Hidalgo, Rubén A.

The mixed elliptically fixed point property for Kleinian groups. (English) Zbl 0815.30032
Ann. Acad. Sci. Fenn., Ser. A I, Math. 19, No. 2, 247-258 (1994).

A Kleinian group $G \subset \mathrm{PSL}(2, \mathbf{C}$ is said not to satisfy the mixed elliptically fixed point (MEFP) property if there is an elliptic element $h \in G$ which is not contained in any degenerate subgroup of G and which satisfies the following trichotomy: either h has its fixed point set in $\mathbf{C}$ lying entirely in the limit set of G and not fixed by one loxodromic element of G, or by two parabolic elements, or one of the fixed points of h lying in the limit set is not fixed by a parabolic element and the other one belongs to the discontinuity domain.

Say that G does satisfy the MEFP if the above situation does not hold.

The author proves that the MEFP-property is conserved by the Klein-Maskit combination method, as a consequence all function groups on the plane satisfy such a property. Also all geometrically finite Kleinian groups satisfy the MEFP-property. The author suggested an example of a Web group (due to B. Maskit) without this property.

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MSC:

30F40 Kleinian groups (aspects of compact Riemann surfaces and uniformization)
20H10 Fuchsian groups and their generalizations (group-theoretic aspects)

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Klein-Maskit combination; Kleinian groups; Web group

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