Start off with triangle abc
length bc = smallest track spacing you plan to use
angle bac = 10 degrees (use different angles for larger or smaller point radii)

draw circle e, centre = midpoint of line ac, diameter = 0.5 (length of smallest spacer piece)

Draw circle track a, centre a, radius closest intersection of line ac and circle e

Draw circles track b and node, offset 2 and 4 metres from track a

Helper points should lie on the intersections of lines and their respectively named circle. In practice a.track1b and a.node01 have been moved apart to make it easier to place junction levers. The distance by which this can be done varies by component.

a

node
track b
track a

e

b   c
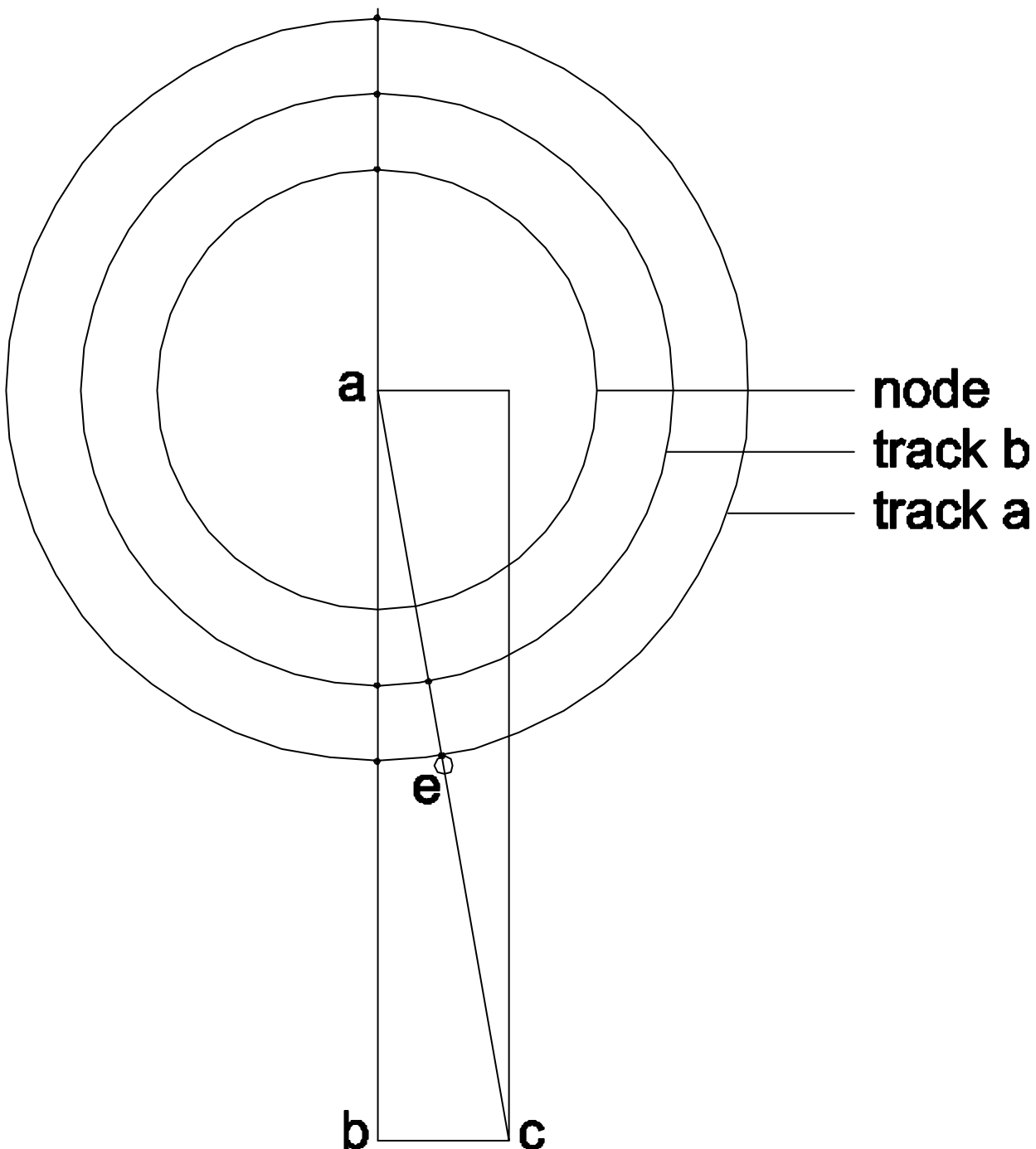
Left Hand Point, Right Hand is mirrored
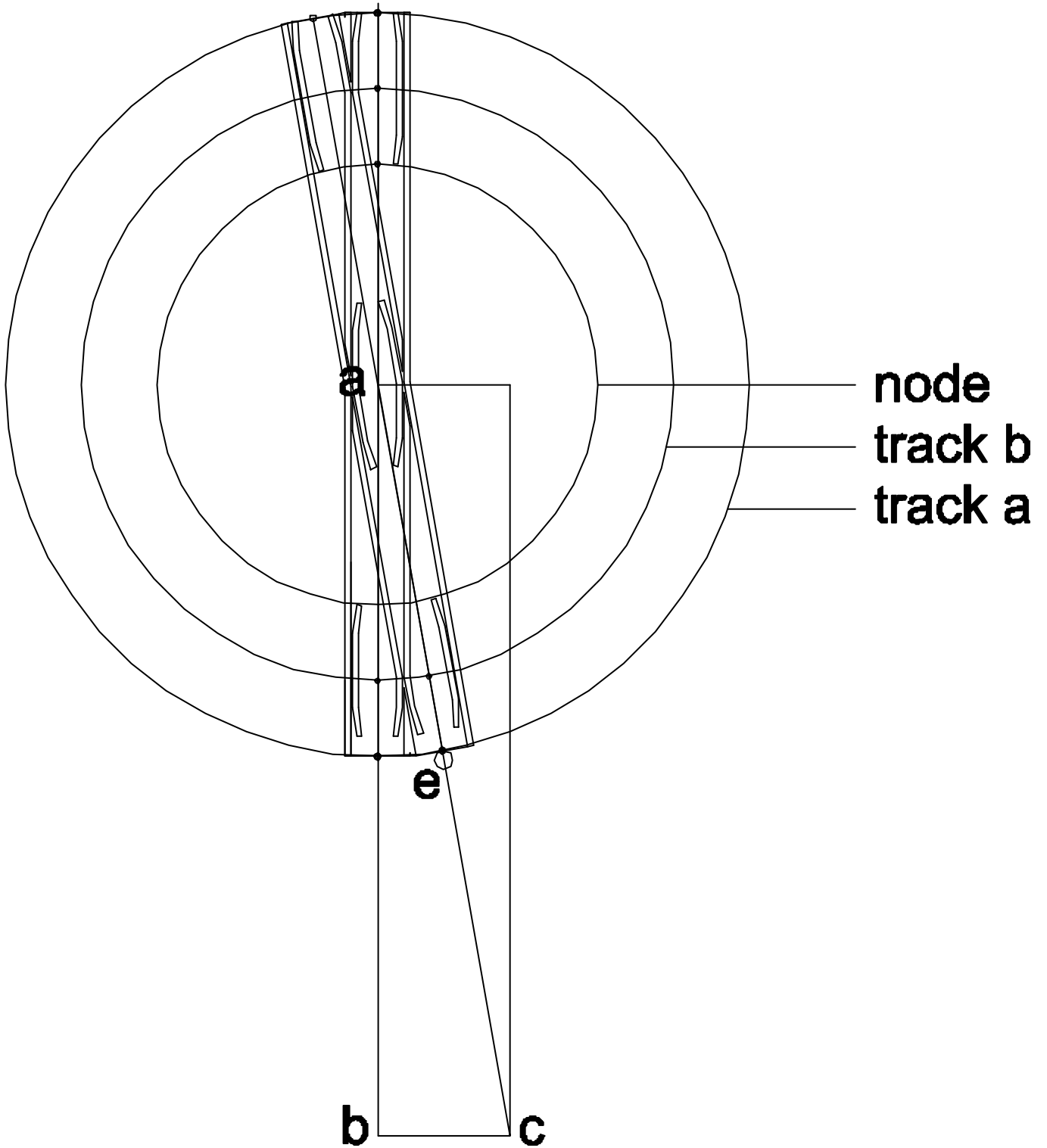
Helper points as noted

Curved track is a circular arc starting at a.track0b and ending at a.track2b
Included angle 10 degrees.

Ignore the fact that a.node01 is not on this arc. Trainz doesn't draw a circular arc it
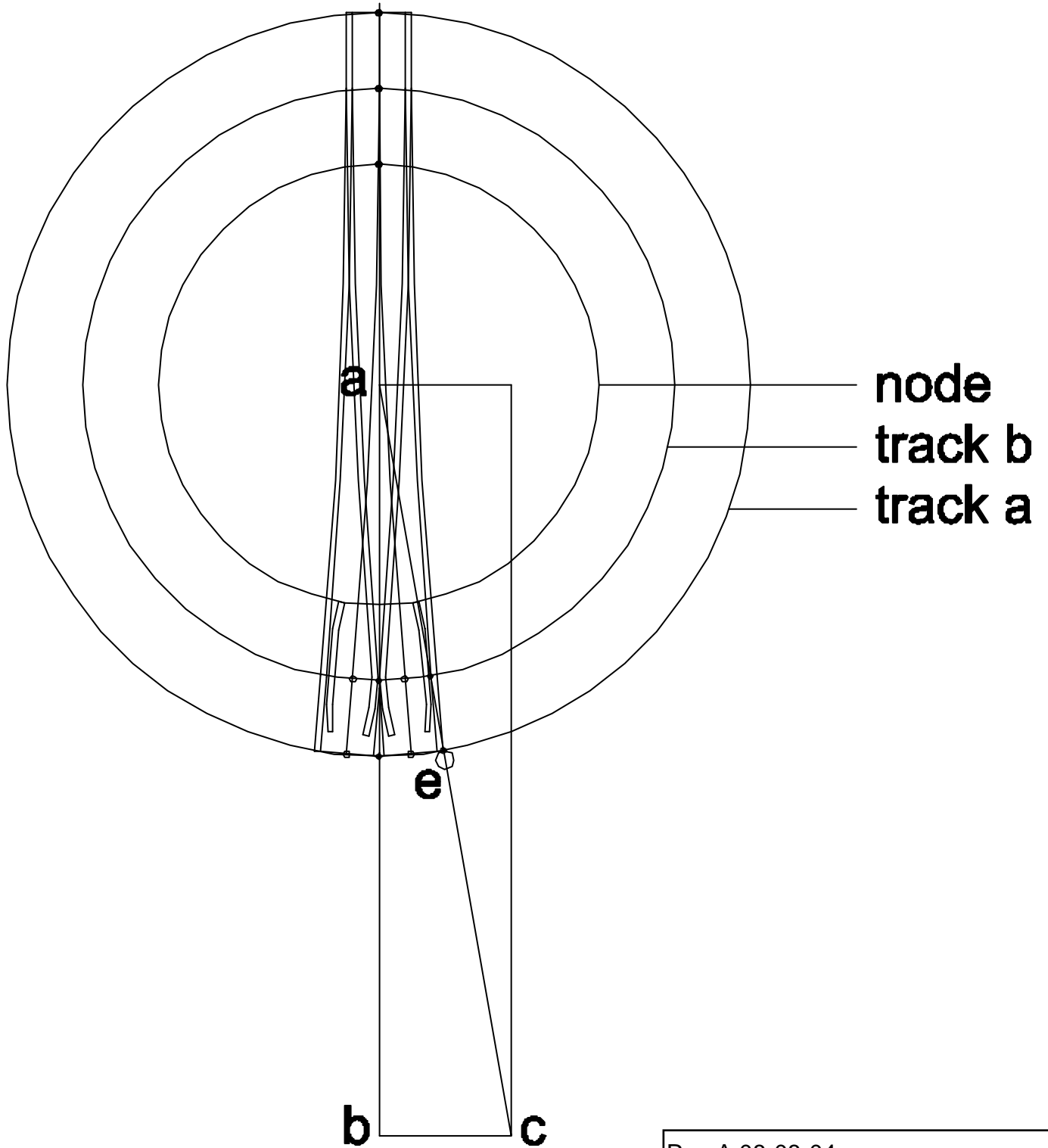draws some sort of indeterminate bezier spline. Node 1 will be close enough.

a.track0a

a.track0b

a.node01

a

node

track b

track a

a.track1b

a.track2b

a.track1a

a.track2a

e

b

c
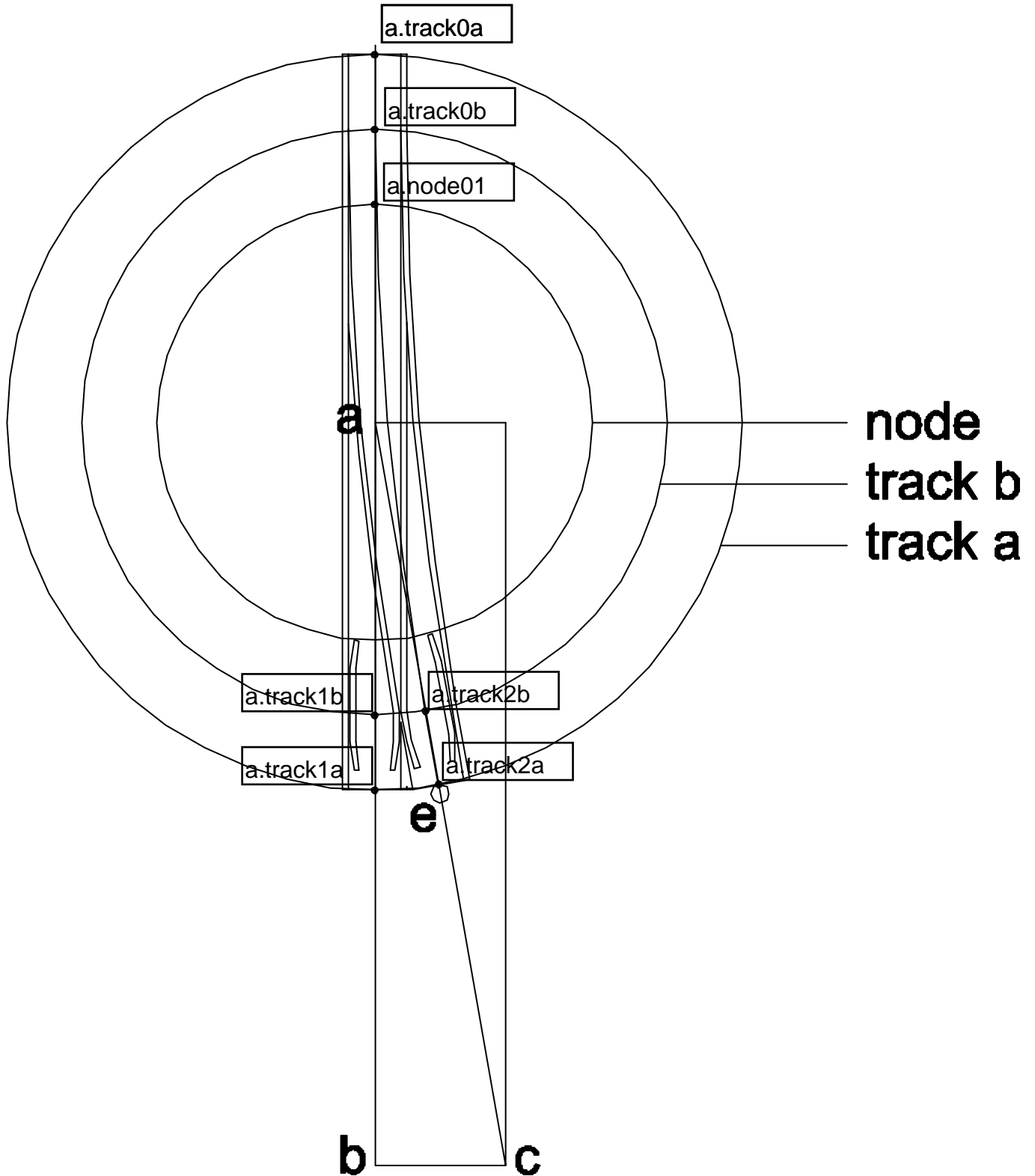
Crossing

Extend line ac to find the additional point locations.

node
track b
track a

a

e

b c

Y Point

Branch helper points rotated 5 degrees about point a

a

e

b   c

node
track b
track a

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