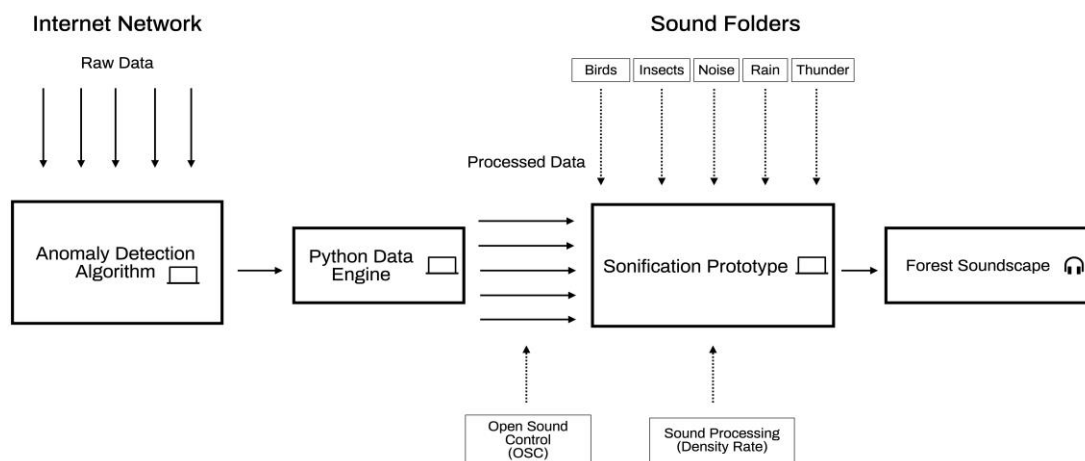


Datascapes

System's architecture

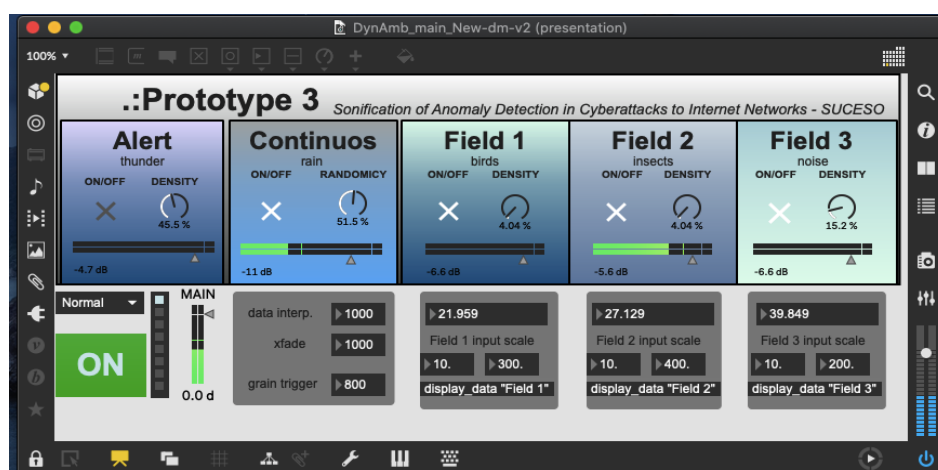


Scheme of the full system, designed by i3B-Ibermática and Sara Lenzi for Datascapes, from the collection of data from the digital network to its transformation into sound.

User Interface

Interface of the current prototype. A simple user interface allows the operator to control the volume of individual sound categories and the overall volume of the system. It is also possible to select specific sound categories to listen more closely, if necessary.

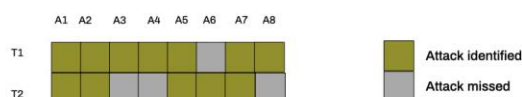
User



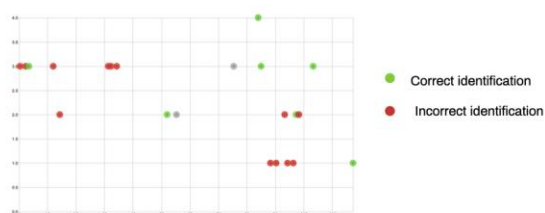
testing results

Quantitative testing

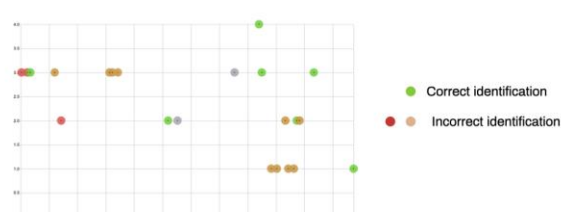
- State of the system



- Level of the anomaly



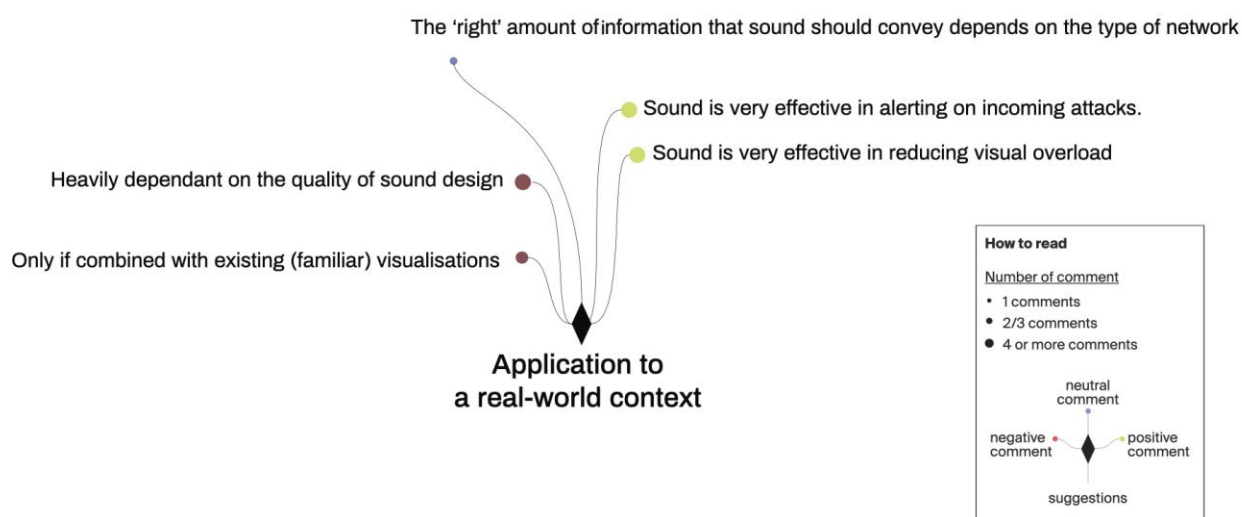
- Location in the network



Insights from the quantitative testing run in early 2021 show how users successfully identified almost the totality of attacks to the network thanks to Datascapes.

The success rate is quite high also in identifying the level of seriousness associated with the anomaly, as shown in the second diagram. The location of the anomaly in the network was somehow more difficult to identify. During the interviews which followed the tests, users highlighted how this last information might not be relevant in the case of digital network as suggested to withdraw it from Datascapes.

Qualitative testing



When interviewed on the applicability of Datascapes to a real-world context, as show in the figure, experts welcome the possibility as a very effective system in alerting on incoming attacks and reducing visual overload, but also admitted their willingness to use the system heavily relies on the quality of sound design, the amount and type of information conveyed by the system and the combination with familiar data visualiztion tools. We are addressing these aspects in a forthcoming iteration of the application.

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