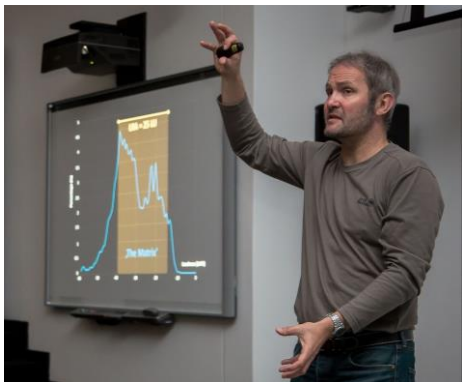
EBU
OPERATING EUROVISION AND EURORADIO

TECHNOLOGY
FACT SHEET

LOUDNESS

The EBU's Loudness work has become a resounding international success. Many national broadcasters have adopted it and over 70 product manufacturers are offering tools in support of EBU R 128.



PLOUD chairman Florian Camerer (ORF) explaining the concept of "Loudness Range" (LRA) during a Content Distribution Conference in Johannesburg, South Africa, 2015

WHAT'S NEW?

In January 2016 the main EBU Loudness publications (except for EBU R 128 and EBU Tech 3344) were updated. Here is a summary of the changes:

The **EBU R 128s1** supplement dealing with short-form content was simplified. In the new version only the Maximum Short-term Loudness limit (−18 LUFS = +5 LU) is specified; the Maximum Momentary Loudness limit is no longer recommended for short-form content. The EBU anticipates that reducing the options in this way will help simplify content exchange and reduce costs in daily operations.

The Production Guidelines **EBU Tech 3343** were completely rewritten by PLOUD chairman and Tonmeister Florian Camerer (ORF). The guide is both a tutorial on loudness metering & normalization and a reference for experienced sound engineers and without doubt the best place to start reading about loudness.

The 'EBU Mode' Loudness Metering specification **EBU Tech 3341** has been updated with new minimum compliance requirements and various clarifications. The complementary **EBU Loudness Test Set** has been extended with 15 new test signals, which help implementers to

check if equipment measures Short-term and Momentary Loudness as well as True Peak levels correctly.

The Loudness Range document **EBU Tech 3342** now specifies that the minimum block overlap between consecutive analysis windows is 2.9 seconds (it used to be 2 seconds). This is equivalent to a sampling of the loudness level of at least 10 Hz. This new value fits well with the requirements for the Integrated Loudness and Short Term measurements.

THE CHALLENGE FOR PUBLIC SERVICE MEDIA

The biggest challenge broadcasters face is to decide how and when to switch over to loudness measurement and levelling. Important factors include (re)investment cycles, switch-over dates set by colleagues/competitors, and the amount of training that is required to educate staff and clients.

- Typically broadcasters try to make the loudness switch-over in sync with their prime colleagues/competitors, involving other organizations where relevant too (such as advertising agencies and national legislators).

- The loudness levelling approach is much more intuitive than the traditional peak-level approach, but staff still need training. Many broadcasters have set up in-house projects to deal with this, often inviting colleagues from other countries.

Other challenges (and opportunities!) relate to the use of loudness tools for radio and online content distribution, such as catch-up TV, where loudness variations have, historically, been bigger than in broadcast TV.

WHAT IS THE EBU DOING?

The EBU PLOUD group continues to share loudness experiences from the field. It is currently working on an update of EBU Tech 3344 and on loudness & streaming.

FIND OUT MORE

EBU R 128 information tech.ebu.ch/loudness