mnemonic.js

Memorable & strong passphrases in the browser

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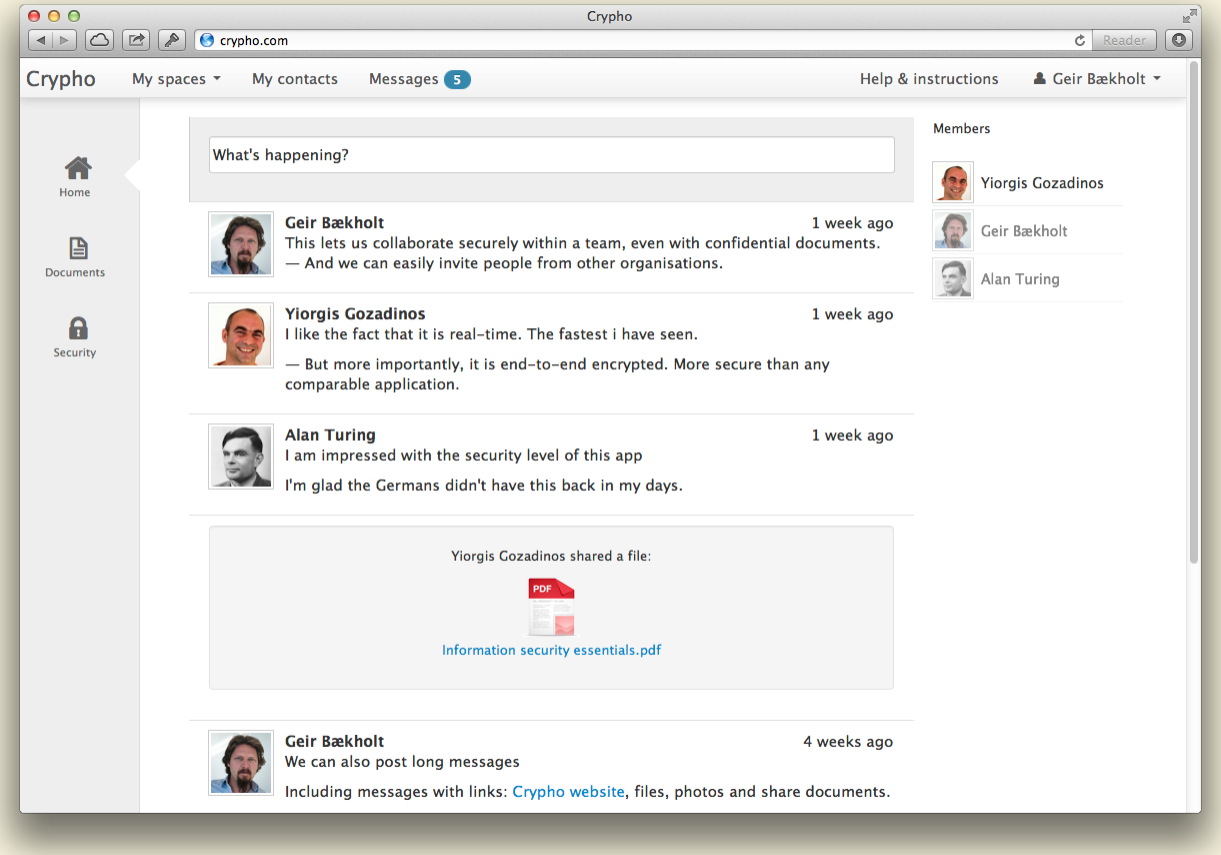
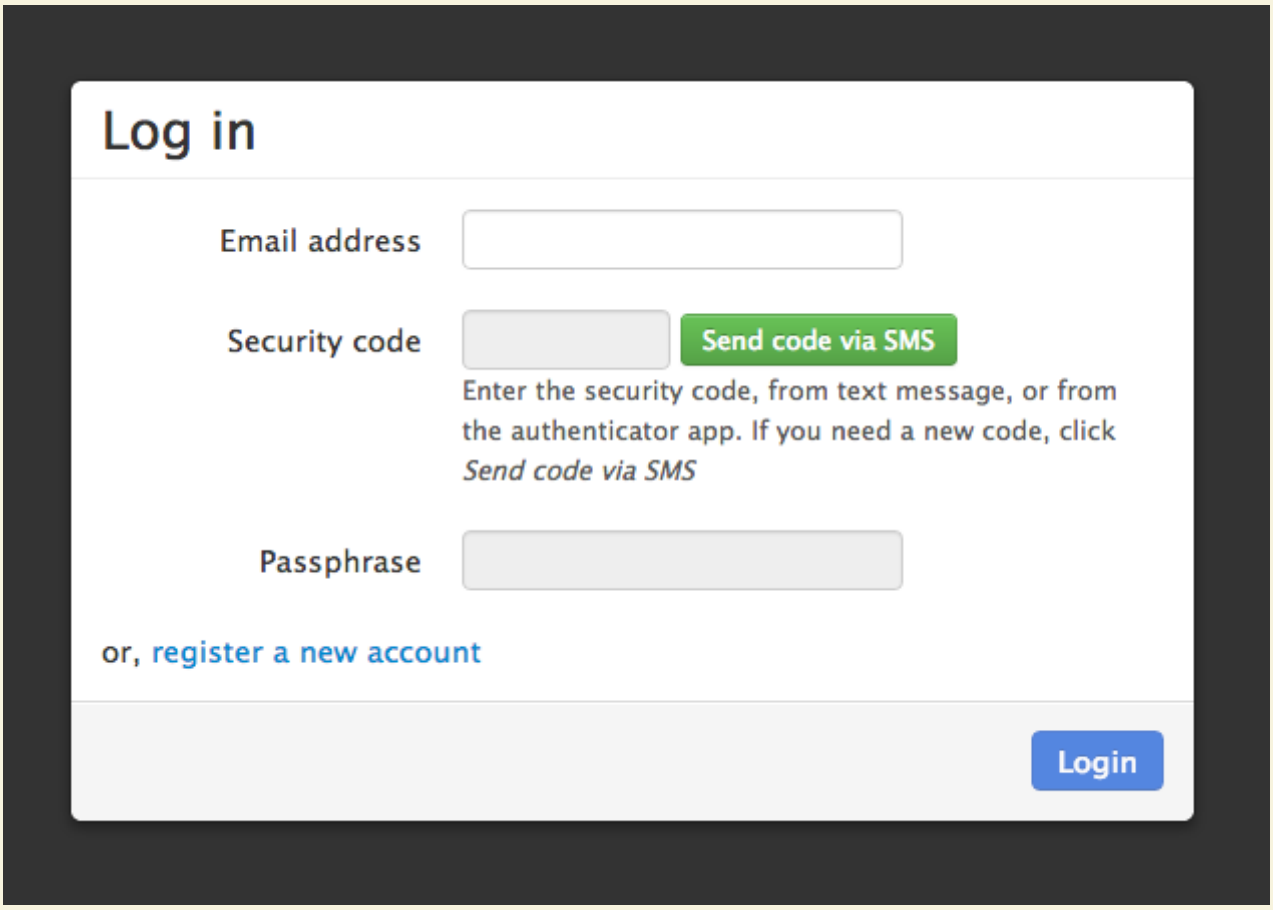
Private and secure real-time team collaboration.



We need to generate passphrases!



Enter mnemonic.js!

STRONG & MEMORABLE PASSPHRASES

- No obscure rules requiring special symbols, numbers or length.
- Using memorable native-language words (n=1626).
- Generated from random 32-bit integer sequences (3 words/integer).

Examples

- **32-bit**

  `confidence ourselves insult`

  decimal: `652372173`
  hex: `26e268cd`

- **96-bit**

  `mean yesterday gone size waist lace endless apple war`

  decimal: `242243840909622304673428913 06`
  hex: `4e45f0dced5ec11c772ff92a`

- **~10.6bits/word**

  Compare to:

  ~6.5bits/char for all ASCII and

  ~2bits/char for english words.

How does it work?

- encoding:

```
w[i,1] = x mod n,
w[i,2] = (x / n + w[i,1]) mod n,
w[i,3] = (x / n^2 + w[i,2]) mod n,
```

- decoding

```
w[i,1] = dict.indexOf(word[i,1])
w[i,2] = dict.indexOf(word[i,2])
w[i,3] = dict.indexOf(word[i,3])

x = w[i,1] +
    n((w[i,2] - w[i,1]) mod n) +
    n^2 ((w[i,3] - w[i,2]) mod n)
```

How do I use it?

Create a new mnemonic

```
>>> m = new Mnemonic(96);
>>> m.toWords();
["grey", "climb", "demon", "snap", "shove", "fr
uit", "grasp", "hum", "self"]
```

get the random UInt32 sequence or the hex

```
>>> m.random
[174975897, 171815469, 1859322123]
>>> m.toHex();
"0a6deb990a3db22d6ed3010b"
```

or reconstruct it from its words

```
>>> m = new Mnemonic(["grey", "climb", "demon",
 "snap", "shove", "fruit", "grasp", "hum", "sel
f"]);
>>> m.toHex();
"0a6deb990a3db22d6ed3010b"
```

Contact

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