

Relazione di Progetto - Reti Logiche

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Nel progetto abbiamo seguito un approccio top-down partendo dal disegno su carta delle FSM e dei DataPath, traduzione in codice VHDL, testing generico e testing mirato agli edge-case.

1. Introduziones

2. Specifiche di progetto

Authors are encouraged to send electronic media as their submission. Although we prefer that papers be submitted as Wolfram Mathematica notebooks, we can process papers from a variety of other formats, such as LaTeX. Papers prepared using other formatting systems or submitted in hard copy only may have to be retyped, causing delays in processing. This sample paper was prepared with Wolfram Mathematica and can be used as a template. It is available for download at www.complex-systems.com/contribute.html. A LaTeX version is also available.

3. Scelte progettuali

Figures are an excellent mechanism for communicating many kinds of results. Great care should be taken to produce clear, well-constructed figures. When there are many related graphs or images, they should usually be combined into a single figure.

Figures should be displayed near where they are first mentioned in the text and are numbered sequentially: Figure ?? is an example. All figures and tables should be mentioned in the text.

It is best to send your figures in a “scalable” form such as Wolfram Mathematica Graphics Objects, Encapsulated PostScript (EPS) or Portable Document Format (PDF). Figures can also be processed in “bitmap” formats such as BMP, PICT or TIFF, but scalable formats

Site Type	Used	Fixed	Available	Util %
Slice LUTs	180	0	134600	0.13
Slice Registers	207	0	269200	0.08
F7 Muxes	0	0	67300	0.00
F8 Muxes	0	0	33650	0.00

Table 1. Utilization Design Information - Slice Logic

generally reproduce better.

Figures should reproduce well (i.e., without noticeable aliasing) on common printers. The source file for a particular figure must include all elements of the figure and should not require modification. Lettering should be consistent throughout a figure and must be no smaller than 6 points when the figure is at final size. Lines should be thick enough that they do not break up under reduction (single-pixel lines rarely suffice). Filled black areas must not drop out. Whenever possible, the figures should be oriented in the same sense as text (portrait mode).

Computer programs or algorithm descriptions may be given either in equations or in figures. Literal expressions that occur as computer input or output should be given in typewriter font.

Tables should include captions similar to those for figures and should be numbered sequentially throughout the paper: Table 1 is an example. Tables must be oriented with the text and use 9-point type, and should be enclosed by a box.

4. Test Bench

Risultati dei test fatti e le ragioni di tali test -motivare le scelte

- TB per reset asincrono
- TB singolo pixel
- TB

If a list of items is given in the text, such as: (*a*) first item; (*b*) second item; and so forth, they should be indicated with parenthesized letters in italic typeface.

5. Risultati di sintesi

Consistent mathematical notation is essential to clear exposition. Try to use familiar notation; for example, avoid having x stand for an integer index.

All standard mathematical symbols and notations must be formatted in equation form, whether inline or displayed. Even standard English letters such as x must appear as x (mathematical font) if they

correspond to mathematical symbols. Use roman for abbreviations in equations, for example, $\sin(x)$.

Displayed equations that are referenced in the text should be numbered sequentially:

$$e^{2\pi i} = 1. \tag{1}$$

Spaces should be inserted in equations where necessary to improve readability. Equations should be referred to as “equation (1).” Short equations may be inserted directly in the text, as in $\beta = 2$. Equations that involve extensive subscripts, superscripts or built-up objects should be displayed. Special symbols in equations must be strictly limited to those that can be produced with Wolfram Mathematica using common fonts.

If a formatting system other than Wolfram Mathematica or LaTeX is used, make sure that all symbols are very clearly identified, and that all subscripts and superscripts are evident. *Complex Systems* allows many kinds of notation. It is suggested that symbols or words related to actual or theoretical computers be indicated in **typewriter** font.

Great care should be taken in mixing plain English, mathematics and algorithm descriptions. Say, for example, “ x is the position” rather than “ $x =$ position.” Consistency must be maintained between different occurrences of a symbol. If x is a mathematical symbol, make sure it appears as x everywhere, not sometimes as x or as \mathbf{x} . As a rough guide, mathematical symbols should appear as x and computer symbols as \mathbf{x} .

Theorem 1. Theorems and other structured mathematical text should be used when it improves the presentation. They should not be a substitute for clear English exposition.

Proof. Proofs can continue for several paragraphs. They should end with an empty square. ■

6. About the References

References should give pointers to background material and related work. They should record credit due to other authors.

References are numbered sequentially throughout the text. Each item should be given a separate number (except when citations are made to different portions of the same document: these should be indicated as “[2, pp. 3–56]” or “[3, Chapter 14]”).

Full titles of papers should be given. They should be enclosed in quotation marks, with all important words capitalized. Titles of printed items should be followed by a comma inside the quotation marks. Include the paper’s digital object identifier (DOI) name (number) if it

is available(www.doi.org/hb.html). Titles accessible only via the internet are treated differently based on their type. See the examples described in the References section of this sample paper.

To cater to a wide variety of disciplines, it is important that *all names of journals be spelled out in full* and italicized. (Use *Physical Review Letters*, not *Phys. Rev. Lett.*, and *Journal of Computer and System Science*, not *J. Comput. Sys. Sci.*)

For printed items, give the journal's volume number in boldface (do not write the word "volume" explicitly). The issue number should be placed in parentheses immediately following the volume number, but not in bold: for example, **4**(1). Include months only when necessary, using their three-letter abbreviation. Give starting and ending page numbers.

Author names should be given with initials first, with spaces after each period. For sources that list more than 10 authors, the names of the first seven authors should be given, followed by "et al." For sources with fewer than 10 authors, all names are listed.

Titles of books (i.e., published material with ISBN numbers) should be italicized. Names and cities of publishers and dates of publication should always be given. Conference proceedings that are distributed through ordinary publishers should be cited like books.

Titles of proceedings and reports that are distributed in other ways or via the internet should be given in full in the standard roman typeface. URLs or other information on how to obtain them should be given following the title. Pricing information should not be included.

Acknowledgments

Acknowledgments should thank individuals and organizations for their contributions to the work. All funding information should be placed in the acknowledgments. If acknowledgments imply some endorsement of the paper (e.g., "We thank X for checking..."), make sure the parties involved approve the statements made.

References

- [1] F. Authorlast and S. Authorlast, "Article Title," *Full Name of Journal*, **volume**(issue number), year pp. #-#. doi:name.
R. Albert and A.-L. Barabási, "Statistical Mechanics of Complex Networks," *Reviews of Modern Physics*, **74**(1), 2002 pp. 47-97. doi:10.1103/RevModPhys.74.47.
- [2] I. J. Authorlast, *Book Title*, Publisher Location: Publisher Name, year.
T. C. Schelling, *Micromotives and Macrobehavior*, New York: Norton, 1978.

- [3] A. Authorlast, "Paper Title," in *A Collection* (F. Editor and S. Editor, eds.), Publisher Location: Publisher Name, year pp. #-#. doi:name.
S. Hou, J. Sterling, S. Chen, and G. Doolen, "A Lattice Boltzmann Subgrid Model for High Reynolds Number Flows," in *Pattern Formation and Lattice Gas Automata* (A. T. Lawniczak and R. Kapral, eds.), Toronto: Fields Institute Communications, **6**, 1996 pp. 151–166.
- [4] A. Editor, ed., *Book Title*, nth ed., Publisher Location: Publisher Name, year.
A. Law and D. Kelton, eds., *Simulation Modeling and Analysis*, 3rd ed., Boston: McGraw-Hill, 2000.
- [5] A. Authorlast, "Paper Title," in *Conference Proceedings Title (Conference Acronym and year)*, Conference Location (A. Authorlast, ed.), Publisher Location: Publisher Name, year pp. #-#.
P. Fritzson, L. Viklund, J. Herber and D. Fritzson, "Industrial Application of Object-Oriented Mathematical Modeling and Computer Algebra in Mechanical Analysis," in *Proceedings of the Seventh International Conference on Technology of Object-Oriented Languages and Systems (TOOLS EUROPE'92)*, Dortmund, Germany (G. Heeg, B. Magnusson, and B. Meyer, eds.), Hertfordshire, UK: Prentice Hall International (UK) Ltd., 1992 pp. 167–181.
- [6] A. Authorlast, *Technical Report Title*, Classification/Number, Department, University or Organization, Location, year. URL if available.
C. Lemieux, M. Cieslak, and K. Luttmer, *RandQMC User's Guide: A Package for Randomized Quasi-Monte Carlo Methods in C*, Technical report 2002-712-15, Department of Computer Science, University of Calgary, 2002. hdl.handle.net/1880/46569.
- [7] A. Authorlast, *Preprint Book Title*, Publisher Location: Publisher Name, forthcoming.
J.-P. Aubin, L. Chen, and O. Dordan, *Tychastic Measure of Viability Risk: A Viabilist Portfolio Performance and Insurance Approach*, Heidelberg: Springer, forthcoming. vimades.com/AUBIN/EradicationVPPI-Presentation.pdf.
- [8] Company Name, *Computer Program Reference Manual* (available from Name, address).
Xerox, *InterLISP Reference Manual* (available from Xerox Palo Alto Research Center, Palo Alto, CA).
- [9] A. Authorlast, "Future Paper," *Full Name of Journal*, forthcoming.
J. Riedel and H. Zenil, "Cross-Boundary Behavioural Reprogrammability Reveals Evidence of Pervasive Universality," *International Journal of Unconventional Computing*, forthcoming. arxiv.org/abs/1510.01671.
- [10] A. Authorlast, "Title," presentation given at *Conference Name (Conference Acronym and year)*, Location. URL of abstract if available.
A. Banos, "Exploring Network Effects in Schelling's Segregation Model," presentation given at *S4-Modus Workshop: Multi-scale Interactions between Urban Forms and Processes*, Besançon, France, 2009.

- [11] Software Name, Release Version Number, Location: Organization, year.
U. Wilensky. “NetLogo.” Center for Connected Learning and Computer-Based Modeling, Northwestern University, Evanston, IL. (Oct 25, 2012) ccl.northwestern.edu/netlogo/index.shtml.
- [12] A. Authorlast. “Website (or page) Title.” (Month Day, Year) URL.
OnlineAtlas.us. “United States Interstate Highway Map.” (May 7, 2012) www.onlineatlas.us/interstate-highways.htm.
- [13] A. Authorlast. “Blog Title,” Blog Series Name (blog). (Month Day, Year) URL.
B. Yorgey, “Recounting the Rationals, Part II,” *The Math Less Traveled* (blog). (Apr 2, 2010) www.mathlesstraveled.com/?p=97.
- [14] A. Authorlast. “Forum Post” from Forum Name. (Month Day, Year) URL.
T. Rowland. “Enumerating Strings” from The NKS Forum—A Wolfram Web Resource. (Apr 02, 2010) forum.wolframscience.com/showthread.php?s=&threadid=929.
- [15] A. Authorlast. “Demonstration Title” from the Wolfram Demonstrations Project—A Wolfram Web Resource. URL.
E. Pegg Jr. “Coin Flips” from the Wolfram Demonstrations Project—A Wolfram Web Resource. www.demonstrations.wolfram.com/CoinFlips.
- [16] A. Authorlast. “Wolfram Cloud Article Title.” (Month Day, Year) URL.
A. A. de Laix. “Encryption with Enigma.” (Jul 1, 2014) www.wolframcloud.com/objects/1f52ae4b-0686-4bde-966e-5e60d8225ae4.