

# Introduction

THE EDITORS

Acquiring data is usually recognised as being one – perhaps the largest – of the cost elements of setting up a GIS. This Section therefore concentrates on several different aspects of this important management issue.

The first requirement of many users is for ‘framework data’ (Rhind 1997) – that which define the location of topographic and other key features in the natural, built, or cultural landscape in relation to each other. On this is ‘draped’ all other ‘thematic’ data. Neil Smith and David Rhind (Chapter 47) describe the nature and desirable characteristics of these framework data as well as their sources. They consider the role of high resolution remote sensing data as an alternative to existing digital maps and show that both have certain advantages. Finally, they point out that most frameworks to date have been constructed within a national context and that this inevitably leads to problems for those dealing with multinational areas. Few such trans-border problems afflict imagery obtained from satellites (though they suffer other problems); Jack Estes and Tom Loveland describe the potential and sources of such remotely-sensed data for monitoring and management of areas at minimum cost and maximal effectiveness (Chapter 48).

There are many data already in existence and held by governments and other bodies worldwide, although most sources will doubtless have imperfections (e.g. being more out-of-date than is desirable). The problem is often knowing what datasets do exist, who is responsible for them, and how to obtain them. Thus the creation of online metadata – data about data – services has come to be a high priority in many countries of late, not least because the existence of metadata should minimise the duplication of data collection and hence minimise the waste of scarce resources. Stephen Guphill summarises the important

early work done in the USA on metadata and the creation of data catalogues, leading to online ‘clearinghouses’ (Chapter 49). He points out, however, that we are still at a rather early stage in the evolution of metadata services, not least because we do not yet have tools for establishing whether particular datasets are ‘fit for (a particular) purpose’.

The recognition of the need for standards relating to GIS data, let alone those for computer systems more generally, originated at least as early as 1969. Since then, massive resources have been devoted to the definition of standards worldwide, some of this work has been rendered obsolete through the growth of online working. Nevertheless, the importance of standards is universally acknowledged in order to facilitate easy, reliable, and cheap use of data compiled elsewhere and to allow systems created by different vendors to work in tandem. François Salgé (Chapter 50) describes some of the complexities arising from having many different players engaged in the ‘standards business’, ranging from national data providers, through national and international standards bodies, to the private sector. The result is inevitably complexity and some uncertainty – will Microsoft simply produce *de facto* standards used by everyone and will all the years of effort by many public sector bodies simply be wasted? He argues that the work of the European standards organisation CEN and that of the ISO will lay the foundations for many *de jure* standards for years to come.

### Reference

Rhind D W 1997 *Framework for the world*. Cambridge (UK), GeoInformation International