Vaisala entered the weather radar business in 2006. Through its acquisition of Sigmet and the development of its own technology, Vaisala has quickly become the leading provider of C-band weather radars. Vaisala’s technology can be found in most weather radars throughout the world.

Vaisala recently introduced the new IRIS Focus Weather Radar Software. With the goal of reducing complexities and delivering a user-friendly experience, the modern look of IRIS Focus and the rich set of tools it provides enable meteorologists to view and analyze their weather radar data like never before.

In 2013, Vaisala began developing its third major modernization project of the IRIS Weather Radar Software. In recognition of the need to put powerful, easy-to-use analysis tools into the hands of meteorologists.

This development project had four main goals:

- Improve usability to provide the same type of experience you, our customers, have come to expect from any number of the modern applications you use on a daily basis.
- Reduce complexity so the interface is simple and easy to understand.
- Speed up development time now and in the future by using common third-party open source modules, such as geographic information systems.
- Test and audit IRIS Focus using the latest information security standards via the use of third-party security firms.

As a result of the development work, better graphics display and data processing capabilities, and leading data quality and accuracy, the IRIS Focus Weather Radar Software raised the bar for analyzing weather radar data. IRIS Focus gives customers many new ways to experience and analyze their weather radar data for better understanding and quicker decision making.

Putting Customer Needs First

With the primary goal of removing the obstacles that make the system difficult to use, the development team devoted considerable time to learning how customers actually used the software so they could.
reduce complexity and provide meteorologists with an effective tool that requires little to no training.

Interactive tutorials provide users with information on how to use certain features. Also, context-sensitive help and tool tips provide additional assistance throughout the program. The user interface, including the help features, can be displayed in four languages: English, Russian, Spanish, and Portuguese.

Analyze Data Faster

Part of what makes IRIS Focus a step above current offerings in weather radar software is the display options and the opportunity for users to see more data from one screen. IRIS Focus allows customers the possibility to view and animate up to four different radar products within the same window. Multiple data points can be layered, such as radar reflectivity and radial velocity, on one map. Also, non-map data can be displayed side by side with mapped data. Using the zoom function will regenerate data at the highest resolution possible for the screen size, helping customers to see the finer details.

Understand Storms to Make Better Decisions

Weather radar data are critical components of weather forecasts, as well as accurate precipitation estimates and classification. Vaisala has been a pioneer in developing dual polarization C-band weather radar technology and the algorithms that produce higher quality and more reliable data. IRIS Focus enables meteorologists to dig deeper into their data in the least amount of time, with display and analysis tools that enable better understanding of storm movements and structures.

Using the storm tracking tool, users can mark the location of a storm at different points in time to help project its future movements. With this tool, users have the ability to compute rate, time, and distance equations. To help understand the three-dimensional area of a storm and its evolution in time, the cross-section tool allows users to see data at different altitudes with respect to other data points, which is especially helpful when looking at curved phenomena such as frontal boundaries.

With IRIS Focus, observations can also be extended for better awareness of convective storms beyond the radar range. For example, weather data outside of the range of the radar, such as lightning data from Vaisala’s Global Lightning Dataset GLD360 can be layered. Combining these tools into one easy-to-use system allows users to maximize the value of all their weather data and create better forecasts.

Built on a Common Web-Based Platform

One of the common expectations these days is that the tools, data, and applications needed for work can be accessed anywhere using just a web browser. With this convenience comes the inevitable need to protect the data, using the most up-to-date security protocols. IRIS Focus allows users to access their data from anywhere, and easily and securely share their data with colleagues in other departments or outside of the agency.

IRIS Focus shares a common technology platform with Vaisala’s Thunderstorm Manager and the Vaisala AviMet® programs. This allows users to seamlessly transition between these applications without having to learn new navigation. In addition, the common software platform helps accelerate future development of next-generation systems, because, as new functionality comes available, it can be integrated into multiple applications.

IRIS Focus provides a new approach to working with weather radar data. From the simple and easy-to-understand interface to the multi-panel display and storm tracking tool, IRIS Focus has the tools customers need for faster analysis of their data and better understanding of storms. Ultimately, IRIS Focus enables users to experience more from weather radar data.