

Interfaces for Data Consent

Riley Wong (they/them), [Emergent Research](#), 2024

How can clear, effective, and fluid interfaces for consent be built into digital public infrastructure and data governance?

Some examples of cultural frameworks and interfaces for consent include: Betty Martin’s Wheel of Consent; informed consent in medicine; University Title IX Policies of Affirmative Consent; Sociocracy’s “Consent Decision-Making”; consensus decision making; opt-in vs. opt-out; consent profiles; GDPR cookie consent interfaces; Creative Commons licensing; open-source licensing, GPL3, and copyleft; and more!

As we translate cultural frameworks for consent into interactable consent interfaces, how can we implement privacy and cryptography tools to provide backend **consent guarantees**?

Cultural Frameworks for Consent

» Wheel of Consent, Betty Martin

- *Who is it for?* is distinct from *Who is doing the action?*
- *Willing to* is distinct from *Wanting to* ([Source](#))

» Informed consent in medicine

- The process in which a health care provider *educates* a patient about the risks, benefits, and alternatives of a given procedure or intervention.
- The patient must be *competent* to make a *voluntary* decision about whether to undergo the procedure or intervention. ([Source](#))

» Affirmative consent, Title IX for universities

- “A knowing, voluntary, and mutual decision among all participants to engage in sexual activity.
- Consent can be given by words or actions, as long as those words or actions create clear permission regarding willingness to engage in the sexual activity.



→ Consent cannot be gained by force, threats, intimidation, or coercion.” ([Source](#))

» **Consensus decision-making**

- Agreement on some decision by *all* members of a group, rather than a *majority* or a select group of representatives.
- “Consensus decision making is a creative and dynamic way of reaching agreement in a group. Instead of simply voting for an item and having the majority getting their way, a consensus group is committed to finding solutions that everyone actively supports – or at least can live with.
- By definition, in consensus no decision is made against the will of an individual or a minority. If significant concerns remain unresolved, a proposal can be blocked and prevented from going ahead. This means that the whole group has to work hard to find win-win solutions that address everyone's needs.” ([Source](#))

» **Consent decision-making, from sociocracy**

- “A facilitated group process for decision-making: invite objections, and consider information and knowledge revealed to further evolve proposals or existing agreements.
- Consent vs. consensus, defined in sociocracy: In consensus, we ask everyone “do you agree?”. In consent, we ask “do you object?”
- “*Good enough for now, safe enough to try.*” ([Source](#))

» **Opt-in vs. opt-out**

- Opt-in: an affirmative action of giving or asking for consent (freely given, informed, specific, unambiguous). When opting-in is the default, consent has to be explicitly given.
- Opt-out: an act of refusing or withdrawing consent or declining from participating. When opting-out is the default, consent is assumed until withdrawn. ([Source](#))

Digital Interfaces for Consent

» **Data coop consent interfaces: Granular consent**

- “With granular consent, we give every member the option of making a decision on the type of data shared, in what form and with whom. This gives total control to the individual member, but it creates large burdens on the individual and organization.
- Similar to the ways that most of us despair when faced with endless cookie consent choices while browsing the web, the system relies on people taking time to understand why consent is needed, risking people either making poor choices or not making a choice at all.
- Consent can be withdrawn at any time.”

» Data coop consent interfaces: Traffic Light Consent

- “The traffic-light consent mechanism is a broad consent mechanism that allows data to be shared on the basis of three options. The most permissive ‘green’ option allows the cooperative to share the members’ data how it sees fit.
- With the ‘amber’ setting, the individual can opt for granular consent for specific datasets, allowing the control of more sensitive data, such as a name or address.
- The restricted ‘red’ option only allows the data cooperative to use the data only for its own internal purposes.”

TRAFFIC LIGHT CONSENT

•Green - share data with anyone the coop sees fit

•Amber - happy to share but choices made on a case by case basis

•Red - data is used for the cooperative’s own purpose

 Permissive

 Controlled

 Restricted

Traffic Light Consent. Source: [Open Data Manchester](#).

» GDPR cookie consent interfaces

- “Cookie consent refers to obtaining clear and informed consent from website visitors for the use of cookies that collect their personal data.
- Under GDPR (General Data Protection Regulation, applies to the European Union), websites must inform visitors about the types of cookies used, their purposes, and obtain their consent before any cookies are set or read on their devices.” ([Source](#))

» Licensing: Creative Commons licensing

- “Creative Commons licenses give everyone from individual creators to large institutions a standardized way to grant the public permission to use their creative work under copyright law.
- From the reuser’s perspective, the presence of a Creative Commons license on a copyrighted work answers the question, *What can I do with this work?*” ([Source](#))

» **Licensing: Open-source licensing, GPL3, copyleft**

- “Open-source licenses are software licenses that allow content to be used, modified, and shared. They facilitate free and open-source software (FOSS) development. They grant the recipient the rights to use the software, examine the source code, modify it, and distribute the modifications.” ([Source](#))
- **GPL3**: “The licenses for most software and other practical works are designed to take away your freedom to share and change the works. By contrast, the GNU General Public License is intended to guarantee your freedom to share and change all versions of a program--to make sure it remains free software for all its users.” ([Source](#))

Possible Tools for Consent Guarantees

» **Zero-knowledge (ZK)**

- Prove you know something w/o revealing the information itself
- e.g. Prove I consented, or not, without revealing my personal identity

» **Multi-party computation (MPC)**

- Can run computation on multiple private inputs
- e.g. How many people in the group consent? without revealing the identity of who consents or not

» **Fully homomorphic encryption (FHE)**

- Everything stays encrypted throughout the entire process
- e.g. Because my information is encrypted throughout the process, I can consent or deny consent without malicious interference compromising my personal identity or information.