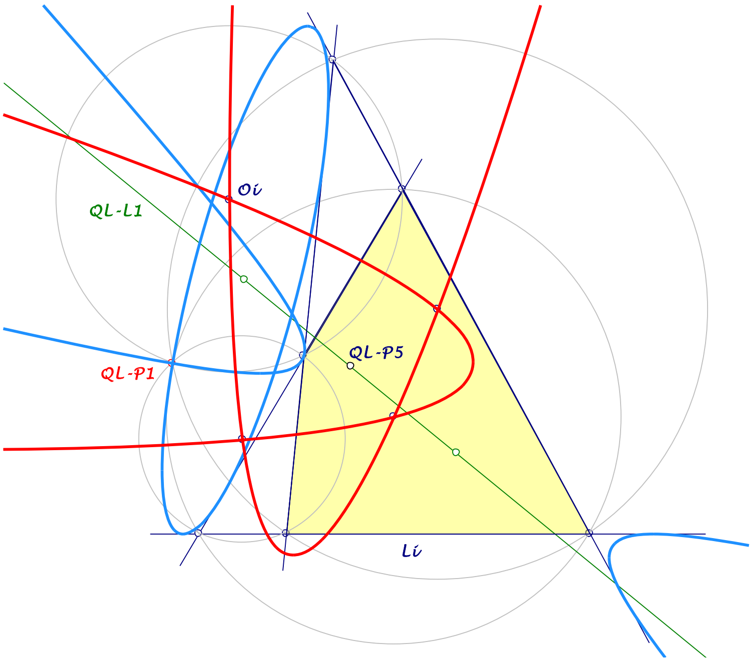
EQF-Note 2015-04-25

Background for these notes is:
Chris van Tienhoven: Encyclopedia of Quadri-Figures
http://www.chrisvantienhoven.nl/

QL-Tf3 for inscribed conics

QL-Tf3, shortened CSCe, of tangents to QL-inscribed conics gives conics through the circumcenters O_i of the QL-triangle components. QL-inscribed conics, centered symmetrically to QL-P5, lead in a special case to two conics, which give with the CSCe-images of their tangents the circumscribed parabolas of the Oi-quadrangle.



CSCe is a *QL*-transformation, which maps a line to the *CSC*-image of the reflection of *QL-P1* in the line.

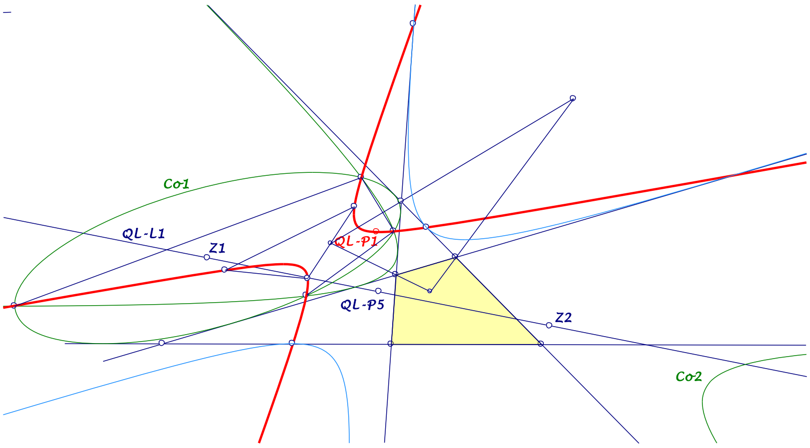
- ***CSCe* of a *QL*-line is the circumcenter for the triangle of the remaining *QL*-lines.**

- ***CSCe* of tangents to a *QL*-inscribed conic gives a conic through the circumcenters O_i of the *QL*-triangles:**
  ... *QL-Co1* gives *QL-Ci3* (circumcircle of O_i).
  … *QL*-inscribed conic with center *QL-P5* gives the orthogonal hyperbola of O_i.

Now we consider pairs of *QL*-inscribed conics Co_1 and Co_2, centered symmetrically to *QL-P5*.

- ***Co*$_1$ and *Co*$_2$ intersect on a conic**
  … bearing *QL-P1* and its *QL-Tr1*-anticevians,
  … bearing the contact points of the inscribed conic centered in *QL-P5*,
  … with a tangent in *QL-P1* perpendicular *QL-P3.P4.P5.P6.*

- **The intersection quadrangle of *Co*$_1$ and *Co*$_2$ has as diagonal triangle *QL-Tr1*.**



Now we consider the special case, that the distance of the conic centers to *QL-P5* is the *QL-Ci3*-radius (see first figure).

- **Two *QL*-inscribed conics, centered symmetrically to *QL-P5* in a distance of the *QL-Ci3*-radius**
  … intersect in *QL-P1*
  … orthogonal
  … with the Steiner axes as tangents.

- **The *CSCe*-images of these two conics give the circumscribed parabolas for the quadrangle of the circumcenters *O*$_i$ of the *QL*-triangles.**

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