androids, assemble!

"A game of engineering, deduction and subterfuge!"

Jeannette Forbes

Matthew Pressman

Tyler Coppenbarger

Margaret Dorsey

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Game Design

Summary

Theme	**:**	Deduction and Deception
Genre:		Card game / Party Game
Setting:		A mad roboticist's experiment floor
Objective:		All players are trying to build an android from the appropriate parts together on the same workbench. Parts are played secretly, and the objective is to deduce and announce that the necessary parts for a completed android have been placed onto the workbench (and be correct) before the other players do.

History, Antecedents and Related Games

- Secret Hitler
- Rummy
- Clue
- BS

Gameplay

Players take turns playing into the shared workbench, either contributing to or sabotaging that android in progress, and use instant cards to modify the workbench and interfere with each other. The game is entirely a card game, and the focus is heavily on manipulation on the state of the workbench and player interaction.

Narrative

The players are all apprentices of a mad roboticist, trying to be the first to build a functional android and impress their mentor. To reach this end, they are willing to sabotage their own work if it means undermining the competition.

Technical

Theming

Deduction, Cutthroat, Competition, Sabotage, Bluffing

Mechanics

Players take turns playing cards into a shared stack, making educated guesses about the stack's contents and jockeying to be the first to determine and call when the necessary material cards are in the stack. This determination can be made -- and undermined -- by a variety of cards that can sabotage the stack, prevent other players' actions, or rapidly change the cards in players' hands.

Balance

The ratio of each card type and effect need to be balanced carefully to ensure that each player, regardless of their starting hand, still has a reasonable chance of winning the game. Instants are easily the most powerful cards in the game, since they are the only cards to both to provide information about the stack and to modify players' hands and abilities; this power is exacerbated by the ability to play them at any time during the game. Their effects and ratios to other cards must be carefully balanced to prevent any one player from winning the game too easily through a combination of a few cards.

Additionally, tweaking the ratio of "workbench" instants, that let you glean information from and manipulate the state of the workbench, and "player" instants, that let you directly affect the other players and their hands, significantly affects the pace and feel of the game - skewing either towards a slower, more thoughtful game or a fast paced chaotic experience.

Game Space

The players are seated in a circle around a cluttered workbench of ambiguous parts, each struggling to out-perform the other mad roboticists and create the first android. The shared workbenches -- stacks of material and sabotage cards -- force the roboticists to work together and grapple for control of the workbenches and knowledge of its parts. As play continues, the workbench grows even more cluttered with obscure materials, and keeping an eye on the types and number of devices -- cards -- in other roboticists' hands is even more vital.
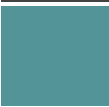
Set Up
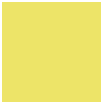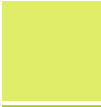
See the Rules Document and Reference Document in the Appendices.

Rules

See Rulesheet in Appendices.

Design

Color Palette

HEX	Color	HEX	Color	HEX	Color	HEX	Color
#EFCD92		#283284		#539498		#E61605	
#EDD368		#284285		#7CAAAA		#E82819	
#EDE468		#285885		#5399A3		#BB2115	
#E0ED68		#286785		#139299		#9A1A10	
#B3CF31		#288085		#07F8FF		#6E140D	

Mood Board

Concept Art

Font Reference

syncopate

Droid Sans

Ubuntu

Components

See Rules Document and Card Spreadsheet in Appendices

Game Flow

Walkthrough of the game

Players sit down in a circle, surrounding the shuffled deck of cards, and are dealt out a starting hand of 5 cards by one of the players.   Gameplay begins with the player left of the dealer playing their first cards, choosing to either play or save their material, sabotage and instant cards... and the game goes from there!

In this case, Andy decides to take advantage of his turn being first, and slaps a head, torso, and 1 of his limb cards face-down in the workbench, saving his remaining limb and sabotage card for later. He draws 2 instants and 1 material -- another limb -- to replenish his hand before ending his turn. Baymax takes his turn, playing two materials and drawing another two out of the deck, saving the other 4 materials in his hand for later. Carlita -- eyeing the meagre pile of cards in the workbench, plays an instant to view one -- a head -- and then slaps 3 material cards down and calls it. Baymax slaps a NOPE instant card down, preventing her from calling it this turn, and she responds with her remaining instant, which blocks another instant's effect. The stack is hers... she starts placing the cards down in order and finds 5 limbs, 2 torsos and a head in the workbench -- she wins!

Playtest Results

Describe the various iterations of playtesting

1st playtests: within development group, playing games of 3-4 people
2nd playtests: CrashTest, fresh players, played 2 games of 5 people
- 1 aborted before finishing (were not clear on rules)
- 1 finished on the 2nd round of turns

3rd playtests: within development group, playing games of 2 & 4 people
- Games began taking longer due to modifications

4th playtests: Crashtest, fresh players, played games of 4-? People
- Games averaged 10-30 minutes
- Game changed to become more focused on deduction than luck

Describe the Level of Design Attained:

The design of the game has been focused on card development and balancing, with minimal attention on the design and aesthetics of the cards and other components. Overall we had 4 major iterations, with multiple minor tweaks and changes to each, before coming to the current game.

Balancing Issues & Considerations:

Major balancing issues: card ratios, deck size, public information, informative effects. The ratios of cards, effects, and deck size in general give entirely different feels and play flows to the game, and every tweak has made a difference. A lot of thought has gone into how much information each player should get "for free", and how easy it should be to obtain more information. This balancing is still very much a work in progress.

Future Work

Current State of the Prototype:

        We have just implemented a new version, and unfortunately within the scope of the class we cannot afford to implement changes from future playtesting and changes to this version into the final prototype after it is printed - realistically, what we have now is what will be printed. With that being said, we have a pretty solid game. It is fun and functional, and while there is more tuning needed in feel, pace, and deck composition, the core of the game is pretty solid at this point in time.

What further work would be required to fully polish the game?

        Considering our game was hard reset towards the end of the semester, we are not yet in a position to worry about polish. We are still very much in the trenches of extensively testing, iterating, and tweaking the very delicate balances of card ratios and information flow. The primary task of the team right now, if this game were to continue in production, is simply to continue designing the game.

Game Viability

Describe how well other similar games fared in terms of Units Sold/Profits

Party Games, and specifically party card games, have historically done well, as shown in the following table. In fact, "Family" game sales are currently on the rise.

Game	Release Year	Estimated Sales
Cards Against Humanity	2011	$12 million profit
Exploding Kittens	2015	$8.8 million (not profits, kickstarter total)
Uno	1971	125 million units in the first 5 years

Expected Development Cost

What are the anticipated production costs?

Because the only components are printed playmats and a relatively small deck of full color cards, production costs will be non-trivial but low in the context of game production. After some research, it seems that a small (1,000 copies) batch of poker size cards are about $3 per deck, and the white duck fabric we used for the playmat is $120 per 20 yard bolt, from which we should get ~ 100 - 120 playmats. Cost of printing the playmats is uncertain, but a fairly loose estimate of cost per unit in production is $10. If priced on the cheaper side of indie card games, at $20 - $25, we would have a small profit margin and enough funds for limited distribution and advertisement.

How many people are needed?

Our team of four has actually been a fairly appropriate number, although the game is small enough that a single artist, a single UI/Fabrication manager, and a single designer could probably competently produce the game. There is no part of the game that demands a large or particularly diverse team.

Presentation
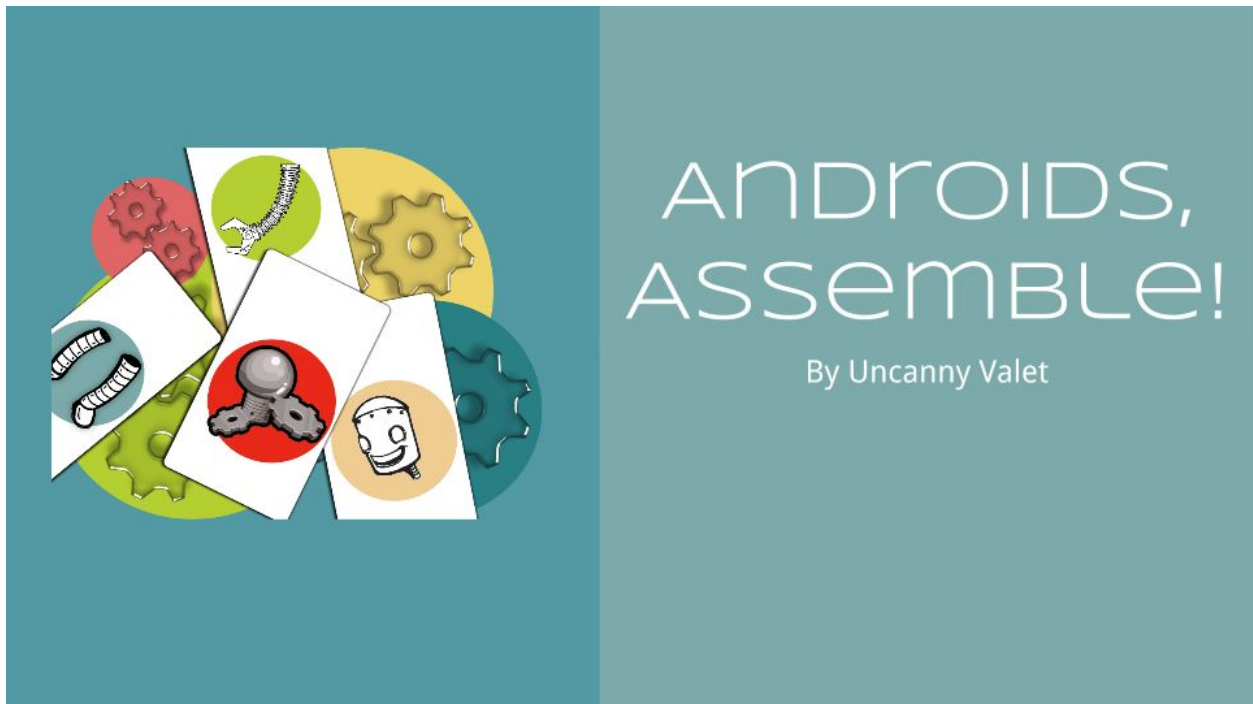
THE GAME

All players are trying to build an android, which needs at least a head, torso, and four limbs together on the same workbench. Parts are played secretly, and the objective is to deduce and announce that the necessary parts for a completed android have been placed onto the workbench (and be correct) before the other players do.

Players take turns playing into the shared workbench, either contributing to or sabotaging the android in progress, and use instant cards to modify the workbench and interfere with each other. The game is entirely a card game, and the focus is heavily on manipulation on the state of the workbench and player interaction.

CONCEPT ART

POSITIVES

- Game rules and mechanics are very simple and easy to learn and teach

- The mechanics support both more methodical, strategic games and faster, chaotic ones depending on the player.

- Not very random, despite being a party game

NEGATIVES

- Game length is very unpredictable and swingy - games can be anywhere from 5 to 45 minutes.

- We had very little time to test and iterate this game, given we hard reset after Design Doc II. As such, it is not fully balanced and polished.

Team Workflow and Dynamics

Future Work

Currently, we are still in the trenches of playtesting and iterating this game. The immediate future work would be ironing out every mechanic and balancing the deck more carefully, among other things.

conclusion

Appendices

Rulesheet

Androids, Assemble!

A game for 3-6 players

Rules Sheet

Components

- ❖ Deck of 93 Cards
- ❖ Rules Sheet
- ❖ Reference Sheet
- ❖ Playmat

Setup

1. Shuffle the deck and place it within reach of all players in the place specified on the playmat.
2. Deal a hand of 5 cards to each player.
3. Players may determine starting player in any way they see fit, and begin the game!

Please Note: The order of cards on the workbench matters. You may organize the workbench as you see fit (see Reference), but it should be done in such a way that resolution order is obvious.

Goal

The goal of the game is to construct an android, and determine when the android has been finished before the other players. An android must have at least 1 head, 1 torso, and 4 limbs.

Players take turns playing part, junk, or sabotage cards face down onto the workbench. Instant cards are played face-up at any time.

Card Types

Parts

Parts contribute to the construction of an android. Possible parts are Head, Torso, and Limb. Parts can only be played face down on the workbench.

Junk

Junk has no effect, and can only be played face down on the workbench.

Sabotages

Sabotages affect other cards on the workbench. When the workbench is declared finished, Sabotage effects are resolved as they are uncovered on the workbench, save for any that affect a "random" card on the workbench - these are not resolved until all cards on the workbench have been uncovered. Sabotages are played face down on the workbench.

During resolution of the workbench, sabotages should be removed from the workbench stack as they are discarded, meaning that by the time the last card of the stack has been resolved, and "random" effects apply, the only type of card left in the resolved stack should be material.

Instants

Instant cards are the only cards in the game played face up and not in a workbench. Instant cards can be played at any time, unless otherwise specified by the card text. When an Instant card is played, the text on the card is resolved. Instants are resolved in order of when they were played, with the exception of an instant that cancels the effect of another card, in which case that card is resolved immediately, targeting the card played directly before it. After being resolved, Instant cards are discarded.

When an instant card is played or the workbench is declared finished, the player should wait a moment or two to allow for response play. After this grace period has ended, reactionary Instant cards (such as ones that block the effect of another card) cannot be played in response. Instant cards cannot be played while the stack is being resolved, although can be played during this grace period to make final changes to its' state.

Player Turn

At the beginning of a player's turn, they must play at least one card face down onto the workbench if they are able. Any number of cards can be played onto workbench in any order.

The player may also declare the workbench finished on their turn, whether they have played cards into it or not. Assuming this action is not interrupted by the effects of

an instant card, the workbench is resolved in order, starting from the topmost card and working down. If the correct components to build an android are present after resolution of all cards, the player wins. If not, the entire workbench is discarded and play resumes.

At the end of their turn, the player draws back up to 5 cards, unless they incorrectly declared a workbench finished that turn, in which case they only draw up to 3 (If the player already has 3 cards or more, they simply do not draw). This is the only time that a player draws cards unless otherwise specified. The current turn then passes to the player on their left, unless affected by an Instant card.

Notes

❖ If the deck runs out at any time, the discard pile should be shuffled to replace it.
❖ The backs of all cards on the workbench, in the deck, or in other player's hands are public knowledge. The discard pile is also public knowledge.
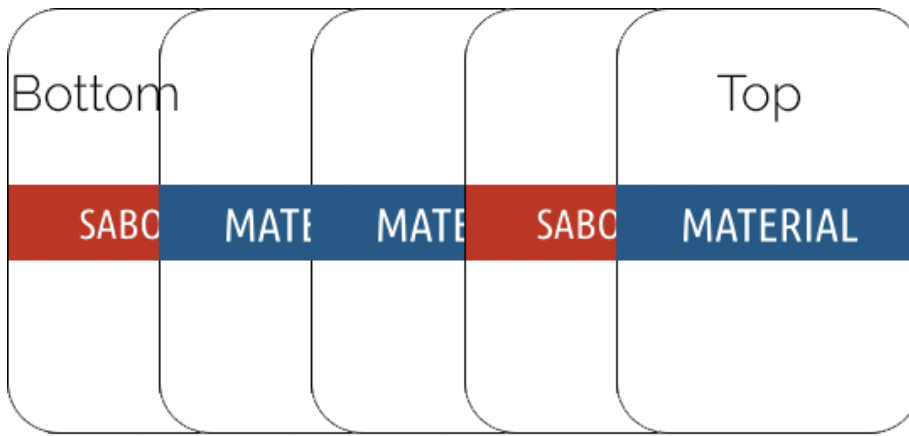
Androids, Assemble!

Reference Sheet

Workbench Layout

For ease of access to the cards, it is recommended that the workbench is arranged as shown in the following image.
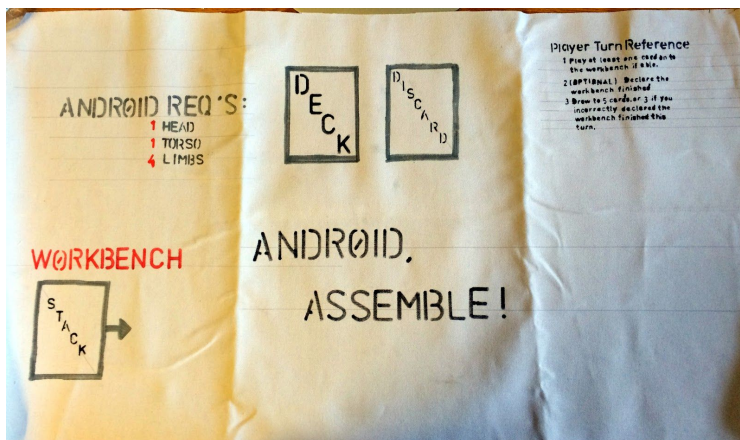

Sabotage Reference

The following are possible effects of sabotage cards:
- ❖ Destroy the card above the sabotage card
- ❖ Destroy the card below the sabotage card
- ❖ Destroy a random card on the workbench after resolution
- ❖ Destroy a sabotage on the workbench (including this sabotage card itself)
- ❖ No effect

Prototype Photo Gallery

ANDROID REQ'S:
1 HEAD
1 TORSO
4 LIMBS

DECK   DISCARD

Player Turn Reference
1 Play at least one card on to the workbench if able.
2 (OPTIONAL) Declare the workbench finished
3 Draw to 5 cards, or 3 if you incorrectly declared the workbench finished this turn.

WORKBENCH

STACK →

ANDROID,

ASSEMBLE!

ANDROID REQ'S:
1 HEAD
1 TORSO
4 LIMBS

MATERIAL

INSTANT   TANT   STANT

Swap the position of any 2 cards on the workbench

WORKBENCH

ANDROID,

ASSEMBLE

MATER SABOTA MATE MATE MAT MAT SABO SABOTAGE

Sample Cards

INSTANT

Look at a single card of your choice on the workbench

MATERIAL

HEAD

SABOTAGE

Destroy the card directly above this card

INSTANT

MATERIAL

SABOTAGE

Card Spreadsheet

Card Name	Total: 28	Count: 93	Card Effect
Instant	1	4	Block the effect of another Instant card and discard it
Instant	1	4	NOPE! Prevent another player from declaring the workbench finished
Instant	1	4	Destroy a card of your choice from the workbench
Instant	1	2	Reverse the turn order after the current player's turn ends.
Instant	1	2	Prevent a player from playing cards onto the workbench this turn
Instant	1	3	Play 1 card onto the workspace
Instant	1	2	Steal one card from another player's hand
Instant	1	2	Discard 2 cards from another player's hand
Instant	1	2	Force a player to discard and redraw their hand, up to the same number of cards.
Instant	1	2	Swap hands with another player.
Instant	1	5	Swap the position of any two cards on the workbench
Instant	1	2	Shuffle the discard pile into the deck.
Instant	1	6	Look at a single card of your choice on the workbench
Instant	1	3	Swap a legal card in your hand with a card on the workbench
Sabotage	1	5	Destroy the card directly above this card
Sabotage	1	5	Destroy the card directly below this card
Sabotage	1	2	Destroy one card on the workbench randomly
Sabotage	1	2	Choose 1 sabotage card still on the workbench (including this one) & destroy it
Sabotage	1	1	No effect
Limb	1	20	
Head	1	5	
Torso	1	5	
Junk	1	1	Blue Mushroom
Junk	1	1	Cowboy Hat
Junk	1	1	Broken Gear
Junk	1	1	Banana Battery
Junk	1	1	Explosive Red Barrel