The Weather Company
An IBM Business

IBM

Weather Content Production

National Forecast — 10:00 AM
September 16

LILLE
AMIENS
LE HAVRE
STRASBOURG
PARIS
TROYES
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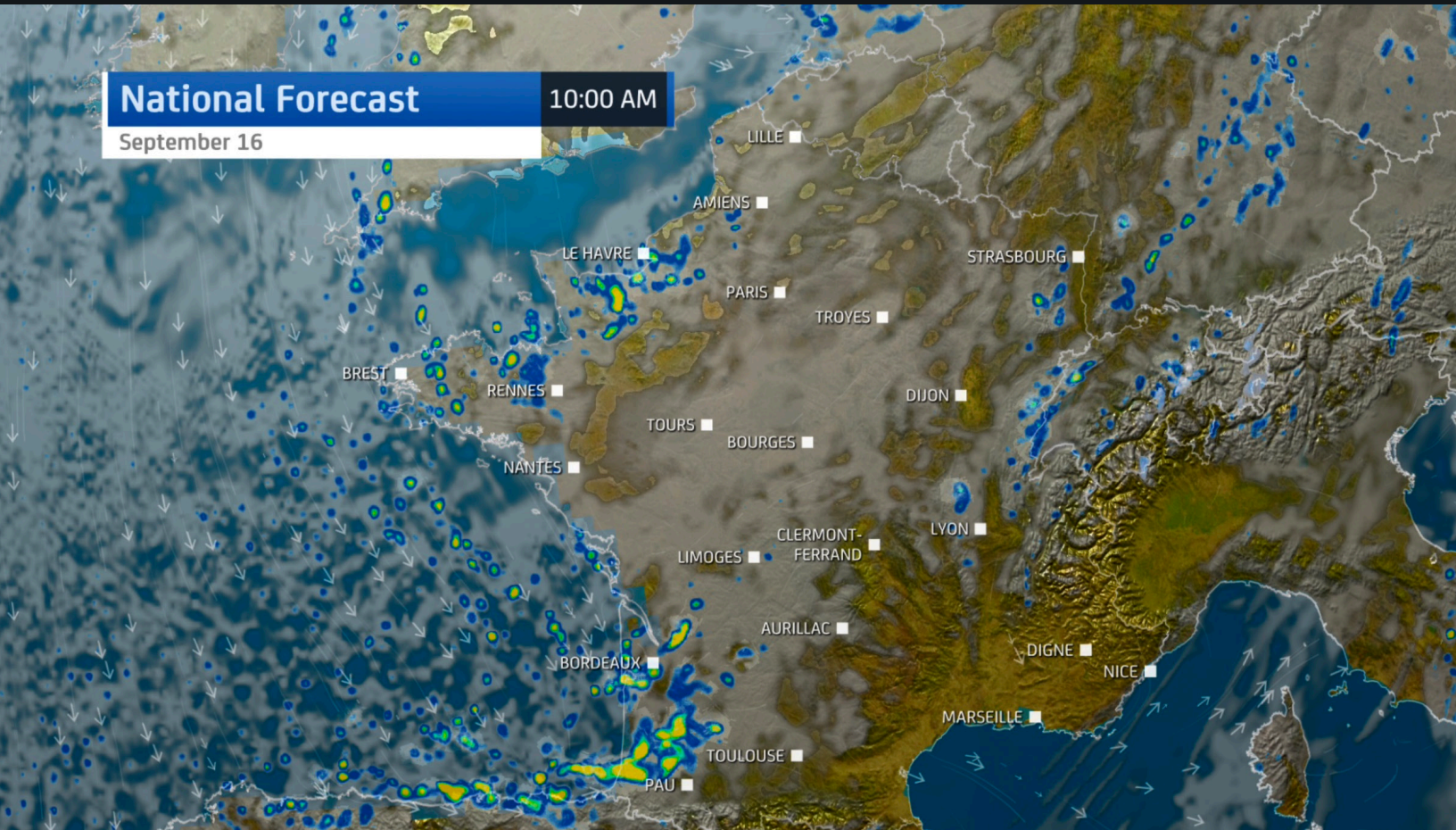LYON
CLERMONT-FERRAND
LIMOGES
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MARSEILLE
TOULOUSE
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Summary

Max systems from The Weather Company, an IBM Business, are designed to provide accurate and distinctive weather forecasts across TV, web, mobile and social media platforms. These solutions incorporate innovative features to help you attract and respond to your audience while driving engagement, awareness and advertising revenues.

Weather is a popular topic of conversation and has been frequently ranked by App Annie among the top-used types of mobile apps (after social media). Being a trusted weather provider can bring frequent, active users to your platforms, creating an opportunity to promote other content and paid advertising.

It is vital for broadcasters to be available on all platforms as audience behaviours change across the world. Weather is increasingly part of the news agenda and—when events occur—audiences everywhere expect rapid coverage, especially on digital.

Global news and weather companies compete for viewers, but their services are usually not locally provided. TV stations have the advantage of personalities who are already known to the audience and can describe events with local context. The challenge is delivering this local content as a distinctive service across platforms.

The output requirements for various platforms can be very different, but it is rarely efficient to have multiple production teams. A centralised content-creation function that provides consistent forecasts across all outputs is often the favoured approach. The ability to rapidly repurpose content for use in virtually any output—for example, TV-to-mobile or social-to-TV—helps ensure full value is gained from all available materials.

Extending the on-screen relationship between audiences and TV presenters to the digital platforms can reinforce a station's advantage over global providers. Using familiar voices and in-vision presentations specific to the small screen help generate native-looking content instead of posting exactly what appeared on TV. It can also establish a "connection with home" for people living outside the country.

The Weather Company has deployed over 750 Max systems around the world. In our experience, there are three essential elements to success:

1. Accurate forecasts
2. Eye-catching, distinctive graphical content
3. Efficient workflows

Proposed solution

The Max Platform provides a centralised weather-content production system supported by data from The Weather Company. These solutions include many unique features that are all integrated into a common user interface to help enable rapid and streamlined operations. Our entire product catalogue is modular and can be configured to suit specific requirements.

Max product overview

Max is designed to create content for TV, web, social and mobile outputs through a single user interface. Once the system is configured, many daily workflow operations may be automated.

Graphics are driven by weather data. Updates to temperature lists and weather icons are automated to help presenters spend more time focusing on telling a better weather story.
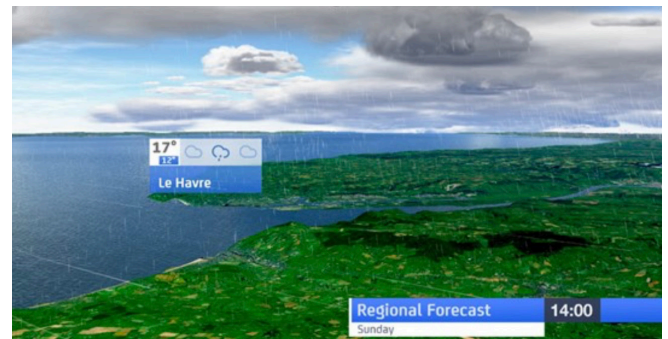

Figure 1: Max production system. Accurate forecasts presented in an eye-catching way are essential to capture viewers. Covering "Weather as News" can help ensure maximum return on investment in the Max system.

Max is fed with data from The Weather Company, which is the world's most accurate forecaster according to a 2010-2017 study, which is the most recent, most comprehensive study available from ForecastWatch. Our forecasts incorporate many weather observations and use 162 forecast models. The output is supervised by human meteorologists who can adjust the forecast when needed. Our data powers Apple iOS, Samsung, Google and others. We continue to invest in forecasting science.

Max is a modular system. You choose the required functions for immediate use and can add more later. The software, which can be sold or leased as a site license in a software-as-a-service model, runs on a collection of HP systems that are custom built to our specifications. The HP has a 5-year warranty.

Max is available in two configuration types—one intended for small production requirements and a second that can scale to include many workstations. A small production system includes two HP systems that provide all operational functions. The larger system typically has five or six HP systems that separate the functions onto their own platforms to increase production capacity.

Hardware can be added later if production requirements increase. Smaller deployments have a direct upgrade path to larger deployments and larger deployments can grow further.
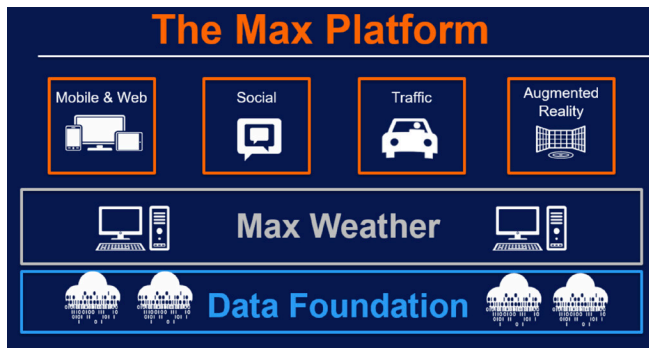
Figure 2: Max modular system. All software modules operate in the same user interface, which is designed to be intuitive. An online client portal and a user community provide access to learning modules and tutorials as well as interaction and feedback from The Weather Company experts and other users.

Content production volume determines the platform. A Max workstation is licensed to operate as either a content creation tool or a live TV playout machine. There is virtually no rendering time required. Outputs from workstations are routed to your master control room. As such, a workstation cannot be used to create and broadcast at the same time. If the production schedule requires this capability, you will need more workstations but not more licenses.

There are several software modules that work as extensions of the base product to add functionality. The base **Max Weather** module offers 3D graphics, SDI video, web and mobile outputs. This offering includes **Max One**, which enables you to record presentations with a webcam for use on a website or an app, supporting a more rapid and efficient way to create multiple updates for digital platforms.

Max Studio adds interactive control for a TV presenter on either chromakey or touchscreen displays. **Max Sky** creates a realistic image of the forecasted sky conditions and provides wind streams (particle animation).

Max Reality is an augmented reality display through which presenters can appear in the graphics. This helps enhance the studio and adds outdoor presentation capability. **Max Social** adds functionality that streamlines posting to Facebook and Twitter from the Max interface. Facebook Live streaming is also included. **Max Connect** is an iPad-based solution that can be used in studio or on location to control the systems.

Road traffic information is often presented alongside weather. Our **Max Traffic** module enables graphics to be created and operated by our road traffic data feed. Similar to the weather data, this allows presentations to be rapidly updated and ready for the next bulletin. Local traffic camera data may also be included, depending on availability.

For digital platforms we offer a complete white label B2B weather app and there are widgets that are suitable for embedding into existing apps.

If you want to go beyond basic weather displays, **Max Engage** searches for conditions of interest and produces content that can be distributed by region. Only those who are likely to be impacted receive the message to help ensure relevancy. A push notification appears on a user's phone that invites them to click into your app. Promotions such as a five-second pre-roll can be included, though this may be adapted to suit your audience. Clients who have deployed automated posting in Max Engage have seen significant increases in video views that might be unattainable using human resources alone.

Max Web provides widgets and interactive maps for website applications. Click here to visit our demonstration page, which supports multiple languages. Select the country from the drop-down menu.

As part of our service, we build the first set of show graphics to your specifications in a collaborative effort between your creative team and our designers. Once this is complete, we send a trainer to your site to help you get started. We also offer an online learning portal where new scene templates are made available in addition to instructional webinar recordings and other tutorial materials.

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Our support team is available 24/7 on the phone and by email. Technicians can remotely access workstations to diagnose issues and make fixes. A hardware health monitoring app installed on the HP will also send an alert to our team and your team if a problem occurs. When this happens, we proactively initiate the sending of a replacement through HP.

Further descriptions can be found in the Media section of our website.

The following are examples of customer outputs using Max:

– Client Showcase IBC 2019

– Max Studio client example

– Max Sky examples

– Max Connect client example

– Max Reality client examples

– Max Traffic example

– Max Social explainer

– Non-weather client examples

Weather data

With three decades of growth in the weather industry, The Weather Company is among the top-rated forecasters that have developed weather forecast data with high accuracy and resolution. We support our solutions with state-of-the-science technology, over 200 meteorologists and scientists, and a strong commitment to continued research and development.

Our data offerings have been driven by our work in aviation, insurance risk and the energy sector where short- and long-term forecasting accuracy are critical in decision making.
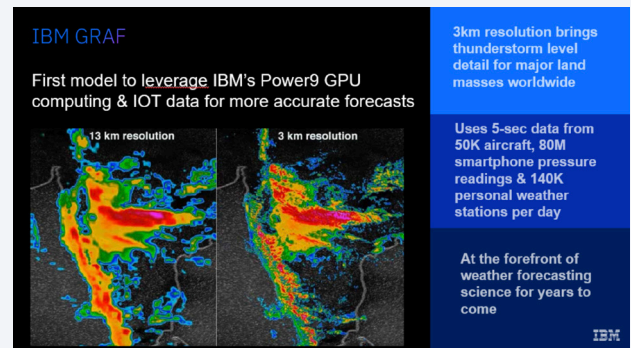
Figure 3: IBM Global High-Resolution Atmospheric Forecasting System (IBM GRAF) The first model to leverage IBM POWER9 GPU computing to help deliver accurate and localized forecasts to users around the globe.

The Weather Company provides forecast data to billions of global users every day using an internally developed system we call Forecast on Demand (FoD).

FoD uses the following approaches:

1. **Ingest as much external data as possible.**
   We ingest many public data sets to help drive higher resolution. These external datasets include airport weather observations, tight mesonet data observation grids, radar, satellite, radiosondes (weather balloons) and aircraft reports. We also pull in a vast array of National Weather Prediction (NWP) models.

2. **Augment with proprietary datasets.**
   As a company embedded in multiple industries, we leverage existing business ventures to gain access to unique data, further improving the output of FoD. For example, our aviation customers provide us with additional upper-air data. We also utilise a global network of over 100,000 personal weather stations that share updates with us every five minutes.

3. **Provide multi-model, multi-ensemble forecast outputs.**
Rather than take a single model, FoD intelligently blends over 162 models and ensembles based on recent performance against our high-density surface observations. One of these models is the newly released IBM GRAF platform.

4. **Human over the loop (HOTL).**
Our forecast process helps human meteorologists supervise the output without delaying the publishing process. The HOTL tool helps modifications be rapidly applied to an affected area and automatically expires those adjustments.

5. **Robust and scalable.**
FoD is delivered from a geographically diverse cloud platform. Four data centres in Europe, Asia and the eastern and western US help ensure that even in the event of a regional failure event, the system remains operational.

Near real-time weather

Alongside the forecast, it can be equally important to know what the weather is right now. If a bulletin or app incorrectly describes the current conditions, which can be verified by looking out the window, the user or viewer will have limited confidence in the forecast.

Therefore, our Currents on Demand (CoD) product integrates data from various public and proprietary sources to create an output of what the weather is right now. Sources include radar and satellite data, personal stations and a growing number of IoT devices, such as location and barometric pressure readings from smartphone users who have opted to share data.

This data helps create a more accurate output even if no sensors are available at a specific location.

Accurate weather

The result of these efforts is a set of products that help drive a multitude of industries, such as aviation clients who incorporate weather data when making decisions regarding safety. The Weather Company has a strong interest in maintaining a leading position in forecast accuracy and continues to invest in the science and technology to support that objective.

Local data ingest

Max also supports the importation of locally created weather data—such as from a national meteorological office—that is available in well-known meteorological formats. We are happy to accept data samples and test them in Max.

Local data is included in Max as another choice in the drop-down menu of data feeds and presented alongside global data from The Weather Company. For example, you may opt to use local data for regional coverage and global data for news in other parts of the world.

Click here to learn more or request a demo of our media solutions.

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