

# SIDE 14.2



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## TCD maps

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### Content :

A TCD map is a map from a triple crossing diagrams to projective space, satisfying an incidence requirement. We introduce dynamics on TCD maps based on Menelaus theorem and show multi-dimensionally consistency with Desargues theorem. To each TCD map we associate a hierarchy of dimer models, which provides local and global invariants. Conveniently, TCD maps include as special cases a large number of known maps, including Q-nets, Line complexes, Darboux maps, Desargues maps, dSKP lattices, t-embeddings, T-graphs, the pentagram map, integrable cross-ratio systems and others. Additionally, we show how to relate the resistor subvariety of the dimer model to dBKP reductions and the Ising subvariety to dCKP reductions.

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