EDUCATION - THE MEANS TO AN END

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We are an industry which is currently enjoying a fantastic growth rate. With the advent of Pay Cable, De-regulation and the increasing use of the system to provide services such as alarm systems, Peak Power Management and Data Communications, we find ourselves faced with an enormous problem: "The Lack of Effectively Trained Personnel." In other industries, this problem can be reduced by going to the colleges of our nation and select personnel from a large graduating roster. Whenever any segment of our industry has made this attempt we have all received the same basic question: "What is a CATV?" One must remember that a successful Institute of Higher Learning is based on the employment success of its graduating students. Until the industry can demonstrate this all important employment success rate, the institutions will not turn the corner and we will continue to play second fiddle to other industries.

Before we can begin to take steps to correct our training problem as an industry, we must first define the problem and look for common denominators as well as evaluate what the various current opportunities are.

When we analyze the problem of education and training we find that there are three specific areas to be considered:

1. Operating System Technician

   For the most part, these individuals have been promoted from lower job levels. A great deal of them have no formal training in electronics. Their knowledge has been developed through industry seminars and on the job training.

2. A.A.S. Graduates

   I refer to those people who are graduated from a formal 2-year program of electronics studies. Our industry does not enjoy very many entrances of these people as the computer industry dominates the on-campus interviewing and many students are not aware of the cable industry's opportunities.

3. A.A.S. or B.S.E.E. Graduates Operating as Chief Engineers or Technicians

   These people have advanced via their formal background and job experience. Their cable TV knowledge has come from industry seminars, trade shows, workshops and SCTE seminars.

All three areas have some common denominators:

1. All have the desire to learn.

   Given the opportunity to attend classes or seminars, not one would refuse.

2. All would like more "hands-on" training.

   Questionnaires from seminars indicate that this is a very important factor.

3. All are weak in test equipment knowledge.

   This is related to the operation and theory of test equipment commonly used in the cable industry (not knob twisting).

Armed with this knowledge, we can now begin to evaluate our options.

Problem Area #1

This is probably our most critical area in our operating systems. The day to day routine maintenance of the system is in the hands of this group. System reliability is most dependent on the technician's knowledge.

At the present time, there are very few programs which will produce the results required. Home study courses, such as those offered by N.C.T.I. are the main source of training. Other correspondence courses on general electronics are also available but you must be very careful which one is selected.

In recent months a joint effort has begun between the S.C.T.E. and the University of Wisconsin to provide the basic knowledge in electronics which is so necessary for a fully developed technician. I have great hopes for this program and am sure that under the watchful eyes of Judy Baer and Jack O'Neill that it will be a success.

The program will cover a lot of territory and will require ten days of a technician's time. Some people, when surveyed, felt that the time would be a "stumbling block" indicating that they cannot afford to give up ten days of a technician's time. During the course of a year a system operator will send his technicians to one or more two to three-day seminars. The unfortunate thing is that without the basic understanding, very little if anything is gained by the technician.

Problem Area #2

We have been spending great deals of money, as an industry, on an annual basis to hire technicians. Most of the dollars are spent in recruiting technicians from other operating systems.

We must take steps to bring new technicians into our industry. During a recent trip to many New York State Community Colleges, I have found that our industry is little known. One school which graduates students trained specifically in communications electronics and augments its training with an FCC First Class License Program was not aware of the requirements of our industry nor the advances we have made in two-way communications, data communications and space communications.

The only cure to this problem is to boast our industry outside of our industry. School visitations, on-campus recruiting, and invitations to placement directors and educators for plant visits will go a long way.

Judy Baer of the S.C.T.E. is preparing a document entitled, "Consider a Career in Cable TV" which will soon be available for circulation.

Problem Area #3

For our industry to advance and create additional revenue and gain the recognition it requires, we must provide training for our more qualified engineers. Currently seminars are the only place for this activity. The problem is that seminars are now directed at the intermediate technician and in most cases provide only knob twisting exercises.

Specific workshops are needed where concentrated effort is given to one or two topics (ie: cross-modulation or composite triple beat) which are peculiar to our industry.

Documentation

If you have ever attempted to find documentation on a specific topic matter related to Cable TV, you already know the problem.

A great deal has been accomplished by the S.C.T.E. in this area but we have only scratched the surface.

One additional step which could be taken is to form a documents center (possibly via the S.C.T.E.) to which papers could be submitted concerning technical matters. At the present, only papers which are presented at shows such as the National, S.C.T.E. Reliability Conference or other major shows are published. (Notwithstanding trade periodical publications, of course.)

System Training Programs

Many systems in an effort to improve the competence of their technicians, have implemented their own training programs. Many of these programs are very good in their content but are lacking in the manner of presentation.

Many universities around the country have departments which could assist in these programs. The Syracuse University, for example, has a "Center for Educational Development" which we at Magnavox have used to assist us in our employee training programs. We determine the content of a program and they (S.U.C.E.D.) develop the educational technology for presentation and assist us on measuring the results of the program.

Another Option

Many schools now have "Co-Op" programs. These programs are designed to put students in the field for work experience during their studies.

The program is set up with the employer so that the student will work for a period of time (3 to 6 months) and then return to full time studies for an equal amount of time. The benefit is that the student can readjust his course of study to develop skills which he will require in his career selection.

Many states offer financial aid to companies which are involved in these types of training activities paying in some cases as high as 50% of the student's income.

Summary

I wish I could say that there are 100 or more places where you could sent your people for training related directly to CATV technology in the United States and then list them. Unfortunately, there is no such possible list at this time. We have taken some major steps forward with the involvement of the S.C.T.E. and the University of Wisconsin, but if the entire industry is not involved and get behind this type of program and future required programs, we will all be saying "What Ever Happened To?",about our options in training.

I have stated before, and I feel it necessary to state again, that we as an industry have moved from an entertainment service providing television pictures to the home into the "Broad Band Communications Service" which can, and in some cases now does, provide an almost unlimited number of services into and out of the subscriber's home.

Without properly qualified technicians and engineers, the fruits of the past 30 years' efforts will die on the vine.