

# EDITOR'S PROFILE of this issue

*from a historical perspective ...*

with Paul Wesling, SF Bay Area Council GRID editor (2004-2014)

August, 1966:

Cover: Focus is on WESCON.



Archive of available SF Bay Area GRID Magazines is at this location:

[https://ethw.org/IEEE\\_San\\_Francisco\\_Bay\\_Area\\_Council\\_History](https://ethw.org/IEEE_San_Francisco_Bay_Area_Council_History)

At time of scanning, the bound volumes are held by Paul Wesling. July, 2021 Contact p.wesling@ieee.org

## WESCON SPECIAL: A Composite Autobiography





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**PRICE: \$12,500.00**

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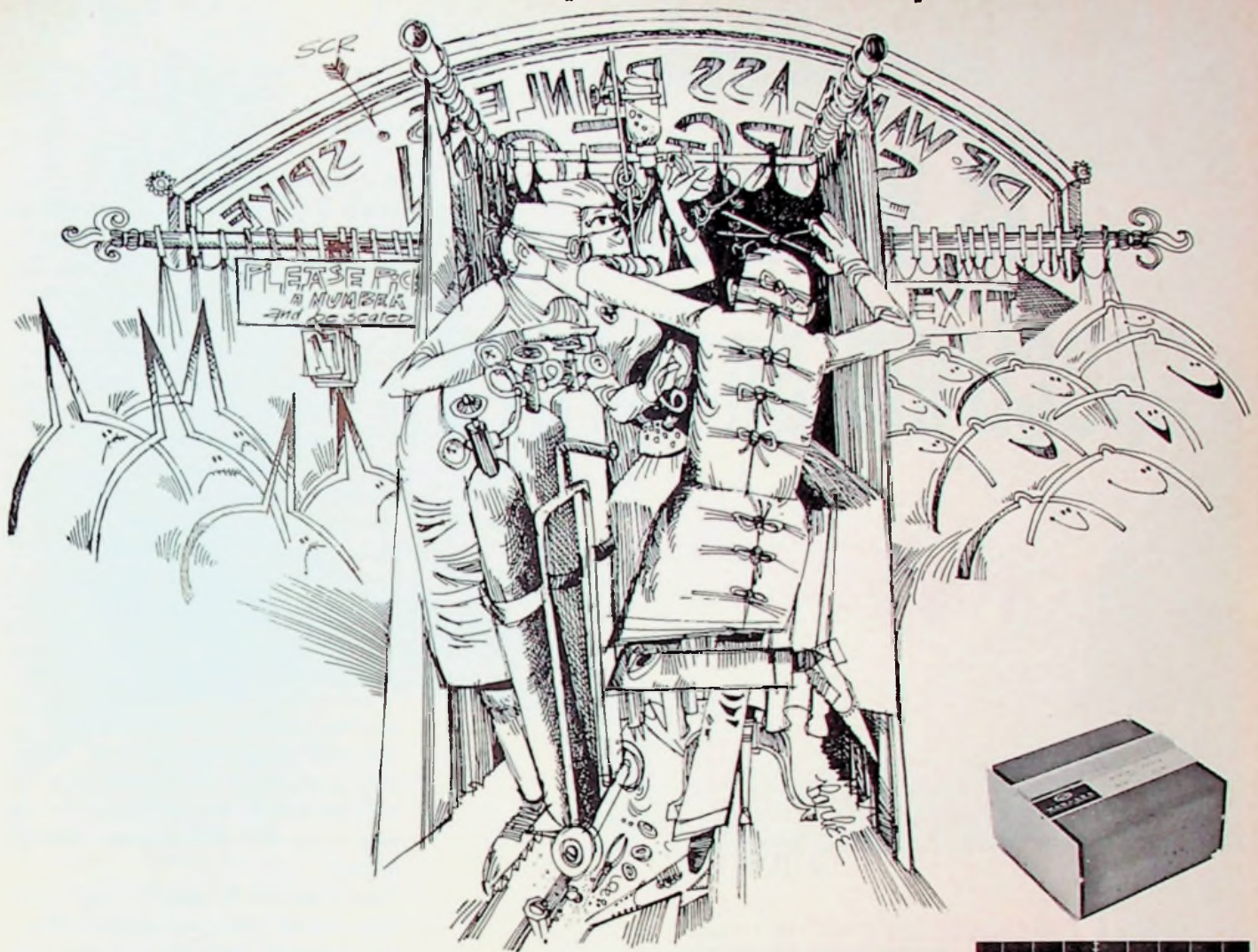
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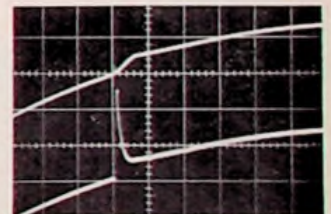
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CIRCLE INQUIRY CARD NUMBER 2



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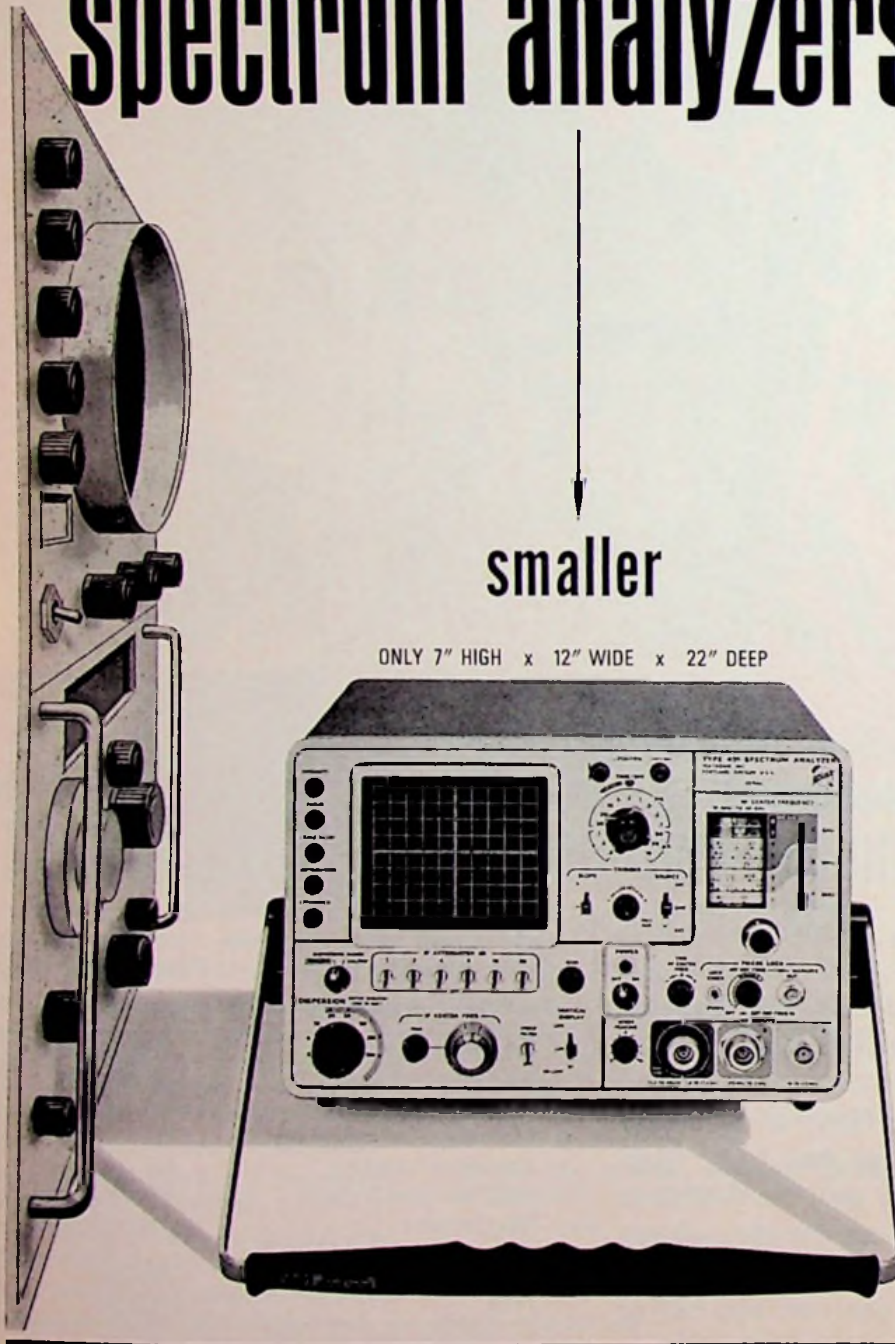
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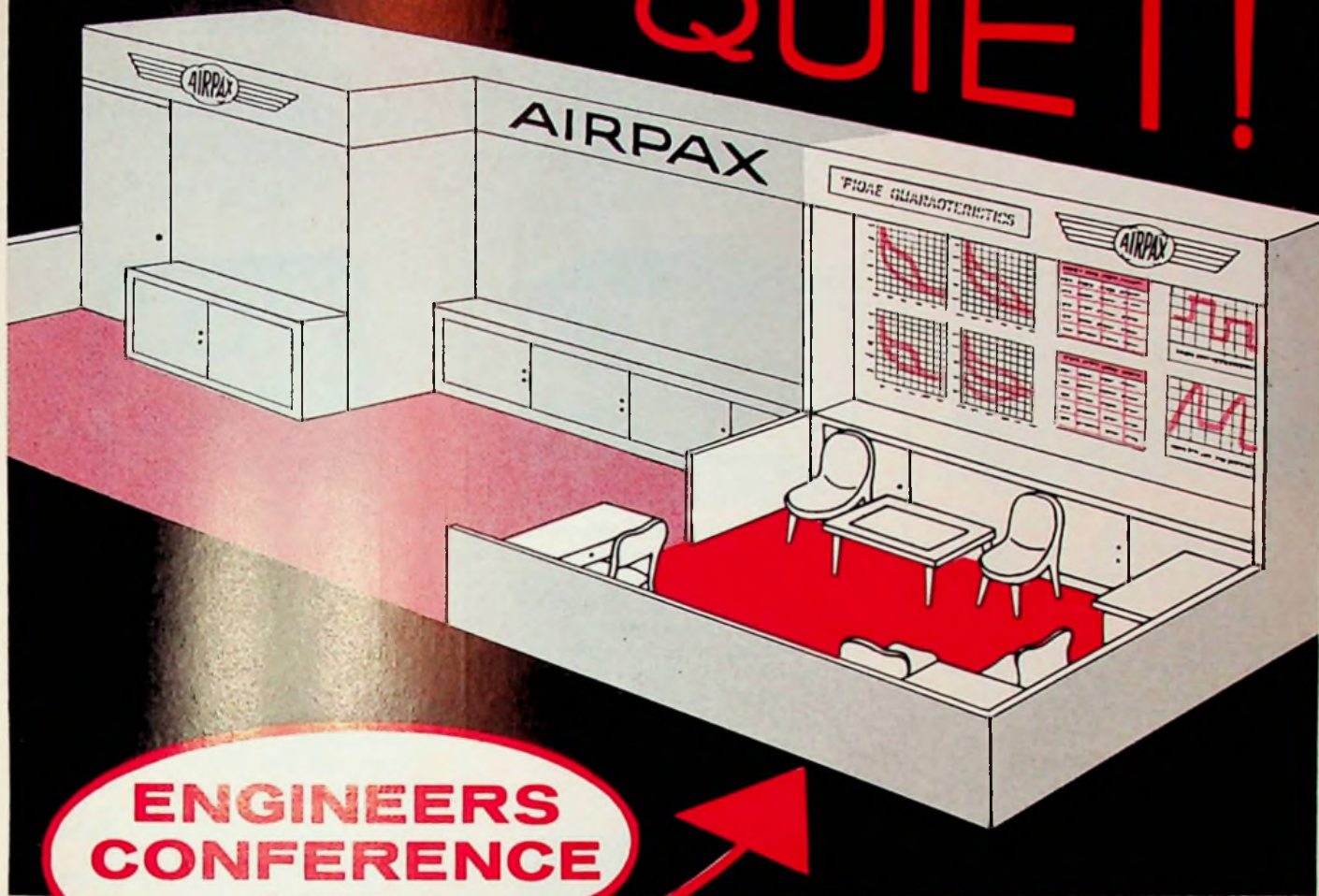
For complete information, contact your nearby Tektronix field engineer or write: Tektronix, Inc., P.O. Box 500, Beaverton, Oregon 97005

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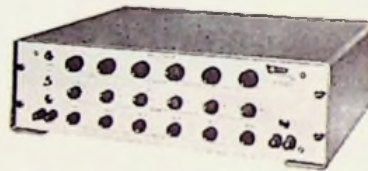


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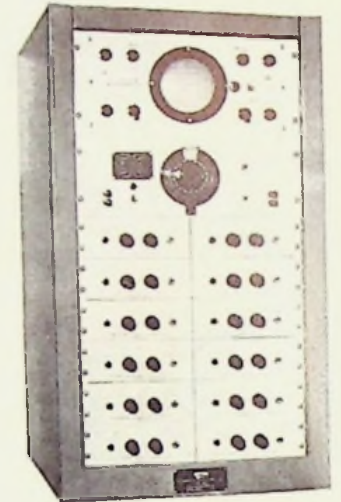


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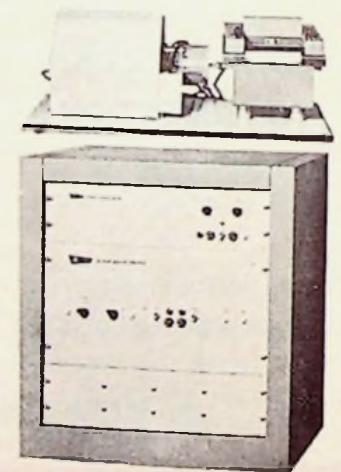


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CIRCLE INQUIRY CARD NUMBER 5



# grid-bulletin

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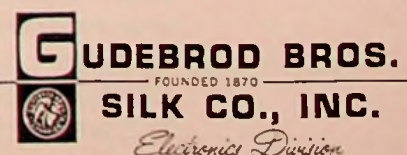
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### A partial list of participating employers:

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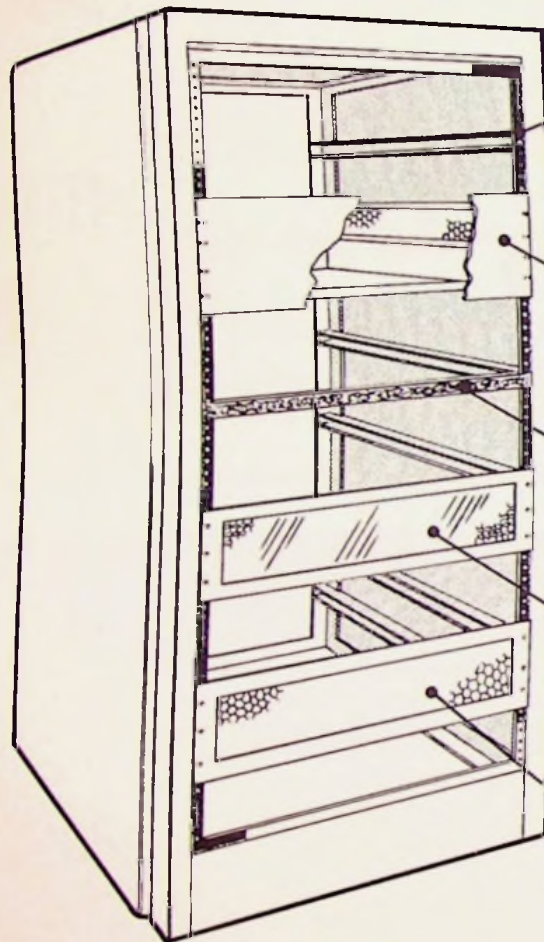
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# WELCOME TO WESCON 1966



G. R. WOODMAN  
*Chairman*  
LOS ANGELES DISTRICT, IEEE



E. H. HULSE  
*Chairman*  
SAN FRANCISCO SECTION, IEEE

## From San Francisco

Wescon/66 again promises to be an all-encompassing, superbly executed program offering something of value for every member of our industry and profession.

This year the statistics are indeed distinguished with a host of exhibits, technical sessions, special ladies events and concurrent symposia all vying for our attention.

The San Francisco Section of IEEE joins with our co-sponsors in extending each of you an invitation to participate with us in this "Greatest Electronic Show on Earth." We are all anticipating an outstanding week and a warm welcome at Wescon/66.

E. H. HULSE, *Chairman*  
San Francisco Section 1966-67

## From Los Angeles

A most cordial welcome to Los Angeles and the dynamism of Wescon/66!

We are now in a world where dynamic forces of change are operating all about us. Technological advances are accelerating at such speed that important breakthroughs have occurred in our time such as the transistor, the laser, and now we are confidently anticipating that direct conversion of atomic to electric energy will be achieved within a few years.

In such a world the electrical engineer needs an ever-improved communication medium to keep abreast of technology and the state of availability of equipment and component parts that swiftly spring up behind the advancement of the research scientist. We are fortunate to have Wescon, where over 1100 exhibits bring together the latest developments for the engineer to actually see equipment, observe demonstrations, compare products, and germinate ideas. Engineers are also invited to participate in the discussions of the technical program which is becoming an important adjunct of Wescon.

The Los Angeles Council IEEE joins with its co-sponsors in extending an invitation to all engineers to come, participate, and learn with us.

G. R. WOODMAN, *Chairman*  
Los Angeles Council 1966-67

## A Bit of Tongue-in-Cheek...

On page 22 you'll read about the meticulously planned and executed satellite-bounce show opener of a recent Wescon which fizzled when a less-than-conscientious teletype operator slept at the switch.

The details of how an overly-conscientious building and safety department inspector almost thwarted the working of an ingeniously conceived portable air conditioning complex, designed to buffer conventioners in "the world's largest tent" from the sweltering August heat of Los Angeles in 1962 appear on page 16.

And on page 22 our own hard-hitting, indefatigable Wescon publicist Ted Shields hangs the head of his ball-point pen in chagrin as he scribbles the details of how a well-organized practical joke, in the form of a phony technical paper, successfully wiggled through all the protective barriers set up by the technical program committee to guard against this very occurrence.

You may get the idea that, by focusing the limelight on the Faux Pas and near-fiascos of Wescon's past we're panning Wescon. Not true at all. There are other editors eagerly waiting to do this with their monotonous regular-

ity. And these same editors and their highly-competent staffs will inevitably repeat their highly creditable jobs of analyzing outstanding aspects of the technical program and highlighting notable new products being introduced — far better than GRID-BULLETIN's limited staff could possibly do.

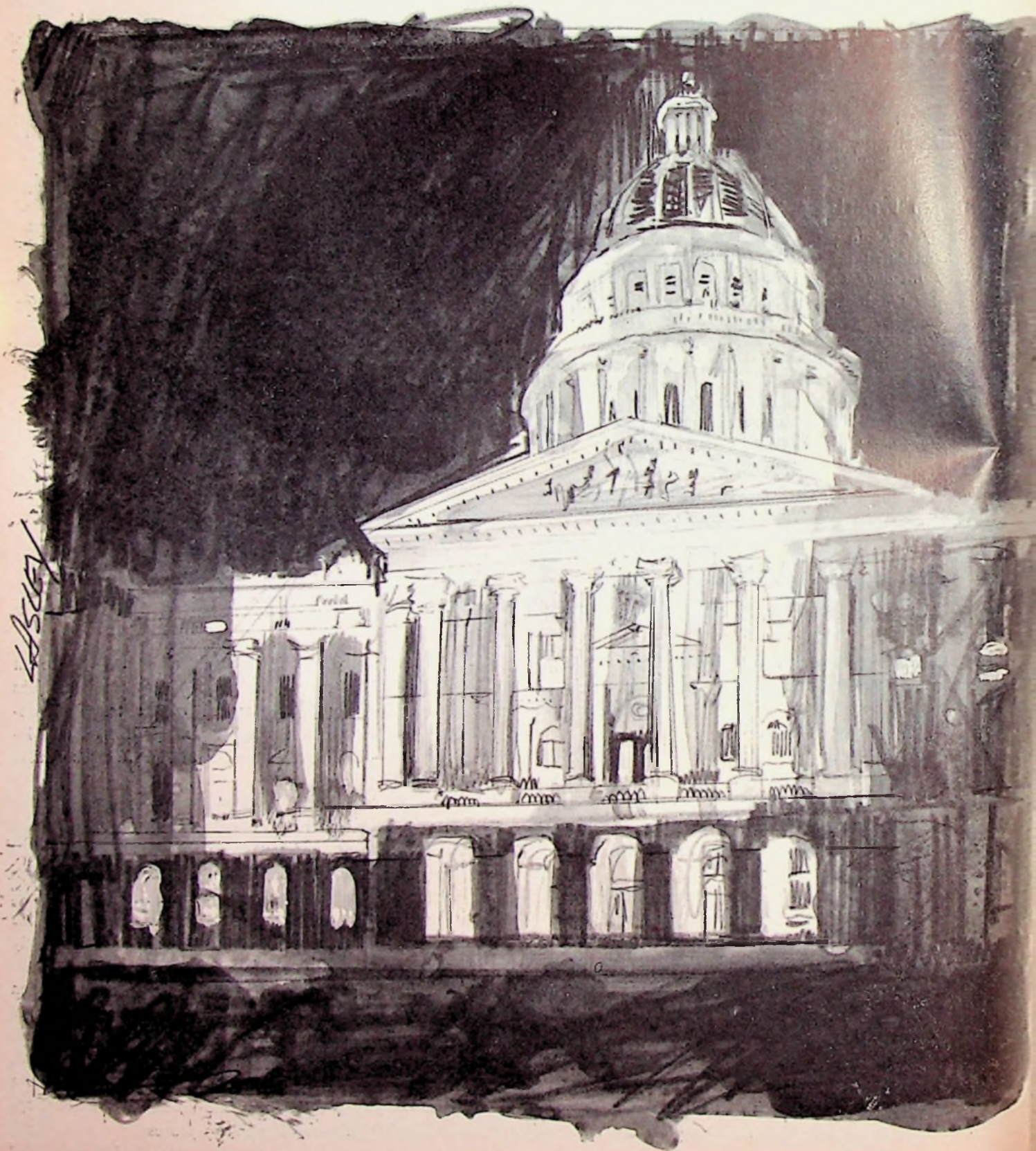
So WE on the staff have undertaken to give YOU on the registration lists a perceptive glance at the behind-the-scenes activity which each year trims the extra pounds from dedicated volunteer committee members and turns their hair a tinge more to the gray . . . activity which is mandatory for this convention to continue being the "the greatest show in the West," and one of the truly outstanding trade conventions anywhere.

The authors of this year's special editorial section have, for the most part, been perennial prime movers behind Wescon. They have tried to impart, along with the light touch we specified, readily useable information aimed at enabling you to benefit more from attending the show, give you a look at the evolution of its development, and have some fun in the process.

*The Grid-Bulletin Staff*



"A WELCOME FROM THE GOVERNOR."





*California's top elected official discusses the growing electronics industry and how the state is using our industry to solve its problems.*

I am grateful for this opportunity to pay tribute to the people of Wescon, not only for the tremendous contributions they are making to American industry and to our defense and space programs, but for the role you are playing in California government.

Your convention is a vivid demonstration of the extent to which government — modern, efficient government — is dependent on electronic and related technologies.

I am proud of the fact that during my administration as governor of California, we have made greater use than ever before of the talents and techniques of your industry.

Perhaps the most dramatic demonstration of the new partnership of government and science, and the one which offers the most potential for society, is California's pioneering program of harnessing the capabilities of the aerospace industry to help solve some difficult, down to earth social problems.

More than two years ago, we asked the scientists and engineers of the California aerospace industry — the men whose talents and systems engineering techniques had launched our flights toward the moon — whether they could apply the same techniques in four specific problem areas.

The State of California entered into feasibility contracts with aerospace firms to determine if their approach would be useful in solving problems in transportation, in waste management, in crime and law enforcement and in harnessing today's "knowledge explosion."

We asked in short whether the techniques that successfully get a rocket off the launching pad might be able to help us get a man off the welfare rolls, or whether the systems that successfully orbit man in space can help us get a man to and from work more efficiently.

The answer to our questions was an emphatic yes. And California now is proceeding on the implementation of those pioneering feasibility studies.

Since then a number of other states have followed our lead and the federal government has indicated strong interest and potential financial commitment.

California was the ideal state to pioneer with this program. The scientific and engineering ability is here. As Fortune Magazine pointed out in a recent article, California has become the "brain capital of the world," with more Nobel prize winners, more scientists and engineers, more NASA and Department of Defense prime contracts, more of virtually everything scientific, than any other state.

The aerospace contracts are just one example of the new partnership of science and government.

Educational television, with its strong reliance on the electronics industry, is an exciting and fast-growing new instrument in our public schools.

Educational television, adding a rich new dimension to the learning process, has been expanded to the point

where it now goes into thousands of elementary schools. Our goal in government with the help of the electronics industry, is to reach every school, every child.

The electronics industry is playing a major role in more efficient and less costly government through computers. And we have only scratched the surface with the computer technology.

The recent session of the Legislature appropriated funds for the beginning of a statewide information system linking law enforcement agencies at all levels, which dramatically shows the potential of the computer in government.

Our intention is to link the entire system of justice from law enforcement agencies, to the courts, to probation and parole — state, local and federal into a comprehensive computer-linked information system.

We believe that such a system cannot only provide instant information for those in the administration of justice who must have it, but can virtually "predict" criminal behavior, "compute" parole risks and do much more.

Rapid transit, high speed vote counting and government cost reduction across the board are only a few of the areas where the electronics industry can make major contributions toward better government.

Finally, a word about the California economy.

It is prospering as never before in our history, and the \$3.6 billion a year electronics industry is one major reason why.

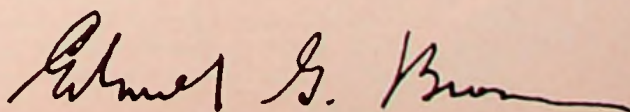
More firms are coming to California every month. Firms already here are expanding operations. Why? Because California offers the businessman more than most states — good climate, unexcelled educational opportunities, the finest and most extensive system of public recreation in the nation, good freeways and much more.

Those of us who are involved in the government of this great state are particularly concerned with the future welfare of our younger citizens and are deeply indebted to Wescon's active interest in stimulating our youths to improve themselves and prepare for useful careers in technical and engineering-scientific fields. I refer now to the Future Engineers Show.

I had the opportunity, recently, to view the judging at the Los Angeles County Science Fair held at the Museum of Science and Industry. I assure you, I will do everything I can to help you in this fine project in order that the citizenry may learn about this new generation of young people and the surprisingly mature accomplishments they have wrought.

With sincere appreciation of all the things that Wescon has done and will continue to offer our state, I welcome this gathering.

*Sincerely,*





1952

# WESCON'S PAST

by Bruce Angwin / General Electric Co.

WESCON  
1952

WESLEY





*A veteran Wescon board member dons his historian's hat and talks about the convention's infancy and adolescence.*

The Wescon story is really that of the development of electronics in the West. But, on the lighter side, it is a tale of a search for identity, wasteful debates involving internal politics, and a constant struggle for survival on the road to becoming a viable organization.

Wescon was born in 1944, although at that time no one knew it. Its birth was heralded by the realization on the part of twenty West Coast electronics manufacturers that during World War II, their very existence depended upon their ability to obtain government contracts. They recognized that Uncle Sam was paying little heed to a budding western industry still in its infancy.

H. L. "Les" Hoffman decided that something was needed to focus attention of the government on West Coast electronics, and these twenty manufacturers organized under the name West Coast Electronic Manufacturers Association (now Western Electronics Manufacturers Association). They elected Hoffman their first president and set out to achieve their goal.

WCEMA's efforts were moderately successful. Significant momentum was gained later when Hoffman suggested Lew Howard for the chore of organizing a group of exhibitors. Howard, a pioneer in West Coast electronics, tied together an exhibit consisting of a display of products manufactured by 25 WCEMA members. The Los Angeles Elks Club easily accommodated the exhibit.

Two years later, in 1946, the war was over and WCEMA faced new challenges as its purpose and program underwent transition.

Many executives and employees of WCEMA organizations were also members of the Institute of Radio Engineers. And since IRE was recognized as an important grouping of engineers who should have a fundamental interest in WCEMA products, the IRE was invited to hold a seminar at the same time as the WCEMA exhibit.

The IRE was no tyro in the area of technical programs. It had regularly held West Coast conventions each year from 1938 to 1945 in a city in which an IRE Section operated. The joint effort was a novel idea and the IRE accepted. 400 people attended the '46 convention and exhibit and had the opportunity to view between 60 and 70 product exhibits.

In 1947, the bond between the two organizations became stronger—in a financial way. Noel Eldred, then Sales Manager for Hewlett-Packard, organized the "Third Annual WCEMA Electronic Exhibit" at the Whitcomb Hotel in San Francisco. It was serendipitous that while searching for exhibitors, Eldred stumbled upon the IRE scheduled for the same time period at the Palace Hotel. Or was it planned that way? In any case, 36 manufacturers exhibited and a portion of the revenue from booth charges was used to finance meeting rooms for the IRE convention. Thus for the first time was witnessed, even if in austere terms, both financial and operational cooperation between the then two independent enterprises.

In 1948, Lew Howard again, as Show Chairman, organized the newly-named Pacific Electronic Exhibit. Lloyd Sigmon of KMPC and SigAlert fame acted as Chairman of the West Coast IRE Convention. These events were held at the Biltmore Hotel, Los Angeles. This time the roll of exhibitors had grown to a total of 76, and 23 technical papers were presented. But most important, something significant happened to further bind these two organizations in a forthcoming marriage that would produce the offspring yclept Wescon.

The IRE had planned a gala banquet and selected the Florentine Gardens in Hollywood as the site. Its entire bankroll of \$500.00 was turned over to the Gardens as

a down payment and almost immediately thereafter the Gardens declared bankruptcy leaving the IRE with no money and no banquet. Again, WCEMA stepped into the breach, loaned the IRE \$500.00 and secured a successful 1948 show and convention.

In 1949, Heckert Parker was retained to act as exhibit manager for the first time, a relationship which he enjoyed for four years. Parker managed 110 exhibits for the Fifth Annual Pacific Electronic Exhibit and West Coast IRE Convention in San Francisco. O. H. "Hank" Brown acted as show chairman and Dr. Joseph Pettit of Stanford University, assumed the role of convention chairman. Eleven separate technical sessions made up the convention with 6400 attending the combined events.

Later in 1949, a series of meetings was held between WCEMA and representatives of the Seattle, San Francisco and Los Angeles IRE Sections to formalize an agreement which would further define the terms of location, sponsorship, financial responsibility and legal identity. Agreements were reached and applied to a similar joint meeting in Long Beach during 1950.

Following this well-received event, and in view of the near-financial fiasco of 1948, WCEMA and the IRE further strengthened their relationship and the 1950 total surplus was put in reserve against future events. To supplement this nest egg, every IRE Section of Region 7 pledged up to 75% of its treasury to underwrite future activities. WCEMA, of course, assumed an overriding financial obligation to insure against any future event becoming bankrupt. So, the mutual relationship between WCEMA and the IRE became even stronger. But when does Wescon actually appear?

Immediately following another successful joint venture in San Francisco in 1951, a formal agreement was consummated between WCEMA and IRE's then Seventh Region to jointly sponsor an annual event to be known as the Western Electronic Show and Convention. And with this action Wescon was officially born.

How this youngster grows to maturity, thriving on the heredity from its parents and nurtured by the proliferating industry, is not unlike the story of any new organization. It asked questions: How large should the Board of Directors be? Who will manage this unusual entity?

It was felt that a small eight-man Board of Directors would assure a flexible, maneuverable administration not possible with a large Board. This format has continued through the entire history of Wescon. Heckert Parker was retained as business manager and Jeanne Jarrett (later Jeanne Howard) served as secretary to the Board of Directors, starting a 13-year full-time job with Wescon which ended in 1964.

The first Wescon Board of Directors were R. G. Leitner, H. G. Grove, Leon Unger, Dr. W. D. Hershberger, R. A. Huggins, J. H. Landells, N. E. Porter and Dr. L. J. Black.

In 1952 Wescon attracted over 15,000 visitors through its turnstiles in the Municipal Auditorium, Long Beach. This was the second and last time that this activity was held in a city other than San Francisco or Los Angeles.

In 1953, the Los Angeles and San Francisco Sections of the IRE representing the Seventh Region, reached an agreement, with Region approval, whereby they assumed active management of Wescon on behalf of IRE sponsorship. Other Sections were relieved of further financial obligations, but continued to receive recognition in the disbursement of the IRE portion of any benefits derived from Wescon.

In the period between 1952 and 1957, the Wescon Board of Directors had indulged in a number of exciting but wasteful debates involving internal politics. The sponsors were aware of the situation, and diagnosing the

*(Continued on Page 40)*



# TRIALS & TRIBULATIONS OF A CONVENTION MANAGER

by Don Larson / General Manager, WESCON

*Blown transformers, pretty girls, insistent fire inspectors, and parking squabbles all add spice to the job of Wescon's head man.*

There is one thing about an event as big as Wescon — anything that occurs is likely to be very large. We can't predict in advance whether an activity will succeed or fail — but we know it will be *big*, in either direction.

The sheer physical housing of 1170 display booths and 20 to 30 technical sessions (to be visited by 45,000 persons) presents the biggest opportunity for the really big mishap.

The absence of an adequate convention center in Los Angeles was responsible for our most ambitious effort — the creation of the largest tent ever assembled. It measured 745 feet long and 140 feet wide, and was big enough to hold two football games inside. With an ever-watchful eye on the August sun, we proposed to air-condition this huge canvas convention hall. To do so, we used a parallel bank of giant air conditioners, the kind employed to keep airliners cool on the ground.

All factors were carefully considered but one. The units were powered by gasoline engines. Every time we shut one down to gas up, the tent temperature would zoom up. We were never able to cool the tent below the outside temperature — which on those particular mid-August days was well into the uncomfortable 90's. Body heat, the sun on the roof, and the heat generated by hundreds of working instruments was really too much to overcome. It was probably the first technical exposition manned by product demonstrators in T-shirts.

We tried the tent one other year, this time with wooden walls, so that air-conditioning ducts could be built into them. The completion of the work coincided with a visit from the building and safety department, who reversed an earlier approval of the plans, and ordered an immediate tear-down.

## THE GREAT TENT DEBATE

The hang-up was this: if the tent had wood walls, it was a building that didn't conform to building regulations. But if it had a canvas ceiling, it was a tent, and had to have moveable walls. And the first hearing we could get was to be Wednesday — the day after Wescon opened. With a silent prayer, we moved quietly into our hybrid structure, and when we finally appeared before the commission, the show was almost half over. We received the needed variance — along with a severe reprimand.

Another hair-graying incident occurred a few years ago when it appeared that a wildcat strike, called 96 hours before the convention was to open, would have all of San Francisco's truck traffic in a full-Nelson for at least a week. The outlook for that year's Wescon indeed looked bleak. However, after some high-level diplomacy and negotiating, union officials gave the green light to those trucks — and only those trucks — transporting

Wescon exhibits and other materials. The work was received 48 hours before the opening ceremony was scheduled, and the moving job was completed roughly three hours before.

When it comes to assigning 700 companies their exhibit spaces, everyone wants to be on the 50-yard line, quite naturally. More than 60 per cent of our space applications list the same 20 booths as their first choices.

Even though actual aisle counts show that floor traffic is almost equally distributed throughout the show area within an hour of the opening, most exhibitors are convinced that certain locations get a much better break than all others.

## EXHIBITORS SEEK "MAGIC" BOOTHS

The difficulty with the argument is that, after the first 20 "magic" locations, exhibitors are disagreed on which locations are prime. Some insist on being near foodstands or restrooms. Others demand to be placed far away from these facilities. Many companies want to be as close as possible to their competitors; just as many make it clear they want to be well away from the opposition. In one classic case, Company X regularly asks to be next to Company Y, while Company Y asks to be at the opposite end of the hall from Company X. Some firms seek booths on the end of the aisle; others ask to be half-way down the row; and the ones who want to have a booth facing other booths are matched by those who ask for a booth in a single-sided row. Setting up a Wescon in Los Angeles involves negotiations with three sets of managements, each with its own set of operating rules. At Hollywood Park, for instance, all working personnel are controlled by various race track unions. These people are used to racetrack operations, not trade shows, and must be trained in our way of doing business each year. There are different problems to meet at the Sports Arena, and still a third set at the hotel where we hold technical sessions.

## THE DAY WESCON WENT DARK

In no Los Angeles location is there sufficient electrical power to handle exhibitors' needs. One year, we supplied power to our tent structure with transformers mounted in large trailers. During set-up time, the system checked out perfectly. But an hour after the show opened, not one, but two transformers burned out completely. Wescon went dark in that tent, and stayed dark for six hours until new transformers could be installed. By that time, the show had closed for the day.

Wescon is one of the few major events where the same staff and volunteer committees handle both the "show side" and the "convention side." We are all concerned with producing the best atmosphere for technical meetings. On several occasions, we actually built meeting rooms in seating areas of the Cow Palace and the Sports Arena using a Variac to test the soundproofing performance of a variety of fabric sidewall materials. More than \$40,000 worth of canvas and other material was used in





providing five meeting rooms.

#### *WHO PARKS WHERE?*

One of the management's annual decisions is how to allot the parking spaces at the show areas. Should the exhibitors (who actually man the booths) be given priority parking ahead of the visitors who actually come to see the exhibitors' products? The subject creates an unending dialog of opinion, and the show manager can be sure of only one thing — his decision may please one group or the other, but never both.

It is essential to the nature of an event like Wescon that it retain a professional atmosphere, conducive to worthwhile examination of products and serious discussion among engineers and executives. On the other hand, showmanship, within the bounds of good taste, is not an undesirable element. Keeping the balance is sometimes a tightrope operation.

#### *GIMMICKS AND PRETTY GIRLS*

A few years ago, exhibitors wanted to give things away — pens, pencils, key chains, carrying bags, paper hats, whistles, and gimmicks of all kinds. Then there was a wave of requests to allow free prize drawings in the booths. If all had been granted, we would have had our own version of the Mexican national lottery.

And — everybody likes pretty girls in bathing suits. But do they belong on the floor of a technical exposition?

*(Continued on Page 44)*



*There's the unexpected, the goof, and the plain perversity of inanimate objects that drive registration chairmen mad. A few hints, arising from their ordeals, follow.*

There was, for example, the occasion of the last Wescon held at the Pan Pacific. On the first day the exhibit area did not open until 1:00 p.m. Thus people had the entire morning to make it to the show. At 12:45 there were about 5,000 people waiting in front of the one lonely registration area gate.

As luck would have it, the one wire gate, 20 ft. long, did not slide back as previously assumed. Instead it had to be opened out into the crowd. This was discovered at 1:00 p.m. when the chairman started to open the gate.

The meaning of the word panic came crashing through to the registration committee chairman and the personnel on duty. How come the panic? Sheer perversity of a gate.

How do you swing a 20 ft. back into the faces of 5,000 people?

Obviously you don't.

Slowly — ever so slowly — with some crowding back, the gate was opened a few inches. People began to flow in like water through the cracks of a dam.

Those behind the gate flowed around it allowing a few more open inches to be gained. Finally, after 10 minutes of constant pushing, the gate was fully opened.

At this point the chairman, who had stuck with the gate, was fully outside. For all practical purposes he was behind the thousands of people still waiting to get in. He finally made it back, after 45 minutes of frustration, feeling like the cashier who was trying to open the box

office and kept getting shoved to the rear for crashing the line!

Then there was the year of the "Recorded Directions."

On the basis of the observable phenomenon that people will not read signs or directions no matter how simple or strategically placed, a continuous tape recording was made and played at the entrance to the registration area. Its simple and concise directions worked wonders. Said the recording, "Please fill out a registration card at the first counter and proceed to a cashier."

But it had to be discontinued the next day. Why? Overlooked was the effect of this repetition . . . twice a minute . . . all day long . . . on the people working in the area.

Ten more minutes and the whole group would have been lost to the men with the white jackets.

The complex know as Wescon, like any fine hotel, depends upon the efforts of many individuals largely unseen and unnoticed — until someone "goofs." Then the results are seen and sometimes condemned in no uncertain terms by from one to 40,000 people.

Of all Wescon committees, the largest is probably the one concerned with registration. The function of this group is largely unnoticed when everyone does his job properly. But the entire image of an otherwise brilliant convention can be tarnished if registration is not properly handled.

Few people not involved have occasion to contemplate the task of registering during a 5-day period over 40,000 people — and most of them during peak hours during the first several days.

This, plus the auxiliary tasks of pre-registering approximately 10,000 exhibit personnel, compiling a directory

SOME TIPS FOR THE WISE **WILL YOU  
BE REGISTERING  
FOR WESCON?**

by Gerry Goldenstern / Signal Electronics Corp.



of all registrants with their addresses, and making special provisions for all the other functions that are handled in registration areas — ticket sales, information, parcel checks, etc.

The registration committee runs up to 100 people, including from 20 to 30 paid typists and cashiers. The job in recent years has been complicated in Los Angeles by the split exhibit areas which means duplicate functions at each exhibit site plus the hotel registration areas.

New registration committee chairman and vice-chairman are largely free to plan their own operation, subject to the approval of the show director. The magnitude of the operation requires a detail of planning comparable

to a military operation. And, like a military operation, things can get highly FUBAB — Fouled Up Beyond All Belief.

There were a few bad moments, for example, the year men's jackets with no breast pocket came out, leaving no place for the combined registration exhibit badge. A stitch in time save nine, but this problem was soon solved with exhibitor pin badge holders and a pair of scissors.

There have also been the serious problems of lost or misfiled exhibitors badges; pile ups due to unexpectedly large crowds at hours that are not supposed to be "peak hours," and specific problems relating to individuals.

*(Continued on page 44)*





# Remember the Great Hoaxatron Story?

by Ted Shields / Assistant General Manager, WESCON



*Behind the scenes, Wescon's publicity efforts aim high, but sometimes too many kooks spoil the scoop.*

Would you believe a publicity stunt that traveled several thousand miles overland and through space, only to be foiled five miles from "home" by a recalcitrant Western Union operator?

Or two respected engineers who darned near planted a "hoax" paper of technical gobbledygook in the Wescon program?

Or a press conference that literally put the reporters to sleep?

Well, they have all happened during various Wescon weeks, and while they aren't necessarily typical, they add a sort of punctuation to the various activities labeled public relations.

Most of them seem to happen just at show time, when the PR attention shifts from the technical and industrial magazines to the consumer press. That's the time when all the real fun starts.

It is readily apparent that a new microwave amplifier is pretty heady stuff to the technical reporter. To the veteran daily newspaperman, fresh from a photo session with Ann-Margaret in a wet T-shirt, it's a bizarre new world with a foreign language.

To his credit, the daily newsman usually stays with it, and somehow emerges with a workable story — one that makes sense to the Van Nuys housewife without turning

engineering information into babytalk.

Occasionally, however, an over-eager newshound will come up with something like "Human Brain to be Replaced by Machine, Engineer Says," causing fainting spells in the laboratory and severe attacks of the vapors in the front office.

Even unbiten technical men are nonetheless twice shy, and many of them approach a confrontation with the press as though it were a general court martial conducted somewhere east of the Elbe. Some fellows simply freeze the moment the TV news camera light come on, entirely misplacing the carefully rehearsed quotation and meeting each query with a glazed stare.

Other interviewees, sensing their moment of glory on the Eleventh Hour News, launch into full doctoral dissertations, leaving the reporter and a good share of the human race far behind.

Somewhere between the newsman who doesn't know a diode from third base and the engineer who likes numbers better than people, stands the Wescon PR committee, trying to translate for each. The project operates on the supposition that 45,000 people, 10,000 products, and 125 technical papers MUST produce a few news stories of interest to the non-engineering public. And they do, after lots of hard work on all three sides.





One great gap-spanner was to be an opening ceremony in which a live interrogation of Explorer VI would be conducted "live" before the very eyes of waiting newsmen. It worked all the way to the bird and back, too — but fell five miles short of the Cow Palace, when a non-sense TWX puncher at Western Union, who certainly knew a garbled message when she saw one, cut off the coded input from space. That's right, the Chronicle headline read, "Electronic Space Query Fails at Cow Palace."

Many Wescon veterans will remember the great "hoaxatron" story of 1962, in which two eastern technologists collaborated to prove that you can't really forecast a good paper from a 100-word abstract. They were right. Their hoax paper was accepted for Wescon. When they revealed the stunt, Wescon officials were momentarily confused, then concerned, then contrite, then amused. The upshot turned out to be positive, after all, when a special session was called to discuss the problems of paper selection, and the authors were invited as panelists.

One year, an author invited to discuss his paper with the press, delivered the entire work instead, and in an absolutely non-oscillating monotone. At the 35-minute mark, the audience consisted of two nodders and one wood-sawyer.

Activities of the volunteer PR committeemen who de-

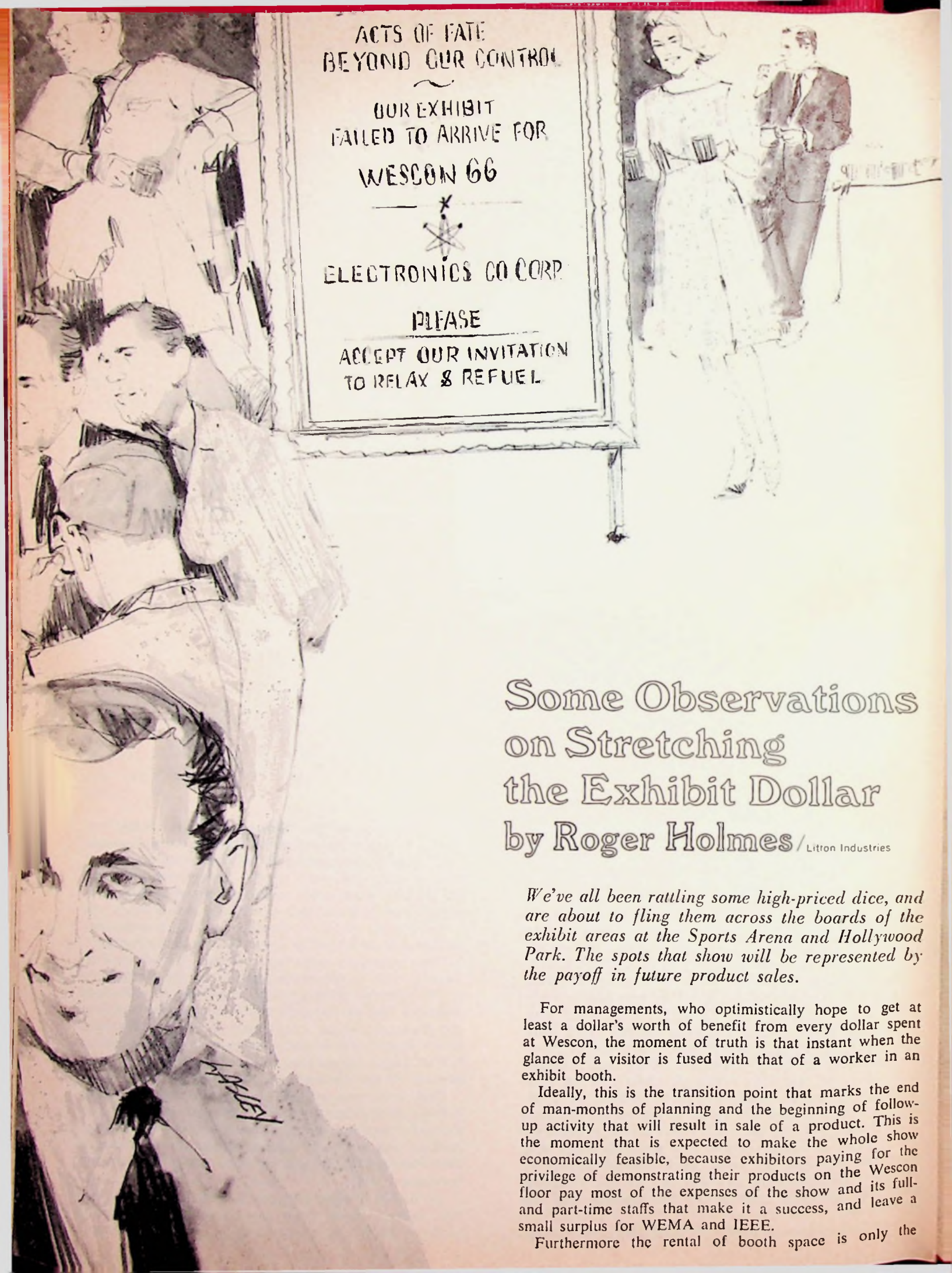
vote their time to The Wescon Story are surely not confined to such fun-and-games at show time, of course. They start "communicating" a full eight months ahead of Wescon week, and work steadily through the year with the industry press, other working committees, editors of company publications, airlines, city and state officials, and a dozen other "publics" whose understanding and cooperation can contribute to a better show and convention.

Their techniques range from exhibitor seminars in February to VIP receptions in August, and they include up to 35 different printed folders, booklets, manuals, and programs (for use by different audiences), news releases and photos, broadcast scripts, mass mailing and individual letters, feature articles and speeches, and at least a boxcar full of hastily reproduced technical papers channeled in advance of the convention to the technical press.

They're the guys with the wire-cutters (in case the laser fails to cut the strand that sends up the opening-day balloon), the ones with the extra projector bulb in their back pockets, and the ready reserve in case the turnout at a press conference for a great man turns out to be embarrassingly small.

As do all Wescon volunteers, they come early, stay late, and try hard. They must have fun, too, because most of them will come back for more next year.





ACTS OF FATE  
BEYOND OUR CONTROL

OUR EXHIBIT  
FAILED TO ARRIVE FOR  
WESCON 66

ELECTRONICS CO CORP.

PLEASE  
ACCEPT OUR INVITATION  
TO RELAX & REFUEL

## Some Observations on Stretching the Exhibit Dollar by Roger Holmes / Litton Industries

*We've all been rattling some high-priced dice, and are about to fling them across the boards of the exhibit areas at the Sports Arena and Hollywood Park. The spots that show will be represented by the payoff in future product sales.*

For managements, who optimistically hope to get at least a dollar's worth of benefit from every dollar spent at Wescon, the moment of truth is that instant when the glance of a visitor is fused with that of a worker in an exhibit booth.

Ideally, this is the transition point that marks the end of man-months of planning and the beginning of follow-up activity that will result in sale of a product. This is the moment that is expected to make the whole show economically feasible, because exhibitors paying for the privilege of demonstrating their products on the Wescon floor pay most of the expenses of the show and its full- and part-time staffs that make it a success, and leave a small surplus for WEMA and IEEE.

Furthermore the rental of booth space is only the



beginning of the exhibitor's costs. The expenses of designing and constructing a booth, transporting it to the Wescon floor, assembling it and keeping it staffed, raises to several million dollars the amount companies gamble each year on the chance that a reasonable number of purchase orders will materialize from those tentative glances on the floor of the busy convention hall.

Yet, it would appear that every physical and psychological factor is directed against the inevitability of that wispy nucleus surviving the gestation period that terminates in a direct return on the exhibitor's investment. Thousands of faces, many of them familiar, seek out his recognition. Thousands of products — the very tools of his trade — compel his attention to his next booth, and the next and on to a panoply of booths, each with a technological breakthrough more exciting than the one before. Technical sessions, hospitality suites, job interviews, the weather and seemingly a million attractions seem to be motivating him not only out of the booth, but completely out of the building.

Probably no technical meeting in the country gives the visitor less opportunity to resist buying the products on display.

In the first place, about a quarter-million dollars is spent creating a physical environment most conducive to purchase. The Wescon management itself will pay about \$130,000 getting Hollywood Park and the Sports Arena ready for the exhibitors, who pay a rental of \$610 or \$560 per 10-foot-wide booth for the privilege of spending more than four times that amount to install an exhibit. Generally, the rental is less than 25 per cent of the total out-of-pocket cost of an exhibit.

Smart companies, it should be noted, are reducing their costs by constructing modules that can be used from year to year and from exhibit to exhibit by changing only the "graphics" that refer to the exhibit and the products on display.

Conforming to the rules in putting on a show is complicated enough. To the end that everybody gets an equal chance at the potential customer and so that the general atmosphere won't drive him away, loud noise, bright lights, odd booth configurations and aisle impediments are banned.

Wescon officials also help exhibitors comply with regulations of the fire department, of labor unions and of other agencies. It's rough when compliance must be met at the last minute, when everybody is at his busiest.

Wescon management extends its sense of responsibility for exhibitors to include extensive tutoring in how to get the most out of an exhibit, as well as how to keep from violating rules.

It wisely feels that if exhibitors fail to reach their objectives for any reason, even through the exhibitor's lack of sophistication, the company may suffer a loss of revenue and Wescon may suffer a loss of reputation.

Wescon management publishes guides for exhibitors, holds briefings, and this year for the first time held exhibitor seminars in New York City and Los Angeles. Proceedings of all speeches — by experts in their field — were sent to all exhibitors. Any potential exhibitors can obtain copies of the proceedings and other useful data from Wescon headquarters.

To help potential exhibitors evaluate a Wescon exhibit as a sales tool, and allow customary exhibitors to consider changing their approach, Wescon compiles a complete audit of the number and types of visitors to Wescon. Incidentally, the full quota of free passes is not used, meaning that many exhibitors are not utilizing this valuable customer relations tool.

The successful exhibitor includes in his pre-show planning many things other than compliance with rules. A successful booth is designed and executed to establish an environment conducive to fulfilling the objectives established for it.

The choice is not merely between "creating a favorable image of the company" and "selling the product." The mission of the exhibit is more precisely pinpointed, such as, "demonstrate with maximum impact the great number and variety of meters available to our customers. When new customers are found through this advantage, we can develop sales of other electronic instrumentation in our line." Meeting this hypothetical objective calls for creation within the booth of an atmosphere of a high-level of activity, with a cornucopia of products on display.

Another company might decide that its best interest is served by emphasizing new products as a device to create an image of it as a company that is always on the forefront in technology.

Some companies may wish to leave the visitor with the feeling that it has been around for decades and has grown hoary with integrity. This type of exhibit is heavy with company references such as trademarks and slogans, and light on product exhibits.

Some exhibits, in fact, are strictly "institutional," but these are vestiges of the days when stock in any science-oriented company would sell for 50 times its per-share earnings and the booth helped sell the stock.

Whatever the objective, the efforts of professionals are required from the time the objective is formulated until the lights blink their warning that the doors are closing on the last day of the exhibit.

Planning should include a detailed statement of the objective of the booth, and a budget adequate to reach it. After hiring an exhibit designer and builder who can most effectively reach this objective, the wise exhibitor takes one more giant step. He is careful in selection of booth personnel and subjects them to an extensive indoctrination.

Personnel in a successful booth act as they would if their best customer walked into their office. They are on their feet, cigarettes out of their mouths, hand out of their pockets, smiling, and giving every appearance that they are looking forward to the visit. In short, everyone who glances in is made to feel welcome through every device under the control of the exhibitor.

The human element being an important factor in the total booth environment — or "boothmanship" as some companies call it — careful selection of personnel is required. A Wescon booth is seldom used as a training

*(Continued on page 50)*



# On Delivering A Technical paper

or, my guy's paper  
is better than  
anyone else's paper

*The creator and perpetrator of one of the best re-  
curring tongue-in-cheek literary efforts gives his  
all to the GRID-BULLETIN.*

Well, here it is Wescon time again, and in Los Angeles yet. Time to take a long, hard look at that typically western art form called Wescon Technical Sessions.

Last year, you may recall, as part of our campaign to defend the sacred American right of freedom of association (trade show-wise), we waxed poetically on the advantages of exhibiting your company's products at Wescon.\* That was last time; now it's this time.

This year we'd like to talk about presenting technical papers, give you a few handy hints on their preparation, and offer helpful suggestions to those of you who are fortunate enough to deliver technical papers at Wescon.

Ever wary of that catastrophe known as "a critical success, but a commercial failure," your company's public relations practitioners have been pruning and preening their hyperboles for several months now in anticipation of these Sessions. Be aware of this potential source of help. It's the P.R. guy's job to make sure that the paper delivered by the representative of *his* firm is publicized and

quoted on TV, radio, newspapers and outstanding trade and association journals such as this one, (which one is this, by the way?).

Additionally, it is the goal of each eager and insecure public relationist to make even the most innocuous paper seem as if it is akin to the first announcement of  $E = MC^2$ . And, for this purpose, we offer the following list of handy terms to use indiscriminately throughout the news releases and press kits that will accompany each and every one of the X-hundred papers that will be delivered as carefully and lovingly as the first son of an aging king. Then, for the sake of clarity, we've included a translation that tells what the P.R. guy really has in mind. See below.

Now, assuming that you've followed our suggestions so far, and your paper has been accepted by the Technical Program Committee, you have the rare opportunity to make a name for yourself among your colleagues (or those you'd like to become colleagues). But, there are still many pitfalls. And, unless you follow a few simple rules, you will not only alienate everybody at the conference, you will bring shame to the company, agency or university you represent (not to mention making a complete ass out of yourself). The following rules were put together

## What The P.R. Guy Really Has In Mind . . .

Useful Term	Real Meaning	Useful Term	Real Meaning
absorbing	With a bit of effort you may even get through the abstract.	highly sophisticated	Even the author doesn't understand it.
advanced breakthrough	(see state-of-the-art) We tried to put too many components in the box.	industry standard	two of our wholly-owned subsidiaries are also using it.
challenging	Can't be done, at least not by us.	micro-(anything)	Anything small enough to fit in a large black box.
comprehensive	boring.	of fundamental importance	not very exciting
concentrates on a vital technological area	Vital to our company's survival.	professional	on the payroll.
critical review of previous work indicates	Someone beat us.	second-generation	doesn't use many vacuum tubes.
evolutionary, not revolutionary	It's taken forever.	significant	anything we've done.
exciting	He says "damn" somewhere in the paper.	state-of-the-art	Designed since 1945
fact-filled	The author wouldn't let us leave out a single equation.	technical	I can't prove it.
great interest has been evidenced	An early release was carried by the Blythe Gazette.	theoretical	We can't build it.
high-performance	It often works.	timely	It only took us five years to get the author to finish the manuscript.
		trivial	Someone else's work.
		tutorial	dull.

\*—See Motorola Collage, Vol. 1, No. 3, July 1965.





## by Jack Buckley

Editor, Motorola Collage, Scottsdale, Arizona

only after a careful analysis of thousands of presentations, and are hereby presented as a public service to status-seeking engineers and scientists.

**1. Learn a foreign accent.** It doesn't matter what kind, but German isn't as "in" as it used to be. You might try Bulgarian or Polish and, if you *are* not of Oriental descent, a Japanese, Cambodian or Indian accent will be definitely to your advantage. If you *are* of Oriental descent, make sure you have an Oxford sound.

**2. Work on your diction.** An accent alone does not assure the success of your presentation. You must strive to be completely unintelligible. A clearly enunciated presentation establishes you as a marketing type, or even worse, one who has taken a Dale Carnegie course. Can you imagine a Steinmetz at a Toastmaster dinner?

**3. Master the techniques of microphone fumbling.** Fool with it for at least 10 minutes before you start your paper. Pretend you don't know it's working and tap and twist at it throughout your talk. Keep asking if you can be heard. Learn the technique of the ear-splitting feedback. Or, conversely, say that you don't need one of those damned things, and speak in a monotone from a corner of the stage.

**4. Change your topic.** Watch the show management laugh when you say something like: "although my paper was scheduled to concern superconductivity, I will talk to you today about my views on Moral Disarmament."

**5. Mind your appearance.** If you don't have time to grow a beard, rent one. If you're in L.A. for Wescon, this should be no problem. Also, there are plenty of costume rental firms that can attire you properly. However, Levi's, a black turtle-necked sweater, a brown corduroy sportcoat with elbow patches, and dirty white sneakers are satisfactory raiment, especially if you are, or would like to appear to be, a PhD. A pipe that must be relighted every 4.5 minutes is optional but effective.

Well, I could go on, but you get the idea. If you want to be known as a true leader in the forefront of your particular discipline, simply follow the rules outlined above and improvise a few of your own. And, as a final example, I might remind you of the lasting impression made by a group of Russian scientists several years back when they presented a session to an overflowing crowd in San Francisco. Preceded by a Barnum-like campaign of publicity, hundreds of engineers politely sat through several hours of technical discourse delivered in a Russian monotone. Someone, it seems, had neglected to furnish an interpreter.



*The wife of Wescon's board chairman recalls some highlights of that segment of the convention's activities aimed at the ladies.*

Wescon may mean many things to many people, but to most of us who have been part of its women's activities, Wescon will always represent "friendship."

The most worthwhile part of helping serve as hostess to hundreds of wives who visit the show and convention with their husbands is the new friends they meet and the old ones they see again.

One reason is the nature of electronics itself — as a business and as an engineering profession. Over these past years, the small "electronics community" in the West has become so large and so spread out that there's a real need for a rallying point — a breathing spell to remind us that the electronics industry in many ways is like a big family.

And the acquaintances made in a few short days have a wonderful lasting quality. It's no trick at all to count Wescon friends from most areas of the United States and several foreign countries.

The heart of our own "people-to-people" program is the women's hospitality center. I often think of it as a sort of "Peanuts' blanket" of security within all that huge Wescon bustle and activity. Whether the hospitality center is in Los Angeles or San Francisco, and no matter who the hostesses may be, the center seems to maintain a warm atmosphere of welcome to which the visiting women respond with enthusiasm.

Every year, the hostesses try to plan a social and sight-seeing program that will help visitors learn a little something of the Bay Area or Southern California. There have been many beautiful and successful events — and some near misses, too.

The trouble is, every time you try to look back over these events, you can remember only the narrow escapes and the funny mixups.

One memorable occasion found two committeewomen completely redecorating a ballroom in less than 90 minutes in order to save a welcoming tea that might have

# THE DISTAF

seemed more like a wake. The occasion coincided with the opening of a new and grand hotel. We had arrived, well-coiffed and gowned, to greet 200 guests.

The hotel management, eager to impress us, had fully decorated the ballroom — but in a manner more suitable to an American Legion luncheon than a ladies' tea. In the center of the room there was a huge American eagle made of colored ice. Each table had crossed-swords for decoration, and no single color went with any other color in the room. The flowers were long overdue for a decent burial, and the table linens were bright red.

Between 12:30 and 2 p.m., we (1) changed the table linen, (2) ordered and installed new floral arrangements for each table, (3) disposed of the eagle and substituted a swan, and (4) rearranged all of the furniture. Believe it or not, we were standing quietly in the receiving line at the appointed hour, albeit panting slightly.

One year, we lost a mother and child on a Disneyland tour. The nose count on the returning bus tallied perfectly, but we were unaware that we had picked up two new noses somewhere along the way. The husband and father of the two strays was classically irate, and the only unruffled people in the affair were the mother-and-child, who, seeing that they had missed their Wescon bus, calmly proceeded to public transportation and arrived back at the hotel safe and sound.

In 1962, we took our visitors on a tour of the Robertson Boulevard design center in Los Angeles. To handle several hundred guests, we divided the party into tour groups, each with its own leader and its own itinerary. Only one lady complained, but she complained all the way. In spite of the continuing efforts of her hostess and fellow-tourists, she found fault with every detail of the day. It was too nice an occasion to be spoiled by a single grumbler — but she tried. After making life miserable for





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AUGUST, 1966 ISSUE



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# 'SIDE AIRED / by Marian Moore

her hostess for more than three hours, she was deposited at her hotel—but she neglected to pick up several gift packages acquired during the day. Within 30 minutes, she called the hostess at the downtown hotel, and demanded that her packages be delivered personally to Beverly Hills. The answer was negative.

I also recall the year in which I personally presented 250 Hawaiian leis to women guests, after the fire department had ruled them out because they weren't fireproofed. Hundreds of dollars had gone into making these attractive mementoes, and we were darned if they would go to waste. I determined to become Official Greeter and hand out every lei myself, on the theory that they could then arrest only me—and my fellow committeewomen could continue the program if I were forced to be the guest of the city at Lincoln Heights jail.

Perhaps the most delightful experience occurred in Portland, where I accompanied my husband for a Wescon directors' meeting. The Portland WEMA and IEEE ladies were most gracious in showing us the city, in a sightseeing program that was highlighted with a lovely luncheon. I did seem to have trouble understanding many of the hostess' comments during the day, but it was only in the evening, when we rejoined our husbands that I realized the mixup. I am Mrs. Hugh P. Moore, and our hostesses had me pegged as Mrs. Norman Moore throughout the entire day.

Both Mrs. Moore's still enjoy recalling the day I had her place at the head table and people kept asking her how things were going for Hugh.





*One of Wescon's long-time tenets holds that a technical conclave need not be a drag to be effective. It can be fun, too.*

There is no historical record of what the first meeting of the Royal Society of England was like; no doubt Harvey droned on about his latest, shocking idea that blood actually circulated in the human body, and Sir Isaac Newton, with a too-bright grin dropped apples from the podium into an oaken bucket. But the latest gathering of scientific engineering personnel would unquestionably show the age-old inferiorities that are peculiar to such individuals — a desire to mumble monotonously about the spectacular, a misplaced attempt at showmanship.

From its earliest years, Wescon has attempted to turn the dull into the delightful. In the case of technical program, it has harrassed its speakers with a booklet which tells them, chapter and verse, how to to keep the audience awake and interested. Where some conventions cram too many papers into too many hours on too many days, Wescon had gradually reduced the number of technical sessions (In 1958 it was 40, in 1966 it is 24). It has eliminated some of the concurrent curse by setting up special sessions against which no other talk competes, it has maintained a healthy turn-down ratio as to papers submitted, rather than filling the time available with the papers that came in, it has turned more and more to invited speakers each year, on the theory that Wescon is not the place for the inexperienced speaker.

In other areas it has worried about the physical com-

fort of its attendees by a continual revamping of registration practices, advance registering, post-convention registration billing, and reducing the mass of technical literature, formerly required by both booth tender and visitor, by substituting a "credit card," it has worried about aisle-space, air-conditioning, provided free buses, entertained the ladies, leaving husbands free to visit the show, and eliminated events (such as field trips, the historical exhibits) which outlived their usefulness. It has innovated, concentrated and eliminated. It brought forth its industrial design show, a banquet without speakers, eliminated its banquet, changed its luncheon from the last day to the first, encouraged concurrent symposia to be held at the same or nearly the same time, and experimented with various ways to preserve its convention record, which sells at a moderate price.

All of these deliberate policies have made Wescon a "fun" show to attend. The Board is well aware that there are considerable points of interest in either of its host cities, San Francisco or Los Angeles, and it has had the courage to leave most of the evening and some of the daytime hours free so that the visitor may restore brain and spirit. It has fostered a gentleman's agreement to reduce recruiting at Wescon, helped out the harried engineer by setting up jet plane schedules so that out-of-city visitors might enjoy one or two days of the show, where most conventions greedily demand at least three days or more of their visitors' time.

Because of its size, it is able to require more than passing attention from the major hotels it fills, gets the airlines to think Wescon, sets up information centers in

# WESCON...





the airports, informs local taxi drivers as to what is going on, and stirs up the press and TV to the advantage of industry.

In its Cocktail party, it recognizes the need for old cronies to get together, people separated by either space or technical innovation. It has even struck a compromise between its exhibitors, who want no one in the convention aisles but customers, and the eager youngsters, of America who are always seeking a free show — youngsters are admitted to Wescon on the last day.

#### The Old — The New

Both cities that host Wescon are ideally equipped to entertain the outlander. In San Francisco, the restaurant roster alone is enough to occupy the non-convention time of the visitor. San Francisco has its bridges, parks and museums, its dramatic hills, its avant-garde night-clubs, Chinatown and Fisherman's Wharf, to name a few of the attractions that in themselves make the city worthy of a visit. Post conventioners head for the Mother Lode country, Yosemite, Lake Tahoe, or Hawaii.

In Los Angeles the visitor may enjoy many well-known tourist attractions or some of the newer ones. Traditionals include: Disneyland, the Farmer's Market, restaurant row on La Cienega, Sunset Strip, Graumann's Chinese Theatre, the CBS tour, Department stores like Bullock's, Robinson's, the May Co., Olvera Street (Mexican "community"), the ocean, with swimming and fishing, major league baseball (two teams) and a thriving motion picture and foreign film schedule.

Newer items include: the Movieland Wax Museum, the

Music Center, the County Art Museum, the new Century Plaza Hotel, and six sky-line restaurants: the Beverly-Hilton, the International Hotel, Gate of Spain in Santa Monica, Room at the Top, at Sunset and Vine, the Occidental Building at 12th and Hill, the Center Club in Westwood near UCLA. Other attractions are: the new baseball stadium in Anaheim, the new theatre in the round music halls in Anaheim, Santa Monica, the Valley and Pomona, the Universal movie studio tour.

Any hotel information desk or Wescon Visitors' Services booth has information on the above attractions.

For more earthy entertainment, one can find traditional strip-tease establishments still offering attractions such as "Fran Sinatra," or the newer topless bars, which if visited in Gardena or Hawthorne are actually topless. Further deponent sayeth not.

There is good food, drink and companionship in the countless hospitality suites, and at the various specialized meetings of the sponsoring groups which are really not too hard to find by the serious fun-seeker.

Post conventioners are likely to find their way to Palm Springs for a rest, and a sun-soak, Las Vegas for the usual, Tijuana, Arrowhead or Hawaii.

There is no way of telling what the pleasure of the day might bring — the hastily improvised dinner party, the chance meeting of an acquaintance who turns into a friend under the impact of loneliness in a strange city, the pleasure of family and business mixed, if one brings one's family, the contrast of a bright noisy day and the quiet of a restful night away from one's usual haunts — all of these, too, can add to the fun side of Wescon.

## why it swings / by Dave Traitel / Electro-Optical Systems, Inc.





*Few names associated with Wescon are more familiar than that of our own perennial Hugh Moore. Here he examines some future Wescon problems, suggests some likely solutions.*

It has been suggested that "climatic events" is a more discrete phrase than "succession of crises" for referring to situations which inevitably develop throughout the growth period of any successful business enterprise.

As pointed out in preceding sections of this Wescon Composite Autobiography, Wescon has experienced its share of Climatic Events, and there is every reason to believe that it will continue to do so in the future. Furthermore, there is no reason to doubt that future solutions will be any less successful than in the past.

Housing a continually-growing show and convention always presents problems, particularly when dealing with the largest such affair in the West. Wescon in Los Angeles would be far better off if it could be contained in a single facility rather than split between three (Hollywood Park, Sports Arena and the Biltmore Hotel) as in the present case. Problems of logistics would be vastly simplified.

For a while it appeared that the construction of Los Angeles' long-proposed Convention Center would enable the single-site goal to be realized in time for the 1968 Wescon. However, unresolved political questions beyond the control of Wescon management have pushed the probable date of the first truly integrated show back to 1970.

Whether the convention building site finally accepted is Bunker Hill, Pico-Figueroa, the Sports Arena, Westchester, or elsewhere, location is only secondary to getting it soon. The Los Angeles city council is reviewing all of the proposals for buildings and sites, and is expected to decide within the next two months. Several of the proposals have been reviewed by the Wescon board and staff during recent months. Most of them are acceptable.

The City Council of Los Angeles and other bodies which are interested in convention centers have listened to Wescon and apparently do give considerable weight to our opinions as to the necessity and importance of having a more adequate center.

In the North, the situation is different. The Cow Palace in San Francisco remains the most suitable site available. In addition, improvements will be made in the Cow Palace to continue to make it adequate.

Some observers have pointed to the peaking-out of the number of show exhibits in 1964 as the end of Wescon's unprecedented growth. We don't believe that to be the case. True, in 1964 there were 1240 exhibit booths contrasted to the 1160 anticipated this summer.

We feel that this reflects the general consolidation within the industry. The strong firms are becoming stronger, and the weaker ones are falling by the wayside or being absorbed into the larger ones. The increase in number of potential exhibitors has therefore temporarily

wavered. By 1970, a resumption in the increased number of exhibits will probably be seen. The number of exhibits will proliferate as the industry grows.

Wescon is past the point, however, where the number of exhibits or attendees is of prime importance. Those of us on the Board, and our numerous committee members, are more engrossed in continuing to raise the quality of exhibits, attendance, and the technical program.

In our opinion, the carefully-planned administration under which Wescon presently operates is geared to maximum improvement in these three areas as Wescon is continually reshaped into the kind of institution that best serves its industry.

Take, for example, the workings of the Wescon Board. It consists of eight members, the number which experience proves to be the optimum. Larger boards tend to become unwieldy. Only two new members join the Board each year and each serves for a total of four years. This plan provides the new Board member, during the first year when his duties are the lightest, an excellent chance to familiarize himself with the operation before assuming heavy responsibilities in decision-making.

Four members are directly involved in running the current show as the Executive Committee while the other four operate as a long range planning committee. The latter foursome meet frequently during the year to consider a great number of problems submitted to them. They function as a think group as distinct from an operating group.

The real key to Wescon is the willingness to innovate. It has prided itself upon setting the pace for other shows and conventions nationally. Never inhibited by the status quo or by the normal way of doing things Wescon has generated many changes. Not the least important is having the first audit of a show attendance. More important is the constantly revamped technical program format that fends off attempts to grind out the same old type of programs and instead modifies, alters and completely changes existing shop-worn concepts. This same policy of alertness and flexibility that has resulted in a superior technical program has been adapted with equal success to other activities such as the Industrial Design Awards Competition and Future Engineers Shows.

In the matter of the technical program, we certainly entered into the current format with a lot of concern that we might be headed in the wrong direction, referring to the type of session that could be organized by one group or even by the employees of one company. The technical program is fundamentally a forum during which new ideas and needs for new ideas are exchanged, and activities and discoveries are described to the benefit of others in the profession. Some of the recent criticism by trade editors may be justified, but I think it's been accentuated and sharpened out of proportion simply to cause some controversy and develop additional readership.

As a forum of communication exchange, the technical program's value is proportionate to the quality of material that is covered. There have been some cases where a



# Some Thoughts for the Future

by Hugh Moore  
Computer Equipment Corp.



phony paper was presented in order to see whether it could get on the program, (see page 23) and we must continually work to separate the clever manipulation from the honest, objective, good-faith approach. It is essential to separate the true advance of innovation—extension of the state-of-the-art—from the mundane rehash of old activities and sheer commercial presentation. This is the

real problem the technical program faces. With the increasing complexity of the profession—look at the complexity which solid state has reached—it becomes increasingly difficult to recognize and properly categorize and present the best balance in a technical area or an area embracing a variety of technical disciplines.

*(Continued on page 52)*









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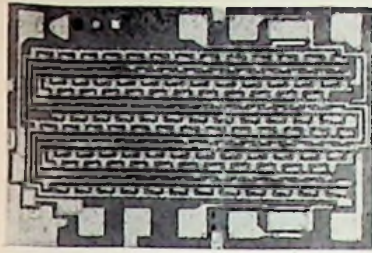
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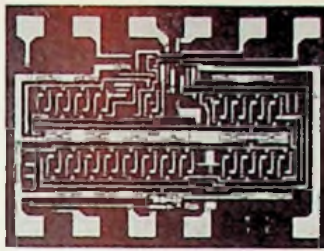
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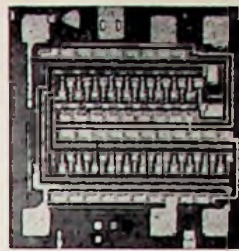
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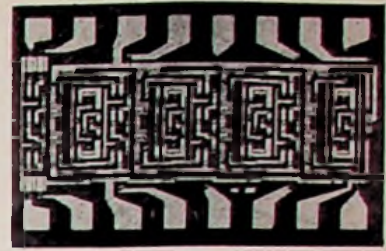
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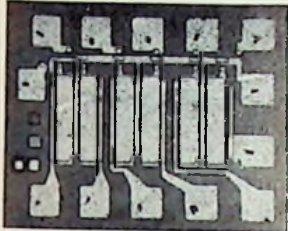
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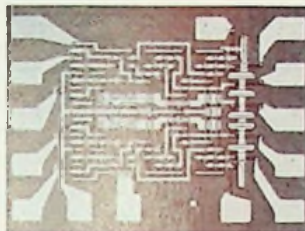
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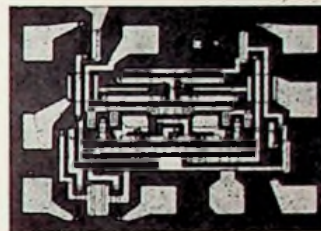
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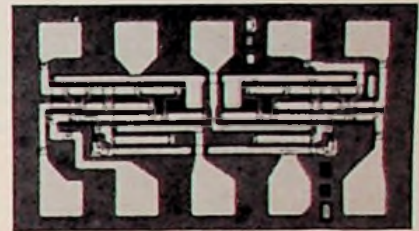
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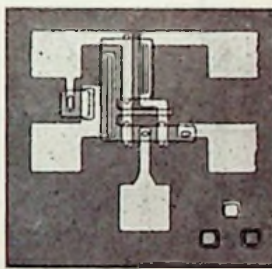


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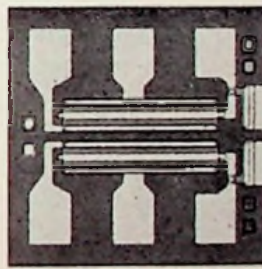
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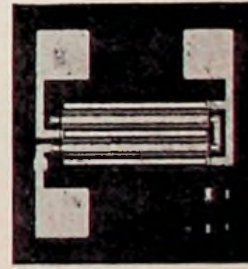
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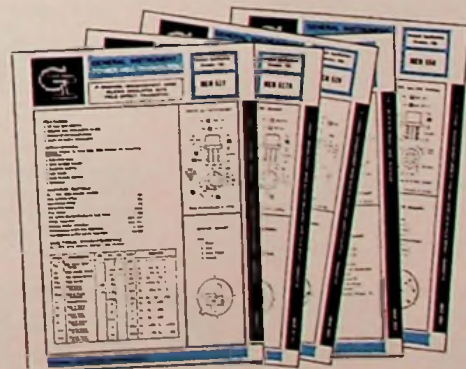


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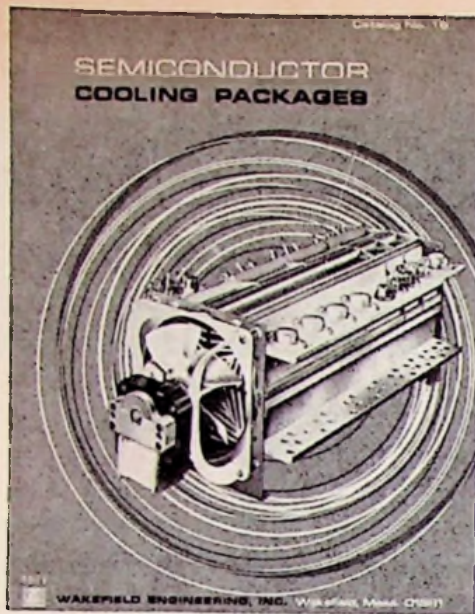


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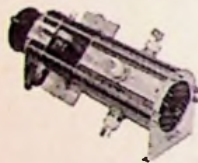




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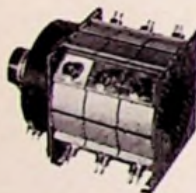
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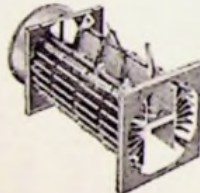
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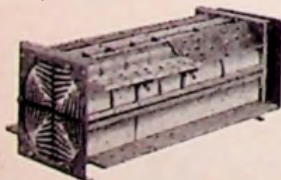
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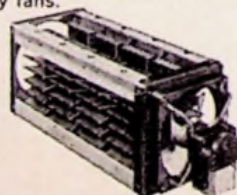
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## Wescon's Past

CONTINUED FROM PAGE 15

problem as organizational, wisely reviewed and rewrote the Wescon contract in 1957. The major problem revolved around the fact that a single top-level position existed on the Wescon Board of Directors, that of Chairman of the Board. The Chairman was elected by the members of the Board and often the political maneuvering toward this position and the problems of individual prestige either wasted good talent on the Board of Directors or prevented acceptance of an appointment to the Board of Directors by a well qualified man.

The new contract provided for automatic succession through the positions on the Board and the designation of two top positions of equal stature on the Board—those of Chairman of the Board and Chairman of the Executive Committee. Starting with 1958, a closer and more harmonious tie between the two sponsors of Wescon resulted.

From 1953 through 1958, Wescon continued to grow, both in the number of exhibits and attendance. Held in alternate years in Los Angeles and San Francisco, Wescon changed little. There were some management changes: In 1954 Heckert Parker retired and Mal Mobley, then Parker's assistant, took the reins as Wescon's General Business Manager. In 1956, Mobley resigned and fortunately for Wescon, Don Larson was enticed to leave his public relations company and resign his WCEMA secretary position to become Wescon's business manager. Larson holds the same position today.

The same year saw the establishment of a business office, housing IRE, WCEMA and Wescon. This arrangement has also continued, progressing from a small office on La Brea Ave. in Los Angeles to larger quarters on La Cienega Boulevard, and finally to its current vantage point on Wilshire Boulevard, nearer the center of industry activity in Southern California.

To complement the Southern California office, Wescon also established and operates fully-staffed offices in Palo Alto, where the IEEE and WEMA likewise share the benefits of this facility.

The now familiar Wescon bus service was initiated in 1956 to shuttle visitors between the Ambassador Hotel and Pan Pacific Auditorium. Then in 1958, another innovation occurred and for the first time youthful participants displayed their talents for the professionals. Thus, the Wescon Future Engineers Show was started. It is now a firmly-entrenched Wescon  
(Continued on page 43)



# Someone's life will change greatly as a result of reading this ad.

He will be a man who can make a significant contribution to the art of electronic measurement—in either design or production. Chances are he will be working for a large organization where his contribution is not accepted or—if accepted—not widely recognized. He will be looking for the opportunity to show his mettle and get the recognition he deserves. If you are such a man, read on:

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The company offers in addition to your salary (which is as good or better than anywhere else) profit sharing, medical insurance, and retirement benefits. So if all this excites you and you fit one of the job descriptions below, write our Engineering Manager, Mr. Ted Thomsen, in confidence. Interviews will be arranged in Los Angeles, San Francisco, or Seattle at your convenience. Please address Mr. Thomsen at P.O. Box 7428, Seattle, Washington.

**Design or Senior Engineers** with communication theory background and/or interest in digital circuits. Preferably an MSEE. Minimum experience, two years. Should be familiar with digital circuit design and frequency calibration techniques.

**Design or Senior Engineer** with minimum of one year's experience in feedback, digital and analog circuitry. Applicant

should be familiar with differential amplifiers, amplifier and feedback design, AC-DC converters, and state of the art measurement instruments. MSEE desired.

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**Electronic Package Design Engineer** with either BSEE or BSME. Applicant should be familiar with packaging methods in the MHz to 10 GHz region. Two to six years' experience with good mechanical design aptitude required.

**Industrial Engineer** with three years' experience in electronics or associated industry. Should possess a BSIE. A BSEE or BSME is acceptable if applicant has industrial experience. Candidate must have knowledge of methods, value, and process analyses, and work simplification.

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SALES DIVISION



## Wescon's Past

CONTINUED FROM PAGE 40

component.

That was the year a Los Angeles television station made arrangements to visit Wescon and televise a one-half hour show. The TV crew became so engrossed with the FES program that it devoted the full 30 minutes to the students. Your historian assisted as commentator on the program and among celebrities interviewed were Dr. William Pickering, JPL, who described the seemingly fantastic plans to explore outer space. Don Fink, then VP of Philco, and President of IRE and presently General Manager of IEEE, was another guest.

One of the real secrets of Wescon's success is its lack of conformance and its willingness to experiment. In 1959, for example, a new idea, the Industrial Design Competition, was introduced. This feature has become a solid part of the Wescon scene.

Over the years, attendance and the number of exhibits continued to grow in both Los Angeles and San Francisco. San Francisco hosted the odd-numbered years, and 1957 saw Wescon move to the Cow Palace with 25,000 visitors. Two years later more than 31,000 attendees viewed 975 exhibits and heard 42 technical sessions. But, the next year in Los Angeles, growing pains caused various rumbings: Pan Pacific had become too small for Wescon and even Los Angeles' new Sports Arena was not commodious enough to accommodate the exhibit booths comprising the show activity.

In Barnum and Bailey fashion, the largest tent ever constructed was assembled on the parking lot adjacent to the Sports Arena to house the booths. How did exhibitors respond to the tent? Initial response caused an overflow of booth space.

Wescon, anticipating the warm season, had a double roof constructed within the tent and the world's largest portable air-conditioners were installed on flat bed trucks to pipe cold air through giant cloth tunnels into the tent.

The exhibitors glee turned to jeers as, unfortunately, the tent became the cause of a jurisdictional dispute between the Los Angeles Dept. of Building and Safety and the Fire Department. In the resolving of the dispute, it was necessary to raise the side walls of the tent to insure exit in the event of any catastrophe. Whew! This concession ruined the airflow through the tent with the result that the air-conditioners became overloaded, broke down, and during the hottest days of the season, Wescon

CONTINUED ON PAGE 44

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## Wescon's Past

CONTINUED FROM PAGE 43

sweltered in its temporary structure. At one point though, during a particularly warm day prior to the raising of the side walls, Don Larson tested the tent's air-conditioners. They worked all right. As he walked through the main entrance, Don's glasses shattered due to the change in temperature!

In 1964 a significant change in location was made and has proven considerably more satisfactory: Wescon occupied three Los Angeles locations—Hollywood Park, the Los Angeles Sports Arena, and the Statler Hilton.

In recent years, the number of attendees and exhibits has reached somewhat of a plateau. About 35,000 visitors come to San Francisco and 45,000 to Los Angeles with approximately 1200 exhibits at each location.

There have been some other changes, most important of which were the adjustments made in 1963 to reflect the merger of the AIEE and IRE. Essentially the contract was rewritten to extend the technical base of Wescon beyond the limitations of electronics into the full technical base the IEEE. This confirms our contention that as industry continues to alter its shape and direction, so goes Wescon, or is it the other way around?

## Trials & Tribulations

CONTINUED FROM PAGE 17

When does showmanship stop, and distraction take over? In addressing these problems, Wescon management and committees have to keep one fact foremost — one idea, harmless in itself, could create chaos if multiplied by 700 exhibiting companies.

All of these considerations — major and minor — come to mind whenever one of these friendly needlers asks, "Oh, you work for Wescon? Tell me, what do you do for the rest of the year . . ."

## Registration

CONTINUED FROM PAGE 19

However, on the whole, considering the number of people processed, Wescon has done a wonderful job.

In a typical year the chairman and vice-chairman, immediately after their appointment by the show director, begin to assemble a working staff of sub-committee chairmen to handle such tasks as facilities, personnel, schedules, data processing, and communication. This working staff, consisting of 5 to 10 people, plan and help administer registration. At a later

date from 50 to 75 volunteers are added to stand floor duty in registration areas during the show.

Thanks to a firm Wescon rule requiring detailed final reports of each year's committee, there is a wealth of background material to aid in the new year's planning. However, the dynamics of Wescon dictated by growth and circumstances, make each new year a fresh challenge.

Detailed plans are drawn up for the layout of each registration area; then examined from traffic patterns, revised, re-examined and revised. Instruction pamphlets are prepared for the use of paid help and volunteers — the handling procedure, the various types of ribbons, badges, and answers for the most often asked questions.

Planning and the recruiting of personnel cover six to nine months of effort. As the time grows close, inevitable crisis begin to appear. Joe is being transferred out of the city; someone must take over his slot. Somehow we missed the signs required in the parking lot area. A box of exhibitors badges is lost. It's opening morning for exhibitor registration — no signs. (They are finally located in another storage area.) And so it goes. Then opening day and the big push is on. Now, we find out how well we planned.

As in any endeavor, nothing is 100% successful. There is always the unforeseen or unforeseeable for which no plans were made, as well as, just plain human error.

As a final word, a few tips to make your registration easier and your visit to Wescon more pleasant:

1. If you received a card in the mail, have it filled out completely, and with you when you arrive.
2. If you are staying at the hotel, try to register the night before — when traffic is light.
3. When you enter the registration area, take 30 seconds to look around, read the signs, and follow simple directions — you won't waste time standing in the wrong line.
4. If you have an individual problem or question, don't wait to stand in line to discuss it with the cashier or typist. Get hold of a registration committee man on the floor, the one with the big badge or ribbon, he will do everything possible to straighten things out. That is his job, and his desire.
5. Should a delay or even a major goof occur, please have a little compassion and understanding. It is a big job and is being done

CONTINUED ON PAGE 46





# Grow with **SPRAGUE ELECTRIC**

The Sprague Electric Company, America's largest and fastest-growing manufacturer of electronic components, is enjoying continuous expansion which has created a wide variety of stimulating career opportunities.

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Major electronic product lines include:

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- ★ Special purpose subassemblies for data processing, communications, and other types of electronic equipment.

Sprague Electric is a research-based company with corporate headquarters at North Adams, Mass., in New England's Berkshire Hills, famous summer and winter resort area, just an hour from Albany, N.Y. Manufacturing facilities and laboratories are located in Massachusetts, New Hampshire, Vermont, Maine, Maryland, California, Wisconsin, North Carolina, Virginia, Florida, and Ohio. Wholly owned subsidiaries operate in Canada, Italy, Belgium, Puerto Rico, and Hong Kong; a Sprague-affiliated company is located in Mexico. Sprague has sales offices in principal cities throughout the United States and abroad.

Sprague Electric provides a comprehensive program of employee benefits, including company-financed education toward advanced degrees at leading colleges and universities near our various locations.

Creative engineers with experience in microcircuit design and development, EMI filter design, test equipment design, process engineering, production machine design, factory methods and planning, and sales engineering are invited to explore the many interesting assignments available at Sprague Electric.

**Write or call John F. Miller, Corporate Manager, Recruitment and Staffing, Sprague Electric Co., North Adams, Mass. 01247 (Phone 413-664-4411) to arrange for a Los Angeles interview during the week of August 22, 1966.**

43E-6142 V2

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**Registration /** CONT. FROM 44

largely by volunteers whose only reward is a knowledge that they are being of service. Lastly and most important, it is not through lack of effort, planning or trying, it is just one of those things that occasionally happens. After all, a 10 or 15 minute delay cannot really ruin the show for you unless you let it.

Happy Wescon going, and as you pass the sweating registration committee man; be happy you are not in his shoes. On the other hand, if you notice a better way to do things, the registration committee **NEEDS YOU** next Wescon.

**Hospitality /** CONT. FROM 21

respective companies. Or in even a mundane setting, an imaginative and broadly integrated theme can provide the spirit that makes the affair seem worthwhile.

It's obvious that some celebration and planning went into the entertainment, and the invited guest has a much greater incentive to attend such a party than to visit a standard "suite." Furthermore, the majority of Wescon's like to live a little in the evening. Thus the party can be a pleasant substitute for a night out. And the buffet enables the guest to go away with something more on his stomach than his favorite alcoholic concoction.

**MAY INVOLVE THE CUSTOMER'S LADY** — Few guests care to bring their wives to the hospitality suite, where there's seldom room to sit down, the conversation may be salted by liquor-loosened tongues, and her patent leathers run the risk of being trampled. But this attitude is reversed when an attractive party is in store. Providing the customer's wife with a memorable evening is as superior to a brochure from a hotel suite as a good peek is to a finesse at the bridge table.

**KUDOS FROM THOSE WHO DIDN'T MAKE THE SHOW** — If the invitation effectively conveys the spirit of the affair, even those who couldn't make it appreciate the invitation, and they take the time to so inform the host.

**KEEPS THE SALE FORCE OPERATIONAL** — Three nights in a hotel room ties up a substantial portion of your sales force during the six to eight hours the suites are open. And some salesmen, when bored, have been known to take a drink. The three-night drain on time and energy can easily make Wescon-week a period of sub-standard sales productivity. However, a single event occupies only a few hours; and each  
*(Continued on page 48)*



# ENGINEERS...

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Current expansion and extensive new product development are rapidly increasing the opportunities at Sundstrand Aviation. While it is the largest division of the Sundstrand Corporation, Sundstrand Aviation is still small enough so that the individual engineer can attain personal identification with his projects.

Excellent fringe benefits include a company-sponsored Master's Degree Program.

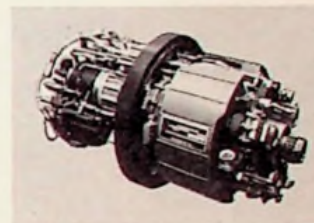
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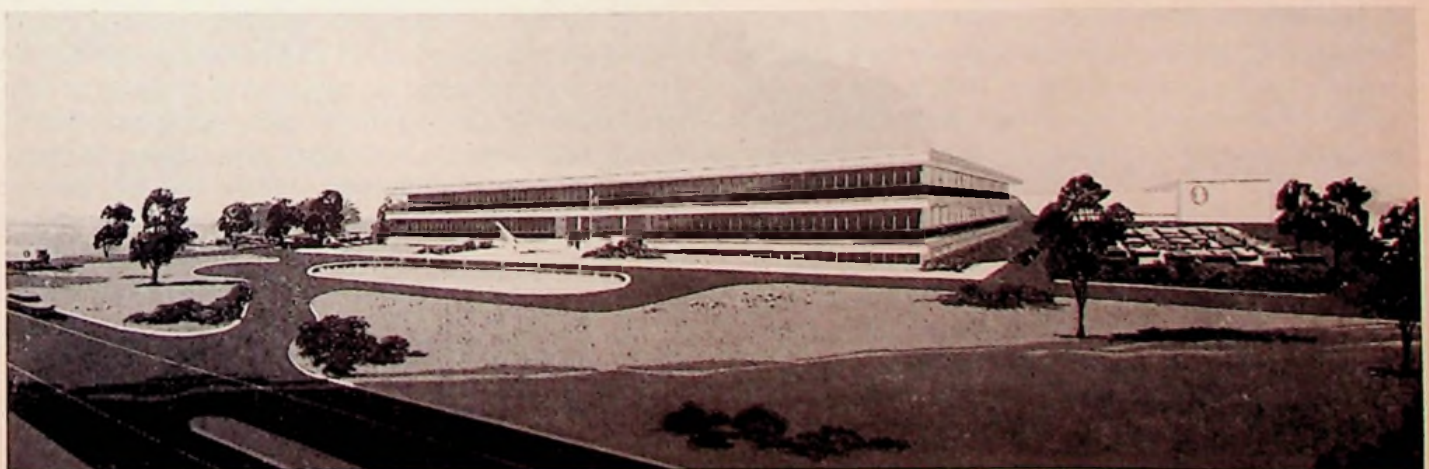
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This multimillion dollar R & D Center scheduled for completion in 1967 will add 400,000 square feet to Sundstrand Aviation's specialized facilities.

CIRCLE INQUIRY CARD NUMBER 19



## Hospitality

CONTINUED FROM PAGE 46

salesman is sure to be on hand when his guests arrive.

### CONTROLS THE GUEST LIST

— Since the one-night party probably won't be on hospitality suite row, the number of uninvited who discover the site will be limited. And even those who do are much less prone to crashing.

Though the number of companies staging one-night parties compose a small minority of those entertaining, here are a few stand-outs from recent years.

The Electron Tube Division of Litton Industries some years ago keyed its entertainment to the San Francisco Bay Area atmosphere with a Japanese dinner party. Held in the Yamato Restaurant on the California Cable Car Line, the theme was carried through with invitations picturing a cable car, free passes for this colorful mode of transportation, and tie clasps bearing tiny cable cars. The cuisine was excellent, and authentic Japanese.

Giannini Controls Corp. during one San Francisco edition of Wescon served a buffet dinner below decks on the "Balclutha." Docked near colorful Fisherman's Wharf, this sailing vessel had been outfitted as a nautical museum, providing an interesting as well as an entertaining environment. A

slight swell, funnelled in through the Golden Gate, caused the ship to roll just enough to suggest being at sea. The company's invitations that year were rolls of parchment simulating pirate maps. Another Giannini Controls' party which was well received (particularly by the ladies), involved reopening the long vacated Romanoff's, the famed dining and wining spot of the stars in Los Angeles. Since the building was slated for demolition in the then near future, the company billed the affair as "Romanoff's Last Party."

A handful of companies, over the years, have held delightful parties on San Francisco tour boats, with guests spending a convivial couple of hours chugging around the harbor, enjoying cocktails against a backdrop of the Golden Gate and the traffic of the busy harbor.

EDN magazine is believed to have innovated the breakfast reception, lasting from 9 a.m. until noon. One of the most memorable, held in the Ambassador Hotel in Los Angeles, featured a New Orleans theme. Mint Juleps and Creole cuisine were served, with Nappy Le Mar's Dixieland Band providing the audible atmosphere.

Marshall Industries on occasion has hired for the evening the Roaring 20's, posh Los Angeles night spot, whose waitresses in both pulchritude and wardrobe may have inspired the

bunnies of the Playboy key clubs. The Marshall people hosting the party wore derby hats and other attire reminiscent of the 20's. Motorola Semiconductor Division's Arizona Room, featuring sumptuous barbecue dishes and refreshments, served by hosts and hostesses in western garb, is an ever popular event.

The common denominator in the above affairs, all vastly superior to three nights in a hotel room, was imagination and planning. And a sincere desire to entertain, rather than merely going through the motions because the competition does. The guests appreciate the difference, and the good will engendered lingers on.

But there are pitfalls in any Wescon hospitality event. One of the most notorious examples occurred some years ago in a prominent San Francisco Hotel, where a large, loud, long cocktail party was under way. The atmosphere and refreshments were so stimulating that one guest decided to slide down the bannister adjacent to the lofty grand ballroom. His launch was as programmed, but the daring young man's inertial guidance system malfunctioned in the early phase, and he climaxed the party by plunging 40 feet to the marble floor below. The *bannisternaut* recovered after some six weeks of hospitalization, but has not since been seen on Wescon's hospitality row.

---

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Alfred Electronics offers these excellent professional opportunities in a company with a fine engineering climate. The company sponsors an educational program at Stanford and other colleges in the area. Additional benefits include profit sharing, retirement plan, bonus, life insurance and medical protection. Please call Dr. Bernard Wambsganss collect or send your resume for a confidential interview. Alfred Electronics, 3176 Porter Drive, Stanford Industrial Park, Palo Alto, California 94304, Phone: (415) 326-6496.

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# ALFRED ELECTRONICS

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# WESCON QUICK-CHECK LIST

## Sunday, August 21

4:00 PM to 10:00 PM IEEE TAB Operations Committee, Hartford and Dallas Rooms, Statler Hilton.

## Monday, August 22

7:00 AM to 5:00 PM Distributor-Manufacturer-Representative Marketing Conference, Statler Hilton, Pacific Ballroom, \$7.50.  
9:00 AM to Noon S.A.V.E. Symposium, Morning Sessions, Ambassador Ballroom.  
9:00 AM to 1:00 PM IEEE Sections Committee, Washington Room, Statler Hilton.  
9:00 AM to 5:00 PM IEEE publications Board, St. Louis Room, Statler Hilton.  
9:30 AM to 11:50 AM IEC Packaging Symposium, Bovard Auditorium, USC.  
9:30 AM to Noon Special Symposium, Oceanographic Instrument Calibration Techniques, Biltmore Galeria.  
9:30 AM to 1:30 PM ISRC Sub-Committee on Cultural and Scientific Exchanges between U.S. and the Soviet Union, Dallas Room, Statler Hilton.  
9:30 AM to 6:00 PM IEEE Technical Activities Board, Detroit Room, Statler Hilton.  
10:00 AM to Noon EIA, Buffalo Room, Statler Hilton.  
Noon IEEE Technical Activities Board, Luncheon, Boston Room, Statler Hilton.  
Noon to 1:00 PM IEC Packaging Symposium Luncheon, Town and Gown, USC.  
Noon to 2:00 PM EIA Power and Spec. Purpose Electron Tube Section, Luncheon, Buffalo Room, Statler Hilton.  
12:15 PM S.A.V.E. Luncheon Session, Coconut Grove, Ambassador.  
1:10 PM to 5:00 PM IEC Packaging Symposium, Bovard Aud., USC.  
1:30 PM to 5:00 PM S.A.V.E. Afternoon Session, Ambassador Ballroom.  
2:00 PM to 4:30 PM Round Table Work Shop, Special Symposium, Oceanographic Instrument Calibration Techniques, Biltmore Galeria.  
2:00 PM to 5:00 PM EIA Power and Spec. Purpose Electron Tube Section, Cleveland Room, Statler Hilton.  
2:00 PM to 6:00 PM IEEE Intersociety Relations Committee, Hartford Room, Statler Hilton.  
2:30 PM to 6:00 PM IEEE Nominations and Appointments Committee, Washington Room, Statler Hilton.  
6:00 PM to 10:00 PM IEEE TAB Systems Council, Dallas Room, Statler Hilton.  
7:00 PM S.A.V.E. Dinner Session, Sunset Room, Ambassador Hotel.  
7:00 PM to 9:00 PM Forum of Section Chairmen, Los Angeles Room, Statler Hilton.  
8:00 PM to 11:00 PM IEEE Finance Committee, St. Louis Room, Statler Hilton.

## Tuesday, August 23

8:00 AM to 6:00 PM IEEE Executive Committee, Dallas Room, Statler Hilton.  
8:30 AM to 11:00 AM S.A.V.E. Morning Session, Ambassador Ballroom.  
9:00 AM to 11:50 AM IEC Packaging Symposium, Bovard Auditorium, USC.  
9:00 AM to Noon IEEE Circuit Theory Group Administrative Committee, Boston Room, Statler Hilton.  
9:00 AM to 11:30 AM Technical Session No. 1, Biltmore Bowl.  
9:30 AM to Noon Technical Session No. 2, Biltmore Ballroom.  
9:30 AM to Noon Technical Session No. 3, Biltmore Music Room.  
9:30 AM to Noon Technical Session No. 4, Biltmore Renaissance Room.  
9:30 AM to Noon Technical Session No. 5, Biltmore Galeria Room.  
9:30 AM to 5:30 PM Wescon Exhibits, Sports Arena and Hollywood Park.  
10:00 AM to 5:00 PM Science Film Theater, Hollywood Park.  
11:30 AM S.A.V.E. Awards Luncheon, Coconut Grove, Ambassador.  
12:00 Noon Wescon's Keynote Luncheon, Biltmore Bowl, \$6.00.  
Noon to 1:00 PM IEC Packaging Symposium, Luncheon, Town and Gown, USC.  
Noon to 1:30 PM IEEE Executive Committee Luncheon, Hartford Room, Statler Hilton.  
1:10 PM to 5:00 PM IEC Packaging Symposium, Bovard Auditorium, USC.  
2:00 PM to 4:30 PM Technical Session No. 6, Biltmore Ballroom.  
2:00 PM to 4:30 PM Technical Session No. 7, Biltmore Music Room.  
2:00 PM to 4:30 PM Technical Session No. 8, Biltmore Renaissance Room.  
2:00 PM to 4:30 PM Technical Session No. 9, Biltmore Galeria Room.  
2:00 PM to 5:00 PM IEEE Administrative Committee of the Geoscience Electronic Group, Hartford Room, Statler Hilton.  
5:45 PM to 7:45 PM All-Industry Cocktail Party, Hollywood Park, Club House, \$5.50 per person.  
6:00 PM to 10:00 PM IEEE Publications Committee, Buffalo and New York Rooms, Statler Hilton.

CONTINUED ON THE NEXT PAGE



# WESCON CHECK LIST CONT.

## Wednesday, August 24

8:00 AM to 8:00 PM	IEEE Board of Directors, New York Room, Statler Hilton.
8:30 AM to 5:00 PM	IEEE Computer Group, Administrative Committee, Washington Room, Statler Hilton.
9:00 AM to 11:30 AM	WESCON FES Symposium, Sierra Room, Statler Hilton.
9:00 AM to Noon	IEEE Group on Circuit Theory Administrative Committee, Boston Room, Statler Hilton.
9:00 AM to 5:00 PM	IEEE Group on Electron Devices Administrative Committee, Detroit Room, Statler Hilton.
9:00 AM to 11:30 PM	Technical Session No. 10, Biltmore Bowl.
9:30 AM to Noon	Technical Session No. 11, Biltmore Ballroom.
9:30 AM to Noon	Technical Session No. 12, Biltmore Music Room.
9:30 AM to Noon	Technical Session No. 13, Biltmore Renaissance Room.
9:30 AM to Noon	Technical Session No. 14, Biltmore Galleria Room.
9:30 AM to 9:30 PM	WESCON Exhibits, Sports Arena and Hollywood Park.
10:00 AM to 5:00 PM	Science Film Theater, Hollywood Park.
10:00 AM to 5:00 PM	IEEE Committee, 10.6, Hartford Room, Statler Hilton.
11:30 AM to 2:00 PM	FES Luncheon, Los Angeles Room, Statler Hilton.
Noon	The WEMA Annual Meeting and Luncheon, Biltmore Bowl, \$6.00 per person.
Noon to 1:30 PM	IEEE Board of Directors Luncheon, Buffalo Room, Statler Hilton.
2:00 PM to 4:30 PM	Special Technical Session A, Biltmore Ballroom.
2:00 PM to 5:30 PM	Parts, Materials and Packaging, National Administrative Committee meeting and dinner, Dallas Room, Statler Hilton.
7:00 PM to 11:00 PM	IEEE Group on Information Theory Administrative Committee, Boston Room, Statler Hilton.

## Thursday, August 25

8:30 AM to Noon and 1:00 PM to 3:00 PM	IEEE 6th Region Committee, New York Room, Statler Hilton.
9:00 AM to Noon	IEEE Spectrum Editorial Board, St. Louis Room, Statler Hilton.
9:30 AM to Noon	Technical Session No. 16, Biltmore Ballroom.
9:30 AM to Noon	Technical Session No. 17, Biltmore Music Room.
9:30 AM to Noon	Technical Session No. 18, Biltmore Renaissance Room.
9:30 AM to Noon	Technical Session No. 19, Biltmore Galleria Room.
9:30 AM to 9:30 PM	WESCON Exhibits, Sports Arena and Hollywood Park.
10:00 AM	IEEE New Technical Activities Committee, Boston Room, Statler Hilton.
10:00 AM to 12:30 PM	Special Technical Session No. 15, Biltmore Bowl.
10:00 AM to 5:00 PM	Science Film Theater, Hollywood Park.
10:00 AM to 5:00 PM	IEEE Committee, 10.6, Hartford Room, Statler Hilton.
11:30 AM to 3:00 PM	Women's Luncheon and Fashion Show, Pacific Ballroom, Statler Hilton, \$6.00.
Noon	Eta Kappa Nu Awards Luncheon, Statler, \$5.00.
2:00 PM to 4:30 PM	Special Technical Session B, Biltmore Ballroom.
2:00 PM to 5:30 PM	IEEE Technical Committee on Interconnections G/PMP, Buffalo Room, Statler Hilton.

## Friday, August 26

9:30 AM to 5:30 PM	WESCON Exhibits, Sports Arena and Hollywood Park.
9:30 AM to Noon	Technical Session No. 20, Biltmore Bowl.
9:30 AM to Noon	Technical Session No. 21, Biltmore Ballroom.
9:30 AM to Noon	Technical Session No. 22, Biltmore Music Room.
9:30 AM to Noon	Technical Session No. 23, Biltmore Renaissance Room.
9:30 AM to Noon	Technical Session No. 24, Biltmore Galleria Room.
10:00 AM to 5:00 PM	Science Film Theater, Hollywood Park.
2:00 PM to 4:00 PM	Special Technical Session C, Biltmore Ballroom.

NO ADVANCE REGISTRATION, THIS YEAR IEC & S.A.V.E. REGISTRATION FEE ADMITS ATTENDEES TO WESCON. FOR WESCON ONLY, REGISTER AT THE SPORTS ARENA, HOLLYWOOD PARK OR BILTMORE HOTEL. WESCON REGISTRATION: \$2.00. IEC REGISTRATION FEE IS \$35.00 AND S.A.V.E. FEES ARE \$35.00, MEMBERS AND \$40.00, NON-MEMBERS.





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CIRCLE INQUIRY CARD NUMBER 22

## Exhibits

CONTINUED FROM PAGE 25

ground for fledgling salesmen. Too many competitors have the first team on the floor. A fledgling salesman costs the company the least amount when he practices on marginal customers — and Wescon visitors are prime prospects.

On the other hand, executives, even those representing the sales department, are a total loss to a booth operation. They check in at noon to pick up their luncheon date, come back in the middle of the afternoon to place a few phone calls, and depart with any customer that chances by. More enthusiasm for the booth-manning is essential.

One person should be responsible for the selection and training of booth personnel and their conduct during the show, and he should have the authority of a choreographer.

You might conceivably have observed that some booths are adorned by females and that they are quite attractive — especially if your Wescon visit takes you out of town. If you feel yourself yielding to the exhibitor's offer to let you buy his product, rest assure that the girl in the booth is not a full-time employee of the company. She was hired for her skills and experience in helping the rest of the exhibit personnel reach their stated objective. This seldom happens when the male drive (or, let's face it, female drive) introduces an earthier objective into the limited confines of a booth. Female employees are generally ruled out because their lack of competence in these matters is overlooked — or difficult to correct — because they are girls, and fellow employees at that. Most female booth workers are airline stewardesses, restaurant hostesses, receptionists or others accustomed to meeting and handling people. Now there are agencies who supply skilled female personnel for booth duty. The practice of hiring girls just because they look pretty in a booth is ruled out by a universal rule observed by successful exhibitors — if it doesn't help sell, don't have it in the booth.

Companies undertake the expenses of a booth at Wescon because the various attributes of Wescon attract potential customers in quantity. To make sure that visitors don't overlook their booths as long as they are that close to rendezvous with booth personnel and products many companies promote booth attendance during Wescon just as legitimate theaters promote attendance at their attractions. This includes publicity and advertising in trade magazines, billboards in the vicinity of the exhibit halls,

television, and such unusual but highly innovative media such as coasters donated to bars, napkins, lapel pins and other clever giveaways. Some even offer bus service linking the various show locations, and the sponsor of the buses known to each passenger. Probably the most effective media for both ads and publicity are the "show dailies" published by trade magazines. Some of these convene their news staffs from all over the country and set them up in their own news centers located at strategic spots. These staffs deserve credit for doing a top job of covering the many dispensed events at the show on a daily basis with a staff that throughout the year works hard to produce issues on a weekly or even monthly basis.

Other good outlets are the daily newspapers in the city. If glamour features, personnel announcements, earnings reports or other stories of general interest are released to coincide with the show, the company's sales prospects can read favorable stories about a company in their hotel rooms at night, over breakfast or at some other time when they are not being inundated with other Wescon-type messages.

Of course, an effective device for getting news of a company's exhibit read despite all the competition is to have a newsworthy device in the booth itself. Introduction of a major new product is one of the most familiar devices, and is still the best. Announcements of this type not only help get the company's booth into the journal covering the show, it also helps pre-condition the reader to purchase the product.

Although some companies have reported sales of their products on the exhibit floor itself, most of them are content with a lead — an individual who expresses an interest in a product. The most marketing-oriented companies consider anyone as a prospect who leaves his name in the booth for the purpose of receiving further information. Although it seems basic to a company to have an effective program to follow up these inquiries, the performance from company to company varies from inept to superb. Be assured that a good salesman appreciates your participation to the extent of proffering your card for imprinting your name and address onto an inquiry form. He probably has a continuing program to inform you of the many merits of his product.

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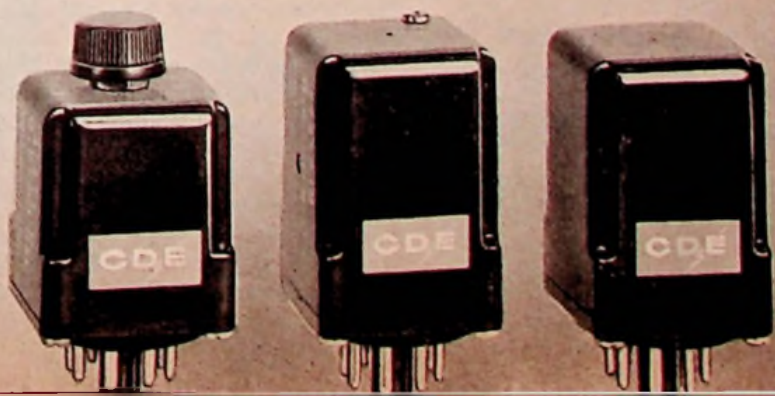
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- 7** With rugged solid state circuitry.
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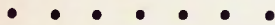






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### Exhibits

CONTINUED FROM PAGE 50

If your need of a product is fulfilled as the result of a visit to a Wescon booth, consider yourself a person who appreciates a competent group effort. In a sense your concrete acknowledgment of a job well done can be compared with appreciating a well executed football play all the more because you know how much that bit of action is the culmination of physical conditioning of the players, repeated practice, mental application to details of the opponents weaknesses, a substantial financial investment in uniforms and equipment and the fact that all these were orchestrated by skilled leaders.

I hope this indoctrination will give you the basis for a greater appreciation of the annual scrimmage called Wescon exhibit.

### Wescon & The Future

CONTINUED FROM PAGE 35

A futuristic idea on how this can all be improved is through the satellite operations which includes the concept of concurrent symposia. Wescon can serve the industry by grouping related efforts together in the same city at the same time and simply saving eastern people time by having them make one trip across the country instead of two or three. Wescon experimented with this last year, and although we do not have all the answers, we can say that the Packaging Symposium was highly successful and the sponsors asked Wescon to assume more responsibility for its operation this year.

If there is an ultimate conclusion to this search for a better vehicle of presentation, we hope it is not that shows and conventions are not worth the effort. This would be a tragic mistake for the real challenge is to make a show as valuable as possible, to overcome the "climactic events" and to provide a technical presentation as valuable as possible to the maximum audience possible. This calls for highly sophisticated people, people with competence in recognizing good technical programs, to produce the type of attraction that is appealing to the largest possible segment of the profession.

We feel that in any form of human endeavor those people who get ahead do a great deal of reading and verbal communicating. And anyone relying on reading alone is eventually going to stagnate. People have to communicate to live with each other, and a favorable medium for such communication is the greatest thing a show and convention can provide.

## 1966 Technical Program Offers New Heights In Appetite Appeal

If the Wescon Technical Program may be considered food for thought, certainly this year's offering reaches new heights in appetite appeal.

The technical visitor gets his appetizer on the Monday before Wescon:

### Oceanographic Instrument Calibration Techniques

Monday, August 22, 1966

Biltmore Hotel, Galeria Room

(Five papers on the subject, in the morning, plus an afternoon panel of the authors, plus the Session Chairman. No special charge. Registration for Wescon covers this event.)

On that same Monday, people whose technical life revolves around packaging may enjoy the beginning of a two day session of 23 papers at the University of Southern California, Boverd Auditorium. This is the former International Electronic Circuit Packaging Symposium sponsored by EDN magazine. It is run by Wescon with the cooperation of USC and EDN magazine; offers new insights into the electronics taffy-pull, the jamming or stretching of things electronic into reasonable shapes and forms.

Registration for this one tabs out at \$35, because there are also two luncheons at USC's famous Town and Gown, plus a fat Convention Record to go home with.

The Value Engineers will be very much on the scene this year with their own S.A.V.E. Symposium at the Ambassador Hotel, also overlapping Wescon one day (Tuesday) after a fast break on Monday. This one runs to \$35 for members, \$40 for non-members and offers two luncheons (Cocoa-nut Grove) and one banquet, with a Convention Record.

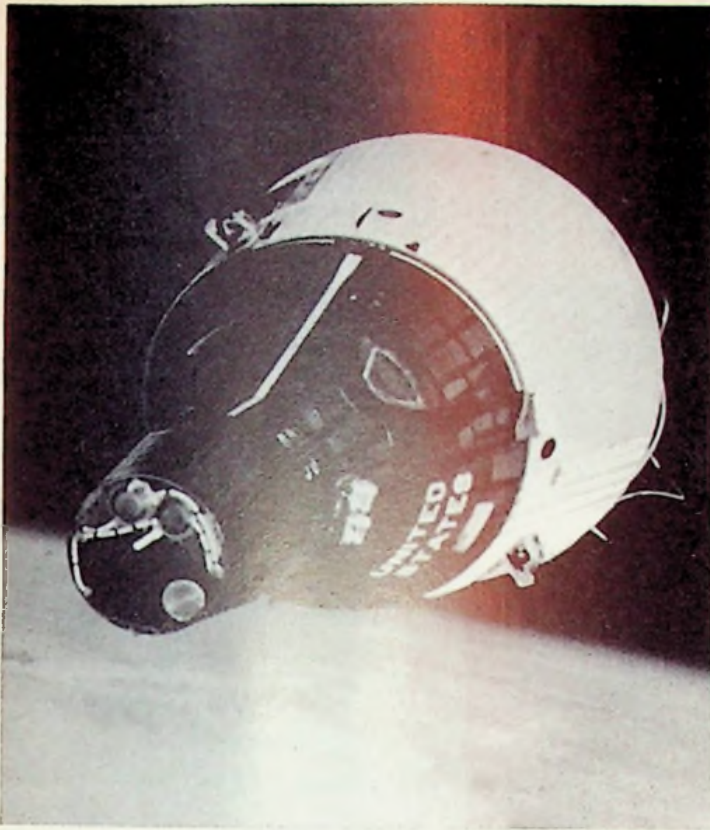
George Fouch, Deputy Assistant Secretary of Defense, Equipment Maintenance and Readiness, keynotes the S.A.V.E. Meet. Brig. General Arthur Exon, Director, Defense Contract Administration Services Region, L.A. will be one of the Luncheon speakers. At presstime, 18 papers on significant aspects of Value Engineering are offered. This Symposium is managed by the Society of American Value Engineers.

Complete programs for all three concurrent symposium appear in this issue elsewhere. As in the case of the Ocean meet, a registration at any of them is also good for the entire Wescon show.

Special note should be made of

CONTINUED ON PAGE 54





A Weston instrument measures range and closing rate between Gemini capsule and mating vehicle.

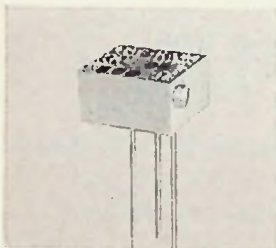


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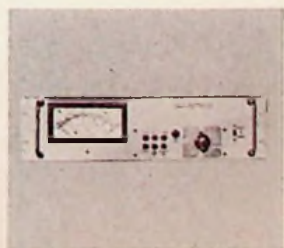
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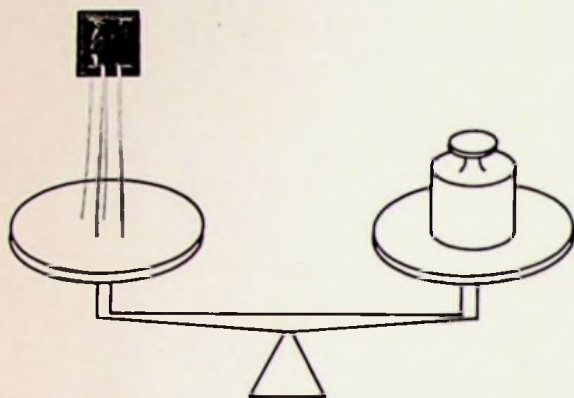
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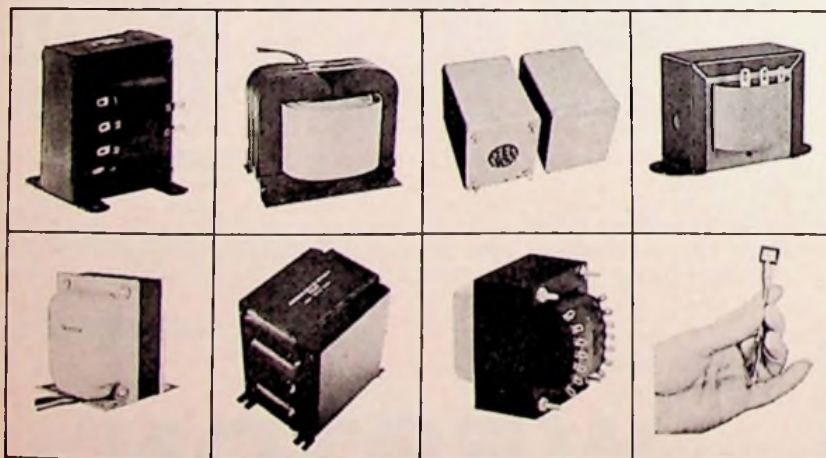




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CONTINUED FROM PAGE 52

Session 2, "Solid State Devices and Integrated Circuits" which is organized by IEEE's Electron Devices Group, and Session 21 "High Availability Computer Systems" which emanates from IEEE's Computer Systems Committee, although they are carried as regular Wescon sessions.

Many of the exhibits touch on these subject areas, thus encouraging Wescon to make room for these special symposia. By the same token, the managers of the symposia gain by utilizing Wescon's assistance and facilities, yet keep their own control of the meetings where requested. The trend seems to be a good one, from the standpoint of reducing the overall number of meetings, building Wescon attendance, and offering double convenience to Wescon visitors.

## 1966 Hawaii Conference Revises Program

*Please note the corrected program on the IEEE 1966 Ocean Electronics Symposium to be held in Hawaii, Aug. 29th-31st. Several speakers announced in the July Grid-Bulletin have been replaced by speakers as announced below.*

*Information as to travel, hotel reservations and registration are available: IEEE 1966 Ocean Electronics Symposium, Suite 1320, 1441 Kapiolani Blvd., Honolulu, Hawaii.*

## REVISED PROGRAM

**Monday, August 29th**

8:00 - 9:30 a.m. Registration

9:30 - 11:30 a.m.

Welcoming Address, R. R. Hill, Symposium Chairman

### TECHNICAL SESSION 1

Chairman: F. L. Mason, Chief, Shore Engineer, NAVSEEAPAC, Pearl Harbor, Hawaii

1. "Instrumentation and Communications of a Pacific Tsunami Warning System," Captain D. M. Whipp, Director, Pacific Region, U.S. Coast and Geodetic Survey, ESSA, Honolulu, Hawaii
2. "Deep Water Sonar Transducers for Ocean Engineering Applications," E. A. Massa, Executive Vice President, Massa Division, Dynamics Corporation of America, Hingham, Massachusetts
3. "Electronics and Deep Submergence Vehicles," J. H. Clotworthy, G. M. Roesler, Westinghouse Defense and Space Center, Biltmore, Maryland
4. "The Taut Wire Challenge: The Story of a Buoy System," H. I. Sargeant, Interstate Electronics Corp., Anaheim, California
5. "Optimum Processing for Passive Sonar Arrays," Dr. H. L. Van Trees, Massachusetts Institute of Technology, presented by Dr. G. Raisbeck, Arthur D. Little, Inc., Cambridge, Massachusetts

CONTINUED ON PAGE 56



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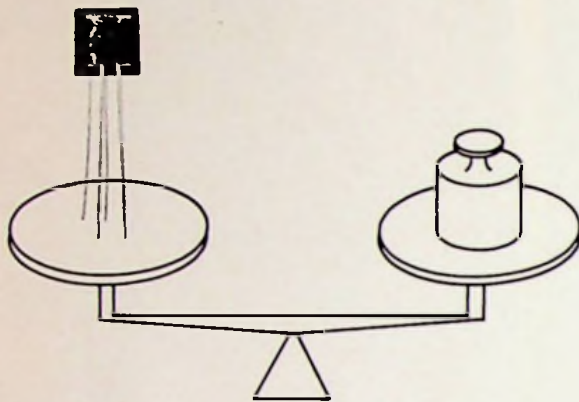
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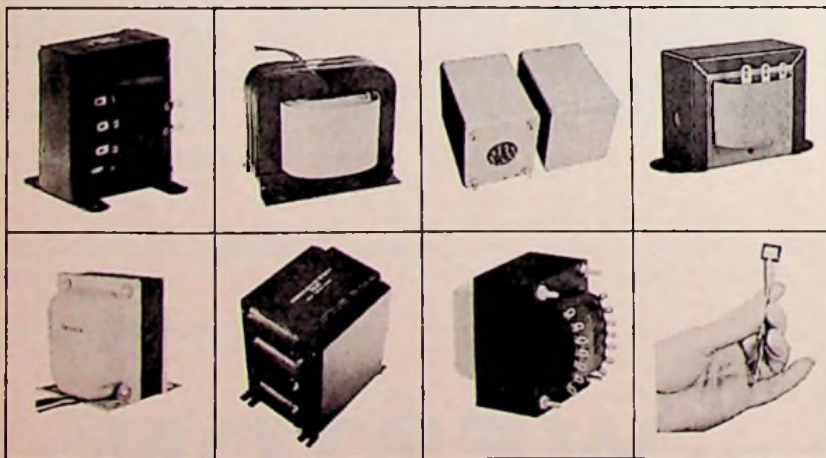




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prototype and specialty production transformers • quality and quantity • milliwatt to 10 KVA

CIRCLE INQUIRY CARD NUMBER 29

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2. "Deep Water Sonar Transducers for Ocean Engineering Applications," E. A. Massa, Executive Vice President, Massa Division, Dynamics Corporation of America, Hingham, Massachusetts
3. "Electronics and Deep Submergence Vehicles," J. H. Clotworthy, G. M. Roesler, Westinghouse Defense and Space Center, Biltmore, Maryland
4. "The Taut Wire Challenge: The Story of a Buoy System," H. I. Sargeant, Interstate Electronics Corp., Anaheim, California
5. "Optimum Processing for Passive Sonar Arrays," Dr. H. L. Van Trees, Massachusetts Institute of Technology, presented by Dr. G. Raisbeck, Arthur D. Little, Inc., Cambridge, Massachusetts

CONTINUED ON PAGE 56



# SAVE TWO-THIRDS THE WEIGHT

*over conventional antenna systems and still obtain*



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CIRCLE INQUIRY CARD NUMBER 28

## Ocean Electronics

CONTINUED FROM PAGE 54

6. "Spacecraft Oceanography — Fact not Fiction," A. G. Alexiou, U.S. Naval Oceanographic Office, Washington, D.C.
- 12:00 - 1:30 p.m. Luncheon  
Key-Note Speaker: The Honorable Robert A. Frosch, Assistant Secretary of the Navy, Research and Development. Also Chairman, Inter-Agency Committee on Oceanography.  
Introduced by: Rear Admiral O. D. Waters, Jr., Oceanographer of the Navy, Washington, D.C.
- 1:45 p.m. Field Trips.  
Kewalo Oceanographic Center — Look Laboratory — Cable Ship Long Lines — research vessel Townsend Cromwell, U.S. Coast and Geodetic Survey hydrographic ship — and other government and private research vessels, contingent on operational schedules.
- 8:00 - 9:30 p.m. Panel Discussion: "How Can Electronics Advance Ocean Technology?" Chairman: Maj. Gen. Edmond H. Leavey, Ret., Chairman Governor's Advisory Committee on Science and Technology  
Participants to be announced.

## Tuesday, August 30th

8:30 - 11:30 a.m.

### TECHNICAL SESSION 2

Chairman: F. D. Bennett, P. E., Bennett & Drane, Honolulu, Hawaii

1. "The Application of Continuous-Transmission Frequency-Modulated (CTFM) Sonar Systems and Related Equipment to Deep Submergence Research and Development," H. W. Volberg, Vice President, Straza Industries, El Cajon, Calif.
2. "Acoustic Imaging in a Turbid Under-seas Environment," Dr. J. W. Muehler, Senior Member of the Research Laboratories, Lockheed Missile & Space Company, Sunnyvale, California
3. "Electronics and Deepsea Acoustic Instrumentation," Dr. D. S. Potter, Head, Sea Operations, General Motors Defense Research Laboratories, Santa Barbara
4. "Barking Sands Tactical Underwater Range (BARSTUR)," H. I. Bernbaum, Technical Director, BARSTUR Program, ITT Federal Laboratories, Nutley, New Jersey
5. "Ocean Magnetic Instrumentation," S. Breiner, Quantum Electronics Division, Varian Associates, Palo Alto, California
6. "Wet Electronics," W. M. Otto, Autometrics, A Division of North American Aviation, Inc., Anaheim, California
7. "Acoustic Position Reference Systems," I. G. Raudsep, Principal Engineer, Honeywell, Inc., Seattle Development Laboratory, Seattle, Washington

12:00 NOON Luncheon—No event scheduled

1:15 - 4:15 p.m.

### TECHNICAL SESSION 3

Chairman: To be announced

1. Integrated Shipboard Oceanographic and Meteorological Display Systems," J. M. Alden, presented by L. Farrington, Alden Electronic & Impulse Recording Equipment Company, Inc., Westboro, Massachusetts

CONTINUED ON PAGE 69



# CAREER NEWS FROM HUGHES

*Aerospace Divisions in Southern California*

## NEW AND CONTINUING PROGRAMS AND PROJECTS

PHOENIX Missile & Fire Control System  
SURVEYOR Lunar Landing Spacecraft  
Synchronous Communications Satellites  
TOW Anti-Tank Missile System  
LEM Optical Tracker  
ATS (Applications Technology Satellites)  
AIM-47A/AIM-4E Missiles  
VATE Automatic Checkout Equipment  
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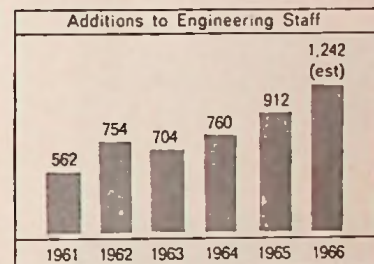
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CIRCLE INQUIRY CARD NUMBER 41

## Session 1

Tuesday, August 23, 9:30-Noon  
(Biltmore Bowl)

### Circuit Engineering by Digital Computation

Each paper in this program is representative of developments in the application of computation to a phase of the design cycle. Four such phases are: theoretical modeling of units, analysis of proposed circuits, behavior simulation of mechanical and hydraulic systems, and control of processes for manufacture of circuits.

Session Chairman: D. W. Cooper, IBM Systems Development Division, San Jose, California.

1/1 A COMPUTER-ORIENTED METHOD FOR ANALYZING NETWORKS WITH RLC ELEMENTS AND IDEAL TRANSFORMERS. K. Lock, IBM Systems Development Division.

1/2 LISA—A PROGRAM FOR LINEAR SYSTEMS ANALYSIS. K. L. Deckert and E. T. Johnson, IBM Systems Development Division.

1/3 COMPUTER-AIDED DESIGN OF TWO SERVOSYSTEMS. D. B. Gasich and R. H. Friesen, IBM Systems Development Division.

1/4 A COMPUTER-AIDED METHOD FOR CHECKING AND MAKING MONOLITHIC INTEGRATED CIRCUIT MASKS. D. M. Sheppard, A. M. Barone, and M. E. Harris, IBM Components Division, Fishkill, N. Y.

## Session 2

Tuesday, August 23, 9:30-Noon  
(Biltmore Ballroom)

### Solid-State Devices and Integrated Circuits

First of two Tutorial Sessions organized by the IEEE Group on Electron Devices.

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TECHNICAL

See the final program

Session Chairman: Peter Myers, Bunker-Ramo Corp., Canoga Park, California

2/1 METAL SEMICONDUCTOR SHOTTKY BARRIERS AND DEVICES. M. M. Atalla, Hewlett-Packard, Palo Alto.

2/2 UNPACKAGED DEVICES. J. M. Goldey and J. M. Early, Bell Telephone Laboratories, Murray Hill, New Jersey.

2/3 LARGE SCALE INTEGRATION. Richard L. Petritz, Semiconductor Research Lab, Texas Instruments, Dallas.

2/4 MICROPOWER LINEAR CIRCUITS. J. D. Meindel and P. H. Hudson, U. S. Army Electronics Command, Fort Monmouth, New Jersey.

## Session 3

Tuesday, August 23, 9:30-Noon  
(Biltmore Music Room)

### Piezoelectric Ceramic Devices and Applications

Recent advances in piezoelectric ceramic materials, device technology and analytical methods have led to the development of a number of new devices. Five papers, diversified in technical scope, present a comprehensive account of significant new developments.

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
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# WESCON PROGRAM

## for possible changes

Session Chairman: Otmar M. Stuetzer, Sandia Laboratory, Albuquerque.

3/1 IMPROVED CERAMICS FOR PIEZOELECTRIC DEVICES. G. H. Haertling, Sandia Laboratory.

3/2 SWITCHING PROPERTIES OF POLYCRYSTALLINE FERROELECTRICS. R. H. Plumlee, Sandia Laboratory.

3/3 THE THEORY OF LINEAR MULTIELECTRODED PIEZOELECTRIC PLATES. R. W. Holland, Sandia Laboratory.

3/4 FERROELECTRIC CERAMIC LOGIC AND NDRO MEMORY DEVICES. D. G. Schueler, Sandia Laboratory.

3/5 SMALL-SIGNAL APPLICATIONS OF MONOLITHIC MULTIPOINT PIEZOELECTRIC DEVICES. C. E. Land, Sandia Laboratory.

## Session 4

Tuesday, August 23, 9:30-Noon  
(Biltmore Renaissance Room)

### Satellite Communications

The program has been structured to provide a good balance in terms of military and commercial applications, in systems concepts and hardware in satellite and ground system considerations, and in industrial participation.

Session Chairman: Frank Druding, Litton Mellonics Systems Development Division, Sunnyvale, California.

4/1 COMMUNICATION SATELLITE SYSTEM OPERATIONS. George D. Dill, Communications Satellite Corp., Washington, D.C.

4/2 MULTIPLE ACCESS — A SURVEY OF THE STATE-OF-THE-ART. R. R. Cagnon, TRW Systems, Redondo Beach, California.

4/3 EVALUATION OF TECHNIQUES FOR SCHEDULING SATELLITE COMMUNICATIONS SYSTEMS. Morton D. Lenske, Litton Mellonics Systems Development Division.

4/4 "MASCOT," A MILITARY AIR TRANSPORTABLE SATELLITE COMMUNICATIONS TERMINAL FOR CRISES MANAGEMENT. J. M. Rosenberg, G. R. Hickcox and C. D. Sordal, Philco Western Development Laboratories, Palo Alto.

4/5 SATELLITES FOR TV DISTRIBUTION. P. S. Visher, Hughes Aircraft, El Segundo.

## Session 5

Tuesday, August 23, 9:30-Noon  
(Biltmore Galeria Room)

### Recent Advances in Non-Digital Applications and Inter-Connection Aspects of Integrated Electronics

The interconnections aspect of microcircuits, an area where substantial progress has been made, will be discussed together with the fabrication approach and operational performance of an engineering evaluation unit employing automated design techniques.

Session Chairman: Adi J. Khambata, Univac, St. Paul, Minn.

5/1 LASER-INDUCED RESISTIVITY CHANGES IN FILM RESISTORS. Stanley J. Lins and Richard D. Morrison, Univac, St. Paul, Minn.

5/2 THIN-FILM MEMORY SENSE AMPLIFIER USING LINEAR INTEGRATED CIRCUITS. John W. Staubus, Univac.

5/3 LAMINATE PRINTED CIRCUIT INTERCONNECTION OF INTEGRATED CIRCUITS. Joseph A. Kimlinger, Univac.

CONTINUED ON PAGE 60



## THE CALIFORNIA INVESTOR

By **STANLEY J. WEISS**  
President, Intercontinental Properties

Last year several groups of people purchased, upon our recommendation, some acreage in a selected area for \$2,000 per acre. Their down payment was 20%, the terms were: interest only payments for two years, and then 1% per month on the unpaid balance for ten years. The adjacent property was sold in smaller parcels for approximately \$3,000 per acre. The benefits to the groups are: 1) They purchased under market value. 2) They are using tax deductible dollars for two years as leverage in a growing area. 3) When the property is resold, the percentage of return on invested capital will yield a profit higher than other types of investments.

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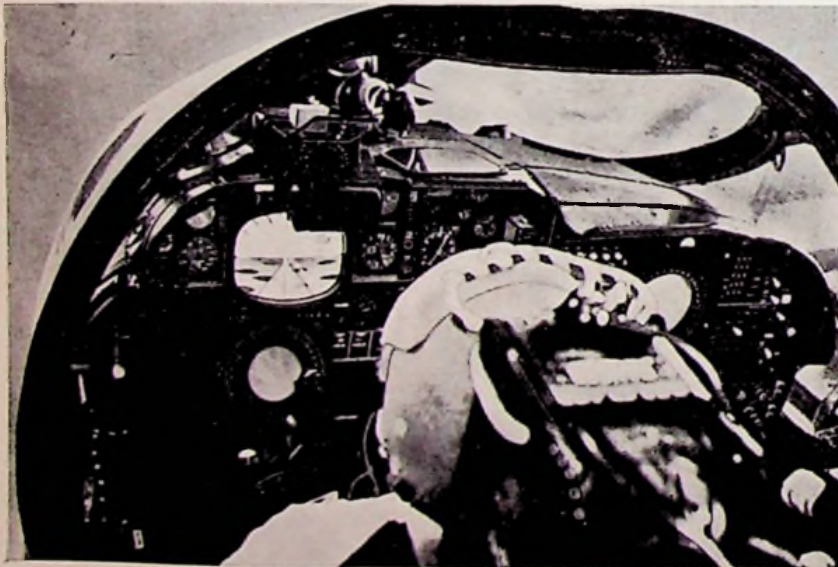
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CIRCLE INQUIRY CARD NUMBER 31

## Technical Program/Cont.

CONTINUED FROM PAGE 59

5/4 PACKAGING MONOLITHIC INTEGRATED CIRCUITS IN THE UNIVAC 1824 AEROSPACE COMPUTER CENTRAL PROCESSOR. R. A. Beck and E. I. Moore, Univac.

5/5 SOME FUTURE ASPECTS OF MICROELECTRONICS. Vasil Uzunoglu, Arinc Research Corp., Annapolis, Md.

### Session 6

Tuesday, August 23, 2:00-4:30 p.m.  
(Biltmore Ballroom)

#### Electron Devices

Second of two Tutorial Sessions organized by the IEEE Group on Electron Devices.

Session Chairman: William R. Luebke, Eimac Division, Varian Associates, San Carlos, Calif.

6/1 HIGH POWER LINEAR BEAM TUBES. T. Moreno, Varian Associates, Palo Alto.

6/2 RECENT ADVANCES IN BEAM-PLASMA AMPLIFIERS. Paul Chorney, Microwave Associates, Burlington, Mass.

6/3 TELEVISION CATHODE RAY DISPLAY TUBES. Fred Townsend, Westinghouse Electric, Elmira, New York.

6/4 SOLID-STATE SWITCHING DEVICES. Vinod Sundra, Transitron Electronics, Wakefield, Mass.

### Session 7

Tuesday, August 23, 2:00-4:30 p.m.  
(Biltmore Music Room)

#### The Application of State-Variable Techniques in Communication and Radar

Purpose of this session is to demonstrate importance of state-variable techniques in the solution of many diverse problems in the field of optimum communication (and radar) theory.

Session Chairman: Harry L. Van Trees, Department of Electrical Engineering and Research Laboratory of Electronics, M.I.T.

7/1 DETECTION AND CONTINUOUS ESTIMATION THEORY. Harry L. Van Trees, M.I.T.

7/2 THE USE OF STATE-VARIABLES AND MARKOV PROCESSES TO PROBLEMS OF ANALOG COMMUNICATION. Donald Snyder, M.I.T.

7/3 MAXIMUM A POSTERIORI INTERVAL ESTIMATION. Arthur Baggeor, M.I.T.

7/4 SIGNAL OPTIMIZATION FOR ADDITIVE NOISE CHANNELS WITH FEEDBACK. Jim K. Omura, Stanford University.

7/5 A MODERN SYSTEMS APPROACH TO SIGNAL DESIGN. Fred Schwegge, Michael Athans, M.I.T.

### Session 8

Tuesday, August 23, 2:00-4:30 p.m.  
(Biltmore Renaissance Room)

#### Recent Advances in High Frequency Solid State Transmitter Systems

The session describes design and application of components and systems in small, high-performance mobile communications systems, development of advanced multi-junction microwave varactors, and design and performance of miniature solid-state microwave transmitters in the lunar excursion program.

Session Chairman: E. E. Spitzer, RCA, Lancaster, Pennsylvania

8/1 R. F. TRANSISTOR CONSIDERATIONS. Stanley Matyckas, RCA, Somerville, New Jersey.

8/2 APPLICATION OF OVERLAY TRANSISTORS TO SOLID STATE MOBILE EQUIPMENT. Nicholas Richards, RCA Broadcast and Communications Division, Meadowlands, Pennsylvania.

8/3 MICROWAVE TRANSISTORS. Hon C. Lee, RCA Industrial Semiconductor Operations Dept., Somerville, New Jersey.



8/4 HIGH POWER MICROWAVE VARACTORS AND VARACTOR MULTIPLIERS. Jacques Collard, RCA, Princeton, New Jersey.

8/5 MICROWAVE SOLID STATE MULTIPLIERS FOR SPACE SYSTEMS. Wellesley Dodds, RCA Microwave & Power Tube Operations, Harrison, New Jersey.

## Session 9

Tuesday, August 23, 2:00-4:30 p.m.  
(Biltmore Galeria Room)

### Advanced Spaceborne Computer Concepts

As future space missions increase in both complexity and direction, so also do the requirements on spaceborne computer systems. This session outlines present Electronics Research Center programs aimed at developing feasible machine structures which handle a wide variety of computation tasks.

Session Chairman: Warren Semon, Burroughs Corp.

9/1 SPACEBORNE MULTIPROCESSING ORGANIZATIONS. Thomas E. Burke, NASA Electronics Research Center.

9/2 ASSOCIATIVE MEMORIES FOR SPACE APPLICATIONS. Dale Gunderson, Honeywell Systems and Research Division.

9/3 LOGIC DESIGN TECHNIQUES FOR ERROR CONTROL. Jack Goldberg, Stanford Research Institute.

9/4 A SYSTEMS APPROACH TO THE VOICE INSERTION OF DATA. Warren Brodey, NASA Electronics Research Center.

## Session 10

Wednesday, August 24, 9:30-Noon  
(Biltmore Bowl)

### Large Scale Integration

Session will include talks on various aspects of the evolution of monolithic silicon integrated circuits to higher and higher integration levels.

Session Chairman: D. E. Rosenheim, T. J. Watson Research Center.

10/1 SYSTEMS CONSIDERATIONS FOR L.S.I. M. G. Smith, T. J. Watson Research Center.

10/2 DESIGN AUTOMATION FOR L.S.I. H. Freitag, T. J. Watson Research Center.

10/3 DISCRETIONARY WIRING APPROACH TO LARGE SCALE INTEGRATION. J. Kilby and J. Lathrop, Texas Instruments, Inc.

10/4 A NEW DIMENSION IN MICROELECTRONIC SYSTEMS. A. C. Lowell, and T. Mitsutomi, Autonetics, Anaheim, California.

10/5 MICROMATRIX APPROACH TO MOS COMPLEX ARRAYS. Leslie Vadasz, Fairchild Semiconductor Research and Development Laboratory.

## Session 11

Wednesday, August 24, 9:30-Noon  
(Biltmore Ballroom)

### Field Effect Transistors

Five tutorial papers presented by engineers from five manufacturers of FETs will offer more information on FETs and their application in both analog and digital circuits.

Session Chairman: George Rostky, EEE—The Magazine of Circuit Design Engineering, New York.

11/1 FET VS. BIPOLAR TRANSISTOR CHARACTERISTICS. Donald L. Wollesen, Motorola Semiconductor Products.

11/2 THE FET AS AN AMPLIFIER. James Sherwin, Siliconix.

CONTINUED ON PAGE 62

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## Technical Program/Cont.

CONTINUED FROM PAGE 61

11/3 THE FET AS A SWITCH. Carroll Perkins, Raytheon Semiconductor.

11/4 CIRCUIT SIMPLIFICATION WITH FETS. George Luettgenau, TRW Semiconductor.

11/5 CONSIDERATIONS OF THE FET IN COMPLEX ARRAYS. Michael Dix, General Micro-electronics.

### Session 12

Wednesday, August 24, 9:30-Noon  
(Biltmore Music Room)

#### Millimeter Wave Techniques and Applications

This session will present recent results in areas of research which are of fundamental importance to the utilization of the millimeter wave spectrum. The session content related to applications will be devoted to atmospheric scattering and absorption, radioastronomy and spectroscopy. Papers concerned with techniques will present the most recent results of current research in millimeter solid state devices and components.

Session Chairman: Donald D. King, Aerospace Corporation, El Segundo, California.

12/1 SOLID STATE MILLIMETER WAVE POWER GENERATION AND AMPLIFICATION. Robert Rafuse and Donald Steinbrecher, Research Laboratory for Electronics, M.I.T., Cambridge.

12/2 SOME APPLICATIONS OF MILLIMETER WAVES IN ATMOSPHERIC RESEARCH. R. L. Mitchell, Aerospace Corporation, El Segundo.

12/3 MILLIMETER WAVE RADIO ASTRONOMY. Douglas Thornton, Space Science Lab., University of California, Berkeley.

12/4 MILLIMETER SPECTROSCOPY AND APPLICATIONS TO HIGH TEMPERATURE AND UNSTABLE MOLECULES. James J. Gallagher, Martin-Marietta, Orlando, Florida.

12/5 SOLID STATE MILLIMETER WAVE RECEIVERS. James Kirwan and Charles Abronson, Space-General Corp., El Monte.

### Session 13

Wednesday, August 24, 9:30-Noon  
(Biltmore Renaissance Room)

#### Theory, Design, and Testing of Error-Correcting Devices

This session will concern itself with the description of the theory underlying error-correcting devices, and with the techniques of their construction and will review results of actual tests made on digital communication channels.

Session Chairman: A. E. Fein, Westinghouse Defense and Space Center, Baltimore, Maryland.

13/1 FORCED ERASURE DECODING. R. M. Heller and R. G. Marquart, Westinghouse Electric Corporation.

13/2 DESIGN AND TEST OF A SIMPLE ERROR-CORRECTING CODING SYSTEM. Joseph M. Van Horn, Codex Corporation.

13/3 DESIGN AND PERFORMANCE OF A TIME-SPREAD CODER. L. E. Hayden and A. E. Fein, Westinghouse Electric Corporation.

13/4 EVALUATION OF ERROR CORRECTION BLOCK ENCODING FOR HIGH SPEED DATA. K. Brayer and O. Cardinale, The Mitre Corporation.



## Session 14

Wednesday, August 24, 9:30-Noon  
(Biltmore Galeria Room)

### Effective Utilization of Grid-Based Interconnection Systems

This session will describe capabilities and limitations of grid-based interconnection systems.

*Session Chairman:* S. V. Worth, Elco Corporation.

**14/1 EFFECTIVE UTILIZATION OF GRID-BASED INTERCONNECTING SYSTEM.** S. M. Paulson, Interstate Electronics Corp., Anaheim, Calif.

**14/2 DESIGN PARAMETERS FOR PROGRAMMED MACHINE WIRING.** D. P. Brouwer, Gardner-Denver.

**14/3 DESIGN CRITERIA FOR METAL-PLATE CONNECTORS.** B. Sheingold, Elco Corporation.

**14/4 TOLERANCE SPECIFICATION BY MULTIPLE ALIGNMENT STATISTICS.** L. Nanis, Institute of Direct Energy Conversion, U. of Pennsylvania.

## Special Session "A"

Wednesday, August 24, 2:00-4:30 p.m.  
(Biltmore Ballroom)

### Information Management: A Technology Amplifier

The electronic computer has stimulated an avalanche of interest in the problems and prospects of scientific and technical information flow. This session will explore the present limits of our information capabilities (in both concepts and hardware), the prospects for future technological improvements, and various organizational forces behind these developments.

*Session Chairman:* Robert M. Hayes, University of California at Los Angeles.

**A/1 AN OVERVIEW OF THE INFORMATION RETRIEVAL FIELD.** Robert M. Hayes, Institute of Library Research, UCLA.

**A/2 AVAILABLE HARDWARE FOR INFORMATION STORAGE AND RETRIEVAL.** J. C. R. Licklider, T. J. Watson Research Laboratory, IBM.

**A/3 THE CHEMISTS' APPROACH TO THE INFORMATION PROBLEM.** Herbert R. Koller, Research and Development, U.S. Patent Office, Washington, D.C.

**A/4. DEVELOPMENTS IN THE IMPROVEMENT OF SCIENTIFIC AND TECHNICAL INFORMATION EXCHANGE.** Melvin Day, Scientific and Technical Information Division, NASA.

**A/5 A PLAN FOR TECHNICAL SOCIETY INFORMATION RETRIEVAL AND EXCHANGE.** Morris Rubinoff, University of Pennsylvania.

## Special Session 15

Thursday, August 25, 10 a.m.-12:30 p.m.  
(Biltmore Bowl)

### Engineering Education for Student and Professional (Panel)

National needs for engineers and engineering training will be dis-

CONTINUED ON PAGE 64

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## Technical Program/Cont.

CONTINUED FROM PAGE 63

cussed from the points of view of  
education and industry. Methods of  
coping with continuing technologi-  
cal developments will be discussed  
from the points of view of the pro-  
fessional educator and the profes-  
sional society.

*Session Chairman:* Dean Joseph M. Pettit,  
Stanford University.

*Panel Members:* Dr. Frederick E. Terman,  
Foundation for Science and Engineering, South-  
ern Methodist University.

Dr. Thomas F. Jones, Jr., President, University  
of South Carolina.

Dr. Robert E. Samuelson, Motorola, Inc., Military  
Electronics Division/Western Center.

Dr. R. W. Kulterman, IBM Corporation,  
Rochester, Minnesota.

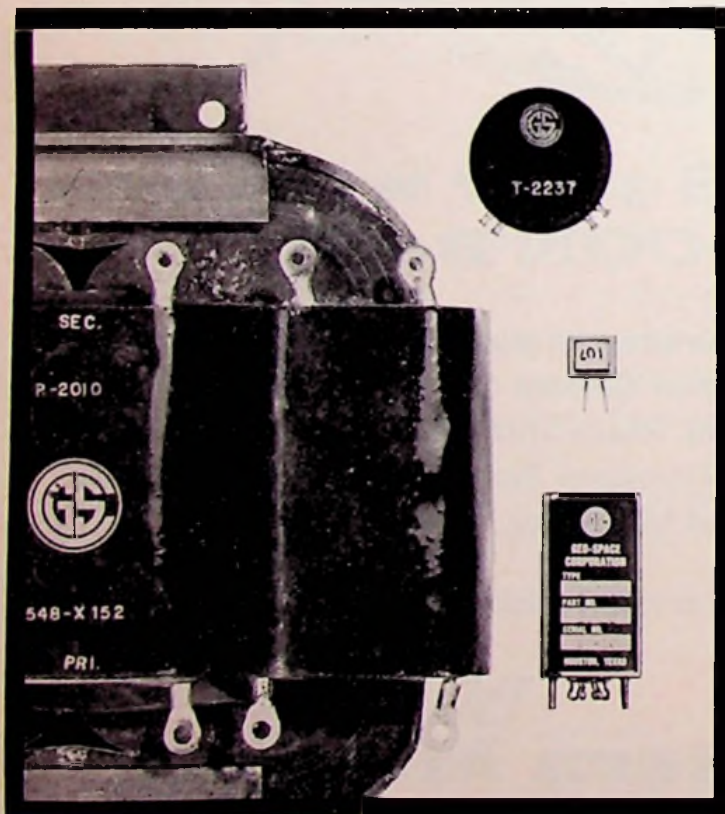
Dr. F. K. Willenbrock, Associate Dean of Engi-  
neering, Harvard University.

### Session 16

Thursday, August 25, 9:30-Noon  
(Biltmore Ballroom)

#### Electronic Systems for Urban Rapid Transportation

Development of the San Francisco  
Bay Area Rapid Transit District  
system necessitated development of  
new techniques and concepts by  
the electronics industry to meet the  
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Session Chairman: Robert C. Wigger, Advance Data Systems Division, Litton Industries, Beverly Hills.

16/1 ENGINEERING TOMORROW'S TRANSIT TODAY FOR BARTD. Deane N. Aboudara, San Francisco Bay Area Rapid Transit District.

16/2 COMPUTER CONTROL OF TRANSIT CARS. C. William Woods, Westinghouse Air Brake Co., Pittsburgh, Pennsylvania.

16/3 URBAN RAPID TRANSPORTATION AND AUTOMATIC REVENUE CONTROL. Raymond Silver, Litton Advance Data Systems.

16/4 APPLICATION OF ELECTRONICS IN URBAN PUBLIC TRANSPORTATION SYSTEMS. John C. Beckett, Hewlett-Packard Co.

## Session 17

Thursday, August 25, 9:30-Noon  
(Biltmore Music Room)

### Design and Performance Capabilities of Solid-State High-Frequency Linear Amplifiers

The session consists of four papers directed to an examination in depth of the combined use of new devices and modern circuit theory techniques to effect the intelligent design of linear amplifiers over a wide range of frequencies.

Session Chairman: R. S. Engelbrecht, Bell Telephone Laboratories, Murray Hill, New Jersey.

17/1 COMPARATIVE APPRAISAL OF HIGH-FREQUENCY SOLID-STATE LINEAR AMPLIFIERS. R. S. Engelbrecht, Bell Telephone Laboratories.

17/2 ANALYTICAL AND EXPERIMENTAL DESIGN PROCEDURE FOR MICROWAVE TUNNEL-DIODE AMPLIFIERS. C. S. Kim, General Electric Co.

17/3 FIELD EFFECT TRANSISTOR AMPLIFIERS. R. W. Ahrons, Radio Corporation of America.

17/4 MICROWAVE TRANSISTOR AMPLIFIERS. P. D. Stark, Bell Telephone Laboratories.

CONTINUED ON PAGE 12



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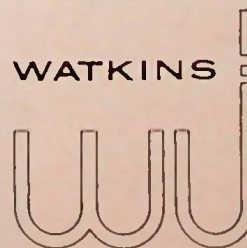
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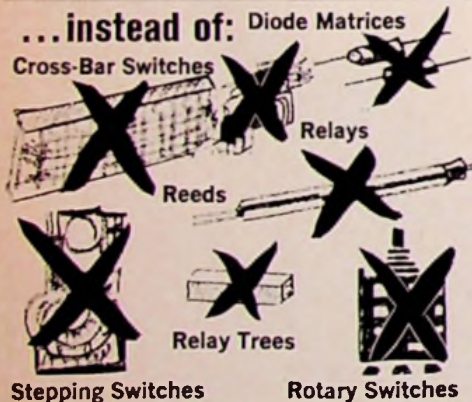
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# WESCON Committees

CONTINUED ON PAGE 68

## Attendance



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## Women's Activities



## Ocean Electronics

CONTINUED FROM PAGE 56

2. "Electrical Environment Determinations at Great Ocean Floors Depths Using the Bathyscape Archimede," E. Selzer, L. Launay, Institute de Physique du Globe de Paris and S. W. Lichtman, Hughes Aircraft Co., Los Angeles, California
3. "Use of Electric Networks to Simulate Seiche Conditions in Harbors with Application to Marina Design," speaker and author to be announced, Marine Advisers, Inc., La Jolla, California
4. "Acoustic Positioning Systems for Marine Application," D. M. Sherwood, Chief Engineer, Underwater & Oceanics, The Bendix Corporation, Bendix-Pacific Division, North Hollywood, California
5. "Deep Submergence Group of the United States Navy, the Man in the Sea Program," Dr. G. H. Sullivan, Director, Life Sciences Section, Northrop Space Laboratories, Hawthorne, California
6. "Electronics and Man in the Sea," T. A. Pryor, President, J. R. Wheaton, Project Director, The Oceanic Institute, Makapuu Point, Waimanalo, Hawaii
7. "Application of Aerospace Capability to the Design of an Integrated Diver System," M. C. Burns, B. L. Lewis, J. H. Muir, Radiation, Inc., Melbourne, Florida

Wednesday, August 31st

8:30 - 11:30 a.m.

### TECHNICAL SESSION 4 (Final)

Chairman: C. H. Williams, Vice President, Hawaiian Electric Company, Honolulu, Hawaii

1. "VLF Navigation for Ocean Research," N. J. Thompson, Hawaii Institute of Geophysics, University of Hawaii, Honolulu, Hawaii
2. "Applications of OMEGA in Oceanography," W. Palmer, P.E., Consultant, Babylon, New York
3. "Capability of Maritime Communications," J. W. Ames, Applied Research Department, Granger Associates, Palo Alto, California
4. "Electronics in Undersea Prospecting," Dr. W. Bascom, President, Ocean Science and Engineering, Inc., Washington, D.C.
5. "Electronics, Instrumentation and Fishing Research and Development," Dr. D. W. Strasburg, Chief, Research Submarine Program, U.S. Bureau of Commercial Fisheries
6. "Educational Programs in Ocean Engineering," Dr. J. W. Shupe, Dean, College of Engineering, University of Hawaii, Honolulu, Hawaii
7. "Electronics and other Disciplines of Ocean Technology," Dr. J. M. Snodgrass, Head, Special Developments, Scripps Institute of Technology, University of California, La Jolla, California

12:00 - 1:30 p.m. Luncheon

Speaker to be announced

1:30 p.m. Field Trips.

The University of Hawaii—East-West Center—Hawaii Institute of Geophysics, Engineering—Bureau of Commercial Fisheries—The Oceanic Foundation (Sea Life Park)

8:00 - 10:00 p.m. Final Banquet

Guest of Honor: The Hon. John A. Burns, Governor, State of Hawaii



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A two-day institute for engineers in industry and government will provide an introduction to computer aided solid-state circuit design. The principle topics to be discussed are: 1) Models of Active Elements and Circuits, 2) Methods of Analysis, 3) Computer Aided Synthesis, 4) Computer Aided Design by Iterative Methods, 5) Availability, Scope and Limitations of Computer Programs.

The Institute will be held on September 15 and 16, 1966 at the University of Santa Clara, Santa Clara, California. For further information write to: Computer Aided Design Institute, Department of Electrical Engineering, University of Santa Clara, Santa Clara, California 95053.

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**1898-1966**


Mark A. Sawyer (Fellow, 1948), retired Protection Engineer of the Pacific Telephone Company, died on June 25, 1966, after a long illness.

He was a graduate of the California Institute of Technology in Pasadena, California, and after more than 41 years of telephone service retired on September 12, 1963.

Mr. Sawyer was a Member of the Los Angeles Council IEEE Royal W. Sorensen Fellows at the time of his death, and Past Chairman AIEE, L.A., 1939-40.

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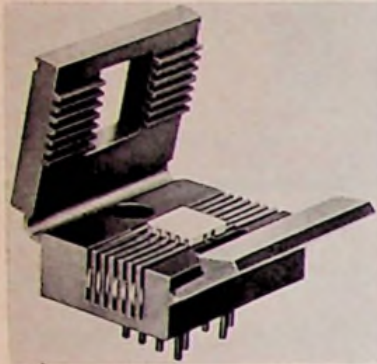
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COMPILED AND EDITED BY  
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## Technical Program/Cont.

CONTINUED FROM PAGE 65

### Session 18

Thursday, August 25, 9:30-Noon  
(Biltmore Renaissance Room)

#### Plastic Transistors—Their Impact on the Industry

The encapsulation of silicon semiconductors in plastic has opened an entirely new potential to the semiconductor industry. The future impact on the industry in relation to the semiconductor manufacturer and the user will be discussed. Processing techniques and reliability data will be presented showing the capability of these products.

Session Chairman: James E. Harrison, Bendix Semiconductor Div., Holmdel, New Jersey.

18/1 ECONOMY LINE SEMICONDUCTORS—THEIR FUTURE. James Bockhaus, General Electric Company, Syracuse, New York.

18/2 MARKET IMPACT OF PLASTIC SEMICONDUCTORS. George Berryman, Texas Instruments.

18/3 THE TECHNICAL ASPECTS OF PRODUCTION. John McDougall, Fairchild Semiconductor.

18/4 SILICON PLASTIC POWER TRANSISTOR—ITS INTRODUCTION TO THE MARKET. Hy Newman, Semiconductor Division, Bendix.

### Session 19

Thursday, August 25, 9:30 Noon  
(Biltmore Galeria Room)

#### Parameters to be Considered in Choosing Sophisticated Microwave Devices in the Design of New Microwave Receiver Systems

Session will define the many problems encountered by the design engineer when faced with selecting microwave components for advanced receiver systems. Papers will cover important component areas in the microwave field, separating the practical from the impractical.

Session Chairman: Bruno Kaiser, Watkins-Johnson Co., Palo Alto.

19/1 STATE-OF-THE-ART ADVANCES IN ULTRA-LOW-NOISE TWT'S AND THEIR APPLICATIONS. B. P. Israelsen and C. C. Billat, Watkins-Johnson Company.

19/2 NEW ADVANCES IN THE DESIGN OF BWO'S: THEIR APPLICATIONS AND RELATIVE MERITS. Bruno Kaiser and A. T. Isaacs, Watkins-Johnson Company.

19/3 YIG DEVICES: THEIR TECHNOLOGY, APPLICATION, ADVANTAGES AND DISADVANTAGES IN THE DESIGN OF SOPHISTICATED MICROWAVE RECEIVER SYSTEMS. L. B. Fletcher and R. W. Peter, Watkins-Johnson Company.

19/4 APPLICATION OF ULTRA-MINIATURE FERRITE DEVICES FOR ADVANCED RECEIVER SYSTEMS. V. E. Dunn, R. W. Roberts, Jr., and George E. Tralle, Watkins-Johnson Company.

### Special Session "B"

Thursday, August 25, 2:00-4:30 p.m.  
(Biltmore Ballroom)

#### On-Line Computing — Capabilities, Constraints, and Challenges

Four papers will be presented describing some current applica-



## Technical Program/Cont.

tions, stressing achievements and the limits hereto, followed by a panel discussion on the challenges for further work.

*Session Chairman:* Richard H. Wilcox, Office of Naval Research, Department of the Navy.

**B/1 ON-LINE EDUCATIONAL TECHNIQUES.** D. Bitzer, University of Illinois Coordinated Science Laboratory.

**B/2 UNCOMMON APPLICATIONS.** L. C. Clapp, Computer Research Corp., Belmont, Mass.

**B/3 COMMAND AND CONTROL APPLICATIONS.** W. D. Wilkinson, Bunker-Ramo Corp., Canoga Park, California.

**B/4 AN ELECTRICAL ENGINEERING APPLICATION.** Speaker to be announced from Project MAC.

### Session 20

Friday, August 26, 9:30-Noon  
(Biltmore Bowl)

#### Power and Control Integrated Circuits

Six speakers from NASA, ITT Semiconductors, Westinghouse Molecular Electronics, and Texas Instruments will present a session on work done on circuits accomplishing control type functions which are neither strictly digital nor strictly linear.

*Session Chairman:* M. J. Hellstrom, Westinghouse Electric Corp., Eikridge, Maryland.

**20/1 A MONOLITHIC VOLTAGE REGULATOR.** J. Jennings, M. Oppenheimer, Westinghouse Molecular Electronics Div., and E. A. Karcher, ITT Semiconductors, West Palm Beach, Fla.

**20/2 A LOGIC - SCR DRIVER INTEGRATED CIRCUIT.** M. Oppenheimer, Westinghouse Molecular Electronics Division.

**20/3 AN INTEGRATED AMPLIFIER-FIRING CIRCUIT.** M. Hellstrom and C. Laughinghouse, Westinghouse Molecular Electronics Division.

**20/4 LOW POWER SOLID STATE INVERTERS FOR SPACE APPLICATIONS.** P. Vergez, V. Glover, Texas Instruments, and B. Willis, NASA Astrionics Lab, Huntsville, Alabama.

**20/5 POWER DEVICES FOR A SOLID STATE INVERTER.** D. Manus, D. Smith, L. Hahn, and R. Windecker, Texas Instruments.

**20/6 MONOLITHIC INTEGRATED CIRCUIT ARRAYS FOR A SOLID STATE INVERTER.** P. S. Newcomb, Texas Instruments.

### Session 21

Friday, August 26, 9:30-Noon  
(Biltmore Ballroom)

#### High Availability Computer Systems

The session, organized by the IEEE Computer Systems Committee, will present six outstanding speakers on this important subject.

*Session Chairman:* William C. Carter, IBM Corp., Poughkeepsie, N.Y.

**21/1 CRITERION FOR ASSESSING THE RELIABILITY OF TOTAL COMPUTER SYSTEMS.** W. E. Marshall, Control Data Corporation, Minneapolis, Minn.

**21/2 SYSTEM EFFECTIVENESS AS A GENERALIZATION OF SYSTEM AVAILABILITY.** Stephen W. Leibholz, Auerbach Corporation.

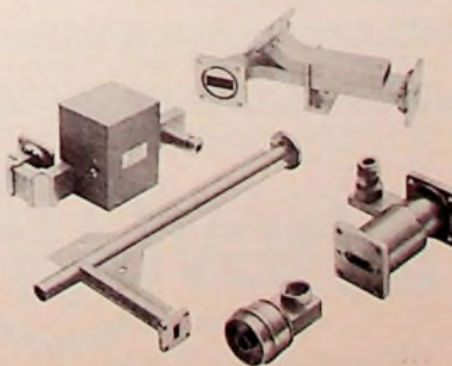
**21/3 MONITORING RELIABILITY REQUIREMENTS BY TOTAL SYSTEM SPECIFICATION AND DESIGN.** Reynolds Thomas, Jr., Defense Communications Agency.

**21/4 DESIGN AND USE OF A FAULT SIMULATOR FOR SATURN COMPUTER DESIGN.** F. J. Hardie and R. J. Suhocki, IBM, Federal Systems Division, Bethesda, Maryland.

CONTINUED ON PAGE 74



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**OLD AND NEW** — LA Council Chairmen pose with Dr. William Shepherd, International president of IEEE (center). On the left, Edward C. Bertolet, Behlman-Invar, outgoing chairman, on the right, Gilbert R. Woodman, Southern California Edison Co., incoming Chairman. Dr. Shepherd is Administrative Vice-President, University of Minnesota. The Century Plaza installation was held July 9, in Los Angeles.

### Technical Program/Cont.

CONTINUED FROM PAGE 73

21/5 SYSTEM DESIGN FOR HIGH AVAILABILITY. C. M. Davis, IBM Systems Development, Poughkeepsie, N.Y.

21/6 MODULAR SYSTEM APPROACH TO HIGH AVAILABILITY. T. S. Stafford, IBM Systems Development, Poughkeepsie, N.Y.

### Session 22

Friday, August 26, 9:30-Noon  
(Biltmore Music Room)

#### High-Frequency Amplifier Design

The why, where and how to of designing amplifiers operating at frequencies between 0.5 MHz and 5 GHz will be discussed. All designs are solid state and will incorporate semiconductor components on the market as of August, 1966.

Session Chairman: John Moll, Department of Electrical Engineering, Stanford University.

Session Organizer: Mark B. Leeds, Electronic Design Magazine, New York.

22/1 SMALL-SIGNAL DESIGN (SYSTEMS HANDLING LESS THAN 1 WATT). Speaker to be announced from Fairchild Semiconductor, Mountain View, California.

22/2 LARGE-SIGNAL DESIGN (SYSTEMS HANDLING MORE THAN 1 WATT). Roy Hejhall, Motorola Semiconductor Products, Phoenix.

22/3 JUNCTION FET HIGH-FREQUENCY AMPLIFIERS. J. B. Compton, Siliconix, Sunnyvale, Calif.

22/4 MOS-FET HIGH-FREQUENCY AMPLIFIERS. Paul E. Kolk, KMC Semiconductor, Long Valley, New Jersey.

22/5 DESIGNING FOR LOW-NOISE. George Johnson, Texas Instruments Semiconductor Components Division, Dallas.

22/6 DESIGN TRADE-OFFS. R. Minton, RCA Electronics Components and Devices, Somerville, New Jersey.

### Session 23

Friday, August 26, 9:30-Noon  
(Biltmore Renaissance Room)

#### The Impact of Ultra Wideband Sampling and Associated Developments on Electronic Instrumentation

The session will background the work leading to ultra high-speed

sampling techniques, will describe their application to phase-locked loops, rector voltage measurements and complex impedance, and will discuss statistical analysis methods.

Session Chairman: Bernard M. Oliver, Hewlett-Packard Co., Palo Alto.

23/1 THE ULTRA WIDEBAND SAMPLING GATE—AN ANALYSIS, CHARACTERIZATION AND APPLICATION DISCUSSION. Dar Howard, Hewlett-Packard.

23/2 SAMPLING BASED PHASE LOCKED LOOPS. Gerald Alonzo, Hewlett-Packard.

23/3 SAMPLER BASED INSTRUMENTS FOR COMPLEX SIGNAL AND NETWORK ANALYSIS. Richard W. Anderson, Hewlett-Packard.

23/4 RANDOM SAMPLING—A STATISTICAL MEASUREMENT APPROACH. John Boatwright, Hewlett-Packard.

### Session 24

Friday, August 26, 9:30-Noon  
(Biltmore Galeria Room)

#### Array Antennas for Space Applications

For future interplanetary communications systems, array antennas will become increasingly important on account of their flexibility, electronic steerability, and compactness. In this session, the performance of such antennas will be discussed in terms of future requirements and present practice.

Session Chairman: Lester C. Van Atta, NASA/ Electronics Research Center, Cambridge, Mass.

24/1 ANTENNA REQUIREMENTS FOR INTERPLANETARY COMMUNICATIONS. Ralph D. Kodis, NASA/ERC.

24/2 RECENT ADVANCES IN THE THEORY AND PRACTICE OF ARRAY ANTENNAS. Bliss L. Diamond, M.I.T., Lincoln Laboratory.

24/3 AN ADAPTIVE ANTENNA SYSTEM FOR MAXIMIZING SIGNAL-TO-NOISE. Robert T. Adams, Communications Systems Inc.

24/4 A NOVEL SPACECRAFT ANTENNA ARRAY. Willard T. Patton, RCA, Moorestown.

24/5 AN ELECTRONICALLY SCANNED K-BAND PHASED ARRAY FOR A SPACEBORNE RADIOMETER. Merlin E. Louapre, Space-General Corp.





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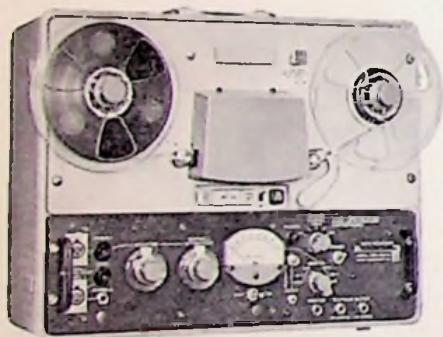


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