Events Organizer on Social Networks

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Events Organizer: Overview

- Website
- New objective function
- Minimum capacity
- Aspiration criterion
- Ch 3 feedback

Website

- Events are public by default
- Owners can set their events private and invite participants

Objective function

Including event owners' preferences within objective function:

- Median age $$max_s\left\{-\sum_j^m \left|\frac{\sum_i^n s_{ij} age_i}{\sum_i^n s_{ij}} - mage_j\right|\right\}$$
- Sex ratio $$max_s\left\{-\sum_j^m \left|\frac{\sum_i^n s_{ij} male_i}{\sum_i^n s_{ij}} - sratio_j\right|\right\}$$

Compound objective function is now a weighted sum over all subobjectives, with $\sum_i w_i = 1$

We still have to set the weights

Minimum capacity

- Vector cmin of size m (one for each event)
- Constraint $\forall_j \sum_i^n s_{ij} < cmin_j \Rightarrow s_{ij} = 0$
- Problem: if incumbent has not included enough (i.e. at least cmin) participants to a given event, it will be definitely canceled; otherwise, the same problem will arise anyway whenever we fall below the cmin boundary.
- Other approach: relax constraints while below the cmin limit
- Whenever cmin is reached, we have to make s consistent
  - Keep the event and remove participations to conflicting events
  - Potentially cancel the event by going back under cmin
- This is a subproblem requiring a new definition of the neighborhood! (LNS)

Aspiration criterion

The L(N, t) function filtering out illegal moves performs better when the aspiration criterion is applied, for the same computing time scale.