A black and white photograph of a vintage computer control panel. The panel features several rows of switches and indicators. Labels for "LONDON", "PARIS", "SYDNEY", "MOSCOW", and "TEHRAN" are visible above the controls. In the foreground, a person's hands are shown interacting with the machinery.

The Distributed Web

Returning the Past by Using the Technology of The Future

Garth Williams
@williamsgarth

Internet History

- TCP/IP was standardised in 1982
- 1st T1 in 1990 linked US and Europe
- In 1991 we had HTTP/HTML the first web browser and the first web server.

Internet History

- 1993 it was decided that the Internet technologies would be free
 - An open platform for information sharing
- By 1995 the internet was widely available



Web 1.0

- “Anyone” could have a web server and publish content
- “Anyone” could consume
- Mostly Uncensored
- The majority of the Web consisted of static content

Issues with Web 1.0

- Publishing was not easy
- Finding and sharing content was not easy



Web 2.0

- Around 2004 the Web became more “social”
- It became easier to publish content
- Technical advances made applications more dynamic

Issues with Web 2.0

- Centralised control
- Geographical restrictions
- Monitoring/Tracking

Issues with Web 2.0

- Net neutrality
- Encryption is an afterthought
- Very little content is signed

Web 3.0

- Needs to solve the issues of Web 2.0
 - Decentralised
 - No geographical restrictions
 - Secure by default

Web 3.0

- Needs to solve the issues of Web 2.0
 - Signed content
 - Net neutrality
 - Sustainable

Implementations

- Many implementations in progress
 - IPFS
 - Ethereum
 - Blockstack
 - etc...

IPFS

- Addressed by content hash
 - /ipfs/QmTZtJZYSjAe7cC68p4BfoxQdzK6rX7Hme5YFnQAhKcnZe
- Immutable

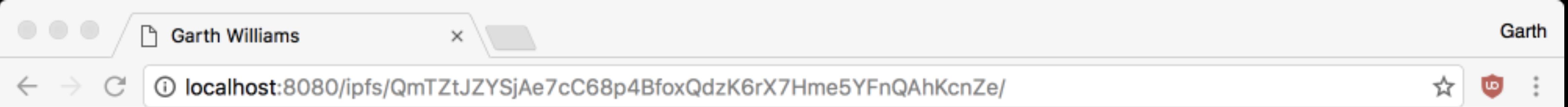
IPFS

- IPNS provides a fixed address
 - ipns/QmeZuVZ6cywSymPu3BfoVWkbYhZr5GAuZfzKo4PjKaqrCM
 - Links to the most recently published ipfs hash

IPFS

- Can be linked to from regular DNS records
 - ipns/wi.llia.ms
- Uses a DNS TXT record to create the link
 - dnslink=/ipns/<hash>





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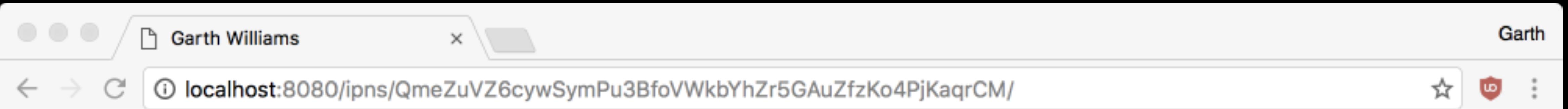
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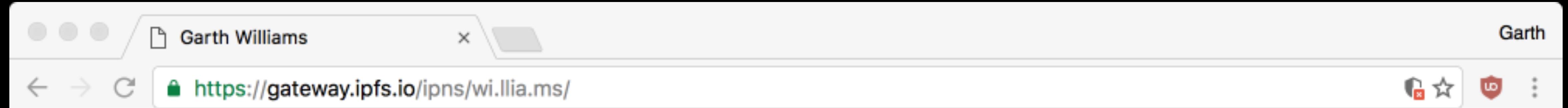
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CTA

- The future is what we make it
- Social apps required
 - Syncthing
 - Twister
 - Spokes/GitTorrent





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<https://github.com/garth>

<http://willia.ms>

[/ipns/willia.ms](ipns://willia.ms)

The Distributed Web

<https://github.com/garth/devfest>

