Microprogramming a processor architecture which has multiple parallel pipeline functional units has long been recognized as a difficult job. Although progress has been made in designing and producing higher level programming tools for this job, it remains an area dominated by meticulous hand coding, usually requiring high wizardry. We identify two aspects of this microprogramming problem and describe some experiences with them. These aspects are:

1. Reconciling the need for efficiency with the need to present end users with microprogramming units which are understandable, usable, and reasonably abstract.

2. Designing tools which can facilitate microprogram development and increase confidence in the correctness of microprograms.