KGOU Using MetaPub to Alert Listeners of Weather

KGOU, based in Norman, Oklahoma, is using visually enhanced broadcasts to alert its listeners of impending storms using MetaPub, the metadata system developed by NPR Distribution for the PRSS.

As one of the stations that participated in the CPB-funded ‘Tornado Alley’ project, which provided MetaPub hardware and software for stations in areas prone to catastrophic weather, KGOU has been at the forefront of public radio stations that are expanding the ways in which they communicate with their listeners.
KGOU GM Dick Pryor, who has made numerous appearances at conferences and meetings to discuss the benefits of metadata, spoke with EsPRSSo about his station's use of MetaPub.

**KGOU is using MetaPub to issue real-time storm alerts. How is this going?**

It's going well. The alerts are going out well for the most part, with an occasional re-boot needed on the computer that holds the ArcticPalm software. We are told revisions of the software are coming out, so this should help alleviate the problem.

We bought Inovonics monitoring gear for each of our remote locations to verify that the weather signals and other messaging such as program information are being transmitted out of the RDS and received at the remote locations.

We received one set of monitoring gear under the Tornado Alley project agreement for our Norman location and bought four additional sets for our full-power stations in Oklahoma City, Ada, Clinton and Woodward, Oklahoma.

**What's the motivation for using MetaPub and metadata to issue alerts?**

MetaPub provides the capability to deliver emergency alerts through visual displays, in addition to our spoken broadcast alerts. In addition, with the new ArticPalm software, we anticipate we will be able to provide digital display of other timely messages and real-time programming, sponsorship and informational messaging. With multiple transmission sites, delivery of such messages is currently difficult, but the new software should allow us to provide instant messaging more easily. As the system becomes easier to navigate, we expect to expand its use.

**What kinds of alerts warrant this kind of message?**

Currently, we use the MetaPub system to deliver emergency messages to digital devices for tornado warnings, blizzard warnings, fire emergencies, civil emergencies, state activations, EAS tests and programming information -- and program titles and segment content, when available. With the new software, we anticipate we will be able to expand emergency alerts to include other weather events including flood warnings, severe thunderstorm warnings and tornado watches. We expect the new software will enable the system to be more stable.

**Have you received any listener or underwriter feedback on your use of MetaPub or metadata?**

We have heard from a few listeners that they have noticed and appreciate the program information on their digital displays.

**How complicated is the process of getting set up on MetaPub?**
ArcticPalm is difficult to set up; we needed guidance from NPR Distribution’s Jon Cyphers to properly configure the system. He has also provided occasional technical support. The rest of the setup - encoders at transmission towers, setting up the IP path - is easy.

Did you have to acquire new hardware or software or systems?

We had to acquire more hardware to support additional sites beyond the one transmission facility provided for under the grant. We were able to purchase and install additional, more economical encoders to service each of our five full-power transmitters. We also purchased decoders to monitor reliability at each remote transmission location.

Is ongoing maintenance of MetaPub a challenge?

Maintenance of the system has been limited. The biggest challenge has been caused by the instability of the ArcticPalm software. With multiple modules open for separate site locations, the software has proven to be less reliable than expected. Because we broadcast over a wide area to five different full-power transmission sites, we must keep all five program modules open, which decreases overall stability and complicates trouble-shooting and re-booting of the system. Jon has been very helpful in assisting us with initial setup of the ArcticPalm software and working through its technical idiosyncrasies.

How is it managed at KGOU?

The MetaPub system is managed and maintained through periodic checks by our engineering staff. These checks are accomplished through the Inovonics remote monitoring system. We also have to periodically monitor internet connectivity.

What advice would you give to station managers that are considering but hesitant to implement MetaPub?

We encourage stations to strongly consider implementing this system for emergency alerts and other potential messaging. Our experience indicates the effectiveness of the system depends on the cost and configuration required to activate and maintain multiple locations. As the ArcticPalm software improves, we expect the functionality of this system to only get better. Given the potential for increasing public service and sponsorship possibilities for a relatively low cost, our expectation is this metadata system will prove to be an important addition to our current capabilities and long-term strategy.

Has it been a useful investment for you?

We believe the metadata distribution system provided through the MetaPub project has provided a useful new element to our public service capabilities and has been worth the investment. We project that over time, the system will enable us to better monetize our remote broadcast locations through
Anything else you'd add for stations mulling over whether to take the MetaPub leap?

We believe the system has become a valuable component of our digital and broadcast tool kit and has given us the opportunity to expand our service and fundraising capabilities. As the ArcticPalm software improves, the system will become more reliable.

To learn more about the Tornado Alley project, which was funded by a grant from the Corporation for Public Broadcasting and executed by NPR Distribution, please see the announcement on the PRSS website. To learn more about MetaPub, please visit http://prss.org/metapub.

The News

**WCVE Provides Feedback on Station Emergency Kits**

NPR Distribution’s Emergency Station Kits will officially launch and be available for stations to request on Monday, June 10, 2019. The kits are designed to be loaned for a nominal fee to stations facing a disastrous weather event or impending maintenance that threatens their broadcasts. A dedicated web page will be launched on the same day where station personnel can learn more about the kits and how to request them.

As part of the development of this program, NPR Distribution benefited enormously from the help of engineers at two interconnected stations. Paxton Durham from WVTF in Roanoke, Va., and Mike Friedman from WCVE in Richmond, Va., performed field tests of the kits. Below, Mike Friedman provides his feedback after spending some time with one of the kits.

**Which kits did you test?**

The Emergency Antenna/Transmitter Kit

- Jampro JFWD Broadband Dipole Antenna
- 30ft. BlueSky Mast
- Nautel VS300 Transmitter

**Did it take long to set up the kit? Could one person do it alone?**
The full kit is straightforward. Review the antenna assembly diagram, BlueSky Mast assembly video and transmitter manual (Quick Start). With some solid state transmitter experience, you won't need much assistance from the manual.

Take your time and you'll be in good shape. The transmitter and mast are shipped in roadkits and are heavy. The transmitter case weighs in at 95 lbs, the mast kit at about 132 lbs.

Thankfully, each case has wheels. It may prove very helpful to have assistance moving these cases. The FM antenna is a super-light folded dipole and was delivered in the original box.

**Antenna Assembly:**

The Jampro JFWD Folded Dipole antenna is very simple to assemble. Just review the one sheet diagram.

**Mast Assembly:**

I had a colleague assist with assembly of the 30-foot mast. Do yourself a favor and fully explore the portable mast case before assembly. You will find everything you need, and the entire process probably took us a total of 30 minutes to erect. NPR Distribution took time out to label a few key items. Besides review of the BlueSky mast video, the mast comes with a very comprehensive set of instructions in the form of a laminated multi-step picture diagram.

This is a military grade mast. We were careful to find a safe site location, free of above-ground power service and with plenty of space for securing each guy line. We laid out the guy lines first, having each rope in place but not staked down. Take advantage of the built-in circular level bubble for a plumb installation (this improves stability of the mast).

It was helpful to have a second person while raising the mast. The mast consists of interlocking poles and is inserted one section at a time just below the tripod base. After 15 feet, it wouldn't take much to lose balance of the mast if erecting solo.

Once the mast is in place, be certain to stake each anchor point. Drive the stake into the ground at an angle and leave "some" play in the guy line. Enough transmission line was provided to fully extend the mast, and I had another 30 feet (or so) to interface with the transmitter.

**Transmitter:**

Depending on experience, you may find the transmitter very straightforward to configure. There are
many parameters, and Nautel provides a comprehensive manual and Quick Start Guide. The web interface will make configuration much easier. Adobe Flash Player is required but I hear Nautel has plans for non-Flash solutions in the very near future.

I was pleased to see this transmitter is equipped with the Orban 5500 series audio processor and also features a RDS generator. I ran the VS300 at 300W without issue. Also provided in the transmitter road kit is an FM tuner capable of monitoring RDS. The VS300 transmitter offers IP audio support (Livewire) and other IP input options such as SHOUTcast and IceCast streaming audio.

What sorts of tests did you conduct?

We made certain the stereo pilot worked, accessed the transmitter remotely via the internet, drove within a few miles of the site (due to time constraints) to evaluate coverage. Expected coverage at 30 to 100 feet at 300W is 4 - 6 miles. By calculations at a height of 100ft, under ideal conditions, you should cover just over 6 miles.

In your opinion, could the kit provide a viable alternative if a station went off the air? If conditions were particularly unpleasant (due to weather or disaster), would the average radio person still be able to make use of it?

Absolutely!! There are many options depending on your situation. The following options come to mind:

- If available, use the transmitter at an existing tower site with an available antenna. You stand to have the greatest coverage if that site is in a populated area. [Please note: NPR Distribution has transmission line adapters available by request for tying into an existing line and antenna.]

- Consider a reciprocal agreement with another stations for use of an aux antenna.

- Operate from a high elevation such as a hill or tall building

- Having the transmitter and antenna on a tall structure with or without the full height of the mast. Make sure you keep the mast secure and keep RF exposure in mind.

- Attaching the antenna to an existing structure on a tall building. Proper location of the antenna will be critical. Keep a distance from other objects which may change the characteristic of the antenna.

- Remote access to the transmitter is dependent on your resources (internet access, Cellular, etc).

- Many options for STL audio. You can have a traditional STL, colocated at the studio, employ the use of an audio codec, use existing streaming audio from your website, etc.

Any other thoughts?

It's wonderful for NPR Distribution to offer an emergency broadcast kit to serve our communities. In the event of a disaster at your transmitter site, do what it takes to get back on the air. NPR is providing a bundled solution but use only what you need.

Please keep RF exposure in mind if the antenna will be near people (closer than the 30ft. mast). If so, have a qualified person determine distance and exposure time in accordance with FCC limits for
human exposure to RF emissions. I initially had concerns about using the mast without lightning protection, but I’ve learned that NPR will have at least one grounding kit available to go with the kit.

NPR Distribution will launch the station kit website on June 10, 2019. It will be available at http://prss.org/station-kit.

Public Radio Alliance Releases New Research Report

The noncomMUSIC Alliance recently released its report “Connecting Through Music: Public Radio Music Stations Serve Audiences, Artists & Communities Across America.” The report is the first of its kind and showcases how noncommercial public radio music stations play an essential and unique role in sustaining music, performers, and their communities.

The report compiles core station statistics and audience data, as well as station-reported responses about programming, platforms, and community engagement, to provide rich insight to the noncom industry and the contribution of public radio music stations.

To learn more, please visit the alliance's website at https://noncommusic.org/report/.

Future Systems Update

PRSS Future Systems Webinars Available On-Demand

In May, NPR Distribution hosted two webinars to provide details and an opportunity for Q&A regarding the wide-ranging Future Systems project, a multi-year effort to develop and implement the next-generation distribution system of public radio.

The webinars, which featured identical presentations delivered by Distribution VP Mike Beach and his team, covered many areas including the new receivers that will be delivered to satellite stations later in the year, the development of the new ContentDepot Broadcast Services, and the overall timeline of the project.

The first webinar was recorded and can be viewed on-demand at the following link: https://www.youtube.com/watch?v=o7L3CWGRnMg&feature=youtu.be

One of the key pieces of information that was shared at the webinar is the overall timeline of the Future Systems project. Below, please find a pared-down version of the timeline. Also note that all dates are tentative and subject to change.

March 2019 - November 2019

Head-end Build: Development of new NOC and Back-up NOC

July 2019

NPR Distribution Webinar - Future Systems Deep Dive: ContentDepot Broadcast Systems

August 2019 - January 2020

Station Beta Test: Receivers Shipped to Participating Stations to Perform Beta Tests
Fall 2019

NPR Distribution Webinar - Future Systems Deep Dive: New ATX XDS Receivers

October 2019 - January 2020

Receiver Rollout: New Units Shipped to All Satellite Interconnected Stations

February 2020-April 2020

Dual Operations: New Receivers Now Live, All Stations Must Move from Legacy IDC Receivers to ATX Units

May 2020 - June 2020

Dual Ops Ends: We Are Live on ATX, Old IDC System Sunsets

What's New in ContentDepot?

There are several new programs (both recurring and one-time-only) appearing in the ContentDepot this month. Listed below are details on a sampling of new regularly occurring programs that your listeners may enjoy:

Witness History: The Race to the Moon - A one-hour, one-time-only special from American Public Media that provides first-hand accounts, archive material, and insight from historians on the historic space race.

American Anthem - A one-hour, one-time-only special from NPR that features a selection of songs about our shared national identity as Americans.

To Honor and Inspire: U.S. Military Bands Special - A one-hour, one-time-only special from American Public Media that features the nation's military bands doing everything from traditional marches to standard classical repertoire.

Political Breakdown Special: Gay Candidates Then and Now, From Milk to Buttigieg - A one-hour, one-time-only special from KQED-FM that looks at the past and future of LGBTQ candidates.

Capitol Steps: Politics Takes a Holiday 4th of July Edition 2019 - A one-hour, one-time-only special from Capitol Steps Productions that provides a comical take on today's headlines.

National Council Grand Finals Concert 2019 - A 134-minute, one-time-only special from Metropolitan Opera Association that provides this performance in two parts.

Stay in Touch

We Want to Hear From You!

EsPRSS-O welcomes and encourages your questions, comments, suggestions and ideas.

- Have you or your team developed a particularly unique and/or nifty technique in operating ContentDepot?
• Are you facing any new challenges and want to get the perspective of others who might be in a similar situation?
• Are you seeing any technology or business developments on the horizon that your pubradio colleagues ought to know about?
• Got a notion on your mind that you want to share with the PRSS?

If so, don't hesitate, write in today!

Send any and all correspondence to PRSSCommunications@npr.org along with info on the best way to get in touch with you.

Stay in touch! Send your questions, comments and ideas to PRSSCommunications@npr.org. As always, the PRSS Help Desk is also available 24/7 at 800.971.7677 or email PRSSHelp@npr.org.