Board Game Arena developers guidelines
Why guidelines?

More and mode game publishers are choosing Board Game Arena for their game adaptations because the quality of these adaptations is high.

If we want to continue to have nice games in the future, we have to make sure that every game published in the BGA platform is matching the quality standards of BGA.

These guidelines are here to help you to make your game easy to use by BGA players, and to make sure it's going to be validated by the game publisher.
General guidelines

The 3 main important guidelines:

- If a player knows the real board game, he should be able to play your adaptation with no learning.

- Fidelity to the original game is an absolute requirement.

- Don't try to create a video game: make your game interface as close as possible to how the original board game looks like.
I – Game layout guidelines
Many board games have a lot of material to display, and computer screens are sometimes too small.

But you are lucky: your game will be on a web page with a scrolling functionality. Basically, you always have some more space available.

**Don't hide game elements** behind menus, submenus, dialogs, ... but display them directly on the main page.

*Tips*: eventually, you can use HTML anchor link to jump between the different elements of the page if the page height is very big.

In Amyitis, characters cards are elements you don't have to check all the time. Thus, we placed them at the bottom of the page and you have to scroll to see them.
BGA game interface is « fluid ». It means the interface width can vary in order to use extra space on the screen when available.

HTML and CSS give us a lot of possibilities to adapt a web content to a given browser width. You have to use HTML and CSS:

- To allow players owning a **big screen** to enjoy the game comfortably without scrolling the page.
- To allow players with a screen of just **1024px width** to play the game – even if they have to scroll.

**Caylus** : when we have a 1024px small screen, available buildings are placed on the the right and below the board.

On larger screen, these tiles are placed on the right of the board.

**Tips** : for each element of the game, answer this question « how many times during a game do I need to check/use this element? ». Less frequently used elements can be placed below the others.

This is a very basic usage of « float:left » CSS property.
I-3 Use whiteblocks

White blocks are « div » HTML element with the « whiteblock » class (white and transparent background).

This is the recommended way to gather game elements together in your game interface when they are not directly on a board.

Whiteblocks helps you to organize the space in order it can be easily understood by players.

Tips: you can use a <h3> title inside the whiteblock to help players to understand what's inside.

In The Year of the Dragon game interface, with whiteblocks and h3 titles
I-4 Use player panels

BGA players are used to look at player panels when they need an information about a player. Using player panels can allow you to save a lot of space on the main game space.

In general, the following information is placed in the player panel:

- Player's resources (ie : small game elements the player is keeping in front of him in the real game).
- Summary information about player (ex : number of cards in hand, number of cards played...).
- « first player » token.
- Score.

Note : for all games, you must always use the standard BGA score counter (with the star). Players are used to check this counter to see who is winning the game.

Player panels in Seasons.

A lot of useful information can fit into these small spaces :)
When some game action is particular to a specific game state, the good practice is to use a **status bar action** (HTML link).

Don't try to place some icon in your main game interface that will be useless 95% of the time: it takes space and makes the interface more complex to understand.
II – Game usability guidelines
II-1 Use tooltips

With BGA Studio it's very easy to associate a **tooltip** on any element of the game.

Each time this is possible: add a tooltip to explain to the players:
- What is this game element?
- What happens if I click on it?

However, tooltips should NOT be used to display dynamic information about the current game to save space on the game interface. Typically, **regular players should be able to play with no tooltips**.

*Tips*: you can place any HTML element in tooltips. So you can make them as rich and beautiful as you need :)
II-2 Use left clic only

- The whole game should be playable with only **simple left button mouse clicks**.
- Context menus should not be used.
- Drag'n'drop should be avoided (if you want to use it anyway, you should make a click based alternative available).
- Mouse icon must change on cliquable elements (« cursor:pointer » CSS property).
If your testers have different opinions about « how to trigger some game action », maybe the best is to make several options possible for this game action.

In the case there is a complex action to do by the player (ex: select some cards, then click on an action button), design your error messages in order they can guide the player (ex: « please select some cards first »).

*Tips*: For complex games, it is simple and useful to highlight the area of the interface where player should focus his attention (using `onEnteringState/onLeavingState` and CSS).

*The Boss*: when a player clicks on a card with no selected cubes, the interface tells us to select some cube first.
II-4 Use the gamelog

With BGA Studio it is very easy to place some text (or HTML code) in the gamelog.

Don't hesitate to use the game log.

Players are not always in front of the game page when their opponents are making their moves.

In addition, the computer manipulates game elements faster than you usually do with the real board game and even regular players can get behind of what happened sometimes.

You should be able to understand the « game story » by reading the game log.
II-5 Tell players about automatic actions

Very often, during a game you are in a situation where:

- Only one action is possible for the active player, or
- A series of action has to be done (according to the rules) without any player's actions.

In these situation, you must or you may trigger these actions automatically.

In any case, you must make sure that players understand what is happening, otherwise they'll probably report a bug.

- Use the **game log** to trace all actions performed automatically.
- Use **synchronous notifications handlers** to slow down the execution of automatic actions, so that players can understand what is happening.

**Stone Age**: people are fed automatically at the end of the turn, but players can always see what happened exactly in the gamelog.
As a rule of thumb, **don't provide a way to confirm a move**.

Confirming a move slows down the user interface and thus, the game flow.

You can eventually allow a player to confirm a move if this is a very critical step in a game, and if it is possible that a player triggers the action by accident.

*Hawaii*: ending a turn is a critical action that happens only 5 times per player in a game. In this case, it is acceptable (and a good idea) to have a confirmation dialog.
III-7 Translatable interface

With BGA Studio it's very easy to translate your game in any language, using BGA collaborative translation system.

Check the FAQ and the example games to learn how to declare your strings so that every message in your code can be managed by the internationalization system.

Diam's 100 % translated in Polish
III – Original game accuracy guidelines
The less you are modifying the original art of the game, the better.

It's important for publishers that a board game adaptation looks like the real board game. Sometimes it can be useful to modify some elements of the game to save some space on the screen – but try to avoid it.

*Tips*: *if you have not enough space on the screen, reduce the size of the game elements. Try to make sure they are recognizable for players who played regularly, and add a tooltip to help beginners to figure out what they are.*

*Gosu*: the original cards are used, with tooltips.
III-2 Be careful about player assistance

As a rule of thumb, in order to respect the original board games, you shouldn't introduce any player assistance feature.

An assistance must not be introduced if it directly helps the player to figure out if his move is good or bad.

An assistance may be introduced if it can helps the payer to figure out what moves are available.

Gygès: the assistance shows you available moves, but is not alerting you about stupid moves (like the upper left one).
As a rule of thumb, **don't allow** players to cancel one of their moves.

Cancelling a move can cause many issues, including allowing players to reveal some private information intentionally.

You can eventually allow a player to cancel a move if he is in the middle of a multiple steps game action and if no private information has been revealed yet.
Every information visible by players in the real game should be accessible in the adaptation.

Pay attention to some information like the number of cards in the opponent's hand, or the number of remaining cards in the deck.

Dominion: as specified in the rules, number of cards in the hand of players and number of cards in the deck are public information.

It is explicitly forbidden to count cards in the discard pile, so this information is not available.
BGA Studio Guidelines

IV – Game technical quality guidelines
BGA Studio provides a set of useful tools to build board games adaptations (ex: card management, confirmation dialog, tooltips, ...).

Use them, and don't use exotic libraries, plugins or tricks.

Why? Because BGA Framework will evolve in the future to provide new features to players, and it could make your game incompatible with the new version.

On the contrary, if you are using standard stuff, you will enjoy these enhancements without any effort.

If you feel that you really need some exotic thing: don't hesitate to ask us.
Some other person than you may have to look on your code:

- We (BGA team) to help you if you need.
- Some other BGA developer wanting to help you.
- ...

For all these reasons, your code must be written in **English** (variables, methods, comments...).

If English is not your mother tongue don't be afraid: the whole idea here is to be understood, not to write an essay :P

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**Reversi : sourcecode extract**

```javascript
function whaitPlayer() {
    // Active next player
    $player_id = self.$activeNextPlayer();

    // Check if both player has at least 1 disc, and if there are free squares to play
    $player_to_discs = $this->getCollectionFromDB("BGA\Board\Board\$player_id", FROM board
    GROUP BY board_player_id, true );

    if (isset($player_to_discs, null)) {
        // Index 0 has not been set -> there's no more free place on the board !
        // => end of the game
        $this->gameState->setState( "endGame" );
        return;
    }
    else if (isset($player_to_discs, $player_id)) {
        // Active player has no more disc on the board => he looses immediately
        $this->gameState->setState( "endGame" );
        return;
    }
}```
A page refresh (F5) must allow players to reset the game interface to a stable state at any moment of the game.

BGA Studio framework allows you to do this with the « getAllDatas » PHP method and the « setup » Javascript method.

Note : this « refresh » feature is also quite useful during the development process:)
A private game element must be visible only to the player owning it. It **must not be visible by his opponents**, by any means.

In particular:
- `getAllDatas` PHP method mustn't return any element that are hidden from current player, even if the Javascript « setup » method ignores them.
- you mustn't send via the « notifyAllPlayers » function some information that is hidden from one player (use « notifyPlayer » instead).

**Hearts**: each player is alerted about his new cards using `notifyPlayer`, and cards from the other players remains secret.
Game progression should be as **accurate** as possible.

Of course, it's not always easy (or even possible) to compute game progression, but a vague approximation is better than nothing.

**Stone Age**: there are 2 different end game conditions (building cards and civilization cards). Both are taken into account to increase the accuracy of the game progression.
Using BGA Studio you can define a set of **statistics** for your game.

Statistics will be displayed at the end of the game, and help players to **figure out why** they win/loose a game, and what they should improve.

Try to choose interesting statistics that distinguish the different strategies for your game, in order it can help players to understand their game.
These guidelines are here to help you to make sure that the players, the game publisher and the game author are going to enjoy your adaptation of the game.

We created these guidelines based on our personal experience (which includes many mistakes along the way) implementing a lot of games on BGA platform.

Don't hesitate to contact us if you feel uncomfortable with one of these guidelines in some particular context with your game: these guidelines are here to help and not to prevent you to do smart things, and have fun while programming your game ;)}