## Resource owner Proportional resource sharing: igspace User i bid $z_i$ to get resource $\operatorname{Share}(\operatorname{Bid}) = (x_i)_{i=1}^n ext{ where } x_i = -1$ $x_i$ : Amount of resources per user Bid Joint bid: Bid $\mathrm{Bid} = (z_i)_{i=1}^n$ x $x_n$ $\mathrm{UE}_1$ $UE_2$ $\mathrm{UE}_i$ $\mathrm{UE}_n$