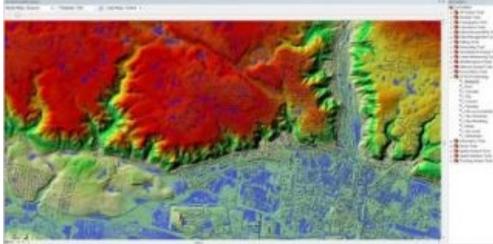


SCALGO Hydrology 1.2



SCALGO has released version 1.2 of the software package SCALGO Hydrology, which can be used to perform basic hydrological modelling on massive raster terrain models (containing tens of billions of cells) on a normal desktop computer. The new version includes a number of new features that make it easier to perform large-area hydrological analysis.

The added features include handling of massive collections of polygon data, for example, which allow for easy and efficient 'burning' of a large number of features (such as buildings, ridges and culverts) that are important for hydrological modelling into a large-area terrain model. The release also includes functionality that allows for efficient computation of various measures (height, area, volume) of all depressions

(including depressions inside other depressions) in massive raster terrain models, which for instance allows for easy and efficient identification of the depressions and terrain areas most important for hydrological modeling.

As with the previous version, all SCALGO Hydrology 1.2 modules can be run through a stand-alone graphical user-interface or from within ArcGIS. In SCALGO Hydrology 1.2 the ArcGIS version 10.1 is supported and an ArcGIS viewer has been added for easy visualisation of the output of many of the package modules.

The most significant updates in SCALGO Hydrology 1.2 include extension to the Bluespot module so that each bluespot cell contains the measure (height, area or volume) of the depression below the cell; new Clip module that clips a raster or a point cloud according to a set of polygons; new Burn module that burns elevation values from a set of polygons into a raster or a point cloud; new Calculate module that evaluates a function for each cell in a raster; a new Masks module that generates binary masks from a raster (e.g. useful for post-processing Sea-Levels module output); merge of TIN Conversion, Raster Conversion and Point Conversion into new Convert module; addition of multi-core support in many core algorithms. The stand-alone user-interface, including options to monitor CPU, disk and memory use are updated.

Image: the result of computing bluespots using SCALGO Hydrology 1.2, visualised using the SCALGO ArcGIS Viewer. A cell is coloured blue if the volume of the depression in the terrain below the cell is at most 3,236m³ (as set by the viewer threshold value). Prior to the bluespot computation, the SCALGO Hydrology 1.2 Burn module was used to add buildings and cut bridges in the terrain model covering more than 13,000km².