

Vaisala FALLS® 5.0 Fault Analysis and Lightning Location System



Prioritize your analyses on the fly using the FALLS® 5.0 Analysis queue. The ability to explore an analysis while others run in the background will improve your productivity.

Vaisala FALLS® 5.0 is an innovative software used by electricity utilities to query previously recorded lightning information in a GIS (geographic information systems) environment.

The Vaisala FALLS® 5.0 software generates lightning information into maps, graphs, and statistical tables, and is used to analyze the impact of lightning on assets and systems. Whether you are investigating suspected lightning-caused faults or are studying the climate of your service territory, Vaisala FALLS® 5.0 provides an easy-to-use platform to quantify and prioritize recommended protection investments.

Electric utility power package

Vaisala has now made it easier than ever for U.S. and Canadian customers to gain access to the FALLS® services you depend on to minimize the risk lightning poses to your operations. Partner with Vaisala for your historic and real-time lightning data access, automated lightning fault correlation, and continuing education to keep your organization ahead of the storm. Vaisala offers customers access to the following options:

- Subscription to Vaisala FALLS® Lightning Data for your service territory
- FALLS® 5.0 and FALLS® Server Software support and upgrades

Features/Benefits

- Easy-to-use interface
- GIS (geographic information systems) functionality
- Automatically generated maps save time
- Automated processing of prioritized and queued analyses
- Execute other tasks while the analyses run in the background
- Easy interpretation of lightning data, using color, time, polarity and amplitude codes
- Filter out unwanted lightning data
- The user can automate analyses by setting the start and end dates, and inserting other criteria

- Priority access to the FALLS® Users Group and Vaisala Webinars on special topics of interest
- Preferred discounts for real-time lightning data access with Vaisala's partners

Lightning data source

- North American customers have access to Vaisala's U.S. National Lightning Detection Network® and the Canadian Lightning Detection Network, which together create the most comprehensive historic lightning database in the world
- International customers and private Vaisala lightning detection network owners can access data from any Vaisala central processor or archive processor

Technical data

Regional analysis

A Regional Analysis generates regional and local lightning strike occurrences and/or densities for user-specified time periods. It is used to identify hot spots for lightning activity, compare variations in lightning occurrence, amplitude, and polarity across days, weeks, months, or years and statistically verify the expected amounts of lightning activity in your service territory.

Exposure analysis

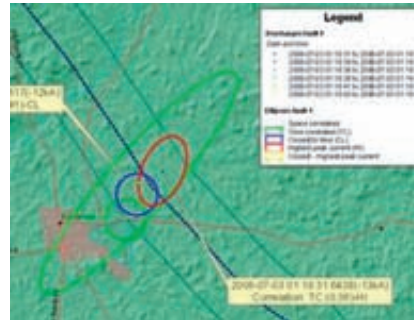
An Exposure Analysis offers point-by-point and/or gridded analysis resolving the amount and type of lightning activity within user-defined asset buffer regions. It plots time trends of lightning over your service territory and/or assets, ranks assets by the amount and intensity of lightning exposure and discriminates by polarity and amplitude around user-defined asset buffers.

Reliability analysis

A Reliability Analysis maps event-specific lightning analysis in near real-time. It locates poorly performing line segments or system weaknesses, validates your lightning protection design and correlates your line faults to lightning activity or a lack of lightning activity.



This FALLS® 5.0 Reliability Analysis reveals four cloud-to-ground lightning discharges which correlated to a suspected fault. The blue ellipse represents the stroke that best matches the fault recorder time-stamp and the red ellipse shows the highest peak current event. Field crews could be dispatched to the location to restore service.



FALLS® 5.0 allows the user to display and discriminate lightning discharges by their time of occurrence. The map displayed above for December 3rd and 4th, 2008 shows a line of thunderstorms in the U.S. Gulf coast that tracked to the northeast.



An example of a FALLS® 5.0 Exposure Analysis for a transmission circuit in eastern Ohio. Areas of higher lightning activity are revealed. This information can help an electric utility to prioritize protection or maintenance.

Computer requirements

Processor Minimum:	1.6 GHz Intel Pentium 4, Intel Xeon, Intel Core Duo, or AMD Athlon equivalent
Operating System:	Windows XP SP2
RAM:	Recommended - 2 GB or higher, Minimum - 1 GB
Hard Disk:	850 MB for install, up to 50 MB of disk space may be needed in the Windows System directory (typically C:\\Windows\\System32), 3 GB of available space to be allocated for swap, temporary files, and saved analyses
Display Card	24-bit capable graphics accelerator card
Screen Resolution	
Recommended	1280 x 1024, 32-bit color,
Minimum	1024 x 768, 32-bit color
Browser	
Recommended	Microsoft Internet Explorer 6.0 or 7.0
Other	
Recommended	
Minimum	DVD-ROM drive

Vaisala Inc. Tucson Operations, 2705 E. Medina Road, Tucson, AZ 85756, USA,
Tel: +1 520 806 7300, Fax: +1 520 741 2848



For more information, visit www.vaisala.com or contact us at sales@vaisala.com

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