

PROFESSIONAL ACTIVITIES REPORT

by Irwin Weitman, P.E.

The Long Island Section of IEEE has finally put a WEB on line. As you might expect there is not much material on our Home Page but the content is being expanded and improved almost daily. There will be hyperlinks to it from many IEEE sources and it will link you to WEB pages our editors feel will be of use to you. Please look at our page when you have an opportunity and give us feedback that we can use to improve pages. Send your suggestions to me, Irwin Weitman, at i.w Weitman@ieee.org

The IEEE Consultants Network of Long Island has also put a Home Page on the WEB. Not only will it provide information to members of IEEE who are consultants, but it will also list information of use to companies that would like to avail themselves of background information about our membership. Suggestions for improvement and additional features will be appreciated.

Although it's not on line at the time of this writing there will be a Home Page for the Employment Assistance Committee shortly. Along with useful features for the employed engineer, it will also list opportunities for both employees and employers.

The Home Page for access to all IEEE services is available from the address below through the courtesy of Pratt University. Obviously there will be Hyperlinks between the pages. The WEB addresses for the above are as follows:

IEEE: <http://sils.pratt.edu/ieee>
Section: <http://sils.pratt.edu/~longis/>
Consultants Network: <http://sils.pratt.edu/ieee/licons.html>
Employment Assistance: available soon!

The Economic Development Committee of the Long Island Section is looking to compile a listing of Engineers/Consultants who are looking to develop and/or expand their customer base.

Please send information about yourself (before 3-30-97) concerning your background and any programs, projects, and jobs you've done to:

Mr. Lou Luceri
660 Grand Avenue
Lindenhurst, NY 11757
e-mail: L.A.Luceri@ieee.org

There is a discussion under way within the Professional Activities Committee to enlarge the scope of the Employment Assistance Committee to provide services to IEEE members beyond just help in finding jobs during periods of high unemployment. Those of you who have been through several of these periods know that each time it takes a while to reconstruct the infrastructure of the committee so that it can do its' job efficiently. It seems reasonable that there are many services that employed engineers could benefit from during periods of high employment. By keeping an organized and motivated committee in operation all the time we can better serve our membership during lean times. If you know of any services that you think IEEE can provide, contact me at the above address.

DATE SET FOR AWARDS BANQUET

The 1997 Long Island Section Awards Banquet will be held on Sunday, May 4th 1997 from 1:00pm to 5:00pm at the Huntington Hilton. As always we will be presenting Region 1 awards, USAB awards, and Long Island Section awards to various deserving members. The list of awards and recipients will appear in next month's copy of *The Pulse*.

The section will once again assume the lion share of the expenses, allowing us to offer this affair to our members and their guests at the nominal cost of \$15 per person. So mark your calendars for Sunday, May 4th and join us for an afternoon of good food, good talks and good friends. If you are interested in attending, send your check to:

Amnon Gilaad
31 Glenn Dr.
Woodbury, NY 11797

Please make check payable to IEEE LI Section.

30 YEARS AGO

by Rod Lowman, Historian

In 1967 the Section presented a panel discussion entitled "Problems for Engineers - the 1980's" moderated by Harold Wheeler, head of Wheeler Laboratories, at Hazeltine, an expert in almost everything electronic. With a panel of four experts in different areas of electronics, the panel looked ahead 20 years to predict what problems engineers would need to solve in their work.

The panel consisted of Dr. John R. Ragazzini, Dean of the NYU School of Engineering and Science and an expert in sampled data control systems. It included Dr. William Webster, RCA Staff Vice-President who was an expert in semiconductors, Arnold Dumey of the Scientific Advisory Committee, an independent consultant in data handling, and David Kahl of Sperry Gyroscope Co.

Unfortunately there was no recording made of the predictions of the panel to compare with the actual problems of the 1980's but what a way to steer your career away from possible obsolescence!

I think this is a marvelous idea worthy of repetition. Do you think we could assemble a panel of experts to advise us on the problems we engineers would need to solve in 2010? On second thought, from what I have read, we might do better with a panel of science fiction writers - they have a better record of predicting future activities than experts in the field. Why don't we give it a try.

CHAIRMAN's MESSAGE

by Harvey Altstadter

The new byline for this column deserves a word of explanation. Nader Bolourchi was assigned to an extended field assignment late in 1996. In his absence, and in accordance with the bylaws of the Long Island Section, I have assumed the role of chairman. We wish him well on his assignment.

We have some interesting things to report about this month.

This time it's true! The Long Island Section web page went active in mid January. My apologies for the premature announcement in the December issue, technical difficulties and vacations forced a delay into the process.

We can be found at: <http://sils.pratt.edu/~longis/> or through links from the IEEE homepage at www.ieee.org. Check this location frequently for news of upcoming events. Future improvements being coordinated with METSAC will allow the integration of the Long Island Section Calendar of Events with those of the other four METSAC Sections for presentation on the homepage.

Now that the dust has settled on the Presidential elections (IEEE and US), it is election time again at the local level. You will find a ballot for election of Section Officers elsewhere in this issue. Please take a minute to fill it out and send it in.

We are looking forward to the Annual Awards Banquet. Planning and scheduling is in the capable hands of Amnon Gilaad, who will provide us with more information elsewhere in this issue.

For those members who are looking to improve their technical skills, we have courses, courses and more courses. Our series of inexpensive and highly acclaimed courses is set to continue through the year. In early March, Babak Beheshti will be repeating his highly successful Introductory Microprocessors and Software Seminar. He is planning a follow up on Intermediate Microprocessors and Software Seminar for early April. Walt Whipple has tentatively scheduled a repetition of his C/C++/Visual C++ course for July, and it even has been rumored that we will have a JAVA/HTML course later in the year. Watch the calendar in the PULSE and our homepage for announcements and course descriptions. Please contact us with your thoughts on any other courses you would like to have us present. We are always looking for your ideas.

In October the Long Island Section will be 50 Years old. We have a celebration in the early stages of planning. Watch this space for future developments.

EDITORIAL

by Lazaros Pavlidis

I was going to write something about the National Engineers Week when I came across President Clinton's National Engineers Week proclamation. He very elegantly encapsulated all of my thoughts on the subject. Here is his entire proclamation and I have nothing to add to it.

In honor of the nation's engineering work force, President Clinton offered the following words during National Engineers Week 1997, celebrated Feb.16-22.

"In our rapidly changing world, we look to America's engineers for the creativity and innovation to meet the increasingly complex technological challenges that lie before us. With outstanding skill and vision, these dedicated professionals strive every day to improve the lives of all of our citizens. Thanks to their determination and ingenuity, they are truly making a world of difference in almost every aspect of human experience. From health care to the environment to the global economy, engineers have made invaluable contributions and promise us a future of even greater health and prosperity.

During National Engineers Week, engineers across the nation are making a special effort to help millions of students discover practical applications of math, science, and technology through hands-on activities. I encourage all Americans to take advantage of this unique opportunity to learn about the engineering profession and to recognize the countless contributions our nation's engineers make to the quality of our lives."

Long Island Section Officers

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1st Vice Chair.Amnon Gilaad

2nd Vice Chair. ????

Secretary.Walter Whipple

Treasurer.Babak Beheshti

Address All Correspondence to:

PULSE EDITOR

Lazaros Pavlidis

52 North Drive

Manhasset Hills, NY 11040-2255

(H) (516) 742-1174

l.pavlidis@ieee.org

TYPESETTING & MAILING

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for April 1997 3-1-97

for May 1997 4-1-97

for June 1997 5-1-97

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LONG ISLAND IEEE CALENDAR

(No membership requirements, no registration, no fees at meeting unless otherwise noted. IEEE Office is in the AIL Main Building on Commack Road, Deer Park, LI exit 52.)

March 3,5,10,12,17, 6:00 - 9:00 PM — Microprocessors and Software Seminar. For more details call Babak Beheshti at (516) 686-7437 or e-mail at b.beheshti@ieee.org.

March 5, 7:00 PM — LI Consultant's Network. Charles Olson of LICN will present "An Introduction to the Power and Utility of Matlab", including sample applications. L.I.E. exit 57 at the LILCO Training Center. For further information call Peter Buitenkant at (516)491-3414.

March 5, 7:30 PM — The Long Island LEOS Chapter is hosting a guest speaker, Professor Brad Carlson. "Application Specific Active Pixel Image Sensors". Place: AIL Systems Commack Rd, Deer Park, NY. For more information or to join the speaker for dinner before the talk, call Marie Cotrone at (516) 738-4914.

March 11, 6:00 PM — Computer Society Presentation titled "JAVA from an ADA and C Perspective". The location will be the Auditorium at AIL. See information on page 8.

March 19, 8:30 AM - 5:30 PM, (Exhibits: 10:30 AM - 5:30 PM) — IEEE SARNOFF SYMPOSIUM 1997, "Advances in Wired and Wireless Communications". Conference chair: Dr. R.L. Camisa. Place: The College of New Jersey (Trenton State College) Hillwood Lakes, Trenton, NJ. Registration: Advance/Same Day: \$50/\$75 (\$5/\$10 student; \$0 life members) (Registration includes entrance to all sessions and copy of technical digest; Additional Digest: \$20). Advance registration checks: Ms. Desiree McDermott (609) 734-2430, David Sarnoff Research Center, 201Washington Rd., Princeton, NJ 08543. Make checks payable to "IEEE Princeton Section/Sarnoff Symposium." Exhibitors: Please contact A. Egger (201) 228-7800. For further information contact: Engineering Dept., TCNJ, Mrs. Kalada (609) 771-2779

March 25, Reception 6:00 PM, Program 6:30 PM — The Engineering in Medicine and Biology Society (NY/North J/LI Chapter) together with the New York Academy of Medicine's Sections on Biomedical Engineering and Nuclear Medicine announce "COINCIDENCE HYBRID SPECT/PET SCINTIGRAPHY". Speaker: Dr. MARTIN P. SANDLER. Place: New York Academy of Medicine, Fifth Avenue at 103rd Street, Manhattan. Further information about this meeting: Office of Medical Education, New York Academy of Medicine (212) 822-7273

April 2, 7:00 PM — LI Consultant's Network. Shelly M. Newman, CFP will present "Financial Planning Needs of the Typical Consulting Engineer". The presentation will be followed by an open question and answer session on a variety of financial topics. L.I.E. exit 57 at the LILCO Training Center. For further information call Peter Buitenkant at (516)491-3414.

April 2, 7, 9, 14, 6:00 - 9:00 PM — Intermediate Microprocessors and Software Seminar. For more details see page 4 or call Babak Beheshti at (516) 686-7437 or e-mail at b.beheshti@ieee.org.

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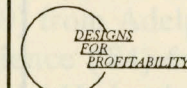
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IEEE Long Island Section
Intermediate Microprocessors and Software Seminar
April 2, 7, 9, 14, 16 1997

Overview

The Long Island Section of IEEE is presenting a five session (3 hours per session) training course "Intermediate Microprocessors and Softwares".

Who Should Attend

This course is intended for individuals with a basic understanding of microprocessors. Familiarity with any particular microprocessor is not required. Knowledge gained in the introductory microprocessor (offered April 1996) is sufficient. This course is a follow up to the introductory course. Example applications of microprocessors, use of on and off chip peripherals, programming examples and real time considerations are discussed.

Key Benefits

- Learn the terminology and fundamental key concepts of any microprocessor based system
- Understand sufficient amount of the technology to be able to do further study on your own
- Understand what software and hardware tools are the minimum requirements for a successful development
- Be able to make trade-off decisions about a design before start of the project

Content

What you will learn: Review of fundamentals, focus on Intel 8051 Micro controller, registers, pin out, on-board peripherals(UART, Timers, A/Ds), ROM, RAM, EEPROM. Review of instruction set. Hardware design and interfacing, digital I/O: interfacing with switches, relays, and LEDs; analog I/O, design considerations. Design examples with software drivers. Interrupts and their role in real time applications. Basic concept of an interrupt. Interrupts in 8051, interrupt service routine setup and considerations. When to use interrupts. Background intensive implementations. Interrupt latency and priority. Software examples will be covered. Use of on-board peripherals: timers, and asynchronous serial communications. Sample programs and applications to interface to the RS-232 line. Where to use micro controllers: how to decide between strictly hardware solutions vs. Micro controllers in a product, system design cycle and its implications, where to use hardware peripherals vs. software implementation of it , software/hardware trade-off, future trends, concluding remarks.

Seminar Coordinator and Instructor

Professor Babak D. Beheshti is a faculty member in School of Engineering and Technology, New York Institute of Technology and a consultant. He has thought many courses on the topic of microprocessors, and in his consulting activities he has many years of micro controller based products and systems design experience.

Location and Times

The seminar will be given in a centrally located place on Long Island evenings, 6:00 to 9:00 PM. Registrants will be advised of the exact location and receive an acknowledgment by mail shortly after registration. The seminar is wholly the responsibility of IEEE LIS and the instructor.

For further information contact Prof. Beheshti via email at b.beheshti@ieee.org or by phone at 516-686-7437.

Fees will be refunded in full if the seminar is canceled or the registrant cannot be accommodated due to capacity limitations. Other refunds will be considered.

Registration Fees

Payment Due	IEEE members ²		
	Public ¹	member	student/life
March 21	\$350	\$300	\$200
March 30	\$400	\$350	\$250

Notes:

1. Includes IEEE Associate New Member dues for those who submit an application at the seminar.
1997 membership card required at first session. Not applicable to affiliate members.

Registration Form

Microprocessors/Software April. 97

Make checks payable to "IEEE Long Island Section".
Send form to Babak Beheshti, 101 Caffrey Avenue,
Bethpage, NY 11714-1435

Name: _____
Company: _____
Address: _____
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Member #: _____ Grade: _____

Amount enclosed: _____

**LI SECTION 1997
OFFICERS BALLOT**

The following people were recommended as candidates for the 1997-1998 Long Island Section office by the EXCOM Nominations Committee. Although there were no petition candidates, provisions have been made on the ballot for write-ins. Please send completed ballots to Dr. Charles Buntschub, 15 Lloyd Haven Drive, Huntington, NY 11743. Your name, address, signature and membership number must appear on the envelope.

**Biographical Information
of the Candidates**

Harvey Altstadter

Harvey Altstadter holds the degrees of BS Physics ('65) and BEE ('67) from the City College of New York and MS Management ('79) from Polytechnic Institute of New York. He has been employed by AIL Systems, Inc. since 1967, and is currently the Manager of Reliability, Maintainability and ILS. Mr. Altstadter has served on the EXCOM since 1992 when he took responsibility for Employment Assistance Activities. He has since been elected to the positions of Second and First Vice Chairman of the the section. He is the recipient of a Region 1 award and a USAB award for his work in employment assistance.

Amnon Gilaad

Amnon Gilaad Received a BSEE from City College of New York in 1967, MSEE and MS in Management from Polytechnic University in 1972 and 1977 respectively. Amnon has been employed at AIL Systems Inc. since 1967 and is a Project Manager in the Radar Systems department.

William Rooney

William Rooney holds degrees of B.S. Physics ('66) from St. John's University, M.S. Applied Physics ('69) from Adelphi University and M.S. Computer Science ('84) from Polytechnic Institute of New York. He has been employed by AIL Systems, Inc. since 1982, and is currently a Senior Staff Engineer in the Software Engineering Department. Mr. Rooney has served on the EXCOM since 1996 when he took responsibility as Co-Chairman of the Computer Society Chapter.

BALLOT: 1997-1998

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☐ Walter Whipple ☐ Other _____

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☐ William Rooney ☐ Other _____

Babak Beheshti

Babak Beheshti received his BEEE and MSEE degrees from State University of New York at Stony Brook in 1985 and 1987, respectively. Since then, he has held a faculty position in the School of Engineering and Technology, New York Institute of Technology. Mr. Beheshti has served on the Executive Committee of IEEE Long Island Section since 1995. He is currently serving as the treasurer of the EXCOM.

Walt Whipple

Walt Whipple Received BS (Engineering Science) from Harvey Mudd College, Claremont CA, in 1962; M.S.E. (1975) and Ph.D. (1988) in Computer, Information and Control Engineering from The University of Michigan, Ann Arbor. Walt has been employed at Symbol Technologies, Inc., since 1995 and is an engineer in the engineering quality assurance department. He is currently section Secretary, served as Employment Assistance Activities Chair in 1995-96, and coordinates several section seminars: C/C++/VC++, HTML/Java/J++, and Windows/Office '95. Walt is an ABET/IEEE visitor in Computer Engineering. He is Past Chairman, Santa Barbara Section IEEE, and past Santa Barbara Computer Chapter chair. Walt serves as treasurer of an investment club and previously served as treasurer of Santa Barbara Section IEEE and Santa Barbara-Ventura Chapter, California Society of Professional Engineers.

The Computer Society to Present a Talk on "JAVA from an ADA and C Perspective"

The talk will cover an introduction to Java by comparing it to languages like C++, C and ADA. The new APIs in Java 1.1 will also be discussed. The discussion will cover the concrete and abstract syntax as well as the Java Virtual Machine and Class Loader. Some time will be spent on Java Beans, RMI, IDL, JDBC and consumer devices.

The speaker will be Rinaldo S Di Giorgio. Rinaldo S Di Giorgio received his BS degree in 1989 and his MS degree in 1992 from Polytechnic University. He has worked for the Center for Entrepreneurial Development at CMU, GTE, Grumman and NYNEX and consulted to ASI (Airport Simulation) and JP Morgan (Intelligent Trading Workstations). Mr. Di Giorgio currently works at SUN Microsystems as a systems engineer and he is providing end to end solutions using the Internet and Intranet as delivery vehicles for business problems. He has published papers on distributed development and testing of large ADA implementations as well as papers on the use of Java in Financial applications in addition to techniques for selecting computing topologies. Mr. Di Giorgio was also a past treasurer of the LIACM. Mr. Di Giorgio has a monthly column at JavaWorld and is working on a book about Java for O'Reilly and Associates.

The presentation will be held on Tuesday, March 11, 1997 in the Auditorium at AIL at 6:00 PM.

Call Bill Rooney at 595-5960 or send E-mail to WROONEY@AIL.COM or call Anthony J. Natoli at 228-8484 or send E-mail to ANTHONYNAT@AOL.COM to facilitate entry through the Lobby.

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Section Cosponsoring Long Island Junior Solar Sprint (LIJSS) Competition (National Renewable Energy Laboratory /Department of Energy registered 1997)

The Long Island Junior Solar Sprint Competition provides a unique opportunity for middle school technology, math and science students to participate in a practical, educational, stimulating science project. 6th, 7th, and 8th grade students design and race model solar powered vehicles at an Island wide rally. It will be held May 17, 1997 (May 31 rain date) between 9:00 AM and 3:00 PM at Polytechnic University Long Island Campus, 901 Route 110, Farmingdale New York.

The middle school students get the opportunity to design and construct their own model solar powered race car. It must be designed around a standard dc motor and photovoltaic panel sanctioned by the National Renewable Energy Laboratory (NREL)/Department of Energy (DOE). The solar kits are purchased for a very nominal amount through the LIJSS Committee. The competition exposes middle school students to all the technologies required to produce a model car. It has the additional benefit for introducing to the photovoltaics and electric traction technology. The model cars will be judged for design concepts and building techniques. A competitive race on the 60 foot outside track provides students, instructors, family and volunteers with a lot of fun from other schools in the greater Long Island area. Cash prizes and certificates will be awarded to the top 3 winners in both the design and racing competition.

The Long Island Section, is committed to supporting science, mathematics and technology education and promoting awareness of the important role engineers play in every facet of our society. The LIJSS competition is a wonderful, exciting way for the Section through its participation and support, to accomplish these goals. In 1995 and 96, the Section supported the LIJSS by assisting technology teachers and middle school student design and race their cars. Our members served as mentors to assist in the design and construction of the cars, and on the race date they provided competition judges and administered the competition program.

In 1997, the Section is cosponsoring this interesting science and technology program along with the Engineering Joint Committee of Long Island (EJCLI), Polytechnic Institute-Long Island Campus, and the Technology Teachers Association.

The Section needs volunteers to serve in several capacities: mentors for their local schools, judges for both design and racing competition, administrative assistance on May 17, 1997 and administrative assistance for both the 1997 and the 1998 LIJSS programs. The amount of time you typically give is a few hours over the life of the project- not very much. The 1997 program started in January (which was a little late) and concludes May 17, 1997 (or May 31). The 1998 program needs to start long term planning, procurement and sponsor solicitation.

Please call Tom Campbell (516) 757-3008 and give your name, daytime phone number, to assist with the program, and if you are volunteering to be a mentor also include the local school name you wish to support.

IEEE - United States Activities Congressional Fellowships

PROGRAM: Electrical and electronics engineers and allied scientists are competitively selected to serve one-year terms on the staffs of Members of Congress or congressional committees. The program includes an orientation session with other science and engineering Fellows, provided by the American Association for the Advancement of Science.

PURPOSE: To make practical contributions to more effective use of scientific and technical knowledge in government, to educate the scientific communities regarding the public-policy process, and to broaden the perspective of both the scientific and governmental communities regarding the value of such interaction.

CRITERIA: Selection is based on technical competence, ability to serve in a public environment,

and evidence of service to the Institute and the profession. The Fellow must be a U.S. citizen at the time of selection, must have achieved IEEE Member grade or higher for at least four years, and must have at least 10 years of professional experience, which may include graduate education.

AWARDS: IEEE-USA plans to award at least two Congressional Fellowships for the 1998 term.

APPLICATION: Further information and application forms can be obtained by contacting Chris J. Brantley at 202-785-0017, ext. 303; 202-785-0835(fax); c:brantley@ieee.org(e-mail); or by writing:

Congressional Fellows Program
IEEE United States Activities
1828 L Street, N.W., Suite 1202, Washington, DC 20036-5104

Applications must be postmarked no later than March 31, 1997.

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Long Island Section HTML/JAVA/J++ SEMINAR†

On May 5, 7, 12, 14, 19, and 21, the Section will offer the HTML/Java/J++ Seminar at SUNY Farmingdale's campus. Meeting 6-9 PM on Monday and Wednesday evenings for three weeks, this seminar will provide a broad overview of the skills required to construct and maintain web pages.

The HTML/Java/J++ Seminar provides a jump start into preparing documents and programs for pages on the world wide web. The seminar will start with a presentation on the HTML language and Microsoft tools available to use it. This will include text edit, Internet Assistant, and Frontpage. The seminar will continue with instruction in the Java programming language as a background for demonstration of Microsoft's J++ programming environment for the Java language. Demonstrations will use Microsoft's Internet Explorer and Personal Web Server to view the pages in the local computer file system.

Registrants should be at least familiar with Microsoft Word and have some knowledge of programming languages. The session is intended as a jump start introduction to web page construction. It is not intended to cover server or network issues and connection to the internet will not be attempted. These issues are best covered in other contexts.

The seminar will award 1.5 Continuing Education Units for those who qualify. The Institute of Electrical and Electronics Engineers, Inc., is an authorized CEU Sponsor Member of

the International Association for Continuing Education and Training.

All six sessions should be attended, but all or some missed sessions may be made up without charge provided that space is available at a future offering within one year. Refunds are not generally available.

An ad with registration form will appear in the April Pulse. The seminar fee is \$375 reduced to \$325 for early registrations postmarked not later than April 19. IEEE members (not affiliate members) who register early may take an additional \$50 discount. Non-member registration includes a free half-year associate membership in the IEEE when the application is submitted at the seminar.

For further information, contact Walt Whipple at (516)738-3114 or w.whipple@ieee.org.

†Products mentioned are trademarked by the corresponding companies.

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Our World Wide Web (www) address is:
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DAVID D RICHMOND
2921 SOUTH SIDNEY COURT
DENVER CO 80231

PISCATAWAY NJ 08855-1331

P.O. Box 1331

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