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CES 2019: IBM unveils weather forecasting system, commercial quantum computer

IBM says the weather forecasting system is poised to help airlines minimize disruption and assist farmers with better preparing for weather changes.

BY ABRAR AL-HEETI | JANUARY 8, 2019 9:28 AM PST

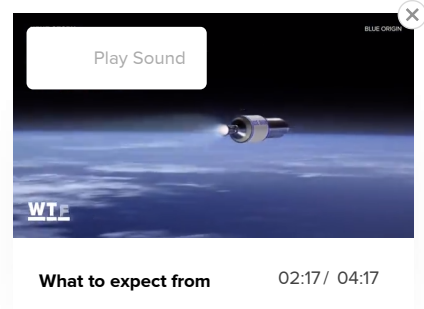


IBM CEO Ginni Rometty announces the company's new weather forecasting system at CES 2019.

Tyler Lizenby/CNET

IBM CEO Ginni Rometty unveiled on Tuesday a new global weather forecasting system designed to provide more accurate and timely forecasts around the world.

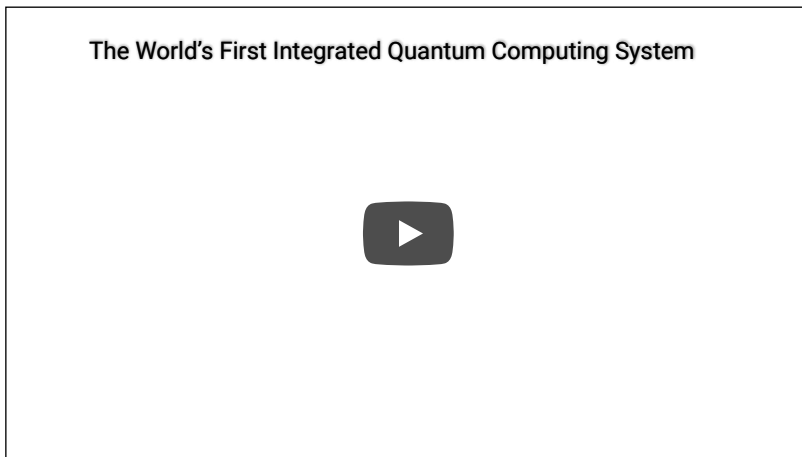
The IBM Global High-Resolution Atmospheric Forecasting System (GRAF), created with The Weather Company, a Big Blue subsidiary,



updates every hour and provides forecasts for smaller, more specific areas than are currently covered. GRAF uses IBM supercomputers to analyze crowdsourced and in-flight data from millions of sensors around the world. The system will be available later this year.

"If you're a farmer in Kenya, if you're a farmer in Kansas, you're going to get a way better weather prediction," Rometty said at at CES, the huge electronics show in Las Vegas.

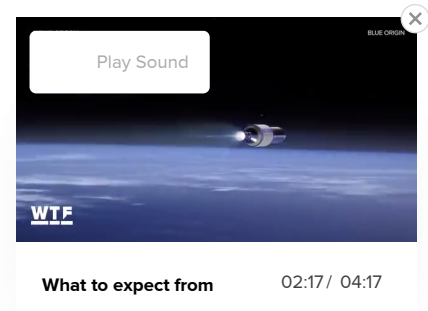
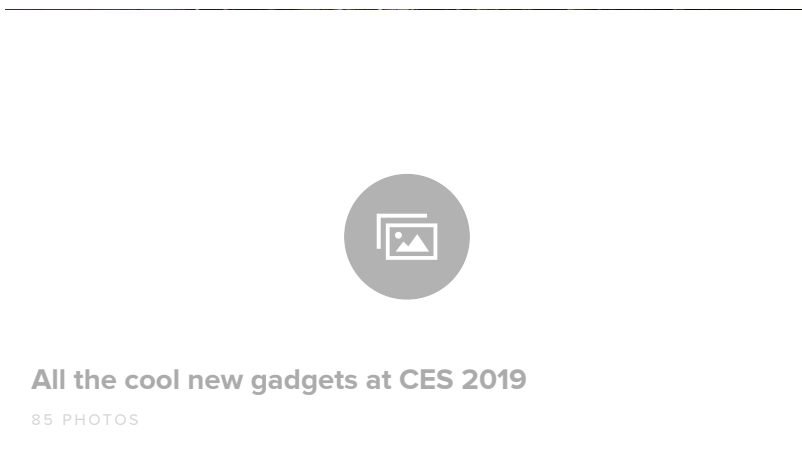
IBM also used the expo to unveil its Q System One, which it said is the world's first integrated quantum computing system for both scientific and commercial use. Quantum computing could one day be used to find new ways to model financial data, for example, or to optimize fleet operations for deliveries. IBM Q System One is significant because it can operate outside of research labs, where this kind of technology has traditionally occurred.



Improving weather forecasting

In many parts of the world, weather forecasts cover 12- to 15-kilometer expanses of land, meaning some weather phenomena might be missed. Traditional weather models also update every 6 to 12 hours. GRAF will address both issues, provide forecasts for smaller 3-square-kilometer areas and update hourly, IBM said.

GRAF's will also tap into data from aircraft sensors, IBM said, giving the system access to wind speed and temperature data in parts of the world that lack specialized weather equipment. People can also opt to share pressure readings from barometers in their phones, which will help improve the forecasts.



IBM will make forecasts from the system available globally later this year, it said. The information could be used to help airlines minimize disruption from turbulence or to assist farmers by preparing for major changes in weather.

Individuals will also be able to better prepare for the weather, IBM said. The Weather Channel app, weather.com, the Weather Underground app and wunderground.com will all incorporate the new forecasts. Businesses that use IBM services from The Weather Company can also access them.

IBM shared a handful of other announcements at its CES keynote. Here's everything the company talked about:

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In addition to unveiling the IBM Q System One, the company said it plans to open its first IBM Q Quantum Computation Center for commercial clients in Poughkeepsie, New York, this year. The center will have advanced cloud-based quantum computing systems, which members of the [IBM Q Network](#) -- made up of Fortune 500 companies, startups, academic institutions and national research labs -- will be able to access.

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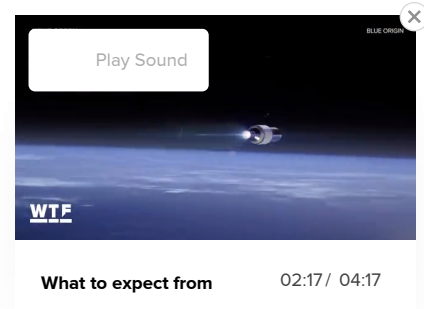
ExxonMobil and research labs, including the European Organization for Nuclear Research (CERN), Argonne, Fermilab and Lawrence Berkeley are joining the IBM Q Network, the tech giant said. The organizations will work with IBM scientists, engineers and consultants to explore how quantum computing can be used for specific industries. They'll also look for ways quantum computers can more efficiently solve real-world problems, such as optimizing a country's power grid or advancing scientific understanding of the universe.

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IBM received a record 9,100 patents in 2018, the company said. It had the most artificial intelligence, cloud computing, security and quantum computing-related patent grants in the industry, it noted. Last year, IBM inventors were granted 1,600 AI patents.

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A patent was also granted for the tech behind [Project Debater](#), an AI system that can debate humans on complex topics. IBM inventors patented a way to use machine learning to find evidence that can support or counter a claim.



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The Consumer Technology Association (CTA) and IBM shared the launch of the CTA Apprenticeship Coalition, which aims to create thousands of apprenticeships in 20 US states. The goal is to help close the skills gap companies often face when hiring new employees. IBM says it'll add at least 450 apprenticeships each year for the next five years. The CTA Apprenticeship Coalition offers more than 15 different apprenticeship roles in fields like software engineering, data science and analytics, and cybersecurity. The apprenticeships are also designed to help people with or without college degrees to work in various areas of tech.

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IBM published research in Scientific Reports last month about a "fingernail sensor" prototype that can help monitor a person's health. The wireless device measures how a person's nail bends and moves, which can help indicate their grip strength -- a useful metric for many health issues. Grip strength has been linked with the effectiveness of medication for people with Parkinson's, a person's cardiovascular health and the level of cognitive function in people with schizophrenia. Skin-based sensors can cause problems for older people with delicate skin, including infection. A fingernail sensor circumvents this problem.

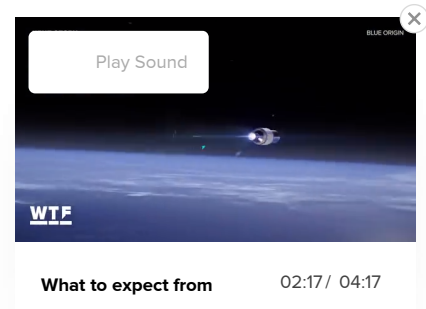
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IBM is partnering with the Michael J. Fox Foundation for Parkinson's Research, which is sharing anonymous data it has on Parkinson's patients. The partnership aims to expand IBM's work to understand and track the disease. Last year, IBM published research on how AI and machine learning can better detect changes in a person's speech, which could indicate the progression of Parkinson's.

Correction, Jan. 8, 10:04 a.m. PT: Fixes a typo in the headline.

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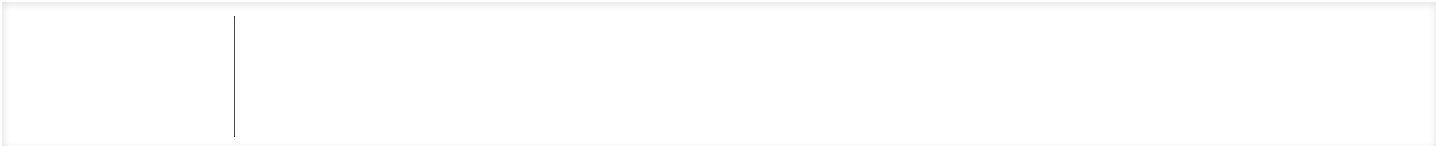
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