

EVOLVING CLAIMS INVESTIGATIONS

UTILIZING REMOTE INSPECTIONS EFFECTIVELY

By

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The advent of technology and its continuous improvements are originating new opportunities for the collection and exchange of information. Never before has the world realized the importance of being connected and working virtually more than during the current global pandemic. The pandemic has necessitated the ability to move workstations from the office to the home environment in order to maintain social distancing guidelines and conform with government mandates to ensure public health. The advances of digitization, computing, and internet streaming have made work associates more connected than ever before and allowed for a nearly instantaneous exchange of information. Many companies have been forced to build new functional teams and develop innovative communication strategies in response to the changing landscape.

When faced with the challenges of working remotely, the claims and legal industry has also been forced to overcome the challenges of performing claims inspections remotely. Technological advancements have been a partial answer to the challenge. Technologies like Unmanned Aerial Vehicles (UAVs/drones), 3D laser scanning, and telecommunications have assisted claims professionals, attorneys, and experts for several years, if not decades. These technologies enable accurate and thorough documentation of an incident scene, with incredible precision, and have afforded experts the opportunity to preserve and analyze the resulting data. They have also assisted in the communication of findings and easy transfer of information through digital file sharing and video conferencing. However, in today's dynamic environment where travel restrictions are in place and personal and public health is at risk, how do we investigate claims? More pointedly, how do we safely and effectively perform joint inspections where multiple parties are invited to attend? Technology provides many advantages that can assist the insurance, legal, and manufacturing industries in answering these questions.



The travel constraints and very real health risks to individuals have forced organizations to rethink the way in which they transact business. To help preserve evidence and minimize prejudice, the legal landscape of the U.S. requires that potentially interested parties be afforded the opportunity to view incident scenes and examine evidence in such a way as to minimize potential allegations of spoliation. Spoliation of evidence as defined in the National Fire Protection Association (NFPA) 921 is the loss, destruction, or material alteration of an object or document that is evidence, or potential evidence in a legal proceeding, by one who has the responsibility for its preservation. When a duty to preserve arises, the scene and accompanying evidence must be preserved to the greatest extent possible. Potentially interested parties should also be given the opportunity to conduct an investigation with their experts in attendance. This requires appropriate identification of the parties, proper notice, and subsequent collaboration on the part of involved entities and experts. Traditionally, these joint examinations have been conducted with noticed and interested parties in physical attendance. Evidence was inspected, documented and tested in a joint setting with an agreed protocol and in accordance with accepted forensic engineering practice. Today, technology has enabled these joint examinations to be conducted with all parties present, albeit some virtually, by performing remote inspections. S-E-A has utilized these technologies and applied them during remote inspections in many diverse settings. There are a number of identified benefits, as well as hazards, associated with employing these technologies and implementing remote inspection procedures. An understanding of both the benefits and risks can assist claims professionals, attorneys, and experts in assessing the potential value of a remote inspection.

Remote Inspection Standardization Development

A remote inspection utilizes virtual technology to allow off-site attendees to observe, interact with, and/or direct on-site personnel in real time. Due to the lack of an imminent need for remote inspections in the past, there is currently a large knowledge gap on what they are and what steps need to be taken to implement one successfully. The NFPA is in the early stages of

developing NFPA 915: Standard for Remote Inspections. This standard was preceded by an NFPA whitepaper titled, Conducting Remote Video Inspections, submitted by the NFPA Building Code Development Committee (BCDC) in August 2018. The whitepaper was written to assist authorities having jurisdiction in the use and conduct of Remote Video Inspections (RVIs) and led to the development of a fact sheet titled, Guidance for Remote Video Inspection, by the BCDC. Despite the NFPA's ongoing work, there is little to no information regarding remote inspections for investigative purposes in civil litigation. This void can be filled through the collaboration of investigators, claims professionals, and attorneys with a mutual interest in helping conduct more efficient, safe, and effective remote inspections.

Applicability

Remote inspections can be utilized and conducted to evaluate many claim types, such as property and liability. The specific evaluations considered to be excellent candidates for remote inspections may include:

- Preliminary examinations, such as non-destructive examinations and visual inspections.
- Inspections that require readily available measurement devices and equipment, and involve a manageable number of parties.
- Inspections involving participants who are unable to attend physically.
- If evidence has been obtained and transferred accordingly, a remote inspection of a small product/component can be performed during a lab examination utilizing material examination equipment that can livestream test results and/or visual feeds to remote attendees using laboratory information management systems.

The viability of a remote inspection also depends on the number of parties. As with traditional inspections, a large number of attendees will make orchestrating a remote inspection very difficult, but not impossible. Single party investigations do not require remote access in most situations since there will likely be no more than two people physically on-site.

Remote inspections are useful, but not feasible for

all investigations. Each situation needs to be carefully examined and it should be determined if a remote inspection can be effectively and efficiently instituted. The applicability of a remote inspection is dependent upon how simple or difficult it is to prepare and execute the inspection procedures.

- A remote inspection would be difficult and/or impossible if the examination must take place in a location lacking a mobile data feed or stable internet connection.
- Large, complex products and large inspection sites are not ideal candidates for remote inspections because it may be difficult for remote attendees to orient themselves and follow the procedures taking place on-site. This obfuscates the ability of the remote attendee to observe, interact, and direct on-site personnel.
- Similarly, examinations that require disassembling a product or destructive testing are typically not suitable for a remote inspection unless elaborate and extensive preparations are made to collect data, document the evidence, and record the activities.
- Additionally, on-site inspections of extremely small products, products that may require a significant amount of specialized equipment, or hard-to-acquire equipment, may need to wait for traditional investigative methods depending on the availability of the required technology.

If a remote inspection has been deemed feasible, it is critical to determine who will be directing the inspection on-site. In a traditional inspection, multiple attendees

can communicate with one another simultaneously or in groups. Remote inspections are run more efficiently if there is a single point of contact directing the discussion and communication pathways. Questions to be addressed include:

- Who will be directing those performing the inspection?
- Will there be one person on-site directing and performing the inspection while everyone else observes?
- Will there be a small group on-site performing the inspection at the direction of the remote attendees?
- Will every expert get the chance to conduct a portion of the inspection or will a single expert direct the entire inspection?

The implementation of a remote inspection requires thorough preparation from all potential attendees and parties involved. It is critical to define communication pathways and responsibilities for each inspection attendee well before the agreed upon inspection date.

Each step of the inspection should be planned and redundancies put in place in preparation for unexpected interruptions. Most challenges that occur during remote inspections are avoidable and include:

- Inadequate inspection time
- Ambiguous protocol
- Lack of protocol compliance
- Unqualified on-site personnel



- Poor communication
- Inspection location conditions (lighting, ambient noise, internet connectivity, etc.)

There are some unavoidable difficulties that may occur during a remote inspection, but proper preparation may minimize their impact. Some examples include:

- Internet outages
- Power outages – electricity/battery
- Equipment issues and failures
- Sudden onset of COVID-19 symptoms for on-site attendee(s)
- Unexpected weather

The quality of a remote inspection relies heavily on preparation. The preparation stage is where the details for the inspection and post-inspection activities are determined. It is critically important to develop a robust, step-by-step protocol that meets the needs of all parties. A detailed protocol is often reliant on the information provided during product research and document review. The protocol should detail the equipment required to perform the remote inspection and the party responsible for providing it. The protocol should detail who calibrates the equipment and who will be taking measurements with the equipment. In order to improve the efficiency of the remote inspection, it is recommended that a single person be designated to take and report all measurements to all parties involved. This can be specified in the inspection protocol. The accuracy of the measurements should be confirmed both visually and verbally, as well as documented via photographs and/or video recordings as specified in the protocol.

Communicative guidelines need to be established during the preparation stage of the remote inspection. Privileged communications can be maintained via different channels, whether that be a phone call or a separate web conferencing service. Time should be set aside to allow questions to be asked and answered from all attendees, as well as the means to ask and document questions. Also, time should be set aside for intermissions and for private discussion between claims professionals and their representatives.

Practical Considerations

In order to avoid complications, it is important to take time during the preparation stage to ensure that all participants are familiar with the software and platform that will be used during the remote inspection. It is valuable to perform a trial run of the remote inspection using the web conferencing software to address any concerns and plan for any unexpected events. During the trial run, each attendee should perform software and hardware checks to ensure stability, while all questions regarding the virtual communication pathways can be answered. Additionally, it is important to replicate the inspection environment or perform a trial setup for all equipment at the inspection site to ensure the equipment used is appropriate and capable of handling the task at hand. The remote inspection protocol should be updated following the trial run to account for any new developments. The trial run is also an appropriate time to disclose any auditory or visual limitations of any participants so adjustments can be made, and participants accommodated.

Once preparation is completed, the inspection can be performed. Remote attendees should use a large screen with good resolution, if possible, while those performing the inspection may want to use smaller devices, such as a smartphone or tablet, for easier manipulation. Multiple video cameras positioned at multiple viewing angles should be considered to allow attendees to view the entire incident location or inspection area. For example, having a dedicated video camera that always follows the evidence or inspection subject will allow all participants to see who is interacting with the evidence at all times. For those who are performing the inspection or are in charge of video camera placement and/or movement, video camera motion should be slow and steady. Slow and steady video camera movement will improve the quality of the video feed and limit any shaky, blurry, and possibly nauseating effects. Additionally, video camera motion should be frequently paused to allow the camera to focus on the most important feature, measurement, or activity. The orientation of every video camera, either portrait or landscape view, should be consistent throughout the duration of the recording. By limiting camera rotation, this will minimize complications when reviewing the

resulting video footage. Cameras that will be stationary for any length of time during the inspection should be mounted on a tripod to improve image stabilization and quality.

During a remote inspection, the traditional methods of documenting evidence are not available to those attending remotely. A remote inspection is typically recorded using the web conferencing software in addition to the cameras set up to provide video feeds during the inspection. Experts, claims professionals, and attorneys who are attending a remote inspection via a web conferencing software should be prepared to take photos on a computer via screen capturing software. It is possible to take photographs of a computer screen with a camera or cellphone, but the image quality will suffer. Participants should practice taking screenshots with screen capturing software so they are prepared for the remote inspection. As previously mentioned, the person at the inspection location handling the camera should be moving slowly and providing a stable camera view. The text and images on labels and warnings should be viewed such that they are legible via a computer snapshot. Parties can agree to exchange on-site photographs and videos of the inspection to aid in the documentation of the investigation for the remote attendees. This should be detailed in the protocol.

Various complications and concerns arise when taking photographs during traditional investigations that experts are equipped to handle given their photography and camera experience; however, these complications may cause issues during a remote inspection if the person designated to take photographs or record video lacks the necessary experience. The following are some examples of issues that can arise while documenting an inspection or providing a web conference video feed using a camera:

- Quality of the captured photograph or video
- Artificial vs. natural lighting
- Tripods and stabilizers
- Multiple cameras



- Battery concerns
- Internet connection quality
- Resolution of computer screens

When questions arise during the inspection, it should be determined whether to filter them through a chat function or allow individual parties to audibly ask their questions. Question intake via a chat function will allow questions and conversations to be documented and preserved

Benefits of Use

Organizations and industries can recognize a number of benefits when utilizing remote inspection technologies and procedures.

- Many corporate, governmental, and personal travel restrictions can be accommodated via remote inspection by allowing attendees to participate without having to violate any local regulations.

- Remote inspections can provide a cost-efficient alternative for one or more of the attending parties by reducing fees and costs associated with travel.
- In addition to saving on costs, remote inspections provide flexible scheduling and are inherently more efficient because the time required for travel is minimized or eliminated.
- Remote inspections can allow for multiple interested parties to participate in the inspection at the same time, despite potential social distancing requirements.
- Remote inspections also allow easy access to a variety of off-site expertise and knowledge resources. Web conferencing technology allows a supplemental expert to easily join a remote inspection, direct locally present experts to collect information, and perform a remote investigation in real-time. This provides efficient data collection and reduces the need for additional inspections in the future.
- As a result of the reduced number of attendees physically present, the likelihood of evidence spoliation is minimized because fewer people are interacting with the evidence.

- Any potential exposure to on-site hazards or health risks is also eliminated for remote inspection attendees and lessened for on-site attendees due to the reduced number of participants physically present.

It is important to keep in mind that remote inspections are not intended to completely replace traditional investigative methods. There are many significant benefits to in-person inspections, however, without knowing when pandemic-related regulations and guidelines will be relaxed, it can be far more important to proceed virtually than to delay indefinitely depending upon the situation. Trials and litigative processes are being postponed, which is increasing the time, effort, and money required to obtain resolution. The workflow for litigative, insurance, and investigative entities is being interrupted. With information and guidance changing daily, the operational status of not only businesses, but federal and state courts is in constant flux. Similarly, juror availability, participation, and travel restrictions are unknown. Remote inspections provide an opportunity to gather important information that could drive a case to resolution or early settlement well before a postponed trial date.

Summary

There is a critical need for the ability to implement remote inspections. Science is advancing at an unprecedented pace, and researchers are working collaboratively in extraordinary numbers across institutions and corporations to tackle complex scientific concerns. Companies are transforming at lightning speed. Some of these changes are temporary, but many are here to stay. The advancement and use of technology coupled with the continued evolution and development of universal standards will foster the acceptance of these remote inspection methods. The adoption of technology utilized in remote inspections, applied appropriately, can provide many advantages to claims professionals, attorneys, and experts, including conserving time, minimizing financial costs, preserving and evaluating evidence while moving matters to conclusion.

About the Authors



Troy Graham works as a Mechanical Consultant and Certified Fire and Explosion Investigator (CFEI) at S-E-A. He has worked on matters including industrial and/or commercial machinery, heavy equipment, motor vehicles, retail products, and other various mechanical systems. As part of his mechanical and fire investigations, he analyzes the design, operation, safeguarding, applicable standards, and failure modes of products, utilizing engineering principles and techniques, including design analysis, failure analysis, physical testing, and finite element analysis (FEA) simulations.



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