It began at an IEEE Computer Society Executive Committee meeting in November of 1982. Oscar García, who was then president of the Computer Society, asked me if I thought a magazine on design automation would be successful. I replied that it had a lot of potential, but suggested that since design and test were inextricably related, a magazine covering design and test technology would be even better.

After that initial conversation, I thought about the subject considerably, and by the end of the year my thoughts were pretty well in order. At that time I was IBM's representative to the Center for Integrated Systems at Stanford University. I spent a good part of the holidays in Palo Alto writing a proposal for a new magazine that would be very broad based in technical coverage and that would appeal to practitioners as well as researchers. Because of the very rapid growth of the technical area, it would cover design automation, computer-aided design, test software and hardware, design for testability, and so on; i.e., it would cover the entire body of methods and practices used to aid in the design and test of all types of electronic hardware. It would focus on practical applications in current use as well as ideas that were likely to be used in practice in the near future.

I sent the draft to about 30 or so of my colleagues in the field, and asked for their comments. The responses that I received were very incisive, and were the beginning of the significant help I would receive from many, many people who were interested in this new venture. The next step was to propose the magazine at the January meeting of the Executive Committee, and it was very well received. We were off and running. The period from January through June of 1983 was loaded with meetings, suggestions, revisions, and approvals. The final approval was obtained from the IEEE in June, and what emerged was a magazine that would be called IEEE Design and Test of Computers; I had proposed the "Design and Test" part, and Oscar García added the "of Computers" because of its Computer Society origin. Its acronym would be D&T.

We had only six months or so until the first issue was due and we had a lot of work to do. True Seaborn's Computer Society office on the West Coast had to gear up for this additional publication, an Editorial Board had to be assembled, and papers selected for the premiere issue. I thought it would be best to go with a ready source of material, and what better place to look than the premiere conference in the design field, the ACM/IEEE Design Automation Conference. I invited a long-time friend, Hillel Ofek, who was then program chairman for DAC, to be guest editor for the first issue, and he readily accepted. Our first issue, due February 1984, would be based on the June 1983 conference. True Seaborn appointed Marilyn Potes as managing editor. And I began to seek recommendations for Editorial Board members. The planning was in full swing!

Support for D&T came rapidly from a number of quarters. Most notable was the Test Technology Technical Committee and the International Test Conference Committee, who promoted the magazine by giving a subscription to every attendee at their 1983 and 1984 conferences. It was a tremendous boost and encouragement for what we were trying to do.

The first issue came out in February 1984. Hillel Ofek had done an outstanding job in selecting a set of seven papers, and the authors had enhanced each of them with new material. Gordon Padwick from Teradyne, editor of D&T Scene, had assembled a worthy news department. Dan Nash from Raytheon and Connie Zagwyn from LTX had selected new products to be featured in their departments. Marilyn Potes had recommended a three-column format with larger type than used in the other publications, and the magazine had an organized and attractive appearance. At that point, the Editorial Board had 16 members, and they were all introduced in the issue. It was a great issue, and I will always be proud of it.

The seven issues that we produced over the year and a half bring to mind many contributors who I want to mention. There is Hillel Ofek, who set a high standard of quality in that first issue; Richard Sedmak, who has been guest editor of two issues and a most valuable D&T editor and advisor; Bob Anderson, editor of our super second issue based on the International Test Conference, our book reviews editor and, most importantly, the person who conducted very informative interviews of IBM's Paul Low, Intel's Gordon Moore, and MCC's B. R. Inman; Gordon Padwick, aggressive editor of our news department, and continuous contributor and "doer" for D&T; Don Thomas, guest editor, author, and dependable Editorial Board member; Leon Maisel, a real go-getter who heads our successful tutorials department; Akihiko Yamada, who secured our first translation of an original Japanese article and is guest editor of an upcoming issue on design and test in Japan; Chuck Radke, who heads up our conferences department, and conceived and implemented "D&T Roundtable"; True Seaborn, a valuable advisor from the beginning, and a creative publisher; and
Marilyn Potes, a first-class copy and managing editor who worked closely with me to solve many problems.

I must also mention Ed McCluskey, Art Fitch, Harold Carter, Alberto Sangiovanni-Vincentelli, Jack Arabian, Steve Kang, Ken Anderson, Gordon Adshead, Maria-giovanni Sami, John Hennessy, Paul Losleben, Ed Porter, Phil Jackson, Ian Getreu, and others who have served as creative advisors, editors, and department heads on the D&T Editorial Board. For their support I thank the Computer Society Governing Board, the Publications Board, and the Magazine Advisory Committee, the publications staff, including Ware Myers and Richard Landry, and the many authors and reviewers. I especially recognize Ray Oberly for planning and carrying out the D&T subscription promotion at ITC, and the ITC and DAC committees for sponsoring subscription promotions. For their encouragement and patience while I spent many hours on D&T business, I thank my wife, Jeannie, and my children, Mark, Keith, Aileen, and Linda. I am grateful to IBM for encouraging and supporting me in this work, and to the employers of the Editorial Board members for their support.

As I turn over responsibility for D&T to you, Vishwani, I wish that you may have as much very good help as I was fortunate to have in creating IEEE Design and Test of Computers magazine.

And now, read on. Enjoy.

Very Best Regards,

Roy L. Russo

Vishwani D. Agrawal
Editor-in-chief-elect

While going over the details of my new assignment with Roy Russo, it occurred to me that he was handing over a job to me that was both easy and difficult. "Easy," because he had given a solid structure to the magazine and was leaving behind an Editorial Board of well-qualified and dedicated individuals. But, new assignments bring new enthusiasm, and in my enthusiasm I was already looking for improvements that could be made to the magazine. That turned out to be the "difficult" part. With a magazine so objectively designed and well organized, there did not seem to be any simple improvements. I will, however, continue to look for newer ways of serving our readers. The fields of design and test are very exciting and readers' needs are continuously changing. We would like to keep up with these changes, so please let me know what new topics you want to see featured in the future issues, and what you like or don't like.

Roy has been more than just an editor-in-chief for D&T. He originated this magazine. As he takes on greater responsibilities with the IEEE Computer Society, I join the D&T Editorial Board in wishing him success. I feel we can never thank him enough for the excellent guidance and leadership he has provided.

Our parting gift to him is the assurance that he will be able to look at D&T with the same pride as he has in the past.

Vishwani D. Agrawal

About the Cover...

A challenge common to all test systems is the design of the electromechanical interface between the tester and the chip under test. As greater circuit densities raise the number of I/Os to be contacted, test data volumes, technology requirements, and tester throughput require ever-increasing data bandwidth in the connection.

The cover photo used to depict this month's theme, "The Economics of Test," shows bursts of light energy emitted by an experimental IBM data storage system. In the future, an apparatus could be developed to couple this high-density information system to a chip under test; currently, however, engineers employ adapter mechanisms much like the one shown on page 18. That adapter is an integral part of IBM's VLSI Chip Test System, which can apply more than 100 million tests per second to each individual chip contact. The system's broadband connection enables testing of more than 75,000 components on each of 200 chips in less than 10 minutes.

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