

DIFFERENCES BETWEEN FACILITIES BASED AND NON-FACILITIES BASED PROVIDERS

Cable Companies - Facilities Based

The traditional cable companies that are providing service in North America today can be categorized as, "Facilities-based" providers of VoIP services. By this we mean that their networks are privately managed, and as such, are capable of being operated in a manner consistent with telephone standards for the communication of alarm signals. This does not say that at all times they are operating their networks in a manner consistent with proper passage of alarm signals but that they are capable of such levels of service.

Other VoIP Providers - Non-facilities Based

There are a host of other companies offering VoIP services to consumers that are categorized as, "Non-Facilities based." These providers rely on the public Internet connection for the circuit that is used for voice communications. One example of such a company is Vonage, but there are many others. In this environment, the public Internet presents the greatest variable in successful delivery of alarm signals and since it is not in anybody's control, is the least desirable form of VoIP for the communication of alarm signals.

How VoIP Works

Regardless of which type of provider is chosen, the fundamental principle is that the analog voice or analog alarm signal from a control panel must first be converted into a digital format using a chosen compression method. Then the signal is translated to a series of Internet packets that are routed over a network (either a managed network or the public Internet). This process is then reversed at the other end so that the person hears the voice or an alarm receiver can hear the alarm signal that was sent.

Problems with VoIP

Those VoIP providers that use the Internet, not a controlled network, are subject to the possible delays of the Internet. For instance, when the Internet is slow, this can cause digital communications to slow down as well. If you send a digital signal over this network during such times, the timing is thrown off. The arrival time of the individual packets could be slowed. For example: ADEMCO Contact ID sends 1 signal in about 1.4 seconds, If the Internet is slow it could take 4-5 seconds for a signal to be transmitted and re-assembled, thus causing communication failures.

Another limitation of VoIP in general is when you lose power, your phone service is also down since there is no power provided by the VoIP provider like a traditional phone company. Furthermore, when a failure of the VoIP network occurs, some equipment leaves the voltage on the phone line, thus the panel believes there is no problem with the circuit when in fact there really is.

There are other limitations when trying to upload/download. The alarm panel may not answer or may connect, but will not allow you to upload or download the program.

As far as installation goes, proper wiring procedures need to be followed by the VoIP provider to insure the same level of line seizure capability that was originally installed with the traditional phone service. Although many VoIP providers are sensitive to this requirement, all carriers in all areas do not consistently apply it. Sometimes the connection is made in such a way that should an alarm occur, the signal would be attempting to talk to the older POTS line and not the new VoIP circuit. Diligence in these areas is a must for a reliable connection that has the fundamentals of approaching the traditional installation reliability of traditional POTS circuits.

Summary

The Facilities-based VoIP providers have begun to work with key alarm companies in the United States to help in providing cost effective communication alternatives to traditional phone lines. Establishing local contacts that can work out specific installation practices will be a key initiative for installing companies in bridging the gap with VoIP.