



The Card Game

A game designed by Chris Williams during Global Game Jam 2018 at UMBC

The theme of this year's game jam was "transmission" in any of the various definitions of that word. As I run SETI@home on my laptop, I was struck with the idea of using SETI trying to decipher an extra-terrestrial transmission as the theme for my game. This is my seventh year at GGJ, and---for the third time in a row---I decided to work solo on a tabletop game.

A Note about Gender Pronouns: I have chosen to alternate using she/her/her's and he/him/his throughout the text of these rules. Within a paragraph, I will maintain gender, but from one paragraph to another I may switch from one to the other. It is never my intention to imply or state that only players of one gender can, should, or may play my game.

In SETI: the Card Game, 2-4 players will each take on the role of an administrator at a radio telescope facility somewhere on Earth. Each player has a scrambled signal from outer space which she hopes her facility will be able to make sense of. Each will work to complete sets of cards which represent radio telescopes at his facility. Working to create these sets will allow her to manipulate---or fine tune---a common radio source which all players can see. Each player secretly has a signal pattern which she is trying to replicate in the common radio source. The first player to do so AND reveal his findings to the world will be acclaimed as the discoverer of ETI and will win the game.

I hope you enjoy playing this game as much as I enjoyed making it. Thanks for taking the time to check it out.

- Chris Williams, January 28th 2018, UMBC, Maryland, USA

Components/needed objects:

- Four player decks of 28 cards; six “3” cards, four “4” cards, five “5” cards, six “6” cards, and (you guessed it) seven “7” cards
- One External Funding deck of 25 cards; 1 set each of “3”s through “7”s
- 20 Special Action tokens 4 sets of 5 (1 token corresponding to each set of cards “3” – “7”)
- Four player Facility Screens
- Five six-sided dice
- 30 small wooded discs or cubes (hereafter referred to as markers); five each of the following colors (yes, the colors matter---see Design Notes at the end of this document--- so pay attention): red, orange, yellow, green, blue, purple (indigo...)
- 1 Carrier Wave mat

Rules

Set Up:






Each player takes one player deck, one Facility Screen, and one set of the colored markers. The Carrier Wave mat is placed where all players can see and reach it, along with one set of the colored markers. Shuffle the External Funding deck and place it beside the CW mat. Place the Special Action tokens close to the CW mat. Each player should shuffle her own player deck and set it on the table close to her Facility Screen.

On the inside of each player’s Facility Mat he will find a small 5 x 6 grid which mimics the grid on the Carrier Wave mat. This is where he will secretly record the transmission which her facility is working to decipher. Each player will now generate the transmission.

First they just assign a color to each of the five columns. Colors may be assigned as each player likes but must follow this guideline: The three Primary Colors (e.g., Red, Yellow, and Blue) must only be assigned to the first, third, or fifth columns. The remaining colors (aka – the Secondary Colors of Orange, Green, and Purple) will be determined by the placement of the Primary colors. Example: Cristiana decides to place her Primary Colors like so – Red in Column 1, Blue in Column 2, and Yellow in Column 5. She then looks at the colors in Columns 1 & 3 (red and blue); red mixed with blue makes purple, so her column 2 is purple. Similarly, her column 4 would be green (blue mixed with yellow). She places an appropriate marker under each column, while keeping the remaining, unused marker (in this case orange) concealed behind her screen.

Next, each player will take and roll all five of the six-sided dice, being careful not to reveal the numbers to her opponents. She will then assign a value to each of the five columns. Continuing the Above Example: Cristiana rolls the following numbers- 1, 3, 3, 5, 6. She is free to distribute these values among the columns as she sees fit; like so - column 1 = 3, column 2 = 1, column 3 = 5, column 4 = 3, and column 5 = 6. She now moves the colored markers into the same space as the value she just assigned to each column.

Her grid should now look like this:

6				
5				
4				
3				
2				
1				

This is how she wants the Carrier Wave mat to look in order for her to win.

After all players have generated their signals the Carrier Wave base state will be set. One player will roll one six-sided die, and assign colors to the Carrier Wave mat based on the chart below.

Die Roll	Carrier Wave Col 1	Carrier Wave Col 3	Carrier Wave Col 5
1	RED	YELLOW	BLUE
2	YELLOW	BLUE	RED
3	BLUE	RED	YELLOW
4	RED	BLUE	YELLOW
5	BLUE	YELLOW	RED
6	YELLOW	RED	BLUE

Columns 2 and 4 on the Carrier Wave mat are Secondary color columns and should be determined just as they were for the players. Example: a roll of 1 on the die would result in the Carrier Wave columns being assigned thusly: Col 1 – Red, Col 2 – Orange, Col 3 – Yellow, Col 4 – Green, and Col 5 – Blue.

NOTE: The columns on the Carrier Wave mat ARE NOT assigned numeric values at this time. The colored markers for each column should be placed below them in the spaces labeled Base State; effectively, they have a value of zero at the start of the game. This is done to prevent the possibility of a player having inadvertently matched the Carrier Wave with her signal before the game even begins.

FURTHER NOTES ON GAME SET UP: It is---statistically---possible that a player might roll all “1”s or---even worse---all “6”s when generating his signal. The former case would make it very easy to win, while the latter very hard. If either of these cases occurs, a player should reveal his dice to the others and reroll them (in secret) to generate another signal. It is also remotely possible that two (or more) players will generate the same signal during set up; if this is the case, then they all win!

Now that the Carrier Wave has been set, and the players have all generated the signals they will be working on, take the top four cards of the External Funding deck and place them face up where everyone can see them.

Play is now ready to begin. The first player (the last one to have been to either a telescope or a planetarium – or any other method of choosing you prefer) begins to take actions!

On her turn, each play **MUST** take two of the following actions:

- 1) Play one OR two cards from her hand onto the table to construct one (or two) radio telescopes. Cards with the same value **MUST** be placed in the same telescope stack, while cards with different values **MUST** always be placed into different stacks. There can **NEVER** be more than **ONE** stack of any given value being worked on at any given time.
This means that if you want to play cards of a given value onto the table and there is already a stack of that value going, you **MUST** play your cards onto the stack. Stacks may never exceed a number of cards in them equal to their value (i.e. – a value 3 stack may never have more than 3 cards in it). This **MAY** prevent you from being able to play more than one card during this action. For each card played during this action, a player may move one marker on the Carrier Wave mat one space (either up or down) to modulate the signal. A marker may never be moved above 6, nor may it ever be moved back down to Base State.
If a player completes a stack (i.e., brings the number of cards in the stack up to the value of the stack – three cards in a value 3 stack) he collects the stack from the play area, returns all player cards to the appropriate player(s) who place them into their own discard pile(s) {cards belonging to the EF deck are set aside out of play for the rest of the game}, **AND** then takes the appropriate Special Action token from the supply (see below for more details on Special Action tokens).
This action may be repeated.
- 2) A player may take one or two cards from his hand, place them at the bottom of his deck and replace it in his hand with either the top card(s) from their deck, or the appropriate number of face up cards of their choice from the available External Funding cards.
This action may also be repeated. For this reason, the face up External Funding cards are **NOT** replenished until **BOTH** of a players actions have been completed.
- 3) A player may, if she is confident of her findings, Present her Findings to the world (attempt to win). She then reveals her signal to all the other players and compares it to the Carrier Wave mat. If her signal matches the Carrier Wave **IN ALL ASPECTS** (all rows match both numeric value and color), then she wins the game and is acclaimed as the discoverer of ETI.
If the signal **DOES NOT MATCH**, then play proceeds, but the revealing player must continue on with his signal available for all other players to see for the rest of the game.

After completing TWO actions in his turn, a player refills his hand back to four cards from his deck. Any missing face up External Funding cards are replaced from the EF deck (this may empty the EF deck---see below) and play passes to the player on his left.

If it is not possible for a player to refill her hand from her deck, then she must refill it from the available face up External Funding cards. Only when the EF deck has run out or so low that a player cannot refill completely from the available cards does a player reshuffle her own (now limited) discard pile and begin to use it again. The External Funding deck is never reshuffled (funding dries up without results...). If any player is required to refill her hand from the EF deck, and cannot do so AND has already reshuffled and depleted their own deck, then that player is out of the game. (see Ending/Winning the Game below)

Special Action Tokens:

There are five different types of SA tokens---one for each value of stack. When a stack in the play area is completed, the player who completed it takes the corresponding SA token and places it beside his Facility screen for all to see. Each player may only acquire each type of SA token ONCE per game, and once spent, they should be placed face down, but may be moved behind a player's screen.

The types of tokens are as follows:

- Value 3 – Boost the Gain - this token allows a player to move one marker one space on the Carrier Wave mat as if they had played a card.
- Value 4 – Fudge the Numbers - this token allows the player to move one marker behind their own Facility Screen one space (either up or down); this is generally done when Presenting Your Data to the World, but may be done at any time on your turn.
- Value 5 – Fine Tuning - this token allows the player to swap columns for two adjacent Primary markers on the Carrier Wave mat. For purposes of this token, columns 1 & 3 are adjacent, and columns 3 & 5 are adjacent, but columns 1 & 5 ARE NOT adjacent.
- Value 6 – Frequency Modulation - this token allows the player to swap columns for any two Primary markers on the Carrier Wave mat regardless of whether they are adjacent or not.
- Value 7 – Remodulate the Carrier Wave - this token allows the player to shift all three of the Primary markers on the Carrier Wave mat either to the left or right. What happens is this: if the tokens are shifted to the right then the marker in column 1 moves into column 3, the marker in column 3 moves into column 5, and the marker in column 5 moves to column 1.

NOTES:

- Special Action tokens may be played at any time during YOUR turn. The exception to this is Fudge the Numbers; it is best---to prevent accusations of cheating and hard feelings---to only play this token when performing a Present Your Data action.
- Tokens for Values 5, 6, and 7 will involve reassigning the Secondary color columns (i.e. columns 2 & 4) based on the new positions of the Primary colors. It should be noted that while there are three Secondary colors (Green, Orange, and Purple), there are only two columns for Secondary colors; be aware of this when moving colors around.

- Also, when Primary colors are moved on the Carrier Wave mat, ONLY their column changes, NOT their numeric value.

Ending/Winning the Game:

Play will proceed until one player Presents her Findings to the World and they are verified as matching the Carrier Wave. If another player has the same signal he may reveal it now (no action required); all players with matching signals are declared the winner (ala Shoemaker-Levy 9) and everyone wins the Nobel Prize!

It is possible that play could proceed in such a fashion so as to have multiple players eliminated by a lack of External Funding. If this happens enough times and only one player remains, she is said to have determined that we are Alone in the Universe; she wins the game, but does not win a Nobel Prize and everyone is sad...

Design Notes:

First and foremost, I must acknowledge that this game is a variation of the rules for a game called Lotus by Renegade Games. I added some bells and whistles, and took out one or two things, but the basic framework is recognizably that of Lotus. It is not my intention to claim that this game was designed from the ground up from scratch; I have stood on the shoulders of Giants and have seen all the farther for it.

Second, some folks have mentioned that the basic set up state of the game makes it hard to match your signal to the carrier wave; this was by design. I wanted to help folks to understand just how much of a needle in a haystack the SETI Project is. If it were easy to find ETI, it would have been done by now.

That said, I do not mean to imply that we are Alone in the Universe; such a point of view seems short-sighted at least, and arrogant at worst. I participate in the SETI@home project and encourage you to at least look into it, and, if you're game (pun intended) to join in the search. It's easy.

Third, it has been pointed out to me that as it currently stands this game is NOT color-blind friendly; quite the opposite, it is very dependent on colors. Given more time, and easier access to other components, I would certainly label the markers with some sort of symbols to better allow color-blind players to enjoy this game.

Lastly, while I have included artwork for the backs of all the decks of cards, no art for the faces of the cards has been provided. For now, I've just been using regular playing cards which I labeled appropriately to make the sets of cards each deck needs. Feel free to do the same, print out the card backs and sleeve them to make cards to play with.

Carrier Wave Mat

6						Primary Color Column Base State
5						Secondary Color Column Base State
4						Primary Color Column Base State
3						Secondary Color Column Base State
2						Primary Color Column Base State
1						Secondary Color Column Base State

Players MUST Take Two of the Following Actions on their Turn:

- 1) Play one or two cards from their hand into the play area. Move markers on the Carrier Wave equal to the number of cards played.
- 2) Place one or two cards from your hand on the bottom of your deck and replace them with cards either from the top of your deck, or from the face up External Funding cards. If the EF deck has been depleted, this action may only replace with cards from your deck.
- 3) Present your Findings to the World by revealing your signal and comparing to the Carrier Wave. If it is the same in all aspects, you WIN! If not, play proceeds, but your signal is no longer secret.

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