

# Remail

Remail is a proposal to reform modern email standards (such as SMTP, IMAP, etc) by prioritizing security, efficiency, binary encoding, etc.

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# Mail clients and mail servers

In order to send mail between two nodes, there ideally should be some kind of client/server setup in which the exchange occurs.

The mail client is responsible for obtaining mail from the mailbox (see next chapter) while the mail server is responsible for receiving incoming mail and storing it in the mailbox so that it may be fetched by an external client.

When transmitting mail, the mail client is to complete a proof of work computation which must have acceptable results in order for transmission to complete.

# Mailboxes and the Blobchain

A mailbox can be seen as a directory containing a number of content addressed files, each of which represent an individual unit of mail. In other words, the filename of each mail file is the SHA256 hash of its content which is to contain a timestamp at the very beginning, followed by two newlines and the mail body.

To prevent tampering of the mailbox, a blobchain is to be present as an "INDEX" file within the same directory. Blobchains are a form of blockchains that have been serialized to disk. A blobchain barley differs from a typical blockchain other than that its usage is meant to make files tamper proof. Each block is to be referred to as a "blob". A blob is to contain the data contents, the SHA256 hash of its contents, and reference to the next and previous blobs. Tampering of the mailbox would result in the chain being broken in a detectable way.