

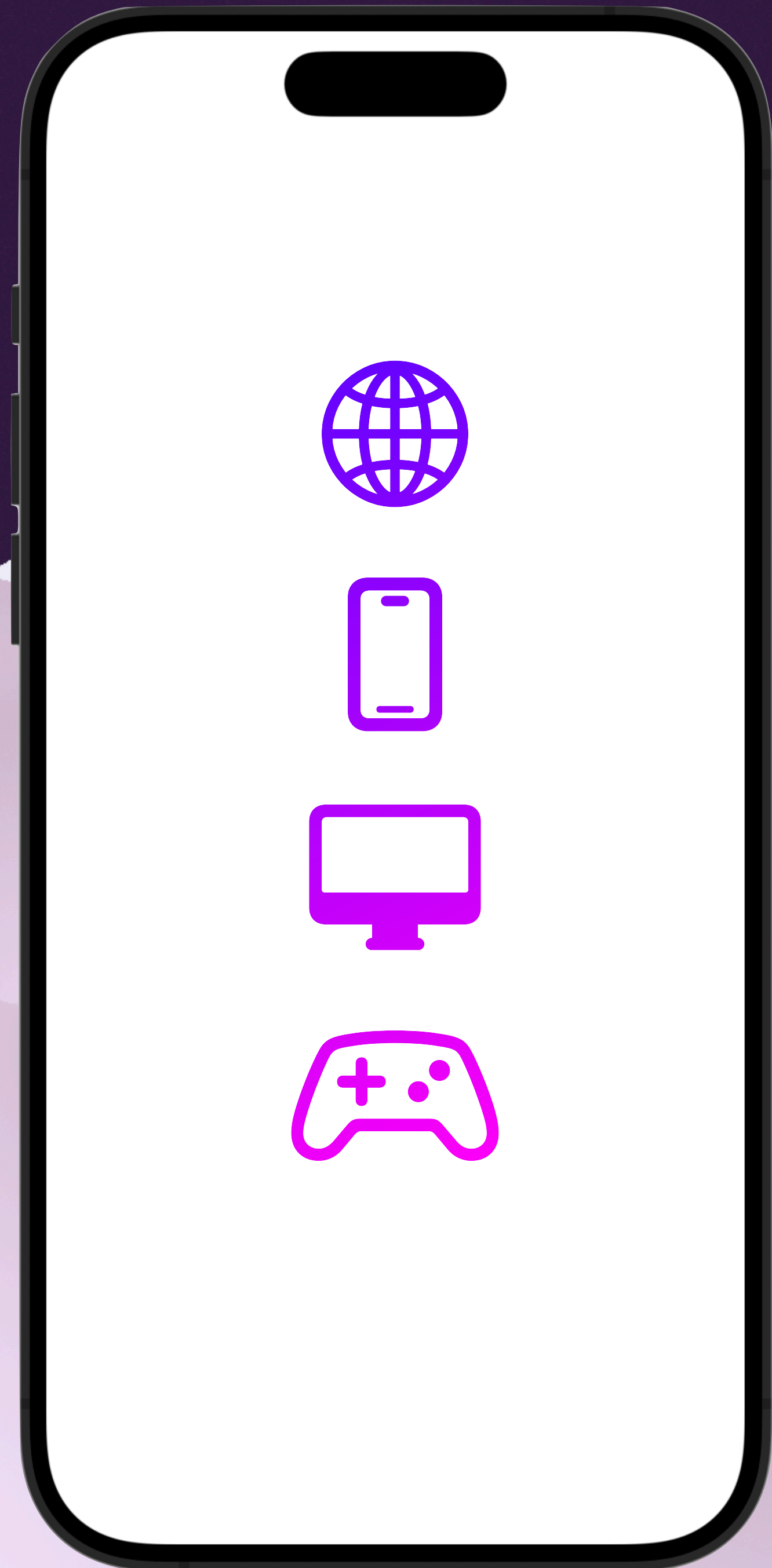
Digital Board Games

Martin Grider

<http://chesstris.com/>

<http://martingrider.name/>

<https://mastodon.gamedev.place/@grid>



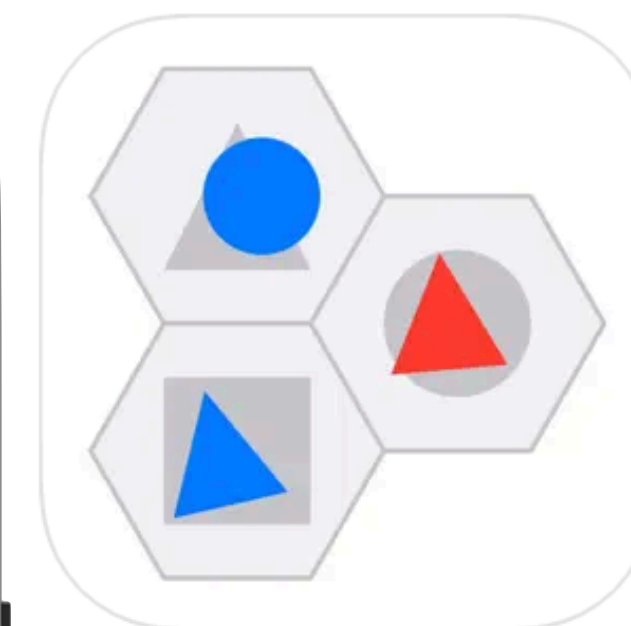
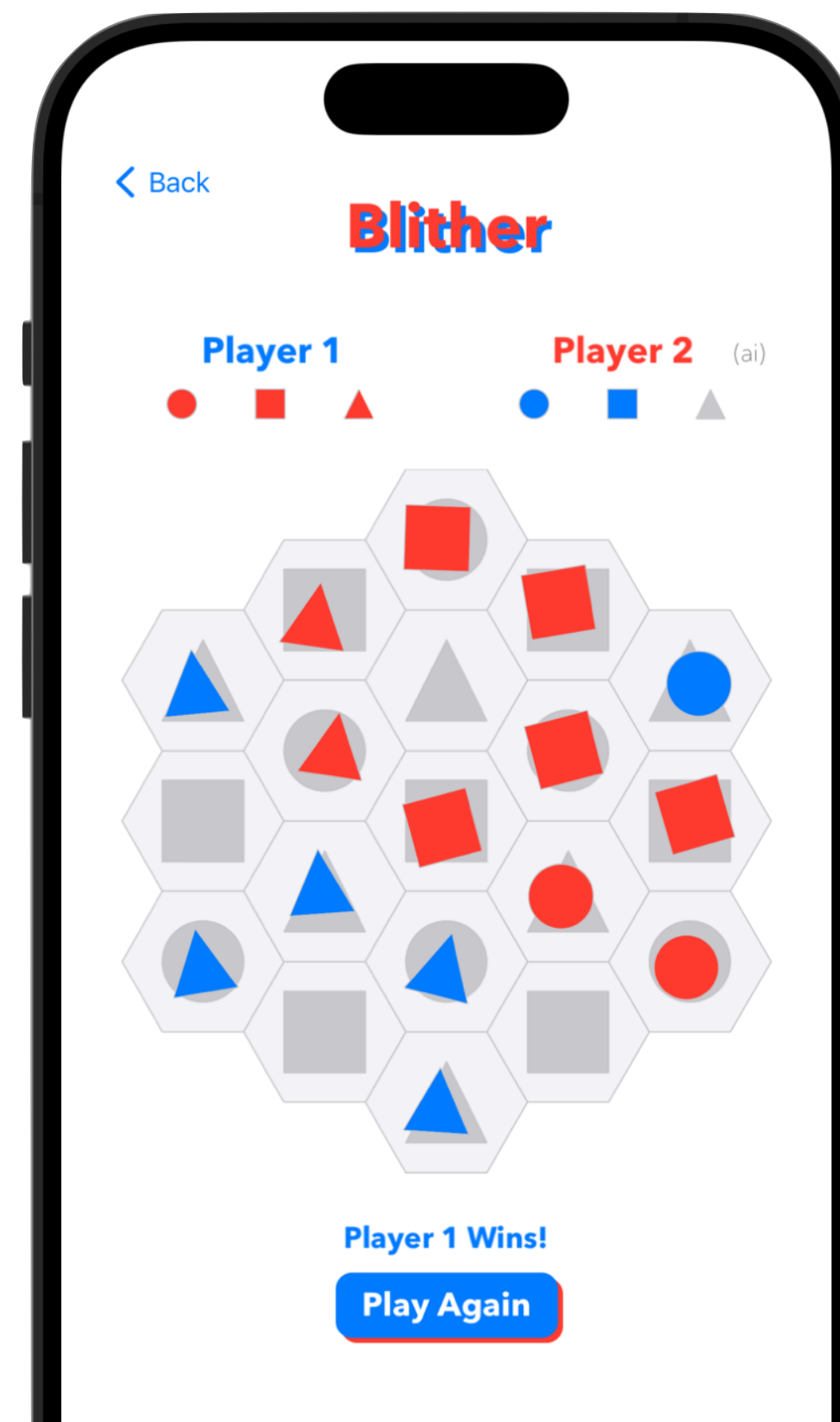
Who am I?

game / iOS developer

- Web developer ~2000-2008
- Flash game 2007
- iPhone game 2009
- Abstract Puzzle 2012
- IGDA Twin Cities ~2014-2021
- Thrive kickstarter 2019



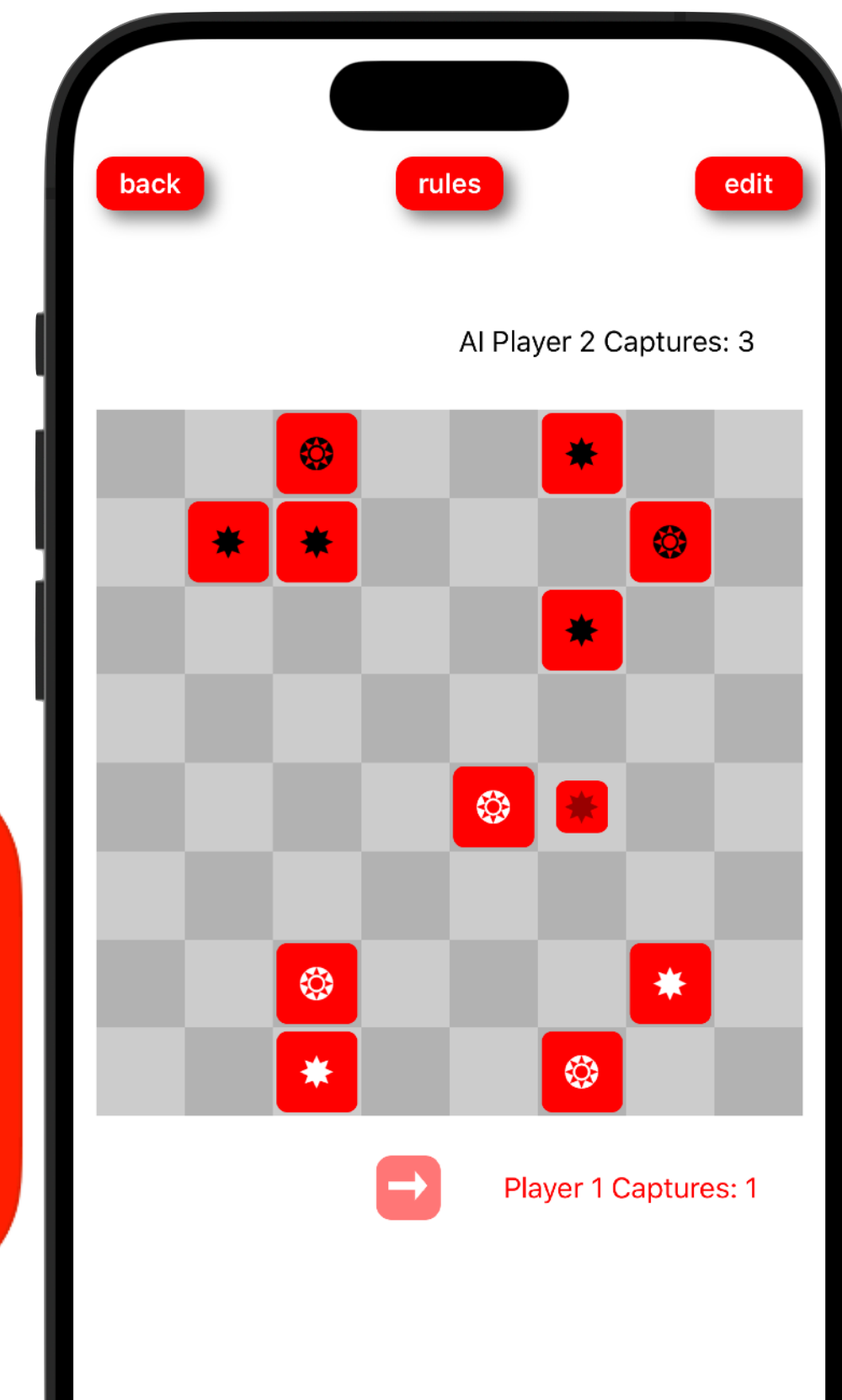
Thrive Board Game



Blither

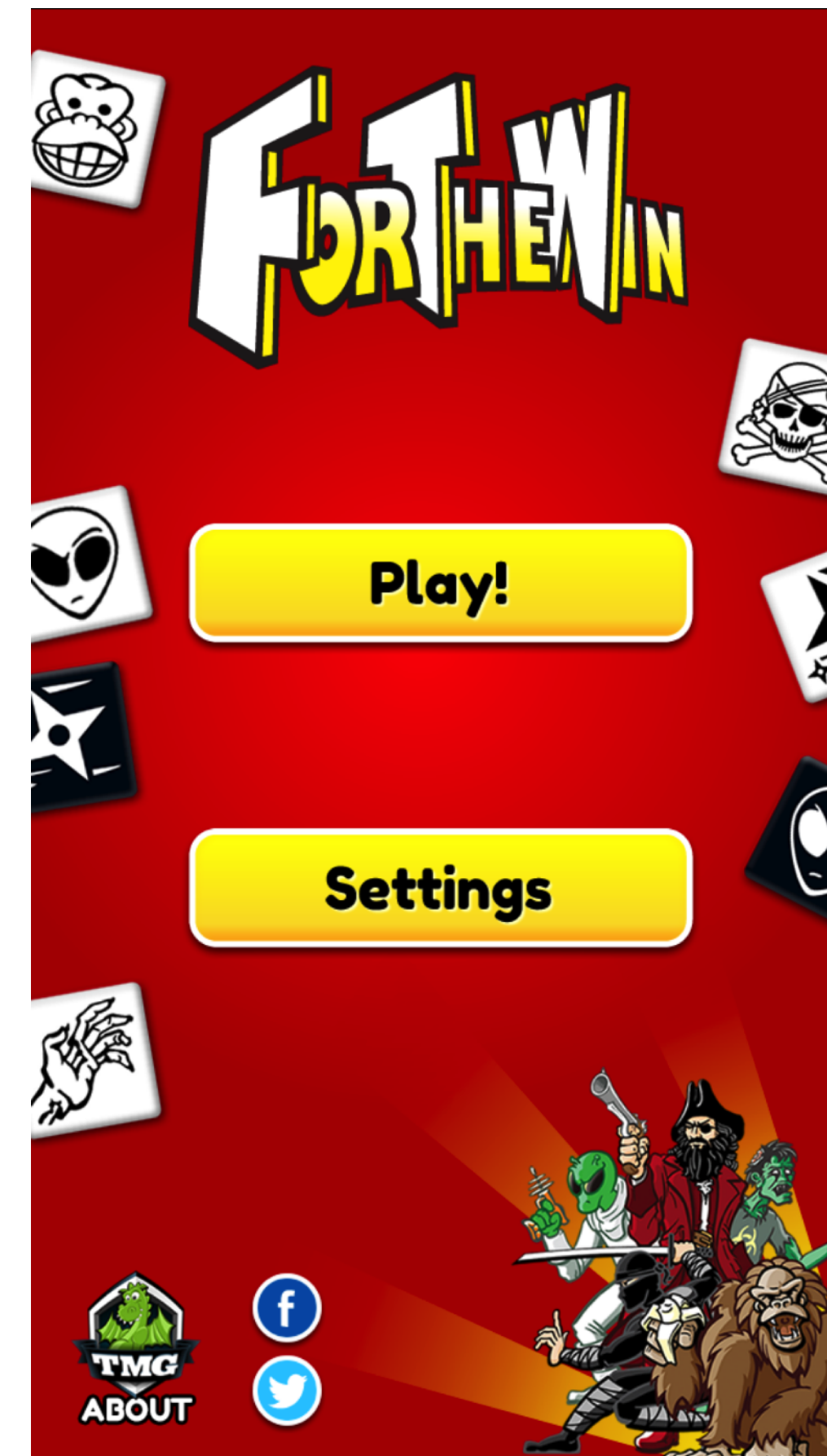


Root Down



What am I going to talk about?

- Making digital board games...



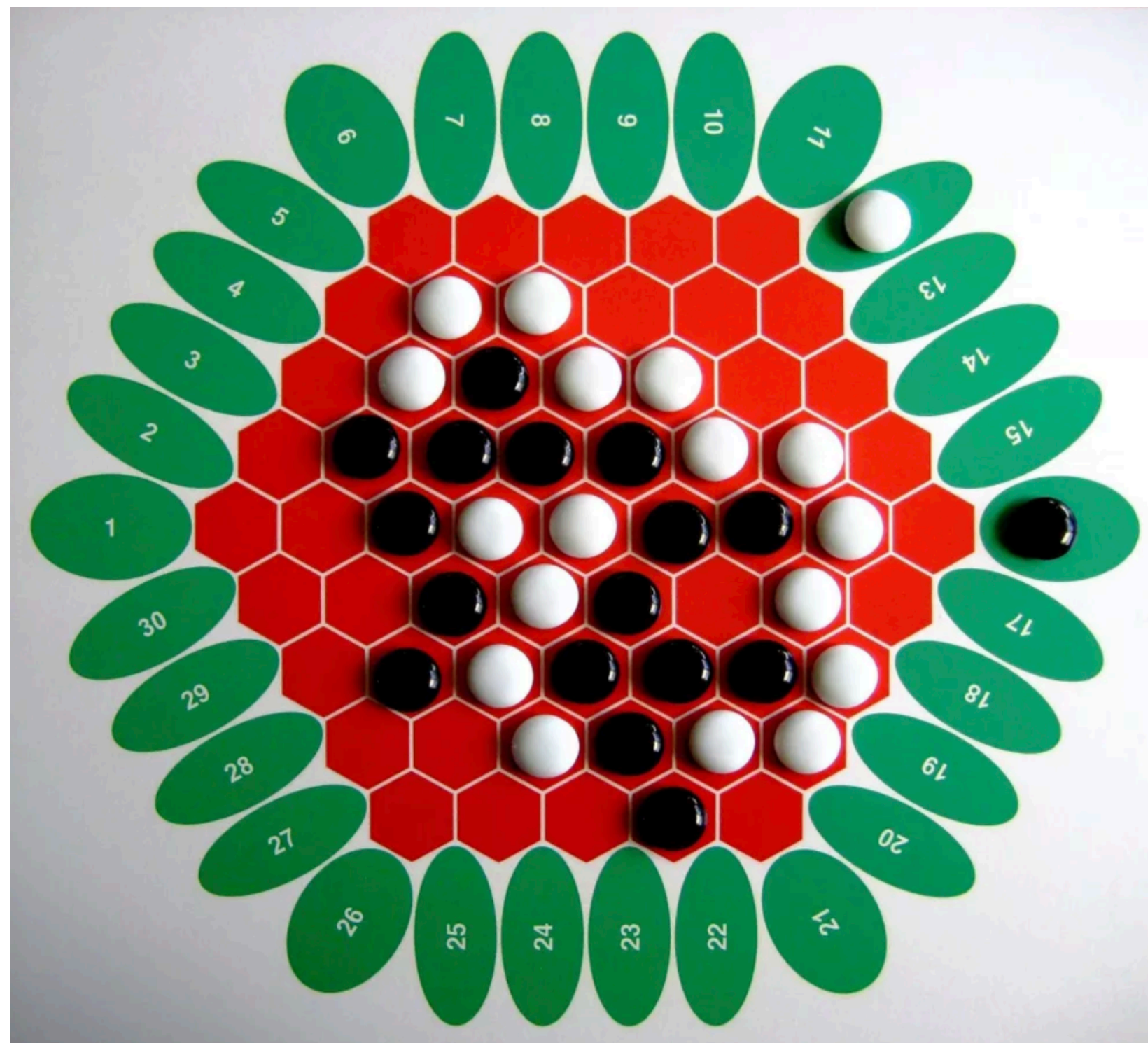
For instance, going from this...

...to this.

For the Win, for Tasty Minstrel Games, 2012
Photo credit: BGG user @joakim589

Or...

- This...



...to...

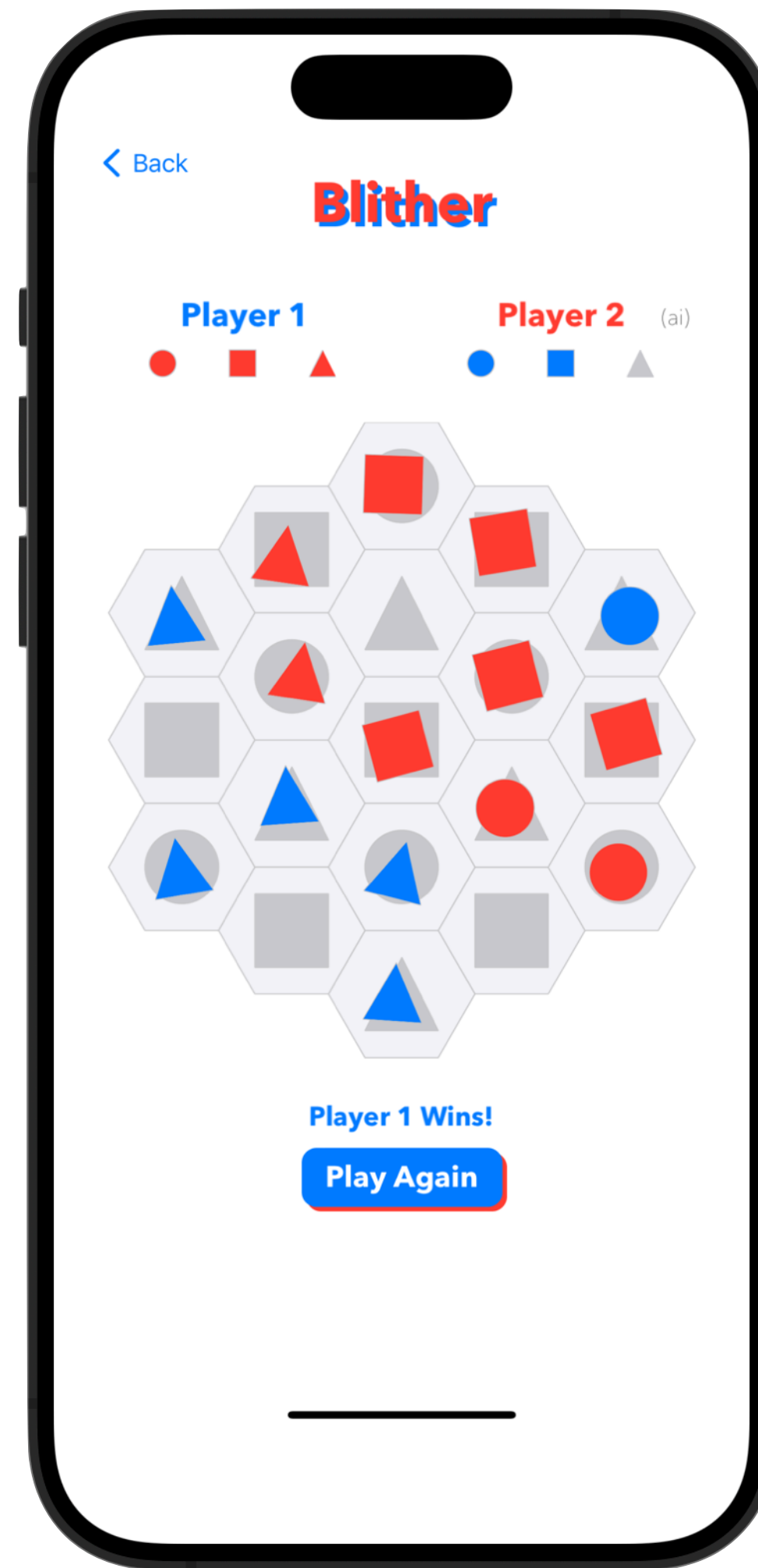
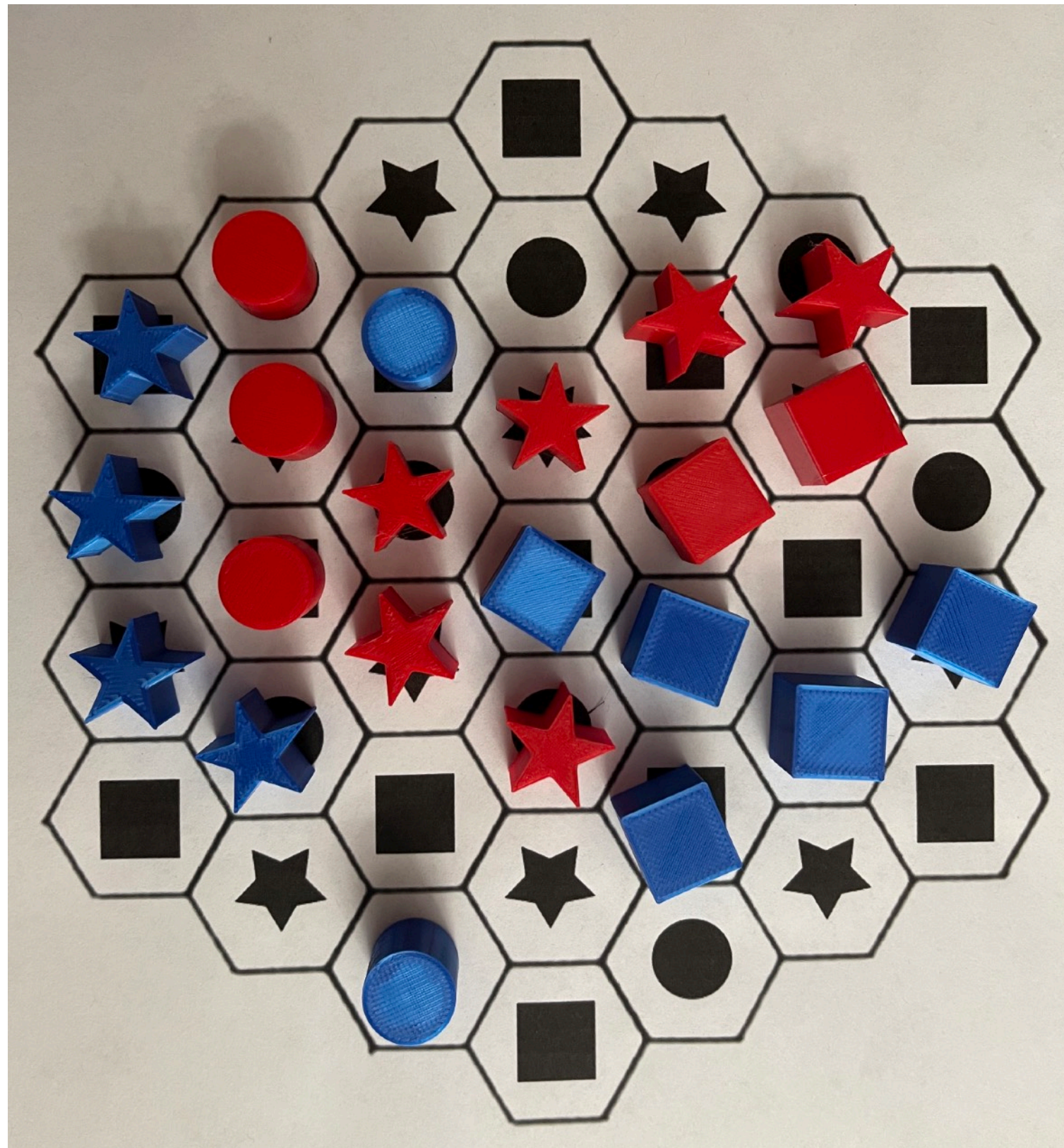


...this.

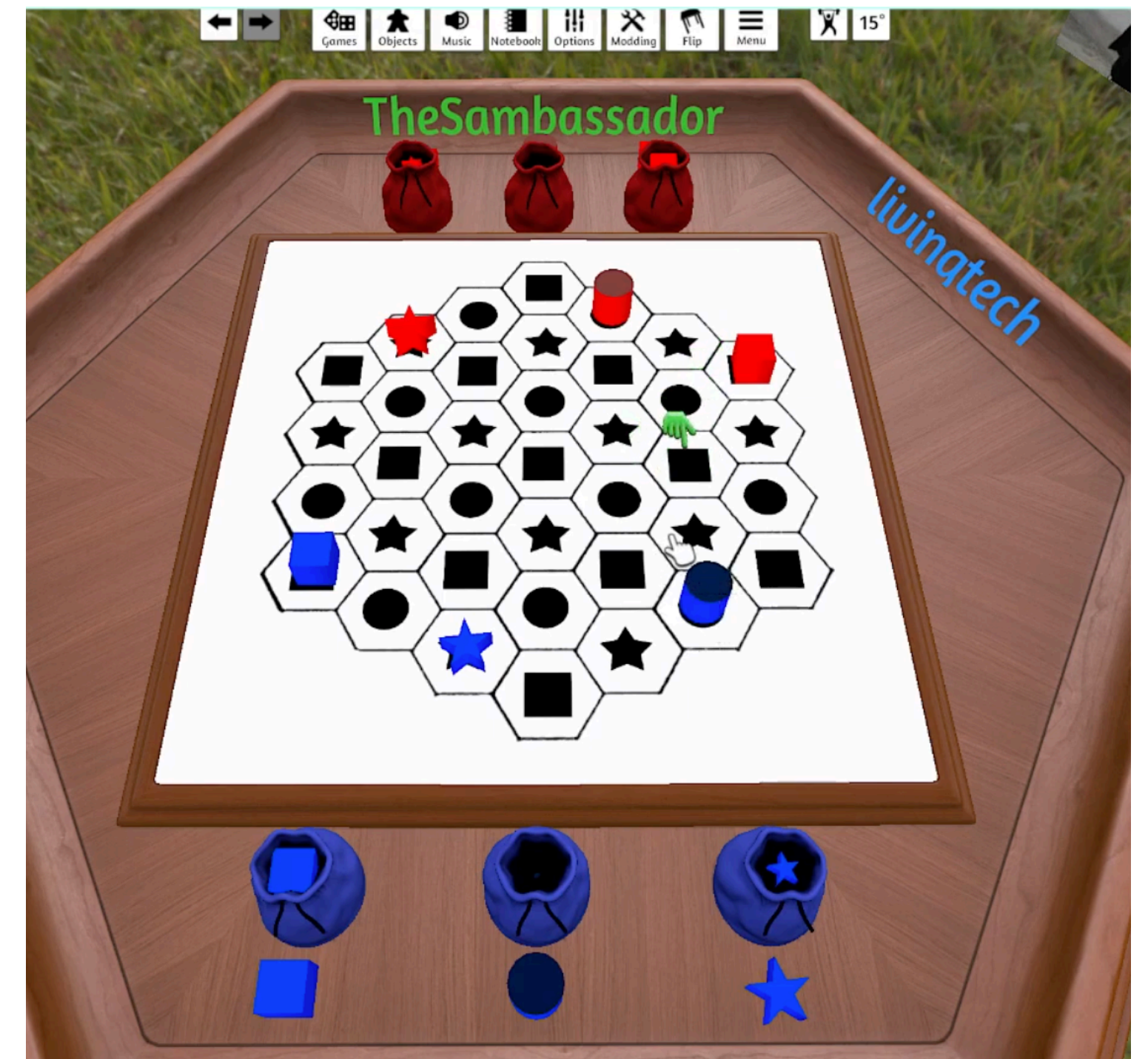
Catchup, designed by Nick Bentley, released in 2014
Photo credit: BGG user @joakim589

Or most recently...

- This... ..to this...



...and...



Blither, designed by Martin Grider, released (pnp) in 2018, app in 2023

What am I not going to talk about?

- Specifics
 - This is a very broad topic.
 - Apologies.
- Happy to answer as many questions as I'm able!!!



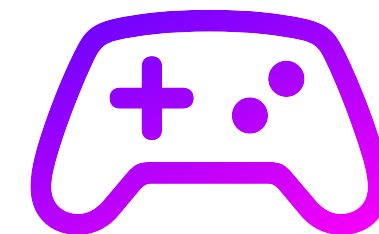
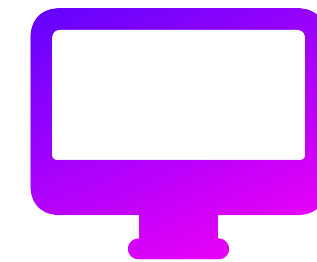
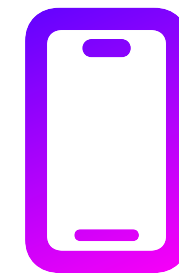
So what *will* I be talking about?

- High-level questions:
 - **Platforms** – Where do you want to play?
 - **People** – Who can do this?
- **Features and Scope** – What is required? And what optional features exist?
 - **Multiplayer** – Who and how and when?
- **Considerations** – What other questions should you be asking?
 - **Motivation** – Why would you want to do this?



Platforms

- Web
- Mobile
- Desktop
- Console



Platforms



- **Web**

- Purpose-built

- Multi-Game Platform



Platforms



- **Web**

- Purpose-built

- Single game

- Examples:

- Dominion Online – www.dominion.games
 - Cascadia – cascadiagame.github.io
 - Glory to Rome – glory-to-rome.com

- Multi-Game Platform



Platforms



- **Web**

- Purpose-built

- Single game

- Examples:

- Dominion Online – www.dominion.games
 - Cascadia – cascadiaonline.github.io
 - Glory to Rome – glory-to-rome.com

- Multi-Game Platform

- Social Features
(pre-existing audience)
 - Built-in Multiplayer
 - Network Effects

Platforms



- **Web**

- Multi-Game Platform
 - Social Features
(pre-existing audience)
 - Built-in Multiplayer
 - Network Effects

- Examples

- Board Game Arena
- Yucata
- Tabletopia***

***Side-Note about *Rules Enforcement*

- There are two broad categories of digital board game conversion
 - “Sandbox”
 - Everything else



***Side-Note about *Rules Enforcement*

- There are two broad categories of digital board game conversion
 - “Sandbox”
 - Everything else

The main thing that makes a digital board game a “sandbox” game is that it has no **rules enforcement**.

Just like playing a physical game, when playing a sandbox game, the players must know the rules to play correctly.

***Side-Note about *Rules Enforcement*

- There are two broad categories of digital board game conversion
 - “Sandbox”
 - Everything else***

***What do you call these?

- *Board Game Applications?*
- *Digital Adaptations?*

The main thing that makes a digital board game a “sandbox” game is that it has no **rules enforcement**.

Just like playing a physical game, when playing a sandbox game, the players must know the rules to play correctly.



Platforms

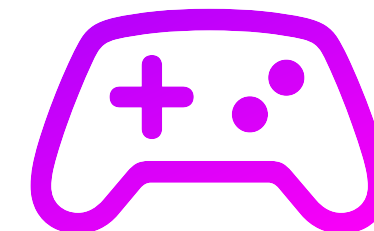
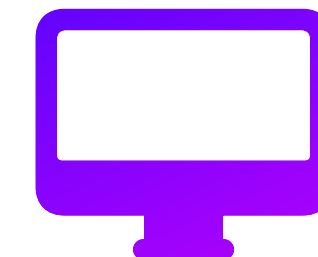


- **Web**
 - Can be the hardest to monetize
 - Potential audience is broad, but typically doesn't want to pay
 - Development is *relatively* cheap

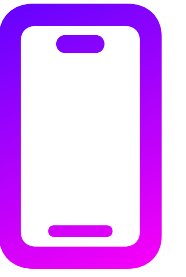


Platforms

- Web
- **Mobile**
- Desktop
- Console



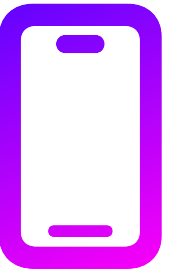
Platforms



- **Mobile**
 - Essentially two platforms:
 - iOS
 - Android



Platforms

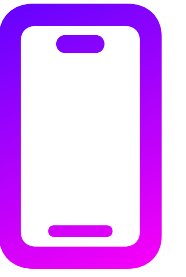


- **Mobile**

- Essentially two platforms:
 - iOS
 - Android
- Have their own stores
 - Low cost
 - Approval process
 - Usually short
 - Usually hands-off



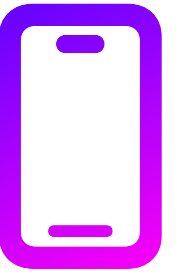
Platforms



- **Mobile**
 - Essentially three development avenues:
 - Native iOS
 - Native Android
 - Cross-platform



Platforms



- **Mobile**

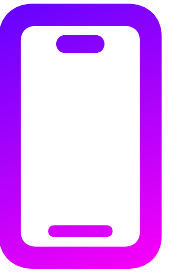
- Essentially three development avenues:

- Native iOS
- Native Android

~~Cross platform~~

- Built-in features
 - User-interface
 - Social
 - Game Center
 - Google Play
 - Multiplayer

Platforms



- **Mobile**

- Essentially three development avenues:

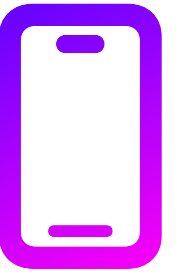
~~Native iOS~~

~~Native Android~~

- Cross-platform

- But really... you probably want to do this.

Platforms



- **Mobile**

- Essentially three development avenues:

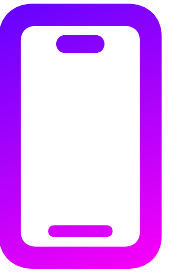
~~Native iOS~~

~~Native Android~~

- Cross-platform

- Main options are
 - Unity
 - Unreal Engine
 - Godot

Platforms



- **Mobile**

- Potential audience is large
- Lots of monetization options
 - Paid application
 - Subscription
 - Free with in-app purchase
 - Free with ads



Side-Note about *Licensing*

- This talk assumes a “developer-perspective”
- Lots of digital board game developers are folks who are not the stakeholders/owners/designers/publishers
- These games are *licensed*

This just means the developer has a contract giving them the ability to make the game, similar to how a publisher has a contract with the designer.

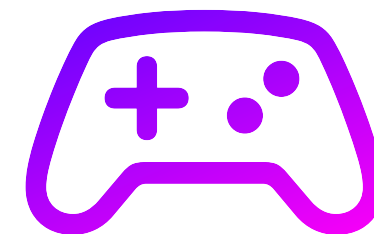
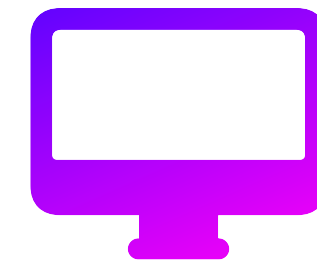
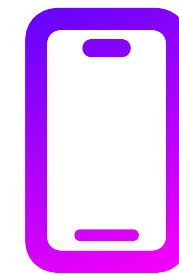


Side-Note about *Licensing*

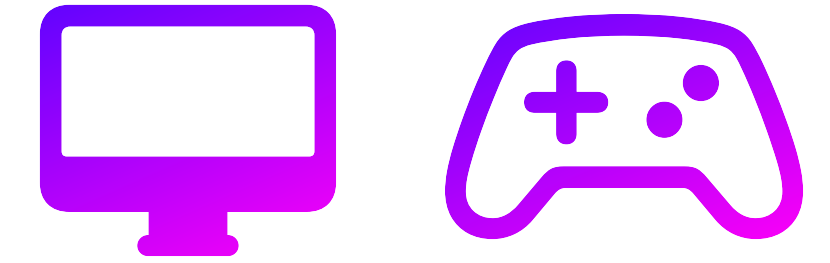
- If you are going to license your game to a developer, you may not need (to care) how they're going to choose to monetize it. (Or you may care a lot!)
- **Monetization** is a huge topic
 - It's different on each platform, and you can probably find talks online about each one. (Though probably not about mobile board games.)
- It's still worth knowing all this stuff!
 - You should understand what the developer intends to do with the game
 - And this will help you evaluate the developer
 - *(Knowledge is power!)*

Platforms

- Web
- Mobile
- **Desktop**
- **Console**



Platforms

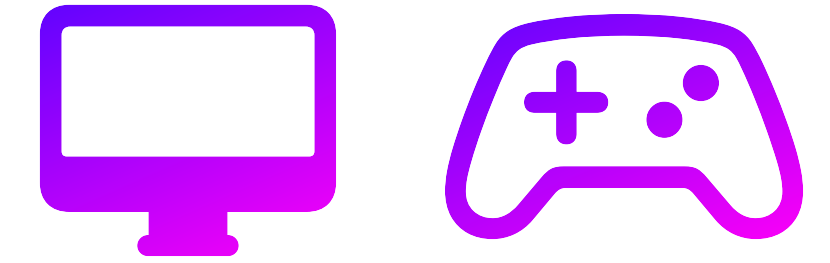


- **Desktop**

- Distribution is mainly through the platform holders

- **Console**

Platforms



- **Desktop**

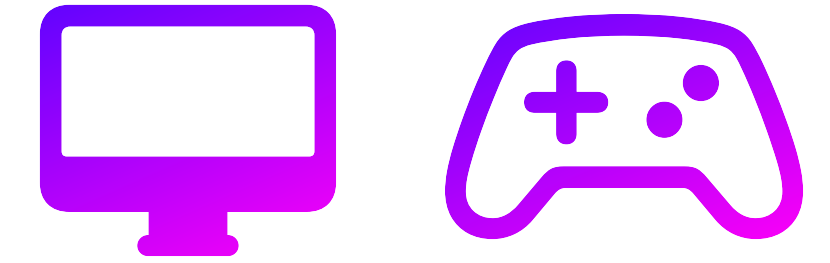
- Distribution is mainly through the platform holders

- MacOS - Apple App Store
- Windows - Microsoft Store
- Linux - *It's complicated*

- **Console**

- Nintendo (Switch)
- Sony Playstation (PS5)
- Xbox (Series X/S)

Platforms

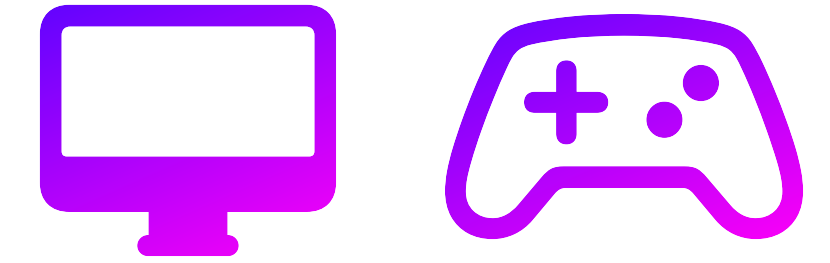


- **Desktop**

- One big difference is on desktop you are not *REQUIRED* to use the stores.
- Consoles you very much are.

- **Console**

Platforms



- **Desktop**

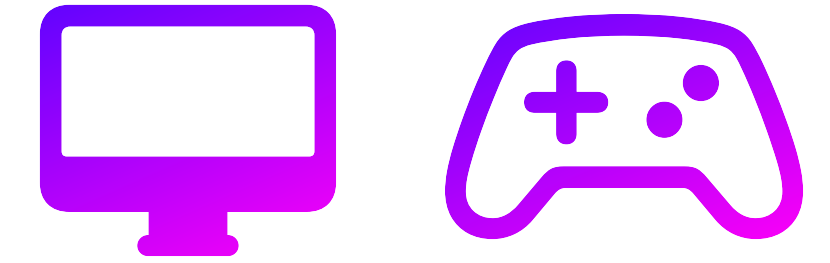
- **Console**

- These are both a lot like developing for mobile
 - Lots of platform-specific differences in terms of features and APIs
 - Meaning, unless you use a cross platform framework...

**It's best to target
one platform
at a time**



Platforms

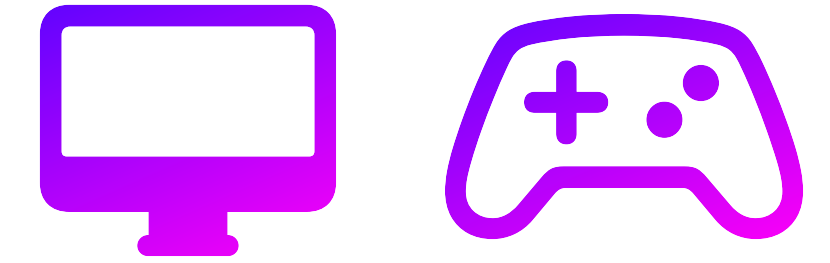


- **Desktop**

- **Console**

- One big difference between desktop and console is *difficulty*
 - Fewer developers overall means
 - APIs are not as frequently used
 - Documentation is worse (or non-existent)

Platforms

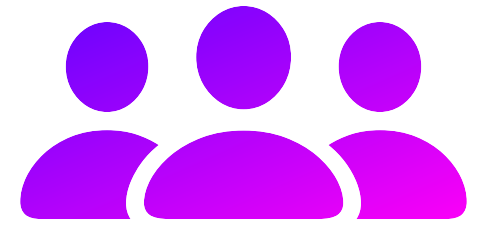


- **Desktop**

- **Console**

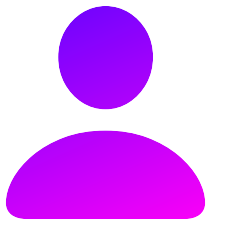
- For consoles, everything is intentionally secret/proprietary
 - Makes cross-platform more difficult
 - Approval (called “*certification*”) can notoriously take *months*

People



- **Who can do this?**

People



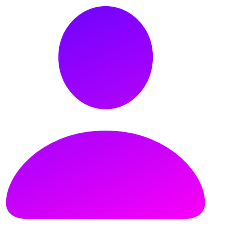
- **Who can do this?**

- Minimally –

- **Developer**



People



- **Who can do this?**

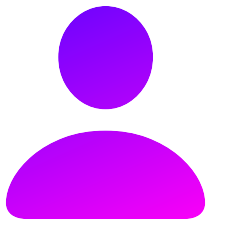
- Minimally –

- **Developer**

- Someone who can write code



People



- **Who can do this?**

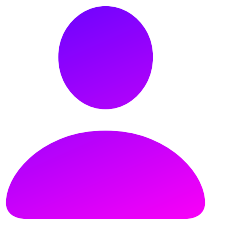
- Minimally –

- **Developer**

- Someone who can write code
 - Knows (or learns) about the platform(s) being targeted



People



- **Who can do this?**

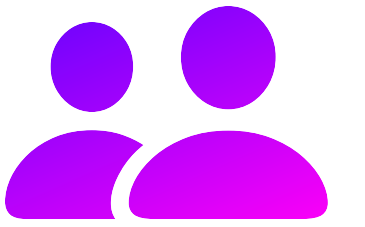
- Minimally –

- **Developer**

- Someone who can write code
 - Knows (or learns) about the platform(s) being targeted
 - Can take art from the board game and convert it to the necessary format(s)



People



- **Who can do this?**

- More realistically –

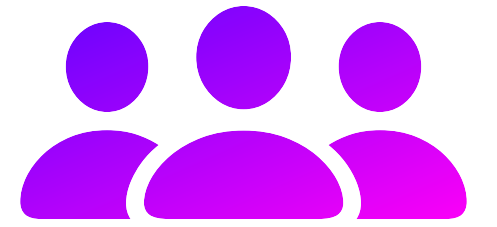
- **Developer**

- **Graphic Designer**

- Can take art from the board game and convert it to the necessary format(s)



People



- **Who can do this?**

- Ideally –

- **Developer**

- **Graphic Designer**

- **Project Manager**

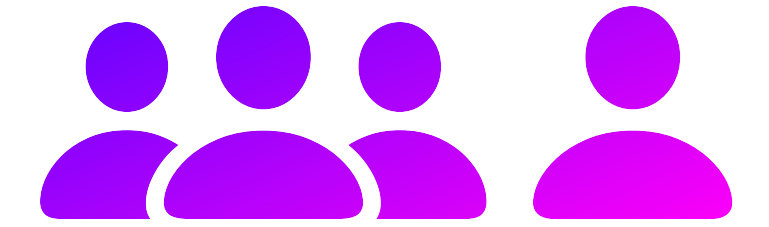
- Knows (or learns) about the platform(s) being targeted

- Keeps track of features and scope

- keeps the project on track



People



- **Who can do this?**

- Bigger projects –

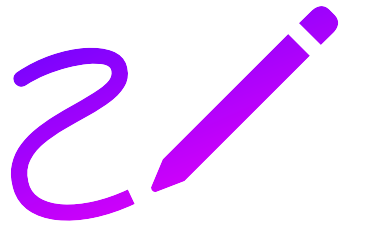
- **Developers**
- **Graphic Designers / Artists**
- **Project Manager(s)**
- **Producer**
 - Typically finds/manages money & contracts
 - Might dictate high-level scope



Features & Scope



Features & Scope



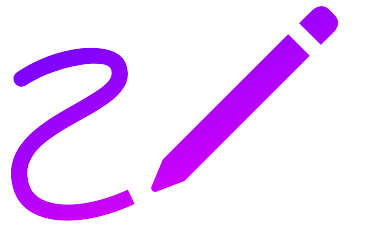
- **What do I mean by feature?**

- Basically anything that'll take longer than 15 minutes to make.
- Most features can be broken down into sub-tasks. (Which you might call additional features.)

- **What do I mean by scope?**

- All the features in the finished application.
- "Scope" can also refer to the effort (time or money) it takes to complete.

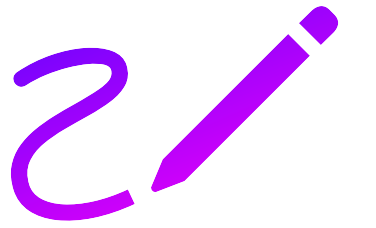
Required Features



- **UI – User Interface**
- **UX – User Experience**
- **Rules**



Required Features



- **UI – User Interface**

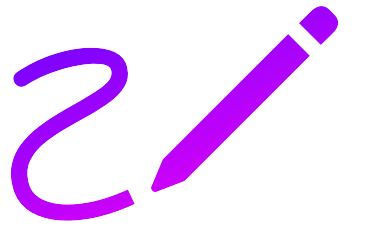
- Game Screen

- This should include all the art and components from the physical board game
 - One important question is whether to render the game in **2D** or **3D**. (3D often takes longer and costs more)

- Don't forget you'll need art for game elements that do not have corresponding graphics in the physical game. (Meeples, cubes, etc.)
 - Menu art if necessary
 - Sometimes the platform will have built-in menu options



Required Features

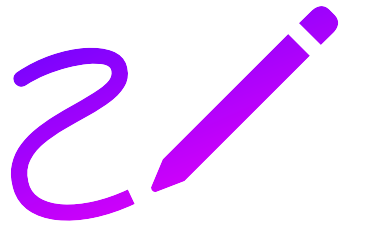


- **UX – User Experience*****
 - The interactions necessary to play the game
 - Interactions for navigating any menus (button presses, etc)
 - Some UX will be dictated-by (built-into) the platform

*** For a talk on just this topic, see the one I gave at GDC in 2014, titled “Usability Lessons from Mobile Board Game Conversions.”



Required Features

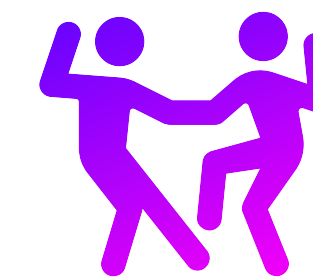


- **Rules**

- This can take lots of forms
- At minimum, there should be a link to the physical game rules
- Required for non-“sandbox” games
 - Rules Enforcement
 - End-game detection

- “Good” conversions usually have
 - A tutorial
 - In-game rules reference
 - UX that clearly shows what game action(s) is/are possible at any given time

Multiplayer



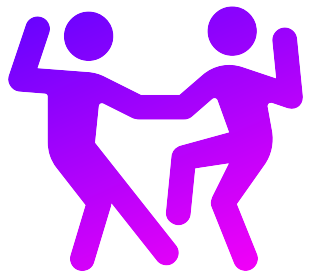
Multiplayer



- **Who**
- **When**
- **How**



Multiplayer

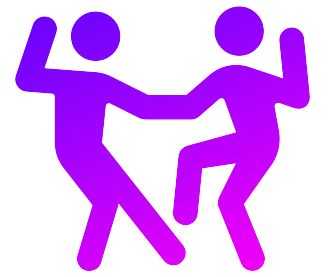


- **Who?**

- Player versus AI
(AI is a lot of work, but many people expect this.)
- Player versus player
 - Same-device
(pass-and-play)
...VS
 - Online

- AI player vs AI player
(Nobody expects this, and probably very few people want it, but it's "almost free" after implementing AI.)

Multiplayer



- **When?**

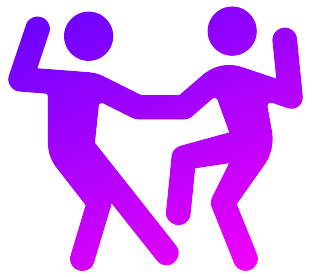
- Realtime

vs

- Asynchronous



Multiplayer



- **How?**

- For online multiplayer, a server component is needed.
- This can get very expensive
 - Both in terms of development costs
 - But also you can offload the hosting... for a price

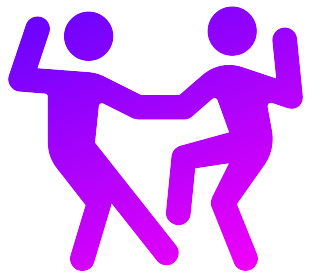
Considerations –

- Will you require an account?
- What kind of matchmaking?

Some examples:

- “pit me against a random opponent”
- “invite my friends to a game”
- “play a game with someone at my skill level”

Multiplayer



- **How?**

- For online multiplayer, a server component is needed.
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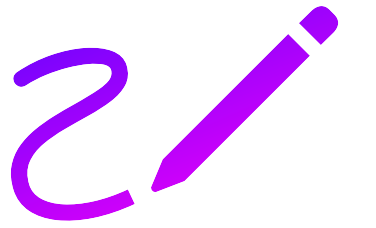
Considerations –

- Will you require an account?
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Some examples:

- “pit me against a random opponent”
- “invite my friends to a game”
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Other Optional Features



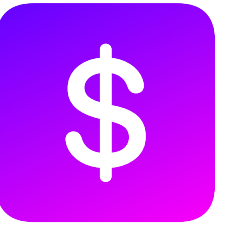
- Game Setup (Screen)
- A campaign or other game modes
- Music and Sound FX
- Settings
(menu screen and “pause screen” settings)
- Statistics
- Leaderboards / Player Ranking
(Often you also need to implement Elo for this, another optional feature.)
- Achievements

- Video Game Polish
 - Cut scenes
 - Ancillary (non-game) animations
 - 3D models or environments

****See my blog post in this session description for more details about a lot of the items on this list.*



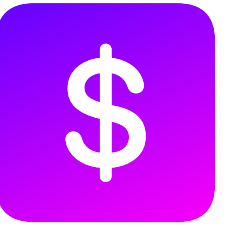
Motivation



- **Why would you want to do this?**

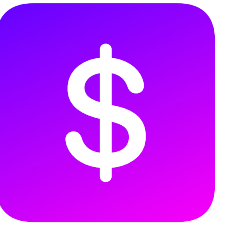


Motivation



- **You might ask yourself...**
- **Will I make any money?**
 - How?
 - How much?

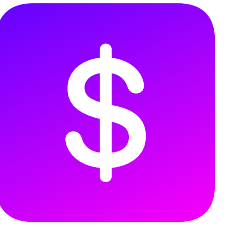




MONETIZATION



Motivation



- **How much will it cost me?**

- Depends on so many factors

- Platform(s)

- Features/scope

- Team

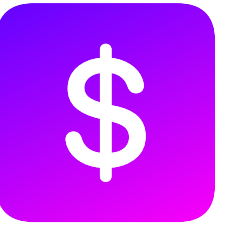
- (Experience and expertise)

- Even if you have all these answers, software development is notoriously hard to estimate.

- Even when you think you have the whole picture... you don't have the whole picture.



Motivation



- **Why would you want to do this again?**
 - Pre-existing audience
(Existing board game players.)
 - Licensing incurs very little risk for the rights-holder
 - Ultimately – the same reason you likely already make games – ***for the love of it.***



Thanks!

Q&A

- Where to find me
 - Blog –
<http://chesstris.com>
 - Resume / bibliography –
<http://martingrider.name/bibliography.html>
 - Game Studio –
<http://abstractpuzzle.com>
 - Mastodon –
<https://mastodon.gamedev.place/@grid>

