1138-20-345 G Christopher Hruska* (chruska@uwm.edu) and Kim Ruane. Graphs of groups and corresponding splittings of spaces.

If a group G acts "nicely" on a space X and also splits as a graph of groups \mathcal{G} , we can often decompose X into geometrically natural pieces corresponding to the vertex and edge groups of the splitting. Using this idea, one discovers that if G is finitely presented and splits over finitely presented subgroups, then the vertex groups must also be finitely presented. Similar phenomena occur for FP_n groups splitting over FP_n subgroups (Bieri), hyperbolic groups splitting over quasiconvex subgroups (Bowditch) and CAT(0) groups splitting over convex subgroups (Hruska–Ruane). We will also see some connections with Świątkowski's notion of trees of compacta, which can be used to describe analogous decompositions of boundaries into pieces. (Received February 12, 2018)