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We exploit a technique related to *transversals and sections of groups* to build loops and study their properties. Here the group is  $\mathrm{PGL}_2(\mathbf{K})$ , or its subgroup  $\mathrm{PSL}_2(\mathbf{K})$ , embedded in the projective space  $\mathrm{PG}(3, \mathbf{K})$  without a ruled quadric  $\mathcal{Q}$ . If  $\mathbf{K}$  is a Euclidean field we take a subgroup  $\mathcal{D}$  of elliptic projectivities in  $\mathrm{PSL}_2(\mathbf{K})$  and characterize loops arising from plane transversals and from the tangent semicone to  $\mathcal{Q}$  through the point 1 ([?]). In the finite case we consider, both for  $\mathrm{PGL}_2(q)$  and for  $\mathrm{PSL}_2(q)$ ,  $q$  odd, different types of subgroups  $\mathcal{D}$  and transversals either geometrically or algebraically well characterized.

## References

- [1] Stefano Pasotti, Silvia Pianta, and Elena Zizioli, *A geometric environment for building up loops*, Results Math. (2015), To appear.

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