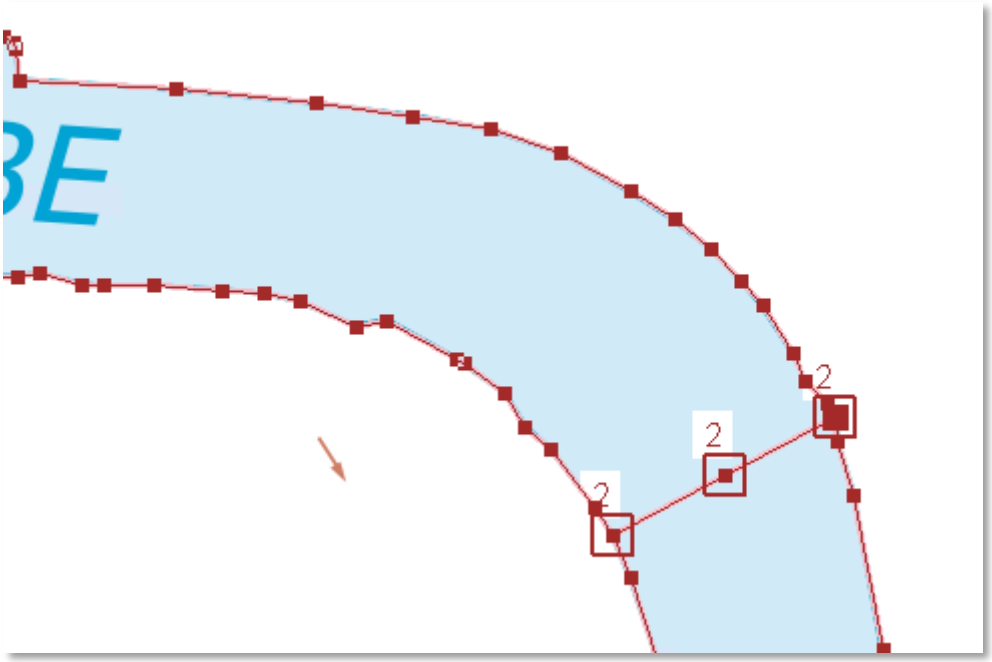
River Labeling task– (Simplified)

Given:

1. River geometry (river.wkt, unit: pt) - may consist of multiple parts
2. Text label (Example: "ELBE") with a specific font size in pt (Example: 12 pt)



Task:

Place the river name **once** inside the river geometry in a cartographically appealing way.

Requirements:

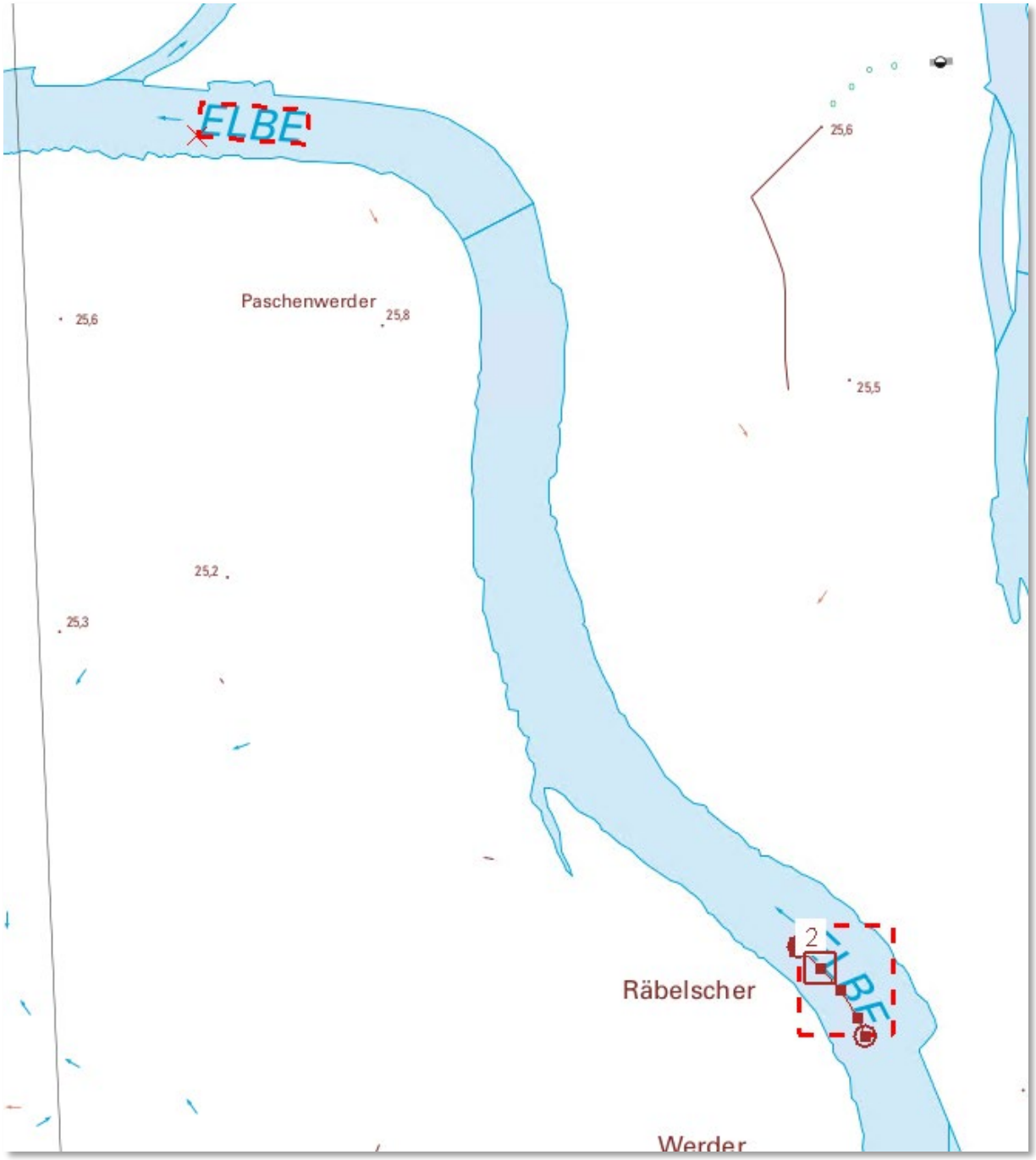
1. **Text must be completely inside the river boundary** with proper padding (no touching edges)
2. **Position text for optimal readability** - centered in the widest/most visible part of the river
3. **Only if no space inside:** Text may be placed outside the geometry

Optional Enhancements:

- Text rotation to align with river flow direction
- Curve-following along river centerline (advanced)

Evaluation Criteria:

Example of an optimal result



Technical Feasibility:

- Can you successfully place text inside the polygon with proper padding?
- How do you handle narrow or irregular river shapes?

Innovation and Creativity:

- How does your placement differ from basic centroid-based approaches?
- Any novel algorithms for finding optimal label positions?

Presentation and Documentation:

- Visual demonstration with before/after examples
- Clear explanation of your placement algorithm