



## National Electronic Security Alliance

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### NESA Position Paper on Voice Over Internet Protocol (VoIP)

**Summary:** Alarm users, who switch to VoIP phone service, cannot be assured of the same reliable communications that they enjoyed with standard phone service.

**Background:** Voice Over Internet Protocol (VoIP) phone service has become a popular alternative to standard phone service due to lower rates and attractive features.

**The Problem:**

- o Most VoIP users are not aware of the limitations of VoIP.
- o Many incorrectly assume that it works exactly like standard phones and will not affect the alarm system.
- o VoIP is not compatible with many alarm systems. The frequencies used by the alarm system may not be consistently available in the VoIP System.
- o It is possible that while the voice communication function will work consistently on each call, that the varying allocation of the frequency available to the alarm panel will allow successful communication at one time and prevent it the next time, because the frequency used for VoIP can vary from call to call.
- o Unlike with regular phone service, there are no legal requirements in place to require back up power or redundant equipment to help ensure that the alarm system will be able to communicate in the event of an emergency.
- o VoIP relies on the internet to operate. Heavy traffic, and power outages and downtime for service or reprogramming can all cause outages or slower performance on the internet. These service disruptions can prevent or delay the communication between the alarm panel and the monitoring station.
- o Rewiring of phones by the customer can eliminate the line seizure feature that is designed to prevent an intruder from sabotaging communications between the alarm panel and the monitoring center.

**Recommendations:**

- o Alarm Users should:
  - o maintain a standard telephone (POTS) line for the alarm system to use.
  - o notify alarm dealers whenever they change their phone service so that the alarm dealer can take steps to verify proper communications
- o Alarm dealers and users should:
  - o be aware that a VoIP line does not provide communications that comply with NFPA 72 for commercial or residential fire systems
  - o be aware that while connecting to a communicator designed to send signals over the internet may solve communications issues that VoIP presents, it does not solve the reliability or backup power challenges posed by the internet.
  - o be aware that adding backup power to modems and/or routers at the alarm site will not solve the power problems posed when VoIP and/or internet providers lose power.
  - o be aware that testing the alarm system over a VoIP line only verifies proper operation at that point in time and because the VoIP system varies the available frequencies from call to call that future reliability is unpredictable at best.
- o Alarm dealers should:
  - o notify customers of the problems presented by VoIP.
  - o program panels to send periodic test signals to the monitoring center to verify that communications is intact.
  - o modify contracts to state that alarm dealers are not responsible for communications failures when the user switches to VoIP.