

Production of table games

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Tete-a-Tete is the first Ukrainian company producing table games. It is young but very ambitious. The motto of the company is "No rehash". All game concepts are new. That is where all the mathematical problems come from. Mr. Makarenko spoke about the rules of creating table games. They are worth mentioning because they give better understanding of mathematical problems.

1. Before writing a game I will ask myself "why do I do this?"

The author has to determine the target group of consumers and purpose (entertainment, teaching etc).

2. I will never write a game which cannot be sold.

The author has to do analysis of market and commercial parameters of the game (is it attractive in terms of design, is it interesting enough to become popular, etc)

3. I will not bite more than I can chew. I do not have eternity to do this.

The author needs to estimate time needed for development.

4. I will never write a game for myself, for elected people, for mathematicians. All I do is for ordinary Tom, Dick or Harry.

All the references to some external knowledge, lack of which may prevent the user from playing must be excluded as well as all situations which take too much computation. That is why the game has to be tested by ordinary people from some target group and analyzed thoroughly in these terms.

5. But the last thing I am interested in is the opinion of Tom, Dick and Harry about my game for they know nothing about making games and know nothing about what they want. But I will never let them know this.

The author needs to have feedback and know the opinion of customers but he may not let it push him around. So each proposal or request from users must be examined and its influence on the concept of the game must be calculated.

6. The text of my game has to be clear to the greatest idiot.

That deserves tests on a target group also.

7. There will be no standard set of qualities, skills and features.

The author must analyze other games and the concept of the game has to be original.

8. I will not copy anything from GURPS, DnD, MTG and Warhammer!

9. I will not use words “first”, “Ukrainian”, “Best” in my advertisement.

So there will be money spent on good advertisement.

10. My game will not have volumes of rules. Big texts are not readable.

11. There must be balance in my game. So that everyone could win (theoretically) and nobody could win always.

The balance is the most complicated part. It deserves long calculations and thinking, and testing. (On this stage empirical methods and common sense are used. But mathematical modeling would be a better way out.)

So we have to consider an optimal trade-off between simplicity, originality, sophistication, commercial properties and balance is compulsory condition.

Some games were described to give a taste of the problems.

Western-Credo

There are two players: Courier and Gangster. Each has 36 cards (symbolizing some location – river, Indians, canyon, road, settlements, towns, banditos, Mexicans and dragoons - suits) and colt. At the beginning each randomly chooses his trump (one of the suits) and takes 6 cards from the deck. Then they lay cards one by one and follow instructions written on the cards (for example River both players – 3 cards). If one player lays his trump card another must put away one more card. The player may use colt 6 times but not more than one for a turn. Using colt means that he may force his opponent put away the card he laid and replace it by another. The Courier carries money from one bank of Wild West to another. He must make a horizontal line (road) of 8 cards. He wins if the road is made or if the Gangster has no more cards. The Gangster must prevent him from getting to the final bank. For this, he has so called by-pass cards. For example instruction on the card “River.3 cards by-path” means that the card must be placed in vertical line of 3 cards upward from the road to “travel round” and then in vertical line of 3 cards downwards from the road to “return” to the road. The Gangster wins if the Courier has no more cards.

Problems

1. What number of cartridges is optimal?
2. What number of by-path cards is optimal?
3. What length of the road is optimal?
4. Is there a balance?

Troll Feast

Trolls allow travelers to spend a night in their cave but ask to entertain them. For this purpose guests have some dishes (the number of dishes depends on their parameter of appetite) and drinks, each turn they must cast a spell on two dishes or drinks and give them to the neighbors then he must eat one of the dishes (his own or dish he got from neighbors). Depending on his parameters of magic and magic resistance the spells of neighbors influence his status, parame-

ter of capability means resistance to alcohol (if the capability falls to zero, parameter of magic resistance is divided by 2). When the status falls to zero the player is out. There are guests with different sets of parameters. The one who remains at the table in the end is the winner.

Problems

Determination of parameter sets and mutual influence of parameters.

Magic&Might&Techniques

Magic&Might&Techniques is a strategy which requires a right choice of parameters depending on the card set of the player. Players (2 or more) take 5 cards and lay them in parallel rows. The table is divided into battlefield (all cards laid), fire zone (first 2 cards of each row), and man-to-man fight (in the beginning there are no cards, but then players fill this zone moving cards to it). Using cards of the set depends on the parameters of magic, might and techniques chosen beforehand: high magic allows using magic and anti-magic, high might allows using the most powerful troops – knights, techniques allows complicated ammunition, but the sum of the parameters (M-M-T) is 5.

Problems

1. Is there a balance?
2. Determination of features for combinations of parameters.
3. Determination of special properties of cards.