

Introduction



Inform is a system for creating adventure games, and this is the book to read about it. It translates an author's textual description into a simulated world which can be explored by readers using almost any computer, with the aid of an "interpreter" program.

Inform is a suite of software, called the "library", as well as a compiler. Without the library, it would be a major undertaking to design even the smallest game. The library has two ingredients: the "parser", which tries to make sense of the player's typed commands, and the "world model", a complex web of standard rules, such as that people can't see without a source of light. Given these, the designer only needs to describe places and items, mentioning any exceptional rules that apply. ("There is a bird here, which is a normal item except that you can't pick it up.") This manual describes Inform 6.21 (or later), with library 6/9 (or later), but earlier Inform 6 releases are similar.

Since its invention in 1993, Inform has been used to design some hundreds of works of interactive fiction, in eight languages, reviewed in periodicals ranging in specialisation from *XYZZYnews* (www.xyzzynews.com) to *The New York Times* (see Edward Rothstein's 'Connections' column for 6 April 1998). It accounts for around ten thousand postings per year to Internet newsgroups. Commercially, Inform has been used as a multimedia games prototyping tool. Academically, it has turned up in syllabuses and seminars from computer science to theoretical architecture, and appears in books such as *Cybertext: Perspectives on Ergodic Literature* (E. J. Aarseth, Johns Hopkins Press, 1997). Having started as a revival of the then-disused Infocom adventure game format, the "Z-Machine", Inform came full circle when it produced Infocom's only text game of the 1990s: 'Zork: The Undiscovered Underground', by Mike Berlyn and Marc Blank.

Nevertheless, Inform is not the only system available, and the intending game designer should shop around. This author at least has long admired the elegance of Mike Roberts's Text Adventure Development System (TADS).

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In trying to be both a tutorial and reference work, this book aims itself in style halfway between the two extremes of manual, Tedium and Gnawfinger's *Elements of Batch Processing in COBOL-66*, third edition, and Mr Blobby's *Blobby Book of Computer Fun*. (This makes some sections both leaden and patronising.) Diversions or seldom-needed passages are marked with a warning triangle \triangle or two. Examples of program are set in typewriter font.

Mundane or irrelevant passages in longer examples are sometimes replaced with a line reading just “. . .”. Further examples are couched instead as exercises, with answers given in §A6. Many are intended not for first readers but to help those returning for some variation on the usual rules.

Chapter I introduces the language used to describe games without doing any actual game design. The real flavour of Inform begins in Chapter II, so that readers may want to begin there, turning back to Chapter I only as needed. Equally, the essential material designers need is mostly done by halfway through Chapter IV, so the book is not as epic as it looks.

One way to get a feeling for Inform is to design a simple game and to add an example of each new feature as it turns up. This book does just that with an eleven-location short story of 1930s archaeology, called ‘Ruins’, taking it from opening lines in §4 to a completed work with a step-by-step solution by the end of §23. Other example games for Inform include ‘Advent’, ‘Adventureland’, ‘Balances’, ‘Toyshop’ and ‘Museum of Inform’.

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The Alexandrian Library of the interactive fiction world is an anonymous FTP site at the German National Research Centre for Computer Science, where Volker Blasius and David Kinder maintain the archive:

`ftp://ftp.gmd.de/if-archive/`

Its unrivalled collection of early and modern interactive fiction (IF), including two dozen rival design systems, makes `ftp.gmd.de` the essential port of call for the IF tourist.† Also archived are “library extensions” and translations of Inform, and the source code of around fifty Inform-written games. Inform’s home on the World Wide Web, which includes Gareth Rees’s ‘Alice Through the Looking-Glass’ tutorial, is located at:

`http://www.gnelson.demon.co.uk/inform.html`

Here you can find a PDF (“Acrobat”) copy of this book; *The Inform Technical Manual*, a dry account of internal workings for the benefit of those working on the compiler; and *The Z-Machine Standards Document*, which minutely defines the run-time format.

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† Stop press: as this book goes to the printers, the archive is in the early stages of migrating to `ftp.ifarchive.org`, a process likely to be complete by end 2001.

Much of this book is given over to syntax and implementation, but the world model and its underlying rules are at the heart of Inform, and they owe much to earlier work in the field. Ideas of how to represent places and the location of items are owed to Will Crowther (c. 1975), while the use of a tree to represent containment derives from work towards ‘Zork’ (c. 1978) by students at MIT, whose artificial intelligence lab promoted the doctrine that such structures occur “naturally”. (Terry Winograd’s ‘SHRDLU’ (1972) had provided an adventure-like parser for a world of blocks supporting pyramids: it recognised pronouns, and allowed the “game” state to be saved.) The completion of today’s standard model of space, objects, lighting and the passage of time can conveniently be dated to April 1979, the publication date of the influential *IEEE Computer* article ‘Zork: A Computerized Fantasy Simulation Game’ by P. David Lebling, Marc Blank and Tim Anderson. The question of how best to model supplementary world rules, of the “you can’t pick up the slippery eel” variety, is less settled. Influenced by post-‘Zork’ Infocom, TADS (c. 1987) has a “verification stage” in processing actions, for instance, which may well be a better scheme than Inform’s before and after. The latter derive from a second tradition, based in Cambridge, England, not Cambridge, Massachusetts: in the first instance from an incremental multi-player game called ‘Tera’ for the Cambridge University mainframe Phoenix, written by Dilip Sequeira and the author in 1990. (The compiler was called Teraform, a pun of Dr Sequeira’s. ‘Tera’ was the sequel to ‘Giga’ and before that ‘Mega’ – anagram of ‘game’ – by Mark Owen and Matthew Richards.) This stole from the vastly more significant Phoenix game assembler by David Seal and Jonathan Thackray which in turn dates back to their creation, with Jonathan Partington, of ‘Acheton’ (c. 1979), the first substantial game written outside America.

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In the defensive words of its first, makeshift documentation, “Inform is an easel, not a painting”. Though I am no longer so sure that the two can be divided. While revising this book, I have been ruefully reminded of Coleridge’s notebooks, that vaulted miscellany of staircases and hidden doors, connections found and lost, plans abandoned and made again. Slipping away from my attempts to index and organise it, this book, too, remains for me a maze of twisty little passages, all different, a kind of interactive fiction in itself.

Over the last seven years, more than a thousand people have trodden these passages, repairing or ramifying by turns with amendments and suggestions: far too many to name but I would like to thank them all, and especially Volker Blasius, Kevin Bracey, Mark Howell, Stefan Jokisch, Kirk Klobe,

the ever avuncular Bob Newell, Robert Pelak, Jørund Rian, Dilip Sequeira, Richard Tucker, Christopher Wichura, John Wood and the games designers of Activision. Particular thanks go to Mike Berlyn, who besides being one of the subjects of Chapter VIII was also instrumental in the reshaping of this text as an unabashed book. His enthusiasm was greatly valued.

Few books can have been so fortunate in receiving the generous attention of others as this new edition. First and foremost its every paragraph was reshaped by Gareth Rees's skilled, tactful and invariably wise editing. The stack of proofs of draft chapters, meticulously annotated in his calligraphic handwriting, is now five and a half inches high; his contribution to the ideas in this book was equally substantial, and especially in Chapter VIII. Toby Nelson and Andrew Plotkin each proof-read the text, making helpful comments such as "Had a bad day at the office?" next to one of the paragraphs, and "Inform is curled up in my head, like a parasitic alien that doesn't spring out and eat the host for a surprisingly long time." Torbjörn Andersson checked the solutions to the exercises: no mean feat, and it resulted in no less than 242 specific suggestions, only four of them pointing out that I'd got the accent in his name wrong again. Later on he proofed the whole book again, so that at times it seemed it would never be finished (delays, however, being solely my own fault). Michael Baum's census of known Z-machine story files greatly assisted the bibliography of cited works. Paul David Doherty, interactive fiction's most careful and dedicated historian, was tireless in tracking down early games designers and in vetting §46 for factual accuracy, and interviews by Dennis G. Jerz further clarified the mid-1970s picture: opinions and errors remain, of course, my own. David Cornelson's enthusiasm and capability made this printed edition possible, assisted by Roger Firth and Florian Edlbauer as English and German agents, and by Ryan Freebern, Duncan Stevens, Nick Montfort and Duncan Cross who proofed pages yet again. Inform designers too numerous to name participated in a survey of what they would like to see appearing in this book, and in a trawling exercise for misprints in the first PDF edition. A generous award from the Society of Authors in 1997 allowed me more time for writing.

One final word. I should like to dedicate this book, impertinently perhaps, to our illustrious predecessors: Will Crowther, Don Woods and the authors of Infocom, Inc.; among them Douglas Adams, whose sudden death only weeks ago robs us of one of our most inventive and maddening writers.

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