

rtree

**Tcl package for rtree spatial
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Introduction:

Tcl package to implement an efficient rtree spatial search data structure, wrapping the C implementation of <https://github.com/tidwall/rtree.c> using [swig](#).

Usage:

To use it see the higher level procs of rtree.tcl

#to create and delete a rtree

NewRtree <dimension>

DeleteRtree <rtree>

#to add points to the rtree

RtreeInsertPoints2D { rtree points ids }

RtreeInsertPoints3D { rtree points ids }

RtreeInsertPoint { rtree coordinates id }

#to ask for the points inside the rectangle

RtreeSearch { rtree rectangle_corners }

#to create auxiliary rectangle (2D) or box (3D)

NewRectangle <x0> <y0> <x1> <y1>

SetRectangle { rect x0 y0 x1 y1 }

DeleteRectangle { rect }

NewBox {x0 y0 z0 x1 y1 z1}

SetBox { rect x0 y0 z0 x1 y1 z1 }

Example:

```
proc Test3D { } {
    set rtree [NewRtree 3]
    set points {1.0 1.0 0.8 1.5 2.0 0.8 1.1 0.9 0.8}
    set ids {1 2 3}
    RtreeInsertPoints3D $rtree $points $ids
    set result [RtreeSearch $rtree {0.5 0.5 0.5 1.5 1.5 1.5}]
    DeleteRtree $rtree
    #puts $result
    return $result
}
```