

# Weatherverse™ Sim from The Weather Company

## The challenge

Weather realism in military simulators is essential for preparing personnel for real-world operations. It helps ensure they can handle environmental challenges, make informed tactical decisions, and maintain operational effectiveness under all conditions.

But current weather simulation capabilities often aren't good enough. Frequently, the data used is synthetic only and, therefore, unable to authentically simulate actual conditions. Most existing tools also don't allow users to effectively conduct "what-if" weather scenarios, hindering their ability to prepare for sudden weather changes.

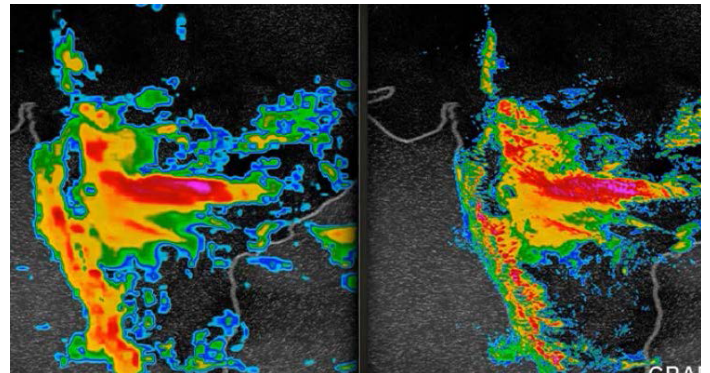
To improve operations and reduce sustainment costs, you need realistic weather data and visualizations for training and planning simulators.

## Key benefits

- **Unparalleled weather realism** by combining exceptional weather visualizations with accurate global high-resolution forecasts to better prepare trainees for the impact of weather on operations.
- **Probabilistic forecasts for risk reduction** to minimize equipment, financial, and human losses by enabling "what-if" weather scenario analysis for ground and air operations.
- **Low bandwidth utilization** using our unmatched data delivery technique while maintaining full data resolution.
- **Design of experiments** to enhance training and planning by storing weather data and enabling users to search for different weather situations to drive different weather simulations.

## The Weather Company

Using the latest models, including The Weather Company's proprietary global high-resolution atmospheric forecasting model (GRAF), Weatherverse Sim enables training and planning simulators to bring actual weather conditions from anywhere in the world into their synthetic environments at high resolution.



GRAF is a physics-based, high precision, rapidly-updating, global weather modeling system that can predict something as small as a thunderstorm virtually anywhere on the planet.

The first weather model to run on NVIDIA's GPU-accelerated supercomputer which enables increased resolution and update frequency, GRAF incorporates extensive atmospheric observations and employs machine-learning (AI) techniques to refine and optimize the model.

One such technique is JEDI data assimilation which allows for the rapid incorporation of additional data sets such as aircraft observations and cellphone pressure data. This resulted in GRAF forecast accuracy improvements up to 15%.

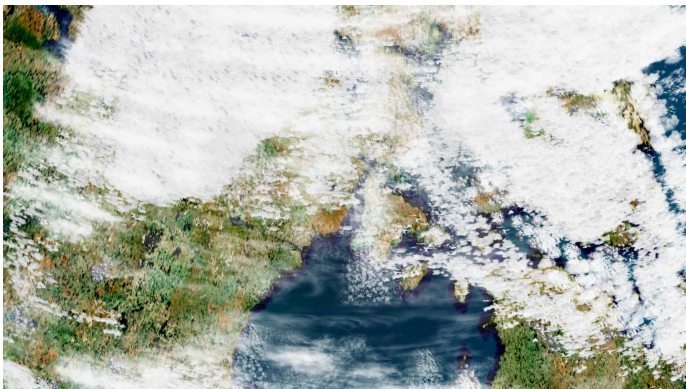
## Leveraging Unreal Engine for Superior Weather Simulations

Weathervers Sim utilizes the Unreal Engine combined with The Weather Company's visualizations to deliver highly detailed visual weather elements at both ground and sky levels. Offering unparalleled cloud, wind, precipitation, and turbulence visualizations, this technology provides personnel with imagery for improved decision-making.



## Real weather, real simulations, real results

Weathervers Sim delivers cutting-edge 3D visualizations of real-time weather conditions, including life-like clouds and precipitation, to enhance preparedness and improve outcomes. Use weather situations such as stronger wind, more rain, less cloud coverage and more to simulate countless combinations of conditions that personnel might face in the field.



The tool stores weather data and provides advanced search and playback capabilities so trainees can review and memorize countless weather scenarios and adjust future training sessions depending on what they might encounter during actual missions.



## Weather on the go

With Weathervers Sim's compact weather data that requires a fraction of bandwidth compared to competitive solutions, users have access to the solution even in bandwidth-limited areas.

Take your training and planning simulations to the next level. Contact us today at [weathercompany.com/contact/defense](https://weathercompany.com/contact/defense) to learn more about the Weathervers portfolio.

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DUNS Number: 09-519-9554  
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Weathervers Sim



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