POLYOMINOES & AMOEBAS: A collaborative-competitive game

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CONCEPT

This poster presents a game prototype aimed at raising awareness for the value of collaboration to solve challenges (fig. 1). To stimulate such awareness the game allows players the freedom to accomplish goals single-handedly or combined as a group, while giving immediate feedback on the consequences of opting for either course of action.

INSTRUCTIONS

BASICS: P&A is two-player, turn-based game whose win condition is to collect five tokens and where each player is represented by a four-cell polyomino piece. Gameplay takes place on a board, divided into a grid of 9x6 square cells (fig. 2). A scoreboard features the tokens collected (fig. 3). Players move in turns, translating along the x and/or y axis and rotating freely but in descrite movements aligned with the grid (fig. 4).
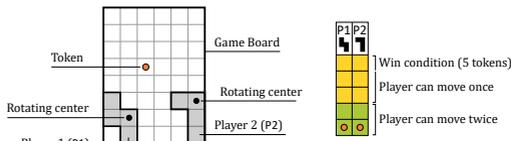
Fig.2. Game board, polyomino player pieces and tokens.

Fig.3. Scoreboard. Both players can move twice. Translation and rotation accounts as the same move.
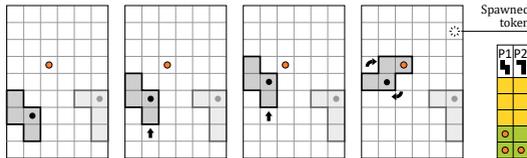
Fig.4. Player1 turn sequence - two moves - scores in the end of the turn and a token is spawned.

BOUNDARIES & COLLABORATION: Polyominoes rotate around a center marked as dot in each piece. The polyomino outline can move beyond the game bounds, as long as its center remains within the play area (fig. 5). Collaboration happens when edges from distinct player pieces touch one another, gluing them temporarily into one combined polyomino. This single player can only move once per turn, yet, it can choose between two centers to rotate, thus increasing its range (fig. 6).
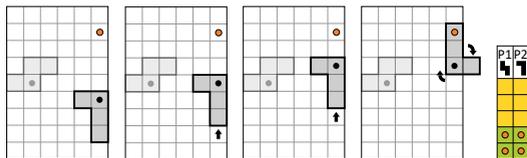

**Fig.5.** Player2 turn sequence - two moves - scores at the end of the turn.
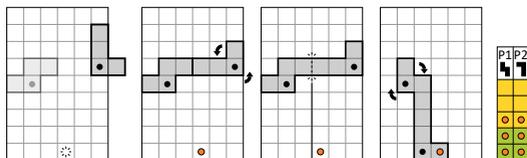
Fig.6. Players join and the combined polyomino shape overlaps the token granting an equal score for each player.
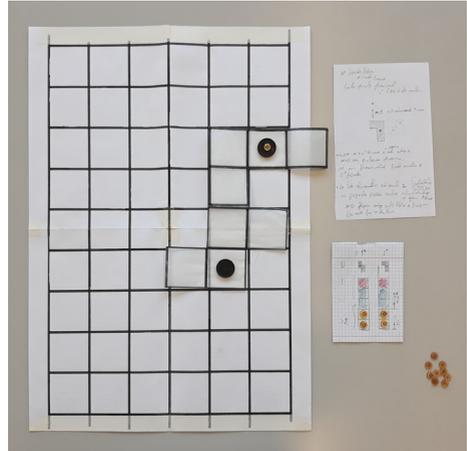

Fig.1. Photo of the prototype with game board, polyomino player pieces and tokens.

TOKENS: Each player starts its score with one token and stops playing when run out of these. Tokens are collected when overlapped by the player piece, failure to collect loses the previous token. Players move twice until three tokens are scored, after that they move only once. Translating and rotating accounts as the same move. The game allows the presence of a single token at any given time, a new one is re-spawned each time the previous is collected. Tokens are spawned into random positions, yet they must remain within player's reach as possible to increase the chances of survival.

SEPARATION: Separated or combined, players are encouraged to discuss and agree, negotiating the actions to take next. Players stop collaborating by moving their corresponding original polyomino pieces apart, following a different course (fig. 7) and resuming individual play (fig. 8).
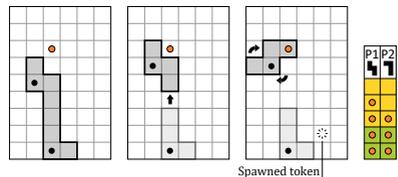

Fig.7. Player 1 decides to separate, taking a turn according to its score - one move. The player scores individually and another token is spawned.
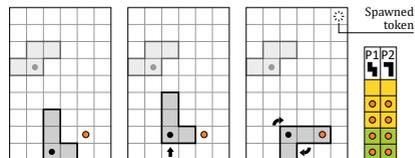

Fig.8. Player 2 enacts its individual turn according to its score - one move - and scores individually. Another token is spawned and the game continues until conditions for success or loss are met.