

The
Broadcasters' Desktop Resource
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... edited by Barry Mishkind – the Eclectic Engineer

Technical Contracting

Providing Successful Tech Support
Part 2: Process, Protocol, Procedure



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[June 2017] A transmitter is off the air. The broadcast tech is called. Should he instantly strive to get it back on the air – or should he make sure the business arrangement is correct first? While most of us were trained to fix the problem and then worry about the money, today's world is no longer the same.

Protecting yourself both physically and financially is the heart of this part of Jerry Brown's series.

When we left off, I promised to guide you in setting up protocols for "best practices" to use in your technical consulting practice.

Every day, you work consciously and unconsciously through established "processes", which lead to a set of "protocols" and end with a "procedure." So, let us begin with a few definitions that will help us as we go:

proc·ess *ˈprä ˌses, ˈprō ˌses/ Noun*
*A series of actions or steps taken **in order** to achieve a particular end. (Merriam-Webster)*

pro·to·col *ˈprōdəˌkôl, ˈprōdəˌkäl/ noun*
A system of rules that explain the correct conduct and procedures to be followed in formal situations. (Merriam-Webster)

pro·ce·dure *prəˈsējər noun*
An established way of doing something. A series of actions conducted in a certain order or manner. (Merriam-Webster)

On the face of this, thus far, it sounds a like a bunch of double talk. I understand why you might think this. But trust me, by doing what we will discuss, you will save yourself a great deal of pain when the time comes.

PROCESS, PROTOCOL, PROCEDURE

Simply put, these three words together explain the way broadcast engineers (and most people) work.

The ***process*** is the overall or main goal: e.g. (for example): the transmitter is off the air, get it back on!

The ***protocol*** is the system of rules to be followed in this situation: e.g., calling the remote control, checking the output power, turning the transmitter on.

The ***procedure*** is the series of actions conducted in a certain order: e.g., dialing the correct phone number, entering the correct access code, inputting the correct channel number of forward power reading, and placing the remote control in the proper mode to select the correct order of num-bers and symbols to issue the command to close the relay that in turn closes and completes the circuit for "Plate-On."

Perhaps you have never given every simple process this detailed level of thought? Good, there is no reason to do so.

MISSION CRITICAL PROCESSES

However, there is good reason to give a great deal of thought to all the "mission-critical" *processes* that you may face – processes that will allow you to develop a set of protocols to keep or get your station(s) back on the air as quickly as possible.

Students of history find a common thread here with the Generals who not only win battles, but the wars. The key point is the battles were all won before the first shot was fired!

Let us see how this works in practice.

THE TROUBLE CALL

Suppose you receive that dreaded call: a transmitter is off the air and the auxiliary or standby will not come on.

What is your process – get in your car, drive to the site and fix it?

Well, yes, sort of.

But, what if your car will not start? Or, what if there is a tree down or a wreck that has closed the road to the site? Suppose the keys to this transmitter building are in your other truck? Have you ever stopped to consider any of these things – or dozens of other potential roadblocks on your way to the transmitter?

Solving each potential "roadblock" is a process. You either jump the car or take another. You navigate a "back door" to the site – or walk in. You can reach out for someone to meet you with a key. Etcetera.

ACTION ON SITE

Finally, you arrive at the site. The both transmitters are D.O.A.

Now, what is your process? To start, likely a determination of whether or not there is AC to the building and, if not, why is the generator not working? (Hint: do you have a protocol for dealing with the generator?)

One smart procedure is to have a list of things to check and correct before you call out to the power company with the account number, and ID/verification information? What is your process if you have to escalate the situation to the line repair supervisors or the generator service company? And, if it is after hours, how do you reach these same people?

BUILDING PROTOCOLS

Whether written down or memorized, before anything happens, spend the time to take an inventory of all Mission Critical Processes and develop protocols that will both minimize downtime – and that will present yourself as a competent professional.

You really need to develop these protocols for installations, troubleshooting, and repairs. Until you have them in place, you will not have the road map which will greatly aid your job performance and help you deflect the worrisome questions and interference from your client during emergencies.

On the other hand, with protocols, you are able to continue your work in a deliberate, methodical manner and explain that you are following established protocols.

SAFETY PROTOCOLS

It is vitally important that you develop a set of safety protocols to protect yourself. Nothing really is more important.

Here is a prime example: *never* work inside a transmitter by yourself!

If you arrive at a site, and the procedure it is not a matter of simply resetting breakers or rebooting computers – and you must open the transmitter cabinet – your most important protocol should be the requirement of another person to be on site with you. Do not be a hero: your life depends on this one.

I am fortunate at my point in life that our children are grown and my wife can accompany me if the need arises at night or on the weekends. But during business hours through the week, I always arrange with my clients to have a staff member that can meet or accompany me when I need to open the transmitter, or any of the electrical cabinets.

CONSIDER THE SITE

Another area where you should have specific protocols concerns sites we all have that are in dangerous areas, whether due to high crime, or being extreme remote locations.

You need a protocol like this for such situations: a person whom you can call while enroute to this site, call when you arrive, call every 30 minutes while on site, call when you depart, and call when you arrive back home. This may sound a bit like a nagging mother, but I have not lived this long by being stupid or careless. (A side benefit: you might never travel far before learning the remote control was left in "local.")

Addressing other physical dangers: Do you know where is (or do you carry a) First Aid kit? Or a snake bite kit? There should be a list of emergency numbers and specific site location information for each site should the local public safety agencies need to locate the site.

WORKING PROTOCOLS

Before we move on from the work site, you need a set of "working protocols" for what you do there.

Consider your routine tools and test equipment. Do you have an inventory of these? When opening a transmitter or other equipment cabinet, do you perform a tool count – that is, the number of screw drivers, plyers, wrenches, screws, etc? Just like a surgeon does when they open you up.

Look at it this way: The last thing you need is to hit "Plate-On," and discover that nifty greenie is lying in the cavity!

RUNNING A SUCCESSFUL BUSINESS

For you to make money at all this, there are many processes, each leading to protocols that must be observed.

What are your have protocols for record keeping? What we mean here are trip forms for your mileage, expense reports for meals, hotels, other travel, shop supplies, etc.

And this point brings us around to the whole concept of managing your technical consulting business.

Over the years we have all heard talk-ing heads, politicians, professors, news media, and the latest business guru with a new book espouse why businesses exist.

Regardless of what any nonsense these folks tell you, my business professor 40 years ago hit the head right on the nail; "businesses exist to make money." End of discussion.

ACT AS A BUSINESS

Let us get one basic thing right from the very beginning – your company name.

You may have noticed in this series that I have called your practice "technical consulting," as opposed to engineering. There is a good reason for this.

Words do matter and this one matters a great deal to various fractions in the legal community. I will not venture into the arguments for or against the restrictions on the use of this word. But please make sure you check with the Secretary of State Office in your state as to any restricttions on the use of the word or term Engineer, Engineering Management, Engineering Services.

Why? In many states the use of the word, and phrases is restricted in company's names, advertising, and business service descriptions to State Registered Professional Engineers (P.E.). You do not want to run afoul of the law before you get started. A word to the young, you are not going to "blaze a path" and be the first to get away with it. There are liabilities associated with using this term and offering services of which you are probably unaware. Most deal with the public's safety.

MAKE IT OFFICIAL

After determining the name of your company or practice, pay the money to properly register it.

I recommend that you talk with an accountant and determine the best way to register your business, i.e. "C" Corp, "S" Corp, Individual, Partnership, LLC. There are enormous tax implications – as well as legal protections – to consider as they impact your personal finances.

Once the company structure is decided, buy yourself an accounting program or hire someone to do your books. You will need this for tax reasons, as well as invoicing. You will want to present a professional invoice to your clients. But more importantly you need to manage your cash flow.

SUFFICIENT INSURANCE

The next item in setting up your business is general liability and auto insurance.

You really do not want to be in the field without insurance. This is especially important when you have transmitter sites on common or commercially owned towers. American Tower, Crown Castle, and others require a Certificate of Insurance from all subcontractors who work on their sites.

And remember, you need the right insurance on your vehicle, not only for accidents, but loss of tools, for example.

IMPORTANT THINGS NOT TO FORGET

So, with all the above in mind, we are ready to "hang out" our shingle, so to speak.

Oh wait, you need business cards!

Now hang it out.

Oops! OK, how about a "contract" between you and your clients?



HAVE IT IN WRITING

The SBE has an excellent "contract engineer's" contract available for free download. It is MS Word, so you can modify it to comply with your state's restrictions on "engineer," for example.

Depending on your relationship with your clients, you may also want to strike out any contractual obligation to be the station(s) Chief Operator. This is a service I do not offer, and you may want to decide the same for yourself.

DECIDING WHAT TO CHARGE

Let us get back to protocols and organizing your company for maximum efficiency and profit.

Yes, we are talking about some of those "pesky" protocols" again. For instance, what is your process for setting your rates? Do you know what the local market will bear?

To avoid some common mistakes, you need to develop a standard rate system. In order to do this correctly you will need to understand your "overhead," including G&L, auto insurance cost, accounting costs, tools, computers, and other items, as well as their depreciation. I suggest working with your account on this matter.

THE RIGHT AMOUNT

You need to be ready to answer an owner or manager as to why they should pay you $125.00 an hour when they can get Hoyt and Delbert for $35.00 an hour (or any company without proper insurance, the proper tools and test equipment, a great CV and references).

Among the criteria to factor: preferential rates for stations under a contract, higher night, weekend, or holiday rates, mileage and other expenses, or surcharge for purchasing supplies. All these factors need to be considered to set a realistic rate that will allow you to have a reasonable profit after expenses.

MISCELLANY

Finally, we need to develop engagement and authorization letters for special projects when you represent your client in certain technical business negotiations.

As one can well imagine, good record keeping is a must. This can be done electronically via tablets, computers, cloud computing, and storage. A side issue is who owns your work product; if not yourself, how it is stored – and where – needs a proper protocol.

Overall, there is a great deal involved in doing this type of work, doing correctly, and enjoying the fruits of your labor. Do not kid yourself. If it were easy, everyone would do it!

Next time we will discuss marketing your skills.

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