Point cloud

Reconstructed mesh

Ground truth

¡Feliz Navidad, mallas correctas y felicidad!

Jingle bells, jingle bells, jingle all the way!
Oh what fun it is to train a meshing DNN.

... walking in a
winter point cloud land.

Isti body do neuronky,
did-dl-laj did-dl-laj dá.

Fa-la-la-la, la-la-la-la!
Deck the points with meshes quickly,

I'm dreaming of a clean point cloud,
just as the ground truth would have been.

Oh Tannenbaum, oh Tannenbaum,
du bist so hart zu scannen.

Christmesh in Vienna

Merry Christmas and a Happy New Year
2022

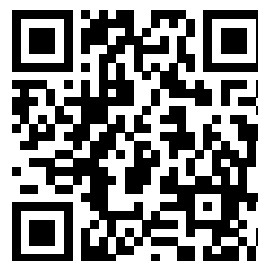**Machines might have a sense for Christmas after all!**

This scene of three trees was reconstructed from an unoriented point cloud with scan shadows. Our neural network **Points2Surf** [1] estimates a signed-distance function from a local and a global subset of the point cloud. By relying not only on global data, it is independent from object classes.

———————— ✳ ————————

Around the corner, not far away,
Meister conducts his orchestra today.

Scan the QR code or follow the link on the right to visit our **procedural Christmas song generator**. It uses a musical grammar [2] inspired by split and shape grammars. Feel free to play around with the exposed parameters or let the random generator surprise you.

Referencecs

[1] Erler, Philipp et al. "Point2Surf: Learning Implicit Surfaces from Point Clouds" in European Conference on Computer Vision

[2] Eibensteiner, Lukas et at. "Temporal-Scope Grammars for Polyphonic Music Generation" in ACM SIGPLAN Int. Workshop on Func. Art, Music, Modeling, and Design

https://xmas.cg.tuwien.ac.at/2021/song

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