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Tangible Modeling with Open Source GIS

Springer

Resources

Tangible Landscape

tangible-landscape.github.io

GRASS GIS

grass.osgeo.org

Blender

blender.org

NCSU Center for Geospatial Analytics

geospatial.ncsu.edu

TANGIBLE LANDSCAPE

TANGIBLE
LANDSCAPE

powered by

GRASS GIS

on GitHub

TANGIBLE
LANDSCAPE

powered by

GRASS GIS

NCSU GeoForAll Lab

North Carolina State University

Center for Geospatial Analytics

geospatial.ncsu.edu/osgeorel

Tangible Landscape

We present Tangible Landscape, an open source tangible interface for 3D sketching powered by GRASS GIS and Blender. Tangible Landscape physically, interactively manifests geospatial data so that you can naturally feel it, see it, and shape it.
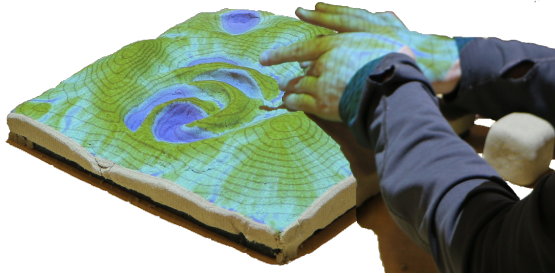

3D sketching by sculpting: by sculpting the terrain you can control the simulated flow of water and other environmental processes.

Planting with colored felt: by placing pieces of felt representing patches of trees you can visualize different designs of the landscape.

Applications

With this novel technology you can intuitively interact with processes like water flow, erosion, solar radiation, flooding, fire spread, disease spread, and urban growth in order to experimentally test interventions.
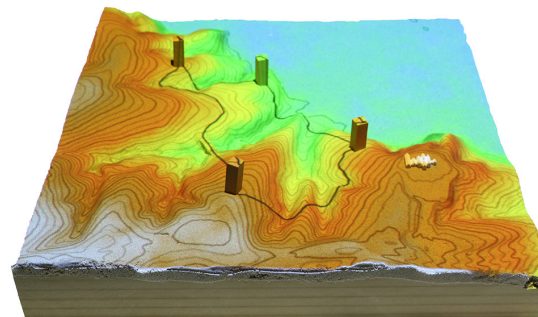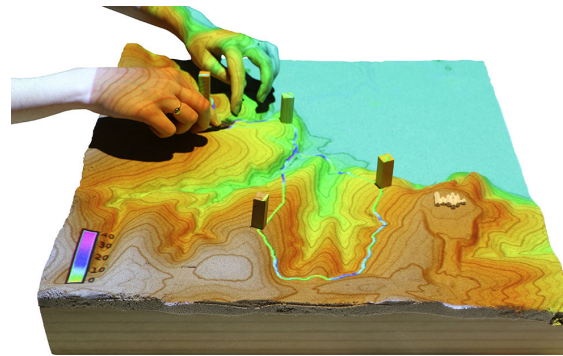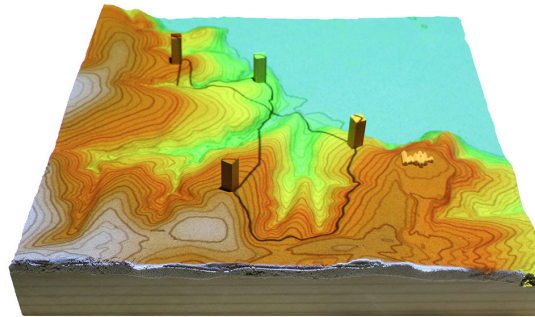
3D sketching with object recognition: you can place markers to digitize waypoints and Tangible Landscape will compute the optimal route.

research by
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How it works

Tangible Landscape is a technology that links a physical model with a geographic information system and 3D modeling platform through a real-time cycle of interaction, 3D scanning, geospatial computation, projection, and 3D rendering.