

Broadcasting From Home: Tech Tools and Tips of the Trade

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Which products and platforms specifically are broadcasters putting to use?

This is Part 2 of a three-part series. [Part 1](#) explored changes in workflow as reported by broadcasters and our series sponsors. Below we share more specific insights about how broadcasters have adjusted their operations to the pandemic, including discussion of specific tools and products.

Tieline said its ViA remote codec and Report IT app are finding a lot of use, with a Bridge IT or Merlin studio codec at the head end. Doug Ferber said the ViA allows a user at home to stream live audio, record interviews, manage recordings, create playlists of local and imported files and produce podcasts that can be sent via FTP. "It is a full broadcast studio in a compact unit that has everything you need to go live from anywhere."

Clients of ENCO Systems are using the browser-based

automation controller WebDAD for adding voice tracks, managing audio libraries and modifying playlists.

“With physical access to stations limited, and remote desktop sessions bogged down by lag or prevented by security measures, stations need a robust solution to provide native-level access to their automation systems,” said Ken Frommert. He noted that WebDAD has a substantial new web interface.

A “surprise hit” for ENCO is ENconveyor, an automated download utility that usually operates in the background. “While originally designed to automate the download and ingestion of syndicated audio segments, many stations are using it as a quick and effective way to transfer files from home studios directly into their DAD library and playlists,” Frommert said. The company is offering free subscriptions to that at present.

Ayrton Mcphail, chief engineer for Baker Broadcasting, is a WebDAD user. Other tools that Mcphail has found useful include GoToMyPC remote desktop software, which allows users to access computers remotely using a web browser; it is being used by trafficking and management. And he likes Luci Live Lite for live remotes.

“It allows the jocks to talk live, and sound like they are still in the studio. All you need is a laptop, a phone and a way to

get it into your on-air line, and you're up and running. And with a little creativity you can talk on multiple stations live with a single instance of Luci Lite."

Wheatstone has a "remote" access app for nearly every IP surface it manufactures, according to the company's Robert Ferguson.

"Some of our surfaces do not come with an ACI, our control interface; however nearly every Blade in our lineup has built-in software utility mixers, so there is the ability to control those with a remote application."

He said Blades had already become popular for various uses in broadcast plants. "They allow for a ton of creativity and flexibility. When we realized that many of our customers would need an easy-to-use and setup solution for these systems, ReMIX was developed as an affordable remote mixing app that could remote control a utility mixer within a Blade."



What Charlie Vollmer of Bloomberg Radio sees at home while running "Daybreak Asia." Remote Wheatstone is on the bottom, automation and audio playback on the top.

Bloomberg Radio is a Wheatstone user. Most of its anchors were given Comrex NX codecs with sportscaster-style boom mics to install in their homes.

"For reporters and our affiliate team, we heavily relied on the various Luci Live apps," said Bloomberg's Charlie Vollmer.

"As far as actually running the shows, our technical producers were given high-performance laptops so they could VPN into designated PCs back in our headquarters. From there, they were given full access to our Wheatstone LXE remote mixing app, automation and audio playback systems. We have various audio hybrids set up with a program feed from each station's air chain so they can listen in real time to the broadcast they're running."

Some broadcasters saw the health crisis coming. According to Yann Vonarburg, general manager of [Aeta Audio Systems](#), client Lagardère / Europe purchased "a good number" of codecs before the lockdown. "They were rushing us to deliver. My guess is that they had anticipated this French lockdown while seeing the one in Italy." Aeta makes the Scoopfone4G and eScoopfone.

Voice of America's Chet Rhodes, special project manager, studio and production operations, said VOA had to [send half of its radio staff home](#) early on, and that eventually all radio programming was done remotely.

"Staff are producing shows at home or in the field and sending in files to be played out of our automation systems. Live programming, such as top of the hour newscasts, are being done with VoIP technology or over the cell phone network." Staff uses a wide selection of free software from Audacity, as well as the Adobe products such as Audition and Premiere.

"Working from the field has always been part of radio production, so in many ways we are going back to the basics; while some staff have not had to work at home at this pace before, staff has had to make sure the home environment, the Wi-Fi, the older home computer was ready to support everything needed. VOA has deployed laptops, and many staff also upgraded home systems."

Reto Brader of Barix said the company's new SIP codec with Opus compression has direct application for home broadcasting. "It will replace older remote codecs, driven by the fact that ISDN goes away and SIP VoIP is the new telephony standard."

He also pointed to the Barix Instreamer ICE for streaming

from home, using its Icecast server or through any streaming service, and to Exstreamer 500 broadcast codecs, which relay and I/O for tally and switching.



Paul Montoya of Wyoming Public Radio's setup includes RCS Zetta automation, Telos Axia Element with SoftSurface software, and Comrex BRIC-Link.

Marty Sacks of the Telos Alliance highlighted its virtual Axia SoftSurface and Axia Pathfinder Core PRO.

"Paul Montoya, director of engineering for Wyoming Public Media, [accessed it remotely](#) during the crisis to switch a last-minute White House press conference on the air, which saved the day, and saved someone making a trip to the studio just to press a button."

Axia IP-Tablet virtual radio software is helping customers connect remotely, offering the same functionality for many Telos Alliance products via software. "We've seen a lot of folks with our small consoles, like Axia Radius, remote into their desktop using VPN/TeamViewer and control their physical console faders that way from all over the world."

In Washington, WAMU uses Livewire-enabled devices throughout its air chain. Director of Technology Rob

Bertrand said Axia Fusion consoles, Telos VX phones and Axia SoftSurface on IP tablets played important roles. "We were even able to deploy a temporary fallback studio in an academic building at our parent American University in a matter of hours using Axia, including full two-way audio with NPR HQ and flexible switching into our transmitter plants and streams." The [primary studio plant](#) is being operated remotely from the homes of station staff.

Bertrand also noted WAMU's use of remote screen sharing tech like VNC and simple Remote Desktop to remotely control WideOrbit players in the studios, as well as AoIP codecs from Comrex and Tieline, as well as Telos VX phones and a Broadcast Bionics PhoneBox screening platform.

[Broadcast Bionics](#) saw new interest in its Skype TX for Radio, according to Dan McQuillin, and came out with a simplified version that WAMU started using extensively, to gather audio using Skype. Also it has introduced Caller One, a software product that runs in a web browser on a simple PC, and added a webRTC audio codec called Anywhere, a simple piece of software that gives remote control over a browser and ability to screen calls in a small footprint.

New York Public Radio moved from a running proof-of-concept version of Teradici Zero Client PCoIP — a remote access platform designed for media — to purchased,

permanent infrastructure to allow remote access for its newsroom production team.

“We had been exploring it prior to the pandemic for general mobility needs for the newsroom reporters/producers, so we were positioned to put it into production relatively quickly,” said Steve Shultis.

“Additionally, Broadcast Bionics offered us an emergency installation of their AudioServer virtual phone PBX and Bionics Studio call screening system for which we migrated to from our legacy, physical PBX/phone hybrids and Bionics PhoneBox call screening system in an effort to move call screeners to their home,” he continued.

“To complete the installation we had to engineer a new QSIG connection from our separate Business SIP PBX and steal some surplus DIDs from that SIP provider and engineer an AES67 connection to the new Bionics server for use in virtual sound cards and hybrids.”

It designed and built 18 home studios based around Comrex NX codecs, Citrix remote access and the Bionics call screening system. “Our engineers delivered installed and tested each of them in the talent’s homes. We are currently doing a live on-air fund drive with all of these in use daily,” he said.

For the many teams producing shows from home, New York Public Radio is leveraging its enterprise Dropbox infrastructure for sharing audio files and worked with Avid for providing remote licensing for its many Pro Tools production workstations to allow individuals to work on remote laptops.

“Lastly, we are working closely with our console manufacturer SAS, building a soft console and soft switching for full remote control of our audio infrastructure mixing and routing, should we be forced to evacuate the broadcast facility. We are using this now for emergency operations from home during unattended operations.”

[Digigram](#) pointed users to its IQOYA Connect, a connection service for remote broadcast applications. It includes Guest service, which allows the user to invite guests to radio shows via a simple link. “Clicking this link transforms any web browser, on a laptop or smartphone, into a two-way codec,” said Xavier Allanic, vice president of sales.

“The plan was to release IQOYA Connect at the NAB Show 2020. We decided to accelerate the development, and we were able to release IQOYA Guest Preview at the beginning of the lockdown in Europe.”

Allanic complimented French [Christian radio network RCF](#), a user of Digigram codecs for program distribution over

satellite. "RCF technical and IT team were waiting for the release of IQOYA Connect. They really appreciated the fast and relevant response of Digigram to the lockdown with early release of IQOYA Guest Preview." The latter is a web-based solution for conducting remote interviews of guests outside the studio.

Demand surged for large deployments of smaller, simpler commentary units, according to Pablo Rodriguez of Prodys.

"This has been a manufacturing and logistical effort for equipment suppliers. Now the air talent were asked to start home studios on their own with new hardware, and only remote support from their engineers." He said the Prodys Quantum Lite has been a strong seller, a handheld device for remotes that allows multiple independent links with the studio receiver.

AEQ offered a series of webinars on how to run a radio station from home. Gustavo Robles said customers are using IP audio codecs over regular internet with excellent audio quality, or are remotely operating audio mixers using IP control applications like the company's VirtualForum.



Rodrigo Poyatos Molero of Andalucía Este FM

“When this pandemic started, we received a big number of purchases orders mainly for portable codecs as our ALIO unit or rack-mounted ones like our Venus. Then in recent weeks we saw conversations move more to remote control or complete remote operation. We believe broadcasters are thinking not only about the next weeks or next months, but perhaps something more permanent.”

Rodrigo Poyatos Molero is CEO and editor at Andalucía Este FM, which runs four radio stations in southern Spain. He said the company uses the AEQ Forum console, controlling it remotely using its virtual console software and the AEQ Forum Screen application. Codes in use are the AEQ Phoenix Mercury, Venus and Studio Audiocodecs. A Phoenix ALIO is in its remote van.

“For sports or unexpected events we use SIP applications for mobile phones that work with a SIP license from AEQ. The audio encoding we use is Opus due the low delay and

broadcast audio quality.

“We faced a great challenge due the coronavirus. We have been working remotely for several years, although we have intensified our work due to the coronavirus situation,” he said.

“Our national headquarters urged us to prevent people from entering the studios, and during this period, we did so. The difference has been that now the editors are not in the studio. One of them is managing our AEQ Forum mixer and sending contribution from a Phoenix Mercury audio codec remotely from his home, and the rest are sending contribution from their homes with more Phoenix Mercuries.

“We haven’t been at the radio studio at all during the entire lock down, not a single day,” he said in mid-May. “We have daily broadcasted telephone interviews with mayors of municipalities, medical officers and people who have overcome the virus.”

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