VAISALA

Vaisala STRIKEnet® and STRIKEfax® Lightning Verification Reports

Objective lightning verification
for claims adjusters and investigators

Lightning's Impact on the Insurance Industry

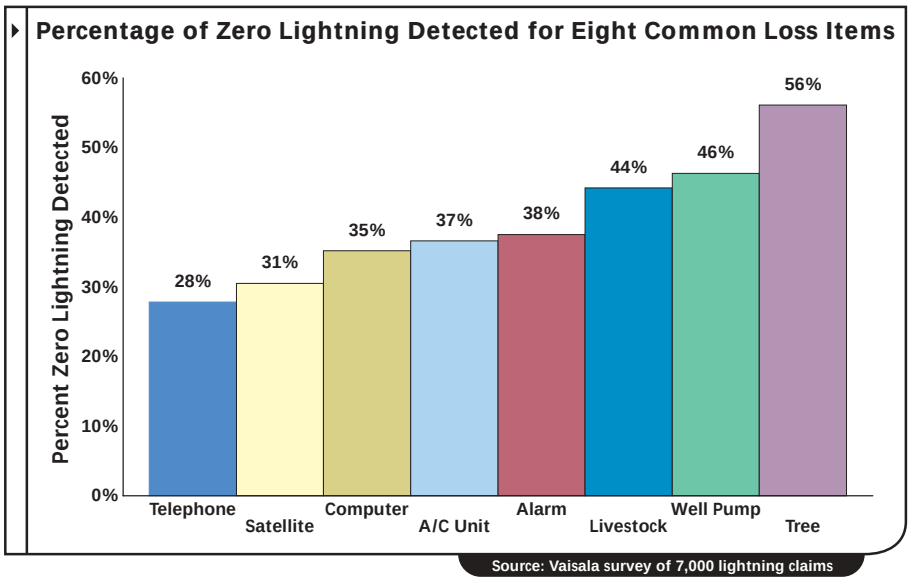
Every year, lightning causes billions of dollars in economic losses from power and communications outages, wildland and building fires, and damage to property, aircraft, and sensitive electronics.

The insurance industry is among those industries most affected by the financial consequences of lightning. A research study published in 1994 by NOAA's National Severe Storms Laboratory found that one lightning-related claim was filed for every 57 lightning flashes and lightning claims then averaged $916.

Today, companies ranked among Standard & Poor's top 100 U.S. home-owners insurance companies report average lightning claims paid range from $1,364 to $2,336.

Individual lightning claims add up fast. One top 10 property and casualty insurance company reported it paid out $1.7 billion—8.7 percent of its total claims and 3.8 percent of dollar losses—in lightning claims during a 5-year period from 1992 to 1996.

Thousands of lightning claims verified by Vaisala STRIKEfax® and STRIKEnet® since 1995 have shown that approximately one-third of lightning claims did not involve lightning on the date of loss.



Rely on the Latest Lightning Location Technology for Objective Claim Verification

Yesterday's lightning investigation methods—lightning affidavits, generic weather reports, or on-site physical inspection of a very complex weather event—are being enhanced by proven, leading-edge technology. Traditional investigation methods without lightning verification reports are very subjective because they are too general or rely too heavily on human interpretation.

Lightning verification reports are the most scientific and objective tool available to verify the presence or absence of lightning at a specific location, date, and time.

Thousands of lightning claims verified by Vaisala STRIKEfax and STRIKEnet since 1995 have shown that approximately one-third of lightning claims did not involve lightning on the date of loss.

Lightning verification reports help control costs by reducing on-site inspections and streamlining the claim verification process. All of the top 10 property and casualty insurance companies now use lightning verification reports in their claims handling process.

Vaisala STRIKEnet and STRIKEfax reports provide:

- Objective, cost-effective, accurate lightning claim verification tool
- Verification of the presence or absence of lightning strikes
- Efficient and timely claim processing
- More than 99 percent storm detection efficiency—less than one percent chance of missing a storm with lightning activity
- Location and time-specific reports
- Better client communication and customer service when report results are shared with the claimant
- Price breaks when report "rerun" is needed to correct the original estimated time or location
- Lightning location data from the U.S. National Lightning Detection Network® or Canadian Lightning Detection Network
- Legal resource: NLDN data has been accepted and upheld in all known U.S. court cases

Lightning Information Tools for Claims Adjusters and Investigators

Vaisala STRIKEnet® is an online lightning verification report that objectively and accurately reports individual cloud-to-ground lightning strikes at a specific location on the date of loss. STRIKEnet is available 24/7. Customers can view their reports online in 1-2 minutes. Lightning data source is the U.S. National Lightning Detection Network®.

Vaisala STRIKEnet® basic, 5-mile (8-km) report contains:

- Text summary of lightning strikes surrounding a given location and one 24-hour time period

Optional reports include:

- Street-detail lightning location map
- Detailed text printout of the lightning strikes
- Confidence ellipse map to illustrate lightning strike location accuracy

Vaisala FaultFinder® is a more detailed forensic analysis report used by power companies, facilities managers, arson investigators, insurance claims adjusters, and legal professionals to correlate recorded power outages, property damage, or equipment damage with actual lightning events. Historic lightning data source is the U.S. National Lightning Detection Network® or the Canadian Lightning Detection Network.

Vaisala FaultFinder® report contains:

- Report summary
- Comprehensive lightning location map with the specified reference point
- ASCII printout of lightning strike data

Vaisala STRIKEfax® is the offline version of STRIKEnet that is ordered and delivered by fax. Turnaround time is 24 hours during regular business hours. Lightning data sources are the U.S. National Lightning Detection Network® and Canadian Lightning Detection Network.

Vaisala STRIKEfax® basic, 5-mile (8-km) report contains:

- Text summary of lightning strikes surrounding a given location and one 24-hour time period

Optional reports include:

- Lightning location map
- Detailed text printout of the lightning strikes

Vaisala Lightning 101 is an educational seminar for insurance professionals and arson investigators presented by Vaisala at various locations around the country. This two-hour seminar covers lightning science, safety and protection, detection, damage, claims, and statistics. Continuing education credits for insurance agents available in some states. Non-credit Lightning 101 Online will be available in Spring 2003.

Visit www.lightningstorm.com/101 for more information on the traditional and online seminars.

Special Corporate Programs for high-volume customers are available. Contact us at 1 800 283 4557 or claims@lightningstorm.com for more information.

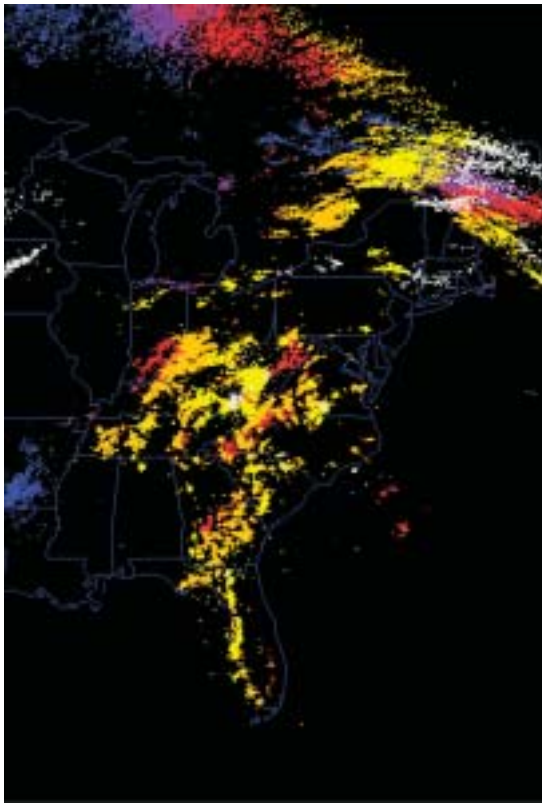


Image shows 24 hours of lightning data across the Eastern U.S. from the Vaisala U.S. National Lightning Detection Network®

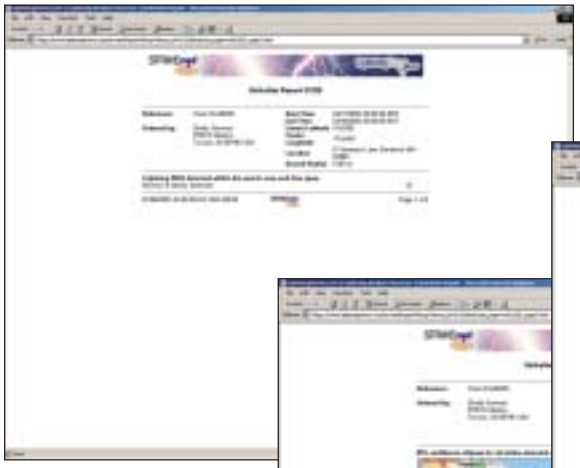
To find out more, visit www.lightningstorm.com/insurance

Was it really lightning?
Find out with Vaisala STRIKEnet® or STRIKEfax®

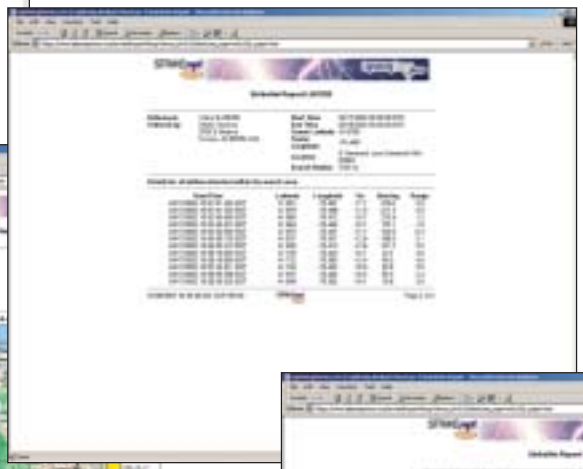
Vaisala STRIKEnet and STRIKEfax reports are used by:

- Insurance adjusters
- Fire and arson investigators
- Forensic and scientific investigators
- Engineering consultants
- Fraud investigators
- Legal professionals
- Law enforcement officers
- Special investigation units

Vaisala STRIKEnet Basic Report



Vaisala STRIKEnet Strike Details Report



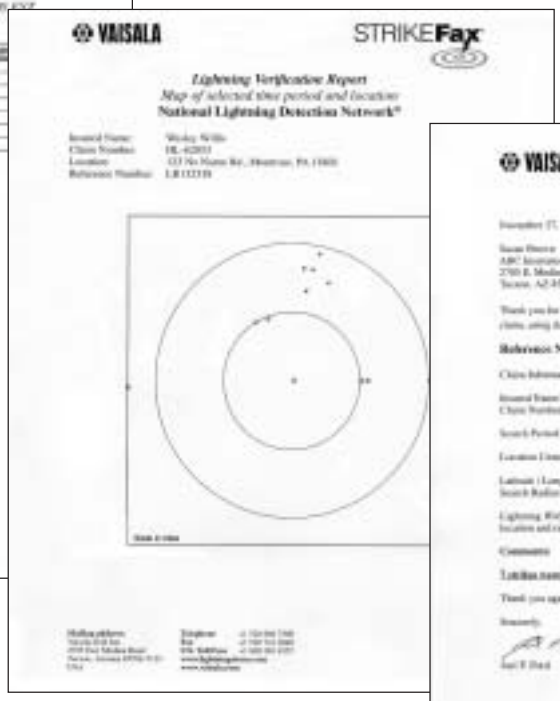
Vaisala STRIKEnet Confidence Ellipse Map

Vaisala STRIKEnet Location Map

Vaisala STRIKEnet®

Vaisala STRIKEfax®

Vaisala STRIKEfax Strike Details Report



Vaisala STRIKEfax Location Map

Vaisala STRIKEfax Basic Report

Vaisala STRIKEnet and STRIKEfax Comparison

	STRIKEnet	STRIKEfax
Availability	24 hours a day, 7 days a week	Monday-Friday, 7:30 am-4:30 pm MST
Delivery	View online within 1 to 2 minutes	Faxed within 24 hours
Customer Support	Via e-mail	Monday-Friday, 7:30 am-4:30 pm MST
Basic 5-mile Report Price	$95 first 24-hour increment	$95 first 24-hour increment
Available Options	Lightning Plot and Area Map Lightning Strike Data Confidence Ellipses	Lightning Plot Map Lightning Strike Data
Report "Rerun" Available	Yes	Yes
Time Period to Rerun	Within 35 days of original report	Unlimited
Coverage	Continental U.S.	Continental U.S. and Canada
Lightning data available since	January 1, 1998-current	September 1, 1996-current
Data Source	NLDN® and CLDN stroke data	
Legality	NLDN® data has been upheld in all known U.S. court challenges	
Net 30 Billing	Available with prior approval	

Frequently Asked Questions

Q: How accurate are Vaisala STRIKEnet and STRIKEfax reports?

A: Accuracy can be measured in terms of storm detection efficiency. The storm detection efficiency of detecting the presence or absence of lightning within a 5-mile search radius on any date since 1995 is 99.03 percent—that's less than one percent chance of missing a storm. This high storm detection efficiency is derived from the NLDN and CLDN (which combined create the North American Lightning Detection Network) recording eight to nine of out every 10 cloud-to-ground lightning flashes. Storm detection efficiency reached 99.03 percent after a major upgrade of the NLDN was completed in 1994.

Q: Can lightning cause damage without directly striking the location of loss?

A: Yes, due to the intense power of a lightning strike, currents can be carried hundreds or thousands of yards, depending on the conducting surfaces. Electric utility, telephone and plumbing lines are widely recognized conductors for carrying surges into facilities.

Q: What does a report with ZERO strikes detected mean?

A: There was no cloud-to-ground lightning in the search radius. A zero strike report is issued only when Vaisala can conclusively state no lightning was detected. Before a lightning verification is issued, our automated quality assurance program conducts a full analysis of the data—checking the condition of the network and the status of the lightning detection sensors. In addition, the accuracy of lightning activity plotted just outside the search area is examined to rule out the possibility of outlying strikes occurring within the area of interest. In rare cases, a request will not pass the quality assurance analysis. When this occurs, a letter is issued indicating that a definitive lightning verification report cannot be provided, and there is no charge for the report.

Q: What if the insured changes the date of loss after I have received the report?

A. If the date of loss changes after a report is produced, you can order a "rerun" of the original report. To keep your total cost to a minimum, the rerun is billed at a lower rate. The reference number of the original report must be provided when ordering a rerun.

Q: What if the insured is certain he or she saw lightning or heard thunder but the report shows zero strikes?

A: Based on 99.03 percent storm detection efficiency and our automated quality assurance, there is less than one percent chance that cloud-to-ground lightning activity within a 5-mile search radius could be missed. It is most likely that the claimant observed intra-cloud, cloud-to-cloud, or cloud-to-air lightning, all of which produce thunder and a flash but do not reach the ground and do not cause damage. These types of lightning—generally called cloud lightning—are the most common type of lightning.

Q: What if this claim goes to court?

A: Lightning verification reports based on NLDN data have been accepted and upheld in all known U.S. court cases. In the event that a lightning claim does go to trial, Vaisala can recommend several of the world's leading lightning physicists as consultants. These experts are available for phone consultations, depositions, and court appearances. Call us for contact information for lightning experts.

Q: Are lightning verification reports available for any area in North America?

A: Full coverage for the continental United States (excludes Alaska and Hawaii) began in 1989 and coverage extended to Canada in 1998.

Q: Are there other sources of lightning verification?

A: The NLDN and CLDN are the only national lightning detection networks in North America that detect and record lightning strikes individually, providing lightning information specific to the time and area around the location of loss for each individual claim. These lightning reports are available directly through Vaisala or an authorized distribution partner. Other sources of information provide only general weather conditions rather than actual lightning strikes detected.

About Vaisala

The Vaisala Group is a successful international technology company that develops and manufactures electronic measurement systems and equipment for meteorology, environmental sciences, traffic safety, and industry.

One of Vaisala's recognized areas of expertise is lightning. Vaisala is the largest provider of lightning detection equipment and lightning data services in the world. Vaisala owns and operates the U.S. National Lightning Detection Network®. A wide customer base of lightning-sensitive industries—to whom early thunderstorm warning and post-storm analysis are crucial—use Vaisala lightning warning, tracking, mapping, and analysis systems and services to save lives, protect property and reduce economic losses caused by lightning.

Vaisala's lightning-specialty division, Vaisala Thunderstorm Business Unit, has operations in Tucson, Arizona, and Aix-en-Provence, France.

For more information about Vaisala Tucson Operations, visit www.lightningstorm.com/about or www.vaisala.com for more information on Vaisala

Vaisala U.S. National Lightning Detection Network®

The U.S. National Lightning Detection Network, owned and operated by Vaisala, is the only lightning information system monitoring lightning activity across the continental United States, 24 hours a day, 365 days a year.

Weather forecasters at the National Weather Service, NASA, FAA, other government agencies, power utilities, airports and businesses nationwide rely on real-time lightning maps and individual lightning stroke characteristics from the NLDN® to closely monitor thunderstorm development, strength, and paths for more accurate severe weather forecasting and issuing warnings.

Since 1989, the NLDN has detected and reported more than 20 million cloud-to-ground lightning flashes that occur every year, creating a comprehensive archive of lightning data used for statistical and forensic analysis.

For more information, visit www.lightningstorm.com/NLDN

VAISALA

Vaisala Inc.
Tucson Operations
2705 E. Medina Road
Tucson, AZ 85706, USA
www.lightningstorm.com
Tel. +1 520 806 7300
Fax +1 520 741 2848
thunderstorm.sales@vaisala.com

Vaisala Oyj
P.O. Box 26
FIN-00421 Helsinki
Finland
Tel. +358 9 894 91
Fax +358 9 8949 2227

For more detailed contact information and for other Vaisala locations visit us at: www.vaisala.com