

## **SIA Press Release**

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### **POTENTIAL PROBLEMS WITH DIGITAL SUBSCRIBER LINES**

The Security Industry Association (SIA) has recently learned that alarm systems might not work properly with Digital Subscriber Lines (DSL). DSL is a new kind of telephone service, growing rapidly in popularity, which enables very high speed "always on" internet connection over the same line as regular telephone service.

As part of an on-going investigation being conducted by SIA's Telco Compatibility Working Group (DC-06), part of SIA's Digital Communications Standards Subcommittee, several problems with fielded alarm systems have surfaced over the last year. While there appear to be a number of factors involved, all the problems point to changes in the telco network as more signals are being converted to digital. Although these network changes are believed to be in compliance with FCC regulations and telecommunications industry standards, they nonetheless are producing some unanticipated and adverse affects on the ability of the installed alarm system base to successfully report alarms. SIA has been working with representatives from several telephone companies to investigate the problems.

At the Telco Working Group's last meeting on March 16 in Las Vegas, the discussion was focused on this newest problem with DSL lines. Telco representatives who attended the meeting pointed out that the alarm system might work just fine with the DSL connection. There are a number of different types of DSL service and ways to wire them into the premises. DSL is usually installed by third parties who are contracted by a local telco or Internet Service Provider (ISP). Most of these parties now realize that some analog devices are affected by DSL signals, even though they are "out of band" (high frequencies above the voice range), and DSL installers now offer low-pass filters for analog devices that block all but the 0-4 KHz signals used by the analog devices. Alarm systems have an additional concern however in the way the DSL is wired and where the filtering is done, since line seizure is critical in alarm reporting.

To ensure that the alarm system will work properly, the group's initial recommendation is that DSL installations be done in the following manner:

First, the DSL path should be split from the rest of the telephone wiring in the premises.

Second, the non-DSL path should be run through the alarm panel to the rest of the analog devices (as in a regular alarm system installation).

And third, the low pass filter should be placed in the non-DSL path prior to the alarm panel.

To provide the DSL / non-DSL split, either an existing wire pair that runs only to the desired wall jack can be used for the DSL path, or a splitter and a new run of wire can be used to create the DSL path. Because many DSL installers are now aware of interference problems, they might provide the split connection. However, DSL does not have to be split, and if an isolated existing wire run cannot be easily located, the installer may not want to run the extra wire. Without the split, the DSL signals can sometimes interfere with the handshake between the alarm panel and the central station receiver. If the paths are not split, and the incoming phone line is run through the alarm panel before it gets to the DSL modem, putting the low pass filter in front of the panel will disable the DSL signals to the entire premises. And of course, if the incoming wire is not run through the alarm panel, the panel will not be able to seize the line.

At least one telco is working on an inline device that will enable a compatible DSL connection without the need for the splitter. The SIA Telco Compatibility Working Group has also established a formal liaison with the Telecommunications Industry Association's T1E1 Committee to help revise the DSL standards. In the meantime, DSL installations to the current standards are continuing to increase.

Because the wiring configuration is so important, dealers should advise their customers that if they decide to get DSL service they should contact their alarm dealer.

SIA plans to issue further recommendations to the alarm industry on this and related telecommunications issues based on the findings of their investigations. Tentative recommendations to dealers include the use of system supervision and proactive contact with their customers alerting them that changes in their telephone service may require changes in their alarm system.

For more information on the Telco Compatibility Working Group (SIA DC-06), readers are invited to sign up for email distribution of project information. This can be done by sending an email request with your full contact information (name, title, company, address, phone, fax, and email address) to [standards@siaonline.org](mailto:standards@siaonline.org).