What is The Relay Project?

*(open-source, community-owned, democratically operated, and free-to-use forever!)*

INTRODUCTION

**The Relay Project** is an first-of-its-kind *socket-based* **Social Content Network** and **Client**. All the features you’ve come to expect from the big brands can be found within Relay - feeds, comments, user groups, forums, but there's much more...

*(So what is it?)*

IMAGINE

Relay is **Democracy**. Anyone can contribute. All developmental decisions occur in a public space subject to community audits. Relay will never be sold, shelved, or repurposed and will exist as long as it has a user base. Anyone can create and publish a (secret ballot) public vote for any reason. It’s your call.

Relay is **Content**. The Relay KeySpace is a paradigm shift in web content delivery. Using the latest browser technology, content loads instantly via always-on two-way socket communication. Using PGP Encryption, user-contributed Relay content is verified automatically and cannot be faked or manipulated in any way. Only the original author has the power to change their *KeySpace Content*. Content consists of anything from feed posts, to personal web pages, business functionality, even eCommerce Solutions.

It’s *your* KeySpace.

Relay is **Privacy**. By default you can’t see anyone on the network and no one can see you. Like any social network, you add friends and contacts and determine what level of access each user has to your KeySpace. No fire walls. No data leaks. No state surveillance. You have Control.

Relay is **Reputation**. Once you create a PGP Identity, it can never be altered or faked. Public identities created for the purposes of delivering consumer content will inevitably build a strong reputation among that user base. Your Brand is your Reputation.

Relay is **Business**. Small and Large Business alike benefit by taking advantage of free Enterprise-level functionality in Relay. Whether the goal is a quick and simple business card webpage, or a feature-rich ecommerce shop with cart and payment options, or just live customer support, Relay is the way to go. No server maintenance. No staff overhead. No costs at all. Just business.

Relay is **Unifying**. Although decentralized in design, all Relay servers are purposed with centralizing the flow of information. On the Relay network, channels of information are unified (via smart networking), and users are only ever one degree of separation away from their destination, or each other. Together is better.

Relay is **Local**. Once you’re ready to meet people, Relay offers communication in every conceivable category. You can join channels based on interest, locality (like timezone or town), or make up your own. Quickly and easily find like-minded people in a controlled and safe chat environment. Unleash the power of networking.

Relay is **Customization**. Create a public profile and customize its content to the last HTML tag. Or set up a small (or big) business website that will live on the relay network for free and forever. You can get involved in activities like Public Votes or Community Calls to Action or even write your own new relay scripts to further enrich the social experience. Taking social networking to the next level.

Relay is **Best Practice**. As new technology appears, as new software patterns emerge, Relay Developers are purposed with implementing the best available solution for any particular problem while maintaining backwards compatibility. As Relay is not owned by anyone, there is no financial (or otherwise) incentive to anything less than the best practice.

# FEATURES

Relay is a [**Cloud**](https://en.wikipedia.org/wiki/Cloud_computing). By design, Relay has no single points of failure. As the Relay Network grows, more servers around the world will be added to the master list dramatically increasing user capacity and bandwidth. Unlike the Cloud, data redundancy exists on the user clients rather than on the servers, reducing dependence on expensive, fast, high-capacity servers and endless hard drive mirroring.

Relay is a [**BlockChain**](https://en.wikipedia.org/wiki/Block_chain_(database)). Similar to modern cryptocurrencies, the Relay Network consists of an endless stream of user entries linked by verifiable encryption (a blockchain). Individual entries refer to each other up and down the blockchain and coalesce into meaningful data, which is interpreted by the user’s client. Once something is sent (relayed) across the network, it cannot be altered, faked or lost.

Relay is [**Push Notification**](https://en.wikipedia.org/wiki/Push_technology). Contemporary push notification networks tend to operate one-way, from server to client, and tend to require scalable infrastructure. Relay pushes in all directions, server to clients, client to servers, client to clients (thousands, millions, there’s no limit). This translates into a significantly more interactive event-driven internet experience for the end user. Page loads become obsolete and instantaneous. UI becomes the norm. Relay *waits* for you.

Relay is [**Encryption**](https://en.wikipedia.org/wiki/Pretty_Good_Privacy). Utilizing PGP (Pretty Good Privacy) Encryption, Relay gives the end user full control over their identity and exposure. PGP Private Keys allow optional passwords, but Relay does not require any passwords to use *(It’s a good idea though)*. PGP Encryption is the lynch pin that makes all of Relay work. For Relay intents and purposes, PGP Encryption offers virtually unbreakable security which operates as logic gates containing and validating KeySpace content as it flows through the Relay network. Relay encryption eliminates the need for old-fashioned peace-of-mind security considerations like *firewalls* or *strong passwords*, which can be circumvented even in the best of circumstances.

# ANTI-FEATURES

Relay is not a [**Walled-Garden**](https://en.wikipedia.org/wiki/Closed_platform). Designed to adapt to new technologies as they surface, Relay developers will not close any doors or windows to new ideas, and will resist any attempts by outside influences to wrest control away from the community. Instead, the developers have an obligation to consider to the best available solution, allow competing solutions, benefiting everyone with the power of Community Source.

Relay has no [**Administration**](https://en.wikipedia.org/wiki/Webmaster). Instead, Relay is built from the ground-up with cooperation in mind. Typically found in other software are features like *moderation, banning, editing of posts, viewing private messages of users, deleting history, censorship, and surveillance to name a few.* Relay doesn’t have these, but more to the point, such features are not possible on the Relay Network. Abuse is countered in two major ways: By preventing exposure in the first place, and by making it very difficult to commit yet very easy to ignore. A PGP Identity’s *reputation* is the determining factor by which KeySpace content is trusted or ignored by the community

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# RELEASE INFO

Relay is a work-in-progress and will be launching an invite-only beta in December.

Most features are not online as of yet.

DONATIONS

**BTC:** 1AT6o3mmPRZVdzXPh7SbThgAhv9g4o3j92

**PayPal**: ari dot asulin at gmail dot com

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# Feature List *(old)*

1. Free and Community Owned
   1. Always free, forever
   2. Cannot be owned, sold, shelved, or reappropriated without the community’s consent
   3. All matters (executive, budget, etc) are audited by the community in real-time
2. Open-Source
   1. Anyone can contribute
   2. Donations go to contributors of the repository (programmers, designers, content editors, anyone)
3. Decentralized
   1. No single points of failure
   2. Most features will continue working during outages
4. Keypair Encryption (with PGP)
   1. The fundamental aspect of what makes Relay possible has to do with client-side encryption.
   2. All content is signed with the creator’s private key.
   3. Signatures cannot be faked
   4. As information is relayed through the network, the authenticity of that information is constantly verified via the creator’s public key
   5. Private messages and content encrypted with strong PGP encryption cannot be broken or read by anyone other than the intended recipient. Client-side to Client-side encryption prevents man-in-the-middle attacks as well as anyone (ISP, government, corporations) from snooping your private data
5. Simple Stack
   1. The Relay client uses a modern browser and is built on JavaScript and HTML5
   2. The Relay 'cache' server uses Javascript also and runs on Node.js and is used to relay socket information and cache http requests
6. Features
   1. KeySpace
      1. Every User has a User KeySpace defined by their unique PGP Key Identity that can optionally host entire websites and online services from a single device
      2. Content is cached in socket servers so that a host device may be offline for long periods of time without the end users experiencing any outages.
      3. Small businesses can host all their content for free forever using many available templates, and even serve transactional requests via POST all from a single device
      4. Users may customize (or design from scratch) anything in their KeySpace. They can also select by default templates that resemble existing social media networks (Facebook, Myspace templates, etc)
   2. User Feed
      1. Similar to Myspace/Facebook, any content posted to the User KeySpace also appears on their User Feed. The User Feed is simply a list of all posts made in chronological order. Content access is up to the content creator and managed via PGP Encryption
      2. Similar to other services, the user feed provides common features like comments, signing content (similar to like)
   3. Chatrooms
      1. IRC-styled Chatrooms with HTML5 awesomeness
      2. Chat rooms provide event push-notification and can act as side-loaded support to all other features built on Relay
      3. Chat rooms can be joined based on locality (country, state, city, house, ip, timezone)
   4. Cryptocurrency integration
      1. Bitcoin (and other currencies) create a user-run economy that operates within the community.
      2. Financial incentive can be used to stimulate such initiatives as voting and software projects
   5. Vote System
      1. Vote initiatives signal community calls to action and can be initiated by any user.
      2. Voter identity and value is protected via PGP Encryption
      3. Voter fraud is regulated by community audits of vote receipts
      4. Financial incentive can be used to promote a public vote by incentivizing users to vote, review and debate on issues, and audit vote receipts
      5. Votes are tallied and protected by vote registrars who are responsible for auditing and tallying all votes under their account. This is all handled automatically. In the event of fraud, a review of voter identities is triggered. Failing to do this may result in all votes in the hierarchy becoming invalidated. Anyone can be a vote registrar, but trust comes down to reputation.
      6. Vote receipts are periodically updated with public-facing hashes that do not give away the voter’s identity or vote value, but do allow for duplicate votes to be detected. Fraud that may have gone undetected may be found after the fact when new hash algorithms become available.