

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554**

| | | |
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| In the Matter of |) | |
| |) | |
| Technology Transitions |) | GN Docket No. 13-5 |
| |) | |
| Policies and Rules Governing Retirement Of |) | RM-11358 |
| Copper Lines by Incumbent Local Exchange |) | |
| Carriers |) | |
| |) | |
| Special Access for Price Cap Local Exchange |) | WC Docket No. 05-25 |
| Carriers |) | |
| |) | |
| AT&T Corporation Petition for Rulemaking to |) | RM-10593 |
| Reform Regulation of Incumbent Local Exchange |) | |
| Carrier Rates for Interstate Special Access Services |) | |

**COMMENTS OF THE
ALARM INDUSTRY COMMUNICATIONS COMMITTEE**

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Summary

AICC urges the Commission to require a substitute service, for purposes of Section 214 discontinuance, to meet reliability criteria and to be functionally equivalent to the TDM-based service. The eight criteria proposed by the Commission should be part of the evaluation of whether a service is an adequate substitute. The substitute service must meet all of the criteria adopted by the Commission and a carrier should not be able to rely on services provided by other providers as an alternative because it is not possible for the carrier to know or demonstrate that a service provided by an alternative service provider meets the criteria.

To ensure reliability, performance-based standards should be developed to address, at a minimum, decibel loss, jitter, dual tone multi frequency (DTMF) signal performance, compression and latency. Further, the standards should measure the entire span of the connection and all legs or providers in the connection and not just the individual carriers. The reliability standard for communications networks should be 99.999% and all communications providers involved in the transmission of a call should meet this standard.

In order for a substitute service to be functionally equivalent to traditional TDM-based telephone service, the service must provide the same functionality with respect to dialing, dial plan, call completion, carriage of signals and protocols, and loop voltage treatment. It also should include eight (8) hours of standby power supply capacity for communications equipment located at the protected premise or field deployed and twenty-four (24) hours of standby power supply capacity for communications equipment at the central office or equivalent facility. In addition, a substitute service must support the same functionality as TDM-based services including alarm signaling from premises, the ability for an alarm provider to reach a remote alarm system and control it as necessary, and medical alert or PERs systems.

Finally, in addition to a certification by the communications provider, the Commission should require the provider to submit documentation to support its certification or, possibly, confirmation by an independent testing organization. Without underlying documentation, it will not be possible for the alarm industry to evaluate whether the proposed substitute service meets the Commission's criteria and is comparable to the service to be discontinued.

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**COMMENTS OF THE
ALARM INDUSTRY COMMUNICATIONS COMMITTEE**

The Alarm Industry Communications Committee (“AICC”), on behalf of its members,¹ hereby files comments on the Commission's Further Notice of Proposed Rulemaking (FNPRM) in the above-captioned dockets, in which it seeks comment on criteria to measure "what would constitute an adequate substitute for retail services that a carrier seeks to discontinue, reduce, or impair in connection with a technology transition (e.g., TDM to IP, wireline to wireless)."²

¹ Central Station Alarm Association (CSAA), Electronic Security Association (ESA), Security Industry Association (SIA), Bosch Security Systems, Digital Monitoring Products, Digital Security Control, Telular Corp, Honeywell Security, Vector Security, Inc., ADT Security Services, AES-Intellinet, Alarm.com, Bay Alarm, Intertek Testing, NetOne, Inc. (formerly, Security Network of America), United Central Control, AFA Protective Systems, Vivint (formerly APX Alarm), COPS Monitoring, DGA Security, Universal Atlantic Systems, Axis Communications, Interlogix, LogicMark, Napco Security, Alarm Detection, ADS Security, Monitronics, Select Security, Inovonics, Linear Corp., Numerex, Tyco Integrated Security, FM Approvals, Underwriters Laboratories, CRN Wireless, LLC, ipDatatel, Protection One and Ackerman Security.

² FNPRM at ¶ 202.

AICC member companies protect over 30 million residential, business and sensitive facilities and their occupants from fire, burglaries, sabotage and other emergencies and, consequently, are an integral part of the public safety network. Alarm companies also provide Personal Emergency Response System (PERS) service for obtaining medical services and ambulances in the event of medical emergencies.

Alarm service providers and their customers utilize many types of communication technologies and services in connection with the provision of alarm services, including traditional telephone service, wireline and wireless broadband services, and the Internet. Many alarm customers still rely on TDM-based telephone service as their underlying communication service and a majority of customers of PERS service are connected by TDM-based telephone service. Because the TDM-based network was engineered to be highly reliable, with quality of service standards and with an independent power source, traditional TDM-based telephone service provides alarm customers with a highly reliable service that meets the standards necessary for fire protection and other life/safety applications. In addition, TDM-based service allows other necessary functions for alarm services, including line seizure, the detection of a loss in communications path and the proper encoding and decoding of tone messages sent by the alarm panel.

As TDM-based networks are transitioned to Internet Protocol (IP)-based networks and with the advent of alternative communication providers and services, these traits must be preserved. It is imperative that there are reliable and stable communications networks and services, no matter the technology, and that those networks are consistent. In furtherance of these objectives, AICC comments on the Commission's specific proposals as follows.

A Carrier's Substitute Service, for Purposes of Section 214, Should Meet All Service Criteria

The Commission proposes that "a carrier seeking to discontinue an existing retail service in favor of a retail service based on a newer technology must demonstrate that any substitute service offered by the carrier or alternative services available from other providers in the affected service area meet the following criteria in order for the section 214 application to be eligible for an automatic grant pursuant to section 63.71(d) of the Commission's rules: (1) network capacity and reliability; (2) service quality; (3) device and service interoperability, including interoperability with vital third-party services (through existing or new devices); (4) service for individuals with disabilities, including compatibility with assistive technologies; (5) PSAP and 9-1-1 service; (6) cybersecurity; (7) service functionality; and (8) coverage."³ In addition to their impact on residential end users, the Commission asks how these criteria would inform the decision-making process of commercial stakeholders and whether additional service metrics should be considered for their purposes.

As discussed further herein, AICC agrees that the Commission should consider these attributes when determining whether a service is an adequate substitute for a retail service a carrier seeks to discontinue. However, AICC urges the Commission to require that when a carrier seeks to discontinue an existing retail service in favor of a retail service based on a newer technology, that new service must meet all of the criteria. A carrier should not be able to rely on services provided by other providers as an alternative because it is not possible for the carrier to know or demonstrate that a service provided by an alternative service provider meets the criteria. AICC notes that incumbent local exchange carriers already file Section 214 applications and point to services offered by other local exchange carriers and VoIP providers as alternatives and,

³ FNPRM at ¶208.

it is the experience of AICC's members, that many, if not most, of these alternative providers do not meet the Commission's proposed criteria on a consistent basis. In addition, the carrier should not be able to rely on a number of services that collectively meet all of the criteria because then no one service would be a substitute.

Network Capacity and Reliability

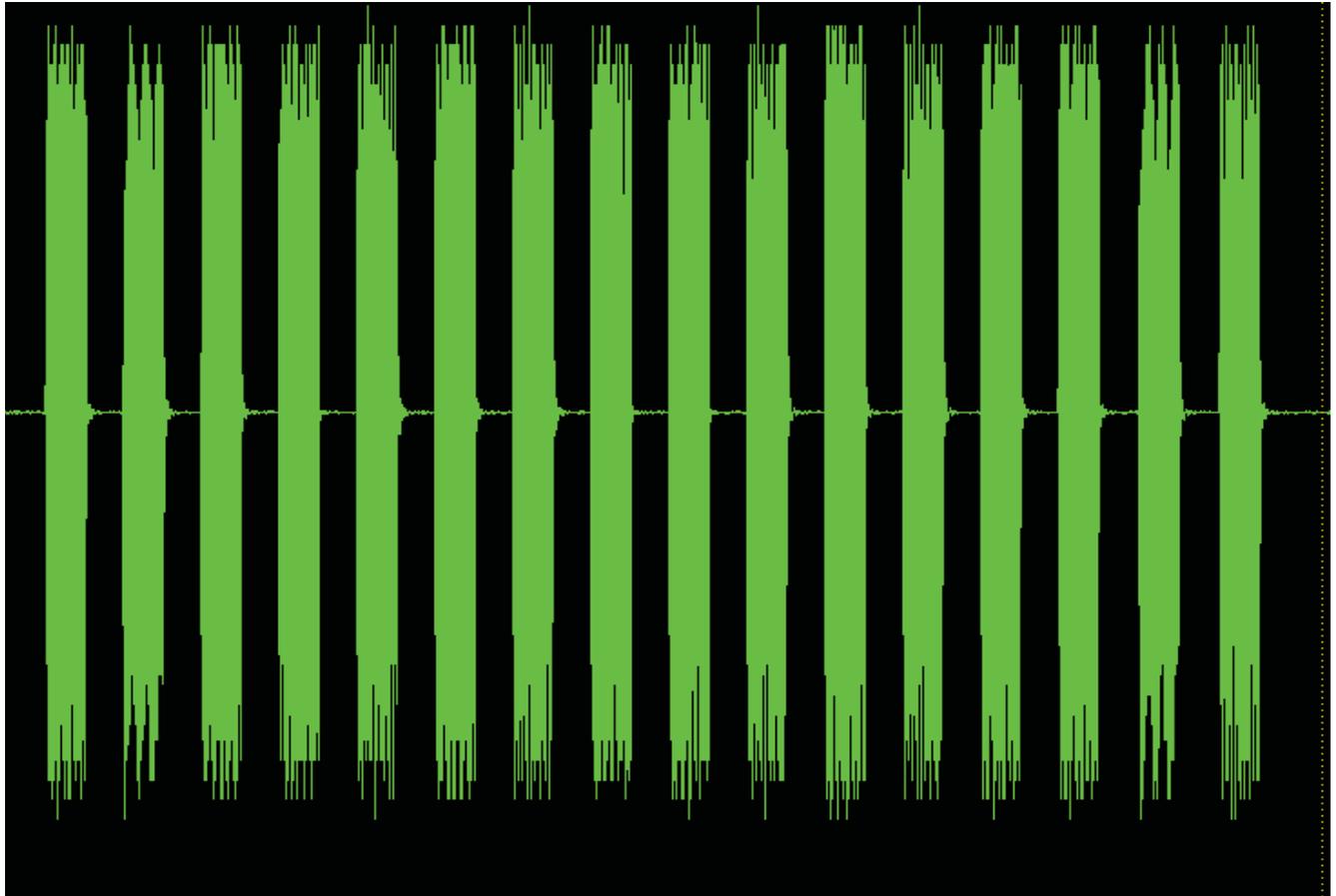
The Commission proposes that any adequate substitute test should evaluate whether the substitute service will afford the same or greater capacity as the existing service and afford the same reliability as the existing service even when large numbers of communications take place simultaneously. According to the Commission, this means that communications are routed to the correct location; connections are completed; connection quality does not deteriorate under stress; and connection setup does not exhibit noticeable latency. The Commission proposes to adopt metrics for jitter, packet loss and through-put. The Commission asks whether it should adopt a 100 millisecond latency metric.

AICC supports the development of performance-based standards to ensure communications paths, including VoIP paths, are reliable, robust and provide a standard of measurable quality. Performance-based standards should address, at a minimum, decibel loss, jitter, dual tone multi frequency (DTMF) signal performance, compression and latency and must measure quality in other areas beyond dial tone and human voice. Further, the standards should measure the entire span of the connection and all legs or providers in the connection and not just the individual carriers. This is crucial to ensure that alarm signals are properly transmitted even when there are multiple carriers involved with a call. Thus, for example, if the Commission adopts a 100 millisecond latency metric and there are four carriers in a connection, the total span of the connection should have no more than 100 milliseconds of latency, rather than allowing

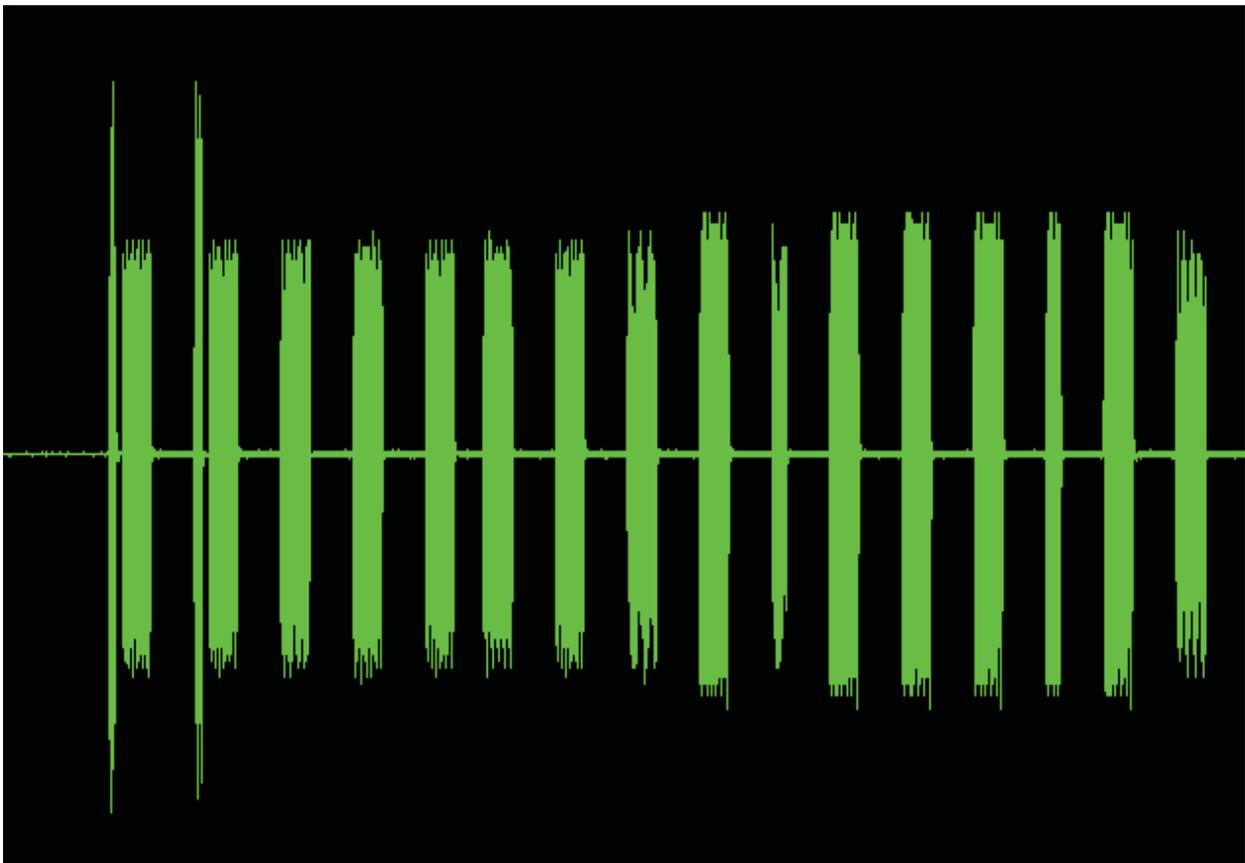
each of the four carriers to have 100 milliseconds of latency.

The alarm industry has experienced serious issues this year, and in the past, when alarm signals have not been completed in connection with communications networks using Internet Protocol and when calls involve multiple carriers, including least cost routers used by interexchange carriers. For example, one regional alarm company experienced a tremendous increase in the number of reports it received that "no data signal" was available in January, March and August of 2015. Alarm signals were not completed for a multi-state region covering the west coast and western states earlier this year, affecting millions of alarm customers. A major alarm provider experienced interruptions in service with VoIP providers in New York, Florida, Georgia, Alabama, and Puerto Rico when alarm signals from the customers' premises to the alarm company central station were not being completed largely because of compression issues.

The first chart below shows how a typical alarm signal appears over TDM-based POTS with a specific 50ms interdigit timing +/- 10% for Contact ID alarm signals. In the example below, the alarm provider measured timing within the required specification. These signals over POTS are received and decoded properly.



The second chart below is an example of a corrupted signal where it was carried over the VoIP provider's network before reaching the alarm company central station. Receipt of the signal at the alarm company central station appeared as below. The alarm receivers could not decode this signal due to the severe distortion to the signal during routing by the VoIP provider. This issue, and many other issues with VoIP providers, was the result of various compression schemes used throughout the VoIP network.



The VoIP provider involved with the above example informed the alarm company that it was using a new least cost router provider for carrying telephone calls to the PSTN. It took a number of days before the problem was corrected when the VoIP provider switched back to its original aggregator carrying signals.

The examples provided also highlight why it is not possible for a carrier seeking to discontinue service to know or demonstrate that a service provided by an alternative service provider meets the criteria. Simply put, it has no control over the alternative providers and the reliability and quality of their services. In addition, we know that alternative providers make changes to their networks that affect service reliability and quality on a regular basis- either by changing their own network parameters, for example, with respect to compression, or by using intermediary providers that do not meet the same reliability and quality standards.

The Proposed Reliability Standard is Not Sufficient

The Commission asks how reliability can be measured and seeks comment on a proposal that reliability for voice communications should mean the ability to access a dial tone within three seconds 98% of the time during the busy season-busy hour. As demonstrated above, dial tone access cannot be a sole measure of reliability. While a dial tone metric for access purposes is helpful, there must be other metrics used to ensure appropriate call completion. Availability is only one part of the necessary quality and reliability standards that must apply once dial tone is achieved.

Further, the reliability standard for communications networks should be 99.999% and all communications providers involved in the transmission of a call should meet this standard. This is the historical standard for the public switched telecommunications network and would allow a network to have approximately 5 minutes and 15 seconds of downtime per year. For comparison, a reliability standard of 99% would allow a network to have approximately 3 days 15 hours and 40 minutes of downtime per year and a reliability standard of 98% would allow a network to have approximately 7 days 7 hours and 12 minutes of downtime per year. A reliability standard of 98% clearly is unacceptable. AICC also notes that Verizon and AT&T

advertise the reliability of their broadband networks as 99.99%, which allows for approximately 52 minutes and 36 seconds of downtime per year. It should be possible for these carriers to attain the higher standard.

Service Functionality

In order for a substitute service to be functionally equivalent to traditional TDM-based telephone service, the service must provide the same functionality with respect to dialing, dial plan, call completion, carriage of signals and protocols, and loop voltage treatment. It also should include eight (8) hours of standby power supply capacity for communications equipment located at the protected premise or field deployed and twenty-four (24) hours of standby power supply capacity for communications equipment at the central office or equivalent facility.

As discussed in AICC's previous filings, the standards discussed above are included in NFPA 72, which was developed by a standards setting group including members of the communications industry (e.g., Verizon, AT&T and Comcast) to ensure that service providers using new technologies continue to meet the rigorous quality assurance, operational stability and consistent features that were the hallmarks of the traditional networks operated by telephone companies. Some communications providers have stated that they already comply with these requirements (e.g., Verizon has stated it complies with the standard in New York City) and a number of communications providers voluntarily agree to these standards with ADT. Therefore, including these standards in the Section 214 criteria should not burden communications providers. In addition, there are thousands of independent dealers and smaller alarm companies that do not have the ability to execute agreements with every communications provider and, therefore, including the standards in the Section 214 criteria will provide a level of consistency

and certainty with respect to the reliability and quality of communications services that cannot be achieved through voluntary agreements.

A substitute service also must support the same functionality as TDM-based services including:

- Alarm signaling from premises
- The ability for an alarm provider to reach a remote alarm system and control it as necessary
- Medical alert systems known as PERS (Personal Emergency Response Systems)

AICC contends that a substitute service that results in a change in 911 service, device interoperability, or call functionality that is available to the consumer, or that fails to provide the consumer with the ability to maintain communication service during a power outage, would result in a reduction or impairment of service sufficient to deny a request for Section 214 discontinuance of service.

Cybersecurity

The Commission proposes that one criterion in the adequate substitute test should be that the carrier demonstrates that a substitute service offers comparably effective protection from network security risks. Communications providers should have a solid risk management plan in place that ensures the organization has processes to identify, assess, prioritize, and remediate threats associated with the solution. Standards related specifically to IP technology include:

NIST: Security Considerations for Voice of IP Systems:

<http://csrc.nist.gov/publications/nistpubs/800-58/SP800-58-final.pdf>

NIST: PBX Vulnerability Analysis: <http://csrc.nist.gov/publications/nistpubs/800-24/sp800-24pbx.pdf>

The decision to move to IP technology in itself does not expose the alarm industry to additional risk. However, just like any other IP-based system, it is important that security design be incorporated into the design, development, implementation, and operation of the communications network. If it is not, then an IP network will most likely expose all consumers to higher risk.

Self-Certification Alone is not Sufficient

The Commission proposes that once a carrier certifies in its Section 214 application that it satisfies all of the criteria, then the application will be eligible for automatic grant pursuant to section 63.71(d) of the rules. However, if the carrier is unable to file such a certification or if comments or objections call into question whether a substitute or alternative service satisfies all of the criteria, then the application would not be automatically granted and the applicant would be required to submit information demonstrating the degree to which it meets or does not meet each factor.

In addition to a certification by the communications provider, the Commission should require the provider to submit documentation to support its certification or, possibly, confirmation by an independent testing organization. Without underlying documentation, it will not be possible for the alarm industry to evaluate whether the proposed substitute service meets the Commission's criteria and is comparable to the service to be discontinued.

Contact Information to Resolve Technical Problems

Communications providers should be required to make available a method other than the general customer service number, for alarm companies and others to reach the provider to report technical problems with the substitute service and providers should be required to respond to network issues and resolve them in a timely fashion. As communications providers upgrade

their networks to adopt new technologies it is expected that there may be some implementation glitches and unexpected problems. However, currently, these problems are compounded because there is no way to report technical issues to a centralized location for the provider with staff trained in and able to address technical issues. Therefore, alarm companies report that when they become aware that alarm signals are not being transmitted properly, it can take hours or days to locate a knowledgeable employee in the company willing and able to address and resolve the issue.

Conclusion

In order for a service to be a substitute for a TDM-based service that a carrier seeks to discontinue, the new service must meet reliability criteria and be functionally equivalent to the TDM-based service. The eight criteria proposed by the Commission should be part of the evaluation of whether a service is an adequate substitute. In addition, performance-based standards should be developed to address, at a minimum, decibel loss, jitter, dual tone multi frequency (DTMF) signal performance, compression and latency. The standards should measure the entire span of the connection and all legs or providers in the connection and not just the individual carriers. The reliability standard for communications networks should be 99.999% and all communications providers involved in the transmission of a call should meet this standard.

To be functionally equivalent to a TDM-based service that will be discontinued, the new service must be equivalent with respect to dialing, dial plan, call completion, carriage of signals and protocols, and loop voltage treatment. It also should include eight (8) hours of standby power supply capacity for communications equipment located at the protected premise or field deployed and twenty-four (24) hours of standby power supply capacity for communications equipment at the central office or equivalent facility. In addition, a substitute service must

support the same functionality as TDM-based services including alarm signaling from premises, the ability for an alarm provider to reach a remote alarm system and control it as necessary, and medical alert or PERs systems.

Finally, in order to ensure that a substitute service is reliable and functionally equivalent, the Commission should require the provider to provide supporting documentation, in addition to providing a certification. Without underlying documentation, it will not be possible for the alarm industry to evaluate whether the proposed substitute service meets the Commission's criteria and is comparable to the service to be discontinued.

Respectfully submitted,

**ALARM INDUSTRY COMMUNICATIONS
COMMITTEE**

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Dated: October 26, 2015