ESPA
ELECTRONIC SYSTEMS
PROFESSIONAL ALLIANCE

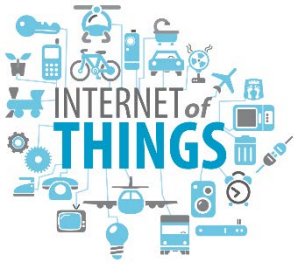
WHY PURSUE A CAREER IN ELECTRONIC SYSTEMS?

Gateway to your EST Career.

WHY PURSUE A CAREER IN ELECTRONIC SYSTEMS?
An Introduction to the Industry

Technology and the World We Live In

Take a look around at today's world, compared to just a decade ago. The iPhone was launched just ten years ago, and now mobile access to virtually any kind of information is something we all take for granted. The internet is ubiquitous. It has changed the way we communicate, get our entertainment, and share our lives with others. It has given birth to the "Internet of Things" (IoT), which means eventually every device that plugs in or has batteries will be part of a huge ecosystem that shares information and control with the other devices. And we are all part of it.

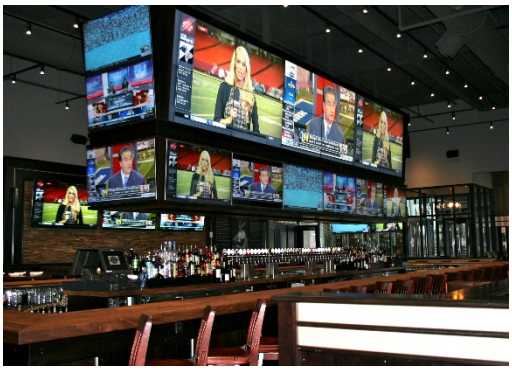


There is no end in sight for this technology take-over, no expiration date, no expectation that the growth will slow down. So doesn't it make sense to be looking at careers that are tied directly to this technology?

It has been suggested that today's younger generation has a mindset which will motivate them to change jobs often, in their pursuit of new challenges and ways to really "make a difference". I can say from many years in the electronic systems industry that nobody I know has ever been bored. The new challenges come on an almost daily basis as new ideas, technologies, and applications are introduced constantly. And very few things have as big an impact on a client as providing capabilities they never knew were possible, in a way that is easy for them to control and enjoy.

What Do We Mean by "Electronic Systems"?

Of course, the term "electronic systems" could be applied to many applications, from aerospace to manufacturing. But in general when we use the term we are referring to low voltage devices and subsystems, installed in buildings, and integrated to be easily controlled as if they are all one larger system. A similar concept is found in an automobile: Dozens of sophisticated sub-systems are integrated together and presented to the drive in such a way that they are no longer really thought of as separate, but rather as one integrated machine. There are two main areas where these systems are found; in the home, and in businesses and public spaces.



The actual technologies and components are mostly the same in residential and commercial systems, but are applied differently in each area of the industry. Systems common to both include the wiring infrastructure, audio and video distribution, security and surveillance, and access control. In the home we will find media rooms and home theaters, voice and mobile control, and some specialized functionality related to pools, driveways, shades, etc. In commercial applications we find digital signage, conference rooms, sound masking, biometrics, video walls, large scale sound reinforcement, and other types of system monitoring, control, and automation.

In short, the electronic systems industry is all about using technology to providing solutions, sometimes extremely complex solutions, in a way that is stunningly easy for the end user to access and control.

What Are the Jobs? Where Are the Jobs?

Like in any industry, there are various types of workers doing different types of work. There are technicians, engineers, designers, project managers, programmers, sales people, and more. And the companies are not limited to any geographical area. This work is done everywhere in the country, in fact everywhere in the world. So finding a job in a new location is not a problem.

The most important point, however, is that the demand for qualified people has never been higher. Virtually every employer in the industry is looking for people to add to their team, not only as entry-level technicians but in more advanced roles as well.

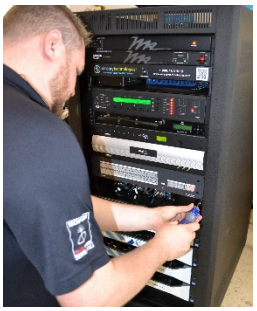
How Fast Can I Advance?

One of the most attractive things about working in this industry is how rapidly someone can make themselves more valuable and move into new positions with new responsibilities. In fact, a large percentage of people doing the more advanced work (engineering, design, programming) started as entry-level technicians and move up rapidly, by doing a good job and always seeking new knowledge and skills.

What Skills are Needed?

Every position requires a different skill set, but they all need to start with the fundamentals used by an entry-level EST (Electronic Systems Technician). Then these basics provide the foundation on which other knowledge is based. These areas of knowledge include: basic electricity, building methods and

materials, tools (including documentation), cabling practices (including termination and testing of the most common cable types), and safety/codes/standards. Along with these basics, a comprehensive training path (school or self-study) should also include an introduction to audio, video, control systems, and several other subsystems which are commonly encountered in the field. Then the path to advancement includes on-the-job experience and additional training to be ready for the next career steps.



An advanced EST fully understands the configuration and functionality of a system and is able to troubleshoot problems, supervise other technicians, and solve complex installation issues. A designer knows how to properly specify a system to meet the needs and budget of the client. An engineer can document precisely how everything is connected and configured. A programmer takes all of this information and sets up the control system to seamlessly control everything easily and dependably. All of the technical positions require an understanding of electronic equipment and computer networking. Project managers track all of the resources and labor over the life of the project to ensure success and profitability. Sales people work directly with the client to assess needs and ensure their satisfaction. In small companies, a few people may each wear more than one hat. In larger companies, there may be even more specific job descriptions. In all cases, EST fundamentals and a general understanding of subsystems are the required starting point. And a solid background in computer networking is a HUGE advantage, as all of these systems now depend on the network, or mobile devices, in one way or another.

Where Do I Start?

Due to the strong demand for technicians, and the increased outreach to schools by industry associations, more and more career centers and tech schools are incorporating the EST essentials and ESPA certification into existing electronics and computer courses. There are also a number of brand new programs being built and launched which cover not only the ESPA basics but the full introduction to electronic systems. These programs range from one semester to two years.

Another training model which is being launched is a “fast-track” type session, which involves 40-60 hours of instructional time, including the required hands-on activities to ensure that the new EST can perform basic tasks on the jobsite. These may be in a 5 day “basic training” format or delivered as night classes over several weeks. The outcome is similar: introduction to just the ESPA body of knowledge, some hands-on experience, and the opportunity to earn the EST certification….followed by a well-coordinated effort to find employment for every successful participant. If there is no school or training program available in your area, it is possible to study the ESPA Training Guide, learn to terminate and test cables, and sit for the exam on your own, although this is the least ideal scenario. There are also self-paced online courses available to enhance the content in the book. In order to be more prepared for actual employment we also highly recommend the Fundamentals of Residential Electronic Systems book from CEDIA. With or without their ESC certification, this knowledge will be extremely valuable regardless of what sector of the industry you go to work in. It serves as an introduction to most of the technologies and subsystems you will be working with once in the industry. For more learning resources, check out the TRAINING RESOURCES page on the ESPA website.

Who is ESPA? What Does the Certification Tell Potential Employers?

Industry certifications send a clear message to employers. This is true in any field. It proves that the candidate:

- has studied the content and mastered at least the key points
- takes training and learning seriously enough to make the effort to earn a credential
- wants to stand out among applicants as the one who has proven their knowledge
- will be more likely to continue to learn, grow, and earn higher credential once on the job

In some areas of work, certain certifications are mandatory, but in electronic systems this is usually not the case, other than some areas which require a low-voltage license. However, the best companies are usually the ones who encourage and look closely at industry and manufacturer training and certification when they hire and promote people. The ESPA certification is intended to be the first step to get to work. After that it is expected that you will pursue higher certifications which are specific to the segment of the industry you have chosen.

Where Can I Learn More?

The ESPA website (www.espa.org) serves as a single point resource which helps you find more information in a number of places. Go to the TRAINING RESOURCES tab, and click through to links which take you to several associations, publications, online training, and job boards. Thoroughly exploring these links will give you a very broad introduction the industry, what systems integrators do, what today's technologies look like, and how you might fit in. If you have additional questions, ESPA is always eager to help. Just reach us at certification@espa.org.

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