



DIGITAL DONE RIGHT

VERNICK **T**ECHNOLOGY, **I**NC

BEST PRACTICES FOR CALM ACT IMPLIMENTATION and GREAT SOUNDING AUDIO





DIGITAL DONE RIGHT

WHO WE ARE

Since 2001 VTI has been best known for assisting our many clients with their ATSC encoder needs but did you also know that VTI offers a broad range of products and services to assist broadcasters and video professionals in getting "Digital Done Right™" in all areas of a broadcast facility?

MANUFACTURERS: We represent major names including Imagine Communications, Grass Valley, Ericsson, Harmonic plus many more. We also represent manufactures with unique solutions-Digital Nirvana, EEG, Nevion, Linear Acoustics and Quantum StorNext and many others. We also provide other broadcast, IT and AV products and services.

VIDEO ENCODING: In 2001 VTI saw that broadcasters needed someone who could help them understand how to put together an ATSC compliant encoding system thereby saving you the cost and complexity of trying to coordinate each company separately. VTI can design a small subsystem up to a complete control room, build it, and get it on the air. We offer traditional "turn-key" systems where we come to your site, built it, test it and support you with a running system, or "U+1 Engineering" where VTI augments your staff to design, integrate and commission the system. U+1 can save you money over the traditional turnkey method by utilizing your staff but still getting the project management you expect.

DESIGN: Upcoming project or capital budget planning? Our relationship with a broad range of manufacturers means we can help you find the right technology for both your facility's needs and budget.

INTEGRATION: VTI can design a small subsystem up to a complete control room, build it, and get it on the air. We can either offer traditional "turnkey" systems where we come to your site, built it, test it and support you with a running system, or we offer "U+1 Engineering" where VTI augments your staff to design, integrate and commission the system, which saves you money over the traditional turnkey method by utilizing your staff rather than paying for additional outside labor.

SPLIT SIGNAL SYSTEMS: If your station has been approached by a local cable company about installing spot insertion equipment or "split signal system", VTI has been designing and installing these systems since 2010. We handle the equipment purchasing and logistics with the cable company. We also provide the engineering, installation, commissioning and training of your staff. We have the expertise and knowledge for a worry free project.



Visit www.VTI.com for more information
or call us at (866) 228-1570 or email DigitalDoneRight@VTI.com
for information about any of the services we offer
or just want to bounce an idea off of us.

BEST PRACTICES FOR CALM ACT IMPLEMENTATION and GREAT SOUNDING AUDIO

(This takes more effort than just putting auto level correction in your transmission path)

Key points of the CALM Act:

- If requested by the FCC, a station must be able to “provide records showing the consistent and ongoing use of this equipment in the regular course of business and demonstrating that the equipment has undergone commercially reasonable periodic maintenance and testing to ensure its continued proper operation”
- The FCC will contact a station about possible loudness violations only after it has recognized a pattern of complaints.

Stations/MVPDs have two choices for demonstrating compliance:

- Actual Compliance - Stations/MVPDs may choose to demonstrate actual compliance with the RP in response to an FCC inquiry (that is, show that the specific commercial that is the subject of the complaints actually complies with the RP).
- Ongoing Compliance - A station/MVPD must, within 30 days, perform a 24-hour spot check of the programming being transmitted on the channel or program stream at issue, to verify ongoing compliance. This requirement applies to all stations and MVPDs, regardless of size, and applies to certified and noncertified programming.
- “Safe Harbor” applies to commercials embedded in programming such as spots placed in programming by the network. In case of an inquiry by the FCC, a station may only claim safe harbor if they have a certificate from the content provider stating that commercials embedded in their programming are CALM compliant.
- Short form content (content 2 to 3 minutes in length) loudness is to be measured over the duration of the content.
- If a broadcast facility transmits a down-mix of its surround sound program audio the down-mix needs to be monitored for CALM compliance.
- Content where the dialogue level is not known (no metadata) the target level will be set to -24 dB LKFS.

How to normalize audio levels throughout the plant to meet CALM Act requirements:

- Choose a target dialnorm setting. -24 is suggested as this is what is referenced in A/85.
 - Check the dialnorm setting in the Dolby encoder or ATSC encoder that is creating the AC3 audio. Make sure to check this for all minor channel encoders.
 - When using a CALM compliant audio processor a downstream Dolby AC3 encoder should be set to the “film light” mode to reduce the amount of additional processing.
 - Using an LKFS audio meter check and adjust audio levels of all sources in the plant. This usually means loudness meters in edit suites, control rooms and ingest stations. It is important that the staff be instructed on how to properly measure loudness.
- Measure and correct audio levels as they are being ingested into the transmission servers and use audio level correction when transcoding compressed video files.
- Have a program stream (off-air) logging system that not only measures loudness but can also segment the measurements by content.



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Here is a sample of manufacturers we proudly represent
Please call VTI for any product needs.



digital nirvana



ERICSSON

Quantum.



neviön



Blackmagicdesign



Visit www.VTI.com for more information

or call us at (866) 228-1570

or email DigitalDoneRight@VTI.com

for information about any of the services we offer or just want to bounce an idea off of us.