

Blockchain & Big Data

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ascribe[®]

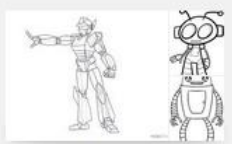
Web **Images** Videos News Maps More ▾ Search tools



Real



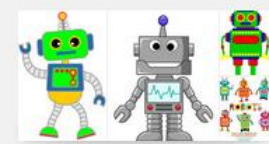
Human



Drawing



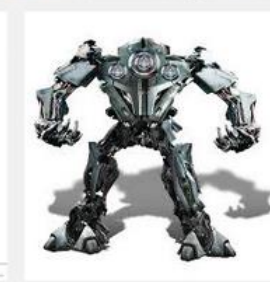
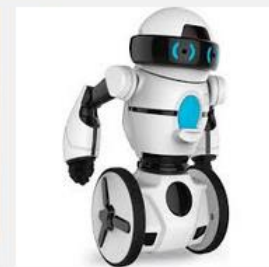
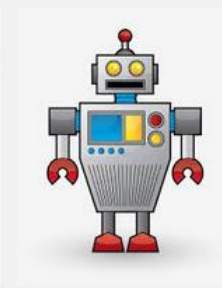
Of The Future



Clipart



Movie



Web **Images** Videos News Maps More ▾ Search tools



Real



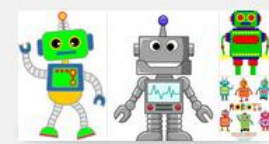
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Drawing



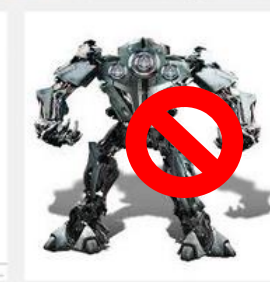
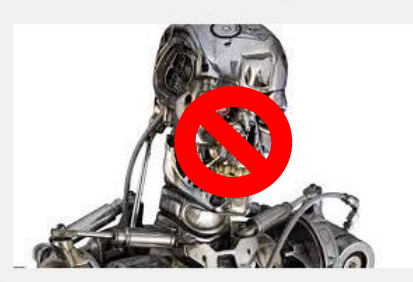
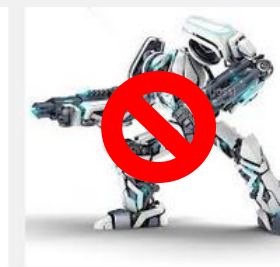
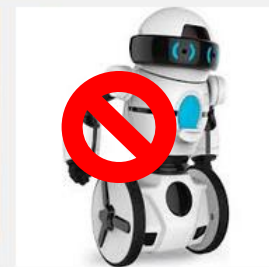
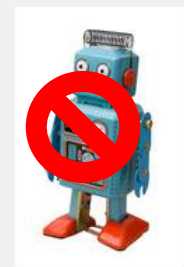
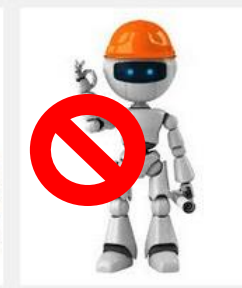
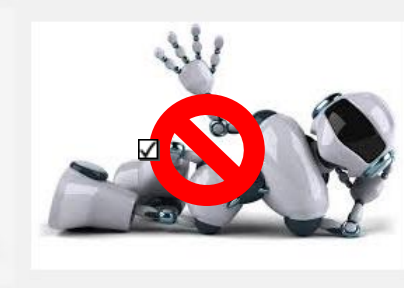
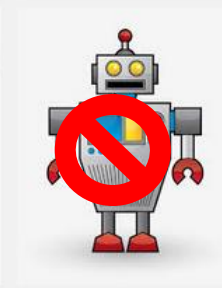
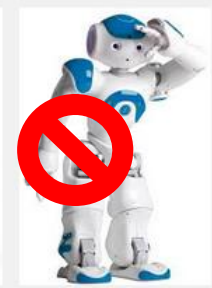
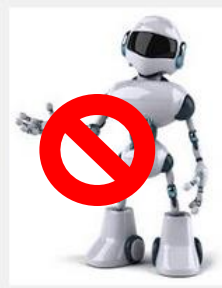
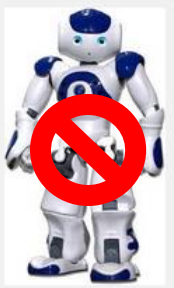
Of The Future



Clipart



Movie



**“I’m interested in buying your art.
But how do I know you own it?”**





This video is not available in your country.

Sorry about that.

“my conclusion is that whatever you put on the internet you lose it. Maybe keep the rights, but lose the power over it.”

-user on Shapeways blog
[3d printing marketplace]

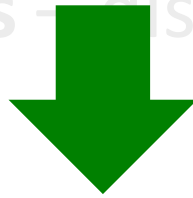
Ownership of digital property (especially on the internet) is a mess

- **Creators** – how to get paid? Sharing = losing control.
- **Collectors / Audience** – “not available here”
- **Connectors** – licensing painful & tedious
- For almost every digital media vertical: digital art, photography, 3d, music, videos, ..

Ownership of digital property (especially on the internet) is a mess

- **Creators** – hard to get compensated. Sharing = losing control.

Where's my stuff?



No visibility

Painful legals

- **Collectors / audience** – no secondary markets
- **Connectors** – distracted by legal issues
- For almost every digital media vertical: digital art, photography, 3D music, videos, ..

**Ownership of digital property
(especially on the internet) is a mess**

Why?

Some WWW history...

WORLD WIDE WEB

The WorldWideWeb (W3) is a wide-area hypermedia[1] information retrieval initiative aiming to give universal access to a large universe of documents.

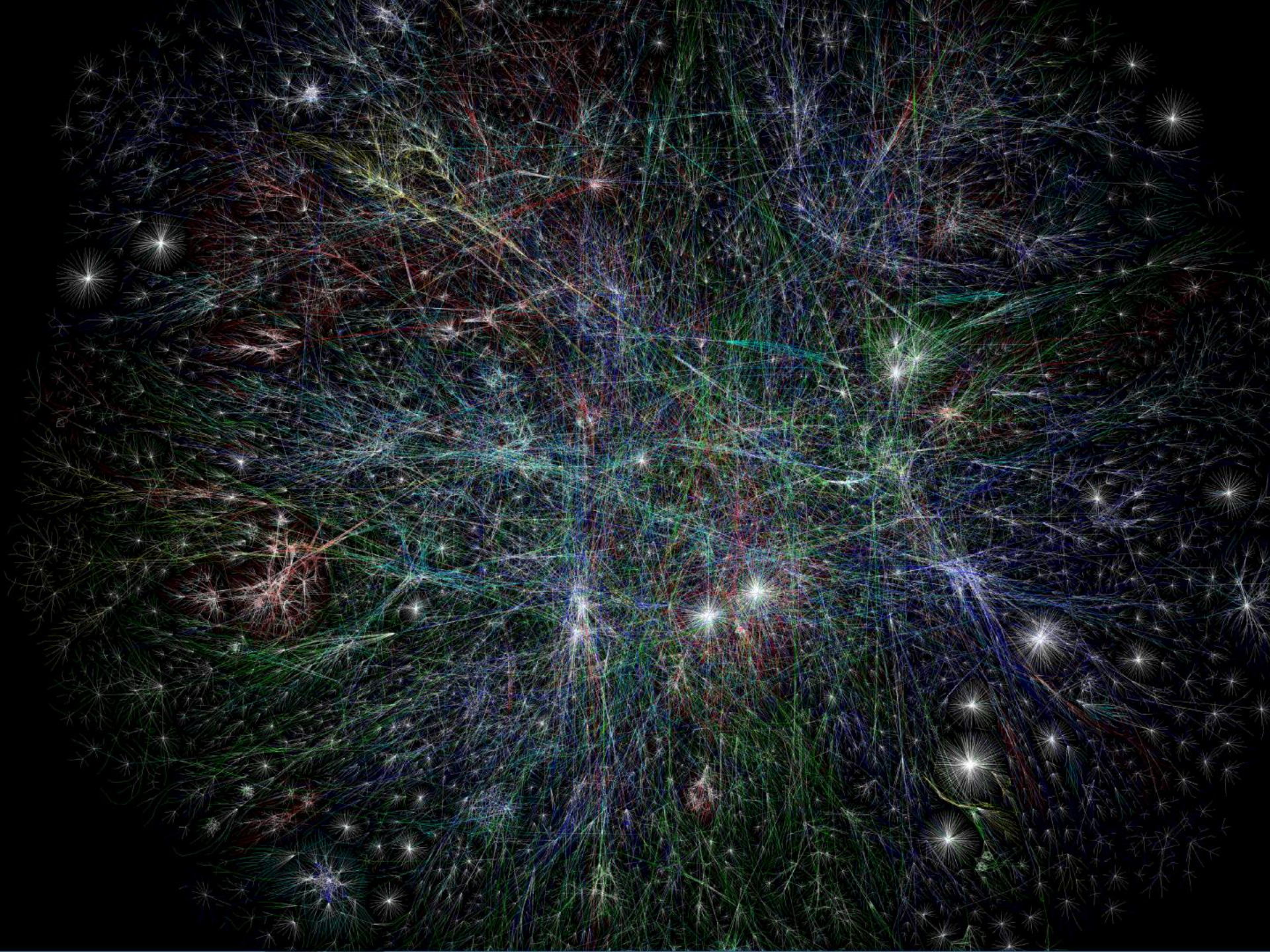
Everything there is online about W3 is linked directly or indirectly to this document, including an executive summary[2] of the project, Mailing lists[3] , Policy[4] , November's W3 news[5] , Frequently Asked Questions[6] .

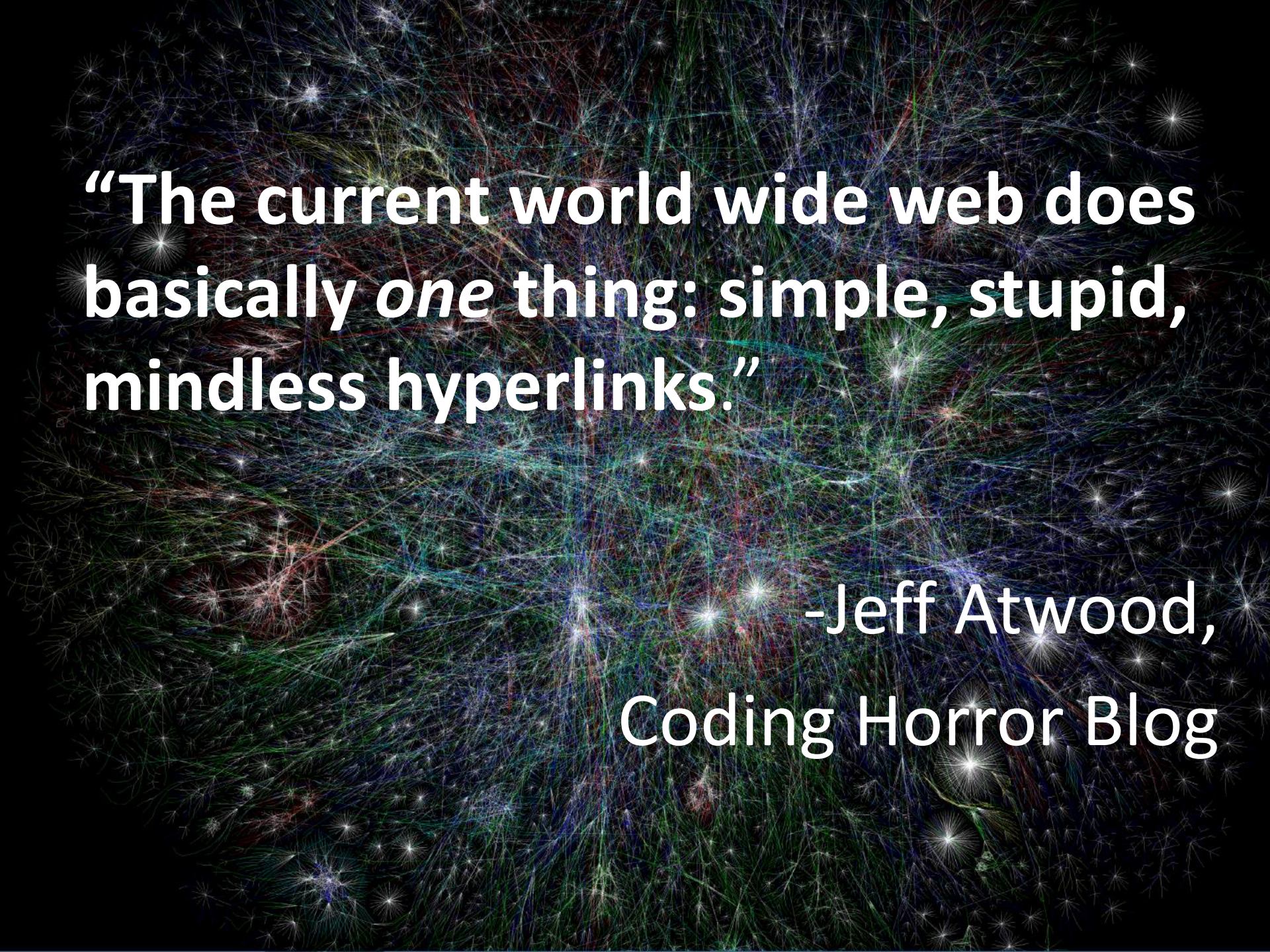
What's out there?[7]Pointers to the world's online information,
subjects[8] , W3 servers[9], etc.

Help[10] on the browser you are using

Software A list of W3 project components and their current
Products[11] state. (e.g. Line Mode[12] ,X11 Viola[13] ,
NeXTStep[14] , Servers[15] , Tools[16] , Mail
robot[17] , Library[18])

Technical[19] Details of protocols, formats, program internals
etc





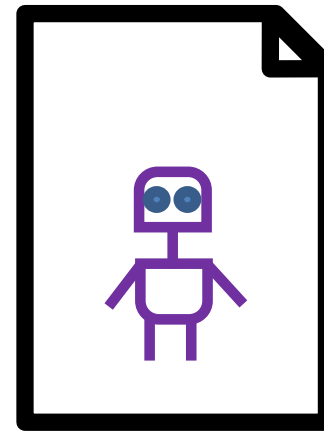
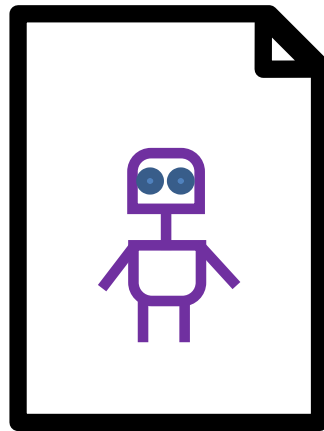
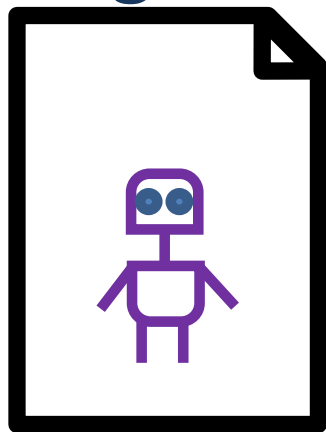
**“The current world wide web does
basically *one* thing: simple, stupid,
mindless hyperlinks.”**

**-Jeff Atwood,
Coding Horror Blog**

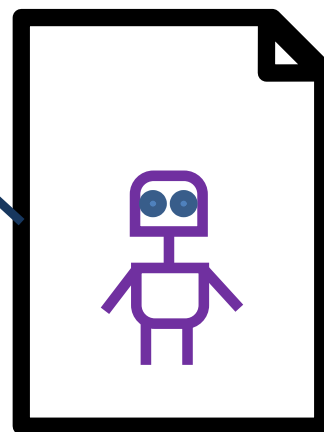
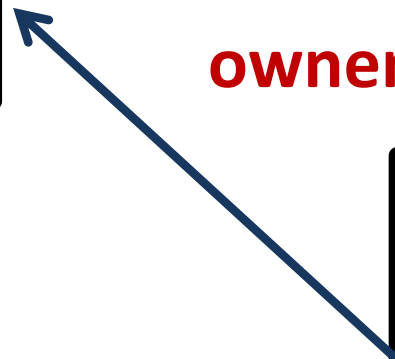
The WWW

Zero links: Copy with **no attribution**

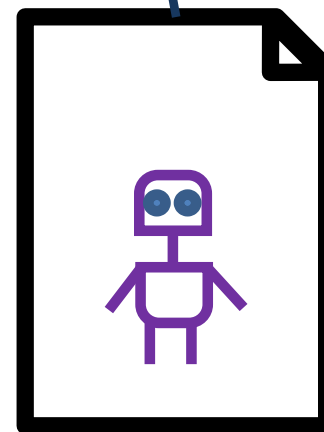
original



Uni-directional links:
Attribution but **no ownership control**



or mis-
attribution



The WWW

Zero links: Copy with no attribution

original

Where's my stuff?

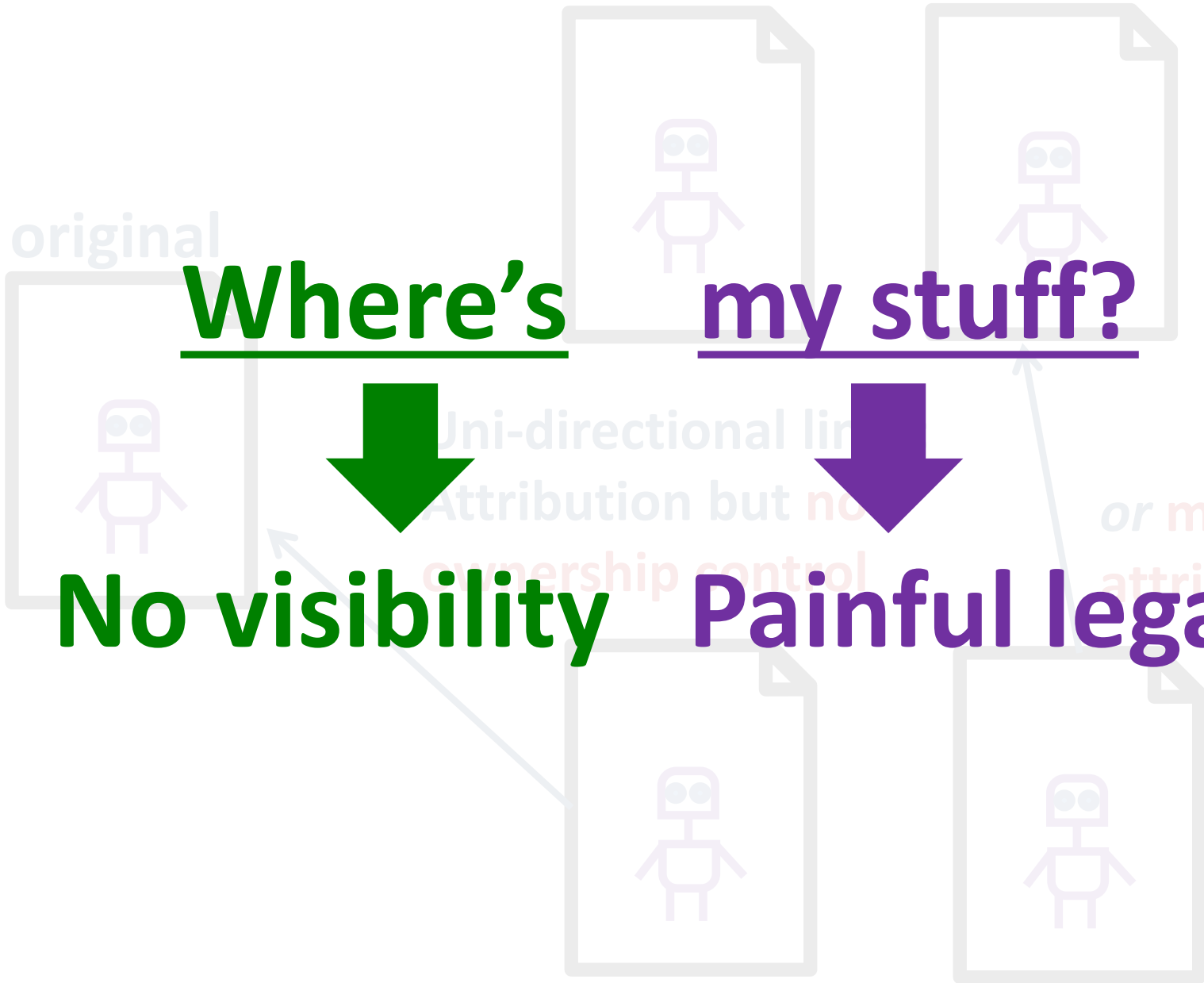


No visibility

Painful legals

Uni-directional link
Attribution but no
ownership control

or mis-
attribution



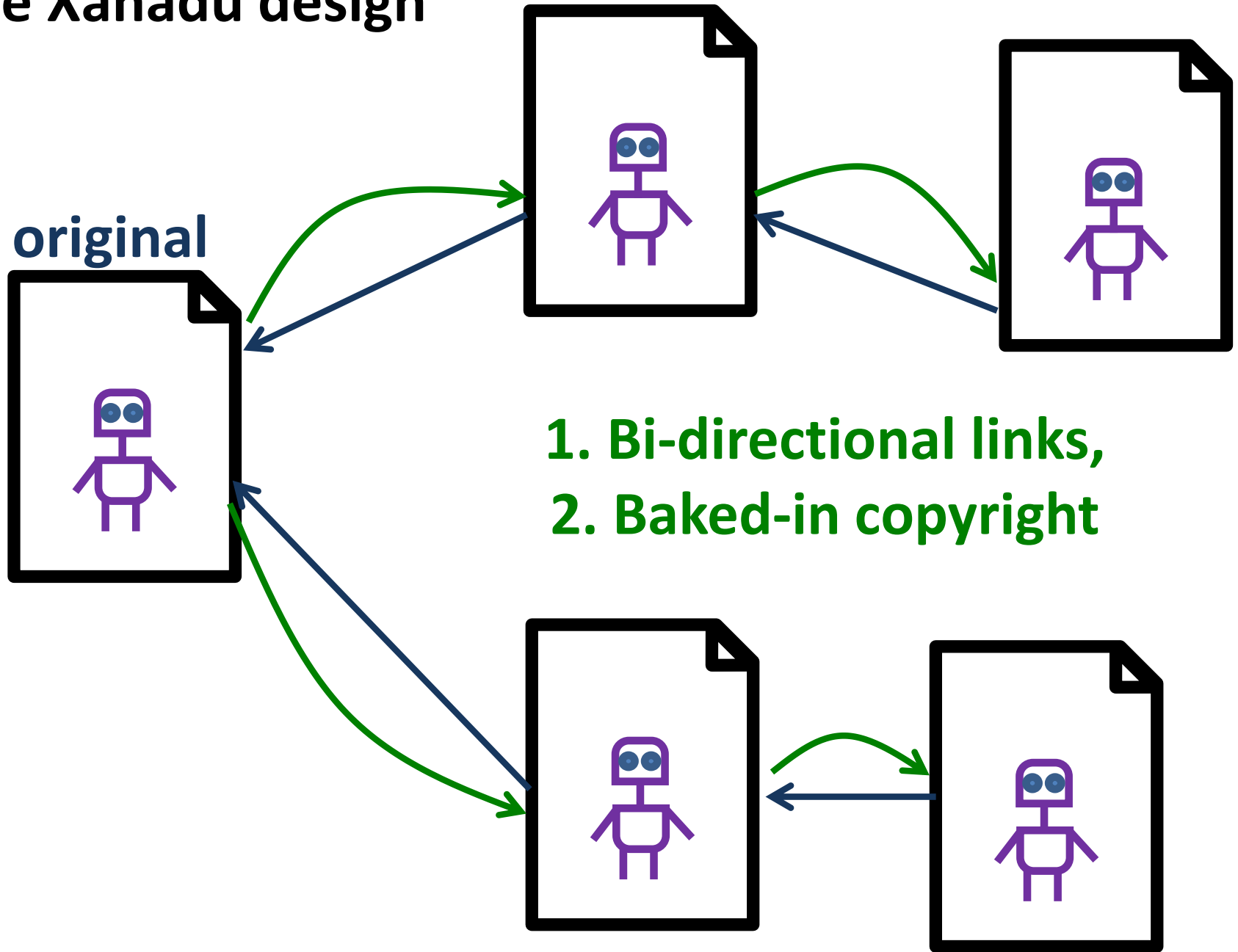
Does it need to be this way?
Some pre-WWW history...

“[Consider] a unified .. service that would provide storage and publication services, and manage .. royalty payment on a .. fair basis that would facilitate unrestricted virtual republishing”

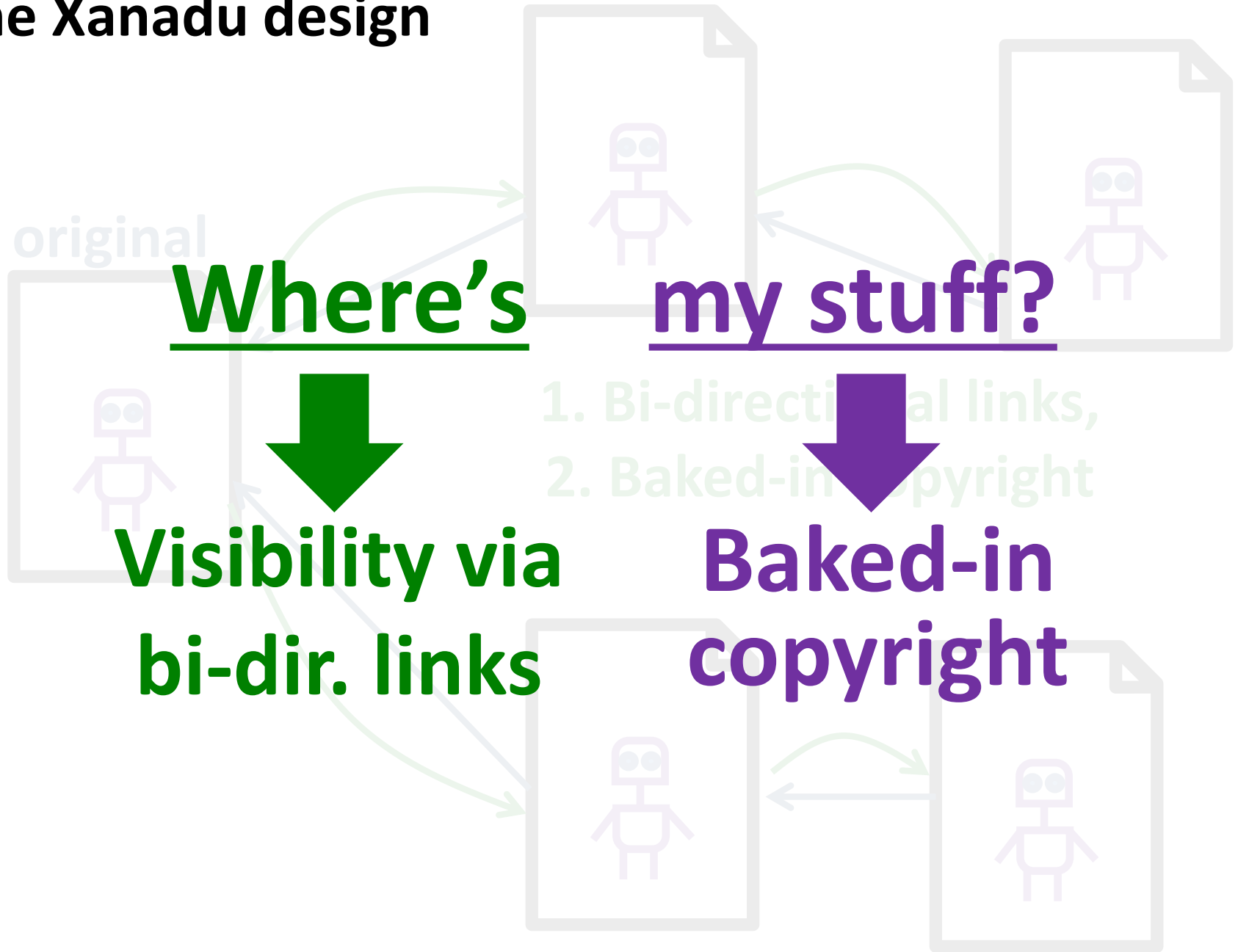
-Ted Nelson

-on a vision from *1965*

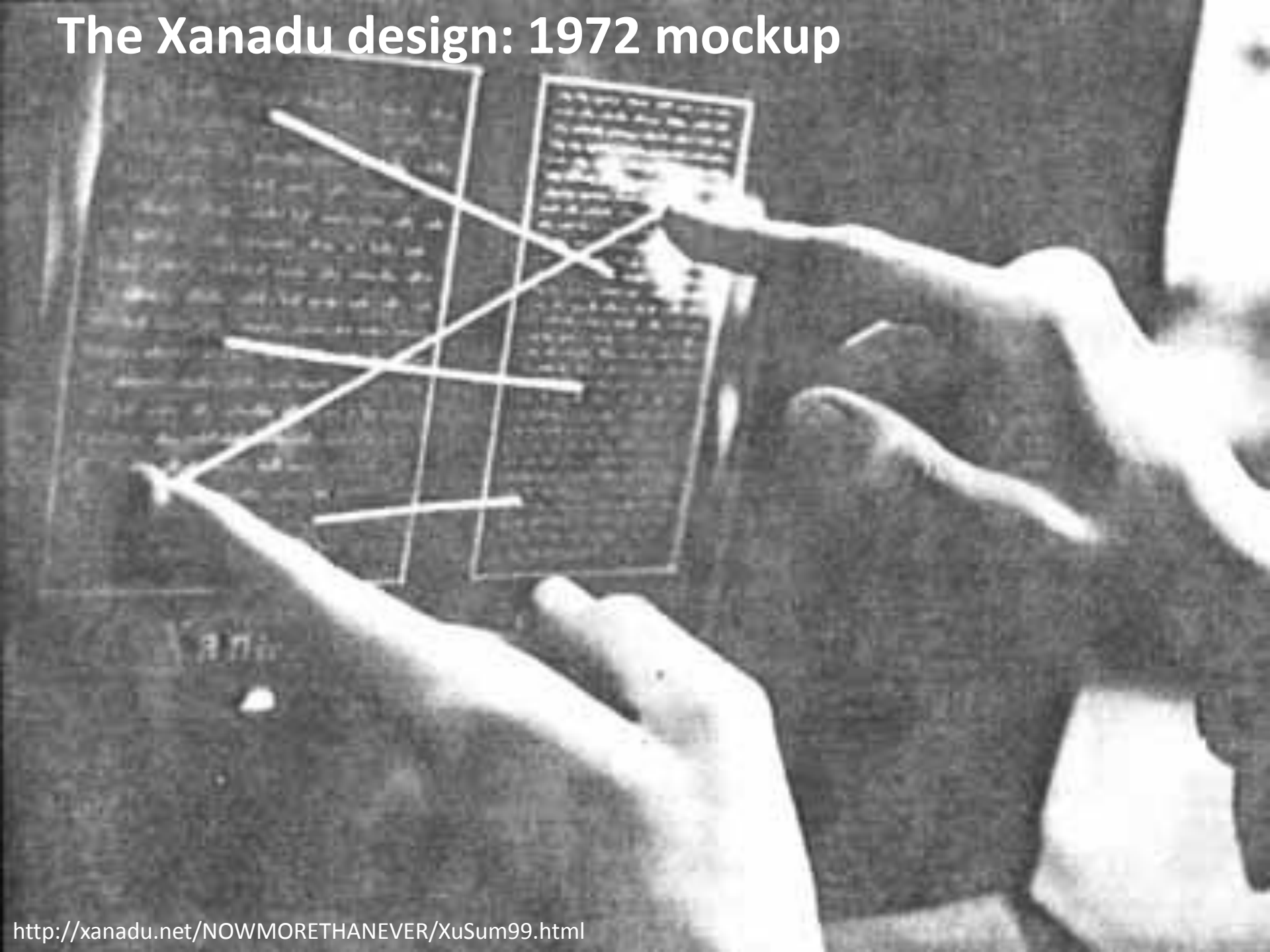
The Xanadu design



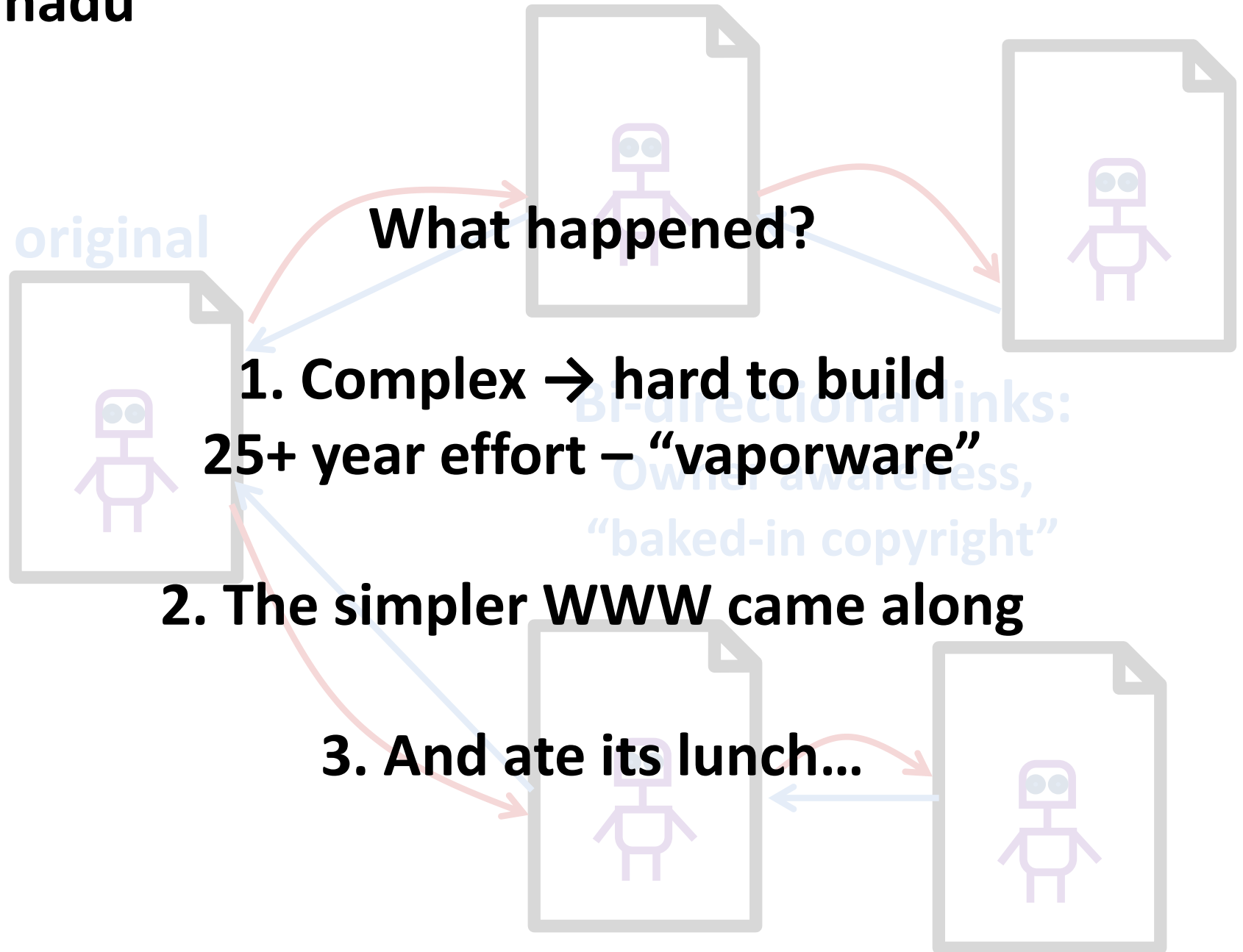
The Xanadu design



The Xanadu design: 1972 mockup

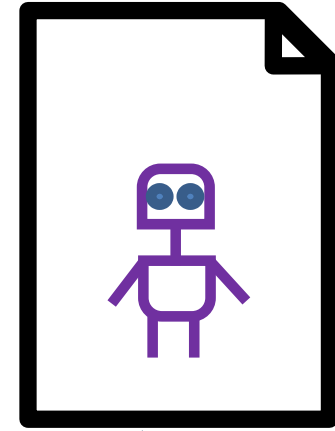
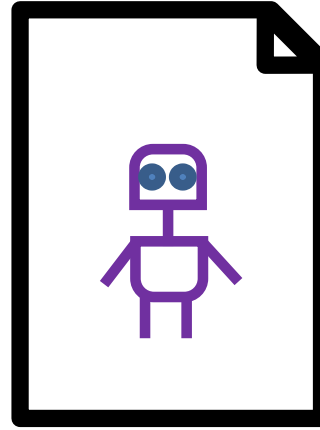


Xanadu

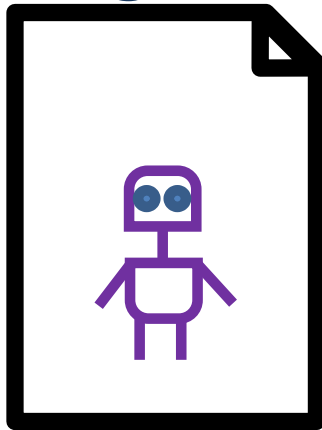


So now we have
the WWW,
warts and all

Zero links: Copy with **no attribution**



original



Uni-directional links:
Attribution but **no
ownership control**

*or mis-
attribution*



“HTML is precisely what we were trying
to *prevent* -- ever-breaking links ... no rights
management.” –Ted Nelson

Summary so far

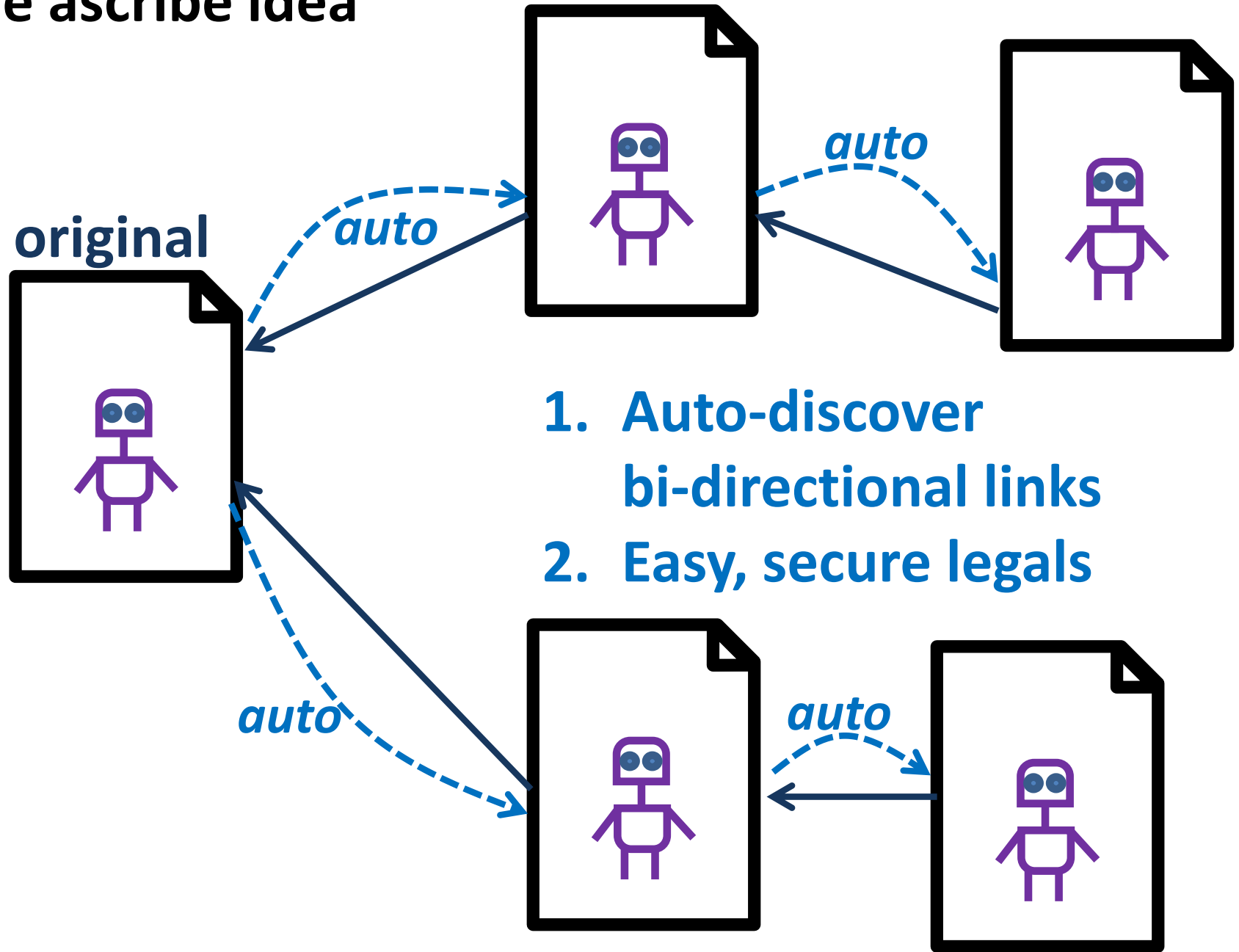
- Ownership of digital property (especially Internet) is a mess
- Despite being anticipated since the 60s
- And designed for
- But simplicity of www won out
- Leaving “where’s my stuff?” unsolved

A new Q:

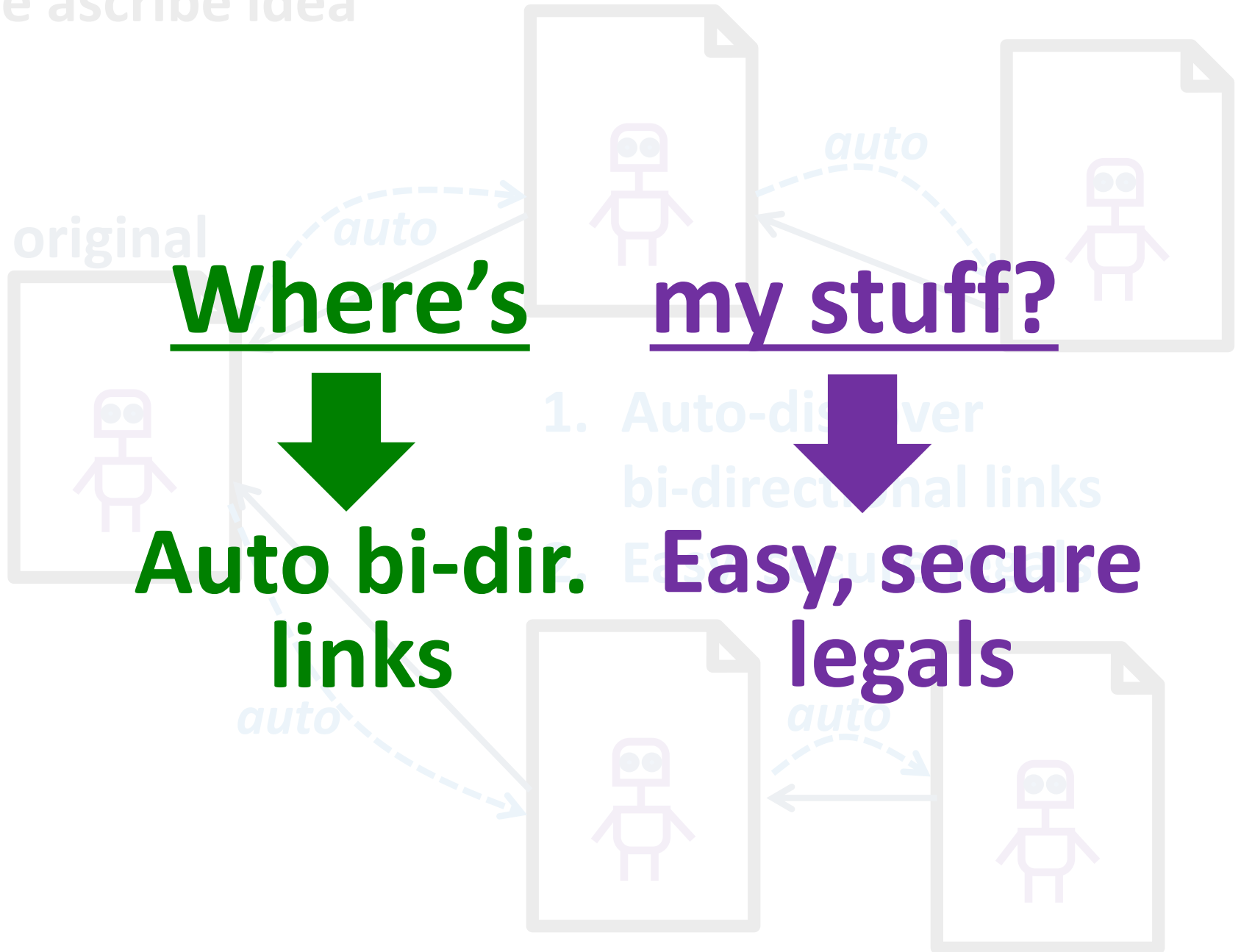
**Can we *retrofit*
the Internet for ownership?**

(and realize the Xanadu aims
in the process)

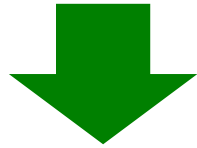
The ascribe idea



The ascribe idea



The ascription Where's my stuff?



How (ascribe):

- Crawl the entire internet (220 Tb text)
- Similarity match against creator's content (10G+ images, 3d designs, ..)
- This is a machine learning problem, at Internet scale
- *To know when someone's using your work*

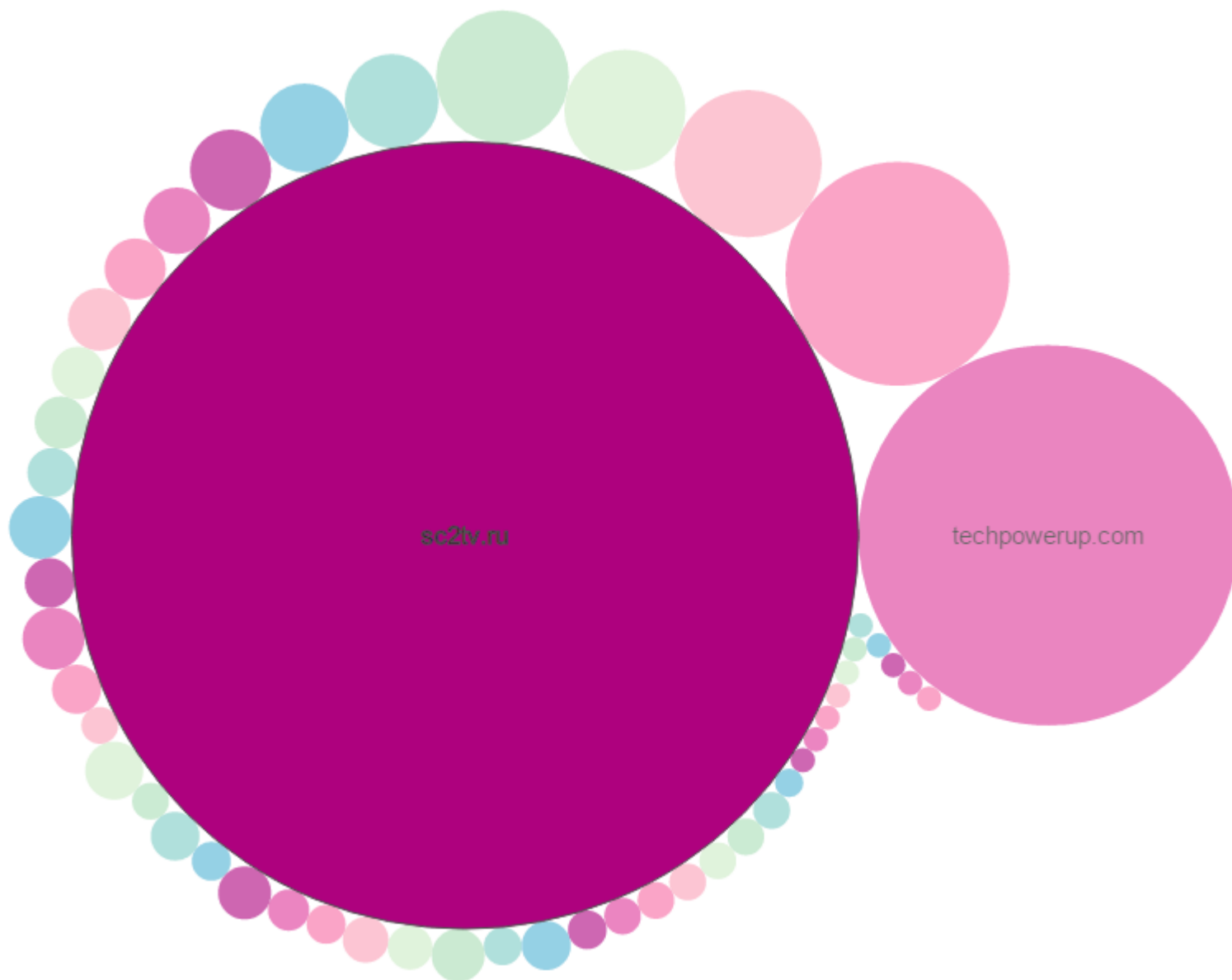
A close-up, blurry image of a dog's face, focusing on its eyes and nose. The dog has light-colored fur, possibly tan or cream. Its eyes are dark and round, and its nose is large and black. The image is intentionally out of focus, giving it a soft, dreamlike quality.

**Where's
doge?**



Domain: sc2tv.ru

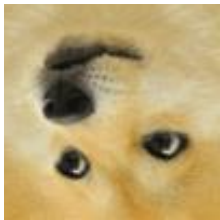
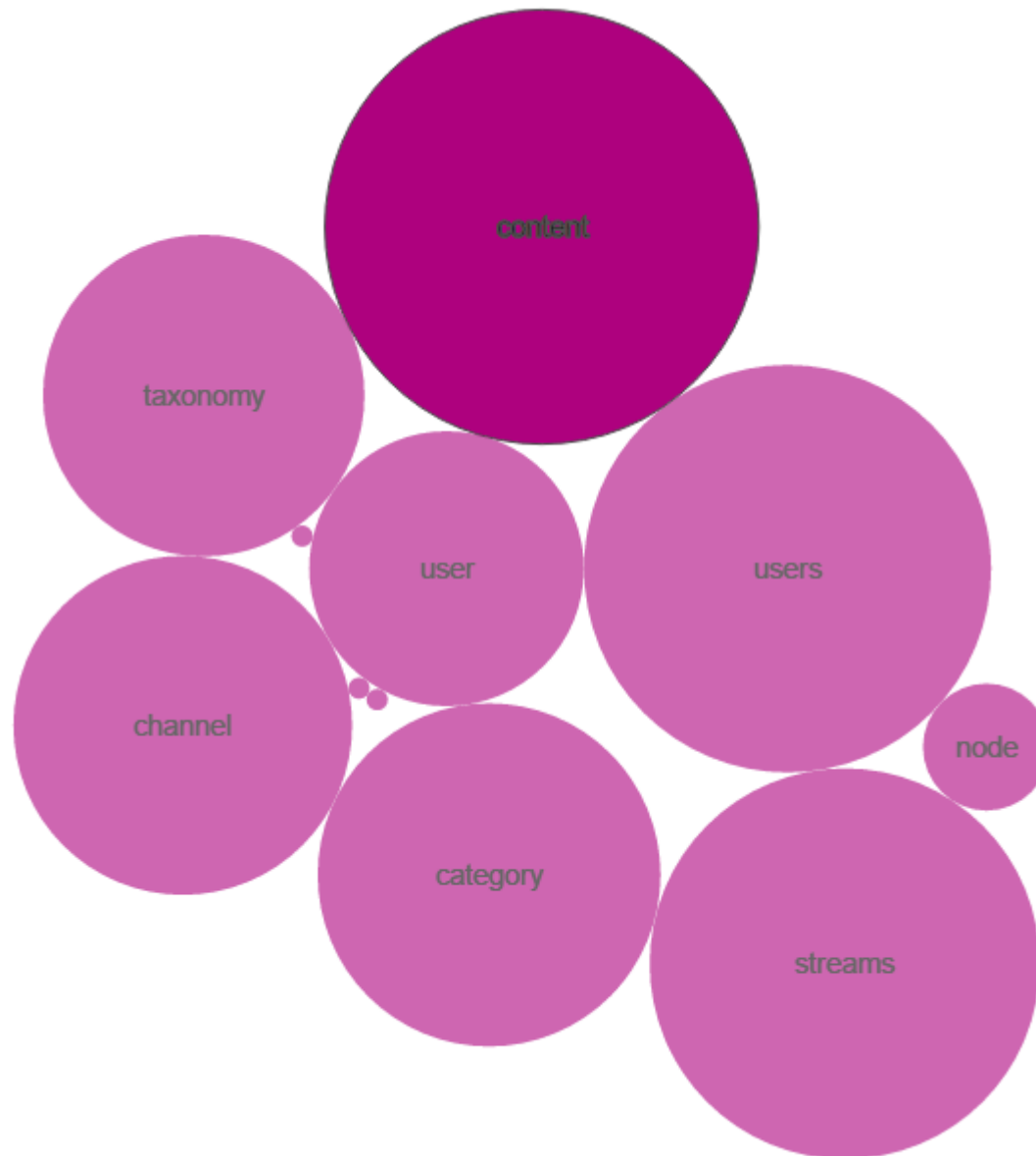
Occurences under this domain: 1285



sc2tv.ru

Domain: content

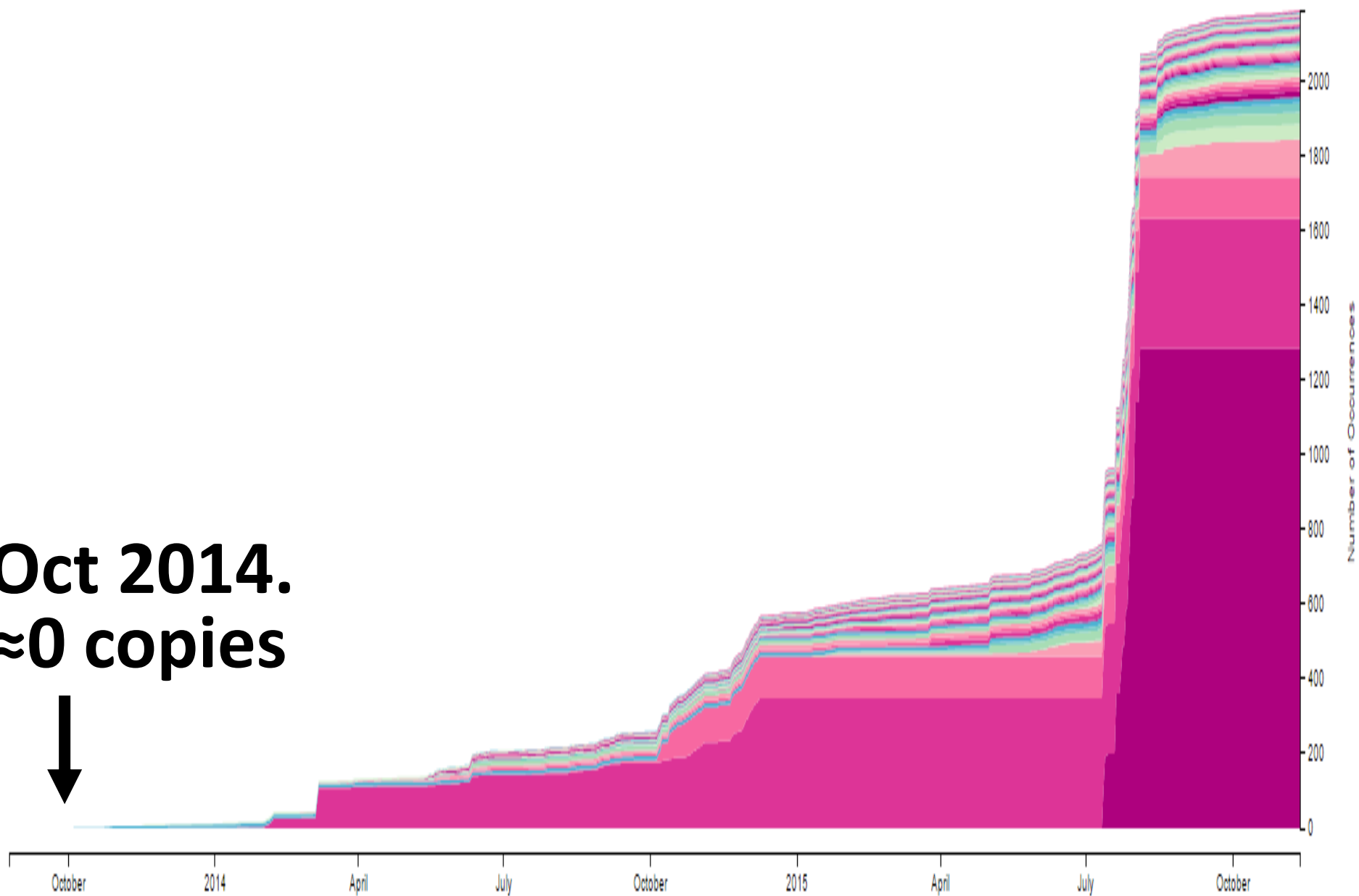
Occurrences under this domain: 295

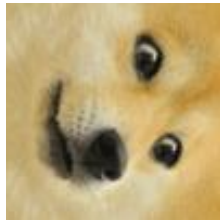


A close-up, blurry image of a dog's face, likely a Golden Retriever, showing its eyes and nose. The image is out of focus, with a soft, warm tone. The text "How did doge" is overlaid on the left side, and "spread?" is overlaid on the right side, both in a bold, black, sans-serif font. The word "spread?" is italicized.

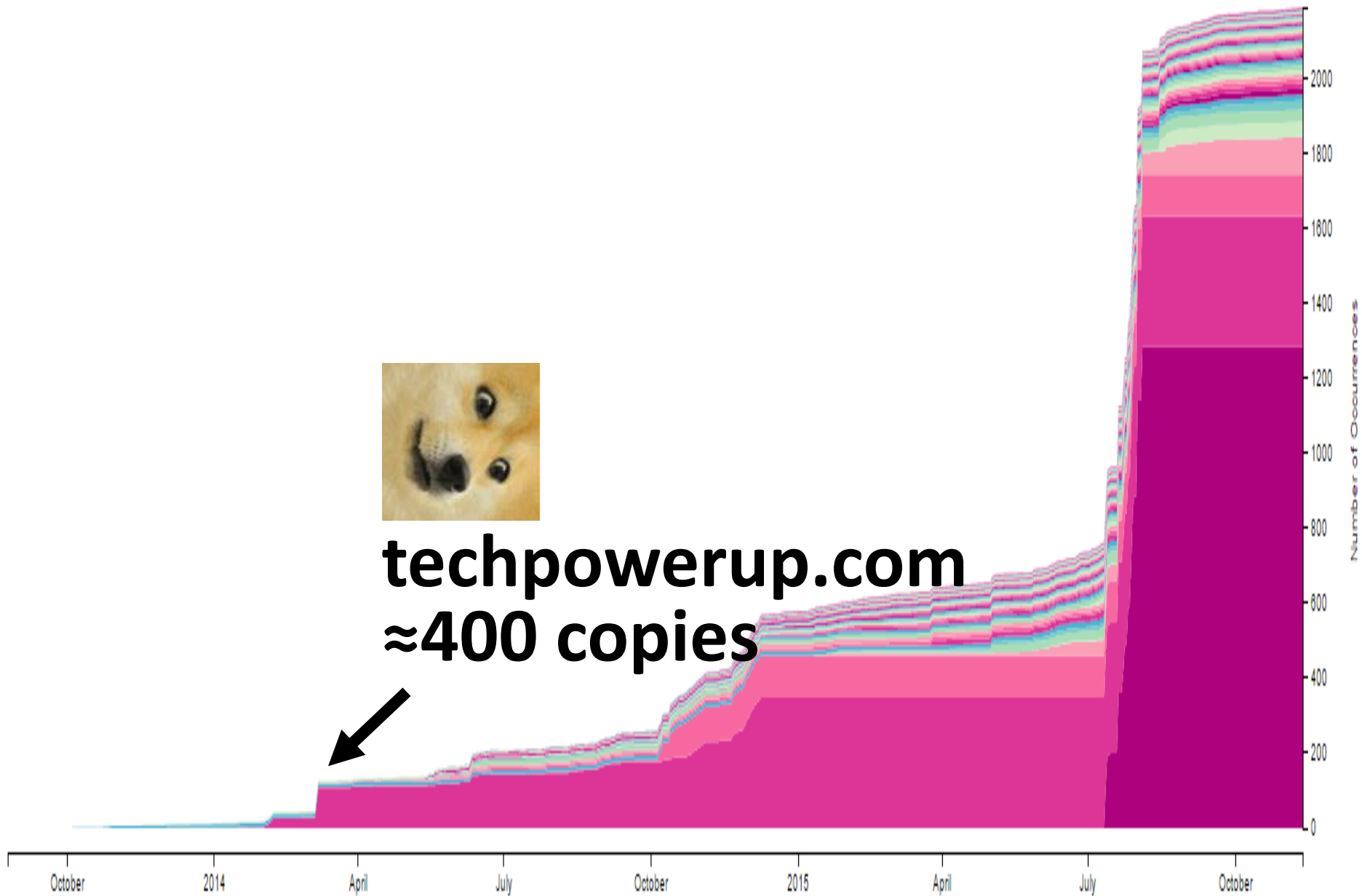
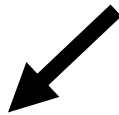
How did doge
spread?

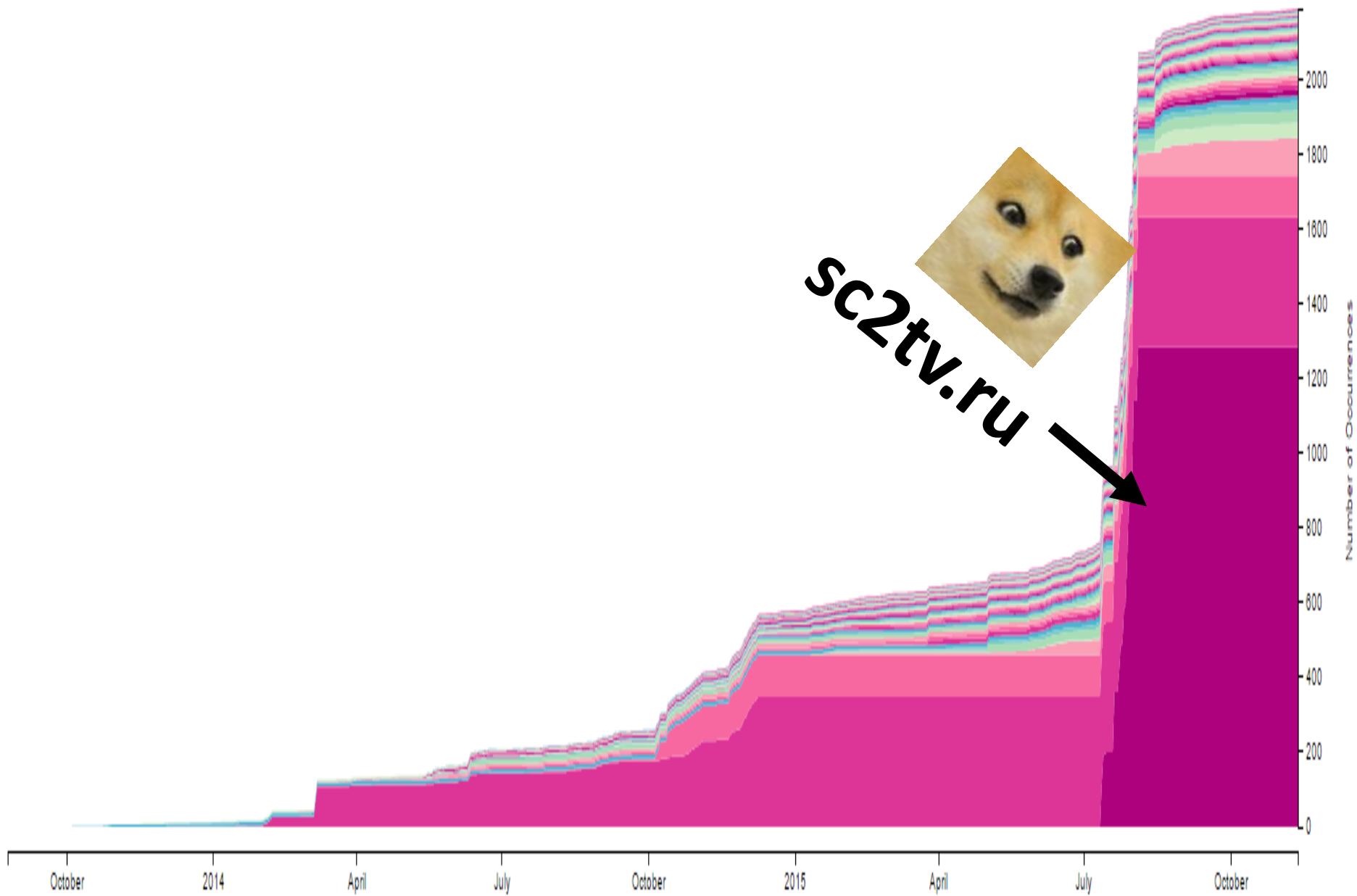
**Oct 2014.
≈0 copies**



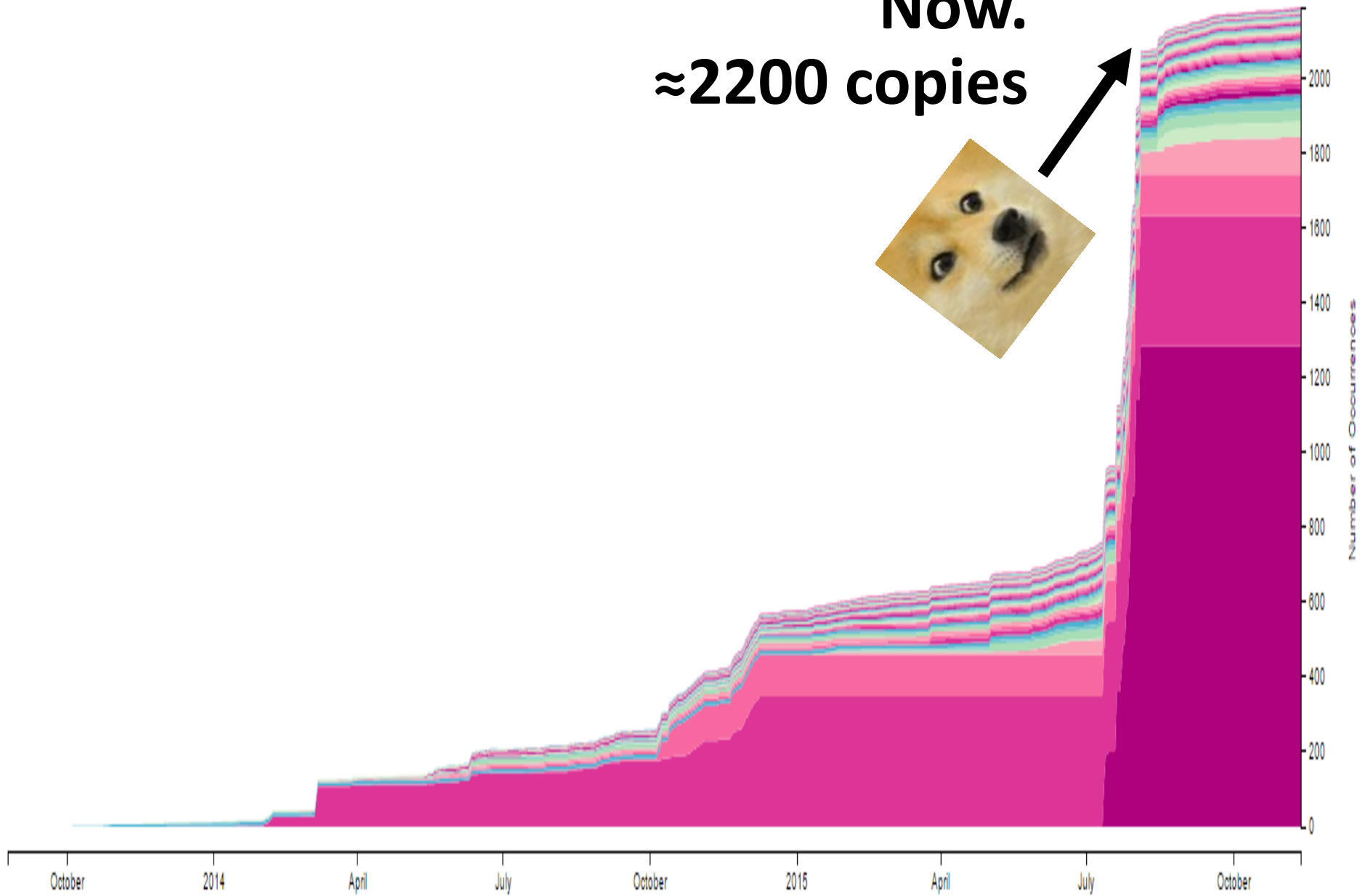


techpowerup.com
≈400 copies



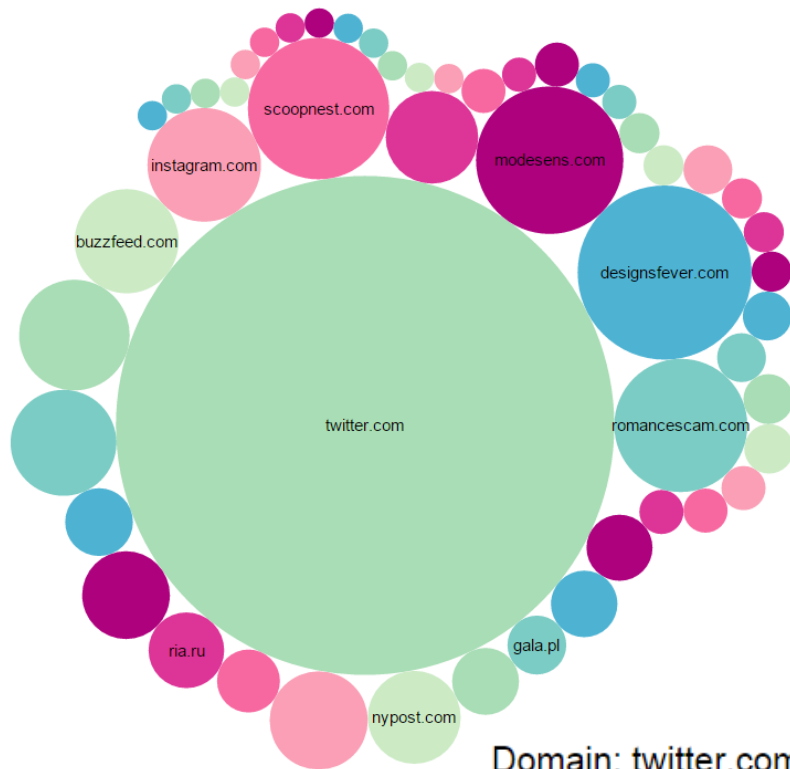
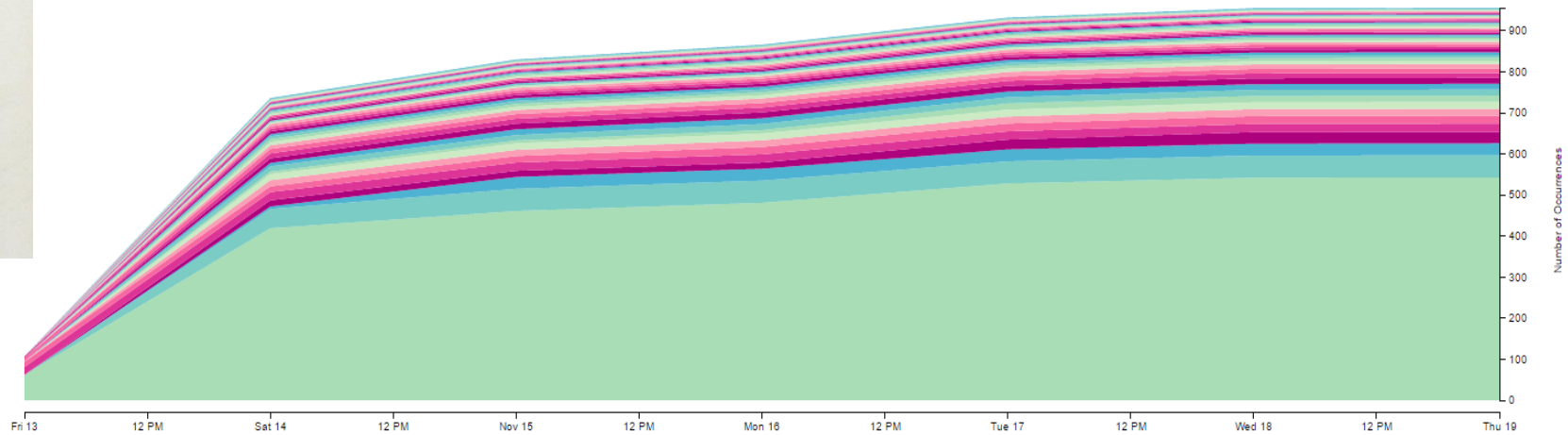


Now.
≈2200 copies

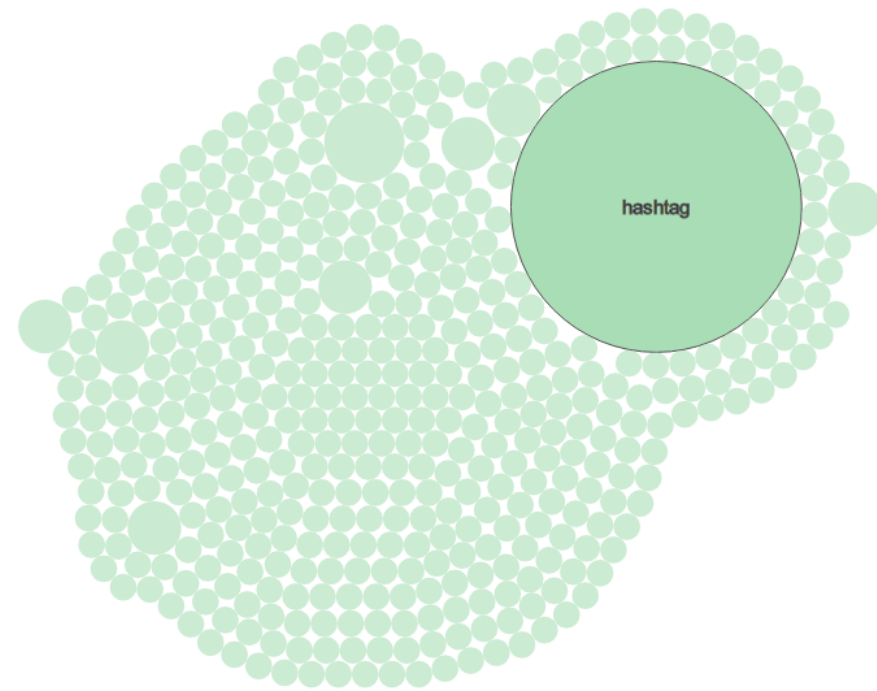


Paris





Domain: twitter.com
Occurences under this domain: 543



Domain: hashtag
Occurences under this domain: 77

The ascription of Where's my stuff?



- Easy legals via terms of service: “I claim copyright rights” (creator) and “I transfer [beneficial-use] copyright rights” (sale).
- Copyright in a box!

Easy legals: snippet of ascribe terms of service

contract unless you object to the inclusion *vis-a-vis* ascribe in writing within three weeks beginning from the receipt of the notice of amendment. In case of such objection, ascribe has the right to extraordinary termination.

3. ASCRIBE DEFINITIONS

You can access the ascribe service through our website www.ascribe.io.

3.1 WORK

"**Works**" are all physical, digital, or intellectual items, objects, or other properties or services that can be traded digitally (e.g. 3D-STL files, photos, stocks, physical property, texts, music, videos, licenses).

3.2 EDITION

"**Edition**" is a digital copy of a Work that can be bought and sold on ascribe. Editions can be thought of as digital property, and can be used in the same way a physical Work could be used (e.g. displayed in private or in public, with or without admission being charged, rented for a fee, loaned, sold, etc.).

3.3 OWNERSHIP TRANSACTIONS

"**Ownership transactions**" are all actions pertaining to the ownership of, rights in, or license to a Work or Edition of a Work. These include, but are not exclusive to, registering the Work, assigning and un-assigning representation, and transferring editions of the Work.

3.4 THE SPOOL

The "**SPOOL**" is a **Secure, Public, Online Ownership Ledger**, which is used to record ownership transactions. When a Work is registered with ascribe, pseudonymous information pertaining to the user and the Work are recorded on the SPOOL, as well as other data related to the user and the Work, and transactions related to the Work. More information about the SPOOL can be found in the Registration of Works section and the Technical Overview page.

3.5 SELLER AND BUYER

These Terms use the terms Seller and Buyer as a generalization referring to the two parties needed as a minimum to close a contract (e.g. to rent or to transfer an Edition).

3.6 WALLET

The ascription of Where's my stuff?



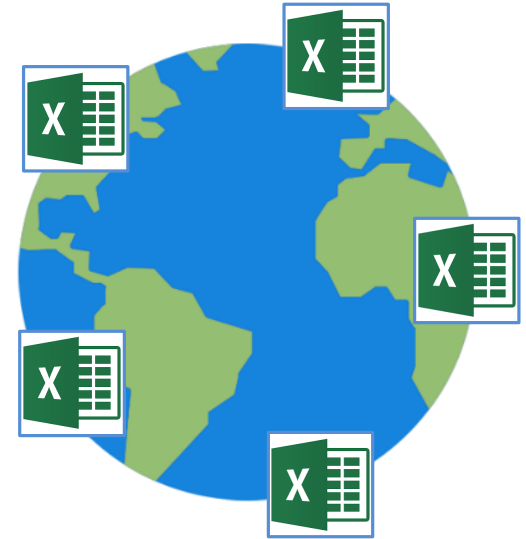
- Easy legals via terms of service: “I claim copyright rights” (creator) and “I transfer [beneficial-use] copyright rights” (sale).
- Copyright in a box!
- **Secure legals ... blockchain?**

Blockchain 101

A blockchain is simply a database.

Just a very weird one:

- anyone can add to it,
- and it gets auto-synced,
- nothing can be deleted
- it's public, and
- It's terrible by most traditional DB measures (throughput, capacity, ..)



On the *Bitcoin* blockchain (DB), you can buy and sell e-money called “Bitcoin”.

The ascription Where's my stuff?



- Easy legals via terms of service: “I claim copyright rights” (creator) and “I transfer [beneficial-use] copyright rights” (sale).
- Copyright in a box!
- Secure legals by time-stamping evidence of ownership actions onto a trusted ledger (bitcoin blockchain).
- Special “SPOOL” protocol for ownership: unique editions, consign, loan ..
- Time-stamp = evidence for court in case of ownership dispute

ascribe[®]

DOLLAR
EURO
SWISS FRANCS
JEFF KOONS
BITCOIN

Currency

Edition: 3/100

Created by: Dan Perjovschi

Owner: trent

Artwork Details:

Artwork ID: 17uZBwSbLGfXy3vRRMWzF5PMjFVNc1tkQ2

Filetype: image

Provenance/Ownership History

Apr. 30, 2015, 12:36:19 - Registered by mail@cointemporary.com

May. 01, 2015, 09:46:08 - Transferred to admin

May. 08, 2015, 13:04:59 - Transferred to trent

Cryptographic Signature

Message: Dan Perjovschi*Currency*3/100*2014*2015Apr30-12:36:19

Signature: 438B24CE06182FA3AA82BC285F867D03FB73F3BCC0F73FDBA6EC2BFF7088E011E60355B7DC75D5745A9D5CA2A8115512FF835C4ABEF686
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E4CB085B9A0A14583F135DBB399121B24ED1L

go to ascribe.io/app/coa_verify to verify

Cryptographic
Certificate of
Authenticity

ascribed digital
art at bitforms
NYC



Jonathan Monaghan

Escape Pod

2015, 3 editions


ID: 1P1EumqcJoxMMGf79WwdkFn7uCRBeNaCR8



Creative
Commons FR

A screenshot of the registration form on the 'cc.ascribe.io' website. The form is titled 'Créez votre titre' and includes several input fields: 'Nom de l'Artiste', 'Titre de l'Oeuvre', and 'Année de Création' (with a calendar icon). There is also a dropdown menu labeled 'Choisissez une licence...'. A large dashed box at the top of the form area contains the text 'Cliquez ou déposez le fichier'. The Creative Commons logo and 'FR' are visible in the top left of the page, and a user profile 'pp' with a settings gear is in the top right.

With CC licenses of
course!

A low-angle photograph looking up at the ornate, vaulted ceiling of a large hall. The ceiling features intricate architectural details, including ribbed vaults and decorative friezes. Several small, round spotlights are mounted on the ceiling, casting a warm glow. The overall atmosphere is one of grandeur and historical significance.

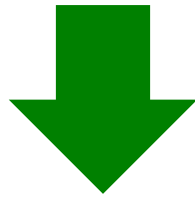
**152-year old art museum MAK
Vienna bought ascribed digital
art to its collection**

<http://ascri.be/1datNRs>

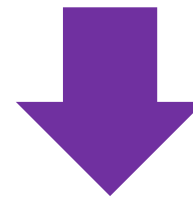
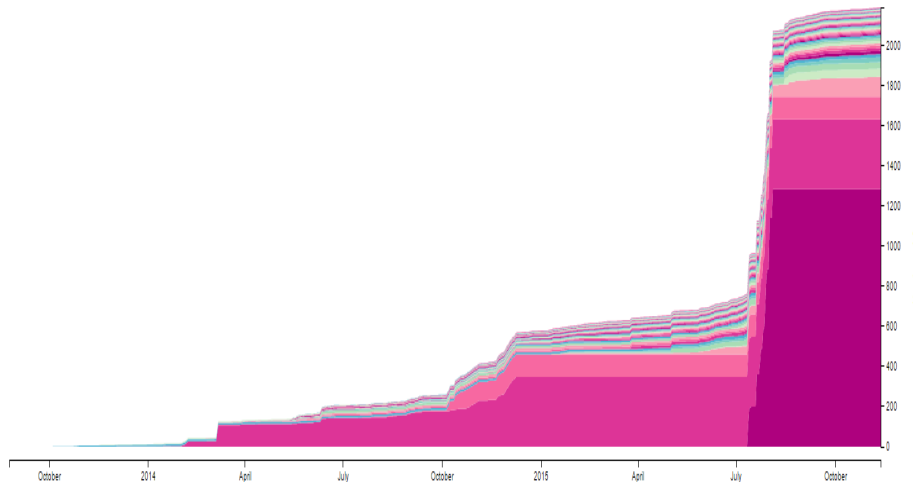
ikonoTV

**Creators register content via ascribe,
then license it to ikonoTV
(300M TV viewers, 100K+ app users,
top app)**

Where's my stuff?



Visibility

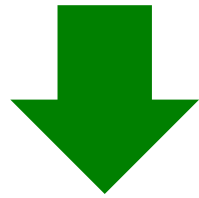


**Easy, secure
legals**



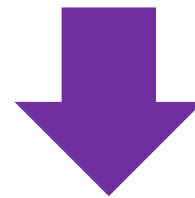
Conclusion

Where's my stuff?



Visibility

whereonthe.net



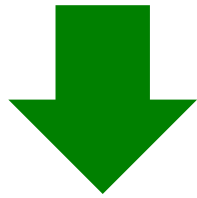
**Easy, secure
legals**

ascribe.io

Big data & blockchains* are key to building an ownership layer for the internet.

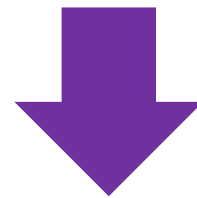
Conclusion

Where's my stuff?



Visibility

whereonthe.net



**Easy, secure
legals**

ascribe.io

Big data & blockchains* are key to building an ownership layer for the internet.

***Scalable blockchains. Stay tuned..**