4.1 Background

The work we describe in this paper formed the background to two large government-funded projects, GIST and DRAFTER, which aim to provide intelligent tools for the automatic generation of multilingual versions of technical documents in two domains: administrative forms and software documentation, respectively. In order to draft a realistic set of requirements for the generation tools we intended to create, we felt it was necessary to acknowledge that they should not be seen as stand-alone tools. Instead, if they were to be accepted by writers, they would need to be integrated as closely as possible into the technical writers’ current use of computer tools and into their wider working practices.

We therefore set out to investigate the environment in which the proposed tools would be used, to find out how technical writers organise their work, and in particular how they currently use any computer-based support tools. From our investigations there emerged the requirement for a set of software tools to support current practice in technical writing, as well as a number of issues which might lead to changes in the role of the technical writer as it is currently understood.

4.2 Deriving a Model of Technical Writing

As the first stage in our investigation, we held a meeting with an invited group of technical writers, both in-house and freelance, using brainstorming sessions and group interviews. Our aim was on the one hand to obtain a clear idea of the processes involved in technical writing as currently practised by reflective expert practitioners, and on the other to gauge the writers’ attitudes towards the technical writing, as well as a number of issues which might lead to changes in the role of the technical writer as it is currently understood.

The discussions therefore covered a range of issues, from overarching constraints of time and budget to personal involvement and perceptions of areas of the job as interesting, rewarding, challenging, difficult, frustrating or tedious. The writers explained the succession and timing of processes in the documentation task from start to finish, and their coordination and monitoring. They also described the forms in which the evolving document is represented, the sources and channels of information, and the tools and resources they use.
The first session was followed up by a number of meetings with technical writers in their own workplaces. The writers were primarily software documentation specialists, though we also interviewed the documentation staff of a large heavy engineering company. We used a combination of structured and unstructured interviews and sessions with a non-functional prototype system. In addition to supplying further details of the authoring process, this allowed us to build up a picture of the environment which technical writers create for themselves out of their computer-based tools, handbooks, dictionaries, notes, telephones and so on.

4.2.1 What do Technical Writers Do?

We expected to be discussing the writing process and deriving a model of how experienced writers write. In particular, we expected to hear about the particular requirements of planning (cf. Flower et al., 1989) and writing technical text in a readable form with, possibly, an emphasis on task and user orientation. Our conversations revealed, however, that technical writers spend much time on aspects of the job not suggested by their job title. Also, they spend little time working on whole new texts: the greater part of their work is updating existing documents.

4.2.2 The Documentation Process

Five main types of activity emerged from the discussion: knowledge acquisition, document planning, composition, validation and maintenance (see Figure 4.1). Although conceptually distinguishable, these activities are interleaved in the production process.

4.2.2.1 Knowledge Acquisition

Technical writers plan and draft both new and updated documents of various kinds, in a variety of organisational structures. But before this, and also concurrent with it, is a 'knowledge engineering' activity which is vital and which ideally involves close collaboration with designers or engineers. In other words, before technical writers are in a position actually to write, they must first gather and structure information about the product or procedure in question.