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OVER FORTY YEARS IN THE COMMUNICATION AND SOUND BUSINESS

by Milton A. Boom, President of BOOM Sound Engineering, Inc.
(address given at the 1964 Altec Seminar)

Back further than most of you can remember — 1925 in fact — I went to work for the Erickson Electric Company of Chicago, installing Western Electric sound equipment, engineered and designed by the Bell Telephone Laboratories. All of our apparatus at that time was called "Loudspeaking Telephone Systems". The transmitters, repeaters, and loudspeakers were first used as monitors of telephone repeater systems.

At this time our microphones also consisted of double-button carbon transmitters — I believe the number was 387W — a battery being used to provide current for this transmitter which drew approximately 20/30 mils on each button and believe me, when that microphone got out of balance, you had a tough time to complete a sound job already operating under major difficulties.

Our first available amplifier at that time was known as a 13A Western Electric, consisting of four 205D repeater tubes, two of which were connected in cascade and two in push-pull, with a total power output of approximately 3 watts. Our filament supply was two 6-volt batteries connected in series and the plate supply was 180 one and one-half volt dry cells connected in series to supply 270 volts.

But you would really be surprised at how usable these systems were when we connected them to a fairly efficient magnetic receiver and a 3-foot trumpet horn.

In 1927 I used one of these systems on a campaign tour with Senator Curtiss, who at that time was campaigning for Vice President as running-mate to Herbert Hoover. We traveled for 3 months on a private car of the Pullman Company, covering 26,000 miles over forty some odd states, with an average of six to eight temporary set-ups in the major cities of these states, covering crowds up to as high as 20,000 people with 3 watts of audio power and four 3-foot trumpet horns.

Prior to this experience, we did a job in Wicker Park, Indiana, for Calvin Coolidge, covering 40,000 people with eight 3-foot trumpets and a 10A amplifier driven by a 8A and a 9A line amplifier, for a total output of approximately 10 watts.

These were very exciting and interesting times, when a failure to perform was really quite embarrassing. We also did the Eucharistic Congress in Chicago in 1926 with carbon microphones, thirty watts of audio power and forty 3-foot trumpet speakers to cover about 100,000 people.

These were tough days in the sound business! However, I will never forget when the 555 Western Electric electro-dynamic receiver was introduced, and what an improvement in quality and efficiency it was over the old magnetic drivers. We did jobs in those days with very limited facilities, practically no test gear or measuring equipment. I

can even remember that on occasions when Bell Laboratory men would come out to make recommendations for a job, their only method of determining the acoustics of a room would be to stand in the center of the area and clap their hands, trying to estimate the reverberation, and then making an educated guess as to where and how many loudspeakers would be required.

There were other difficulties as well. Most mechanics in those days were not familiar with this type of installation work and were so at a loss that they would try to put up bridle wire with spikes instead of staples and, unless we could locate men with some telephone experience, we had some real problems. None of the technicians we employed at that time had the slightest idea of what it was to match impedance — in fact, I think they thought that impedance was a nasty word.

There are, of course, some very pleasant memories of those early days, due to the fact that competition wasn't so plentiful as today; however, we are continuing today with many other advantages, such as the very finest of gear available to us from the Altec Lansing Corporation, wherein, a small unit which you can hold easily in one hand will deliver fifty watts of clean audio power, and this in the early days would have called for about 5 six-foot racks of equipment. We also have available from Altec expert engineering advice. Better engineers are also available to determine proper application of our products and the installation and service technicians are far better qualified to make neat and efficient installations.

Today we are also able to measure the acoustics of the areas where we are going to install our equipment and, further, by means of measurement of performance, prove our abilities to our customers. It is nothing unusual today for a well-qualified communication and sound engineering company to have at least \$10,000 to \$20,000 investment in test measuring equipment available in his business. The instrumentation we have today available at Boom for making electronic and acoustical measurements consists of the following gear:

Tektronix Model 502 Oscilloscope

General Radio Model 1554A Sound and Vibration Analyzer

General Radio Model 1521A Graphic Level Recorder

General Radio Model 1304B Oscillator

General Radio Model 1932A Harmonic Distortion Analyzer

General Radio Type 1390B Random Noise Generator

Boom "White" noise to "Pink" Noise Converter
General Radio Type 1551B Sound Level Meter
General Radio Type 1555A Sound Survey Meter
Clough-Brengle Type 282A Sweep Oscillator
General Radio Type 1552B Sound Level Microphone Calibrator
Altec Lansing Type M20 Microphone System

Plus many other miscellaneous pieces of test gear. The major usage of this gear is for the following applications, in particular:

Measuring frequency response of system components,
(amplifiers, speakers, etc.)

Measuring frequency response of installed systems,

I. E. overall response.

The more important use of this equipment, particularly that which will enable us to do a better job than our competitor, is the use of this equipment in measuring reverberation, ambient noise level, acoustical gain, distribution (evenness of coverage) and time delay checks.

Today we are also doing some very unusual jobs which years ago would have been considered practically impossible. In Chicago, for instance, at the Board of Trade Trading Pit, we have installed a system where the noise level varies from 20 to 30 db, and we provide automatic level adjustments to compensate for these variations by using "Noala".®

Speaking again of competition, which we didn't have so much of years ago, I must admit that we do have competition today, but we should be very thankful that most of them are only keen on price but weak on know-how and ability, and the majority lack the backing of such organizations as Altec. I might add that, in my opinion, our competitors' suppliers don't have the know-how of Altec, which has resulted from experience and knowledge accrued through years of development work in the telephone industry and in theatre sound. In this area Altec excels all others.

Now let me briefly outline the qualifications and service which I believe you must provide today if you wish to establish yourself in the communication and sound business to render service and make a profit:

First, your customer should be prudently apprised on how to evaluate a public address system, and you must be able to design, engineer, assemble, install and service systems tailored to specific needs, such as a system with components easily adaptable to expansion and modernization:

Loudspeaker arrays so located and designed to assure smooth coverage without blasting; these loudspeakers to assure a natural maximum illusion of presence for attention-holding of the audience.

Audio power to assure pleasant, undistorted tone with the highest degree of intelligibility:

Strive for quality of craftsmanship and components to provide reliability of operation, low operating costs and natural, non-irritating reproduction.

Frequency equalization facilities to compensate for noise, variance in program source, and acoustical conditions:

Flexibility of control in monitoring facilities; facilities for auxiliary program input services assembly which allows fast, inexpensive servicing, when occasionally required.

All this, and more, is available to you as an Altec distributor. Next, and by far as important, is your business policy and marketing philosophy, in relation to this industry. May I give you some thoughts on the Boom policies and philosophy?

Over the years Boom has developed highly specialized techniques in the analysis, solution and practical application of sound equipment for every need of commerce, industry and institutions. We believe it is our responsibility, not only to provide systems offering unexcelled performance, but also to guarantee them and to provide assurance of their continuing excellence by maintaining round-the-clock repair service.

The company policy is: To furnish the best possible electronic communication and sound facilities at the lowest cost consistent with financial safety of the company and fair treatment of its employees.

In carrying out this policy, the company has a four-fold obligation — to the customer, to the audio art, to investors, and to employees. We are pledged to:

1. See that our service is at all times adequate, dependable and satisfactory to the user at a reasonable cost.
2. Keep in constant contact with developments in our field and to make intelligent application of such developments.
3. Protect the stockholders investment.
4. Pay salaries and wages commensurate with ability and responsibility, and to recognize individual merit.

Company earnings must be sufficient to assure fulfillment of these obligations. Only by adequate earnings can the company maintain its well-established high standard of service, provide for future growth and thus develop broader opportunities for its employees.

The company philosophy is: That we believe the only justification for our existence is to market. For only through marketing of goods and services can we produce the income from which we pay materials, equipment components and assemblies, occupancy, costs, tools, salaries, taxes, fees, office supplies, insurance, commissions, transportation and a reasonable return or profit on invested capital.

Therefore, it is important that every individual in our organizations — whether responsible for accounting, installation, engineering, service, maintenance, estimating, delivery and shipping, or the acquisition of new business — realizes that the objective of all effort is the marketing of our goods and services.

What should our concept of marketing be? It must be the delivery of benefits through equipment and services that we can provide, at costs consistent with properly engineered applications, correct installations, dependable performance and expert maintenance.

What should the underlying philosophy behind our marketing concept be? Communication and sound contribute importantly to the success of all businesses. Communications and sound facilities are essential to the implementation of successful communication procedures. A broad segment of primary communication and sound systems can best be supplied and expertly fitted to the needs of various businesses and institutions by Altec distributors. These are musical environmental aid systems; audio paging and program distribution systems; public address and sound reinforcement systems; and electronic specialties systems. Every business management has problems in the field of communication and sound which can be solved, in whole or in part, by communication and sound procedures and practices which require systems, facilities or services expertly supplied by Altec distributors.

Our function is to help management solve these problems, to the end that their whole operation will become more efficient, more productive, more satisfying and more profitable.

We, as Altec specialists in this field, are highly qualified to assist business management in certain areas of communication and sound, such as:

1. Accelerate tempo, which means getting things done, speeding decisions and action, reducing wasteful waiting and increasing return on the plant investment.
2. Increase efficiency, which means minimizing errors, maintaining interest and reducing boredom and fatigue.
3. Create working climate, which means job satisfaction, organization harmony, reduction of idle talk and gossip, raise esprit de corps, reduce turn-over, reduce absenteeism and make recruitment easier.
4. Improve control, which means guide, persuade, authorize, and keep informed.
5. Effect savings, which means time, manpower, money, downtime, and paperwork.
6. Influence attitudes, which means sell ideas, promulgate policies and dispel rumors.
7. Protect plant and personnel, which means reduce accidents, lower insurance costs, prevent pilferage, protect health, provide alarm system and catastrophe action, such as a survival program.
8. Sell goods and services, which means announcements, mood music, and distribute information quickly.
9. Develop people, which means more effective training, more effective conferences, better information dissemination, and closer supervision.

These benefits to business and institutional management need a wrap-up or theme under which they can be dramatically and interestingly presented to our prospects. All of these benefits qualify as executive skills so we should merchandise our services as a means of augmenting executive skills. Thus, we will offer benefits with real appeal to management people in every line of business or institutional endeavor. Management is acutely aware of the importance of executive skill. Seminars, post-graduate courses, trade associations, professional societies and business press are all giving full treatment to the boosting of executive competence to achieve greater organization productivity.

Altec distributors can proceed on a sound concept and philosophy when they offer to help solve problems in the field of managerial or executive accomplishment. This approach lifts us out of the highly price-competitive position of selling the "nuts and bolts" of communication and sound.

Altec distributors can offer instead, a wide variety of specific managerial benefits — benefits sought by management at all levels — and they offer these on a provable basis that justifies purchase or lease.

The task of the Altec analyst, therefore, is to interpret a prospect's needs as a problem affecting many facets of his entire operation. A single improvement in communication and sound facilities can result in one or several benefits through augmentation of one or more of the executive skills — greater productivity, less waste, more profit.

Our thinking must be based on benefits and the benefits accrue from complete systems, not from "nuts and bolts", such as your parts houses and most competitors supply.

Since communications and sound facilities play a vital role in so many departments, and in so many phases of any company or institution, it is impossible to intelligently or accurately specify any organization's needs without expert study and analysis. Detecting the prospects' needs, analyzing them, and then interpreting them to him in a manner that spells out justifying benefits, is a procedure which requires considerable care and, frequently, considerable time.

Fortunately, management is acutely aware of the benefits to be derived from augmenting the executive skills and is eager to learn ways and means that will help achieve them.

Our job is to educate him to a conviction of his needs — sharpen his appetite for the benefits to be gained — help him obtain the facilities he needs to obtain the benefits he wants — thus the activities we have been accustomed to regard as "selling", becomes instead, a "customer service" function.

By helping the customer purchase intelligently, we are "on his side" and he relies upon us to conscientiously specify and supply the equipment necessary to the appropriate system.

Our people responsible for the acquisition of and/or retention of business, will no longer be designated or referred to as "salesmen". Why? No one wants to be "sold". Instead, everyone likes to feel that he has made a wise and profitable purchase. Our representative, by assisting prospects in making wise and profitable investments in communication and sound facilities, become communication and sound analysts. Every member of our organization becomes a vital link in this chain of service to the customer. The high caliber of our service to the customer can only be maintained by charges which meet the costs of skilled applications engineering, dependable equipment, installations which reflect care and craftsmanship, and maintenance that is prompt and satisfactory.

Because the success of our collective effort depends upon the productivity of the time devoted to it, may I recommend we concentrate our marketing effort on those prospects which have the largest potential of applications for the communications and sound facilities we are best fitted to supply. Concentrate customer service activities on organizations already using our systems or services, and who have a substantial potential for further communication and sound facilities which Altec distributors are well fitted to supply.

By adhering to this policy, we will develop larger and more profitable customers, spread the fixed overhead of our company over a broader base, and hold and expand the business of existing customers. As a general yardstick, for the measurement of preferred prospects, we should seek out customers among businesses and institutions having only excellent credit references. Let us leave the "alley operator" and the poor credit risk to our competitors. While he is chasing such prospects servicing inferior equipment, and installations, and struggling to collect overdue billings, we can be giving our undivided attention to customers with potentials equal to a dozen such.

Any plan for the production of new or additional business for Altec distributors must recognize that we offer facilities and systems that augment executive skills; the augmentation of executive skills and the benefits to be derived therefrom are the concern of top management; and that while other buying influences in an organization may have a voice in the decision to purchase communication and sound facilities, the strongest voice will be that of top management.

Thus we need to educate top management, plus a broad segment of lesser managerial people, to acquaint them with the scope and character of the benefits Altec distributors provide. This can be done partially through space advertising and direct mail, but the major portion must be done by communication and sound analysts, working with appropriate literature and with their own knowledge of the use and benefits of properly applied Altec communication and sound facilities.

Our communication and sound analysts must be able to demonstrate thorough knowledge and understanding of communication and sound problems in order to build confidence on the part of the prospect. With such confidence established, the prospect will rely upon Altec distributors' analysts' authoritative recommendations for the systems and services he needs.

Perhaps this would be a good time for me to take a moment, to tell you how important we think it is today that you acquire the best of people as analyst in your business. People are really one of your most important products and services.

If a stranger walked into your office today and asked you to loan him \$5,000 without any security, what would your reaction be? Would you give him the money?

Most of you would say that anyone who would loan a stranger \$5,000 under these circumstances would be a very poor businessman. But the chances are that you have all done this in the past because this is exactly what happens when most people hire a salesman or sales-engineer to train as an analyst.

We have talked at length today about the importance of selling in our business, in any business. No business can exist very long without sales and the people in our company who bring in the contracts are among the most important people on our payroll. They work differently from most employees because we rarely see them. Most of their time is spent out in the field working with customers, developing new business. And because so much of their time is spent away from direct supervision, this means that they must have the personal qualities of dependability and trustworthiness; they must do their jobs exactly as if you were working by their side.

At Boom, over the last two years, by a process of trial and error — mostly error — we have developed a program for recruiting salesmen and sales-engineers as analysts, which we call the three "I's". These stand for "Interview, Investigate," and "Indoctrinate".

One of the big differences, they tell me, between men and women is in their shopping habits. When a man goes out to shop, he may look at one or two suits and make up his mind rather quickly. When your wife goes out to shop, she may look at many hats and fail to find the one that is exactly right. So she looks elsewhere.

Now, one of the major mistakes we make in hiring salesmen and sales-engineers is that we make up our minds too quickly. We simply do not talk to enough men. In former years, we might have interviewed three or four men for an opening and chosen the best of the four. We know today, however, that we may have to interview 20 or 30 men to come up with one who has the qualities we want.

When we do find a man that looks good, we know now that he must be investigated carefully. Remember, you are going to loan this man \$5,000, because this is exactly what it costs you to train him as an analyst. You will be paying him \$5,000 in salary before you can expect a reasonable return. Therefore, you had better know something about him.

We investigate a man in several ways. We will have him complete a series of tests. These are tests to measure his abilities and attitudes. We will look into his credit background and his family background. He will complete a physical examination. Before we make a decision on this man, we know his life story to a considerable degree.

The final "I" is indoctrination. No matter how good the salesman or sales-engineer may be potentially as an analyst, he still must learn the application of our product line. For this reason, a new man will get intensive training for the first three months. Our managers will make daily calls with him. Within three to six months time, if we have selected him wisely, he is more than paying his way. Now, let's get

back to this man's selling job.

Some preliminary sales steps are prospect identifications through directories, lists, referrals, advertising and sales promotion inquires, canvassing, etc. Qualify your prospects through interview and survey of the prospects operation. What is the principal activity of the prospect? Number of employees? Gross dollar volume? Physical plant? Who are the buying influences? Who is the person who must make the buying decisions?

Then, here are some sales procedures. Analysis consisting of actual collection, compilation and study of all data relevant to communication and sound system facilities required. This should cover practically every phase of the prospects' operation. Actually, a diagnosis of the prospects' communication and sound problems.

Our recommendation should be a carefully prepared document setting forth all of the benefits available to the prospect through intelligently applied communication and sound systems. It must relate each benefit of the prospect's own business and fully justify the expenditure necessary for the lease or purchase of the recommended facilities.

Check utilization of your service. Follow-up is important to make certain the purchaser obtains maximum utilization and benefit from the facilities furnished by you as an Altec distributor, and to cause additional requirements to develop.

This post-sale follow-up is imperative for future repeat business. The customer must always and at all times be conscious of the Altec distributors' concern with the successful use and performance of Altec systems. The customer should also know how he can get maintenance and repair service, be conscious of its convenience and be convinced it is tendered conscientiously.

In closing and in summarizing, may I offer a few more suggestions worthy of your consideration. Try to build strength into your organization, particularly in sales through intelligent analysis of your customers' communications and sound problems, through competent engineering with satisfactory installations. Select Altec, the quality line, to sell and specify, and use it on every job to make your systems distinctive and effective. You will then be building a business reputation by handling only the best. Your communication analyst must cultivate architects and consulting engineers, and write thorough and effective specifications, and then combine this effort with consistent cold canvass calls on responsible potential prospects. Don't be afraid to demonstrate, where necessary, and keep your business away from — and above — the ordinary run of hybrid systems. Make a profit on your jobs — no one can get all of the jobs — so be prepared to lose those which may not be profitable. Remember, there are really only two ways to make money. You must either take in more than you spend or spend less than you take in. Be a joiner of local business and civic organizations, as this will help to extend your group of friends and acquaintances. Bear in mind that a friend is someone to help and not to use. Remember the Rotary axiom — "He profits most who serves best".

Be sure to attend Altec seminars and clinics in order to at all times be up-to-date and learn all of the new developments and advances in the state of the art.

In closing, I would like to thank you for your kind attention and the Altec organization for inviting us to this seminar, which I am sure will be very beneficial to all in attendance, and will leave with all of us thoughts advantageous for the future of our business.