Ephemera and apocrypha
3. Boundary groups

1. (Open) Give an explicit computable example of a degenerate B-group, not in terms of a limiting process. (This then gives an explicit example of a geometrically infinite group which is finitely generated.) Compare the non-constructive result, [1].

2. (Open) Prove or disprove: if $\Gamma \in \partial\,\mathrm{QH}(G)$ where G supports deformation, then Γ is a cusp iff its matrix entries are algebraic over $\mathbb{C}$. A similar result for groups in the interior lying on rational lamination locii.

3. (Open) Write a completion of the space of graph curves which is in natural bijection with the (projection of the) Thurston or Bers boundary of the relevant Teichmüller space. (That is, Schottky groups are to smooth tropical varieties as B-groups are to...?)

4. (Open, but see [2]) Determine necessary and sufficient conditions for a circle packing on the sphere to be the limit set of a maximal cusp. Give similar results about circle packing limit sets for higher dimensional groups.

References

[1] L. Greenberg. "Fundamental polyhedra for Kleinian groups". In: *Annals of Mathematics* 84.3 (1996), pp. 433–441. DOI: 10.2307/1970456 (cit. on p. 1).

[2] David Wright. "Searching for the cusp". In: *Spaces of Kleinian groups*. Ed. by Yair N. Minsky, Makoto Sakuma, and Caroline Series. LMS Lecture Notes 329. Cambridge University Press, 2005, pp. 301–336. DOI: 10.1017/cbo9781139106993.016 (cit. on p. 1).