








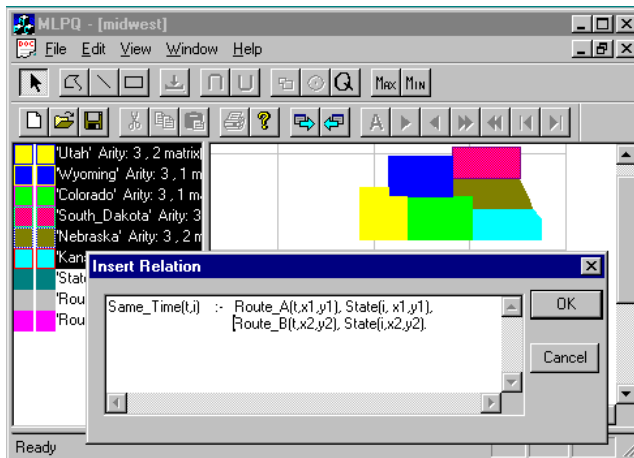
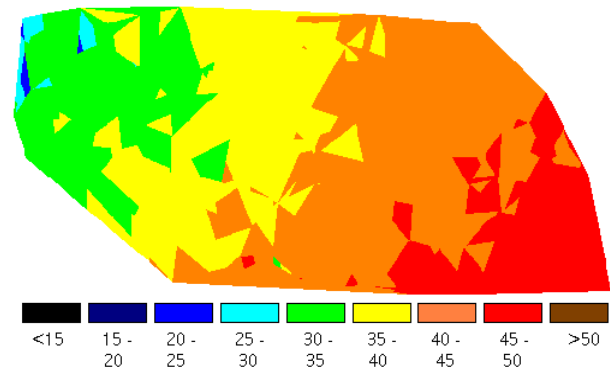
The MLPQ/GIS Constraint Database System*

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MLPQ/GIS [4,6] is a *constraint database* [5] system like CCUBE [1] and DEDALE [3] but with a special emphases on spatio-temporal data. Features include data entry tools (first four icons in Fig. 1), icon-based queries such as  Intersection,  Union,  Area,  Buffer,  Max and  Min, which optimize linear objective functions, and  for **Datalog queries**. For example, in Fig. 1 we loaded and displayed a constraint database that represents the mid-west United States and loaded two constraint relations describing the movements of two persons. The query icon opened a dialog box into which we entered the query which finds (t, i) pairs such that the two people are in the same state i at the same time t .

MLPQ/GIS can animate [2] spatio-temporal objects that are linear constraint relations over $\text{space} \times \text{time}$.

Users can also display in discrete color zones (isometric maps) any spatially distributed variable that is a linear function of $\text{space} \times \text{time}$. For example, Fig. 2 shows the mean annual air temperature in Nebraska. Animation and isometric map display can be combined.



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