Ingrid Lemberg, Bernhard Schröder and Angelika Storrer (Editors). Chancen und Perspektiven computergestützter Lexikographie. Lexicographica. Series Maior 107. 2001, 270 pp. ISBN 3-484-39107-3. Tübingen: Max Niemeyer. Price: € 72.

The present volume is a collection of thirteen papers resulting from a symposium on the computer-aided production and publication of dictionaries held in Heidelberg in 1988 (p. 4). It is subdivided into two sections, Basics (*Grundlagen*), which discusses the impact of computational methods on lexicography in general, and Applications (*Anwendungen*), which contains descriptions of various existing computer-aided lexicographical projects. All of these projects deal with German as the object of lexicographical description and many of them are concerned with specialized scholarly dictionaries, often of historical stages of German. Thus two articles (Burch and Fournier; Plate and Recker) deal with Middle High German and another one (Gloning and Welter) with the language of Goethe. Some articles, however, also describe projects dealing with present-day German and the design of general purpose dictionaries. Thus Petelenz discusses information design in an electronic Polish–German dictionary and Haß-Zumkehr focuses on the organisation of the microstructure in the LEKSIS-database of the Institut für Deutsche Sprache in Mannheim.

There are several themes of computational lexicography which resurface time and again in many of the articles. One such theme is the question of the encoding of lexicographical data. Generally, the authors recommend SGML or XML for this purpose because both markup languages are sufficiently powerful as well as platform and software independent. SGML and XML feature prominently in several articles. Thus Büchel and Schröder give an introduction to the basic concepts of data markup as well as the storage of data in database systems; Schmidt and Müller set out to develop a new model of lexicographical data structuring, which clearly separates the level of the storage of structured data from the level of data presentation of the user; and Burch and Fournier discuss the application of the guidelines of the Text Encoding Initiative (TEI) in digitising the entries of traditional print dictionaries of Middle High German, arguing that the difficulties they encountered by and large do not result from weaknesses in SGML but rather from the print dictionaries themselves, which are not consistent in their presentation of information.

Another dominant theme is the "added value" which authors see in computer-aided lexicography both for lexicographers as well as users. With respect to the compilation process, Plate and Recker discuss the creation and use of a digitised text archive as an empirical basis for the creation of a new Middle High German dictionary. In contrast to the time-honoured process of collecting citations first and then writing up the lexicographical entry on the basis of the collected citations, lexicographers can now directly access and electronically search through the full text of the archive, which will result in a more balanced view of the properties of the lemma. As Lemnitzer shows, electronic online dictionaries can also help the lexicographer to find out more about users' needs by registering the frequency and kind of users' queries as well as their success

rate. Also of interest for lexicographers is computer-aided research in the neighbouring field of lexicology; in this vein, Kunze and Wagner present the GermaNet project and compare it to its American cousin WordNet.

From the user perspective the added value of electronic dictionaries includes the multimedial possibilities of the electronic platform as well as the essential flexibility in data presentation. Thus Richter explains how a dictionary of *Flurnamen* (i.e. names containing topographical elements) can be enriched by material such as aerial photographs or pronunciations of local speakers, which in a printed dictionary is possible only to a very limited extent (pictures) or not at all (sounds). More generally, this point is also argued by Storrer, who explores the possibilities of the hypertext concept in lexicography. The essential flexibility in data presentation materialises in the possibility to access the dictionary in various ways in complex searches as well as the possibility to adapt the selection and display of data to the specific needs of the user as is argued for example by Klosa in her article presenting assessment criteria for the quality of CD-ROM dictionaries.

In sum, the anthology gives a well-rounded picture of aspects of electronic lexicography. However, since electronic lexicography has been developing at such a fast pace since the book was published, not everything rings quite so new (and newsworthy) as it might have rung five years ago. For example, from today's perspective there is little need to argue in favour of SGML/XML, the latter of which is nowadays generally and uncontroversially regarded as a markup standard.

Other aspects of the book are clearly outdated; for example, Storrer's complaint about electronic dictionaries more or less directly copying their corresponding print dictionary (p. 54) was certainly justified at the time of writing but is much less valid today. A good up-to-date CD-ROM dictionary such as the electronic version of the *Longman Dictionary of Contemporary English* (4th ed.) shows a host of advanced features including additional material, field-based and spelling-tolerant searches, and multimedia features, i.e. exactly those desiderata called for by authors in the present volume. Not surprisingly, this outdatedness also concerns internet links. Thus the link given for Burch and Fournier's Middle High German project <gaer27.uni-trier.de/mwv-online/mwv-online.html> (p. 135) as well as the link given by Lemnitzer (p. 248) for the dictionary publisher Zeres <www.zeres.de/dict> is broken and gives an error message.

Nevertheless, readers who are new to the field of electronic lexicography and have a special interest in German lexicography will find the anthology a rewarding read.

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