Technische Universität Braunschweig
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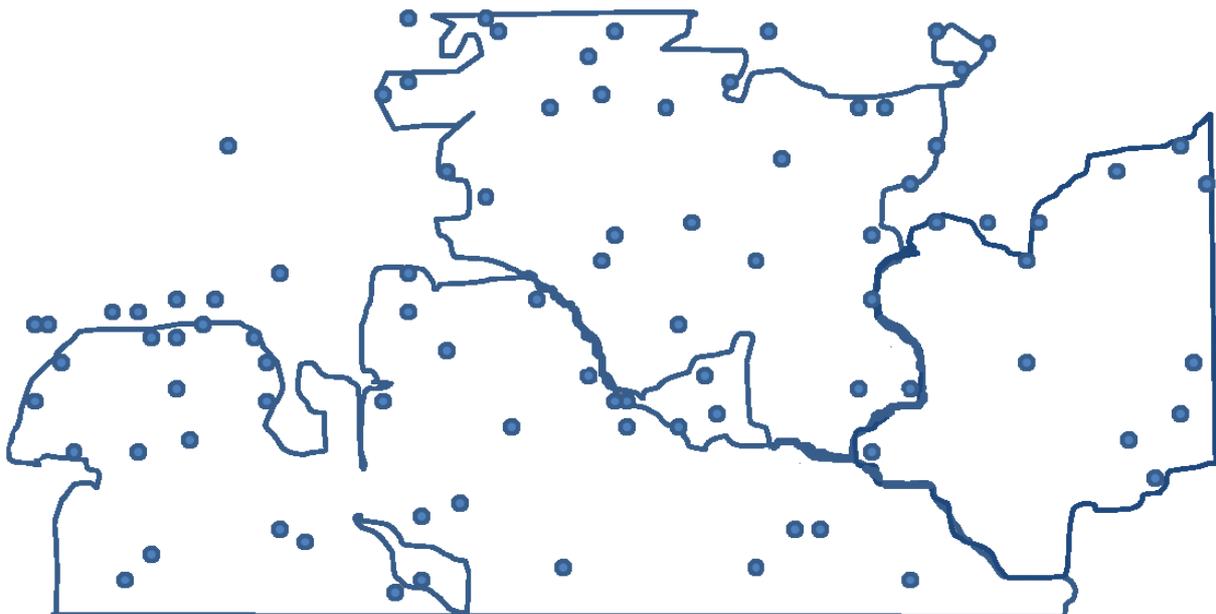http://www.ifis.cs.tu-bs.de

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Exercises for Spatial Databases and GIS

Sheet 5 (until 11.12.2009)

Exercise 1 (Spatial index)

1. What kind of spatial index would you use for the following data and why?
   a. weather stations
   b. nesting sites
   c. rivers
2. Would you choose a different index type if you knew that the following query type is mostly asked?
   a. nearest neighbour query
   b. exact match query

Exercise 2 (Quadtree)

Choose one quadtree variant for the given weather stations. Draw the quadrants and the corresponding tree structure. One leaf may contain 10 points.

Exercise 3 (R-tree)

If you want to apply the splitting strategy to the construction of a R-tree to store points, what possibilities do you have? Choose one and construct the R-tree for the given points. One leaf may contain 10 points.