 6

Conclusions & Future Scope

6.1 Conclusions

The project entitled, “Cardiac Waveform Analysis & Wireless Transmission Using Embedded Controllers”; has been successfully carried out and following conclusions are derived from the same.

1. Online 12 lead ECG signal from the human body surface can be captured, analyzed and displayed.
2. The data can be recorded, and viewed as an when required for diagnosis.
3. Software has been developed using fresh approach in the higher level language C++ to detect irregularity in the cardiovascular system.
4. GUI has been developed using Visual Basic 6.0 for easy operation of the system.
5. The output of the system that is the characteristics of ECG and arrhythmia can be transmitted using GSM module.

6.2 Future Scope

As the microprocessor and its parent semiconductor technology continue to evolve, the resulting devices will stimulate development of many new types of medical instruments. We cannot even conceive of some of the possible applications now, because we cannot easily accept and start designing for the significant advances that will be made in computing in
the next decade. With the 100 million transistor microprocessor will come personal super computer. Only futurists can contemplate ways that we individually will be able to exploit such computing power. Even the nature of the microprocessor as we now know it might change now towards the architecture of the artificial neural network, which would lead to a whole new set of pattern recognition applications that may be more readily solvable than with today’s microprocessor.

The choices of a laboratory computer and operating system, and a language for a task must be done carefully. The new high level programmed PC’s have emerged as a clear computer choice because of its widespread acceptance in the market place. The fact that so many PCs have been sold has produced many choices of hardware add-ons developed by numerous companies and also a wide diversity of software application programmers and compilers.

Research can be extended on developing the system to detect and analyze more number of arrhythmias. System can be made more compact with latest technology.