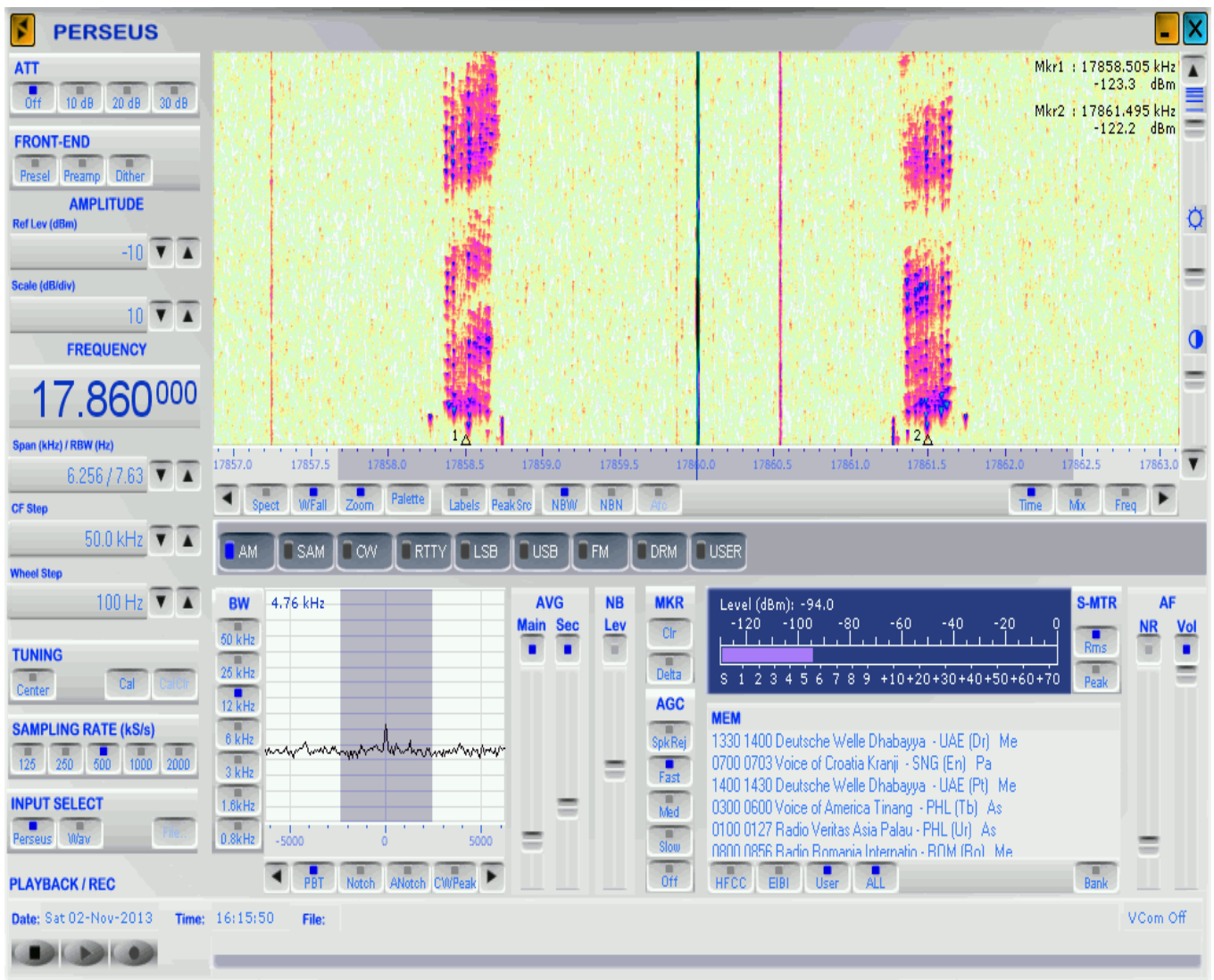


4.3 The future

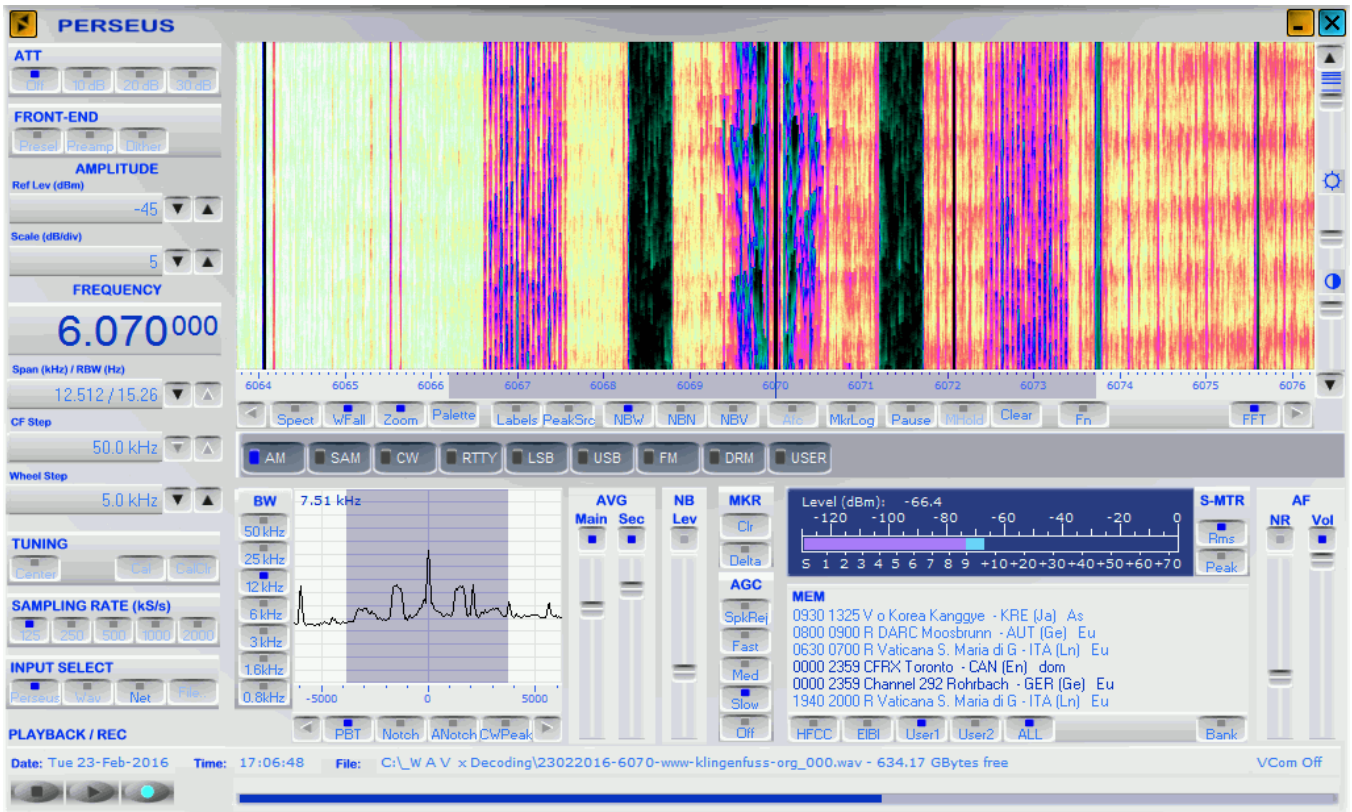
To cut a long story short, broadcasting on shortwave will continue its sloooooooooow but steady decline - while very interesting **professional digital utility station radionets are on the rise!** Surely, we will not experience a rapid collapse, but we'll continue to lose around 5 % of active broadcast frequencies year after year. That said, even if you would opt for a 4 % decrease, it will take more than 13 years to arrive at halving broadcasters' activity! What's more, we're in 2019 and "DXers" rapidly become extinct. We've foreseen this development already 20 years ago. From its very start way back in 1997, the book in hand has never been written for "DXers", but for global travellers, ordinary shortwave listeners, technically interested people, and the like.



State-of-the-art digital data signals have been tested since 2013 by innovative broadcast (!) stations such as the Voice of America ...

This screenshot shows parallel MFSK emissions on 17858.5 and 17861.5 kHz, i.e. on both sidebands ± 1500 Hz from the carrier frequency 17860.0 kHz

The MEM window of the PERSEUS shows our unique *userlist.txt* Frequency Database with both broadcast and utility radio stations combined - see page 337!



Shortwave Radiogram transmits PSK and MFSK signals mirrored on both sidebands
 See page 5 for the zoom on the MFSK emission • New schedule see swradiogram.net

Joerg Klingenfuss:
 Confirming your reception of VOA Radiogram on the Voice of America 2 November 2013 1600-1630 UTC 17860 kHz via North Carolina (GVL) voaradiogram.net



UK 17860 kHz
VOA RADIOGRAM
 Sicily 17860 kHz
VOA RADIOGRAM
 Colorado 17860 kHz
VOA RADIOGRAM
 Greece 15670 kHz
VOA RADIOGRAM
 Portugal 15670 kHz
VOA RADIOGRAM
 Virginia 6095 kHz
VOA RADIOGRAM

QSL via e-mail for a Radiogram via Voice of America digital data test transmission
 It shows perfect sample colour graphic files received from listeners all over the world!