Book reviews

SMIL 2.0 Interactive Multimedia for Web and Mobile Devices by Dick C. A. Bulterman and Lloyd Rutledge, Springer X.media.publishing, 2004, 440pp, ISBN 3-540-20234-X.
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This is the first textbook containing a complete, in depth description of SMIL. SMIL is an XML language, promulgated by the World Wide Web Consortium, for multimedia authoring. SMIL may be used to create sophisticated multi and hyper-media artifacts by means of the temporal and spatial integration of existing media items, and by defining certain forms of reactivity among such media items. SMIL is typically used for "rich media"/multimedia presentations which integrate streaming audio and video with images, text or any other media type. In common with all XML languages, SMIL is declarative in nature and permits the author to ascribe values to attribute names, such as duration, start, and so forth, which serve to define the behaviour of the items comprising the multimedia artifact.

Despite considerable interest in SMIL, especially in the academic community, there has until now been a relative dearth of comprehensive, user-oriented material dealing with the language. This monograph fills the gap admirably. It is written by two of the foremost experts on SMIL, both of whom were intimately involved in the development of both SMIL 1.0 and SMIL 2.0. The authors, appropriately, claim that the book is designed for three audiences: existing SMIL users who need more information, new SMIL authors, and multimedia developers; the book more than adequately meets the needs of these three different audiences. The book is not intended to introduce the concepts of multimedia or, more specifically, multimedia timing concepts.

The book certainly achieves its aims of meeting the needs of newcomers and more seasoned developers. In this regard, a particular strength of the volume is the diversity of examples used to describe features of the SMIL language. The newcomer is presented with six examples introduced in Chapter 1 of the book, where they are used to describe the power of SMIL and its diversity of applicability. A number of these examples reappear later at various stages of the book used later on when describing specific SMIL features.

The book encourages a hands-on approach to learning SMIL. Part One of the book, comprising the three initial chapters, provides a complete overview enough features of SMIL that the reader will be in a position to modify existing SMIL presentations and create his or her own new ones once this material has been assimilated. It is noteworthy that in addition to the complete stand-alone presentations, the book contains numerous illustrative code fragments, many of which could be used as templates by the reader when creating her/his own scripts. In this regard, however, it is disappointing that the book does not include a CD ROM containing the examples and code fragments and a SMIL player. This is particularly so as the website to which the reader is referred for this purpose appears to lack the section containing the demos and code in the book! Some of these are on the website, but one has to dig deep to find them. Even so, the website will be of little help to the insomniac reader crossing the Atlantic, who wishes to pass the time by adapting one of the book's presentations.

Parts Two and Three of the book provide a more structured, thorough treatment of basic and more advanced SMIL constructs. Once the multimedia author moves away from all but the simplest specifications, authoring becomes a far from simple task, and in all but its most

basic uses, SMIL is far from simple. The timing model of SMIL 2.0, for example, is intricate and complex, and this book takes good care to subdivide the treatment of this topic so that its various aspects are introduced in an understandable but at the same time usable fashion. Thus, these sections of the nook will be of equal interest both to the reader who wishes to apply SMIL in producing powerful artifacts and to reader whose interest lies in the linguistic, formal aspects of temporal aspects of multimedia. The same approach is successfully used for other aspects of SMIL, including topics involving Layout, and Content Control.

Despite the fact that SMIL is not intended for media content creation, SMIL 2.0 incorporates a powerful animation module, permitting multimedia presentations to include a variety of cartoon-like items. This topic is well covered in chapter 15 the book, but it would have been preferable for the reader to be exposed to and to use aspects of animation earlier on. Animation is viewed by many creators as an central aspect of multimedia; indeed for many, multimedia *is* animation and since the ability to specify a wide variety of animations in a relatively simple, uniform fashion is one of the attractive features of SMIL 2.0, the reader may well be frustrated by this late treatment.

A good deal of attention is paid in the book to existing SMIL editing and rendering software, so that the reader is made well aware of which systems are available for download and use. This topic is discussed in Chapter 1, so that the reader is in a position to acquire and install appropriate software is when beginning to learn the SMIL language. Further reference to tools and players is made as the book progresses. Such information tends, of course, to be very dynamic in nature, as new products are created, new versions of existing products are released, and so on. This is a further reason why it is essential that the book's website be kept strictly up to date, which it appears not to be at the time of writing. Furthermore, many SMIL users, especially in their initial stages, are likely to want to make use of the XHTML+SMIL Profile, since this is readily available in most existing Internet Explorer browsers. This profile presents, at least from the user's perspective, a number of significant departures from "standard" SMIL, and it would have been helpful for the book to include more material on this version of SMIL.

An important aspect of SMIL relates to the matter of accessibility. SMIL is intended for the specification of artifacts which can run both on powerful computers and on small hand-held devices, or which are suitable for readers who are unable to perceive particular media types. This matter is dealt with late on in the book and somewhat tersely, in Chapter 17; it deserves more thorough exposure.

Overall the book is extremely well written and is a joy to read. Despite the inclusion of some rudimentary, introductory material, the reader is treated as intelligent and knowledgeable and the style of writing and presentation are informative, thorough, and leave little to be desired. In addition to the numerous examples referred to earlier, the book provides clear and useful illustrative descriptions of the structure of most features of SMIL, as well as a useful set of references to related material. Surprisingly, the authors make no specific claim about the use of this text by students; it is admirably suited to such a purpose and would be entirely suitable for a senior undergraduate, or more likely postgraduate, class.

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Programming Languages and Operational Semantics by Maribel Fernández, King's College Publications, 2004, ISBN 0954300637.
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This slim volume by Maribel Fernáandez is Volume 1 of King's College Publications new 'Texts in Computing' series, edited by Ian Mackie. The book has been developed from notes for a second year undergraduate course at King's College London, taught by the author. One