A Hardware Description Language from the State of Nebraska*

Part 2. About Mae West, computer Don Juans, and professors in tubes

In the last installment we showed that young authors could speed up the publication of their works if they succeed in softening the hearts of their reviewers. To do this it is sufficient to revive a principle first applied in the Midwest and named, not inappropriately, the "Principle of M. West."

This principle, it turns out, is a familiar one not merely to the scientific world but also to the worlds of movies, music, and literature. Briefly, it can be formulated as follows. Any authority can delay the effects of imminent menopause (mental and physical alike) by attracting a young and energetic coauthor. As for the fame resulting from the issue, it is usually apportioned in accordance with the respective ages of the coauthors.

In other words, the "Principle of M. West" gives immense prestige to the elder member of this alliance and a questionable reputation to the younger member.

The popularity of the principle has been conclusively demonstrated by a number of legends to which it gave birth. One of them, which endures through time and place, alleges that one Hollywood grandma so frequently applied the principle that everyone began to call her Mae West. This worthy lady tried to prove that her perennial youth could be preserved by a daily exercise of the above principle in concert with young beginning actors.

Furthermore, our own investigative analysis, performed on several scientific journals, has definitely established that the popularity of the M. West principle among scientists far exceeds its quite modest showings sampled in Hollywood. Indeed, there is practically no issue of a journal wherein one fails to discover a picture of a well-known popular authority who shares the success of a new publication with a young scientist who, it usually turns out, is from China (Taiwan), or India, or Pakistan, or Bangladesh, or some other country known by its high birth rates, low salaries, and passports requiring a professor's sponsorship to extend the holder's U.S. visa. (It has been rumored that the principal scientific activity of the same well-known popular authorities consists mainly of simulating telephone and travel expenses on a pocket calculator.)

One may counter that not only Asians are selected. Indeed, some professors prefer to support computer sciences in Africa, East Europe, and now even in the Middle East. Others combine a liberal latitude in both research themes and nationalities of the would-be coauthors. We found that in less than a two-year period, one well-known scientist managed to coauthor his papers with members of as many as five distinct continents. In fact the only continent not represented in this group was Antarctica (whose inhabitants—penguins—would have been of little help to this professor anyway).

No one rejects the idea that "coauthorship" could be dictated by purely charitable considerations. So far, however, no one has been able to refute the argument that a good scientific idea, not unlike a good wife, can be encountered only once in a lifetime.

Even if one accepts as an axiom the unusual trait of a scientist to be generous to all, one would agree that to voluntarily relinquish one's first treasure—viz., a scientific idea—into someone else's hands would logically imply the voluntary relinquishing into the same hands one's second treasure—i.e., one's own wife. However, can anyone detect even one instance when a famous, respected professor would intentionally offer his wife (even temporarily) to his favorite graduate students?

The total absence of instances as interesting as this makes it highly unlikely that anyone would voluntarily relinquish his idea into someone else's hands.

We thus establish two probable options: (1) A student (assistant) using physical power (money, hypothesis, charm, etc.) compels a famous professor to yield 50% of the professor’s idea. (2) A venerable professor, also using power (administrative and/or public position) compels a student (assistant) to yield 50% of the student’s idea.

To discover the truth, we are presently engaged in collecting statistical data on these alternative cases of violence. They will be included in our future work, tentatively named The Great Scientific Robbery.

In any case we assert that most scientists either publish their works independently, or else their coauthorship lasts for many years (reminding one of a faithful marriage). For all that, who can be unmindful of those individuals who replace the retinue of their young scientific “wives” (or, more properly, concubines) practically every month? Surely these computer Don Juans do not murder one coauthor after another as Blue Beard did with his wives. Instead they appear to dispose of the used subjects with no concern for their future. Is this harem-life of computer sultans dangerous for computer societies?

We answer this question affirmatively. In their scientific harems they injure not only careers but also the souls of gifted scientists. The Computer Society must defend these young talents who can and should publish their research independently. And then all computer Don Juans and sultans will retire from view— to sell cars.

These and other reasons obliged us also to develop a new hardware language—one that will be convenient for describing any event within or without the computer world in a form easily understood by everyone who suffers no allergy to humor. In addition, the proposed language responds to one property that, as disclosed in the following digression, can be of value for the IEEE administration as well.

To the credit of IEEE, a comparison of its administrative policies with those of the federal government over the past few years indicates that the scientific leadership of the IEEE exhibits an indisputably superior degree of practical foresight. For example, what did the U.S. administrations do during the last 15 years? While neglecting the energy problem, they tried their best to leave the Russians behind in throwing billions of dollars in space. What did the IEEE administrations do during the same time? Wisely anticipating the impending paper crisis, they dutifully supported a program for converting all their journals into microfiche.

Thus, every member of IEEE can now be assured that his micro-membership fee supports a microprogram of journal microminiaturization.

But let us now view this decision from the viewpoint of a college professor. What is peculiar about the office of an ordinary college professor who keeps his membership with IEEE for as long as 15 or 20 years is its accumulation of huge bookcases filled with IEEE journals. If successful, a complete transition to micropublications would lead to a reduction of all these bookcases to the mere size of a box of milk of magnesia.

Our analysis of the bookshelves belonging to the professors of Harvard, Nebraska, and Stanford Universities, respectively (representing points along the cross-section of the U.S. scientific community between 38° to 42° latitude north), shows that the layer of dust on the journals is distributed proportionally to their respective ages—i.e., the older the journal, the thicker the dust. This archeological discovery will certainly help future generations of researchers in comprehending how far in depth the scientific literature of our days was penetrated by our colleagues and students.

However, we are now interested in another side of the dust question. Pasteur proved that the more dust in a building, the more germs it contains. This theory was only recently reinforced by an interesting experiment conducted at the National Institutes of Health (Bethesda, MD).

Two large tubes were used for housing two volunteer professors, A and B. The tube with Professor A was filled with as much dust as one expects to find in a 20 year old collection of journals; the other tube was sterile. At the end of the third month of the experiment, Professor A manifested a certain apathy. On the other hand Professor B, who occupied the sterile tube, showed the same explicit signs at the end of the fifth month. If one regards the 120-day duration of a university semester as a yardstick, one can easily see that the activity of Professor B was enhanced by no less than 25%.

Therefore, it was established that elimination of the source of dust in a typical professor’s office merely by the use of microfiche would account for as much as a 25% increase in activity of an average professor of computer science. This also implies that the age limit of any working professor would move from 65, as it has been widely accepted until now, to 81 years, 3 months.

It is certain that such longevity in our universities would reduce the numbers of younger scientists there. Moreover, a dramatic reduction in the influx of young talent may also produce another side effect—viz., a premature death of the IEEE Computer Society about the time the last living authority is laid to rest.

Henceforth, to prolong the lifetime of our beloved society, which even in the worst periods of inflation did not raise our membership fees, we propose to translate all publications of the IEEE to a new language, hereafter called the Universal Nebraska Language (UNL). The UNL is thus conceived as a simple means for expressing on paper practically any fragment of information which crosses a professor’s mind—not only in the office or at faculty meetings but in the car, at a cocktail party, at home, and even in bed.

Contrary to all existing hardware languages, our language opts for the following important feature: it unhesitatingly eliminates any information recorded earlier by other authors. Therefore a total and unequivocal transfer to the UNL would secure a dramatic reduction in the size of the papers authored by the current authorities in computer science, which effect may in turn permit more frequent (and independent) appearances of young authors.

Using the old tradition of Japanese samurais and scientists—parasitologists for whom death was the best evidence of the established truth—we also decided to condemn the original synopsis “Computer Architecture” to death by translating it to the UNL. One can judge the effectiveness of this translation by comparing the following figures: 145 original pages in English and 156 pictures were dramatically condensed by the UNL to the size of six columns in the Open Channel, which will comprise our next and final installment.

Steven I. and Svetlana P. Kartashev
University of Nebraska at Lincoln

*The UNL should not be confused with the Universal National Language, or University of Nebraska (Lincoln), or University National League, etc.
Our September satire begets another...  

A mild protest against metrification was expressed in “Rally ‘Round the Yardstick” appearing in Open Channel in the September issue. It is felt here that the protest should have been more vigorous. The binary numbering system used by computers has rendered the metric decimal system as obsolete as the English system. Our changing to the metric system now is like trading a Model T in on a Model A.

Commerce rendered the Roman numeral system obsolete and forced the adoption of the Arabic system. Computers now render it appropriate for us to permit the Arabic system to pass into honored retirement beside the Roman system—while we move forward with a computer-compatible system.

The first computer compatible system of which the writer knows was proposed at a meeting in Prague in the early fifties. A base-64 system was suggested. The digit for 63 was as follows:

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  8
 2
 1
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More recently the base-16 system has found favor. Barnes suggests the following digit:

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  1
  2
  4
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Gabrielian has suggested the following digi:

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  2
  8
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He has shown that arithmetic is much more easily performed in a binary derived system. Another base-16 system provides numerals patterned after the Roman system—but having binary weighted elements.

There is little doubt that a binary derived system will soon replace our revered Arabic system. It is said indeed that our nation at great expense is now changing to the metric system, at just that point in time when it should be changing from the metric system to a system more nearly abreast of modern technology.

R. O. Whitaker
Electronic Designer

Dedicated to the scientists and engineers of NASA, JPL, et al., on the occasion of the outstanding success of the Viking project...  

On Mars, sloppy Cobol is sudden death*

In the crystal house beside the bone-dust sea, Mrs. Ixxt’s kitchen sang:

**CLOCK VALUE IS 5! CLOCK VALUE IS 5!**

**MOVE BUNS TO OVEN! COMPUTE LOOK = ALIVE!**

But Mr. Ixxt’s sand-yacht was already gliding up to the filigree mooring-post. Mrs. Ixxt hurriedly dismissed her apron to hang itself up in the kitchen, and dressed herself in a violet evening mist. Too late: he had seen, and was angry. She PERFORMed MOLLIFY-HUSBAND VARYING CAJOLE-TECHNIQUE FROM 1 TO N, but Mr. Ixxt put his furious purple mask on, and his empty golden eyes stared past her. His favorite chair ran up to greet him, and he patted it, grateful at least for its dumb loyalty. But his wife! Day-dreaming again. Other Martian wives were USAGE COMPUTATIONAL or at least USAGE DIS-

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PLAY, but she was forever wrapped up in this Earthmen fantasy. He took down a rare porcelain jar marked USER: BUDGET WIFE, shook out a credit and tossed it, with a glare at his wife, to the nut-lobster which caught it and cracked it into rishness with its berylum claws. Mrs. Ixxt began to cry—no new scarlet mist from the big store in Syrtis Major now, and she had so wanted something new to wear to the Uzts’ barbecue.

She told the knives to spread the royal ant-jelly extra thick on the mors-buns. But Mr. Ixxt was not softened, and after supper called his sleep-spiders to spin his bed in the porch. He was not going to be kept awake by her night-time mutterings. “CAPTAIN-SMITH”—what sort of a data-name was that? Or gibberish like MULTIPLY DELTA-TIME BY DECELERATION GIVING VELOCITY-CHANGE. But while Mr. Ixxt slept soundly through the black velvet night, pin-striped by the quick threads of Phobos and Deimos, Mrs. Ixxt tossed and turned in her sleep-web. Once she cried out and woke herself to hear her own voice still echoing in the room, but the word meant nothing to her. What _language_ was that? She trembled. Somewhere in the void she felt a silver egg was coming to her.

After breakfast Mr. Ixxt loosed his yacht and set off for work. He wore his Disapproving mask—on the back of his head, so that Mrs. Ixxt would have to see his frown until the yacht was a speck among the dunes of ruby-dust.

When he was finally out of sight she turned back to the house. Today, she would really try and forget her dreams. She would teach the kitchen to bake scorpion thermidor. Or have the sleep-spiders embroider a pennant for Mr. Ixxt’s yacht.

Then it happened! A distant sigh in the heavens. A hot breath—a strong smell of small boys’ baseball boots! Then a spice-scented rocket wind that tickled the taste-buds like Grandma’s pretzels! Ten thousand Edgar Allan Poes cleared their throats in the sky! A million unseen Blishes and Heinleins and van Vogts gasped! The dust-spray foam’d up from the fossil sea and fell back, sparkling like a Halloween fire. Then Mrs. Ixxt saw the ship. It was outside her house! Solid, silver, as though it had been there forever. And inside, she knew there were Earthmen—thick, hairy, pink-faced, exotic. Not like Mr. Ixxt, all burnished gold and lizard-thin.

The hatch opened and Captain Smith stepped out, planted his foot on the red sand, then saw Mrs. Ixxt.

“My God! A woman!”

“Hot dog,” shouted Spaceman Schultz jumping out after him. “Let me at her!”

**COMPUTER**
Out they came. Coca Cola tins, real estate signs, Joe’s All Nite Eater, Cheap Gas, You now run Five Times Faster. Yes Five Times Faster with our Software. Schultz and O’Brien danced on the margin of the ancient sea, dry for a billion years.

“Steady, men,” said Captain Smith. Mrs. Ixxt stepped forward. Was her violet mist correct for welcoming Earthmen? She sent it back to the house, meaning to change it for a green one—Earth green.

“Hey, hey,” said Schultz, “It’s toleless!” He threw down his hamburger among the crown jewels of a thousand dead Martian kings and lurched towards her.

A cold voice sounded at Mrs. Ixxt’s elbow. It was her husband, who had turned back on an impulse and now stood there wearing his Ferocious mask. His tube of deadly bees lay in his hand. The Earthmen froze.

“SOURCE—” he said. No answer. The Earthmen screwed up their eyes to see him better.

“What a weirdo,” said Schultz. “OBJECT—”

Still no answer.

Then Captain Smith started to speak.

“A small leap for all mankind. I mean to say, a giant step to peace. Honored to know you, sir.”

Mr. Ixxt tried to make sense of this. He parsed it bottom up, top down, left to right, while the tinkleberry bushes chimed faintly and the house murmured to itself as it planned the lunch menu. He finally spoke.

“NOT A VALID STATEMENT IN THE IDENTIFICATION DIVISION.”

Silence again, then Schultz burst out.

“Why, you goon, go to hell!”

Mr. Ixxt did not understand, but he heard the “GOO”. They were using obscene language! He raised the tube.

Mrs. Ixxt screamed. The tube buzzed. Out snapped the bees, golden in the sunlight. Schultz tried to run, but the bees swarmed and stung him too.

The Earthmen lay dead beside their rocket-ship. Mrs. Ixxt sobbed indoors. In time, a Martian police launch hissed up the immemorial shingle and the police chief stepped out. He looked at Mr. Ixxt, still motionless, holding his empty tube, then at the dead aliens. He strode over to them and turned Schultz and the captain on their backs, so that he could examine their identity tags.

“NON-STANDARD LABELS”, he remarked, smiling at Mr. Ixxt, and got back in the launch. The radio was summoning him back to Syrtis Major: TRAFFIC-JAM OCCURS 10 TIMES, it said.

John Race  
Brunel University, Great Britain

### Classified Ads

#### Faculty Positions

**Faculty Positions:** Junior and Senior Faculty positions open for Spring and Fall 1977 to teach graduate courses and do research in systems programming, computer architecture, structured programming, stochastic processes, optimization methods, microprocessors, and related areas. Ph.D. required. Contact John Colligan, Acting Dean, School of Advanced Technology, University of New York, Binghamton, New York 13901. An equal employment opportunity/affirmative action employer.

**Position open** for part-time lecturer winter and spring quarters to teach course in Microcomputer and Modeling in the Neurosciences. Require background in biotechnology and neuroscience research. Send C. V’s to Professor Carol M. Newton, Chairman, Department of Biotechnology, University of California, Los Angeles, CA 90024.

**Faculty Positions in Computer Science:** Applications are invited for faculty positions related to computer science and digital systems in the Division of Mathematics, Computer Science, and Systems Design starting September 1977. Rank and salary are open. Applicants should have a Ph.D. in computer science or digital computing systems and demonstrated research capabilities or industrial experience in one of the following areas: file and disk-based systems design, software engineering, operating systems and computer architecture, programming languages, applications of micro/micropower computer systems, digital logic, or computer systems analysis. Resumes should be sent to: Professor David Rine, Computer Science Division of Mathematics, Computer Science, and Systems Design, The University of Texas, San Antonio, Texas 78285 (Ph. 1-512-691-4452)

The University is an equal employment opportunity, affirmative action employer.

**Computer System Research & Development:** The Central Research Laboratories of Texas Instruments have several research and development positions in Computer Science. Areas of interest include computer architecture, design techniques for distributed systems, digital communications, pattern recognition, speech processing, and artificial intelligence. Candidates with a Ph.D. in Computer Science or Electrical Engineering are preferred, although candidates with a Master’s degree and exceptional qualifications will be considered. Send your resume to: Dr. John Linn/Texas Instruments/Central Research Laboratories/P.O. Box 5936, M.S. 938/ Dallas, Texas 75222

Our East Coast-based clients are seeking highly motivated BSEE’s with 2 to 10 years analog/digital design and software experience. Send Background information in confidence to Career Adv., Suite 408, Atbany, N.Y. 12205.

Applicants are invited for two faculty positions at the Associate and Assistant Professor level in Computer Science from qualified individuals who have a strong commitment to teaching and research. Qualifications include an outstanding academic record, creative research background and a doctorate in Computer Science/Engineering. Areas of research specialization are not restricted; however the following areas are preferred: theoretical computer science, operating systems, database and computer organizations, and computer networks, computer graphics and image processing. Send resumes to Prof. George I. Davila, Department of Electrical Engineering and Computer Science, University of Wisconsin-Milwaukee, PO Box 413, Milwaukee, WI 53201. UWM is an equal opportunity employer.

**Faculty positions currently available in Computer Science.** Areas include: Data Base Systems, Graphics, Artificial Intelligence, System Architecture. Qualifications: Ph.D., industrial experience desirable. Send resume to Philip Gilbert, Chairman, Department of Computer Science, California State University, Northridge, California 91330. Equal opportunity and affirmative action employer.

**Assistant Professors:** The University of Iowa has openings at the assistant professor level in the Division of Information Engineering. Candidates would teach undergraduate and graduate level courses in the Electrical Engineering Program and conduct research in the following areas: computer architecture, software and hardware; computer communications; computer simulation; digital logic, and digital computer systems. Send resume by January 15 to: George M. Lance, Associate Dean, College of Engineering, The University of Iowa, Iowa City, Iowa 52242. The University of Iowa is an equal opportunity employer.

**Two Faculty Positions:** The Department of Electrical Engineering, Washington University, St. Louis, invites applications for two Assistant Professor positions available in the digital area. One position emphasizes design and analysis of digital electronic circuits; applicants for this position should possess experience in circuit design, computer architecture, microprocessor technology, and asynchronous techniques. The second position emphasizes analytical and applied aspects of digital systems; applicants should possess experience in the application of communication-information and signal processing principles to digital communication and computer systems design. Both positions require a doctorate, a strong commitment to teaching and research, and a willingness to participate in application-oriented, multidisciplinary projects. Starting dates are open, Washington University is an equal opportunity, affirmative action employer. Qualified applicants should send their resume to D. L. Snyder, Chairman, Department of Electrical Engineering, P.O. Box 1127, Washington University, St. Louis, Missouri 63130.

2 **Assistant Professorships in Computer Science:** Boston University is seeking Ph.D’s in computer science or related area to start Janu- ary 1977 and September 1977. Duties include undergraduate and graduate instruction in an existing degree program. Preferred areas are operating systems, programming languages, data base and management information systems. Send vita to Dean Irwin Price, Metropolitan College, Boston University, 755 Commonwealth Avenue, Boston, Mass. 02215. An equal opportunity, affirmative action employer.