

# VOTING & SCIENCE FICTION: POTENTIAL FUTURES

## 2 Worlds\* of Democracy in 2040

...branching from our present

\*where this world case study is limited to the U.S. election system

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## Motivations

- Heightened concerns for the integrity & security of U.S. election systems
- Election integrity is a matter of national security
- Low voter participation rates

*Where do mobile voting and blockchains fit in?*

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**Today:**

**A presentation of worlds with alternative voting systems  
+ stories from within them**

**Final Project:**

**A prototype & use\* of an alternative voting system**

\*Use: This class will use this system in role play from a future world.

**The year is 2040 and today is Election Day.**

**Alice is on her way to where she will vote, but it's not the polls. The polls are open, but more out of adherence to a national tradition and heritage rather than utility. Alice still hears about people going to the polls in some places, mostly to protest what has come to be, but the media always portrays those folks as “tin foil hat wearers”. Most everyone these days votes remotely.**

## People vote remotely

The secrecy of ballots ensured by the private voting booth has been lost.  
Votes are traded for beers, purchased, coerced.

## Democracy has devolved into plutocracy

Corporations and wealthy individuals buy and coerce votes for their own agendas.  
National parkland is sold, industrial waste flows into rivers and wetlands as environmental restrictions relaxed for the convenience and needs of private industries.

## The general public is politically dispassionate

Citizens lost their voting power, and overall sense of choice.  
High income inequality, high sense of despair.

# artifacts

Memos young activists tweeted: “Have your vote and drink beer too!”

When security experts realized states were still moving forward with their “mobile voting solution” contracts despite their warnings, they staged PR stunts for their cause.

They “sold” their votes for beers outside polling stations and then walked in to vote however they wanted to, in order to show how private voting booths made vote buying and coercion ineffective. Once back outside they shouted “have your vote and drink beer too!” The young activists who joined them sometimes took selfie videos of themselves chugging these beers, which they streamed on social media. Others made memes and tweeted slogans.

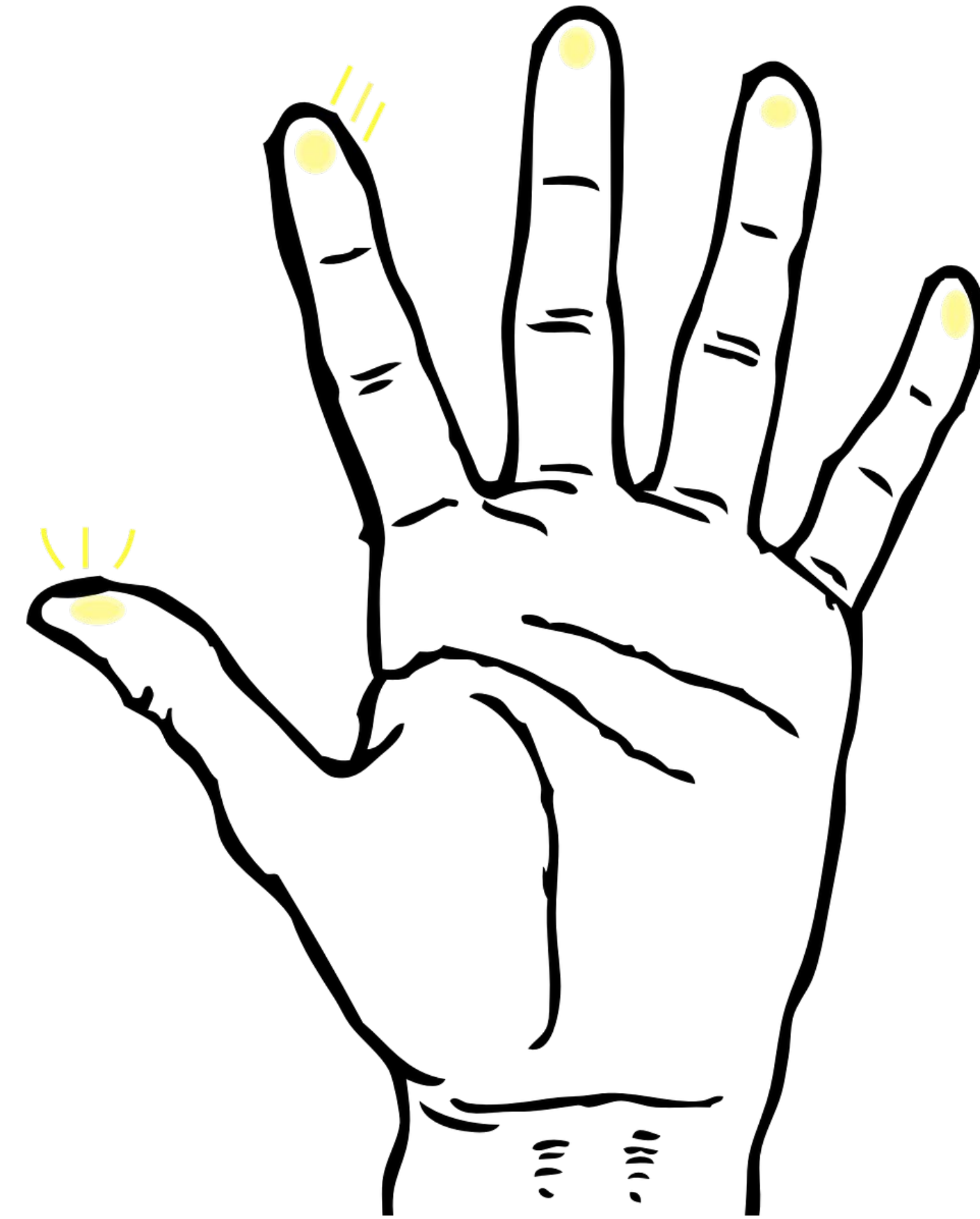


# artifacts

Hand with embedded digits.

What was previously shown on screens is now either surfaced directly from people's palms, or projected onto a thin lens that sits within the eye. Embeddeds led to an explosion in human-computer-interaction (HCI) research, fueled by a quest to find the most subtle and natural ways to control these new interfaces, where control extends well beyond the primitive uses of pressing "buttons" and composing text. Concepts from the outdated technologies of T9 keyboards made a comeback. With just a user's subtle gestures of fingers with embeddeds, 10 digits (plus advanced autocomplete technology) again became the primary way to use keyboards, and express anything digitally.

- Embeddeds enhanced the means for surveillance.
- Embeddeds are how most people vote remotely





**The year is 2040 and today is Election Day.**

**Alice heads out to the polls, leaving her boyfriend Bob at home, responsible for baking the pumpkin pie they had prepped together. Bob had already voted the Wednesday before, at a quiet time when he could avoid the crowds. Alice instead liked to wait for the final day of voting, when she could engage in the lively scene at the polls. This year she is wearing a red and white striped top and flowing blue skirt.**

## 2. A National Holiday and Patriotic Celebrations of Democracy

### **Election Day is a celebrated national holiday**

With in-person voting days starting weeks beforehand.

Election Day is a day when democracy is celebrated, with patriotic pageantry and BBQs.

### **Voter participation rates are high**

Voter suppression is low.

Due to social rather than technical advancements.

### **Elections are secure due to cryptographic systems**

Elections systems use end-to-end verifiable technology.

The general public is mathematically sophisticated, educated in encryption schemes and the concepts like zero-knowledge proofs that secure the integrity of elections.

# artifacts

Election Day merchandise.

Stores sell Election Day merchandise just as aggressively as they sell July 4th, New Years, or Thanksgiving themed items. They stock their aisles with red, white, and blue plates, napkins, BBQ equipment, hats, and any other patriotic apparel voters might buy, months before the holiday. (Thrifty voters buy what immediately goes on sale the day after Election Day, in anticipation for next time.)



## artifacts

“I Voted” pin with a ballot receipt on the back.

Upon casting a ballot, each voter receives an “I voted” pin with their ballot “receipt” on the back. The “receipt” is a cryptographic hash of the encrypted ballot that was cast and is part of a system that allows anyone to check the integrity of the election.

In some municipalities, the receipts are embedded in the pins with RFID tags; in others they are printed and pasted QR codes; in the simplest cases they are the fully printed out cryptographic hashes of the encrypted ballot.

