Pierre Aumond

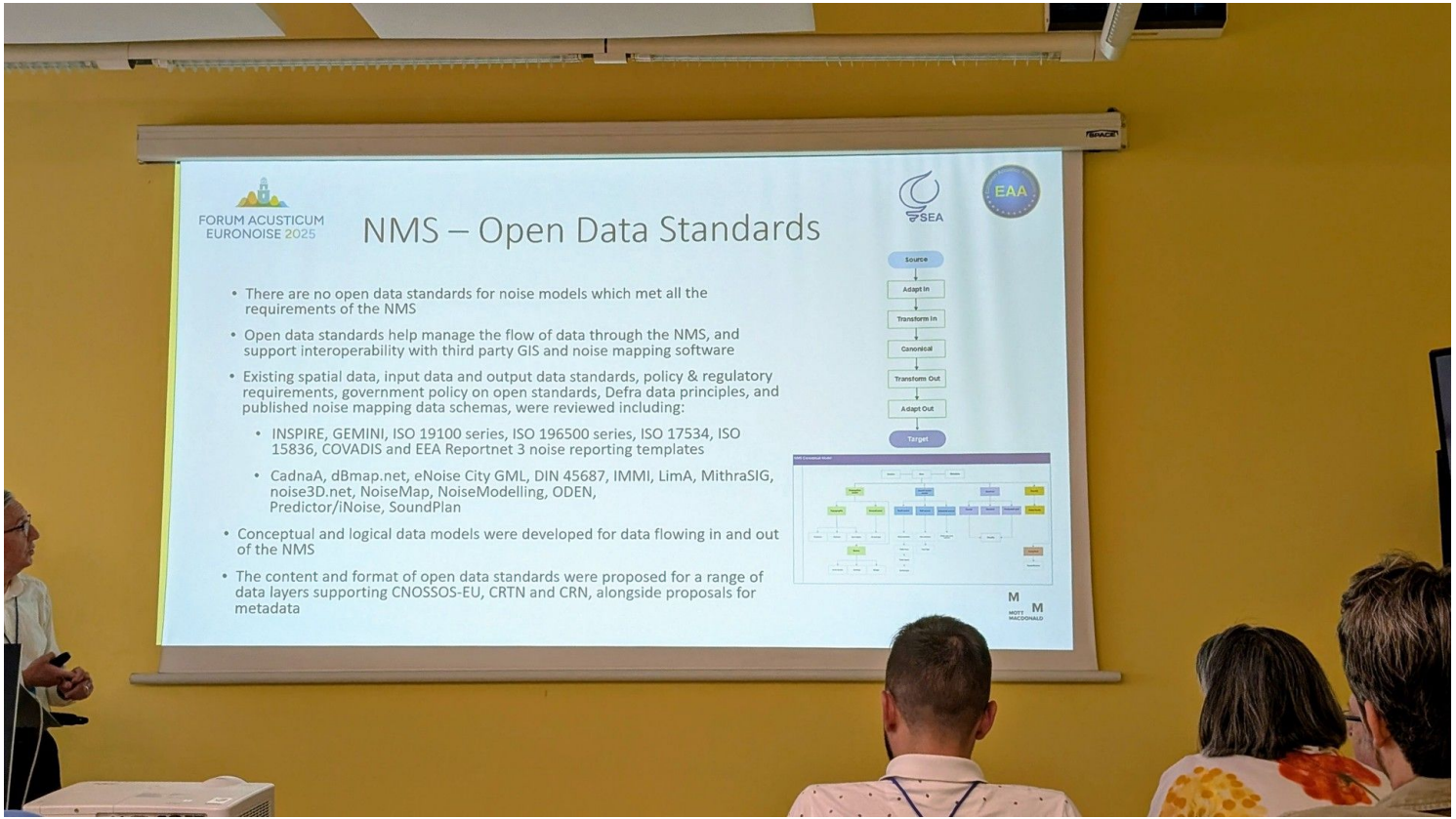
22th June 2025, Malaga

Open research & Env Noise Directive

FORUM ACUSTICUM
EURONOISE 2025

Open-Tools for END / CNOSSOS-EU

No Open Data Standards



Simon Shilton, Forum Acusticum 2025

Open Tools ?

NoiseModelling

NoiseModelling
QGIS - Noise Prediction

NoiseModelling
QGIS - Noise Prediction

Noise Prediction

Plugin ID: 2605

This plugin estimates the noisel level by distances and barriers as BS:5228 standard.

(28) votes

Download latest

About | Details | Versions

Author:
Htet Arkar Soe

Maintainer:
htetarkarsoe

Tags:
python noise bs5228

Plugin home page:
https://github.com/geohtet/Noise-Prediction-Algorithm/...

Tracker:
Browse and report bugs

Code repository:
https://github.com/geohtet/Noise-Prediction-Algorithm

Latest stable version:
1.1

NoiseModelling
QGIS - OpenNoiseMap

OpeNoise Map

Plugin ID: 480

opeNoise Map allows to compute the noise level generated by point source or by road source at fixed receiver points and buildings.

(85) votes

Download latest

About | Details | Versions

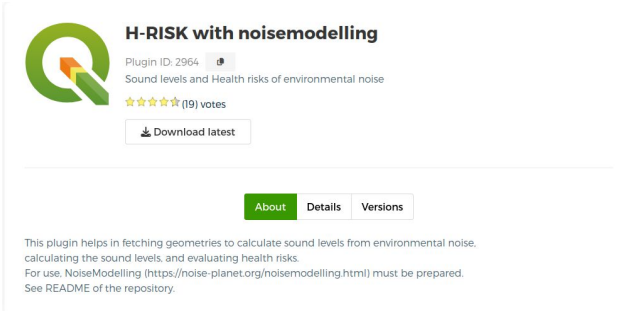
The plugin allows to compute the noise level generated by point source or by road source at fixed receiver points and buildings.
Please consider the following condition:
- geometrical divergence
- atmospheric absorption ISO 9613-1
- pure diffraction without ground effects, for horizontal and vertical obstacles
- modelization is 3D

NoiseModelling
QGIS - OpenNoiseMap
QGIS - H-Risk with NoiseModelling

Use NoiseModelling inside QGIS, with a GUI

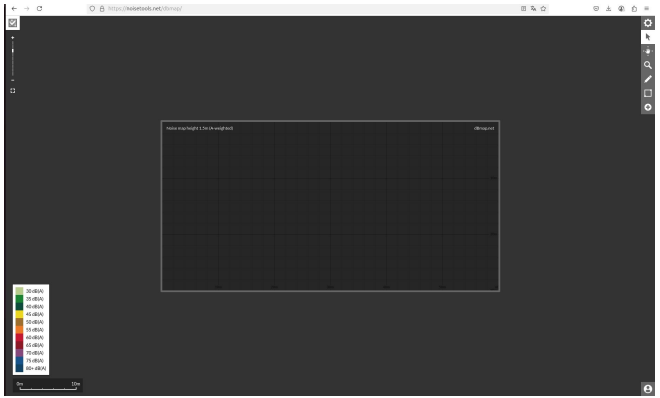
Warning → NoiseModelling is not 100% implemented

QGIS Plugin :
https://plugins.qgis.org/plugins/hrisk-noisemodelling-master/



Tagusari, J. (2024). H-RISK with NoiseModelling: a QGIS plugin to predict environmental noise and estimate health risks. Journal of Open Source Software, 9(93), 6023.

NoiseModelling
QGIS - OpenNoiseMap
QGIS - H-Risk with NoiseModelling
dBMap.net
freeware



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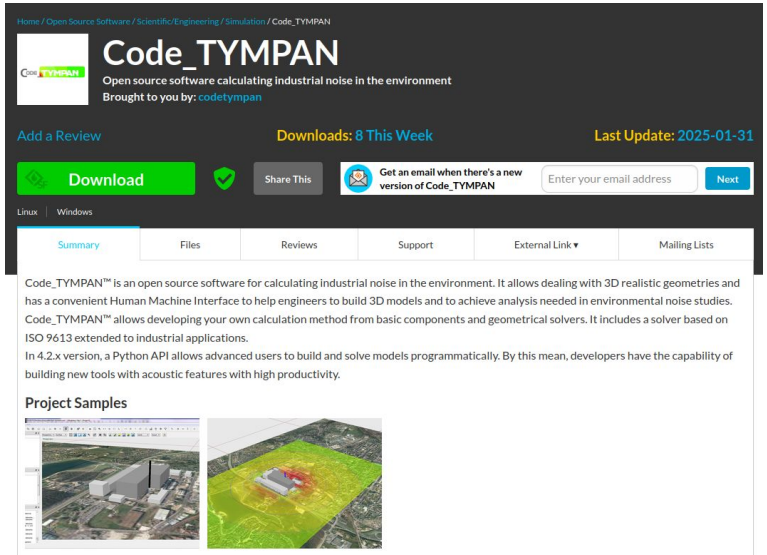
Code_TYMPAN



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NoiseModelling
QGIS - OpenNoiseMap
QGIS - H-Risk with NoiseModelling
dBMap.net
Code_TYMPAN
?

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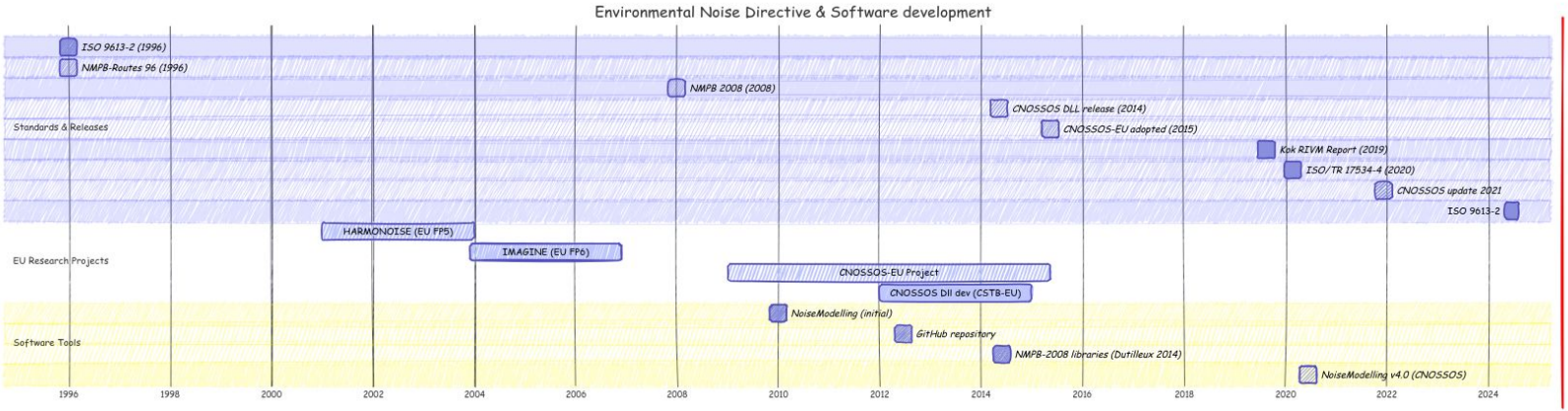
CNOSSOS.dll - short reconstructed story



"We already try Open-Research in Env. Acoustics during Harmonoise…", 2024

Partly true & no package for directive 2021

Software quality

ISO 17534

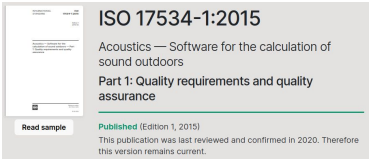
- at the beginning software some claiming to use CNOSSOS.dll

- Then respect the ISO 17534
  - Issues inside ISO document ?
  - Compliant with ?
  - not fully transparents

- Now German softwares A-QNS

A-QNS
Verband zur Förderung der Qualitätssicherung von Software zur Berechnung von Schall e.V.

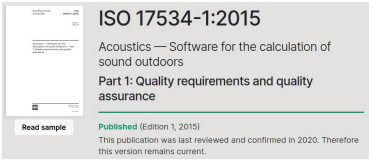
- The ISO is actually in revision



Test Case	Conform ?	NLD Conform ?	Largest Deviation	Details
TC01	☑	☑	0.00 dB @ 2000 Hz	TC01
TC02	☑	☑	0.07 dB @ 1000 Hz	TC02
TC03	☑	☑	0.05 dB @ 500 Hz	TC03
TC04	☑	☑	0.07 dB @ 1000 Hz	TC04
TC05	☑	☑	0.00 dB @ 1000 Hz	TC05
TC06	☑	☑	0.06 dB @ 500 Hz	TC06
TC07	☑	☑	0.02 dB @ 1000 Hz	TC07
TC08	☑	☑	0.02 dB @ 1000 Hz	TC08
TC09	☑	☑	0.01 dB @ 250 Hz	TC09
TC10	☑	☑	0.02 dB @ 250 Hz	TC10
TC11	☑	☑	0.02 dB @ 125 Hz	TC11
TC12	☑	☑	0.04 dB @ 500 Hz	TC12
TC13	☑	☑	0.01 dB @ 500 Hz	TC13
TC14	☑	☑	0.04 dB @ 8000 Hz	TC14
TC15	☑	☑	0.06 dB @ 250 Hz	TC15
TC16	☑	☑	0.00 dB @ 2000 Hz	TC16
TC17	☑	☑	0.05 dB @ 500 Hz	TC17
TC18	☑	☑	0.02 dB @ 500 Hz	TC18

So what ?

- Reference code, good idea
  - but if no maintenance ?
- Revision of ISO method ?
  - add emission
  - …
- Measurement tests ?
  - Scale models
  - measurement database
- “Reference model” comparaison ?
- Round robin (since 1995 for room acoustics !)…
- A-QNS



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