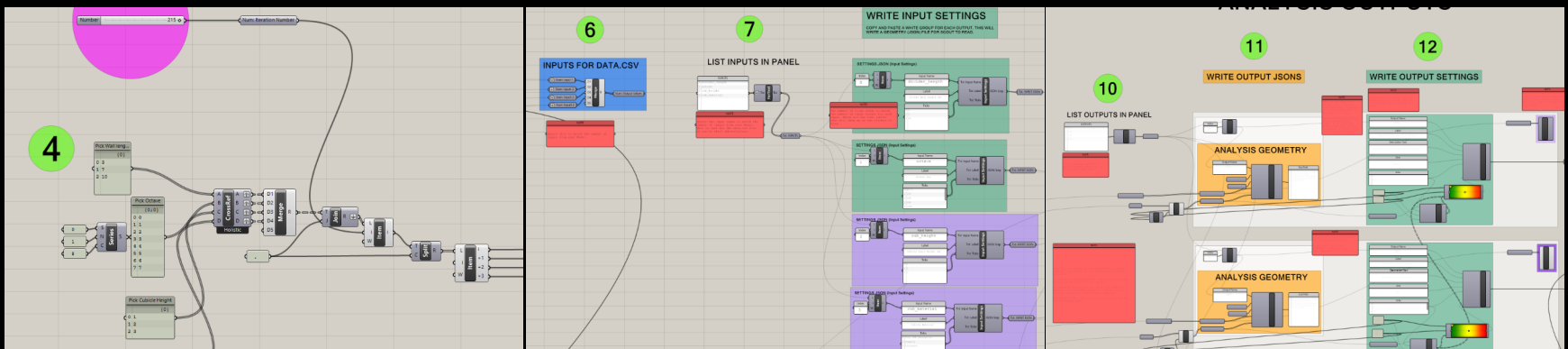


Acoustic Computational Modeling

Sebastian Schloesser
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Architectural Acoustic Ecologies

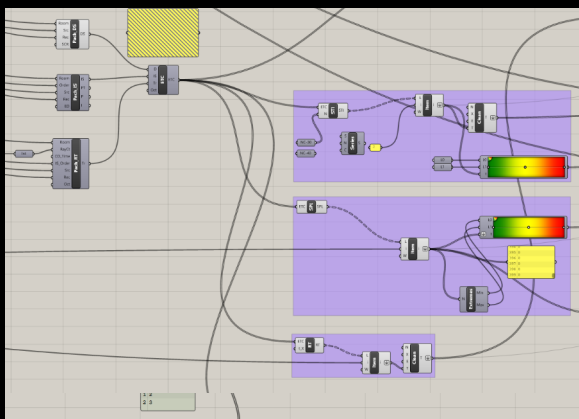
A workflow for exploring and optimizing parametric design spaces in terms of acoustic performance using Pachyderm in Grasshopper for simulation/analysis and KPF's Scout for visualization of the results.



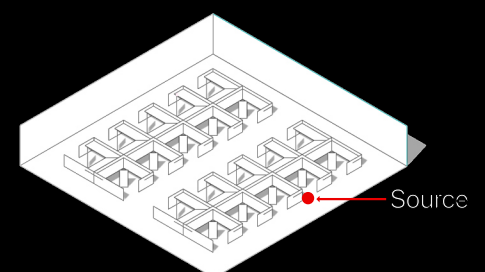
Prepare your design space and parametric geometry or acoustic properties. In this case you can change the wall length, cubicle divider height and material, and see all the octaves.

Then structure your inputs to produce the necessary files in the right format to give to Scout's UI.

Define the range and color ramp of the gradients that will be used to visualize results.



For the main portion, feed your scene to a ray tracing algorithm from Pachyderm and calculate all the necessary metrics. Let the design space run overnight to compute all the combinations.



For this example, we are looking at an office space with cubicle walls, determining how a conversation or call in one cubicle affects the other workers across the room.

Now you can visualize the results in Scout, as you move sliders corresponding to your parameters, the metrics are visualized immediately, allowing you to quickly sift and compare many options.

