Grammar for Language Describing Game Structures

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Pretty-printed EBNF grammar:

⟨*game*⟩ ::= 'Players:' ⟨*teamList*⟩ 'Rounds:' ⟨*roundList*⟩ 'Win:' ⟨*winConditionList*⟩

⟨*teamList*⟩ ::= (⟨*team*⟩ {',' ⟨*team*⟩} | ⟨*playerList*⟩ | 'randomly divide' ⟨*playerList*⟩
    'into' ⟨*nameList*⟩) ['all with' ⟨*attributeList*⟩]

⟨*team*⟩ ::= 'team' ⟨*name*⟩ ':' ⟨*playerList*⟩

⟨*playerList*⟩ ::= ⟨*player*⟩ {',' ⟨*player*⟩}

⟨*player*⟩ ::= ⟨*name*⟩ [⟨*attributeList*⟩]

⟨*attributeList*⟩ ::= ⟨*attribute*⟩ {',' ⟨*attribute*⟩}

⟨*attribute*⟩ ::= 'affiliation called' ⟨*name*⟩ | ('score' | 'resource' | 'counter')
    'called' ⟨*name*⟩ ['starting at' ⟨*number*⟩] ['with minimum of' ⟨*number*⟩]
    ['with maximum of' ⟨*number*⟩]

⟨*roundList*⟩ ::= ⟨*round*⟩ ';' {⟨*round*⟩ ';'} [⟨*modifierList*⟩]

⟨*modifierList*⟩ ::= ⟨*modifier*⟩ ';' {⟨*modifier*⟩ ';'}

⟨*modifier*⟩ ::= ['just' | 'from'] (⟨*roundReference*⟩ ('before' | 'after') ⟨*phaseReference*⟩
    'insert' ⟨*phase*⟩ | ⟨*roundReference*⟩ 'replace' ⟨*phaseReference*⟩ 'with' ⟨*phase*⟩)

⟨*roundReference*⟩ ::= 'round' [⟨*number*⟩]

⟨*phaseReference*⟩ ::= 'phase' [⟨*number*⟩]

⟨*round*⟩ ::= ⟨*phaseList*⟩ ['repeated' ⟨*number*⟩ 'times']

⟨*phase*⟩ ::= ⟨*action*⟩ | ⟨*progression*⟩

⟨*phaseList*⟩ ::= ⟨*phase*⟩ {'\n' ⟨*phase*⟩}

$\langle action \rangle ::= \langle competition \rangle \mid \langle decision \rangle$

$\langle competition \rangle ::= [\text{'scored'}]\,[\text{'team'}]\,\text{'competition between'}\,\langle idList \rangle$

$\langle decision \rangle ::= [\text{'self-included'}]\,\text{'vote by'}\,\langle idList \rangle\,\text{'between'}\,\langle idList \rangle\mid[\text{'self-included'}]$
$\quad \text{'nomination of'}\,\langle number \rangle\,\text{'by'}\,\langle identifier \rangle\,\text{'between'}\,\langle idList \rangle\mid\text{'allocation of'}$
$\quad \langle name \rangle\,\text{'by'}\,\langle idList \rangle\mid[\text{'self-included'}]\,\text{'directed vote by'}\,\langle idList \rangle\,\text{'between'}$
$\quad \langle idList \rangle\mid\text{'uses?'}\,\langle identifier \rangle\,\text{'then'}\,\text{'('}\,\langle phaseList \rangle\,\text{')'}\,[\text{'otherwise'}\,\text{'('}$
$\quad \langle phaseList \rangle\,\text{')'}]$

$\langle progression \rangle ::= (\langle affiliationUpdate \rangle\mid\langle counterUpdate \rangle)\,\text{'for'}\,\langle idList \rangle$

$\langle affiliationUpdate \rangle ::= \text{'elimination'}\mid(\text{'add'}\mid\text{'remove'})\,\langle name \rangle\mid[\text{'number preserving'}]$
$\quad \text{'swap'}\,\langle nameList \rangle\,[\text{'adding'}\,\langle nameList \rangle]\mid\text{'change'}\,\langle name \rangle\,\text{'to'}\,\langle name \rangle\mid$
$\quad \text{'merge'}\,\langle nameList \rangle\,[\langle name \rangle]$

$\langle counterUpdate \rangle ::= (\text{'increase'}\mid\text{'decrease'})\,\langle name \rangle\,\text{'by'}\,\langle value \rangle\mid\text{'set'}\,\langle name \rangle$
$\quad \text{'to'}\,\langle value \rangle$

$\langle value \rangle ::= \langle number \rangle\mid\langle name \rangle\mid\text{'results'}\,\text{'of'}\,(\langle compReference \rangle\mid\langle allocateReference \rangle$
$\quad \mid\langle voteReference \rangle)\mid\langle identifier \rangle\,\langle name \rangle$

$\langle idList \rangle ::= \langle identifier \rangle\,\{\text{','}\,\langle identifier \rangle\}\,[\text{'except'}\,\langle idList \rangle]$

$\langle identifier \rangle ::= (\text{'everyone'}\mid\langle name \rangle\mid\text{'chance'}\,\text{'('}\,\langle idList \rangle\,\text{')'}\mid\text{'nominated'}\mid$
$\quad \text{'tied'}\mid\text{'eliminated'}\mid(\text{'winner'}\mid\text{'loser'})\,\text{'of'}\,\langle compReference \rangle\mid(\text{'majority'}$
$\quad \mid\text{'minority'})\,\text{'of'}\,\langle voteReference \rangle\,[\langle tiebreaker \rangle]\mid(\text{'highest'}\mid\text{'lowest'}\mid$
$\quad \text{'most'}\mid\text{'least'})\,\langle name \rangle\,\text{'('}\,\langle idList \rangle\,\text{')'}\,[\langle tiebreaker \rangle])\,[\text{'*'}\,\langle value \rangle]$

$\langle compReference \rangle ::= \text{'competition'}\,[\langle number \rangle]$

$\langle allocateReference \rangle ::= \text{'allocation'}\,[\langle number \rangle]$

$\langle voteReference \rangle ::= \text{'vote'}\,[\langle number \rangle]$

$\langle tiebreaker \rangle ::= \text{'tiebroken by'}\,([\langle action \rangle]\,\langle identifier \rangle)$

$\langle name \rangle ::= (\text{'a'}\mid...\mid\text{'z'}\mid\text{'A'}\mid...\mid\text{'Z'})\,\{\text{'a'}\mid...\mid\text{'z'}\mid\text{'A'}\mid...\mid\text{'Z'}\mid\text{'0'}\mid...\mid\text{'9'}\}$

$\langle nameList \rangle ::= \langle name \rangle\,\{\text{','}\,\langle name \rangle\}$

$\langle number \rangle ::= (\text{'0'}\mid...\mid\text{'9'})+$

$\langle winCondition \rangle ::= [\text{'team'}]\,\text{'achieving'}\,\langle name \rangle\,\text{'of'}\,\langle number \rangle\mid[\text{'team'}]\,\text{'competition'}$
$\quad \mid[\text{'team'}]\,(\text{'highest'}\mid\text{'lowest'}\mid\text{'most'}\mid\text{'least'})\,\langle name \rangle\mid\langle number \rangle\,\text{'member jury vote'}$
$\quad \mid\text{'survive'}$

$\langle winConditionList \rangle ::= \langle winCondition \rangle \; \{ \text{`,'} \; \langle winCondition \rangle \}$

Notes:

- make grammar unambiguous

- should allocate be a decision and progression or just progression? Both, but decision will automatically also do the progression. The progression exists for non-decision related resource updates, such as awarding a player more of a resource for winning a competition.