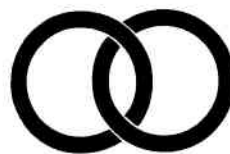


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Geney -

As promised, here are copies of my
"Flashback" columns which ran in the
LA Council Bulletin in 1991-1994. They
are written from the perspective of Los
Angeles and cover the creation of the
LA Bulletin, the SF Guid, Wescon, ECI,
ECM and Electro. I hope you find
them of value. You're free to use them
as you wish but I'd like to edit
and supplement them if they're going in
any permanent files.

With Best Regards -
Bruce

Visit the Wescon Home Page <http://wescon.com/wescon/>

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NUMBER 1C

OCTOBER 1991

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In Retrospect

By Bruce Angwin

(Editor's note: This is the first in a series of columns covering the fantastic origin and highlights of the Los Angeles Council, The BULLETIN, Council office and Wescon. Mr. Angwin, an IEEE Life Fellow, has had a distinguished career in engineering. He is the retired President of Electronic Conventions, producer of Wescon and other high technology conferences.)

To set the stage, the year was 1944. The Los Angeles Section of the Institute of Radio Engineers (IRE), forerunner of the IEEE, was meeting regularly at various locations -- school auditoriums, radio studios, hotels, restaurants and company conference rooms. The Council, Societies, The BULLETIN and the business office were yet to make their appearance. Meeting notices were penny postcards, hand addressed by the Section Secretary-Treasurer.



Bruce Angwin

There were also IRE Sections in San Francisco

and other large cities on the West Coast. To complement the annual IRE Convention in New York City, it being too far away for most West Coast members to attend, an annual IRE West Coast Technical Conference rotated between the major cities. Likewise, in Los Angeles and San Francisco, there was a local trade association, the West Coast Electronic Manufacturers Association (WCEMA), formed the year before by Les Hoffman to attract government contracts during WWII. Most local electronic firms were administered by engineers who were also IRE members.

WCEMA held monthly meetings, one of which each year consisted of a show-and-tell meeting in which members brought examples of their products,

radios, record-players, intercoms, measuring instruments, etc., to display to each other.

Things were proceeding smoothly until in 1947 a dilemma surfaced. Both the WCEMA show meeting and the IRE Conference were scheduled in San Francisco for the same time period. The solution was to cooperate in a joint meeting at the Whitcomb Hotel with 10 technical sessions and a 36-booth electronic exhibit. That Conference proved to be the nucleus of a world-class event, later called Wescon.

This revolutionary idea was such a success that a joint committee was formed to plan similar events in succeeding years. In 1948, the Pacific Electronic Exhibit and IRE West Coast Convention opened a three-day run in the Los Angeles Biltmore Hotel. Supplementing the technical sessions and the WCEMA exhibit were an ARRL Hamfest and field trips to local radio and motion picture studios.

The same year, the IRE postcard meeting notices were replaced by a folded, single-sheet, four-page printed notice with 13 advertisements to cover its expenses. The November '48 meeting notice announced a joint AIEE/IRE dinner meeting at the Savoy Hotel (cost \$2). Featured speakers were two Bell Labs employees named John Bardeen and William Shockley who would describe "a new ultra small non-vacuum device which they called a Transistor." The issue also disclosed the approval of IRE Headquarters to form local technically oriented groups in 12 fields to be called Professional Groups. The issue also announced that the printed meeting bulletins would be a regular monthly feature and solicited names for its masthead.

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NOTICE !!

November 18-22 is design

'WESCON Week'

Section and Chapter Officers
— Please do not schedule conflicting meetings and events during this week.

In conjunction with the 1948 Convention at the Biltmore and Embassy Auditorium, a special social event was planned. A dinner-dance at Earl White's nightclub in Hollywood was organized when tragedy struck. The nightclub declared bankruptcy and the entire bankroll (all \$600) which had been put up as a deposit, was wiped out. WCEMA bailed out the Conference but a realization remained that a formal agreement on financial responsibility was desirable. At the 1949 Convention, Dr. Fred Terman, Regional Director, proposed at the Regional Committee meeting that a formal agreement be worked out to promote the Conference on a Region-wide basis, with the Region sharing financial responsibility and benefits. A year later, all Sections in Region 7 (now IEEE Region 6) pledged 75% of their individual treasuries toward that end while meeting during the Conference and Exhibition in the Long Beach Auditorium. Wescon was finally approaching its birth.

(Next month: The BULLETIN, Section Office and Wescon all appear)

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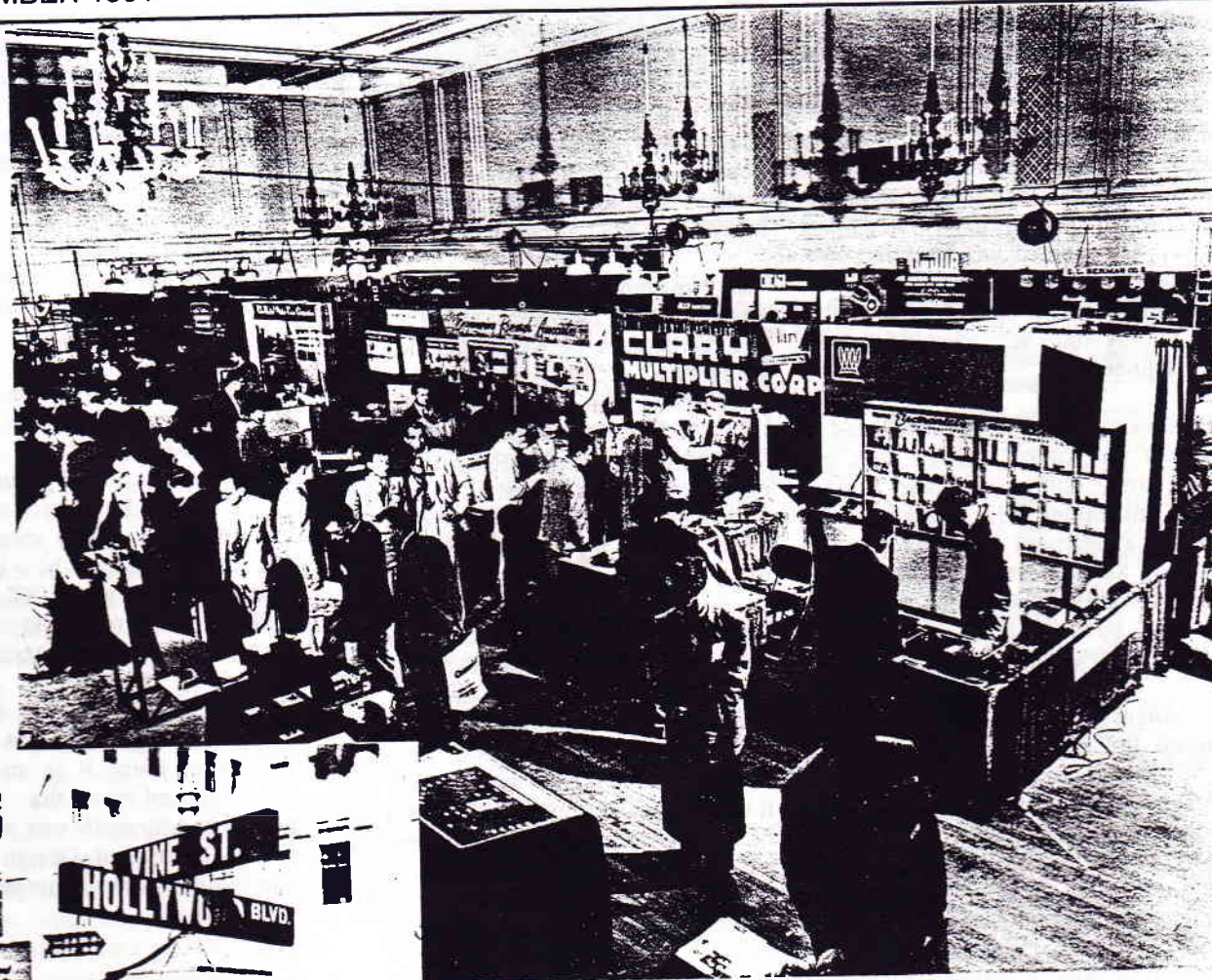
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WESCON FORERUNNER -- This was the IRE West Coast Convention in 1948, the acorn from which Wescon grew. See Flashback on Page 4.



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Flashback

By Bruce Angwin



Bruce Angwin

(This is the second in a series of columns detailing the origin and growth of the Los Angeles Council, The BULLETIN, the Council office and WESCON.)

With the success of their new meetings announcement flyer, the Los Angeles Section officers concluded a contest with the announcement that the flyer would henceforth be named The BULLETIN. Its first issue under that name was published in March 1949 and contained a first-time cover picture showing seismic exploration gear. The eight-page publication was supported by 15 local ads and covered the complete program of a TV symposium jointly sponsored by the IRE, UCLA and the Society of Television Engineers.

The January 1950 BULLETIN listed a volunteer publication staff of nine, including an Editor, Associate Editor, three Contributing Editors each with a separate assignment covering Section activities, an Advertising Manager, a Business Manager and three Copy Writers. The publication in 1949 took in \$1,420, just 10% short of breaking even.

The August 1950 BULLETIN announced the fourth IRE West Coast Convention to be held in conjunction with the West Coast Electronic Manufacturers Association (WCEMA) Electronic Exhibit at the Long Beach Municipal Auditorium. Among the featured events was a Keynote address by Dr. Frederick Terman, Dean of Engineering at Standard, and a Fellows luncheon address by Dr. Simon Ramo, Co-Director of Hughes Aircraft Company. The event drew 5,000 to the exhibition including 1,500 who signed up for the technical conference, and the function netted a first-time surplus of \$1,693.20.

The IRE's Executive Secretary George Bailey at New York Headquarters was very sensitive about the non-profit status of the Institute and insisted that any surplus be rebated to the exhibiting companies where it had originated.

Since most of the exhibitors' books had been closed for the particular exhibit year and the amount to each exhibitor would only be a few dollars, they refused to accept the rebate. The solution was to rent a storefront on La Brea Avenue just north of Wilshire to be used as office space for Heckert Parker, the hired Conference Coordinator. A short time later, desks were added for use by the volunteer officers of the Section and WCEMA. Out of this nucleus were to come the three business offices that exist today.

The November 1950 BULLETIN also announced the establishment of a tentative agreement between the IRE 7th Region and WCEMA to formalize their joint promotion of an annual West Coast IRE Regional Convention and a WCEMA Electronics Exhibition, with each sharing the financial responsibilities and benefits. Since the event was already outgrowing the physical facilities of all Western cities except San Francisco and Los Angeles, the operational responsibility was to be assumed by the SF and LA Councils of WCEMA and the SF and LA Sections of the IRE. An operating committee of two representatives from each of these four organizations was to plan each yearly event with the IRE being responsible for the Technical Conference and WCEMA responsibility for the exhibition. Any social events were to be jointly handled by the two organizations.

A year later, a formal contract was signed between the IRE 7th Region and WCEMA to this effect and established the name of the event, starting in 1952, as the WESTERN ELECTRONIC SHOW AND CONVENTION. It was specifically agreed that the acronym WESCON would not be used in order to assure proper identify of the event. This agreement, however, only lasted until the national trade press covered the story and WESCON, the original of all of today's "CON" shows was born.

Topic: Software Tools For Testable ASICs

The Orange County Computer Society and the Association of Computer Machinery will hold a joint dinner meeting Monday, November 25 featuring a talk on "USC -- Software Tools for Testable ASICs" by Dr. Melvin Breuer, chairman of the EE-Systems Department at USC. The meeting will take place at the Jolly Roger Inn in Anaheim.

Achieving low-defect levels in ASICs requires tests that cover a very high percentage of manufacturing defects. The creation of these tests is costly and time consuming. For ASICs having more than 20,000 gate equivalence, functional test patterns are not suitable because they do not detect a high percentage of faults and require too much time to execute on ATE. Automatic test pattern generation (ATPG) doesn't solve the problem because for most sequential circuits the resulting fault coverage is inadequate.

To solve these problems, industry is slowly beginning to accept concepts first proposed in the 1970s dealing with design-for-test (DFT), built-in-self-test (BIST) and the more modern 1990 concept of boundary scan (JTAG). Dr. Breuer will describe how USC is developing new DFT and BIST techniques as well as a software development environment to support these technologies.

Dr. Breuer is editor of a number of journals on digital systems and involved with other journals as co-author. He has published more than 150 technical papers and formerly was editor-in-chief of the Journal of Design Automation and Fault Tolerant Computing.

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Flashback

By Bruce Angwin



Bruce Angwin

The first two issues of this series followed the birth of Wescon from the merger of the WCEMA Pacific Electronic Exhibit and the IRE West Coast Convention in 1947 and the origin of the BULLETIN in 1948. With the success of the 1952 Show and Convention in Long Beach under its newly adopted name things really began to take off for both Wescon and its sponsors. WCEMA had hired a part-time association executive, Heckert Parker, as the exhibit manager and an eight-man board was charged with overseeing the show activity.

The IRE Seventh Region, now the IEEE Region 6, and WCEMA had signed a contract agreeing to mutually support an annual show and convention, alternating between the two largest Western cities, Los Angeles and San Francisco, with responsibilities and benefits equally shared between both organizations. The region's sections had agreed to pledge 75% of their respective treasuries to support Wescon. Recognizing that the lines of communication and authority must be kept short, the region further authorized the San Francisco and Los Angeles Sections to act on behalf of the entire region with respect to Wescon. Each was individually to have full veto power over the region relative to the operation except that any surplus funds were to be shared by the entire region on a per capita basis.

Noel Porter, a Wescon director, vice president manufacturing of Hewlett-Packard and mayor of Palo Alto, arranged in 1952 for one of his employees, Jeanne Jarrett, to act as Wescon recording secretary. Late the following year she moved to Los Angeles and, as office manager, became Wescon's first full-time employee.

To have an office to manage, Wescon rented two adjacent store fronts at 342-344 N. La Brea, just north of Wilshire Boulevard, and hired Mal Mobley as



1954 WESCON GATHERING -- Officials of IRE and Wescon gather at the 1954 event. Left to right, George Bailey, IRE Executive Secretary; Bill Hershberger, Wescon Chairman of the Board; Larry Cummings, IRE Technical Secretary, Tor Walker, Wescon Vice Chairman; and Hal Mobley, Wescon Business Manager.

full-time exhibit manager. Mobley had been very active in IRE affairs while working as engineering supervisor at radio station KMPC. He also had been sharing duties as co-editor of the Western Electronic News Magazine with Don Larson, about whom we shall hear later. Wescon therefore had put down roots and the San Francisco and Los Angeles sections had clear responsibility, along with WCEMA, for its operation.

To appreciate the economic status of the West at that time, a review of the late 50's issues of the BULLETIN shows that employment was, as now, a topic of major concern. The Los Angeles Section retained an official employment agency, H.A. Beall & Associates, and regularly reported employment opportunities in the BULLETIN. A year-end BULLETIN survey of the section's 1,400 members reported that the average Fellow was 49 years old and enjoyed a salary of \$12,000. The average Senior Member was 39 and earned \$9,200. The average 31-year-old Member got \$6,900 and the average Associate was 30 with a salary of \$5,300. The issue also offered a listing of seven "hot" engineering jobs paying between \$4,200 and \$6,000. A companion article described, as a good place to work, the fledgling Hughes Aircraft Company under Co-Directors Simon Ramo and Dean Wooldrich, boasting of 900 employees, a \$10 million budget and an objective of half military, half domestic product output.

The growth and diversity of activities in

the section benefited from the maturing of the BULLETIN which was crucial in providing communications between all facets of the IRE. Its extensive volunteer staff worked smoothly and its advertising revenue covered its cost of production and distribution. The San Francisco Section, noticing this success in 1955 published the first issue of its GRID. In July 1955, the first joint publication of the GRID-BULLETIN appeared. Traditionally, the vacation months of July and August were dormant regarding IRE activities in both cities. However, Wescon ran in late August so the combined July and August publications each were used in total for Wescon promotion. This was particularly attractive to advertisers as over 60% of the entire region received personal copies and Wescon attendance also benefited. Even local newspapers such as the LA Times and SF Chronicle contained supplements covering Wescon during its three or four day runs.

(continued page 7)

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Antennas, Propagation Group Studies Compact Range Aspects

Dual reflector compact range aspects will be the topic and Dr. V.J. Vokurka of March Microwave Inc. the speaker at the Tuesday, December 10, evening meeting of the Antennas and Propagation Society at the Hewlett-Packard facility on Manchester Boulevard in Los Angeles. The Society will host students and professors from the LA area.

Compact antenna test ranges (CATR) have been in use approximately 20 years as an alternative to outdoor antenna measurements ranges and developments have been accelerated by needs of the aerospace industry. Compact ranges have become popular for indoor radar cross section (RCS) measurements.

The presentation by Dr. Vokurka will detail development of dual-reflector CATRs, modifications to CATR technology, new concepts in CATR and techniques applied to various dual-reflector CATR concepts.

Dr. Vokurka was co-founder and president of March Microwave Systems, BV, in the Netherlands and of March Microwave Inc. in Chandler, Arizona.

FLASHBACK

continued from page 3

In late 1952, the BULLETIN reported that the regular section meeting would feature Dr. Louis Rydenour's proposed "Subscription TV System" undergoing tests on the Palm Springs Community Antennae network in preparation for FCC consideration of pay TV. A hint of things to come! That BULLETIN also reported that the Los Angeles Section, second largest in the country, had established its first sub-section, the Orange Belt Sub-Section covering the Covina, Pomona, Riverside and San Bernardino areas. A year later, the Buenaventura Sub-Section was approved for Ventura and Santa Barbara counties.

The only thing missing in the section was a permanent address, facility and staff to serve as a base for the section's many activities.

(Next issue: The Section Business Office appears)

'We Gotta Stop Meeting This Way'

By Justin Biddle

Coordinator, National Meetings and Symposia

Well, let's keep our fingers crossed and hope that Bob Myers, our editor, can squeeze two months in as nicely as he did in November's issue. Good job, Bob! NOTE: " after FAX means a repeat of the area code given for the voice phone.

December

2-5 GLOBECOM'91 IEEE Global Telecom. Conf. Civic Plaza, Phoenix, AZ. Ms Elodia Chavez, U.S. West Commun. 33 N. 3rd St., Rm 901, Phoenix, AZ 85012, (602) 235-1564, FAX " 235-3534

8-11 1991 IEEE Winter Simulation Conf. WSC91, Arizona Biltmore, Phoenix AZ. Jennifer E. Mishler, Pritsker Corp., PO Box 2413, West Lafayette, IN 47906, (317) 463-5557

8-12 ISDN'91 IEEE Symposium, Integrated Services Digital Networks, Loew's Ventana Canyon Hotel, Tucson, AZ. Russ DeWitt, Contel Service Corporation, 245 Perimeter Center Pkwy, Atlanta, GA 30346, (404) 551-4911, FAX " 391-1876

Happy holidays to all!

January Resolutions, anyone?

22-24 IEEE International Conference on Wafer Scale Integration, Fairmont Hotel, San Francisco.

27-31 8th Optical Fiber Sensors Conf., Monterey Sheraton, Monterey, CA. This is followed by the Conf. on Optical Fiber Communications on Feb. 3-7 in San Jose.

28-30 1992 Annual Reliability and Maintainability (RAM) Symposium, Riviera Hotel, Las Vegas.

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Switches as Medium Voltage Protective Devices

The Industrial Application Society' Los Angeles Chapter will feature Barry Holcombe, Product Manager of Switching Products for Hevi-Duty/Nelson and a talk on the use of fuses integral to dead-front medium voltage switching devices at its December 11 dinner meeting at Taix Restaurant in Echo Park.

Holcombe also will discuss the application of using selector switches as a means of protecting transformers remote from medium voltage circuit breakers. Hevi-Duty/Nelson, of Tulsa, Okla., manufactures medium voltage load break SF6 and oil switches for electric utilities and industrial distribution systems. Holcombe has been active in the electric industry for 30 years and held various engineering and marketing positions with Southern States, Inc. and Siemens Energy and Automation before joining Hevi-Duty/Nelson.

Electrical Engineering Definition May Change

If you are an engineering consultant or are considering private practice, this may affect you. The Board of Registration for Electrical Engineers and Land Surveyors has proposed a change to the statutes defining electrical engineering. The expressed purpose of the change is to update the language, provide better guidance to registration applicants and for law enforcement purposes. Hearings are being held throughout the state to obtain public comment. For information, contact Bruce Burr, P.E., Legislative Coordinator, at (818) 963-5325.

IEEE Seeks 'Good People'

The Los Angeles Council is looking for a few good people . . . to be company representatives. What is a company representative you might ask! He or she is an IEEE member who would be responsible for posting IEEE activity notices, with an employer's permission, on bulletin boards at work.

If you are this individual and want to get involved, please contact the Los Angeles Council business office at (213) 775-2859 or (310) 618-8344.

Flashback

By Bruce Angwin

(CHAPTER IV -- WESCON's Growing Pains



Bruce Angwin

During the late 40's and early 50's, WESCON struggled through a period of organizational confusion due in part, to its metamorphosis from two separate events into a single rapidly growing activity. The

trade show had been WCEMA's Pacific Electronic Exhibition and the conference had been IRE's 7th Region Convention. An agreement to mutually support a joint activity had been established and both parties had pledged financial responsibility and planned to equally share any benefits.

The matter of legal identity, ownership and responsibility needed clarification. The ideal solution would have been to organize WESCON as a non-profit corporation with WCEMA and the IRE 7th Region as shareholders. However, the IRS was then, as now, looking for additional sources of revenue and we

received a legal opinion that there was considerable doubt the new corporation would be granted non-profit status. To keep the administration restricted to the IRE Regional and WCEMA boundaries, it was agreed that WESCON would legally become a Committee of WCEMA, a California non-profit corporation, but would operate as an equal joint venture of WCEMA and the Region, with the SF and LA Sections representing the Region.

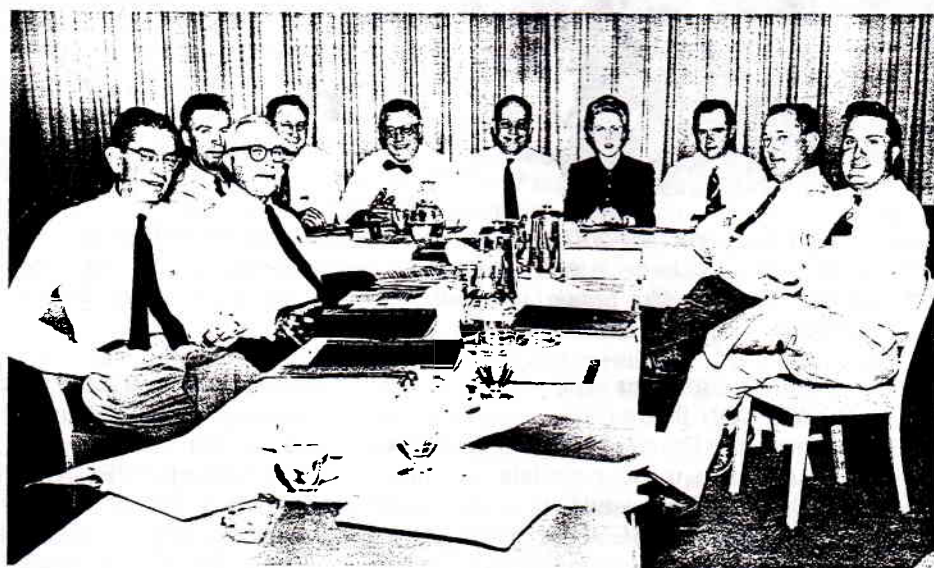
Since the SF and LA Sections were acting as representatives of the Region in their WESCON responsibility, the new Regional Director claimed that the full IRE share of any surplus funds from the event should be turned over to the Region for distribution, even though an earlier agreement clearly defined the distribution throughout the Region. When he failed to disburse the funds but, rather, established a Regional bank account with them, an emergency meeting of IRE officers was called at Fred Wolcott's home on North Palm Drive in Beverly Hills. The meeting was proceeding in heated debate when we became aware of a major commotion outside. Moving to Fred's front porch, we found the street filled with newsmen, newsreel cameras and radio microphones. For the next half hour, we had ringside seats while, across the street on her front lawn, Marilyn Monroe and

celebrity lawyer Gerry Geisi announced the termination of her 1 month marriage to Joe DiMaggio. After the excitement ended, the group retired again to Fred's living room and, some hours later, with the morning sun just starting to brighten the sky, the final seal was put on a new Regional Agreement regarding WESCON.

Two innovations were inaugurated in 1955. The WESCON Board negotiated an airlift with United Airlines to bring attendees from Chicago, thus officially extending its activities east of the Rocky Mountains. Also, the SF Section officers visited LA in early January with request for advice and assistance in establishing a publication in the Bay Area similar to the BULLETIN. The SF GRID's first issue was published in February and in July and August the two publications merged forces during the normal vacation period and published the joint GRID-BULLETIN as a cooperative activity devoted to publicizing WESCON and their mutual support of the annual event. The GRID-BULLETIN was distributed throughout the entire Region where 80 percent of WESCON's attendance originated. These two-month issues continued each year for 17 years through 1971.

In early 1956, Mal Mobley resigned as Business Manager and Jeanne Howard assumed the role of acting manager during the year. The walls of the business office on North LaBrea were extended in late 1956 and the LA Section and WCEMA each placed a desk in the small room and thus officially estab-

(continued page 5)



A LOOK AT THE 1956 BOARD — Wescon Boards of Directors posed for a lot of photographs in 1956 — and that habit has continued until today. Left to right are Directors Don Harris, Mal Mobley (Exhibits Manager), Tom Walker (Secretary-Treasurer), Walt Noller, Elmer Gertsch (Show Vice Chairman), Fred Wolcott (Chairman of the Board), Jeanne Jarrett (Recording Secretary), Bruce Angwin (Convention Vice Chairman), Noel Porter and Norm Moore.

Computer Demo. and Assembly Course Sat., Jan. 25



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Early Wescon Leadership

WESCON BOARD IN 1955 — Members of the Wescon Board of Directors in 1956 take time out of a meeting to pose. Clockwise from far left are Directors Fred Wolcott, Bill Hershberger, Walt Noller (Secretary-Treasurer), Don Harris (Convention Vice Chairman), Noel Porter (Chairman of the Board), Jeanne Jarrett (Recording Secretary), Norm Moore (Show Vice Chairman), Mal Mobley (Exhibits Manager), Tom Walker and Leon Ungar.

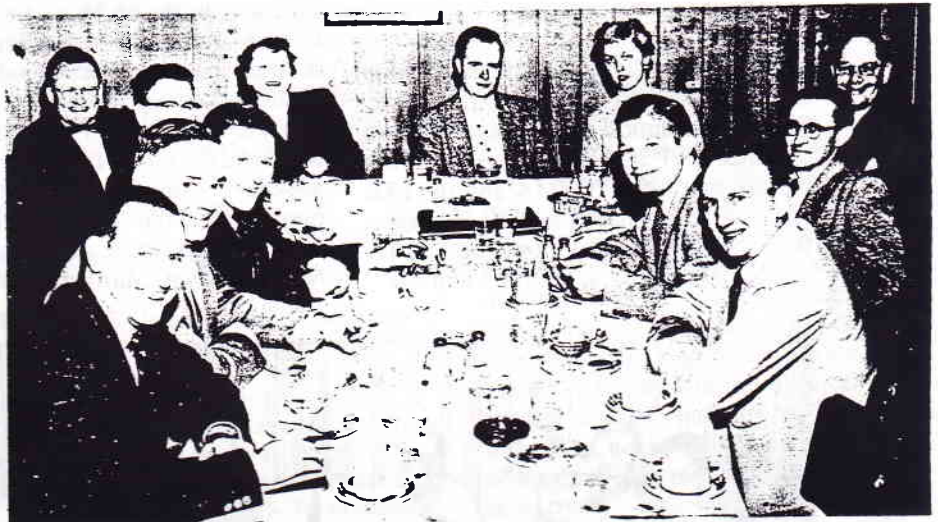


MR. WESCON -- Don Larson, pictured shortly after he was appointed Wescon General Manager in 1956, remained active in Wescon until his death.

Flashback Continued from page 3

lished the first of their respective business office operations for their volunteer officers. For larger Section committee needs, Lloyd Sigmon, KMPC Chief Engineer and organizer of the SigAlert Traffic system, offered use of his Studio A on Sunset Boulevard.

In September of 1956, just after WESCON had successfully closed its doors,



1956 COMMITTEE MEETING — This was a meeting of the Wescon Joint Committee in 1956. Clockwise from left bottom are Bill Jamieson, Ed Bertolet, John Grossland, Walt Peterson, Mrs. Frank Dunnigan, Bruce Angwin, Jeanne Jarrett, Fred Wolcott, Will Fen, unidentified, Bob Lacy.

Don Larson was approached by the WESCON Board of Directors who had instructed Gramer Yarbrough and Bruce Angwin to try to negotiate a contract whereby Don would be offered the position of WESCON Manager, contingent upon his disposing of his interest in a public relations partnership and his position as WCEMA Manager. Fortunately, Don saw a bright future in this enterprise and moved into the WESCON office. In 1957, the office outgrew its facility on North LaBrea and moved

to its second location at 1435 South La Cienega just below Pico where it occupied the entire second floor of a small office building. WESCON also opened an office in the SF Bay Area for the first time in 1957, locating it in the Villa Hotel in San Mateo. Space was provided there for the two sponsors as well as secretarial service.

(Next Month -- The Section hires its first paid employee and WESCON copes with union problems.)

Flashback

By Bruce Angwin

CHAPTER V – Section Business Office Established and WESCON Deals with a Union Problem



Bruce Angwin

Along with the establishment in July 1955 of the combined San Francisco GRID and Los Angeles BULLETIN during each two pre-WESCON months, the BULLETIN had

grown to be a sizable document with data on meetings of the Section, Sub-Sections, Group Chapters, Student Branches, as well as employment information, editorial material, advertising and a host of pictures. With a sizable volunteer staff to support it, a regular mid-month edition was inaugurated in September of 1955 to keep the membership apprised of the Section's many happenings. In mid-'56, a young technical writer, Ray Banks, started a volunteer term as head of publicity and by year's end had demonstrated the need for a centralized permanent business office to bring together the scattered BULLETIN and Section activities being carried out within the homes and work locations of the many volunteers. A permanent address and phone were recognized as critical to properly serving the local membership. Admitting that the Section could no longer efficiently operate without a centralized organization, in January, 1957, Ray became the Section's first paid employee, a position as Business Manager that he held for 13 years.

Simultaneously, Richard Paullus was hired by WCEMA as its Business Manager and, later that year, both Ray and Dick moved into the new combined WESCON-WCEMA-IRE offices on South La Cienega Boulevard. Ray soon found that soliciting advertising, editing and managing the BULLETIN was only part of his responsibility as he assumed the tasks of maintaining membership records, preparing the required annual reports to Headquarters, making meeting arrangements and taking minutes, preparing audits, monitoring various

THINGS HAVE CHANGED — This 1960 vintage computer took up a lot of space. A comparable computer today will sit in the palm of a hand or fit in a shirt pocket.

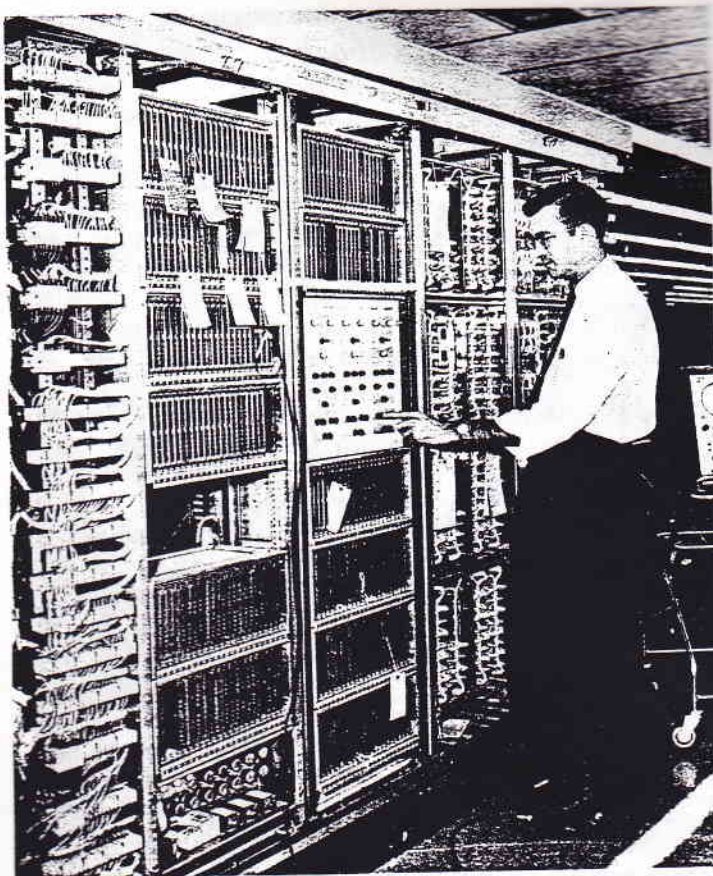
budgets and paying bills, providing labels and maintaining mailing lists, developing and maintaining inventories of reports and supplies and providing a telephone and letter service to the membership. These tasks, even today, are the life blood of the Council.

WESCON was also experiencing growing pains. The WESCON President, Vice President and Secretary-Treasurer positions were routinely elected from within the WESCON Board, by the Board, and often resulted in heavy politicking which hampered the Board's heavy workload. At a particularly volatile Board meeting in 1956, one Board member lined up a bare majority of the possible eight votes to support his candidacy as President. He had one member agree to make his nomination speech and then proceeded to arrogantly announce to anyone listening that he would be the next President. For two days he offended everyone. When the time arrived, his nominator made a typical political speech, including many "he who..." and "my candidate..." phrases. As he approached the climax, his "candidate" was halfway to his feet in

acceptance only to hear his opponent's name stated. The Board quickly voted "aye" as the unsuccessful candidate stormed out of the room. The next day he resigned. As a result, an organizational change was implemented in which Directors rotated through the chairs in a permanent and predetermined sequence which gave perfect balance in responsibility and recognition to the eight Directors from the four sponsoring elements during their four-year terms. This routine has stood the test of time for more than 24 years and is still, today, the basic formula for the WESCON Board of Directors.

Don Larson's first serious test as WESCON General Manager came with the 1957 show in San Francisco. WESCON had grown to world-class status with the participants from all over the U.S. as well as several foreign countries, and was scheduled to open in August in the massive Cow Palace. That year, Harry Bridges, controversial longshore labor boss, decided to seize control of all unions serving the San Francisco harbor,

(continued page 9)



Flashback

continued from page 4

And especially the Teamsters Union. His strategy was to stop all freight into and out of San Francisco's highways and waterways. He set up barriers at every road, bridge and pier entering the SF peninsula. No freight of any kind, including food, was moving while he negotiated his contracts. The city was at a standstill and there was little hope that WESCON's supplies and exhibits could reach the Cow Palace. This embargo was headline news.

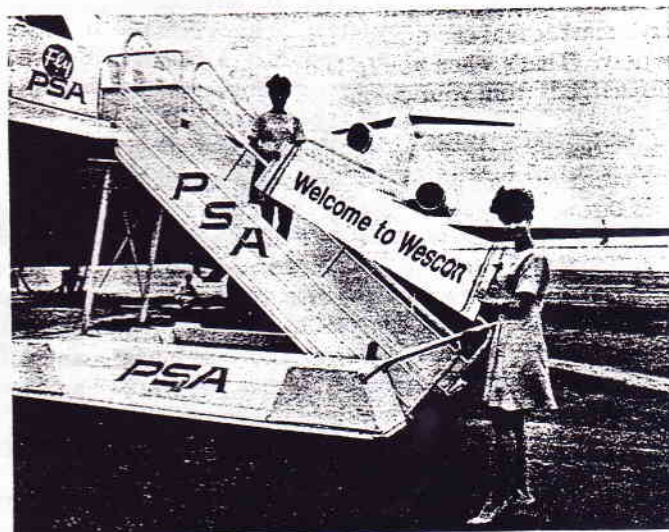
Don had an inspiration. I accompanied him in a search for Bridges' headquarters which we finally found in the rear of a Tenderloin District bar. Don proposed that, at the roadblocks, Harry Bridges' union drivers secretly "featherbed" the out-of-town drivers carrying WESCON freight, which would give them some extra income during their strike and would not compromise the local freight haulers who Bridges was striking. He agreed and gave us a supply of personally signed passes which WESCON staff personnel used at strategic roadblock locations. WESCON was saved, opening in force and on time. We had agreed to secrecy so never did answer columnist Herb Caen's query: "Who in the world is this WESCON group that can move goods throughout Baghdad by the Bay when even the City Hall's highest are stymied?"



WESCON'S COME A LONG WAY — This is the floor of WESCON at San Francisco's Cow Palace in 1959. It was a good sized event but nothing like today's extravaganzas.



WESCON BRAIN TRUST — Plans are reviewed for a late 50s WESCON. Left to right are Don Larson, WESCON General Manager, Ray Banks, Los Angeles IRE Section Business Manager, and Walt Peterson, WESCON Program Chair.



FLYING HIGH — Flight attendants from Pacific Southwest Airlines display a welcome sign to promote WESCON Los Angeles-San Francisco shuttle flights.



LEADERS GATHER — Joining for a meeting in 1958 at WESCON in Los Angeles are IRE national and local officials. Left to right are George Bailey, IRE Executive Secretary; Will Fenn, Los Angeles Section Secretary/Treasurer; Les Vanatta, LA Section Chair; Don Fink, IRE President; and Burgess Demster, LA Section Vice Chair.

Flashback

By Bruce Angwin

CHAPTER VI — WESCON Comes of Age



Bruce Angwin

By the late 50's, the Los Angeles Section of the IRE, predecessor of the IEEE, had grown into one of the largest in the world. Through its WESCON support it had been able to hire a fulltime Business Manager, establish a Business Office, publish two issues each month of its BULLETIN and support individual meeting activities of the Section, its six Sub-Sections, and 18 Professional Group Chapters (now known as Society Chapters). Ray Banks served as the Business Manager and one of his duties consisted of developing sufficient advertising revenue to cover BULLETIN expenses. In addition, a volunteer BULLETIN editor, Phil Diamond, directed the activities of a dozen other volunteers in developing and writing editorial and meeting material. Regular columns were also furnished by the Section Chairman to report Section plans and activities and the Section Secretary who condensed the monthly minutes of the Section Executive Committee into readable form. An interesting Section Meeting was listed in the BULLETIN's February, 1957, issue covering a paper to be presented in Caltech's auditorium on the subject of Air Pollution and the Results of Smog Control Efforts (has anything changed?).

In the second half of the 50's, the San Francisco and Los Angeles IRE and WEMA units were receiving, as part of their WESCON surplus distributions, a number of services including salary administration, group insurance management, tax reporting, along with office space, furniture and supplies.

WESCON had also grown. Although originating as a full regional activity, it

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had outgrown any location for its presentation except the Los Angeles and San Francisco areas. Even then, it was impossible in these areas to find single venues that could accommodate all of WESCON's many show and convention events. Since other Sections could not be considered as WESCON sites, it was decided to reinstate the regional convention from which WESCON had sprung. The 7th Regional Conference, held about six months removed from WESCON, also initially featured exhibits, a full technical program, field trips and a number of social events. It was also supported financially by the Regional allotment of WESCON surpluses and received consulting and operational assistance from the WESCON staff. The Regional Conference in 1957 was held in San Diego in April and boasted of 70 technical papers in 14 sessions, a 240-booth exhibition and several field trips, together with a banquet and social events for wives.

Meanwhile, the 1956 WESCON had been held in Los Angeles with technical sessions and social events in the Amba-



WESCON MOBILES – Wescon Director Don Duncan displays satellites which orbited the exhibition floor at the 1957 Wescon in San Francisco. The mobiles, created by sculptor Artzibashov, later were featured on the cover of TIME Magazine.

sador Hotel and the exhibits in the Pan Pacific Auditorium. To accommodate the split venue, WESCON established the first-ever shuttle bus system in the trade show industry. That year also saw the first four-day show after 14 years as a three-day event. Another "first" was the public introduction to KTLA's Channel 5 Helicopter. Its inaugural flight originated during WESCON from the Pan Pacific parking lot and its first broadcast covered the crowds lining up to register for the show.

The following year, 1957, WESCON returned to San Francisco and, expecting more than 750 exhibitors and an attendance in excess of 25,000, also split venues with exhibits and technical sessions in the massive Cow Palace in

(continued page 15)

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DeFOREST TUBE - Wescon Director Don Harris points to an original vacuum tube made by Lee DeForest and mounted on an oscillator at Wescon/57 in San Francisco.

Hughes Stereolithography Lab Tour Set by I&M, IE

The Los Angeles Chapters of the Instrumentation and Measurement and Industrial Electronics societies will tour the stereolithography facility at Hughes Aircraft Company in South El Segundo as a feature of its March 19 evening meeting. Allan Lange, Chief Scientist and Assistant Laboratory Manager, will present an overview of this method of rapid prototyping.

Stereolithography is a means of creating plastic parts directly from a CAD model in several hours without tooling. A liquid photopolymer, sensitive to an ultraviolet laser beam, is the core of the process.

Parts built with stereolithography methods can be used in the product development cycle to reduce the time required to define the product for the target market and to reduce associated costs. Applications for this process include creation of OEM mockups, verification of the CAD model, creation of patterns for prototype castings, fabrication of masters for casting tooling and concurrent engineering analysis.

Lange will explain how stereolithography has been used at Hughes to manufacture patterns for investment casting molds and casting tooling.

FLASHBACK continued from page 11

South San Francisco and the social activities in the Fairmont Hotel on Nob Hill. The exhibits were placed on the floor of the Cow Palace arena and its surrounding corridors. To add color, a 10-foot diameter latticework "globe" hung from the high ceiling while stylized satellites orbited it in 100-foot circles. The satellites, created by sculptor Artzibashov, were later featured on the cover of TIME Magazine.

Technical sessions were held in temporary bleachers made by curtaining off the sloping arena seats under a very high ceiling, although the high ambient noise level from the exhibits below made hearing very difficult. Additional meetings and some exhibit overflow were housed in the cow barns adjacent to the arena. This posed a problem as it was necessary to thoroughly disinfect the barns for several days before they could be used. Even then, an odor of Lysol permeated those areas during WESCON week.

Other new features included an exhibition titled Art in Electronics where a gallery showed off the works of amateur artists employed in the electronics industry. Another special feature was an Historical Exhibit presenting many of the original electronic devices created in the West. Included were Hewlett-Packard's first oscillator, DeForest's vacuum tubes and the first police radio transmitter placed in use in the nation.

In the Fairmont Hotel, another interesting event occurred. The year 1957 had been declared as the International Geophysical Year and scientists worldwide were scheduled to meet in Colorado Springs. A week before WESCON opened, we received a request from the State Department to allow a delegation of Russian scientists to visit WESCON under its sponsorship. We countered by asking that the Russians present a special session as part of WESCON's technical program. The State Department and the Russians agreed and, to cement relations, we invited the Russians to a private dinner with the WESCON directors and staff. Seating was arranged with a Russian alternating with a director around the table. At first, no Russian admitted to speaking or understanding English but, as the evening

MTT Group to Examine European EW and Defense



John Hakes

The outlook for EW and defense systems in the European Economic Community will be explored by John Hakes, chief executive officer of Thorn Security and Electronics, at the March 19 meeting of the San Fernando Valley Chapter of the Microwave Theory and Techniques Society at California State University, Northridge.

Hakes has experience in EW and defense on both sides of the Atlantic and will compare the European and American perspectives and what the future holds for microwave, radar and EW systems engineers.

Prior to joining Thorn Security, Hakes was CEO of Thorn EMI Electronics, a group of military electronics companies operating in the United Kingdom and US. He also was a divisional managing director of Plessey Electronics Systems and on the Board of Directors of Elettronica in Rome. He spent 14 years in the United States with General Dynamics in San Diego, Motorola GED in Scottsdale, AZ and ITT Gilfilan in the Los Angeles area.

wore on, communications miraculously improved and the services of an interpreter became unnecessary. It was apparent that each Russian had been assigned a subject to explore and the efforts to gain technical information were blatantly obvious. Soon, however, the social aspects took over and, by the end of the evening, we were being treated to interesting personal observations about their strange educational system, their lack of everyday luxuries and to marvelous piano solos and dancing by the delegates.

The State Department chaperon had long since thrown up his hands in amazement and frustration.

Flashback

By Bruce Angwin

CHAPTER VII - 1958, A Busy Year



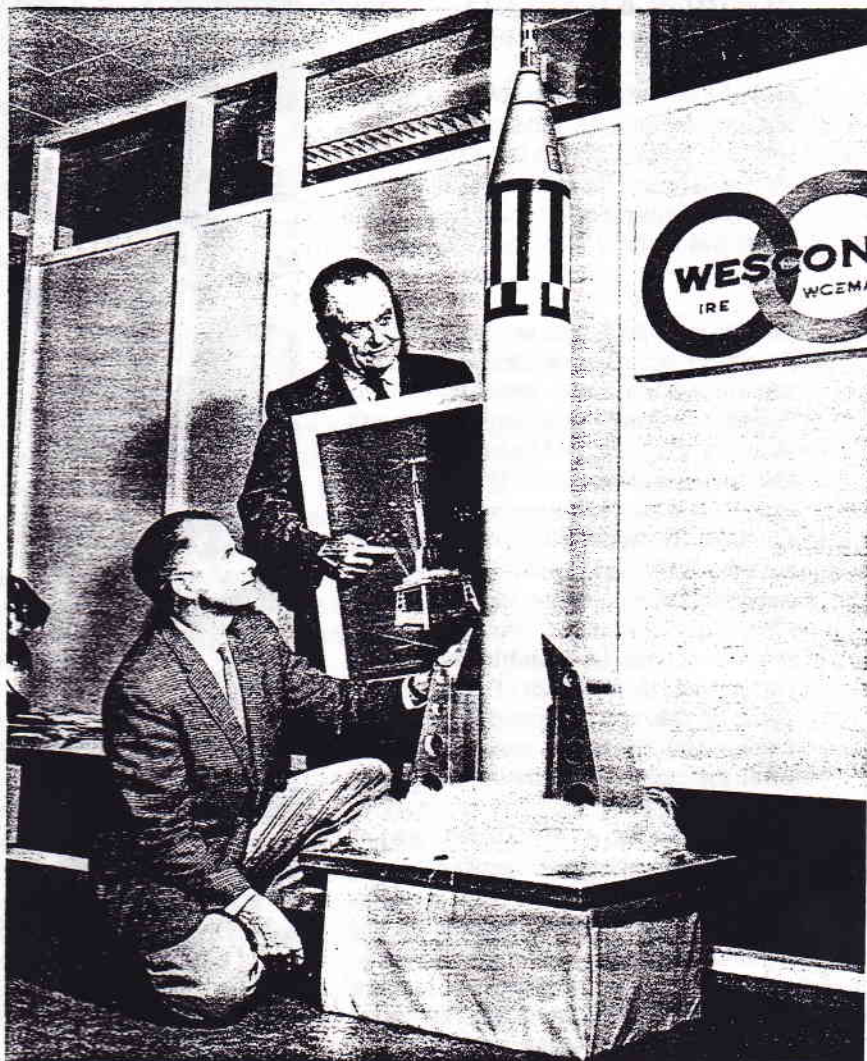
Bruce Angwin

The Los Angeles Section of the Institute of Electrical Engineers (IRE) had become a large and active complex by the late 50's, geographically embracing an area extending from but not

including Monterey County on the north to San Diego County on the south and from the Pacific Ocean on the west to the Utah and Nevada borders to the east. Although its local activities were centralized in the Section, which operated out of the Business Office on LaBrea Boulevard, there were also six active sub-sections within its boundaries, each of which was administered by a set of officers and regularly held technical and social meetings. Technologically, the Section supported 19 chapters of the National Professional Groups which concentrated on specific areas of engineering interest and also held local meetings. Add to this the student branches which functioned at each of the universities and colleges within the Section and one begins to realize the wealth of opportunities the IRE was presenting to its local membership.

Typical of the meeting opportunities was the February 12, 1958, meeting of the San Fernando Valley Sub-Section, arranged by its officers, John Guarrera, Einer Ingebretsen and Chuck Olsefsky. Attendees assembled in Encino, were bused to Rocketdyne's Santa Susana test facility to witness a live test of a rocket's main engine, tour the facility and see a motion picture of ICBM futures. Returning to Encino, they were served a full dinner at the Community Center. Total cost, \$3.50. Two weeks later, the Section's monthly meeting was held jointly with its student branches where an all-day program was presented, including talks by company heads on engineering job opportunities and ending with an evening dinner and talk by

(continued page 22)



THEME EXHIBIT - The centerpiece to the theme exhibit at Wescon in 1958 is checked by Bruce Angwin, Chairman of the Executive Committee, and Lew Howard (standing), Chairman of the Board, just before it was installed above the entrance booth on the exhibition floor. The rocket, not an altogether familiar sight in those days, was a crowd pleaser at Wescon/58.

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FLASHBACK

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Nobel Prize winner Dr. William Shockley, co-inventor of the transistor. As was his custom for this annual event, Prof. Clarence Radius brought the entire graduating engineering class down from Cal Poly at San Luis Obispo for the event.

Section meetings each month, as well as other IRE activities, were usually held in the auditorium of the Institute of Aeronautical Sciences Building on Beverly Boulevard just east of Fairfax. In 1958, the IAS Building was adjoined by the Pan Pacific Auditorium on the east and Gilmore Stadium and Farmers Market on the south. Some years later it disappeared to make room for facilities of CBS Television City. An outstanding feature of the IAS auditorium was a replica of the Wright Brothers first plane which was suspended from the ceiling and could be lowered to floor level for closer examination. This was done during one Section meeting where William Hewlett, co-founder of Hewlett-Packard, was the main speaker.

The IAS claimed that their replica was an even more faithful duplicate of the original plane than the "actual plane" displayed in the Smithsonian Institution. In reality, the original plane was so cannibalized that the only true original part on the current Smithsonian display is a bicycle axle which acted as a wheel on the front underside of the plane's central skid.

In early 1958, major Southern California aeronautical firm members of the IAS decided to build an exact replica of the famous plane. A search disclosed that there were no copies of the original plans in the U.S. It was known, however, that the brothers had tried unsuccessfully to sell the Army on buying planes for military observation. Failing this, they turned their attention overseas. France had offered a contract for such production and a search of French archives uncovered a full proposal which included highly detailed plans for their original plane. Using these plans, the IAS obtained spruce from the same forests used by the Wrights in making their spars. Similarly, they had an eastern mill weave fabric using the same linen thread and with the same warp and woof spacing as in the original wing



SCIENCE MUSEUM - A group of VIPs inspect a science museum display during Wescon in 1962. The science museum was a special attraction. Looking over the display, left to right, are the director of the museum, California Gov. Edmund G. (Pat) Brown, Arizona Gov. Paul Fannon, Bruce Angwin, Chairman of the Wescon Executive Committee, and Don Duncan, Chairman of the Wescon Board of Directors.

fabric. A barometer-altimeter identical to the original one made by Bulova was obtained and an exact duplicate of the engine was built. The result was a perfect duplicate of the original plane.

When the IAS Building was abandoned, the plane and other exhibits were sent to San Diego for display in the aeronautical exhibition in Balboa Park. Unfortunately, the plane was lost sometime later in a tragic fire set by teenage arsonists.

By 1958, WESCON had also taken on the character of the nation's leading electronics conference and exhibition with 42 technical sessions covering 200 papers and 900 exhibits. The 1958 WESCON featured General Douglas

MacArthur as a luncheon speaker with General Omar Bradley as an interested attendee. The industry at that time was still dominated by military-oriented products and systems. Other special guests at WESCON that year were the Western Governors, including Pat Brown of California. Mark Pendergast of

(continued page 12)

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Caltech Forum Examines Optics, Photonics Firm

The April 22 Caltech/MIT Enterprise Forum will take a look at Physical Optics Corporation and its technical, business and marketing plans for its family of fiber optic multimedia communications links and future products. The Forum will take place in the upstairs lecture hall of Caltech's Baxter Auditorium in Pasadena. A light dinner precedes the presentation.

Executives of the company will outline plans to introduce lines of portable smart sensors in 1993 and automatic spectrometers the following year. In 1991, the company generated \$5.5 million in revenues and was profitable, while making significant investments in engineering, manufacturing and facilities. Physical Optics' technologies are fundamental, spanning physics, chemistry, optics and photonics in the areas of holography, photonic data communication and photonic monitoring instrumentation.

Power Electronic Circuits; There Are New Developments

Two approaches in switched-mode power electronic circuits will be outlined to the Los Angeles Chapter of the Power Electronics Society at its Wednesday evening, April 22, meeting in Building E2 at TRW in Redondo Beach.

Bob Mammano, Vice President of Advanced Technology for Unitrode Corporation, will explain both approaches: (1) a power factor correction method using zero current switching and (2) a technique for resonant-switched pulse width modulation with phase shift control.

Mammano has extensive experience in circuit design and development of integrated circuits for power control applications. He organized the integrated circuit divisions of both Unitrode Corporation and Silicon General Inc.

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UCLA Has Unique Bi-Polar Near-Field Facility



Y. Rahmat-Samii

Bi-Polar near-field will be the topic for a special Orange County meeting sponsored by the Antenna and Propagation Society Tuesday, April 21, at the Newport Beach Marriott Hotel and Tennis Club, site of the 1995 Antennas and Propagation International Symposium. Speaker will be Yahya Rahmat-Samii, a Professor of Electrical Engineering at UCLA.

The science/art of antenna and RCS measurements and diagnostics has advanced dramatically in the past 25 years with near-field, compact range and microwave holographic measurement techniques receiving the most attention. An overview of these techniques will be presented along with a description of the unique features of the world's first indoor bi-polar near-field measurement scanner at UCLA.

Topics to be addressed include (a) bi-polar near-field concept, (b) simulation algorithms to verify transformation techniques to the far field, (c) mechanical developments of a bi-polar scanner, (d) measurement error considerations, (e) diagnostic and microwave holographic capabilities, (f) results of recent measurements, (g) comparison to other near-field measurement techniques and (h) cost effectiveness. Educational utility of the UCLA facility for electromagnetic visualization will be addressed, as will trends and measuring and diagnostically evaluating future generation antennas.

In addition to his UCLA duties, Dr. Rahmat-Samii has been a Senior Research Scientist at NASA's Jet Propulsion Laboratory since 1978 and has been involved in advance antenna technology programs. He also has been a consultant to many aerospace companies. He was a guest professor at the Technical University of Denmark in 1986.

FLASHBACK
continued from page 22

Oregon and Paul Farnon of Actinium, all of whom actively participated in WESCON events. Also, the IRE Board of Directors for the first time held a regular meeting outside New York by scheduling it in Los Angeles during WESCON.

A special exhibit at the Pan Pacific Auditorium, in a tent adjacent to WESCON's main exhibition, was the Future Engineers Show. There, high school science fair winners displayed their projects under the sponsorships of each of the Sections of the Region. A popular TV show of the time was Bill Burred's "City at Night" which each week made a live visit to a factory or major event in Los Angeles. Burred had arranged for a remote hour-long pickup from WESCON, starting in the Future Engineers Show and moving throughout the entire WESCON exhibition in the main Pan Pacific Auditorium. Your writer was to be the guide to announcers Ken Grau and Stan Chambers. However, the announcers and camera crew were so intrigued by the student engineering projects that, no matter how hard I prodded them along, by the end of the hour the cameras were still in the tent and the main WESCON exhibition coverage was postponed to some future year. Such was live television of the 50's.

(Next month: The Problems of the World's Largest Tent and City Bureaucracy.)

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Flashback

By Bruce Angwin

CHAPTER VIII – The Unexpected Always Happens



Bruce Angwin
in that unique history.)

(Most IEEE members are unaware of the history of the development and growth of the LA Council, the BULLETIN and WESCON. This series recounts many of the fascinating occurrences

By 1959, WESCON's success had made possible in LA the establishment of the office of the IRE Section (predecessor of the IEEE Council), the services of a paid business manager and the publication and distribution of the BULLETIN. WESCON's co-sponsor, WCEMA, also shared the office and had hired its business manager, Dick Paulus. That year WESCON opened a branch office in San Mateo at 60 West 41st Ave., adjacent to the Villa Hotel, and made room for the San Francisco IRE Section and WCEMA officers. Dick Paulus shortly thereafter resigned and his position was assumed by Lenkurt employee Ed Ferrey as WCEMA's paid manager.

The 1960 WESCON had outgrown the Pan Pacific Auditorium and, looking for a larger venue, chose the new LA Sports Arena in Exposition Park. Even then, the Arena and all its concourses had insufficient space to hold WESCON's exhibits so Canvas Specialties Co. was commissioned to fabricate an enormous tent, 150 feet wide by 400 feet long, to be erected next to the Sports Arena.

To handle the power requirements of the 450 booths in the tent, along with several portable air conditioners, a special sub-station was built in a nearby parking lot. Unfortunately, the August period chosen for WESCON's four-day run was also one of the hottest and most humid of the year and on opening morning, an overloaded special transformer blew and one-third of the tent went dark. There being no local replacement transformer available, it was necessary to fly replacement units from



WORLD'S LARGEST – WESCON in 1962 used the Los Angeles Sports Arena as its main venue but had to erect a tent (foreground) to handle many exhibitors. This "world's largest" tent required special aircraft air conditioners to keep attendees and exhibitors comfortable.

necessary to fly replacement units from Seattle to be put in service the following day. Few exhibitors who survived the resulting steambath will ever forget that opening day.

Two years later, the lesson learned but still without an alternative venue, the WESCON staff commissioned an even larger tent, capable of housing two full football fields end-to-end with space left over. This time the tent had a second top, several feet below the regular top to help shield the interior from the sun's murderous infrared radiation. This was reported to be, at that time, the largest tent in the world. In the 60s, airplanes did not carry air conditioners on board but were coupled to air conditioning trucks while exchanging passengers during ground stops. An order was placed with the manufacturer of these air conditioners for 12 of the largest units yet built mounted on multi-wheeled trailers with six-foot diameter flex ducts to connect to the tent side walls. Six such trailers were strategically placed down each side of the tent.

On the evening before the opening morning, the tent was visited by LA Fire Department inspectors who, reacting to a tragic circus fire which had trapped

and killed many men, women and children a short time before in Boston announced that it would be necessary to raise all sides of the tent six feet whenever occupied by attendees. There went any hopes of cooling the tent, especially since each of the hundreds of exhibit booths inside were dissipating more than a kilowatt of power in lighting and demonstration equipment.

(continued page 11)



MISS KITTY – The major spouse event at WESCON/62 was a fashion show at the Biltmore Hotel. It was quite an occasion. Here, Amanda Blake, Miss Kitty of Gunsmoke fame, models a period dress on the luncheon runway.



COOL - Twelve converted air conditioners were used to cool the world's largest tents used to handle overflow exhibits at Wescon/62 at the Sports Arena. From the reaction of the model, the units were noisy.

FLASHBACK

continued from page 4

Minutes after the Fire Department inspectors left, another city delegation arrived, this time from the Department of Building and Safety. After a walk-through of the tent, this group announced that since the tent was a structure, it had jurisdiction and, for safety sake, required that WESCON remove the tent sidewalls completely.

With disaster on hand, a panic call went to the city councilman responsible for the Sports Arena area. Following a few expletives by him and aimed at various city departments, he suggested that WESCON sit tight while he "determined which department had cognizance over the WESCON site." Not receiving an answer, the show opened on schedule Tuesday morning with sides down and closed on Friday evening, four days later. On Saturday morning, the councilman advised which department had jurisdiction. That was the last year WESCON ever considered tents.

Meanwhile, the Section's Women's Auxiliary sponsored a fashion show during WESCON at the Biltmore Hotel. The commentator was to be Pamela Mason, wife of actor James Mason.

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Their daughter, Portland, assisted and, as models, several TV personalities were recruited. Included were Amanda Blake (Kitty of Gunsmoke), Marjory Lord (Danny Thomas' TV wife) and Mary Tyler Moore. Because of the show business atmosphere, the press was invited and, wonder of wonders, both Hollywood gossip writers of the period showed up, Louella Parsons and Hedda Hopper.

Pamela Mason, who was known to take a few nips from time to time, arrived as the saying goes, "feeling no pain." Someone, not knowing the intense rivalry between the gossip columnists, proceeded to seat them directly opposite each other at one of the long, narrow tables. Soon after the fashion show started, the commentator embarked on the raciest dialogue imaginable and, while the audience was recovering from its startled embarrassment, one of the columnists made an unkind remark about the other's hat. They were soon on their feet, shouting epithets across the table at each other while the starlet models paced the runway trying to obtain attention to the period costumes and new creations they were wearing. WESCON was credited that year with providing some of the best entertainment in its women's activity programs.

The year 1962 also saw expansion of the combined WESCON/IRE/WCEMA offices with a move from its LaBrea location into two floors of the Travelers Building on Wilshire Boulevard. There WESCON, the IRE and WCEMA each enjoyed a suite of offices, shared a conference room and the several multilith and Xerox machines grew into a fully equipped print shop with a fulltime manager, all supported by WESCON surpluses. Times were good and each of the three organizations' staffs began to grow. That same year the WESCON/IRE/WCEMA office in San Mateo also moved to Palo Alto to larger and more convenient space. WESCON hired Vera Waldron to run the combined office and the two sponsors were provided office space for their local activities.

(Next month: IRE becomes IEEE)

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Multimedia, Special Effects On Tap for May Joint Meeting



David Franklin

Multimedia - combining text, graphics photography and live video to improve presentations - will be demonstrated at a joint meeting of the Reliability, Computer and CHMT chapters May 28 at the Hacienda Hotel in El Segundo. Special emphasis will be placed on video and the use of special effects and animation.


Computer presented options will be compared and a video demonstrating many of the effects of multimedia will be shown. Availability of various systems to produce multimedia presentations will be reviewed and capabilities compared.

The speaker will be David Franklin of the Hughes Aircraft Company Space and Communications Group. The multimedia and video production review is based on work done with his son in the field.

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Flashback

By Bruce Angwin

CHAPTER VIII -- IRE Becomes IEEE



Bruce Angwin

(The first eight chapters of this series covered, from 1944 through 1962, the creation and development of the IRE Los Angeles Section, its BULLETIN and its involvement in WESCON.

The Section made tremendous strides during that period but was to face the greatest change and adjustments in the time that followed. To gain proper perspective of those events, it is necessary to go well back in time.)

Long before DeForrest put the third element in the vacuum tube and Marconi demonstrated wireless telegraphy, engineers whose major interest was the generation and transmission of electrical power founded a technical society, the American Institute of Electrical Engineering. The year was 1884. Some years later, a group of AIEE engineers, more interested in radio than power, spun out of the AIEE and formed a splinter group known as the Institute of Radio Engineers (IRE). The two organizations ran as friendly rivals for several decades. Over the years the AIEE matured and then started to level off, finally shrinking while the IRE maintained a healthy membership position. As the 50's drew to a close, however, it was apparent that the AIEE was facing extinction. After much soul-searching and swallowing of pride, the officers of the two organizations announced that they would soon present a proposal to their memberships regarding a merger.

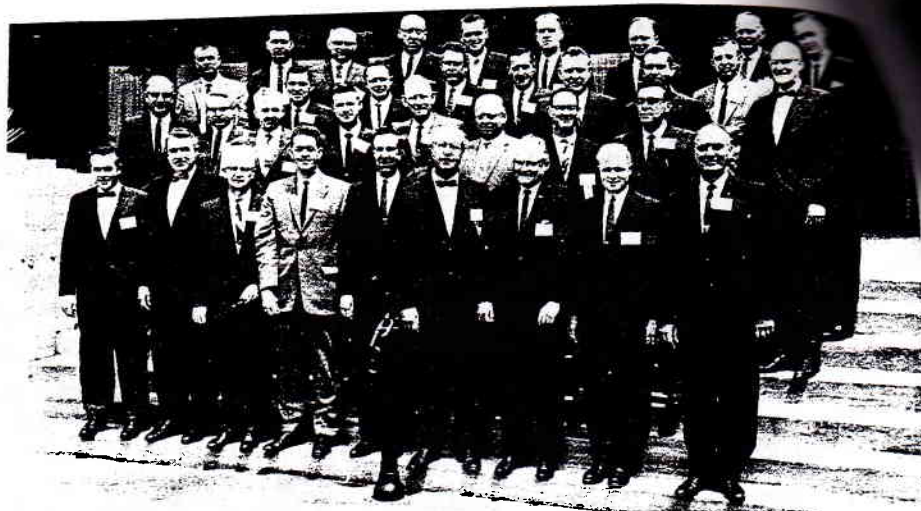
In the Southwest, the AIEE had operated from 1908 through a district structure which embraced the Los Angeles area.

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FIRST MEETING - Attendees at the first IEEE Region 6 committee meeting in Phoenix in 1963 pose during a break in the action. There's some familiar faces in the crowd including, second from right in the second row, a youngish-looking Eric Herz, now General Manager of the IEEE, and second from right in the front row, the author.

The Los Angeles IRE Section was chartered in June of 1926 and had grown to include eight sub-sections and a large number of professional group chapters. It also had established a business office with paid employees, published two issues of a BULLETIN each month and shared responsibility for the operation of the region's annual show and convention, WESCON. In fact, the BULLETIN and business office had become an obstacle to them in one respect. The eight sub-sections of the LA Section had grown larger and more active than the majority of other sections nationally. They aspired to full section status but were bound to the Los Angeles Section through their participation in the business office, BULLETIN and WESCON. The solution seemed to call for an organizational level between the section and region so that these activities could serve the various sections and allow the sub-sections to advance to full section status. The planned merger would offer that opportunity if such an organizational structure were planned.

With that in mind, LA Section Chairman John Guarrera and his counterpart in the AIEE, L.L. Grandi, appointed in April, 1962, a committee of four members from each organization to study the idea of merger. Members of that committee were Bruce Angwin, Dudley Foster, Ralph Lamm and Walter Peterson for the IRE and Dale Barcus, Earl Finley, Ellis King and W.H. Wadel for the AIEE. After considerable study and a series of meetings at UCLA, a merger

proposal document was signed on April 26. Then ongoing working committees were established consisting of Angwin and King on organization, Lamm and Wadel on publications and Foster and Finley on finance.

Immediately, Walt Peterson and I went to Dallas to make our proposal to the chairman of the national merger committee, Pat Haggerty (IRE President and Board Chairman of Texas Instruments), staying at his home for a week as we worked out various points with his full committee. Our two major points were accepted, establishing an interim level between the section and region to be known as a district and keeping the IRE 7th Region intact due to its ownership and involvement with WESCON.

In anticipation of the probable merger of the IRE and AIEE, a combined dinner-dance installation of IRE and AIEE officers was held June 2, 1962, at the Hollywood Palladium with the Lawrence Welk full orchestra furnishing the dance music. Ralph Lamm (IRE) and Floyd Goss (AIEE) were installed respectively as section chairmen under the proposed district.

(continued page 10)

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FAMILIAR - This Hollywood starlet parodies a movie queen's greeting in a publicity shot for a WESCON "Night in Hollywood" party in the early 60s. She later established her own trademark. Do you recognize...Mary Tyler Moore?

Flashback

continued from page 4

By yearend, the two sections were working smoothly together with both sets of meetings publicized in the BULLETIN and invitations to the joint membership inviting them to attend all meetings. The National AIEE and IRE finally merged officially on January 1, 1963, although the local sections already had been operating the business office and publishing the BULLETIN as joint ventures for six months. On April 8, 1963, Will Fenn (formerly IRE) and Bill Moody (formerly AIEE) were respectively installed at another Palladium/

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Lawrence Welk dinner-dance as chairman and vice chairman of the new LA IEEE District.

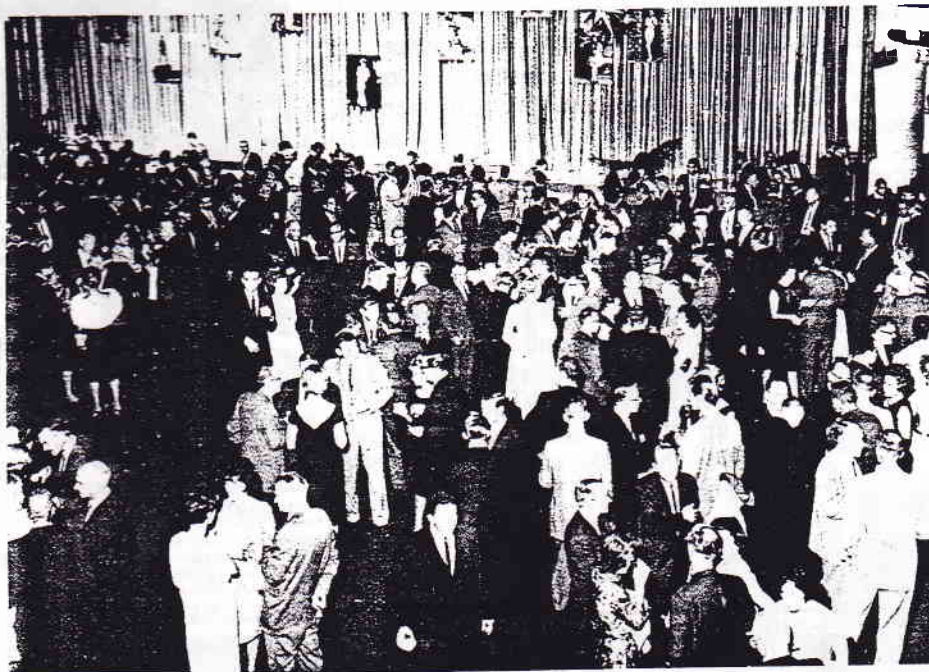
Since the loyalties of the membership toward their previous sections was still very strong, 1963 became a year of gradual integration. IRE's Region 7 became IEEE's Region 6 intact. By April, the four AIEE and eight IRE sub-sections were melding as were the AIEE's eight technical divisions and eight technical groups along with IRE's 24 professional group chapters by blending their parallel interests. In September, 1963, the full new LA organization structure was formally described to the membership along with full complements of officers, including district, sections, professional/technical group chapters and student branches. Headquarters formally approved the entire package and the District was legal. The District then nominated Bruce Angwin as Regional Director and Walt Peterson as IEEE Vice President. These nominees were elected for terms starting in 1964, thus assuring a voice in New York as the new IEEE went through its growing pains.

Los Angeles had successfully demonstrated its leadership to the rest of the world by being the first to actually merge and also to implement the new level of district. Its former collective

sub-sections had also, upon going through the normal channels, redefined their integrated boundaries and emerged as 10 full sections under the District umbrella with the China Lake Section joining two months later. In addition, the local IRE PG's and the AIEE's technical divisions were kept intact as 31 professional/technical groups. The District, through its District Committee, was charged with the responsibility of setting policy and coordinating activities of the sections and PGs and in operation of their joint interests, including the business office, BULLETIN and sponsorship of WESCON. It was also to maintain overall budget and fiscal responsibility and act as liaison with other societies, the Region and Headquarters.

Some time later, the Professional/Technical Groups gradually integrated nationally and are today known as societies. In early 1966, on request of Headquarters, the Los Angeles District changed its name to the Los Angeles Council. Headquarters also identified WESCON and the Region 6 Annual Conference as the two technical and organizational meetings of regional scope. The Los Angeles Council was on its way to bigger and better things.

(Next month: WESCON is victim of a deliberate hoax and its opening is delayed by a space-age messenger on a bicycle.)



NIGHT OUT - Partygoers crowd the floor of the Hollywood Palladium at the opening of the Los Angeles Council's big dinner-dance April 8, 1963. The big attraction at the exclusive event was the music of "one-and-a-two-and-a-three" Lawrence Welk.

Flashback

By Bruce Angwin

CHAPTER XI -- Catering to the Media



Bruce Angwin

Prior chapters of "Flashback" have detailed growth and activities of the LA Section of the IRE. Local meetings had grown to be dominated by the regular monthly meetings of the Section together with frequent meetings of the eight sub-sections and the 28 Professional Group Chapters. Under the new merged IEEE organization, the eight sub-sections became 10 full sections while the previous overall area known as the section became a District (later to be called the Council).

The centralized meeting was discontinued, except for one annual meeting, and members were invited to attend monthly meetings of the section in which they were registered. Professional group chapters were assigned to one or more of the sections and all district members were encouraged to attend their meetings regardless of their section affiliation. The District (Council) retained the responsibility for such overall activities as publication of the BULLETIN, sponsorship of WESCON, liaison with the Region and Headquarters, fiscal management of the District and its sections and management of the business office and its staff.

Just before merger was completed, the combined IEEE, WESCON and WCEMA business office moved from its La Brea location to the full 19th floor of the Travelers Building near the Ambassador Hotel on Wilshire Boulevard. It also set up its print shop on the 21st floor under the able management of Henry Ako.

In keeping with the change, the West Coast Electronic Manufacturers Association

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tion (WCEMA), co-sponsor with the IEEE of WESCON, dropped the "C" from its name to reflect growth from its original two-city venue.

Meanwhile, WESCON was expanding both in size and scope. Although it had added glamour to some of its earlier activities by utilizing the beauty and talents of such Hollywood luminaries as Mary Tyler Moore, Marjory Lord, Amanda Blake and Pamela Mason, in 1961 WESCON combined both technical base and worldwide scope in appointing Marlene Schmidt, Miss Uni-

verse, as its theme girl. Aside from involvement in beauty contests, Schmidt was also employed as an electronic engineer in her native San Jose. Needless to say, WESCON didn't have full media coverage that year.

The year 1961 also had seen another WESCON contribution to the trade show industry through the introduction of the embossed plastic card, which later became the universal name badge and inquiry card found in most shows today.

(continued page 7)



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Quality Assurance For Small Business



Steve Kozich

Quality assurance consultant Steve Kozich will explore quality assurance and TQM for small businesses at an August 20 joint meeting of the IEEE Reliability and Computer Societies and the American Society for Quality Control at the Hacienda Hotel in El Segundo.

Quality assurance and TQM have become intense subjects in American industry. Each company must build a quality system to fit its own product or service. The key to every small business is to have a unique specialty and success is based on assuring that customers receive the expected level of quality. Some owners are detached from business operations and leave quality in the hands of all employees, with the result that no one takes responsibility. Successful business owners actively assume that responsibilities and the rest of the employees follow.

Kozich will examine the aspects of proper quality assurance and control with examines and suggestions.

Kozich has been a consultant to industry since 1972 and earlier held management positions in engineering, manufacturing and quality control, including 10 years with Atlantic Research Corporation, Missile Systems Division, as Director of Quality, Assistant to the President and Division Manager. He has been a consultant to more than 300 organizations.

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FLASHBACK

continued from page 3

In 1962, while wrestling with its problem of the tent adjacent to the Sports Arena, WESCON was planning a grandiose 2nd Annual Banquet, a formal-dress affair to be held in the Biltmore Bowl. Keynote speaker was to be Elmer Engstrom, President of RCA, and Abe Zarem, Electro-Optical Systems President, was to act as Toastmaster. To publicize this event and the other WESCON activities, a luncheon was held to which local security analysts and members of the newspaper, TV and radio services were invited. Abe, a naturally charismatic speaker, outdid himself as moderator and the press and TV crews turned out en masse.

At the banquet, WESCON, IEEE, WEMA and industry dignitaries were arranged in several stepped rows of tables facing the audience and the dance floor while Jerry Gray's orchestra provided the dance music. Seated at the center of one of the rows of dignitaries was an IEEE officer who shall remain nameless. At the appropriate time, Abe Zarem delivered several humorous anecdotes and then launched into his introduction of the featured speaker, Elmer Engstrom. Suddenly everyone was aware of a low rumble which grew in intensity until the prestigious introduction was virtually drowned out by the growling snores of the IEEE officer who had fallen asleep in his seat just in front of the speaker. Nudged by his companions on either side only momentarily interrupted his booze-induced sleep and he had to be bodily carried out before the program could continue. Needless

to say, the TV news had some chic coverage of the WESCON banquet night.

Due to the disastrous experiences in previous years with the tent used to expand the Sports Arena, a new location was sought. The solution was to split the exhibition between the Sports Arena and the grandstands in Hollywood Park. Five hundred exhibit booths were placed there and with the technical programs at the Statler Hilton Hotel, WESCON held forth in three locations coupled with a special shuttle-bus system. With the AIEE merged into the IEEE, power was also added as a subject covered in both the exhibition and professional programs. For the first time, due to the wide range of subject matter, the show floor was categorized for the convenience of the attendees. A film theater was added to offer both interesting information on the exhibits and to serve as a much-needed lounge.

For the first time also, an attendance committee was formed whose innovations included arrangements with commuter airlines serving Los Angeles to feature WESCON flights. Extra planes were put on during the peak period and all flights carried WESCON literature. The result was a significant increase over former years in both interest and attendance. WESCON was approaching some of its best years.

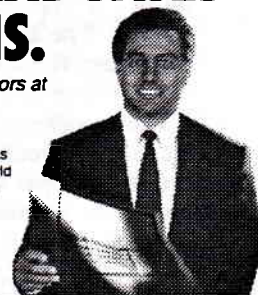
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Flashback

By Bruce Angwin



Bruce Angwin

CHAPTER X — WESCON Suffers a Hoax and a Hi-Tech Glitch

Through the 50's and into the early 60's the WESCON technical program was recognized as a leading forum for the announcement of state-of-the-art research and development achievements. Papers were carefully screened by a large committee of experts and the final papers were copyrighted on behalf of their authors and catalogued in the Library of Congress. To be accepted for inclusion in the WESCON program, each paper was to be a first-time original and the author was required first to furnish an abstract of his proposed paper to the Program Committee. If accepted, the author was then required to furnish a complete copy of his paper which was, again, meticulously reviewed and edited. With the author's concurrence of these suggestions, a final draft was to be submitted from which printed copies were prepared for distribution to attendees, the media, libraries and for copyright filing. The author could then either read his paper at WESCON or comment on its contents.

In 1962, a prestigious program committee of 43 technical experts was headed by David Langmuir of Space Technology Labs and Urner Liddel of Hughes Research Laboratories, Inc. One of the proposed papers which passed the abstract phase of review was titled "Linotron - A Practical Device for Majority Logic." The abstract, in broad generic terms, described a universally applicable device which was predicted to become a necessary component of most future electronic circuits and systems. The proposed paper seemed to be ideal for the 1962 Technical Program and the authors, W.E. Rowe, Manager of the Digital Systems Department of Sylvania, and C.D. Simmons of Philco's Lansdale Tube Division, were invited to submit a detailed draft of the full paper.

Only then did they disclose with great



HI TECH BACKFIRE — A weather balloon is readied for a special demonstration at the opening ceremony of WESCON at the Los Angeles Sports Arena in 1962. The balloon was to have been released by a laser signal flashed around the world through the auspices of Jet Propulsion Laboratory. A human glitch foiled the experiment but quick thinking saved the day.

glee to the media that the paper was a hoax and that "Linotron" was in reality the common resistor. WESCON had egg on its face.

In a letter to Langmuir, Rowe indicated he and Simmons had prepared the abstract to dramatize their conviction that methods of paper selection for technical conferences were inefficient. Langmuir's reply pointed out that major technical programs are traditionally based on reviews of summaries and abstracts and program chairmen must count heavily on the good faith of pro-

spective authors. He then invited Rowe and Simmons to participate in a special session at WESCON, consisting of a panel of their contemporaries to discuss how technical programs could be improved. They accepted and joined A.N.

(continued page 11)

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Flashback
continued from page 4

Curtiss, Administrative Manager for RCA Laboratories, John Granger, President of Granger Associates, Philip Klass, Editor of Aviation Week, and Dr. Bernard Oliver, VP Research and Development for Hewlett-Packard, in one of WESCON's largest and most exciting sessions that year.

That same year emphasis on military electronics was taking a backseat to space exploration. JPL, under Dr. William Pickering, was much in the news. The big item of interest was orbiting satellites. JPL's tracking network and its monitoring station in Pasadena was often seen on local TV. Also, laser technology was in the news with much science fiction type speculation regarding laser weapons.

Searching for a spectacular hi-tech opening to the 1962 WESCON, the staff devised a ceremony utilizing both technologies. A platform was constructed adjoining the entrance to the LA Sports Arena, site of half the trade exhibition, the other half being in the grandstands of Hollywood Park. With the assistance of Dr. Pickering and various Hughes Aircraft engineers, a large weather balloon was tethered to the platform with its restraining wire passing through the path of a laser beam. When activated, the beam was to cut the wire, allowing the balloon to rise to its full tethered height.

A telegraph key was placed on a strategic corner of the adjoining table and, when pressed, a coded message was relayed to the downtown office of Western Union, thence to JPL in Pasadena where it was to be relayed to the Goldstone Tracking Station in the desert. From Goldstone, the message would bounce between satellites and earth over the JPL tracking network around the world, terminating again at Goldstone. Leaving Goldstone it was to travel back



VICTIMS OF HOAX — David Langmuir of Space Technology Labs (right) and Umer Liddel of Hughes Research Laboratories, Inc. were chairman and vice chairman, respectively of the 1962 WESCON Technical Program -- and they were had. A paper was accepted describing a device which the authors claimed would be a necessary component of future circuits and systems. It turned out the authors were describing the common resistor.

to Pasadena, then to Western Union's downtown office and, by a temporary telephone link, to the Sports Arena where it would trigger the laser and the balloon would rise -- or so we hoped.

The opening speeches completed, Don Duncan, WESCON Board Chairman, pressed the telegraph key and everyone waited for the round-the-world transit to be completed. They waited -- and waited -- and waited.

Suddenly the laser brightened, the wire melted and the balloon rose majestically. What few knew was that Don Larson, WESCON's General Manager, had closed a bypass switch behind the plat-

form, activating the laser. In reality something had gone wrong in the hi-tech relay scheme.

An hour later, while the platform was being removed, a Western Union messenger arrived at the Sports Arena on a bicycle with a yellow envelope in hand. On the enclosed telegram form was the coded message. The signal had circumnavigated the world successfully only to be diverted by an uninformed operator in the downtown LA office of Western Union where it was duly transcribed, glued to a yellow form and passed on for hand delivery to its intended address: So much for hi-tech!!!

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Flashback

By Bruce Angwin

CHAPTER XII — Into the 60's



Bruce Angwin

During the late 50's and early 60's, the electronics industry on the West Coast was still reacting from WWII in the past and looking forward to the space age in its future. As a result, most R&D and manufacturing was government oriented with emphasis on the military and aerospace. WESCON's focus therefore was similarly oriented as evidenced by participation in 1958 by General Douglas MacArthur and General Omar Bradley as banquet speakers. Ronald Reagan, who was transitioning from the Screen Actors Guild presidency into California politics, served as the toastmaster that year for the All Industry Luncheon which featured General Maderis, Chief of the US Army Ballistic Missile Agency as principal speaker.

Also, the Western Governors Brown (California), Fannon (Arizona) and Hatfield (Oregon) were special guests and judges in the Future Engineers Show. 1959 similarly featured Edward Teller, father of the hydrogen bomb, while Rear Admiral Japp, Office of the Chief of Naval Operations, held down a similar responsibility in 1960. Military electronics accounted for 70% of WESCON's exhibits with only 30% covering domestic and business electronics.

The size and scope of WESCON continued to grow, however, and it was increasingly difficult to find adequate space to contain its large product and services exhibition along with exhibitions associated with the Future Engineers Show, Industrial Design Exhibition and the Art in Electronics Gallery. Further, the Technical Programs, Film Theater, Workshops, Luncheons, Banquets and social affairs sorely taxed available facilities in both San Francisco and Los Angeles. In San Francisco the massive Cow Palace, along with the major downtown hotel function rooms, were all jammed during the four-day WESCON span while in Los Angeles the Sports



TOASTMASTER — Then-actor Ronald Reagan was toastmaster at an All-Industry luncheon at Wescon in 1958. It was prior to the time he turned from the movies to politics. Left to right are Luncheon Chairman Art Curtiss, Vice Chairman Bill Miller, Nancy Reagan, Helen Angwin, Reagan, Wescon Directors Bruce Angwin and Penny Belue and Billie Miller.

Arena, Hollywood Park, Pan Pacific Auditorium and all downtown hotels were similarly hard-pressed.

During the transition into the 60's WESCON grew each year and while doing so substantially supported the IEEE and WEMA activities. During the boom year of 1966, however, the IRS dropped a bombshell. Although WESCON was actually a 50-50 joint partnership between WEMA and the IEEE Region 6, it had been sheltering its non-profit status by declaring itself "a Committee of WEMA," a California non-profit corporation through a complex series of agreements and contracts involving WEMA, Region 6, the San Francisco Section and the Los Angeles District (Council). The owners were WEMA and IEEE Region 6. The operators (sponsors) were the San Francisco Section and the Los Angeles District on behalf of the Regional along with the Northern and Southern Chapters of WEMA and its corporate identity was as "a Committee of WEMA."

The IRS didn't buy this, however, and issued an opinion that WESCON fell under its not-for-profit classification. An appeal was presented, of course, which had the effect of putting the decision in limbo pending a full investigation and decision. The IRS was in no hurry to finalize the investigation as it knew that WESCON could present a strong case and it did not want an early decision to

act as a precedent in other cases the IRS was prosecuting.

The problem was that, if the IRS prevailed, WESCON would be obligated to pay the full taxes retroactively from the time of the first IRS opinion. This forced WESCON to put virtually all of its upcoming surpluses in escrow rather than distribute them to the owner organizations. For the next three years WESCON's benefits to its owners were to be seriously curtailed. Fortunately, an earlier agreement by WESCON to accumulate reserves against lean years came to the rescue and, before the reserve funds were totally dissipated, the IRS capitulated and declared, in 1969, that WESCON was a valid non-profit segment of WEMA. By then, however, a major recession was looming and big changes were soon to be made necessary. (We'll cover them in the next issue of FLASHBACK.)

While all this was going on at WESCON, the IEEE District was settling into its new role following the IRE/AIEE merger. The District had actually assumed its new identity almost

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year before merger had been run by Headquarters and was running fairly smoothly. As it was happening nationally, the local membership was still finding it difficult to think in terms of a merged power and electronics base and tended to label its members as "power" or "electronics" types. However, their common dependence on the Business Office, the BULLETIN and WESCON tended to bring them together more rapidly than elsewhere.

Ed Bertole in 1965 was District Chairman with the Business Office paid staff of Ray Banks, Ron Tansky and Jeanne Mohitt supporting, along with a large cadre of volunteer committee people. Aside from WESCON and the various Section and Professional-Technical Group meetings, the District was active in several regular major activities. The Professional Group on Military Electronics held a convention in Washington DC each fall and the local chapter, with District help, held a complementary Winter Convention in Southern California, site of a major aerospace industry. This convention, originally known as PG-MIL, later became the Winter Conference on Aerospace and Electronic Systems. It included, in addition to open and classified technical sessions, a full exhibition with the help of the WESCON staff.

Typical of other District features was the tradition of one of its sections of PG-T chapters hosting the entire District each month. Examples of the variety of programs available to District members in 1965 were: April 1, the San Francisco Valley Section hosted a presentation by the candidates for LA Mayor (Sam Yorty and James Roosevelt) on the need for advanced technical and professional services in Los Angeles. That same month, Abe Zarem moderated a special panel on thermonuclear energy during the Region 6 Conference which, incidentally, also featured commercial exhibitions arranged with the cooperation of the WESCON staff. In November, Dr. William Pickering headed a dinner-meeting in the Biltmore Bowl to discuss the recent successful transit of the Mariner IV to Mars. That meeting featured displays of actual standby space vehicles and satellites related to various NASA missions. On December 7, the San Fernando Section again hosted the District with a program titled "A Look at Vietnam." Principal



OLD SOLDIER – Retired General of the Army Douglas MacArthur arrives in Los Angeles in the late 50s for a speech before Wescon. MacArthur was one of many public figures to appear before Wescon audiences and the "Old Soldier" made a dramatic presentation before a packed audience.

speakers were flying ace "Pappy" Boyington and Lockheed's Chief Test Pilot, Herman "Fish" Salmon.

On December 11, 1965, the District was treated to a program on "The Electric Car Today" covering the development of electric automobiles from the 1890's to the present. It featured rides in and other demonstrations of the two-passenger electric auto Marketeer I being manufactured by Westinghouse in Riverside. The same subject, incidentally, is a feature of the 1992 WESCON.

On January 1, 1966, at the request of Headquarters, the Los Angeles District changed its name to the Los Angeles Council, an identity it retains today.

Next month: WESCON reorients its ownership and takes on broader exhibition responsibilities for the IEEE.

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WESCON Keynote Talk

continued from page 1

Council of the School of Engineering at the University of Michigan.

The Hughes presence at WESCON/92 will be extensive. In addition to Armstrong's appearance, two Hughes divisions -- the Semiconductor Division and Hughes Interconnect Systems -- will exhibit. And James A. Ambrahamson, Hughes' Executive Vice President, is Honorary Education Chairman for the Technical Conference program of sessions and short courses.

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Flashback

By Bruce Angwin

CHAPTER XIII — WESCON Approaches a Transition



Bruce Angwin

Prior chapters of FLASHBACK described the birth and growth of WESCON, together with the development of the LA Council, its Business Office and the BULLETIN, all of which WESCON

helped make possible. By the mid-60s, the newly formed IEEE was gaining strength and the LA Council was a recognized Institute leader in organizing and implementing the broader scope of IEEE interests and activities.

Although WESCON had successfully weathered an assault by the IRS to tap the financial benefits being funneled to the WEMA and IEEE regional organizations in the West, trouble began to loom as a major recession started to grip the country. Robert McNamara, while Secretary of Defense in the Kennedy and Johnson administrations, had set in motion a campaign to cut waste in the military. Through the Government Services Administration he centralized military procurement for all the armed services and held a tight rein on all military contracts.

WESCON, in step with the electronics industry, relied heavily on military-oriented products and services as the industry slowly transitioned from a military to a domestic economy. The 1971 WESCON was sold out for its planned exhibition in the massive Cow Palace in South San Francisco with 1,200 booths committed and assigned when the Defense Department suddenly issued a proclamation which, in effect, said that

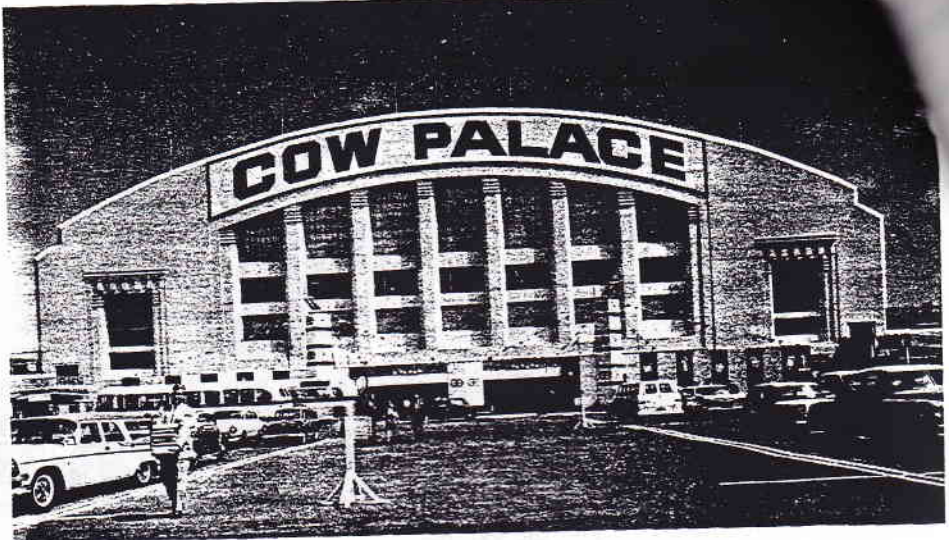
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VINTAGE WESCON -- The massive Cow Palace in South San Francisco played host to WESCON in the late 1950s through the 1960s when the event was in the Bay Area. This a scene from WESCON/61. Note the automobiles.

any manufacturer working on a government contract would become ineligible for that business unless he could prove that no funds received for that project had been utilized for the solicitation of domestic business or new government contracts. He did not, however, immediately set up guidelines to evaluate and implement his edict. The result was that those WESCON exhibitors who produced products for both military and domestic consumption, as most did, couldn't risk exposing themselves to the possibility of losing their contracts by the inference that their exhibits were partially financed by military dollars. They cancelled their 1971 exhibit plans en masse. Virtually overnight the 1,200-booth WESCON exhibition became a 550-booth show.

Although space in the Cow Palace had already been assigned to individual exhibitors, and a special air conditioning system had been installed, and advance publicity had been distributed, the WESCON Board searched for an alternate site. The new underground exposition facility, Brooks Hall, at the San Francisco Civic Center was chosen and a last-minute move of all WESCON activities announced. Miraculously, the show was carried off successfully and barely in the black.

The following year, 1972, the WESCON show was scheduled into the new Los Angeles Convention Center, utilizing two of the three available exhibition halls. Buoyed by their success in back-

ing the Winter Conference on Aerospace and Electronic Systems (WINCON) and the Region's Annual Conference each year, WESCON decided to step into the field of public shows by producing a Hi-Fi audio show in the third exhibition hall on the weekend immediately following WESCON's closing on Friday. WESCON soon learned that high success in producing a trade show is no credential for operating a public show. Retail business is conducted in an entirely different manner and by an entirely different breed of person. Sale and attendance promotion is markedly different as is the show audience. To add to WESCON's woes, we had scheduled the room next to the show office, overlooking the show floor, as a demo room for Bose loudspeakers. The thin walls separating the rooms were no match for the super-power instrument speakers being demonstrated at full volume. Seemingly even the typewriters were bouncing across the desks with each note and telephone conversation

(continued page 9)

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Magnetic Society Studies Potting, Processing Means

"Potting and Processing Techniques" will be the subject of the October 21 meeting of the Magnetic Society at Caltech's Steele Hall Auditorium. The meeting will feature two speakers from Epoxylite Corp. - Bradley Thomas, technical services in Irvine, and Hinh Myguen, technical services in Sacramento.

Thomas will discuss characteristics of potting epoxies, those suited for ferrites and other components materials requiring small shrinkage, CTE (coefficient of expansion) of the epoxy and Tg (transition temperature). Myguen will deal with processing equipment, epoxy kit processing and a description of the Red Point Vacuum Epoxy Impregnation System. He will discuss general impregnation systems and procedures, along with epoxy kit processing, Red Point system operation, vacuum and pressure capabilities and potting cycles.

Battery and Charger Application Techniques

The Los Angeles Chapter of the Industrial Applications Society will hear an in-depth presentation on application considerations for battery and charger systems at its October 14 meeting at Taix Restaurant in the Echo Park area.

Jack Keegan, President of Matzinger-Keegan manufacturers' representatives, will examine the proper application of various types of batteries (lead-acid, wet cell, gel, absorbent glass mat and nicad) and chargers (ferroresonant, SCR and high frequency). He will touch on safety and seismic considerations in specifying, installing and maintaining battery systems, as well as calculation methods for sizing battery systems for both switchgear and UPS applications.

Keegan was a founder of Matzinger-Keegan in 1955. Earlier Keegan was a regional manager for battery manufacturers McGraw-Edison and Nife.

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Flashback continued from page 4

was absolutely impossible. So ended WESCON's first and only foray into public or consumer shows.

During the 60's the WEMA Executive Director, Ed Ferrey, was seemingly jealous of Don Larson's image as WESCON General Manager and was covetous of WESCON itself. He periodically proposed to his WEMA Board that it take over total control of WESCON. The Board always turned him down. In 1972, however, his argument included the alternative of withdrawing from WESCON, believing that alternative would not be considered. Surprise! The WEMA Board felt that the Association's future objectives strongly included government lobbying which didn't fit the WESCON objectives and announced the intention of discontinuing sponsorship (ownership) of WESCON.

Simultaneously, Don Larson announced plans to soon retire after 20 years at the helm. To add to the confusion, the IEEE, which had been experiencing increasing difficulty in keeping its International Show and Convention (INTECON) alive during the recession, made an urgent plea to WESCON to take over management of INTERCON based on WESCON's ability to stay afloat while other shows and conventions were floundering. Suddenly WESCON found itself with a number of unanticipated problems to solve.

Next: WESCON undergoes major change

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PLACE: Vince's Spaghetti House 1206 W. Holt Blvd. Ontario (Just West of Mountain)	RESERVATION INFO: (By Friday 16 Oct 1992) Contact: Gary Davidson ☎ (818) 915-9812
SOCIAL: 6:30 pm	
DINNER: 7:00 pm (Optional) - \$8.00 Registered Students - Free	
PROGRAM: 8:00 pm	

IEEE Foothill Section

Flashback

By Bruce Angwin

Chapter XIV: WESCON's Entire Structure Changes



From the very first show in 1943 through the 50's and 60's WESCON grew from one of the country's very first electronics trade shows and conventions into the most prestigious of its type in the nation. Over that period it spawned a number of specialized spin-offs and stimulated many imitators. Even variations of its name became a model in identifying each new show and WESCON became the standard by which every show was judged. The melding of the efforts of a technical society and a trade organization proved to be the ideal mix to assure a successful information exchange and marketing tool. As parents, WEMA and the IEEE's Sixth Region had spawned and nurtured a genius of a child.

The educational and operational support provided by WESCON to its two owners had allowed them to grow beyond any expectation. During the August 1972 Annual Meeting of the WEMA Board of Directors, Ed Ferrey, the Executive Director, again proposed that WEMA take steps to operate alone. He claimed that WESCON's management did not totally exploit its financial potential and that if owned and operated by WEMA alone, it could become an even more valuable source of funding. He had on previous occasions made similar proposals to turn their 50% share into 100% and had been turned down each time. This time, however, he had a sympathetic ear and

that same day WEMA notified the WESCON Board of their intentions to pay IEEE the value of 50% of WESCON's equity in its reserves and capital equipment and become sole owner.

One item in the contract between the WEMA and the Region, however, provided for a standard procedure involving partnerships. If one partner desired to buy out the other, he was to make an offer and, if the other partner wished, he could, in turn, meet the identical conditions himself and prevail over the initial offer. The Region so expressed itself and therefore stood to become the successor owner. It would be necessary however that WEMA be paid in cash the value of 50% of WESCON.

A meeting of the officers of the IEEE San Francisco Bay Area Council and the Los Angeles Council, who were jointly charged with representing the Region in WESCON matters, was hastily called. The Regional Director also attended and it was decided to liquidate all possible assets and try to find a trade oriented successor to replace WEMA. Shortly thereafter it was concluded that the logical choice would be the Northern and Southern California Chapters of the Electronic Representatives Association (ERA). The Chapters expressed a positive desire but noted that much organizational work was needed and that they also had a problem regarding the necessary financing.

(continued page 8)

Applying High Temperature Superconductors to Antennas

Stuart Long, Chairman of the Electronic Engineering Department at the University of Houston will speak on the application of high temperature superconductors to antenna systems at a November 18 meeting of the Los Angeles Chapter of the Antennas and Propagation Society at the Los Angeles Airport Marriott.

The recent discovery of high temperature superconductors has given rise to speculation concerning their possible application to radiating structures. A general discussion of the efficiency and quality factor of such antennas will be followed by a specific investigation of several possible radiations, including electrically short dipoles, electrically small loops, microstrip antennas and high frequency arrays.

The possible impact on the design of radiating system-feed structures, matching networks and actual antennas will be investigated and the effect of use of superconducting material on radiation and circuit properties will be discussed.

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Flashback *continued from page 5*

For the next year, from September 1972 until August 1973, many IEEE meetings regarding transition of WESCON authority and responsibility were held and WESCON was operated, basically, by the SF and LA elements of IEEE and the WESCON staff. From these meetings several conclusions eventually emerged, the three most important being:

1. WEMA should be paid as soon as possible for their half of WESCON. Reserves and unused capital assets should be used together with loans from SF and LA IEEE and cash from the new partners (probably ERA). The Region, again, pledged a portion of the treasuries of each of the other Sections as they had done during WESCON's early formative years. (This Regional loan, it turned out was not needed)
2. The San Francisco Council-IEEE and Los Angeles Council-IEEE would continue to operate WESCON on behalf of the Region with the Region sharing proportionally in the benefits.
3. ERA segments in Northern and Southern California should be brought into financial and operational position on a proportional basis.

Further challenges also entered the picture. Many years before, when the question of corporate responsibility arose, particularly regarding tax liability, the solution had been to declare WESCON a "Committee of WEMA", a California non-profit corporation, even though WESCON was, in actuality, a joint venture of WEMA and the IEEE Sixth Region with equal ownership. With WEMA's withdrawal, that umbrella also disappeared. Available options seemed to include separate incorporation with a plea for non-profit status or to operate as a part of the sponsor's parent (national) organizations which already had non-profit recognition. With the desire to keep control of WESCON within the local organizations' areas, the first alternative was chosen and planning proceeded accordingly.

It was also decided that, as had been done in defining WESCON's relationship to WEMA for tax clarification, the new corporation would list the LA and SF Councils as Members (Stockholders) rather than the Region as they had identifiable organizations and business addresses in the state in which the corporation was registered and would operate. The Region's position would be respected however by their continued participation in the benefits on a basis proportional to membership figures.

After much more deliberation, a Memorandum of Agreement was signed on July 30, 1973 by the International IEEE Executive Committee, Los Angeles Council, San Francisco Bay Area Council, and Region Six of the IEEE establishing the structure and extent of authority of the proposed corporation. An important statement in that document states that "the corporation shall operate financially and otherwise as if it were a separate corporation and not as a part of the IEEE." This was intended to keep operational channels short and prevent interference and delay by those who were not directly involved. IEEE Headquarters must, however, approve any By-Law changes in the corporation, their only authority. The document also provides for Subsidiary Boards for the operation of specific shows. The WESCON Board is an example, being appointed by, and responsible to the Corporate Board.

In anticipation of ERA's involvement and knowing that ERA would have only a 30% stake in the Corporation, a further stipulation was that the Corporate Board would have at least 70% of the voting Directors appointed in equal numbers by the San Francisco Bay Area Council and the Los Angeles Council of IEEE. It did, however, allow any directorship distribution to exist on the Subsidiary Boards as approved by the Corporate Board and the specific sponsoring organizations.

(continued page 9)

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New Directions in Technology Management and Marketing

The Los Angeles joint chapter of Engineering Management, Education and Professional Communications Societies will hear David Lewis, editor-in-chief of "IEEE Engineering Management Review," at a November 12 meeting at the Hacienda Hotel in El Segundo. The evening session is cosponsored by the Foothill and Metropolitan Los Angeles sections.

Lewis' talk will deal with building "core technological competencies" and their implementation through expeditionary marketing. He will discuss a new long-range planning paradigm for technology based firms and how to choose and build technological competencies. The presentation will be illustrated with examples from the computer and electronics industries.

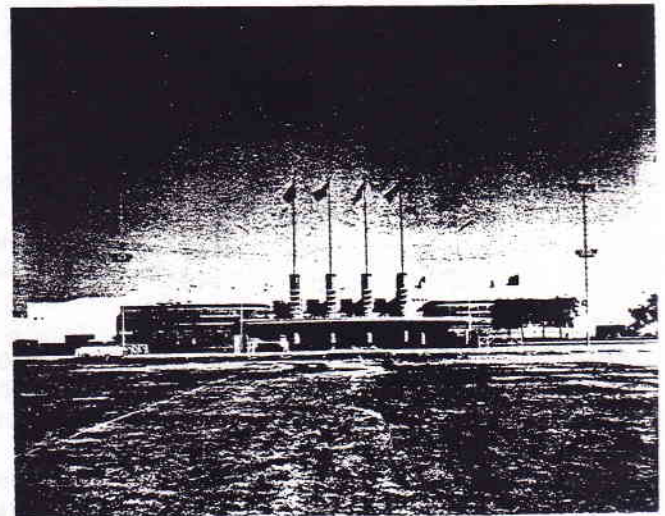
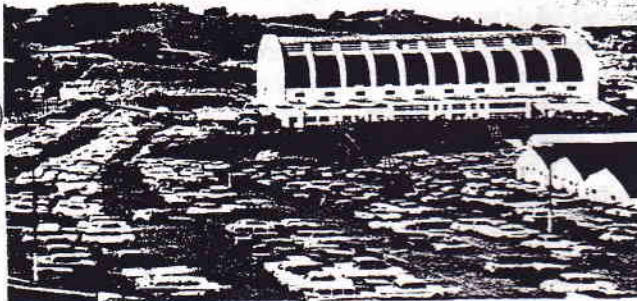
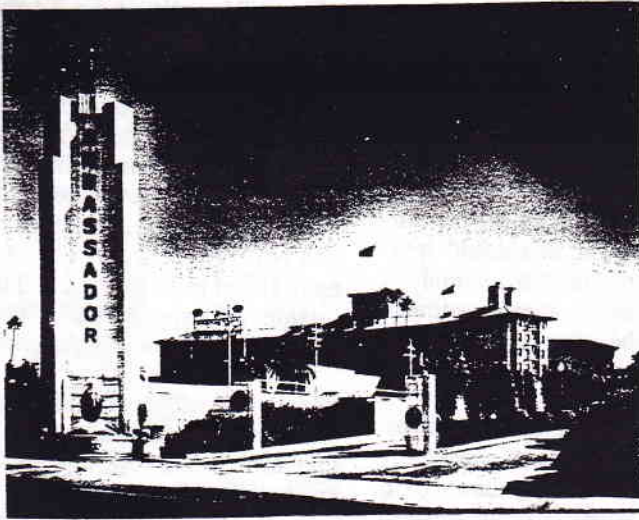
Lewis is Vice President, Business Development, Nouvas Manufacturing Technology Co. in Orange, CA and Kahle Engineering in Orange, NJ, and Caravaggio, Italy. He is a contributing editor on advanced computing and biomedical technologies to "Future Scope" and is completing an anthology entitled "High Tech Management."

OC Computer Society Checks GPS Technology

The IEEE Computer Society of Orange County will look at "GPS Technology for Commercial and Military Use" featuring specialists in both disciplines at its November 23 meeting at the Jolly Roger Inn in Anaheim.

Gary Smith, Director of Product Development at Odetics, Inc. Precision Time Division, will discuss commercial uses of GPS technology while Carlton Richard, Branch Manager of Range Systems Project Engineering for Interstate Electronics, will present GPS from the government and military viewpoint.

Smith has spent five years with Odetics applying GPS to time and frequency applications. He led an Odetics team that developed the GPStar, a GPS receiver dedicated to time and frequency. Richmond is experienced in government and military operations and will look at data on GPS receivers in those fields.



Wescon Homes – Former sites of Wescon before it moved to its present locations at the Anaheim Convention Center in Anaheim and Moscone Center in San Francisco. Clockwise from the upper left are the Ambassador Hotel in Los Angeles, The Sports Arena also in Los Angeles, the Cow Palace in San Francisco and the Pan Pacific Auditorium in Hollywood.

Flashback *continued from page 8*

Articles of Incorporation were filed with the Secretary of the State of California for a non-profit Corporation to be named Electrical and Electronic Exhibitions Inc. (EEEI). The charter was granted on August 16, 1973 and non-profit status was granted. Nine months later, ERA joined the Corporation. The name was changed to Electronic Conventions Inc. (ECI) in 1978.

On the same date, August 16, the first meeting of the EEEI Board was held with its five members, two each from

LA and SF IEEE and, anticipating their later involvement, one from ERA. They were: Fred MacKenzie and Emmet Cameron from IEEE-SF, Charles Edwards and Ralph Lamm from IEEE-LA, and Chuck Fetty from ERA. Three months later, in November 1973, WEMA was paid for its full share of WESCON and was released from any rights of the new corporation.

There followed a long series of meetings with ERA, principally represented by Ed Landa and Harrison Frank. In May 1974, ERA's Northern and Southern California Chapters each purchased 15% of the Corporation, and the Corpo-

rate Board, in accord with the 1973 Agreement, was increased from five to eight directors, the closest ratio to 30/70 without creating too large a group. The three additional members were Dick Foley, Jack Beckett, and Bob Watkins.

Thus the period 1972-1974 was one of great change and redirection of WESCON. During this period also, two additional major adjustments began: the expansion of operations beyond WESCON to the IEEE's International Convention (INTERCON) and Don Larson's move toward retirement. These events will be included in the next Chapter of FLASHBACK.

Flashback

By Bruce Angwin

CHAPTER — EEEI Takes on Headquarters



Bruce Angwin

The last chapter of Flashback covered WEMA's retirement from sponsorship of WESCON, the establishment of EEEI (Electronic and Electrical Exhibitions Inc.) and ERA's entry into a joint sponsor position

(the term "sponsor" is used to identify the owner/operator organizations with financial benefit privileges.) During the same time period, 1973-1974, much else was happening.

Don Larson, who had served two decades as WESCON General Manager, expressed a desire for personal retirement but was persuaded to stay on until the WESCON reorganization was completed.

In the Los Angeles area, the show outgrew available facilities and moved into the new LA Convention Center which WESCON staff members had helped to design. Also, the responsibility for financial support of their portions of the LA and Palo Alto offices was turned over to the respective sponsor organizations, to be drawn from their share of show surpluses, although their offices continued to be located in WESCON office locations and WESCON continued to provide employment administration services.

The 1974 WESCON in the LA Convention Center drew more than 28,000 attendees, who registered in Yorty Hall, one of the smaller exhibit areas. On the second morning of the show, I received a call from a security guard asking that someone help resolve a problem at the entrance. It seemed someone was trying to bring a monkey onto the exhibit floor.



Familiar Faces — Past members of the WESCON Board of Directors gather at reunion in Anaheim in 1982. Many of the faces are familiar and well known. How many can you identify?

On arriving at the entrance, I found a well-dressed man with a chimpanzee in tow, also fully dressed in shirt, pants, vest and jacket. Although I was rather impressed, I had to tell him that animals weren't allowed on the exhibit floor, to which he expressed extreme disappointment and turned to leave. About 15 minutes later there was a crowd gathering in one of the aisles. There, strolling hand-in-hand were the man and his chimp. This time, however, the chimp sported a regular WESCON name badge on his little lapel. He had been registered as a WESCON attendee!!

Once again, I had to explain that the Convention Center prohibited all animals except seeing-eye dogs. Disappointed, he retreated to the outdoor courtyard where he tied his chimp to the lower branches of a tree while he finished his tour of the exhibits. An hour later, a distraught gentleman burst into the show office to report that his chimp was gone. After a frantic search we finally located him at the local SPCA office where he was enjoying a large banana.

While WESCON was enjoying continued growth as it went into the 70s, the Inter-

national Convention of the IEEE (INTERCON), which also relied on an associated trade show, was holding forth each year in New York City and a friendly rivalry with WESCON had been developing. Also, in Boston, the IEEE Northeast Electronics Research and Engineering Meeting (NEREM) had developed and with its exhibition was

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the principal support of the Boston Section business office and its two employees. A recession hit both INTERCON and NEREM very hard, NEREM suffering a loss for the first time while INTERCON shrunk from a four-floor exhibition in the NY Coliseum to a struggling two-floor show. Its paid manager resigned and the IEEE Headquarters staff tried to operate both the exhibition and the technical sessions. In late 1972, it became apparent that the 1973 show was in serious trouble and probably could not open.

Pride was swallowed and a panic distress call went out to WESCON for help. WESCON's ability to survive the recession was felt to be the result of its unique organization and method of operation. INTERCON's technical program was being planned and implemented by the IEEE staff with the exhibition in the hands of a professional show manager. It was held each year in New York. WESCON, on the other hand, operated through a Board of Directors appointed by its sponsors, elements of a trade organization and a technical society, and relied on a volunteer committee to handle the technical program. It sold exhibit space and managed the exhibition through its own staff with its location rotating on a two-year cycle between Los Angeles and San Francisco.

The IEEE Board, parent of WESCON, wasn't particularly anxious to dilute its efforts by taking on a failing activity clear across the country but couldn't diplomatically refuse. After all, its owners were a part of the IEEE. The answer, then, was that Don Larson would temporarily move into an office in IEEE's New York headquarters and direct the 1973 INTERCON, using IEEE staff members, but it was made clear that, if subsequent help was required, a major reorganization of responsibility, authority and format was necessary. In Don's absence, Ted Shields and I would operate the IEEE

office in LA. The results were that INTERCON-73 ran successfully and just above the breakeven point.

At the close of INTERCON-73, the IEEE Board requested that IEEE take a three-year contract to manage INTERCON with options to continue in

(continued page 8)

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Description: This one-day seminar will consist of several lectures on significant topics of slotted waveguide array antenna technology. Fundamental concepts essential to the design and analysis of such antennas will be presented. Many modern applications such as shaped beam patterns, multiple beam arrays, and the dual polarizations and analysis tools will be discussed.

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Flashback continued from page 7

succeeding years. EEEI countered by agreeing, provided INTERCON agreed that by the end of the three years, a volunteer INTERCON Board would be appointed from the local membership, a trade organization such as ERA, would be involved in an ownership and operational capacity, the conference would rotate between NY and another eastern city and EEEI staff and the show board would have full authority without interference from IEEE's Board or its staff. Also, EEEI would receive a substantial management fee. In short, INTERCON would become a clone of WESCON but retain its own identity. Although we did not expect that IEEE would accept these strict terms, within a few days we found ourselves in business under a three-year contract.

During 1974 and 1975, INTERCON was run under EEEI's staff management while plans to reorganize the conference were underway. Fortunately, Don Larson further postponed his retirement.

IEEE formed a study committee under the able chairmanship of Sprague's marketing VP, Carroll Killian, to analyze and recommend IEEE's future convention and conference activities. After much deliberation, the committee reported that the WESCON format was the model under which major future IEEE conferences should operate and that the EEEI staff should be retained to operate each conference.

Don Larson and Don Fink, IEEE's General Manager, then met with the Boston ExCom to explore its interest in merging NEREM into INTERCON and becoming the alternate city and an INTERCON sponsor. Boston played it cool and, claiming that NEREM contributed \$5,000 annually to support its business office, questioned gambling on a new format. Carefully concealed was

the fact that the last NEREM lost money. To become a partner with New York, Boston demanded a guaranteed minimum of \$5,000 annually from the new show as a floor on the anticipated surplus distribution after bills were paid during the initial three-year period. At the same time, the ERA New York and New England chapters were invited to become sponsors. IEEE, however, insisted that any ERA director on the new show board had to be an IEEE member. There also developed much controversy over which show was merging into the other and, therefore, which would be named the survivor.

Through a series of negotiations, it was agreed that both INTERCON and NEREM would be dissolved and a new show and convention, called ELECTRO, would be created. It was further agreed that the WESCON type format would be adopted and that the EEEI staff

would provide management services with periodic reviews, usually on a five-year basis, to adjust the management fee as economic circumstances dictated.

On May 11, 1976, the first ELECTRO opened in Boston with great emphasis on that year's bicentennial theme. EEEI and its western IEEE and ERA sponsors found themselves responsible for operating the country's two most prestigious electronics shows and conventions, one on each coast.

(Next Month: EEEI becomes ECI and further WESCON clones appear)

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