



Acoutrain Software

Definition

ACOUTRAIN Final Conference
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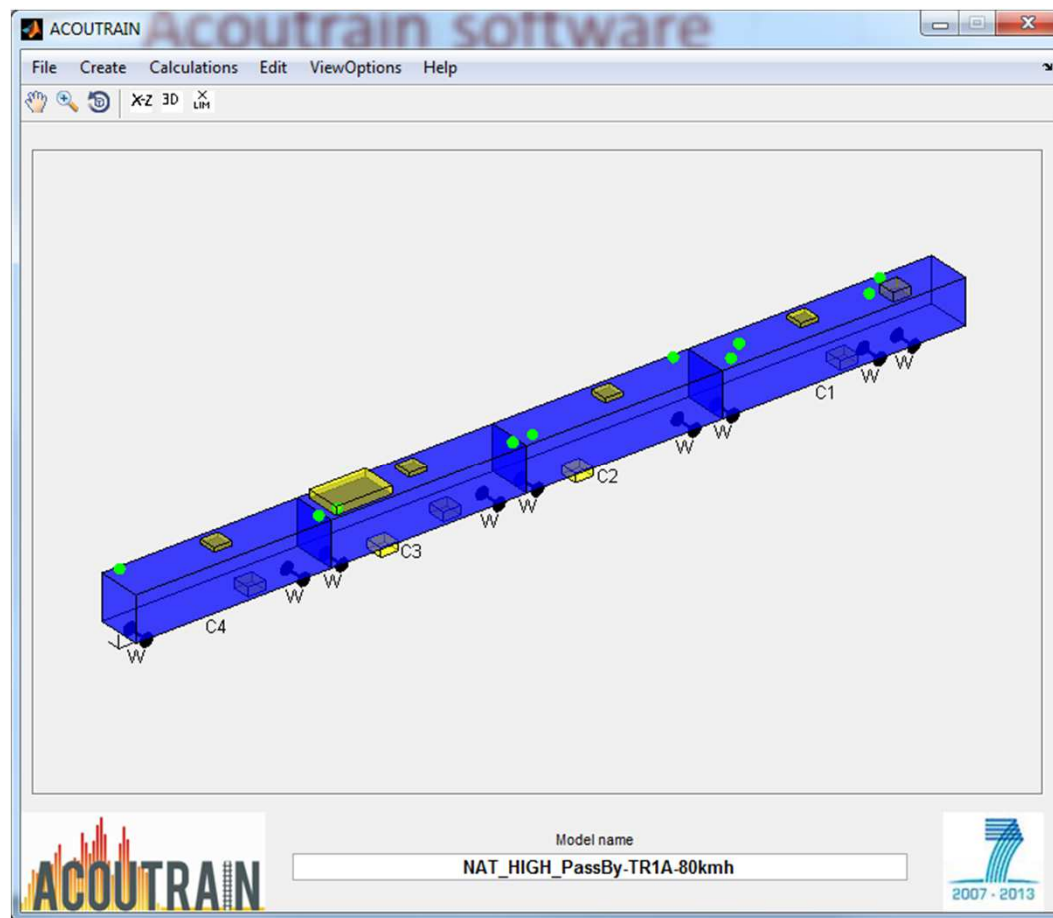
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Objective of the tool

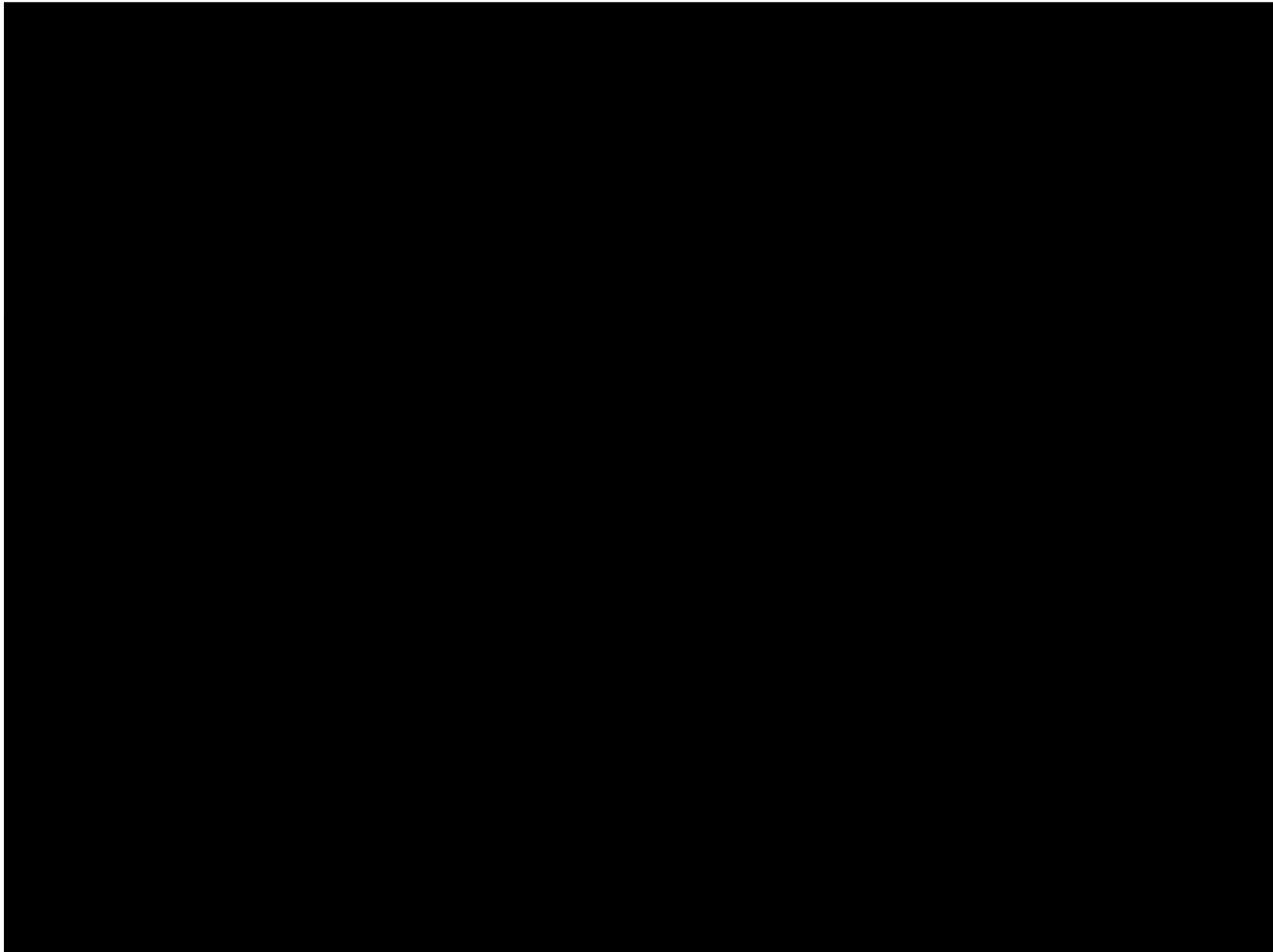
- It was decided to develop a tool inside the project for third parties who didn't have tool
- The purpose was to allow third parties to demonstrate the method for the virtual certification.
- It is based on simple global simulation model to answer on the minimum requirements and input/output data defined by the project,
- The tool was developed by ISVR
- As input this global simulation tool takes data describing :
 - the position of various sources on a train for various equipment
 - sound powers and directivities
 - rolling noise powers coming from Twins calculation / roughness levels
 - train speed
 - three different impedance models are available to represent the ground.
 - position of various receiver microphones
- As output, it can predict :
 - overall and one-third octave L_p at standstill & $L_{pAeq,Tp}$ for moving train
 - $L_p = f(t)$ for pass-by

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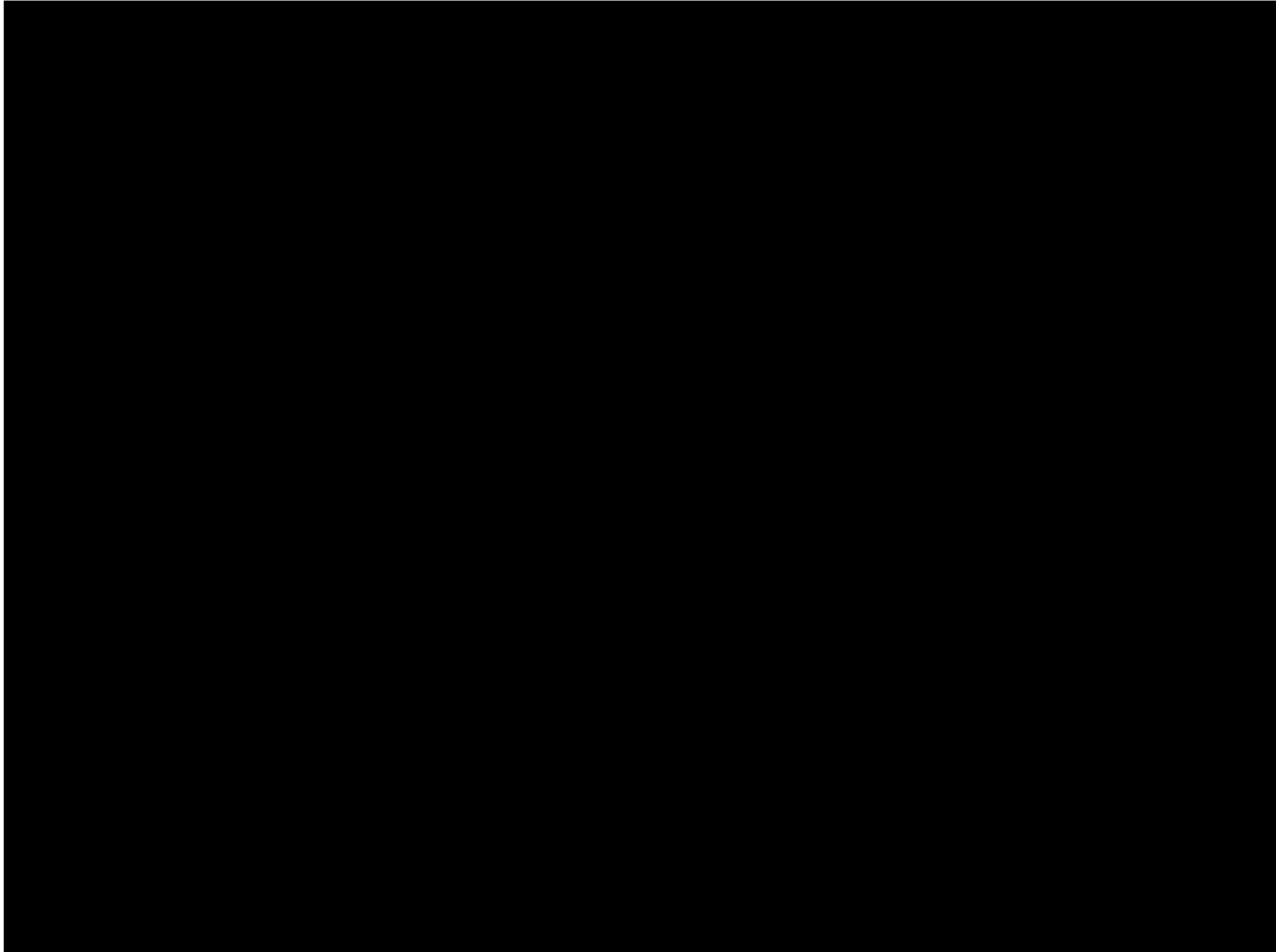
Demonstration of the tool by
Giacomo Squicciarini, ISVR



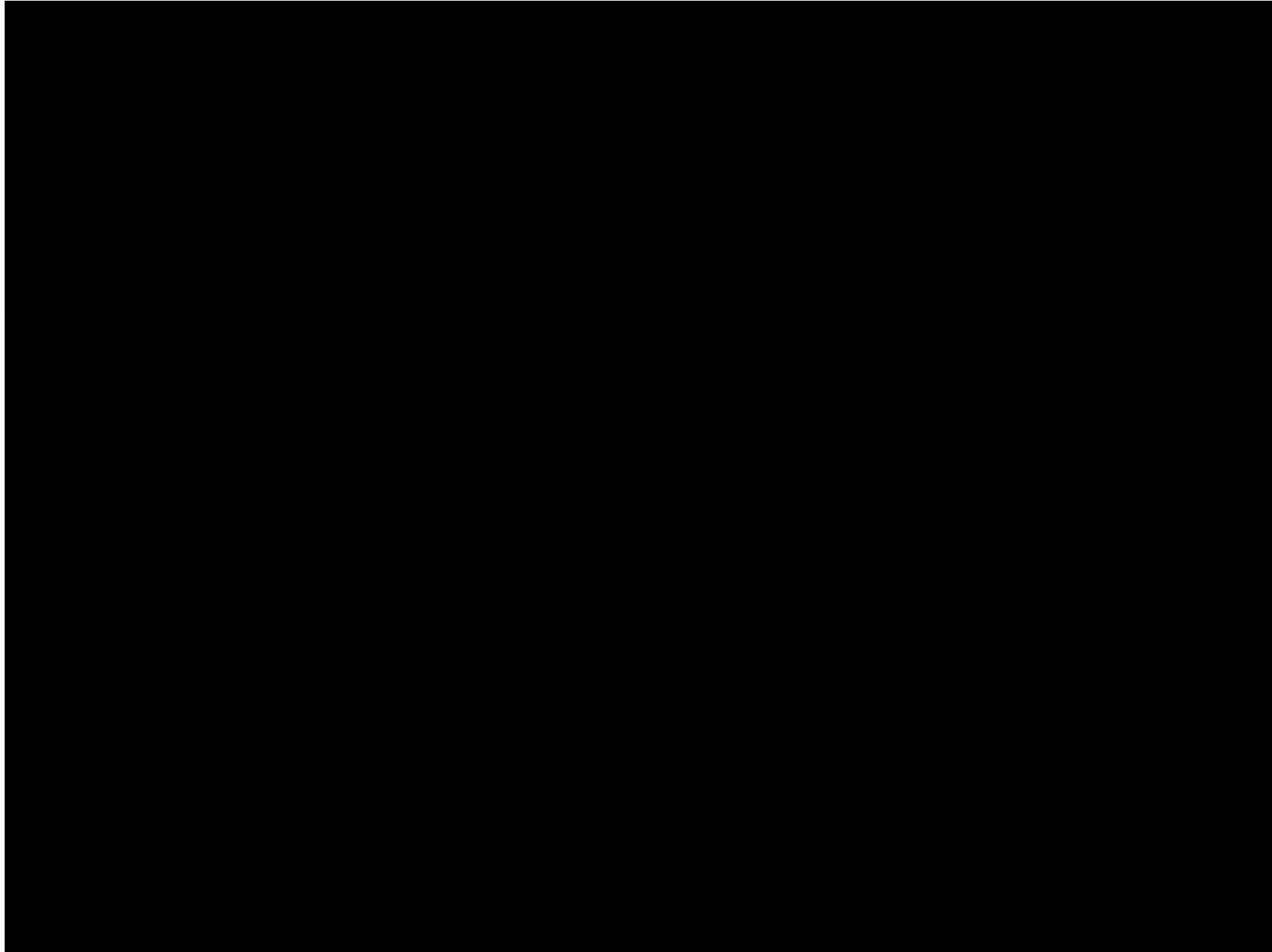
1. Set up a new virtual train



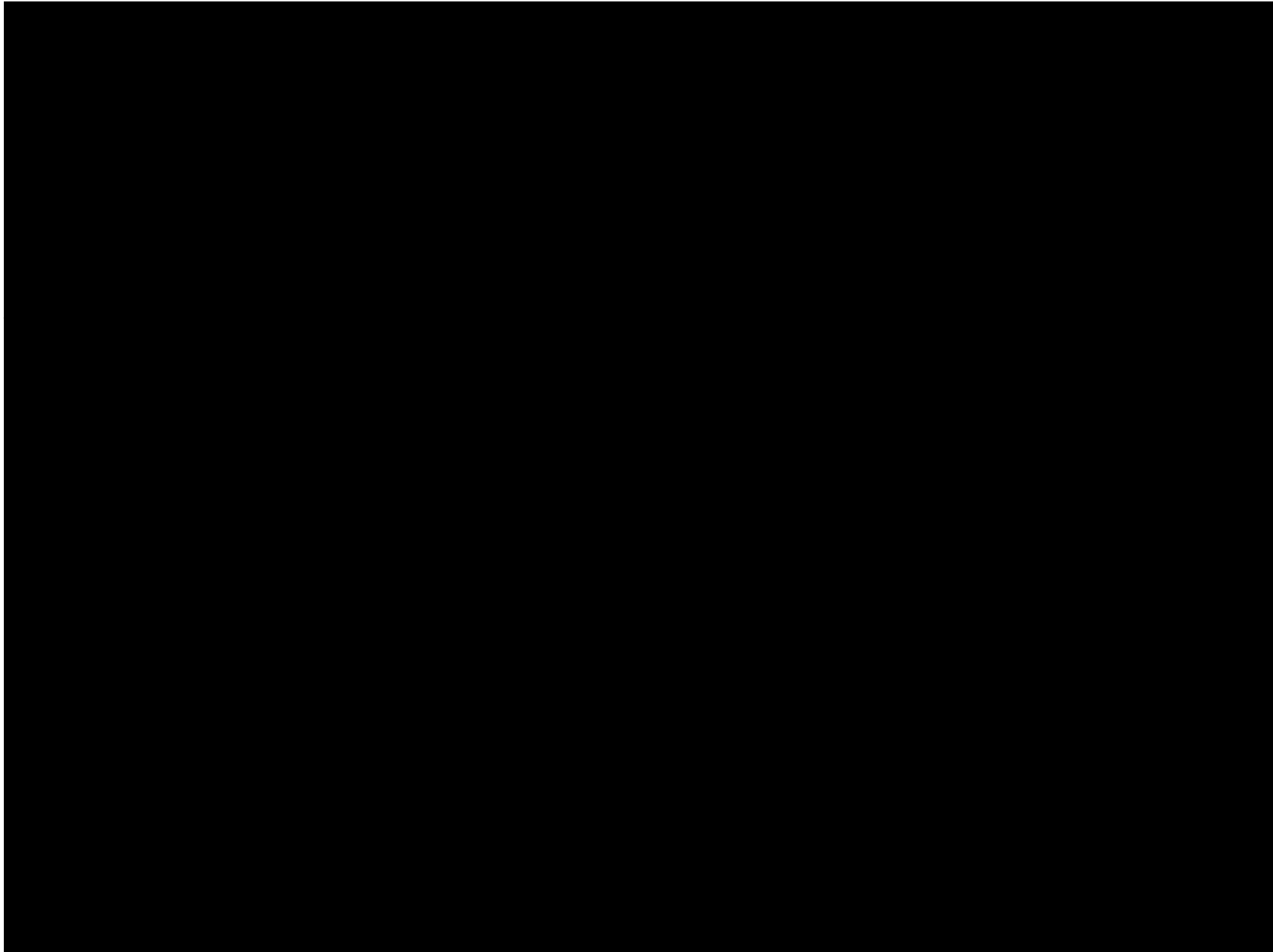
2. Add rolling noise



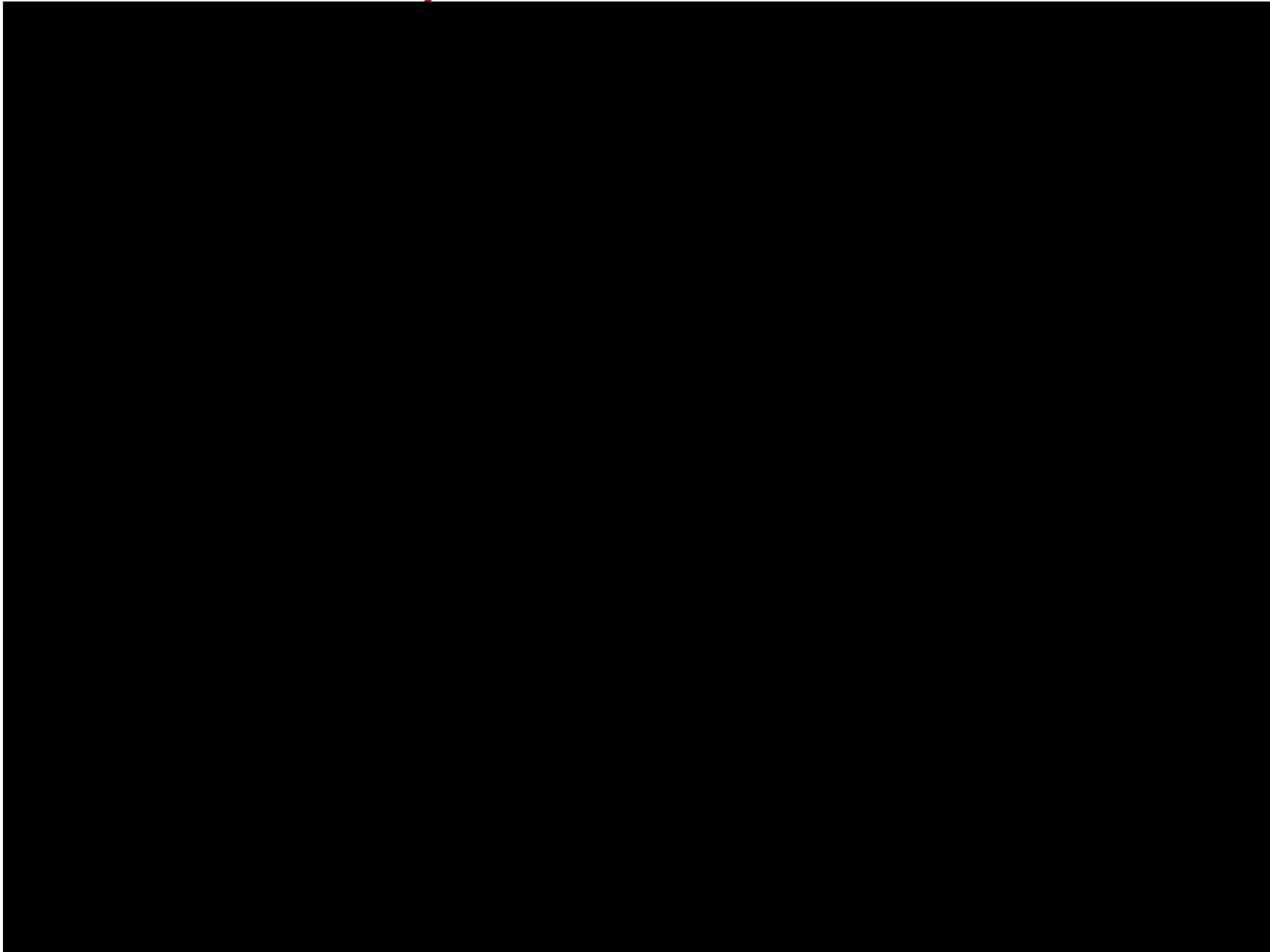
3. Test Site and Operating condition



4. Run



5. An example



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Conclusion about the tool :

- The tool has been tested successfully with a series of reference cases
- It has been very useful to test the procedure for virtual certification
- It is planned to be made available for licensing → Subject to European Commission's feedbacks



Thank you for your attention!