

ABSTRACT

IMPLEMENTATION OF A FLOATING-POINT SYSTEM  
FOR THE 6809 MICROPROCESSOR

Paul Michael Grey

The use of microprocessors for scientific computations, demands the availability of Floating-point representations to overcome the scaling problems of Fixed-point systems.

This Project Report presents an implementation for the 6809 Microprocessor Unit based on the IEEE Standard (754), for Basic Single-Precision binary floating point numbers.

Along with the usual benefits of standardization, the IEEE Standard provides for thorough error checking and clearly defined responses to exceptions.

This Implementation offers the four basic operations:

ADDITION

SUBTRACTION

MULTIPLICATION

DIVISION

for decimal and basic single-precision binary