

## comp.lang.vhdl

# Frequently Asked Questions And Answers: Part 2

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### **Preliminary Remarks**

This is a monthly posting to comp.lang.vhdl containing information on VHDL books. Please send additional information directly to the editor:

*edwin@ds.e-technik.uni-dortmund.de (Edwin Naroska)*

Corrections and suggestions are appreciated. Thanks for all corrections.

At the end of this listing, you'll also find reports on global topics concerning VHDL, which are available per ftp.

There are three other regular postings: part 1 lists general information on VHDL, part 3 lists products and services (PD+commercial), part 4 contains descriptions for a number of terms and phrases used to define VHDL.

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FAQ comp.lang.vhdl part 2

## 1. Documents of the IEEE

See also <http://standards.ieee.org>.

### "1076-1987 Standard VHDL Language Reference Manual"

IEEE Standards, Not available from the IEEE anymore. Now available from Menchini & Associates (see FAQ part 3 products & services), for a cost of \$75 US. Please contact [mench@mench.com](mailto:mench@mench.com) for further information.

### "IEEE Standard VHDL Language Reference Manual"

IEEE Std 1076-1993, IEEE Standards, Order Code SH 16840, \$56, 30% IEEE Member Discount, bulk discounts, ISBN 1-55937-376-8, 1994

### The Sense of VASG

Standard No. 1076-CONC-1990, Order Code SH13326, \$22.50,

"This publication is the companion document to IEEE Std 1076-1987. It clarifies ambiguities and editorial errors in IEEE Std 1076-1987 and contains accepted requests for new language features"

### "IEEE Standards Interpretations: IEEE Standard VHDL Language Reference Manual"

IEEE Std 1076/INT-1991, Order Code SH148941991

### "IEEE Standard Multivalued Logic System for VHDL Model Interoperability (std\_logic\_1164)"

IEEE Std 1164-1993, ...1993

### "A CD-ROM Learning Tool for VHDL"

The VHDL CD-ROM Tutorial provides an easy-to-use logical method of referencing the standard, while showing actual detailed examples of VHDL implementation. This product is available for use in Microsoft Windows. (3.1 and '95), Macintosh., Sun OS and Sun Solaris environments. See also <http://standards.ieee.org/catalog/press/>.

## 1.1. Where to Obtain?

### U.S.A.:

IEEE Service Center  
445 Hoes Lane  
P.O. Box 1331  
Piscataway, NJ 08855-1331 USA  
Phone: 1-800-678-IEEE, FAX: 908-981-9667

### Canada:

This office is no longer in operation.

### Europe:

IEEE Computer Society, 13,  
Avenue de l'Aquilon,  
B-1200 Brussels BELGIUM  
Telephone: 32.2.770.21.98

1.1. Where to Obtain?

FAX: 32.2.770.85.05

## 2. Books on VHDL

Please send a note to the editor if any of these books are out of print or a good book is missing. See also <http://www.shef.ac.uk/uni/projects/vhdl/books/pubpage.html> for another list of publications on VHDL.

### **Digital System Design with VHDL**

Mark Zwolinski

ISBN 0-201-36063-2, Prentice Hall

2000. 1st Edition, 336 pages, <http://www.pearsoneduc.com/titles/0201360632.html>

### **Writing Testbenches: Functional Verification of HDL Models**

Janick Bergeron

ISBN 0-7923-7766-4

2000. Writing Testbenches: Functional Verification of HDL Model is the first book ever devoted entirely to the topic of verification and testbenches. It covers all the issues of a verification process that aims for first-time success. <http://janick.bergeron.com/wtb>

### **Digital Systems Design With Vhdl and Synthesis : An Integrated Approach**

K. C. Chang

ISBN 0769500234, IEEE Computer Society Press

May 1999, Hardcover - 516 pages

### **VHDL Coding Styles and Methodologies, 2nd Edition**

Ben Cohen

ISBN 0-7923-8474-1, Kluwer Academic Publishers

1999, 450 pages. Book emphasizes detailed application of the language, style, methodologies, and synthesis through several complete examples. This edition provides practical information on reusable software methodologies for the design of bus functional models for testbenches. This includes the waveform, client/server, command text and binary file methods. All VHDL code is on CD. CD also includes the GNU toolsuite with EMACS language sensitive editor, TShell, 30 day evaluation of ModelSim (Model Technology), and 20 day evaluation of Synplify (Synplicity). For TOC see <http://members.aol.com/vhdlcohen/vhdl>

### **A VHDL Primer, Third Edition**

J. Bhasker

ISBN 0-13-096575-8, Prentice Hall

Sept 1998, 375 pages, updated to cover the popular new IEEE STD\_LOGIC\_1164 standard, <http://www.phptr.com>

### **A VHDL Synthesis Primer, Second Edition**

J. Bhasker

ISBN 0-9650391-9-6, Star Galaxy Publishing

August 1998, 312 pages, Hardcover, \$59.95, Describes the NUMERIC\_BIT and NUMERIC\_STD packages and uses these packages in the examples, Publisher/Order info: Star Galaxy Publishing, 1058 Treeline Drive, Suite 277, Allentown, PA 18103, Phone/fax: 888-727-7296 (toll free in US), 610-391-7296 [24 hours], <http://users.aol.com/SGalaxyPub>

**VHDL 3rd Edition**

Douglas Perry  
ISBN 0070494363, MacGraw-Hill  
June 1998, 500 pages, 3rd edition

**Essential VHDL : RTL Synthesis Done Right**

Sundar Rajan  
ISBN 0966959000, S & G Publishing  
June 1998, 320 pages, US\$49.95, Essential VHDL provides a simple, hands-on approach to writing VHDL for RTL synthesis. It follows a systematic, "how-to" style and instructs readers on practical VHDL design. Although targeted primarily at programmable logic designers, the techniques presented in this book make it equally useful for those interested in real-world HDL design. See also <http://www.vahana.com/vhdl.htm>.

**The Student's Guide to VHDL**

Peter J. Ashenden  
ISBN 1-55860-520-7, Morgan Kaufmann Publishers  
January 1998, 340 pages, \$29.95

**Digital Systems Design Using VHDL**

Charles H. Roth, Jr  
ISBN 0-534-98099-X, PWS Publishing Company  
1998, 470 pages, <http://www.brookscole.com/engineering/ee/roth.html>

**Essential VHDL : RTL Synthesis Done Right**

Rajan, Sundar  
ISBN: 1199456721, S & G Publishing  
June 1998, Softcover, Web page:  
<http://www.clbooks.com/sqlnut/SP/search/gtsumt?isbn=1199456721>

**VHDL for Logic Synthesis, 2nd Edition**

Andrew Rushton  
ISBN 0-471-98325-X, John Wiley & Sons  
May 1998, 390 pages, Hardback, Web page:  
<http://www.users.globalnet.co.uk/~arushton/>

**VHDL Answers to Frequently Asked Questions, 2nd Edition**

Ben Cohen  
ISBN 0-7923-8115-7, Kluwer Academic Publishers  
1998, Web page: <http://members.aol.com/vhdlcohen/vhdl/>

**Digital Design and Modeling with VHDL and Synthesis**

K.C. Chang, Boeing  
ISBN 0-8186-7716-3, IEEE Computer Society Press  
January 1997, 368 pages. 7" x 10" Hardcover, The book combines VHDL and synthesis in an easy-to-follow step-by-step sequence. This approach addresses common mistakes and hard-to-understand concepts in a way that eases learning. Digital Design and Modeling with VHDL and Synthesis introduces VHDL with closely related practical design examples, simulation waveforms, and schematics so the reader can better understand their correspondence and relationship. See <http://www.computer.org/cspres/catalog/bp07716.htm>

**HDL Chip Design - A Practical Guide for Designing, Synthesizing and simulating ASICs and FPGAs using VHDL or Verilog**

Douglas J. Smith

ISBN 0-9651934-3-8, Doone Publications, [extern\\_mref@doone.com](mailto:extern_mref@doone.com)

1997, Foreword by Alex Zamfirescu, IEEE Project Chair/IEC TC Convenor. This book won the 1997 small press award for Science and Engineering. Shows equivalent VHDL and Verilog models side-by-side followed by a common synthesized circuit implementation. Large format (8.5x11 inches) - case bound - 470 pages - 240 illustrations - 180 practical modeling examples, <http://www.doone.com>.

**Analysis and Design of Digital Systems with VHDL**

A. Dewey

ISBN: 0534954103, PWS Publishing Company

August 1996, 682 pages

**Quick-Turnaround ASIC Design in VHDL :: Core-Based Behavioral Synthesis**

M. S. Ben Romdhane, V. K. Madiseti, J. W. Hines, (Foreword by Prof. J. Allen, MIT)

ISBN 0-7923-9744-4, Kluwer Academic Publishers

June 1996, \$95, <http://www.ee.gatech.edu/users/215/book3.html>**Vhdl for Programmable Logic**

Kevin Skahill, Jay Legenhausen, Ron Wade, Corey Wilner, BL Wilson

ISBN 0201895730, Addison-Wesley

May 1996, 593 pages, book & CD-Rom edition includes Cypress WARP software and examples,

<http://www.amazon.com/exec/obidos/ISBN%3D0201895730/002-9583653-7021215>

**A VHDL Synthesis Primer**

J. Bhasker

ISBN 0-9650391-0-2, Star Galaxy Publishing

February 1996, 250 pages, Hardcover, \$49.95, Publisher/Order info: Star Galaxy Publishing, 1058 Treeline Drive, Suite 277, Allentown, PA 18103, Phone/fax: 888-727-7296 (toll free in US), 610-391-7296 [24 hours],

<http://users.aol.com/SGalaxyPub>

**VHDL Made Easy**

David Pellerin and Douglas Taylor

ISBN 0-13-650763-8, Prentice Hall

1996, 420 pages, \$54.95. Includes CD-ROM containing a VHDL simulator, VHDL examples and other software. Available direct from Accolade Design Automation (800-470-2686), 26331 NE Valley Street, Suite 5-120, Duvall, WA 98019, FAX 206-788-3768, <http://www.acc-eda.com/>

**VHDL for Designers**

Stefan Sjolholm and Lennart Lindh

1996, ISBN 0-13-473414-9, Prentice Hall

Covers everything from basics of VHDL through test benches, synthesis, test methodology even to behavioral synthesis

**Introduction to VHDL**

D Hunter, T Johnson

Paperback:0-412-73130-4, Chapman & Hall

November 1995, 246x189mm, 496 pages, 8 line illus, UK o24.99

**The Designer's Guide to VHDL**

Peter J. Ashenden

ISBN 1-55860-270-4, Morgan Kaufmann Publishers

1995, 710 pages, list price US\$44.95,

<http://www.cs.adelaide.edu.au/~petera/designers-guide/DG.html>

**VLSI Digital Signal Processors: An Introduction to Rapid Prototyping and Design Synthesis (using VHDL and other means)**

Vijay K. Madisetti

ISBN 7506-9406-8, IEEE Order Number PC5599, IEEE Press

1995, 524 pages, \$59, <http://www.ee.gatech.edu/users/vijaykm/bl.html>

**Circuit Synthesis with VHDL**

R Airiau, JM Berge, V Olive

ISBN 0-7923-9429-1, Kluwer Academic Publishers

1994

**Digital Design & Synthesis with VHDL**

Ross

ISBN 0-9627488-3-8, Automata Publishing Company

1994, 300p, Cloth Text

**Structured Logic Design With VHDL**

J.R. Armstrong and F. Gail Gray

ISBN 0-13-855206-1, Prentice Hall, Englewood Cliffs, N.J., USA

May of 1993

**VHDL Programming with Advanced Topics**

Louis Baker

John Wiley & Sons 1993, New York

**VHDL Buyer's Guide**

Steve Wolfe and Fouad Kiamilev

ISBN 0-934869-14-6, Cad Cam Publishing, Incorporated 11/1992, Trade Paper, 30p

**Applications of VHDL to Circuit Design**

edited by Randolph Harr and Alec Stanculescu

ISBN 0-7923-9153-5, Kluwer Academic Publishers

1991, 256 pages, \$75.00, 101 Philip Drive, Norwell, MA 02061

**Hardware Design and Simulation in VAL/VHDL**

Larry M. Augustin, David C. Luckham, Benoit A. Gennart, Yo Huh and Alec G. Stanculescu

ISBN 0-7923-9087-3, Kluwer Academic Publishers

1991, 352 pages, \$69.95

**The VHDL Handbook**

David Coelho (Vantage Analysis Systems)

ISBN 0-7923-90310-8, Kluwer Academic Publishers

1989, examples and std package on (PC) disc for \$100 handling cost from: Coelho

Publications, 43000 Christy Street, Fremont, CA 94538 voice: (415) 770-0875, fax: (415) 770-0728, email: ...!uunet!coelho!drc

**An Introduction to VHDL: Hardware Description and Design**

Lipsett, Schaeffer, Ussery

ISBN 0-7923-9030-x, Kluwer Academic Publishers

1989, 320 pages, \$59.95

**ASIC System Design with VHDL: A Paradigm**

S. Leung, M.A. Shanblatt

ISBN 0-7923-9032-6, Kluwer Academic Publishers

1989, 240 pages, \$56.50

**Chip Level Modelling in VHDL**

J. Armstrong

Prentice Hall

1988, 148 pages, 119,- german marks

**The VHDL Cookbook**

Peter J. Ashenden, University of Adelaide, South Australia

per ftp from ftp://ftp.cs.adelaide.edu.au/pub/VHDL-Cookbook/ (129.127.8.8)

(Mac,PC,PS) or ftp://bears.ece.ucsb.edu/pub/VHDL/comp.lang.vhdl

**Introduction to HDL-Based Design Using VHDL**

Steve Carlson

Synopsys, Inc.

\$49.95, 700 East Middlefield Road, Mountain View, CA 94043 (415)962-5000

**Performance and Fault Modeling with VHDL**

edited by Joel M. Schoen

ISBN 0-13-658816-6, Prentice Hall

\$44.00, 406 pages clothbound

**VHDL Designer's Reference**

Jean Michel Berge, Alain Fonkua, Serge Maginot, Jacques Roulliard

ISBN 0-7923-1756-4, Kluwer Academic Publishers

**A Guide to VHDL**

Stanley Mazor, Patricia Langstraat

ISBN 0-7923-9255-8, Kluwer Academic Publishers

**VHDL for Simulation, Synthesis and Formal Proofs of Hardware**

Jean Mermet

ISBN 0-7923-9253-1, Kluwer academic publishers

**VHDL: Analysis and Modelling of Digital Systems**

1/E, Zainalabedin Navabi

ISBN 0-07-046472-3, Mc Graw Hill

US\$ 38.50

**Digital System Design using VHDL**

Chin-Hwa Lee, CorralTek

P.O. 2616, Salinas, CA 93902 (408) 484-1726

Price \$29 (answer book \$10)

**VHDL '92; The New Features of the VHDL Hardware Description Language**

Berge, Fonkoua, Maginot and Rouillard

ISBN:0-7923-9356-2, Kluwer Academic Publishers

Price: \$87.50 Dfl180.00

**A VHDL Primer, Revised Edition**

J. Bhasker

ISBN 0-13-181447-8, Prentice Hall

(this edition is based on VHDL-93)

**A Designer's Guide to VHDL Synthesis**

Ott

ISBN 0-7923-9472-0, Kluwer Academic Publishers

**A Guide to VHDL Syntax**

J. Bhasker

ISBN 0-13-324351-6, Prentice Hall

\$45.00, Number of pages: 268

**Formal Semantics for VHDL**

Carlos Delgado Kloos, Peter T. Breuer (eds.)

Kluwer Academic Publishers

more info on: <http://www.dit.upm.es/~cdk/inv/euroform/sem-vhdl.html>

**VHDL Techniques, Experiments, and Caveats**

J. Pick

ISBN 0-07-049906-3, McGraw-Hill

\$55

**VHDL Modeling for Digital Design Synthesis**

Yu-Chin Hsu

ISBN 0-7923-9597-2, Kluwer Academic Publishers

376p

**VHDL: Features and Applications, A self-study course**

J. Bhasker

IEEE

Contains: Self study course + final exam + A VHDL Primer(Revised Edition) text + IEEE Std 1076-1993 + IEEE Std 1164-1993 (all in one package), \$229.00 IEEE members, \$299 non-members, IEEE Product number: HL5712, To order: Call IEEE at (800) 678-IEEE

## 2.1. Books in French

**VHDL, du langage au circuit , du circuit au langage**

J. Weber and M.Meudre

ISBN 2-225-82957-8, edition Masson

1997, <http://www.masson.fr/>

**Initiation au langage VHDL**

Michel Amiaux

ISBN 2-225-85232-4, edition Masson

1996, <http://www.masson.fr/>

**Circuits numériques et synthèse logique, un outil : VHDL**

Jacques Weber, Maurice Meudre

ISBN 2-225-84956-0, Collection : Technologie de l'Université à l'Industrie

1995, 208 pages

**VHDL du langage a la modelisation**

R. Airiau, J.M. Berge, V. Olive and J. Rouillard  
 Presses Polytechniques et Universitaires Romandes  
 Lausanne 1990

**2.2. Books in German****VHDL-Synthese, Entwurf digitaler Schaltungen und Systeme**

J.Reichardt, B.Schwarz  
 ISBN 3-486-25128-7, Oldenbourg-Verlag  
[http://www.oldenbourg.de/verlag/index\\_suche.htm](http://www.oldenbourg.de/verlag/index_suche.htm)  
 2000, 288 Seiten, <http://users.etch.fh-hamburg.de/users/reichardt/buch.html>

**Entwicklung digitaler Systeme mit VHDL - Einsatz und Anwendung von VHDL zur Simulation und zur Synthese von digitalen Systemen**

Jürgen Bäsig  
 ISBN 3-00-005081-7, Eigenverlag  
 1999, 45,- DM (zzgl. MwSt.),  
<http://www.nf.fh-nuernberg.de/prof/baesig/buch.html>

**Abstrakte Modellierung digitaler Schaltungen (VHDL vom funktionalen Modell bis zur Gatterebene)**

K. ten Hagen  
 ISBN 3-540-59143-5, Springer  
 August 1995

**Schaltungsdesign mit VHDL**

Gunther Lehmann, Bernhard Wunder, Manfred Selz  
 ISBN 3-7723-6163-3, Franzis-Verlag  
 1994, 317 Seiten, mit Diskette, Poing, DM 89,-.  
 Das Buch ist zur Zeit vergriffen, aber eine pdf-Version kann unter  
<http://www-itiv.etic.uni-karlsruhe.de/FORSCHUNG/VEROEFFENTLICHUNGEN/lws94/lws94.html>  
 kostenlos heruntergeladen werden

**VLSI-Entwurf (Vorgehen, Methoden, Automatisierung)**

Thomas Kropf  
 ISBN 3-8266-0163-7, International Thomson Publishing  
 TAT (Thomson Aktuelle Tutorien) Nr.17, (trotz des Titels ist das Buch zu ca. 80% ein VHDL-Buch)

**Die VHDL-Syntax (Deutsche Uebersetzung von "A Guide to VHDL Syntax")**

J. Bhasker  
 ISBN: 3-8272-9528-9, Prentice Hall Verlag GmbH

**2.3. Books in Japanese****Transation of: A VHDL Primer**

Jayaram Bhasker  
 ISBN4-7898-3286-4 C3055 P3200E, CQ Publishing

## 2.4. Books in Dutch

### **VHDL, VHDL'87/'93 en voorbeelden**

Egbert Molenkamp

ISBN 90-802634-3-5

1997, 250 pages, Dfl 70,- (excl. VAT and Handling), Order via: Transfer EDS,  
Goorseweg 5, 7475 BB Markelo, the Netherlands, fax. x-31-547-367366

## 2.5. Books in Swedish

### **VHDL för konstruktion**

Lennart Lindh, Stefan Sjöholm

ISBN 91-44-47782-1

1996, 524 pages, Studentlitteratur

## 2.6. Recommended Books in comp.lang.vhdl

I compiled two lists from articles which were posted to comp.lang.vhdl from 1996/1/1 to 2000/6/22. Only books which were recommended at least by 4 different posters (excluding the author) appear on the lists. I've done my best to get exact numbers but probably caught not all postings which included any recommendations. Hence, if you think that a book is missing or got a wrong number of recommendations (see below) please send me a note.

How to get your favourite book onto the list(s)? If you are the author: there is no way (besides writing an excellent book). Otherwise, if you think it's an excellent book please share the information with the community: just post a recommendation to the newsgroup. If their number exceeds the threshold the book will be added to the appropriate list. To initialise this process I plan to post a 'request for recommendations' every 12 month. The next request is scheduled for August 2000.

Please note that the books may focus on different topics of VHDL and not all books are recommended for beginners. Hence, try to get some more informations on a book before ordering. Usually, the various on-line book stores provide some additional infos (see i.e. <http://www.amazon.com/>, <http://www.bookpool.com/>,...). Of course you may also check out Section 2. Further, please post/send remarks about the books on the list (for beginners, not for beginners,...)

The lists are sorted by decreasing number of recommendations (the actual number for each book is enclosed in '()').

General books on VHDL:

- "The Designer's Guide to VHDL" by Peter Ashenden (29)  
remarks: for beginners, comprehensive, very good for reference
- "A VHDL Primer" by J. Bhasker (13)  
remark: for beginners, not suited to learn synthesis
- "VHDL" by Doug Perry (6)

- "VHDL made Easy!" by David Pellerin (6)  
remark: for beginners
- "VHDL for Designers" by Stefan Sjöholm and Lennart Lindh (6)

Books on VHDL for synthesis:

- "VHDL for programmable logic" by Keven Skahill (15)  
remark: for beginners
- "VHDL Coding styles and methodologies,... an In-depth Tutorial" by Ben Cohen (14)  
remark: not for beginners
- "Hdl Chip Design" by Douglas J. Smith (12)  
remark: for beginners
- "VHDL for Logic Synthesis" by Andrew Rushton (13)
- "Analysis And Modeling of Digital Systems" (second edition) by Z.Navabi (4)  
remarks: not for beginners, covers testbench and synthesis

## 2.7. Some Publisher Addresses

- Prentice Hall  
www: <http://www.prenhall.com/>  
Order addresses
  - U.S.: To order by phone, call 1-(800) 643-5506. Please give the operator the following "key code": E1001-A1(3)
  - UK, Europe, Middle East, and Africa: Fax your order to 44-1-442-882277, or send e-mail to [ibd\\_orders@prenhall.co.uk](mailto:ibd_orders@prenhall.co.uk).
- Kluwer Academic Publishers  
www: <http://www.wkap.com/>  
Contact addresses
  - North and South America: Kluwer Academic Publishers Customer Service Department, P.O. Box 358, Accord Station, Hingham, MA 02018-0358, U.S.A., Tel : (617) 871-6600, Fax : (617) 871-6528, E-mail: [kluwer@wkap.com](mailto:kluwer@wkap.com)
  - Rest of the World: Kluwer Academic Publishers Customer Service Department, P.O. Box 989, 3300 AZ Dordrecht, The Netherlands, Tel : (+31) 78 639 23 92, Fax : (+31) 78 639 22 54, E-mail: [services@wkap.nl](mailto:services@wkap.nl)
- McGraw-Hill  
www: <http://www.books.mcgraw-hill.com/>  
Contact addresses
  - U.S.: McGraw-Hill, 11 West 19th Street, New York, NY 10011 U.S.A.
  - United Kingdom and Europe: McGraw-Hill Publishing Company Europe, Shoppenhangers Road, Maidenhead, Berkshire, SL6 2QL, England, Telephone +44 (0)1628 502500 Fax +44 (0)1628 770224
- Morgan Kaufmann Publishers  
www: <http://www.mkp.com/>  
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  - The Sales/Editorial office: 340 Pine Street 6th Floor, San Francisco, CA 94104

Phone: 415-392-2665, Fax: 415-982-2665

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Phone: 800-745-7323, Fax: 800-874-6418
  - Phone order: Please call 800-745-7323 from the US or Canada, or 407-345-3800 from any other location.
- Europe & the UK: Afterhurst Mail Order Service, 27 Church Road Hove, East Sussex, BN3 2FA, United Kingdom  
Phone: 44-1-273-748427, Fax: 44-1-273-722180, Email: [mkp.europe@psypress.co.uk](mailto:mkp.europe@psypress.co.uk)
- John Wiley & Sons  
www: <http://www.wiley.com/>  
Order
  - United States, Latin America, and the Caribbean: U.S. Customer Service Department at John Wiley & Sons, Inc., Distribution Center, 1 Wiley Drive, Somerset, NJ 08875-1272, Phone: (908) 469-4400 or (800) 225-5945, Fax: (908) 302-2300, Email: [bstahoski@wiley.com](mailto:bstahoski@wiley.com), Hours: 8:30 a.m to 5:30 p.m. EST
- Springer-Verlag, Germany  
www: <http://www.springer.de/>  
Contact address: Springer-Verlag Berlin, Heidelberger Platz 3, D-14197 Berlin, Germany, Phone: 49-30-82787-0, Email: [service@springer.de](mailto:service@springer.de)
- Doone Publications  
www: <http://www.doone.com/>  
Contact addresses
  - America, Europe: Anne Smith, Doone Publications, 7950, Highway 72W #G106, Madison, AI, 35758, USA, Phone: Outside USA +1 205 837 0580, Within USA 1 800 311 3753, Fax: +1 205 837 0580, Email: [asmith@doone.com](mailto:asmith@doone.com)
  - Asia, Australasia: Coral Cooksley, Kirstep Distribution, Australia, Phone: +61 (02) 489 7855, Fax: +61 (02) 489 7034, Email: [cc@aaoepp.aao.gov.au](mailto:cc@aaoepp.aao.gov.au)

## 3. Free Documents

### 3.1. Reports

Only stuff available by ftp, http or similar will be mentioned here, if of general interest.

On <ftp://ftp.estec.esa.nl/pub/vhdl/doc> (or via <http://www.estec.esa.nl/wsmwww/vhdl/vhdlpage.html>) the following documents can be found (look in their README for the most actual info):

#### **BoardLevel.ps**

"VHDL Models for Board-level Simulation", ref. WSM/SH/010 This document provides recommendations for development and usage of VHDL models intended for Board-level simulation. The purpose of these recommendations is to define modelling criteria that will produce models that are highly accurate in both functionality and timing, and that will provide sufficient simulation performance to facilitate long simulation runs. Format: postscript.

#### **CompList.ps**

"Support Component List", ref. WDN/PS/822 Issue 2 This document contains summary information for European components for space applications. Their main characteristics are listed, including radiation tolerance. Coordinates to contact persons for further information are also included. Format: postscript.

#### **ModelGuide.ps**

"VHDL Modelling Guidelines", ref. ASIC/001 Issue 1 The ESA VHDL Modelling Guidelines have been established to ensure a good coding standard for VHDL, w.r.t. to readability, portability and extensive verification. There are separate sections dealing with specific requirements for models for component simulation, board-level simulation, system-level simulation and test benches. The document is being used for education at several universities, as a base for company specific guidelines etc. Format: postscript.

#### **UseOfVHDL.ps**

"The Usage of VHDL in the European Space Agency" An overview of the current and envisaged (April 1995) usage of VHDL within ESA. Describes the background, scope and purpose of the ESA VHDL Modelling Guidelines, and introduces the upcoming document "VHDL Models for Board-level Simulation". Outlines a planned scheme for making VHDL models for Board-level simulation available including schemes for protecting the design information. The paper was presented at the Workshop on Libraries, Component Modeling and Quality Assurance in Nantes (F), April 1995. Format: postscript.

#### **VHDLReport.ps**

"The VHDL Standard" (by E2S n.v.) An overview of the May 1994 status of the VHDL standard and associated activities within the IEEE, EIA, and ESPRIT projects. An extensive summary of VHDL repositories is included, together with a list of European VHDL tools. Format: postscript.

At <ftp://ftp.edif.org/pub/vhdl/models> the following documents are available:

**VHDL93-model.ps**

Internal Report, 30-03-95, "An Information Model of VHDL'93 (Draft Version 02)" University of Manchester, Department of Computer Scienc. Format: postscript.

**VHDL87-model.ps**

Internal Report, 10-11-94, "An Information Model of VHDL'87 (Draft Version 10)" University of Manchester, Department of Computer Science. Format: postscript.

Content of the README file: "The present documents are the result of work supported by the UK Defence Research Agency and ESIP (ESPRIT Project 8370). The goal has been to produce comprehensive information models of VHDL'87 and VHDL '93. The models defined here describe the essential objects and the semantics of VHDL'87 and VHDL'93 at the description, analysis, elaboration and simulation levels of design. They are not implementation information models for a VHDL simulator nor for a VHDL checker; they can, however, provide the basis for the creation of such implementation oriented information models.

The VHDL'87 model is accompanied by a the presentation from file VHDL87-model-presentation.ps.

This document supersedes the earlier reports ECIP2/UM/015-1 01-05-93 and UM Internal Report 10-10-94."

The **Actel HDL Coding Style Guide** provides instructions for optimizing HDL code for the Actel architecture using examples in both VHDL and Verilog. While this document primarily targets coding for the Actel architecture it also contains a section about technology independent coding styles. The style guide is available from [http://www.actel.com/docs/29105\\_0.pdf](http://www.actel.com/docs/29105_0.pdf).

## 3.2. Free Books

**The VHDL Cookbook**

Peter J. Ashenden

An introduction to VHDL. Available per ftp from <ftp://ftp.cs.adelaide.edu.au/pub/VHDL-Cookbook/> or <ftp://bears.ece.ucsb.edu/pub/VHDL/comp.lang.vhdl>. see also booklist entry

**VHDL Kurzanleitung**

Andreas Mäder

A German introduction to VHDL. Available from <http://tech-www.informatik.uni-hamburg.de/vhdl/vhdl.html>.

**Schaltungsdesign mit VHDL**

Gunther Lehmann, Bernhard Wunder, Manfred Selz

ISBN 3-7723-6163-3, Franzis-Verlag

A German introduction to circuit design with VHDL, a pdf version is available

from

<http://www-itiv.etec.uni-karlsruhe.de/FORSCHUNG/VEROEFFENTLICHUNGEN/lws94/lws94.html>

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Part 3: Products & Services for VHDL includes a Public Domain and a Commercial Section

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