

KEEPING THE SYSTEM RUNNING SMOOTHLY

Now we know, more or less, how to make everything work, we can turn our attention to making it work well. The meaning of "well" has to be derived from our overall aim of bringing computer services to people. The aim, as always, is to keep people happy. They want to be able to get work done reliably, conveniently, and reasonably quickly; they want to worry as little as possible with anything not directly connected with their immediate interests.

Of course, we have had these concerns in mind throughout our development, so we are sure that each individual component of the system satisfies these criteria as well as we can manage. There remain, though, a number of factors which determine the performance of the system as a whole. It takes more than the operating system as we usually understand the term to address these requirements, let alone to satisfy them, for we are now facing – really for the first time – decisions which the computer system cannot make.

Decisions of this sort fall into two groups. The first group contains the decisions about what the computer system is going to do : what sorts of work will our computer system handle ? – is some of it more important than other parts, and, if so, what are the priorities ? Decisions in the second group follow from the decisions made in the first (or, at least, they should do) : what machinery do we buy to support this work ? The decisions in the second group determine the system *configuration*, which can mean the collection of hardware and software which constitutes the system, the process of deciding the composition of this collection, or something else which we shall discuss later. The decisions in the first group cover *specification*, in which the purpose and function of the system are determined, and which is not much of our business; they lead on to *scheduling*, where, given the configuration and the work to be done, we have to decide what to do when, and that certainly is our business. If we stick to the usual view of an operating system, then configuration and specification are not included; in our view, specification is governed by other considerations, but defines the job which we have to do, while configuration, which is exceedingly important in determining what services can be offered, is properly a part of our study.

We shall therefore discuss each of them rather briefly, but emphasise that the brevity is not because they are unimportant; rather, it is because this course is essentially technical in nature, and these two topics are more managerial. It is nevertheless essential that the technical and managerial components must interact strongly if the overall computer system is to be successful in achieving its aims.
