

**Fiction:** Aliens have taken over a human colony on Mars. But they're bros about it, so it's cool. The one thing humans and aliens can agree on is sports, so once a year, the humans use alien technology to protect themselves while engaging in alien sports. Because the aliens only have vague ideas of how actual human sports work, the sports the humans are forced to play are only rudimentary and mashed up versions of normal sports.

### **Gameplay:**

There are 2 basic gameplay modes:

- **Quick Play** - The fastest way to start playing Super Action Sports! Pick players, teams, games, and go!
- **Super Action Very Sports!** - Quick Play with custom rules to change gravity, impact, color schemes, etc

There are 5 implemented mini-games:

1. **Action Tiny Egg!** - All players have golf putters, but there is only one ball and only one hole. Your goal is to peacefully knock the ball into the hole, but other players' goal is to peacefully put their golf club between your eyes so they can try to knock the ball.
2. **Action Furry Egg!** - Tennis with a twist. 4 players are divided into doubles teams. Points are awarded like tennis, but points are also awarded for attacking players. Teams are encouraged to knock each other out for points, but selfishness may be your downfall... (Multiball bonus!)
3. **Action Sticks!** - Fencing free-for-all. Players frantically wave swords at each other, block, or throw their stick.
4. **Action Stick Egg!** - A baseball is periodically tossed into the air somewhere in the court. If the players can be distracted from clobbering each other with baseball bats long enough, maybe they can manage to hit it out of the field and score extra points
5. **Hockey!** - Hockey free for all with power ups and squishy, pedestrian goalies

**More information can be found under the Mini-games header later in this document**

Mini-games are, at their most basic, frantic and cartoonishly violent versions of actual sports. Unlike other party games like *Mario Party*, players are allowed, and encouraged, to actively annoy and prevent their fellow players from accomplishing sometimes delicate and complicated goals. For instance, in *Action Tiny Egg!*, a sort of golf meets medieval land battle game, players are expected to eventually get a golf ball into a small hole all while dealing with other players attacking whomever tries to do the difficult and precise putt.

The goal for combining frantic beat-em-up, *Smash Brothers* style game play with slower, precise actions is to create a chaotic game where the leader can change on a dime, but skill is still an important component.

## Aesthetics

*Super Action Sports!* takes place in a sci-fi environment, Mars specifically. However, sticking to the idea that the sports are Martian interpretations of sports, arenas are made with the Martian interpretation of appropriate settings in a stadium. For instance, Action Tiny Egg! would take place on a golf course on Earth, but on Mars there isn't any grass or clouds or lakes or anything. To make up for this, clouds would be billboards with painted clouds sliding around the the background. The sun would be a floating flying saucer holding up a yellow satellite dish. The grass would be obviously and poorly painted dirt. The aim is to make the game look like it is occupied by aliens who only know about life on Earth from second-hand experiences. Effectively, the game looks like *Ben Hur* is being put on by a low-budget elementary school.

[Juice](#) is extremely important. *SAS!* is an action party game, so players need to know when they did something right and when their opponents did something right. Normal elements like screenshake and bassy sound effects are present, as well as a paint and crowd system of determining the game leader.

When players are knocked out, their respective color paint is sprayed over the field. This serves two purposes: it lets the party know who is the worst player and gives the losing player a small advantage. Because their armor color blends in with the background, they'll be harder to spot than the other players with their contrasting color.

Number of players	Typical armor/paint colors
2	Black and White Red and Blue Purple and Yellow Green and Orange
3	Red Green Blue Cyan Magenta Yellow Red Blue Yellow
4	Cyan Magenta Yellow Black Red Green Blue White Red Blue Yellow Black

A lot of focus should be placed on the very beginning of the games. The crowd should be quiet and anticipating the bloodshed. The first impact should be a coveted move. The camera zooms in, slows down, and emphasizes the hit. Air horns go off, confetti explodes, the crowd cheers. There will need to be a few versions of this effect to keep things fresh.

## Other features

It's a party game, and we're in the future, so the game should be designed with streaming and Let's Play users in mind. An example would be letting the UI slide around to fit in face reaction sections. Development should have a dialogue with these content creators to determine which features would be most helpful for them.

## Technical Features

Any multiplayer game is going to have its share of technical complications, and *Super Action Sports!* is no exception. We had 3 large technical concerns that we would need to overcome to make the game enjoyable and reasonable to finish in the timeframe. We would need to handle multiple input devices and multiple kinds of devices, we would need the framework to make many games quickly, and we would need to be able ensure that each game would be as responsive, interesting, and thematically similar as the other games.

Input is handled through **InControl**, a Unity asset store plug-in from Gallant Games. InControl handles the input mapping of almost any controller that the user might use and stores references to these devices between scenes by way of a singleton design. InControl lets us store player's color preferences and other data between games and saves us a huge amount of input mapping work.

We needed to make 5 mini-games as quickly as possible to make the game feel full featured and worth people's time. To that end, we would need to have a mini-game framework that was robust enough to build a minigame from the ground up and have it working as quickly as possible. To this end, we designed a Liaison-Wizard-Handler-Controller-Card tree for each game to use. The **Liaison** works with InControl and the menu to save and store player preferences. The **Wizard** works with the liaison and the predefined game rules to maintain structure in the game. The **Input Handler** takes input from the input devices as assigned by the wizard and applies movement and commands to the player controller. The **Player Controller** is effectively the player's state and sets custom player animations and logic on its own. The **Score Card** keeps track of the player's actions (kills, deaths, points, etc) and returns this to the Wizard for result displays and later tournament mode implementation.

Finally, to make sure every game felt like they were all in the same universe, we needed a central aesthetic theme. None of us are impressive artists, let alone 3D modelers, so we also needed to make sure that the aesthetic look is pleasing but simple. To this end, we stuck with primitives (cubes, planes, capsules) for most of our assets. For all other assets where we wanted to make things look a little nicer, we used ProCore's **Prototype** plug-in, an in-editor modeling tool for low-poly models. Thanks to Prototype's simple and easy-to-understand tools, we were able to model interesting tools and equipment in a matter of minutes instead of having high-poly count prebuilt assets that wouldn't fit in with the other games.

Additionally for aesthetics, we set the games largely at night. Games in space would use artificial lighting with clear shadows so that the arenas look more like lit stadiums. Screenshake and fluid camera movements also replicate the camera that would be used in a sports broadcast. Besides that, thanks to our aesthetics groundwork and philosophy, no game looks out of place compared to any other game.

## **Mini-game Details**

### **Action Tiny Egg! (Golfing)**

Players are placed onto sunken-in platform in the middle of a rectangular arena. A hole is randomly generated somewhere in the field, and a ball is placed randomly as well. Players can move around and strike each other, naturally, but more points are awarded if the player can putt the ball. Putting the ball requires the player to approach the ball, enter a putting stance, adjust the power and angle of the putt, and then putt the ball all before getting struck by other players. Indicator of power and direction is done through a GUI system.

### **Action Furry Egg! (Tennis)**

Players are divided into teams or an assumed free-for-all. The server sends the ball over the net and the game begins. Players can aim the ball with the left stick to determine the angle of return and the power of the serve by holding down the swing trigger. Players score more points by having the ball bounce on the ground twice in a row on their opponent's turf. Additionally, players can jump and spike the ball down at a faster speed with less control. Players have to balance playing tennis with the threat of each other, as everyone can hit other players to gain a small number of points.

### **Action Sticks! (Fencing)**

Players are on a long platform with swords. They can run, throw, slash, stab, and counter the other players and their attacks. When there is only one player left standing, the camera zooms in on them, the stage celebrates their victory and - after a brief pause - the other players respawn.

### **Action Stick Egg! (Baseball)**

Players are spawned in front of a pitching machine which will slowly launch slow-moving baseballs. Players get most of their points from hitting the ball in the air, but they can get also get points by hitting each other. The pitcher launches balls at a steady rate until the end of the game. After a pause, it will launch balls again at a much faster rate for fun.

### **Hockey! (Hockey)**

A blend of air hockey and ice hockey, Hockey! is a twin-stick brawler/hockey match. Players move their avatar to hit the puck into their goal. The right stick is used to the rotate the player and try to hit other players out of the way and off their paddle. After a goal is scored, the puck resets in the middle of the court after a brief pause.