



2019 Construction Conference
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Smart Building Technology – Is it The New Trend in Construction Defect Litigation?

I. Concerns and Questions with Smart Building Technology/ Planning for future technology failures in the Construction Industry

1a. What Lies Ahead?

New Technologies:

New building technologies are surfacing - smart and advanced structural components, building envelope, energy and water management, data collecting building and HVAC controls, security, facility management systems, advanced sensor use and smart phone/multi-media interface with users as well as self-repairing concrete/moisture-resistant concrete additives, autonomous robot facility managers and 3D building component printing.

Example Buildings:

To see the future of these technologies in construction, we can look toward our European counterparts, in particular, Amsterdam - The Edge is the greenest building in the world and uses 28,000 sensors throughout the building for light, motion, temperature, and humidity control as well as infrared sensors allowing wireless flat screens throughout the building to be synced to user smart phones, robot security patrol, and smart technology in bathrooms. These technologies offer advancements useful in building marketability, energy savings and building longevity.

<https://www.bloomberg.com/features/2015-the-edge-the-worlds-greenest-building>

To a lesser degree, PNC Plaza in Pittsburgh which includes numerous sustainable attributes such as an operable double-skin facade, an onsite grey water reuse system, and heating and cooling systems to operate in a "net-zero-energy state" up to 30% of the year.

<http://www.skyscrapercenter.com/building/the-tower-at-pnc-plaza/14069>

1b. *How are end-users affected?*

After the initial development and construction, facility management, tenants and end-users are tasked with operating and maintaining these technology-filled smart buildings. Turnover of the building will require further IT integration into the Operations and Maintenance process and required advanced technological skills and knowledge beyond abilities of many traditional facilities management staffs. Continuing education on software updates and planned system maintenance is a must. (How many *older* buildings exist right now with fire alarm or HVAC warnings that go un-analyzed?)

1c. *Issues that may occur:*

As technologies multiply, malfunctions leading to personal injury or property damage multiply as well and can occur, including attacks from outside sources, prescribed building materials do not match the planned performance, building material manufacturers go out of business equating to lack of ability to replace damaged components, personal security becomes compromised from non-working smart lights and sensors, motion sensors, elevators and escalators all compounded from the lack of human security personnel.

Furthermore, security and privacy hacks can compromise patient data at hospitals, students at universities, software and sensor failures disabling use of space and down time for businesses and loss of use, property damage from water intrusion system failures, interface and cooperation between multiple systems and failures of any that rely on related systems.

Current common issues include temperature sensor failures causing freeze events resulting in water damage (polar vortex), gate sensors causing injury and vehicle damages - Boeing 737 and Tesla to pilot come to mind.

The amount of control an end user has over smart devices' features and controls further complicates product liability cases. While a mechanical or design flaw may remain easy to spot, questions of comparative or contributory negligence will likely compound when a user has the option to exert greater control and reason to do so but does not exploit it. Comparative or contributory negligence issues arise.

1d. *What happens when an issue occurs?*

Risks are part of any building construction and management. These risks are magnified as buildings become more and more complicated.

Regardless of advancements in the building technologies, failures and misuse will happen which may result in property damage or injuries.

Many smart technologies may be smarter than the end users, the handoff from multiple parties such as may blur the line of guarantee obligations, and lack of sound continued training can cause potential issues between the providers and users of these smart technologies.

Once a failure does occur, one of the first issues that an attorney must take on is to determine what is wrong, the cause, liability and defendants in the case, and damage mitigation. This series of tasks may be too specialized for some attorneys. To ascertain this information may be very difficult understanding the roles and relationships between the different parties – building owners, facility management groups (71% of total building lifespan costs are associated with operations), end users, tenants, manufacturers, suppliers, general and specialty contractors and installers, programmers and software designers.

Furthermore, insurance coverages are further stressed with potential issues including available coverages, best practices for investigating causation and liability. Expert retention may need to include software design and networking expertise. Experts will need to be able to communicate clearly to a jury, helping them understand how the smart device in question is meant to work, what went wrong, and how it might have gone differently. Finding these experts may be a challenge in itself - will these experts be available and current in the market?

II. Given the complex nature of these technologies, how can insurers and insureds protect themselves?

Send lawyers, guns and money,
Get me out of this, hiyah...

Warren Zevon (1978)

The course of action proposed in Mr. Zevon’s lyrics is bit extreme. Smart building claims merit an equally smart response. Developing an understanding of and implementing the following principles will great assist carriers and their clients in dealing with smart building claims.

1a. Legal Considerations for Securing Information and Data

Preservation Notices

When faced with a claim involving a smart buildings where critical evidence may be altered or destroyed, a timely preservation notice should be sent to all parties involved. The letter need not be long or complicated. Rather it should be simple, direct and to the point. The recipient should be placed on notice that the electronic data and evidence should be preserved. The notice should inform the recipient that if the data is not preserved, he or she may face a claim of spoliation.

Restraining Orders

If you learn that data is about to be destroyed and that data is critical to your case, a motion seeking a restraining order may be filed. The motion should be done via an emergency basis and the opposing party should be given notice. A preservation notice should also be served. It has the added benefit of court’s oversight. However, timely access to the court can be an issue.

Subpoena Duces Tecum

A subpoena duces tecum is a writ issued by a court through counsel to compel production of evidence by a witness under penalty for failure. The requests for items must be specifically spelled out and a witness has a right to object.

Rules of Evidence Regarding Admissibility

Simply stated the rules surrounding the admissibility of evidence are to make sure that the evidence placed before a jury is reliable. Today, eyewitness testimony can be enhanced, corroborated or refuted by a technical data that comes in a myriad of forms: security data, systems data, cell phone recordings, GPS data, emails, text messages, comments on social media sites and even Twitter. How then is a Judge supposed to deal with newly developed types of evidence that did not exist when the rules of evidence were formulated? The answer is that Judge will require that the party offering evidence lay a foundation which shows that the evidence is reliable before it is placed before the trier of fact.

The first step in establishing the proper foundation is authenticate the data. That is, the proponent must show that the evidence is what it is represented to be. For example, a witness may testify that she is familiar with the image taken from a drone and identify the items shown in the imagery. The evidence must also be relevant. That is, it must have a tendency to either prove or disprove a fact at issue in the case. Note that the evidence must not contain hearsay which is an out of court statement offered to prove the truth of the matter asserted. If the aforementioned drone imagery contained a soundtrack, the Judge may allow the image but preclude the statements that go along with the image. That is, allow the video to play with the sound turned down. Finally, the probative value of the evidence must outweigh any prejudicial effect.

Spoliation

The most critical aspect of any successful investigation is the preservation of evidence for use at trial. In *Landry v. Charlotte Motors Cars, LLC*, District Court of Appeal of Florida, Second District, 2017, the Court reiterated the severe sanctions for spoliation of evidence: "Generally speaking, sanctions may be appropriate when a party has spoliated, lost, or misplaced evidence. *League of Women Voters of Fla. v. Detzner*, 172 So. 3d 363, 391 (Fla. 2015). Spoliation is defined as "[t]he destruction, or significant and meaningful alteration of [evidence]," *Vega v. CSCS Int'l, N.V.*, 795 So. 2d 164, 167 n.2 (Fla. 3d DCA 2001) (quoting *Black's Law Dictionary* 728 (5th ed. 1983)); or "the failure to preserve property for another's use as evidence in pending" or reasonably foreseeable litigation, *id.* (quoting Jay E. Rivlin, Note, *Recognizing an Independent Tort Action Will Spoil a Spoliator's Splendor*, 26 *Hofstra L.Rev.* 1003, 1004 (1998)). See also *Aldrich v. Roche Biomedical Labs., Inc.*, 737 So. 2d 1124, 1125 (Fla. 5th DCA 1999) (similar definition); Spoliation, *Black's Law Dictionary* 1620 (10th ed. 2014) (defining spoliation as "[t]he intentional destruction, mutilation, alteration, or concealment of evidence"). Evidence is deemed "lost" when it is "beyond the possession and custody of its owner and not locatable by diligent search." *Lost*, *Black's Law Dictionary* 1089 (10th ed. 2014).

To guard against spoliation, ensure that your experts carefully observe legal protocols concerning the preservation of evidence and data when removing evidence for the scene, and during subsequent storage and testing. Written agreements should be obtained among all potentially interested parties whenever feasible prior alteration of evidence (including removal from scene). Obtain a court protective order when agreement cannot be reached. Consult with legal counsel and your experts early on about this crucial issue - the credibility of your expert testimony can be weakened or destroyed by the mishandling of evidence.

Legal Issue Summary

Carriers and insureds can best protect themselves by adhering to the following practical pointers:

- Put together the right team upon the notice of a claim;
- Consider retaining experts early on to guide investigation and weigh in on discovery and assist in the development of a theme;
- Be thorough in your investigation and document retention practices;
- Be thorough in obtaining security and system data held by others- your experts will need them;
- Be sure to provide your expert with all relevant data to protect him or her on cross examination.;
- Communicate early and often to avoid spoliation; and
- Finally, make sure that all portions of the piece of evidence to be shown to the jury have proper foundations.