

# Afterword

This book has described various aspects of microprocessor systems, using a top down approach in which the concepts are introduced and then the topics are examined in more detail. The three topics covered are logic, hardware and software.

In logic, simple combinational logic circuits were considered first, together with techniques for their design. Then sequential circuits were described. Finally, it was shown how logical operations are used to perform arithmetic operations.

The hardware section considered the structure and operation of a system and the principles by which information is transferred between the components of the system. Specific circuits were then developed showing how slave devices may be connected to a simple system and then to three practical systems, the 8051, the 68020 and the STE bus.

The software section considered the ways in which software can be developed, the typical instructions provided on microprocessors, and then programs were written for the 8051 and the 68020; for the latter it was also shown how assembly language and high level language code can be mixed.

In the final chapter, the means were described whereby a microprocessor system is developed and tested, both the hardware and the software.

The appendices describe the 68020, 8051 and the STE bus in more detail, as well as describing some practical details of logic devices and the new standard for logic symbols, which may be adopted in practice, and providing answers to the exercises.

The author hopes that the reader finds the book useful by showing how microprocessor systems may be designed and developed and providing insight into the ways in which these systems operate.

P.S. In the preface, the author expressed the hope that all the acronyms in the book were explained. The reader, however, might be wondering what STE stood for (even though STE is not an acronym). In fact, STE was originally developed as an improvement on the STD bus (STD standing for standard). Thus the E in STE is the next letter on from the D of STD. Subsequently, it has been said that STE stands for standard on Eurocard. It has also been claimed that the E comes from the name of the person who first proposed STE.