

TECH DECK

CYBER DEFENSE

Ben Cheung, PhD
Dušan Šídlo



45 min



2



7+



Game
Theoretic



Puzzle
Game



Area
Control

RULES VERSION 7
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THE TECH DECK



Playing cards were created in China during the 9th Century. Playing cards were imported into Europe from Mamluk, Egypt, in 1370. By 1377, the French used playing cards with Hearts, Diamonds, Clubs and Spades. The Tech Deck **MODERNIZES** classic playing cards by depicting 21st century concepts on each card. It is **PORTABLE** and **VERSATILE**: play games anywhere, any time with anyone. It is a **GAME PLATFORM** you can play many games with.

THE DOMAINS (SUITS) OF THE TECH DECK



KNOWLEDGE (BOOK) INFORMATION TECHNOLOGIES

Knowledge is facts and information accumulated by science. It is the theoretical and practical understanding of a subject foundational to science and technology.

SCIENCE (BEAKER) RESEARCH & DEVELOPMENT

Science is organized knowledge with testable explanations. The natural sciences (biology, chemistry, and physics) study nature. The social sciences (economics, psychology, and sociology) focuses on societies. The formal sciences (logic, mathematics, and computer science) are for abstract concepts.

TECHNOLOGY (GEAR) INDUSTRY, MANUFACTURING

Technology is the application of scientific knowledge for practical purposes. Engineering is the creative application of science and math to the design and construction of machines, systems, and processes.

SERVICES (GLOBE) MARKETING

Services are the integration of knowledge, science and technology to create a product to benefit consumers. Services provide a benefit or product for a customer.

GAME THEORY, PUZZLE GAME, AREA CONTROL GENRES



COLONEL BLOTTO – Cyber Defense is based on a game called Colonel Blotto from Game Theory. Colonel Blotto is a multi-battle ground warfare game where two opponents vie for battlegrounds with rewards and assign troops and resources to those areas in hopes of gaining control of contested battlegrounds.

DESCRIPTION, GAME OBJECTIVE & WINNING THE GAME



DESCRIPTION – Cyber Defense thematically represents concepts in cyber security. Modern computer systems are vulnerable to cyber attacks, and there is a constant vigil to keep computer systems safe against cyber attacks through cyber security measures. Common types of cyber attacks include Phishing, Man-in-the-middle and Distributed Denial of Service (DDOS) attacks. In Cyber Defense, one player plays as the Hacker, and the other player plays as the Defender.

OBJECTIVE OF THE GAME – The objective for the Hacker is to try to deduce the Defender's password. The objective of the Defender is to try to protect his password.

GAME END – The game ends after three rounds or if the Hacker has cracked the Defender's password.

GAME SETUP



BATTLEGROUND AREAS – There are 3 Battlegrounds (BG): Phish, Man-in-the-Middle (MitM) and Distributed Denial of Service (DDOS) BGs. Mark these three regions in the play area with face down cards, playing cards or placemats.

DRAW DECK – Expel the Wild Cards. Shuffle the remaining cards to form a draw deck.

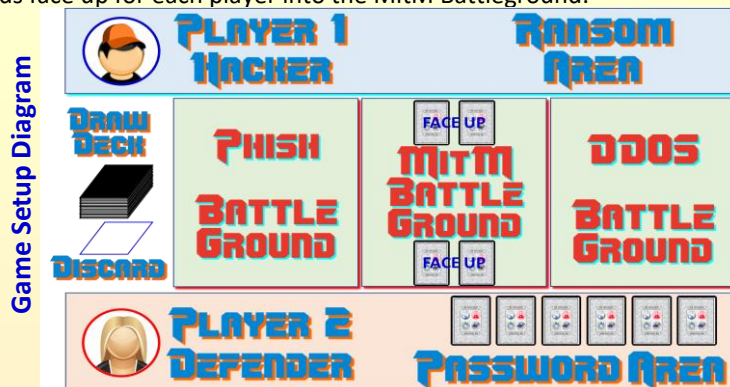
DISCARD PILES – The deck has a discard pile next to it (that starts with no cards in it).

DEAL CARDS – Each Player is dealt 10 cards from the draw deck.

DETERMINE ROLES – Randomly determine roles. One player is the hacker (starting player), one player is the defender.

PASSWORD – Deal 6 face down cards in a row into the defender's password area. The defender may look at these.

MITM CARDS – Deal two cards face up for each player into the MitM Battleground.



GAME PLAY



Each round follows these steps:

CYBER DEFENSE GAME PLAY – Steps in a Round

STEPS IN A ROUND



**DEVELOP
BATTLEGROUND**



**CARD
EFFECTS**



**RESOLVE
BATTLEGROUND**



**PREPARE
NEXT ROUND**

- 1. DEVELOP BATTLEGROUND** – Players take turns playing cards into any of the three Battlegrounds (BG) until each player has played 9 cards into the three Battlegrounds. Cards played into the Phish and DDOS Battlegrounds are played face down. MitM Battlegrounds cards are played face up. Each player must play at least one card into each BG. There is no maximum.
- 2. CARD EFFECTS** – Players alternate using up to two Card Effects in their Man-in-the-Middle (MitM) BG (see below).
- 3. RESOLVE BATTLEGROUND** – Each battleground is resolved starting with the Phish BG, then the MitM BG and lastly the DDOS BG (see below).
- 4. PREPARE NEXT ROUND** – Prepare the next round. Gather all cards (except password cards) to form a new draw deck. Each player is dealt 10 cards. Deal 2 cards face up for each player into the MitM BG. The game ends after 3 rounds. The first player alternates.

DEVELOPING BATTLEGROUND




Play – Players take turns playing a card into any of the three Battlegrounds until each player has played 9 cards into the three Battlegrounds.

Phish & DDOS – Cards played in the Phish and DDOS Battleground are played face down.

MitM – MitM Battlegrounds cards are played face up.

Minimum – Each player must play at least one card into each BG. There is no maximum to the number of cards a BG can hold.


GAME PLAY – DEVELOP BATTLEGROUND




**DEVELOP
BATTLEGROUND**

Each BG must have at least one card played to it. Each BG can hold any number of cards.


DRAW DECK



DISCARD




PHISH BATTLEGROUND




Cards played to the Phish Battleground are played face-down.

MITM BATTLEGROUND



Additional cards played to the MitM BG are played face-up. You can use two Card Effects of from the MitM BG each turn.

DDOS BATTLEGROUND



Cards played to the DDOS Battleground are played face down.

RESOLVING BATTLEGROUNDS



Resolve each BG separately and sequentially.

Phish [Theme: Seeing Information] – The highest value card wins the Phish BG. If tied, use Tech Deck tie-breaker rules for suit order: Knowledge (lowest suit), Science, Technology, Service (highest suit). If the Hacker wins, they reveal one password digit card of the Defender. If possible, first reveal a non-upgraded digit. Then, the Hacker makes 2 guesses. If the Defender wins, they can unlock a locked digit. The Hacker makes 1 guess.

MitM [Theme: Eavesdrop insertion] – The highest total sum value of the all the MitM cards wins the MitM BG. High card is the tie breaker. If necessary, use Tech Deck tie-breaker rules for suit rank (see above). If the Hacker wins, they make 4 guesses (2 bonus guesses). If the Defender wins, the Hacker makes no guesses.

DDOS [Theme: Overwhelming Attack] – Arrange the DDOS cards from high to low for each player. Compare each pair of Hacker & Defender cards from low to high. For each pair, the player with the lower value card wins the comparison. Use Tech Deck tie breaker rules to break ties. The DDOS Winner is the one who wins the most comparisons. If one player has more cards in their DDOS BG than another, it counts as a win for that comparison. If there is a tie, the player who played the most cards into the DDOS BG wins the Tie. If there is still a tie, use the lowest card among all revealed cards to break the tie. If still tied, use Tech Deck tie-breaker rules for suit order: Knowledge (lowest suit), Science, Technology, Service (highest suit). If the Hacker wins, they can lock one digit in the Defender's password preventing it from being upgraded. Slide the card back to indicate it is locked. The Hacker make 2 guesses. If the Defender wins, they can upgrade a password digit sliding it forward. The Hacker makes 1 guess.

RESOLVE PHISH BATTLEGROUNDS EXAMPLES



Example #1

Highest value single card wins the Phish BG. Hacker wins with 13-Tech besting the Defender's 10-Science.

The Hacker wins and reveals (turns over) a digit in the Defender's password and he makes 2 guesses.

Hacker

Defender

PHISH BATTLE GROUND

The Defender played two cards into the Phish BG, but only the highest card (10-Science) is considered.

Example #2

Hacker

Defender

PHISH BATTLE GROUND

Here, the Defender wins the Phish BG because 12 Service wins over the 7 Knowledge.

The Defender wins and unlocks a digit in her password and the Hacker makes only 1 guess.

RESOLVE MITM BATTLEGROUNDS EXAMPLES



Example #1

The highest total sum value of the all the MitM cards wins the MitM BG.

Here $25 > 16$. The Hacker wins and as a result makes 4 guesses (2 bonus guesses).

Hacker

Defender

MITM BATTLE GROUND

Example #2

Hacker

Defender

MITM BATTLE GROUND


In example #2, the Defender wins since $7+4+10 = (21)$ is greater than $13+2+2 = (17)$.

When the Defender wins, the Hacker makes no guesses.

RESOLVING BATTLEGROUNDS




RESOLVE DDOS BATTLEGROUND EXAMPLES




Example #1

Most number of lowest pairs-offs wins in the DDOS Battleground.

Compare 2 to 3, 2 to 4, (none to 6). The Hacker wins 2 to 1 in DDOS BG.





Example #2

Ties: the player with the most cards in DDOS BG wins the tie. If still tied, lowest card wins (knowledge, science, technology, service).

In this example, Both players tie as each have one pair-off win. The Defender has the lowest card (2 knowledge) so wins the tie.

USING A CARD EFFECT



USE A CARD EFFECT – Each round, players alternate using game effects from up to two different Man-in-the-Middle cards that they control. The effects can be applied to any of the Battlegrounds. Cards the battlegrounds are owned by their respective players. But they are also considered Neutral Cards for Tech Deck game effects purposes. After using a Game Effect on a Card, a player can play a card to any Battle Ground. Password cards are not considered in play for game effect purposes and may not be affected by game effects. The Hacker may not use game effects that search the deck (9 of Knowledge, 6 and 11 of Technology). However, the Defender may use effects that search the deck.

CARD EFFECT RULES



- RESHUFFLE** – If a game effect requires you to draw or reveal card(s) and there are not enough cards in the deck to do so, shuffle the discard pile with what is left of the deck to form a new deck.
- LOOKING AT PILES** – Any player may look through the discard. The discard is public information.
- REVEALING** – To reveal card(s), expose the card(s) for all to see. Then, returned them to where they came from, preserving their order. A player who *looks* at a card is the only person to see it and *may* divulge the information.
- EXPILING** – A card that is expelled is permanently removed from the game.
- EXCHANGING** – Exchanging two cards causes them to swap places with each other. For example, exchanging a card from the top of the deck with a card in hand causes the two to change places with each other.
- REPLACE** – To replace a card, discard it and put the replacing card in its place.

RESOLVING BATTLEGROUNDS – PASSWORD GUESSES



- MAKING A GUESS** – The Hacker selects a card (position in the password) and makes a guess, stating a number from 1 to 13. If he selects an upgraded digit, he names both a value and suit instead.
- MARKING A GUESS** – If the Hacker guesses a number that is in the password but not in that position, the Defender states how many of that guessed number are in the password. If there is at least one card of the value, he turns the selected card sideways. This indicates that the selected card is not of that value, but the value is in the password. If the Hacker guesses the proper suit of an upgraded password digit but not the right value, the card is turned 180° upside down. If the value is not in the password, the Defender says that there are no digits of that value and leaves the selected card alone. The Defender's response considers previously revealed digits. If the card is already turned sideways, and it is selected as a card for a guess again, it is only turned again only for a guess if it is an upgraded digit.
- CORRECT GUESS** – If the Hacker selects a non-upgraded password card and it matches the number, the Defender reveals that password digit. If there is more than one of the value chosen, the Defender says so. If the Hacker makes a correct guess for an upgraded password digit with both number and suit the Defender reveals that password digit.
- NOTE TAKING** – Note taking by the Hacker is permitted.



RESOLVING PASSWORD GUESSES

Upgrade Password Cards require the Hacker to guess both Value & Suit

Locked Password Cards cannot be upgraded by the Defender

Defender

13

The Hacker guesses "13" at the 2nd password card. The Defender responds with "None". The password cards are untouched.

3

The Hacker guesses "3" on the 3rd card. The Defender says "Two" and turns the card sideways indicating there are two 3s but neither in the 3rd position.

2

The Hacker guesses "2" on the 5th card. The defender says "one". Since the 5th card is value-2, card the Defender reveals the card.

GAME END



GAME END – The game ends after 3 rounds or if the Hacker deduces the Defender's password. If after three rounds the Hacker has not cracked the Defender's password, the Defender wins.

TECH DECK RESOURCES: RULES, VIDEOS



Rules and videos for Tech Grid Poker, Tech City, Tech Exchange, Tech Chess, Gears of Industry, Chronological, Elevator Pitch, Peer-to-Peer, Cardoku, Newsworthy, Card Barrage, Prisoner's Trilemma, Tricks of the Trade, Host a Heist Dinner Party and Paradoxical are at my homepage cheung.interzone.com, Boardgamegeek (BGG) and my Youtube channel.

TECH GRID POKER

TECH CITY
CITY OF CARDS

TECH EXCHANGE
REAL-TIME TRADING GAME

TECH CHESS

GEARS OF INDUSTRY
PERSONALIZED BOARD GAME

ELEVATOR PITCH
CREATIVE PARTY GAME

CARDLE
HEAD-TO-HEAD CARD-BUILDING

CHRONOLOGICAL
LEARN THROUGH GAMES

PEER-TO-PEER
GROUP DECISION BUILDING GAME

NEWSWORTHY
A CONVERSATIONAL GAME

CARD BARRAGE
A PRIORITY TOPPER BUSINESS GAME

PRISONER'S TRILEMMA
GAME BRINGS AN ACTION

CARDOKU
HEAD-TO-HEAD SUDOKU

TECH DECK TRICKS OF THE TRADE
TRICKS & TRICK TRIANS

TECH DECK HOST A HEIST DINNER PARTY

TECH DECK PARADOXICAL
RACE FOR PRISONER'S PARADOX

TECH DECK CYBER DEFENSE

CREDITS



Designer, Developer Benjamin Cheung, Dušan Šidlo
 Play Testers Sherman D. Cheung, Steven O. Chew, Clifton Field, Elizabeth Stallone Jonach, Ken Jonach, Kenji B. Kaneshiro, Rich Kopacz, Eugene Ku, Vincent Mondaro, Lillian Mondaro, Pedro T. Ortiz, Henry K. Young