Next-Gen Professional Monitoring:
Scaling Verification

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The security industry has undergone substantial change in recent years, but one thing remains the same: security system owners demand a swift, accurate, and effective response to alerts and issues. The value of security solutions is undermined when systems detect and alert users to issues that are not actual security events or emergencies. False alarms also prevent public safety and emergency responders from effectively validating and responding to security events.

Response to false alarms diverts responders' time and attention away from valid security events at a time when law enforcement is facing severe staffing constraints. It also conditions first responders to assume that system-triggered security events are false.

These issues are critically important to the security industry, as de-prioritization of alarm response is a threat to professional monitoring's core value proposition. Players across the residential security ecosystem have worked to improve technologies and processes to decrease the occurrence of false alarms.

The Monitoring Association developed an alarm validation scoring standard, TMA-AVS-01, to help emergency operators and responders to prioritize and respond to alarms more effectively, reducing the number of nuisance alarms and improving overall system performance.

This white paper shares primary consumer and industry research conducted by Parks Associates, in partnership with Ubiety, to share first responders' view of security alarms and how it impacts their response times. It highlights the threat of law enforcement de-prioritization of alarm response to the residential security industry and evaluates various verification methods that can help scale AVS-01 deployment.

Parks Associates conducted interviews of law enforcement, dispatchers, and other first responders for this whitepaper. Our findings indicate that false alarms are a critical problem that contributes to slower police response and undercuts the value of professional monitoring for both first responders and consumers.

Law enforcement and first responders acknowledge that false alarms are a problem, and account for most of the alarm-based dispatches.

Security industry and public safety stakeholders also acknowledge that false alarms contribute to slower police response.

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Alarm Fatigue in Public Safety: An Industry Emergency

The security alarm industry is amid great transformation, and its key value proposition is in fundamental danger because of coinciding headwinds that challenge its core value: rapid and reliable emergency response. Reliable and swift response to events detected by professionally monitored home security systems is dependent on the industry's relationship with law enforcement and their ability to prioritize alarms.

Law Enforcement Challenges

Currently, law enforcement is overwhelmed with **"calls for service," an industry term referring to any call-in to which emergency services may respond**. Law enforcement agencies are facing a critical shortage of police personnel, which constrains law enforcement resources and slows response times to calls for service. Much of this shortage is the result of a high level of resignations and retirements that are outpacing recruitments.[1] Even with aggressive recruiting, many departments are finding it difficult to fill positions, driven by a range of factors including negative public perceptions and changing generational attitudes towards careers in policing.[2]

The resulting delays in response times affect all priority levels: Response times in New Orleans increased from 51 minutes on average in 2019 to 146 minutes on average in 2022.[3]

Police resources are being strained for several reasons, including staffing shortages and reduced funding, along with the ongoing issue of false alarms. As a result, prioritization of alarms is shifting.

> "90%+ are false alarms, so alarms become low on the priority list. Even if there is an officer a block away, it would get trumped by something higher on the list…
>
> We will still respond to an alarm, you just don't expect anything; you get calloused that it's going to be a false alarm."
>
> — **Major Metropolitan PD**, Sheriff's Office, DEA Agent

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Long-term Challenge of False Alarms

First responders want a solution that simplifies the process for them with a way to confirm that a threat exists without being overwhelmed with information.

- The Los Angeles Police Department, overwhelmed by receiving tens of thousands of false alarm calls annually, has imposed fines for repeated false alerts to reduce resource diversion and improve response times to actual emergencies (City of Los Angeles, Municipal Code).
- The New York City Police Department employs a verification process for alarm calls, requiring confirmation of an emergency before dispatching officers, a measure aimed at reducing false alarm responses and optimizing resource allocation (New York City Police Department Policy and Procedure Manual).

The industry faces the loss of a resource that has essentially been provided at no charge, traditionally. To that end, many jurisdictions such Akron[4], Vallejo[5], and Seattle[6] are requiring verification of alarms before response, and implementation of these procedures can be costly for providers. Others, such as Las Vegas[7], Pittsburgh[8] or Milwaukee[9] have stopped responding entirely.

Value of Professional Monitoring in Question

The promise of professional monitoring is even more important in today's market where the options for security solutions have expanded to include self-monitored systems, and devices like video doorbells and networked cameras.
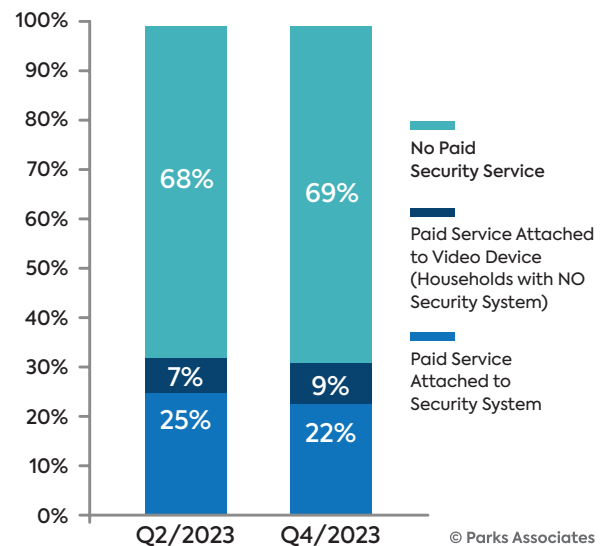
Parks Associates research shows that 5% of all US internet households have a paid self-monitoring service– typically video storage and/or interactive controls and alerts. Consumers who have professional monitored services have alternatives and could switch to a new service. Those who cancel generally select more than one reason. High fees are the main reasons, but shifting to a smart security device as a substitute runs a close second. Further, 15% of those canceling their pro monitoring service say that false alarms are an issue, and 20% report that the pro monitoring was not effective or reliable when needed.

> Currently, 43% of households have some security solution, and the majority (31%) are security systems. But not all of these are professionally monitored.

Home Security System & Service Adoption
Among All US Internet Households

In 2023, 34% of security system owners with professional monitoring considered a self-monitored system when shopping – up from 25% the year prior.

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Red Flags: Identifying the Signs of Customer Attrition

The risk of losing customers to self-monitoring or alternatives to systems is real. Parks Associates latest consumer research shows that 20% of consumers who canceled their professional monitoring service reported they purchased an alternative smart security device to monitor their home.

15% of those who recently canceled their security service cite false alarms as an issue, alongside high monthly fees and lack of value/use of the service.

This is a warning sign that the industry cannot ignore. It also marks a move towards "good enough" security solutions from self-monitoring systems and products.

Parks Associates' interviews of security industry executives reveal universal agreement that false alarms are a problem for the industry — negative for the customer, the security dealer, the monitoring centers and first responders. All industry players see it as their responsibility to reduce false alarms before they ever reach dispatch:

- Hardware and platform providers emphasize the sensors and intelligence being built into the platform, and the vast improvements security systems of today are making in identifying real from false alarms.
- Some security platforms providers have come up with custom scorings to proactively flag alarms that are highly likely to be false.

Security executives also see monitoring centers as part of the solution, by first filtering out nuisance alarms and passing along those screened calls to dispatch — a resource extension for law enforcement rather than a burden. However, such efforts require mechanisms for verifying which alarms are real and which are false.

Timing is critical -- consumer trust hangs in the balance and the new options for security solutions are appealing.

18% of pro-monitored households reported a high intention to cancel their monitoring contracts in the next 12 months.

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The Industry Responds: Technology and Standards

Standardizing Alarm Scoring through AVS-01

TMA–AVS-01 provides standardized alarm scoring for unauthorized human activity detected by alarm systems that will assist law enforcement with resource allocation and calls for service prioritization. It is designed for use by monitoring providers along with the advanced technologies that enable the ability to score alarms.

The primary importance of AVS-01 lies in its role in enhancing the reliability of alarm systems by establishing criteria for verifying alarm events before emergency response units are dispatched. Classifications in the security monitoring industry have been lacking or fragmented, which presents a challenge when combined with different priority scales used by Emergency Communications Centers (ECCs). AVS-01 is a unified standard for verifying alarms to help law enforcement be able to prioritize alarm calls.

> "I was a strong advocate of [TMA-AVS-01] because the frustrating thing for many officers is the very limited information passed down [from monitoring center to 911]."
>
> — **Director Public Safety,** Mid-Size Municipality, Former Police Officer

Industry adoption of AVS-01 is just the first step. Communication and education of first responders, municipalities, and any other stakeholder in alarm response and police response is an important next step. Parks Associates research uncovered low awareness of the standard from dispatchers and first responders, with several also indicating concerns about the implementation due to the fragmented nature of dispatch priority rankings and concerns around how much information will be required for verification.

To facilitate the adoption of the AVS-01 standard, the Monitoring Association, with the Partnership for Priority Verified Alarm Response (PPVAR), offers free online training courses specifically designed for Monitoring Center Operators and ECC Telecommunicators. These courses provide a thorough understanding of the AVS-01 classification process and the standardized communication protocol, ensuring that monitoring center leaders are well-equipped to integrate AVS-01 into their operations.[10]

Read our in-depth white paper on the AVS-01 Standard "Solving False Alarms: Bringing New Context for Monitoring"

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Technology as Part of the Solution

Today, many law enforcement agencies define "verified" alarms as having a human present at the event (e.g., homeowner, neighbor, private guard, other witness). This naturally limits the number of events that qualify as "verified". The private sector is creating innovative solutions that can be integrated with security monitoring systems to improve verification capabilities and determine a real threat without necessarily requiring a human presence to confirm.

Reducing false alarms requires preventing them at the source. Solutions like the integration of disarm functions into security system keypads is one notable example, or arms/disarms security alarms based on inactivity in the home or schedules. Video verification of alarms is helpful, provided that the camera placement and angles are optimized, and the feed available to the resident, the central station, and perhaps even law enforcement. While video verification is a great solution, many consumers have privacy and security concerns and refuse to have a camera inside of their home.

> "Enhancing the entire contextual story around an alarm event for the operator is just an ongoing effort. Person-on-site likelihood detector and cancel likelihood detector ... were envisioned before AVS-01 even came in."
>
> — **Security Platform Provider**

Other technologies involve contextual flags, such as sensors for glass break detection, gunshot detection, and Wi-Fi sensing. Wi-Fi sensing and other known/unknown presence detection is particularly useful.

The goal is to provide a clear picture of normal or abnormal behaviors for the monitoring centers, by providing additional touchpoints beyond the alarm.

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Deployment at Scale: Evaluating Verification Methods

A variety of methods can be employed to ensure verification within the AVS-01 framework. These methods each offer distinct advantages and unique challenges. Some examples are calling or texting residents, video verification, sensor-based AI, radio frequency (RF)-based AI, and the deployment of private guards.

Calling residents is the traditional method used for verifying alarms; the effectiveness is tempered by high false alarm rates attributed to resident unavailability or non-responsiveness, highlighting a significant drawback in reliance on resident participation. Texting is more successful, especially if automated to residents; however, text-based solutions can lack event context.

Video verification can be effective depending on how it is being used, with the benefit of direct visual confirmation of incidents. This method can mitigate false alarms and enhances law enforcement response. Its effectiveness hinges on optimal camera placement, the level of monitoring included (self vs. pro), and video settings.

Verification Methods	Ability to Scale for AVS-01	Benefits / Drawbacks
Calling the Resident	High	• Widely available with pro-monitoring • **Drawbacks:** low answer rate, no contextual info if resident not home, significant human resources
Texting the Resident	High	• Efficient to implement • Can be included as a free or paid service • **Drawbacks:** no contextual info if resident not home
Video Verification	Moderate	• Growing uptake of video with systems • Visual evidence of person, car; resident can confirm known/unknown identity • **Drawbacks:** Limited to systems with integrated cameras and pro monitoring of video feeds, limited line of sites, moderate costs to deploy, privacy concerns
Sensor-Based AI Verification	Moderate	• Can repurpose existing sensors to scale, provides some situational context • **Drawbacks:** may require deployment of multiple sensors/pro-install, risk of false positives, lacks context around identity, does not capture visual context
RF-Based AI Verification	High	• Presence awareness at scale, situational awareness around identity; software integrated into leading security panels; no new hardware; creates dynamic workflow for monitoring response • **Drawbacks:** low current deployment in legacy systems, lacks visual context
Private Guard	Low	• Human verification needed by some municipalities, relieves strain on law enforcement • **Drawbacks:** Premium application for as-needed response complementing other verification approaches

Video also triggers privacy concerns for some consumers, particularly internal video: **just 29% of smart home device owners say they are comfortable sharing indoor video with third parties, and 63% of indoor camera owners say they have privacy and cybersecurity concerns about the device.** The real value of video may very well rest with the AI capabilities that are becoming a key component of emerging security technologies.

71% of security system owners have a camera or video doorbell, though these cameras are not necessarily part of the security system, nor are they necessarily monitored.

AI Technologies A Key Differentiator

AI is being used in the identification of humans, pets, or vehicles in video surveillance and to determine presence or absence in RF-based technologies and user interfaces. And consumers are taking note of value: Parks Associates research highlights that 70% of security system owners say it is appealing to use sensors in their home with AI to understand and confirm emergencies.

Despite great value in AI technologies for verification, security dealers cite concerns about marketing AI including consumer confusion and uncertainty of real benefits. Security dealers, like all other businesses, must embrace the role of technology including AI. **AI's ability to reduce false alarms is a major opportunity for the security dealer businesses today.**

> "AI, it's a bit of a mixed bag right now. Some systems are really good, and others, well, they have a way to go. [...] They're only going to continue to learn and improve upon itself unless there's some sort of just drastic world apocalyptic AI event"
>
> **— Alarm Monitoring Provider**

Known Presence Solution

Ubiety has developed software that can be used to identify the presence or absence of a resident in a home. It does this by monitoring for signals emitted by the resident's mobile phones, via Wi-Fi and Bluetooth. If these signals are detected the software determines that the resident is present.

Conversely, the absence of these signals is interpreted as the resident being away. This technology is not for tracking a resident's location within the home, but rather just their presence or absence.

Steps Forward

The core of professional monitoring services is to offer customers peace of mind through quick and reliable responses to alarms or incidents. If a service fails to deliver on this promise, it undermines its own value proposition, potentially leading to customer dissatisfaction and loss. The industry must respond with a multi-pronged approach:

- **Defining False Alarms** - A comprehensive approach to identifying what constitutes a false alarm is crucial. This involves not just technological solutions but also a deep understanding of the scenarios under which alarms are triggered.

- **Verification Processes** - Relying solely on video verification can be flawed due to its limited adoption and physical constraints like line-of-sight issues. The deployment of the AVS-01 standard must plan around these adoption gaps and limitations, by scaling with integrated tech solutions to make the process of verification effective.

- **Coordinated Deployment** – Both the security landscape and law enforcement agencies are fragmented with thousands of individual businesses and departments. A coordinated approach among leading monitoring providers and security platforms can minimize compatibility issues, improve the efficacy of security protocols, and create a better experience for dispatchers. Coordinated efforts are essential for seamless deployment, ensuring that the standard achieves its intended benefits across the board.

- **Law Enforcement Education** - Low awareness of AVS-01 among dispatch personnel can significantly hinder the effectiveness of this standard in real-world applications. Industry leaders must invest in training and education initiatives to ensure that those at the front lines of response are fully informed about the protocols, technologies, and best practices associated with AVS-01.

The prevalence of false alarms has been a long-term challenge for the security industry. While security technologies and new protocols are decreasing the number of false alarms that make it to call centers, severe staffing shortages have forced departments to de-prioritize alarm response and fine homeowners for repeated false alarms. Interviews with law enforcement, dispatchers, and other first responders indicate that false alarms are a critical problem that contributes to slower police response and undercuts the value of professional monitoring at a time when self-monitored systems and options are adding competitive pressure. Security providers are encouraged to move with urgency to adopt technologies that can help scale AVS-01 and enhance the valuable service professionally monitored security provides.

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About Parks Associates

Parks Associates, a woman-founded and certified business, is an internationally recognized market research and consulting company specializing in emerging consumer technology products and services. Founded in 1986, Parks Associates creates research capital for companies ranging from Fortune 500 to small start-ups through market reports, primary studies, consumer research, custom research, workshops, executive conferences, and annual service subscriptions.

The company's expertise includes new media, digital entertainment and gaming, home networks, internet and television services, digital health, mobile applications and services, consumer apps, advanced advertising, consumer electronics, energy management, and home control systems and security.

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About Ubiety

Ubiety develops solutions that enable situational awareness for residential, commercial, and government security applications. Ubiety can sense, categorize, and identify people and their presence in a location using the devices they are carrying. Ubiety's proprietary AI engine ingests high-velocity radio frequency data and generates real-time inferences about a person's identity using only passive RF signaling (wifi, Bluetooth, and cellular). This unique dataset can significantly reduce false alarm rates by providing the context necessary to augment alarm monitoring providers' confirmation, verification, and notification procedures. Learn more: www.ubiety.io.

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HomeAware
By Ubiety

Reduce Customer Attrition

Increase customer trust & loyalty and secure long-term success by addressing false alarms impacting homeowners today.

Up to 98%

of all alarm signals are false alarms.

Privacy Friendly False Alarm Solution

Only HomeAware by Ubiety offers a false alarm solution that doesn't require any new hardware or cameras and is fully compliant with AVS-01 standards.

Increase Customer Engagement

Empower your customers with proactive home insights. Ubiety's AI-powered solution delivers smart situational awareness notifications, increasing engagement and loyalty.

homeaware.com

RESEARCH & ANALYSIS

for Emerging Consumer Technologies

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Smart Home Devices and Platforms

Digital Media and Platforms

Home Networks

Digital Health

Support Services

Entertainment & Video Services

Consumer Electronics

Energy Management

Home Control Systems

Home Security