Force-Directed Layout
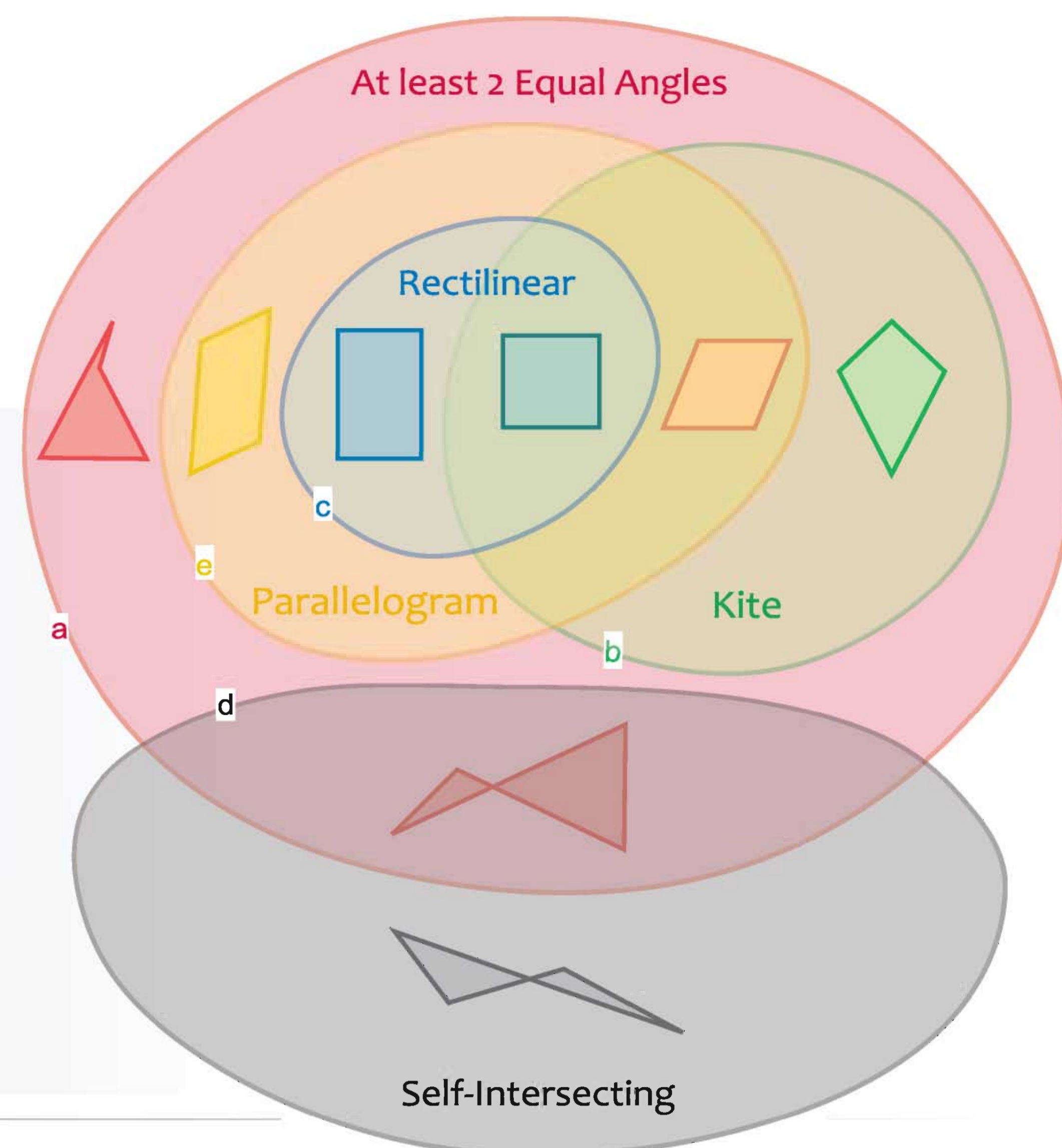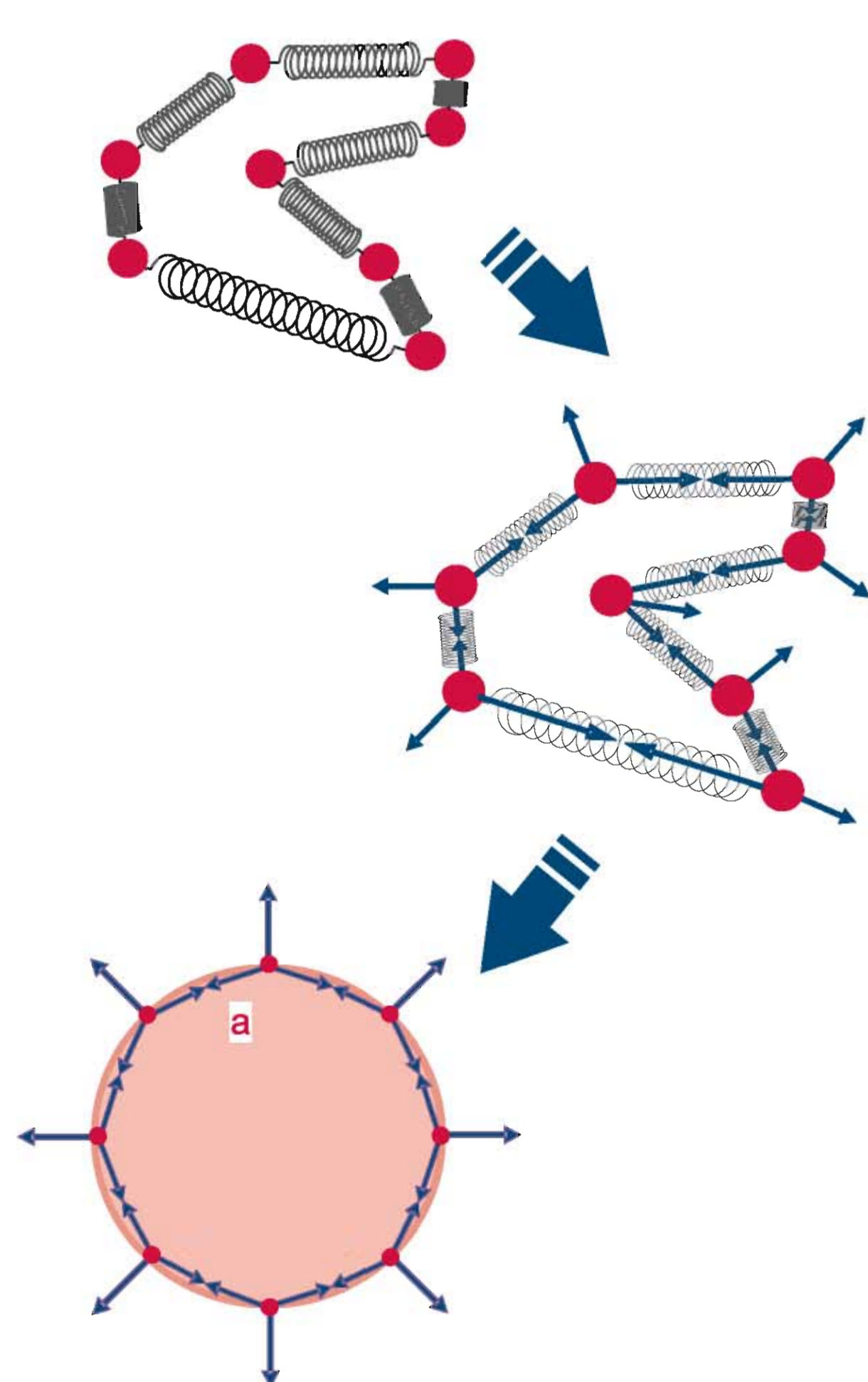## f o r   E u l e r   D i a g r a m s

Problem

Euler diagrams are the only diagrams that intuitively represent *containment*, *intersection* and *exclusion* of data. Though they are used in a wide variety of application areas, such as biological visualization, data classification and querying of large databases, none of the current *automatic diagram layout techniques* produce good layouts in reasonable time.
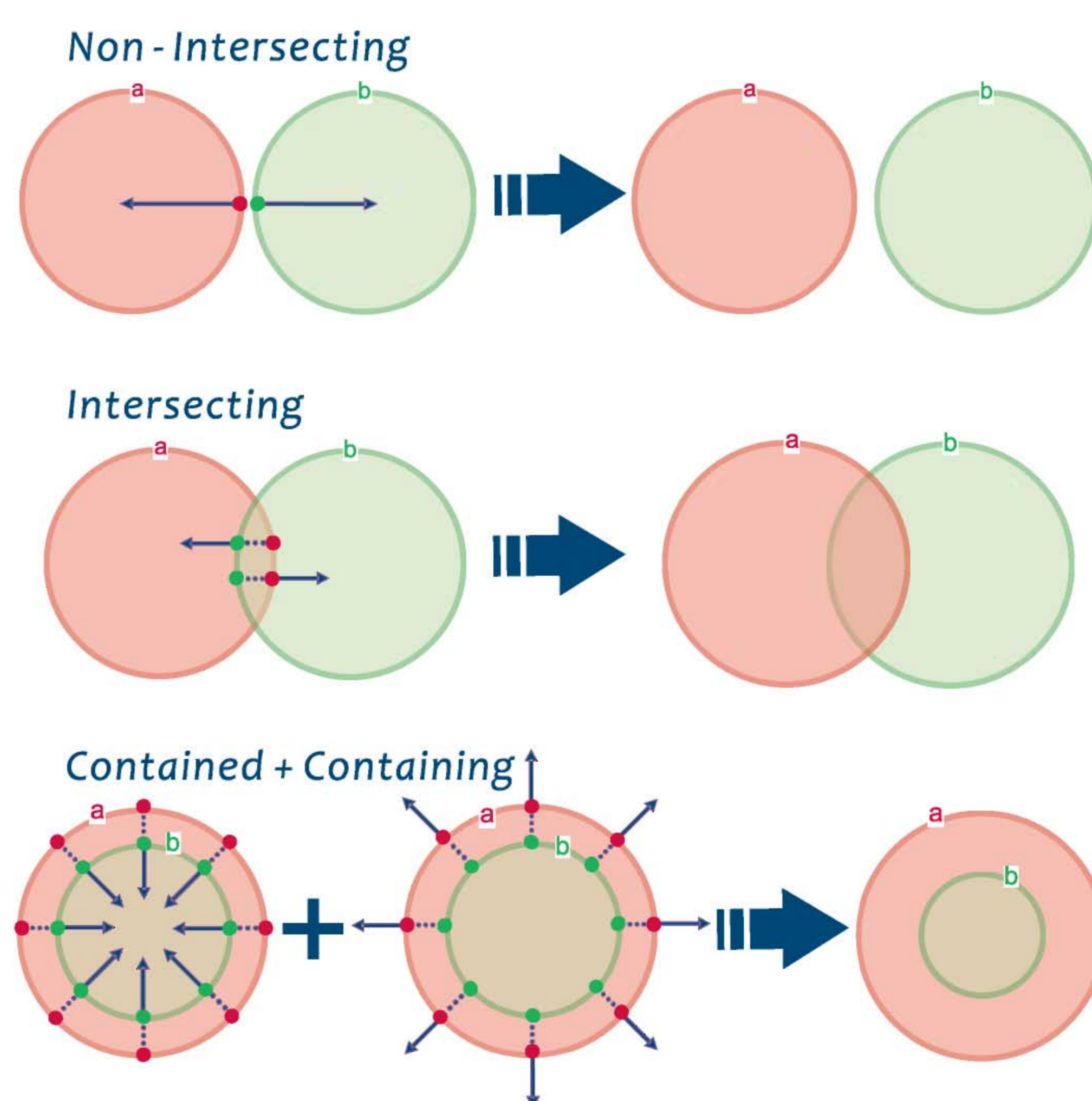

Our Approach

We adopt a *force-directed approach* to automatically layout aesthetically pleasing Euler diagrams in a reasonable time. The initial diagrams dealt with are all generated by the latest wellformed Euler diagram generator. All the forces in our model have specific objectives:
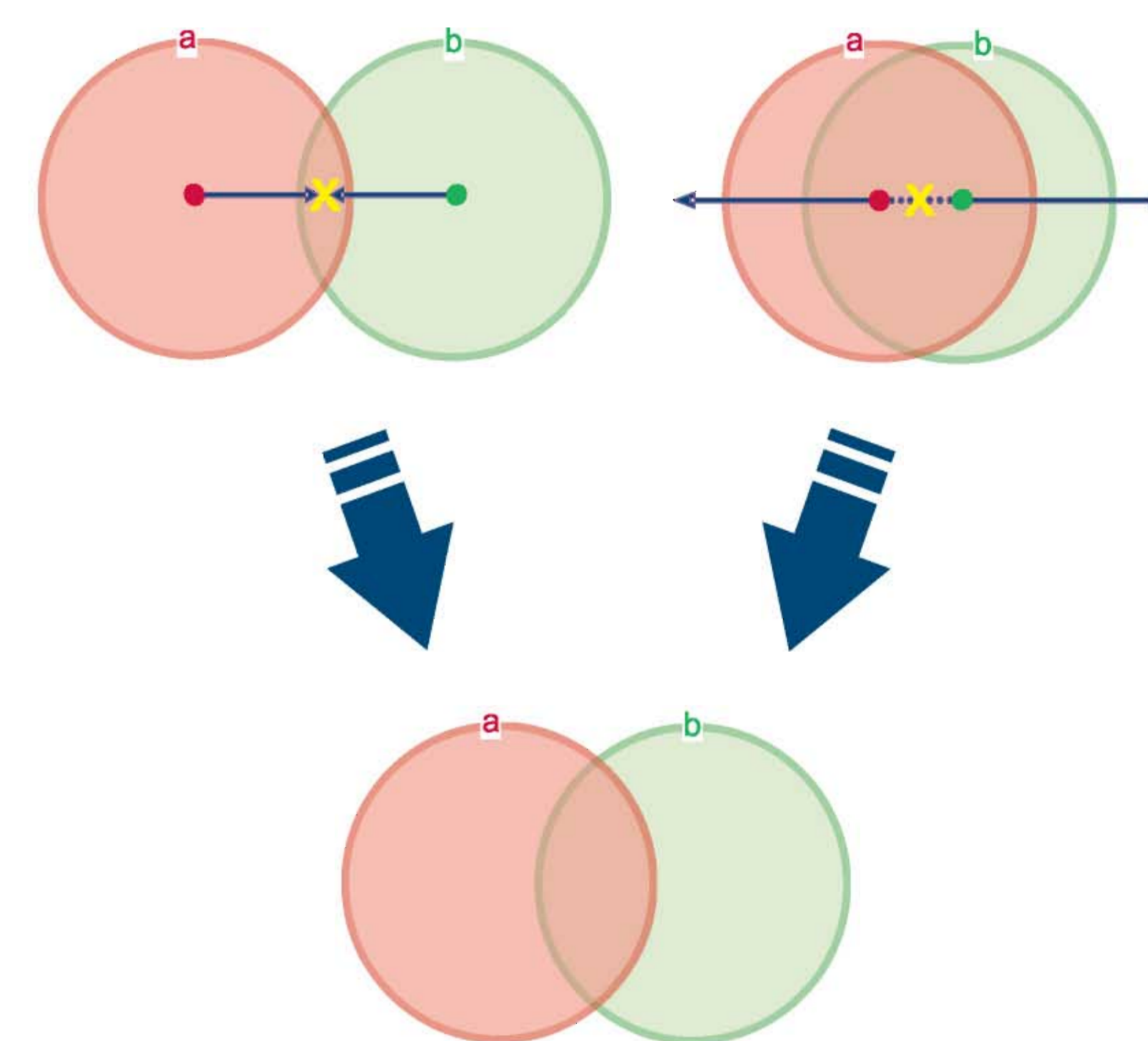
① Attain Smooth Polygons

② Maintain Original Structure

③ Ensure Adequately Sized Curves and Zones

Non - Intersecting

Intersecting

Contained + Containing

Example

Initial Diagram

Final Layout by our Force-Directed Approach

Final Layout by a previous Aesthetic Layout Metrics Approach

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