

The roles of FORTH in blockchain technologies and beyond

We investigate the roles of FORTH in Blockchain related technologies and novel decentralised schemes beyond Blockchain, with the potential of reinventing the Internet, but without the huge footprint required by Blockchain.

Liang Ng, October 2025

omnixtar.github.io/svfig

Overview

Introduction (5 min)

Fundamentals (3 min)

What can CMP & FORTH do?

- From Web-based Omni*Web to FORTH Triple-less Card Computer (TCC)
- Artificial Intelligence & Beyond?
- (4 min)

Phoscript-Linux/C-FORTH Sandwich Model (5 min)

Conclusions (3 min)

Outline

MMAGA 2024 Revenues USD 1.8 trillion

Separation of Disclosure & Royalties (SDR)

Hash as Proof of Intent

***Triple-less Card Computer
(Domain-Kernel-Database-less)***

Phoscript -Linux/C-FORTH Sandwich Model

Decentralised Social Media

Trispecies Monetary Payment
(Crypto, Fiat, Bullion)

Crypto-Metaprogramming

Omni*Web

Omnihash & DJSON Decentralised JSON

Hilbert Hotel & Infinity Cabinet

Isaac Asimov's Foundation & Metanarchy

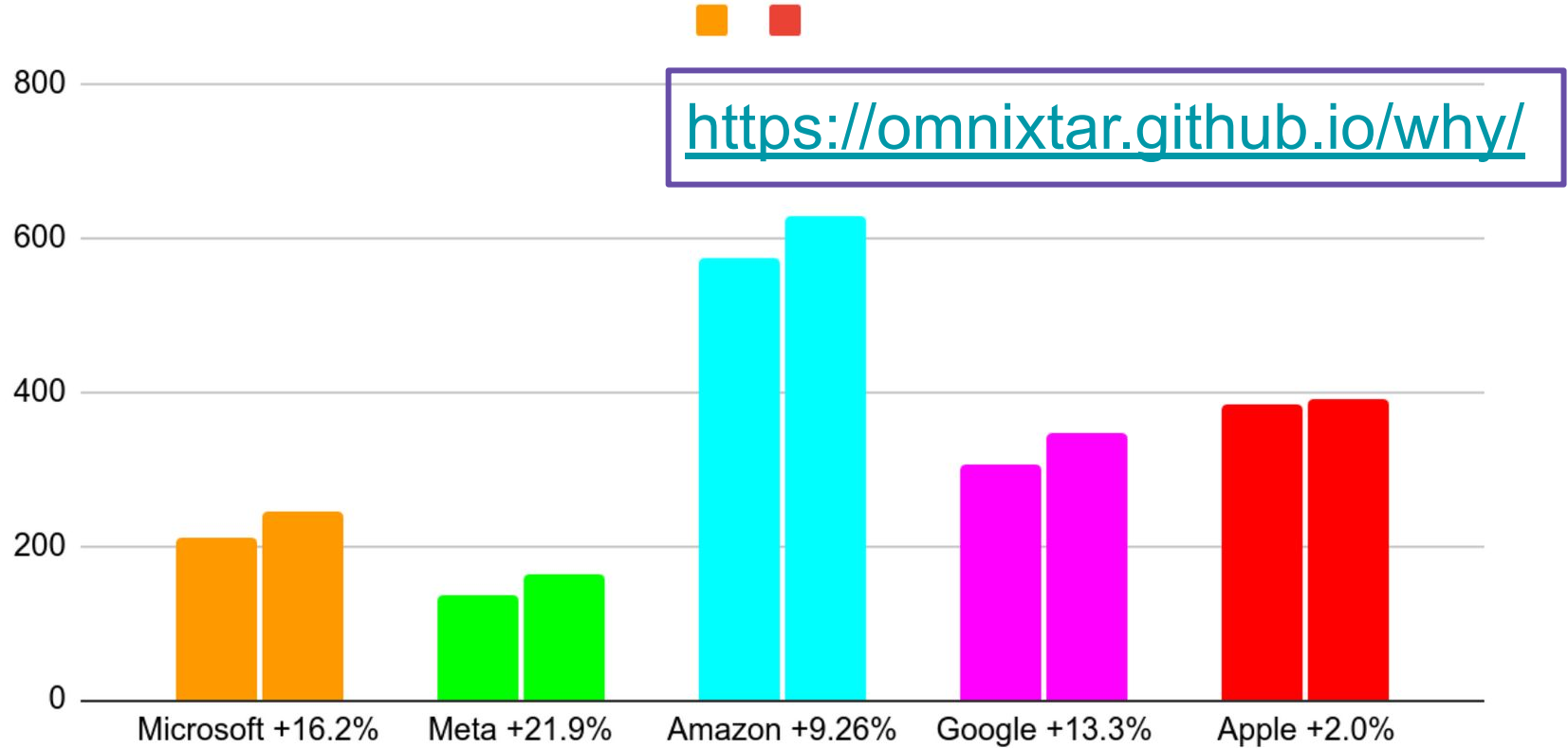
French Revolution, Ownership of Property
& Decentralised Digital Assets

Hash as Pointer & Mask, encrypt hash with
PBK

Chained Hash Properties
(String & Function)

MMAGA Revenues 2023/24 (USD billions)

Total 2024: USD 1.776 Trillion (+10.27%)



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Omni*Web

<https://omnixtar.github.io/contract/>

Omni*Contract: Ownership & Rights of Use of Digital Asset (Source Code)

Like

- On the Separation of Disclosure and Royalties of the Source Code July 21, 2024

1. You, a human agent of a company or government agency, may read the source code without making payments to the author or authors, but if you execute this program on a computer, we reserve the rights to claim royalties from you or your company.
MMAGA 2024 Revenues USD 1.8 trillion
2. Your copy of source code shall be attached with at least one copy of the Agent and your own Omnihash, to authorise you the use of the source code. You shall pay maximum penalties allowed by a legal court in your country for deploying the source code pertaining to clause (1).
Separation of Disclosure & Royalties (SDR)

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French Revolution, Ownership of
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**Omnihash & DJSON Decentralised
JSON**

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with PBK

Chained Hash Properties
(String & Function)

DJSON Decentralised JSON is a JSON object or its encoded string where at least one of the fields is an Omnihash, representing the owner of this JSON object.

- ```
["2025-02-11T14:25:28.207+0000", "like", "CXAGcRkevA==", "CXAGcRkevA==", "HymWBzfj9A==",
{"repo": "https://github.com/omnixtar/omnixtar.github.io/", "contract": "https://omnixtar.github.io/
contract/", "ghh": "https://github.com/omnixtar/omnixtar.github.io/
commit/19bb258190d57d6246840bf8ccc8957ae880e341", "datetime": "2025-10-24T04:41:21.000Z"}]
```



*(Pop Quiz: Tron MCP vs.  
CMP?) Decentralisation?*

## Hilbert Hotel & Infinity Cabinet

Hilbert Hotel (1924)

Turing machine (1936)

Room number is a hash number.

Each room has a cabinet with infinite number of drawers.

Drawers are identified by a hash number, derived from the contents of documents in the drawer.

### Chained Hash Properties:

1. Concatenation of strings
2. Concatenation of hash functions

Discovered not Designed: Mathematical properties are discovered, by algorithms designed by programmers.

Recursive structures: Containing substructures – [hotel, rooms, cabinets, files, documents, texts] shown in JSON and DJSON.

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3 4 +  
Phoscript  
Metashell

1

Inverse Shunting  
Yard Algorithm  
(ISYA)

Infix: 3 + 4  
C, C++, PHP, Python  
Java, JavaScript

Sandwich API  
Model

(internal operations  
of compilers,  
interpreters)

2

Shunting Yard  
Algorithm (SYA)

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We demonstrate how management of digital assets such as texts, photos and videos can be decentralised using Decentralised JSON, a JSON object where one or more of its elements are hashcodes.

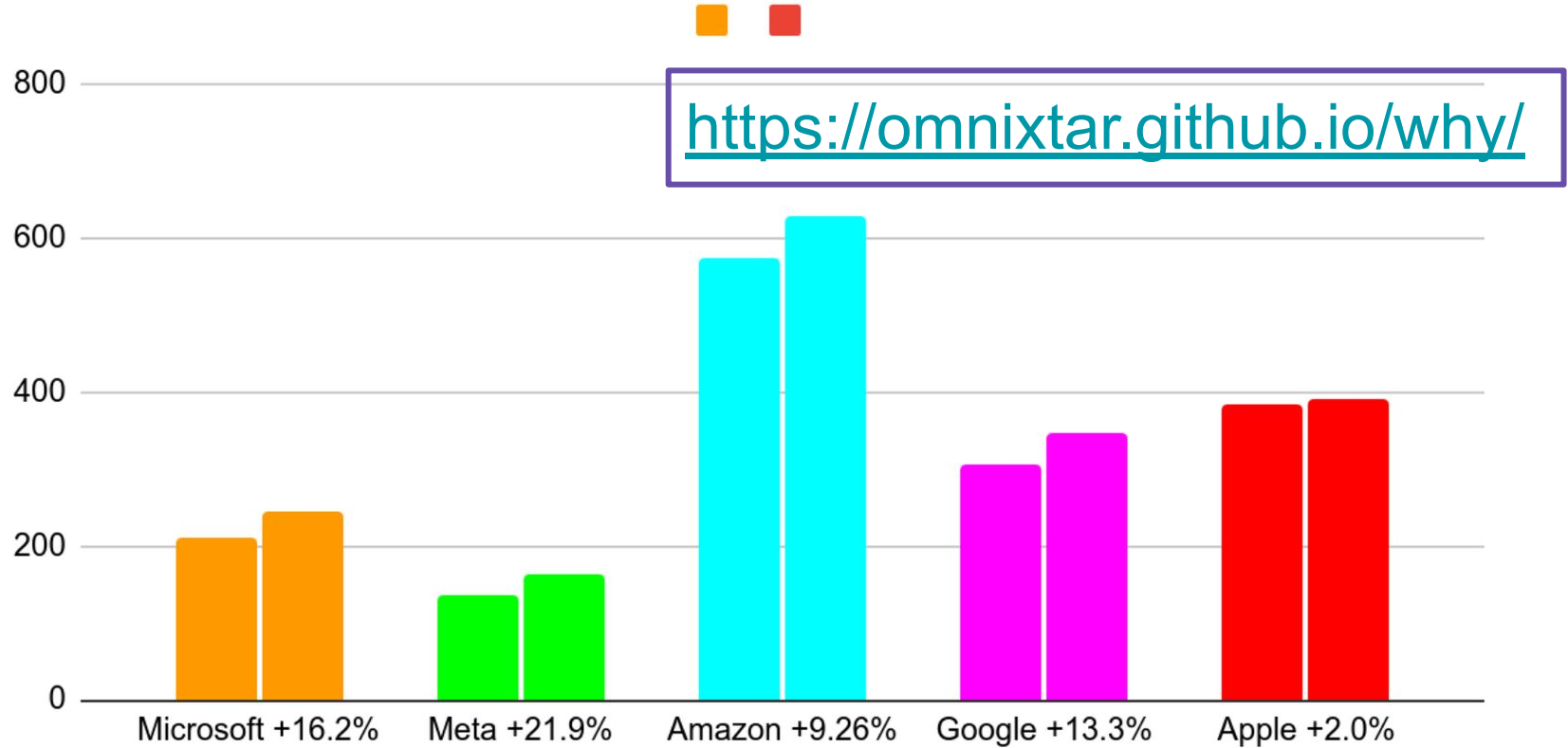
Next we show how DJSON removes the necessity of database servers, making it possible to construct a “Triple-less” computing system, namely without domain name system, operating system and database server: Domainless, Kernel-less, Database-less.

FORTH is the natural candidate for the Triple-less computing system, a prototype being card size electronic wallet, where Trispecies monetary transactions, namely fiat money, cryptocurrency and bullion, can be carried out, laying the foundation (Asimov’s pun!) for a post-Blockchain global financial framework and **Metanarchy** – global governance based on decentralised transactions in the Metaverse.

a.k.a. **TRILLION Dollar Solution?**

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# Crypto-Metaprogramming (CMP)

Bitcoin FORTH example

Hash of Public Key, as Decentralised User Identifier

Basic explanation: Phoscript interpreter loop

How Omni\*Web CMP is similar or different from Bitcoin FORTH?



## BITCOIN

### Bitcoin: Technical Concepts

Bech32  
Blockchain Diagram  
Bitcoin Encryption  
Creating forks  
Bitcoin mining  
Blockchain  
Bitcoin Improvement Proposals  
Pay-to-Script Hash  
Proof of Keys  
UTXO  
User Activated Soft Fork  
OmniBOLT  
Blockchain (database)  
Segregated Witness  
Lightning Network  
Hashed Timelock Contracts  
NSequence  
Bitcoin Emission  
Block timestamp

**Pay-to-PubKey-Hash (Pay-to-Public-Key-Hash, P2PKH)** is the basic form of making a [transaction](#) and is the most common form of transaction on the [Bitcoin network](#). Transactions that pay to a [Bitcoin address](#) contain P2PKH scripts that are resolved by sending the public key and a digital signature created by the corresponding [private key](#).

The ScriptPubKey and ScriptSig for a transaction is shown below:

#### Table of Contents



1. Pay-to-Pubkey Hash
  - 1.1. Pay-to-PubKey-Hash Review
  - 1.2. Pay-to-PublicKey Hash Example
  - 1.3. See also
  - 1.4. References

[https://bitcoinwiki.org/wiki/  
pay-to-pubkey-hash](https://bitcoinwiki.org/wiki/pay-to-pubkey-hash)

## Pay-to-PubKey-Hash Review

Two types of payment are referred as P2PK (pay to public key) and P2PKH (pay to public key hash).

[Satoshi](#) later decided to use P2PKH instead of P2PK for two reasons:

Elliptic Curve [Cryptography](#) (the cryptography used by your public key and [private key](#)) is vulnerable to a modified Shor's [algorithm](#) for solving the discrete logarithm problem on elliptic curves. In plain English, it means that in the future a quantum computer might be able to retrieve a private key from a public key. By publishing the public key only when the coins are spent (and assuming that addresses are not reused), such attack is rendered ineffective.

With the hash being smaller (20 bytes) it is easier to print and easier to embed into small storage mediums like



works  
Softfork  
Scalability  
Adaptive difficulty  
CVE-2012-4684-new  
CVE-2013-2293  
Nanopayments  
Block weight  
BIP UNOFFICIAL DRAFT 0  
Ideal Properties of Digital  
Commodities  
Address reuse  
Hashlock  
Contingency plans  
Offline transactions  
Off-Chain Transactions  
Funding network security  
Bitcoin scalability problem  
Segwit support  
CVE-2012-3789  
Proof of Ownership  
Dump format  
Test Cases  
Hot wallet  
Dominant Assurance Contracts  
Bitcoin Binary Data Protocol  
Coin analogy  
CVE-2012-4683  
BIP Draft – Instant Partial

A [Bitcoin address](#) is only a hash, so the sender can't provide a full public key in scriptPubKey. When redeeming coins that have been sent to a [Bitcoin](#) address, the recipient provides both the signature and the public key. The [script](#) verifies that the provided public key does [hash](#) to the hash in scriptPubKey, and then it also checks the signature against the public key.

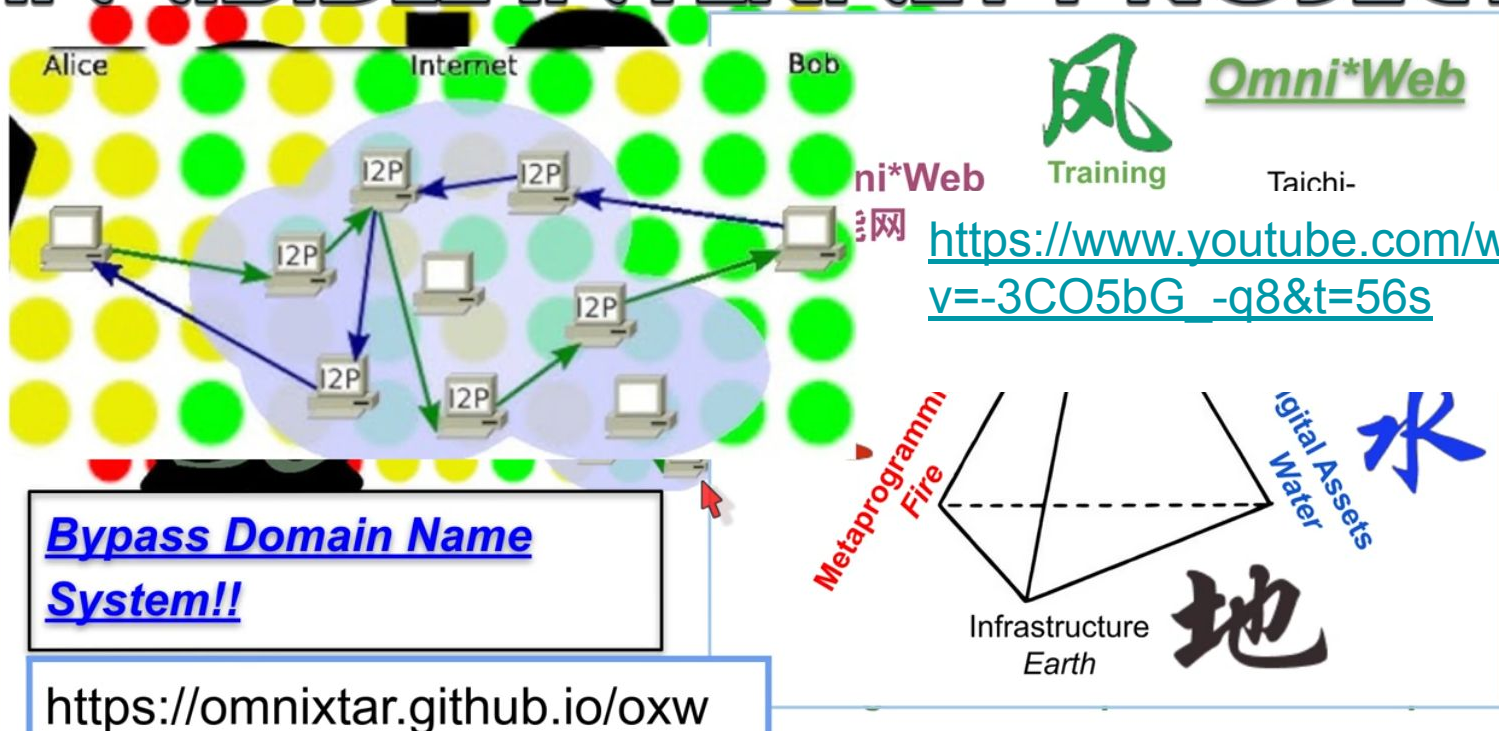
Checking process:

| Stack                                        | Script                                                                         | Description                                             |
|----------------------------------------------|--------------------------------------------------------------------------------|---------------------------------------------------------|
| Empty.                                       | <sig> <pubKey> OP_DUP OP_HASH160<br><pubKeyHash> OP_EQUALVERIFY<br>OP_CHECKSIG | scriptSig and scriptPubKey<br>are combined.             |
| <sig> <pubKey>                               | OP_DUP OP_HASH160 <pubKeyHash><br>OP_EQUALVERIFY OP_CHECKSIG                   | Constants are added to the<br>stack.                    |
| <sig> <pubKey> <pubKey>                      | OP_HASH160 <pubKeyHash><br>OP_EQUALVERIFY OP_CHECKSIG                          | Top stack item is duplicated.                           |
| <sig> <pubKey><br><pubHashA>                 | <pubKeyHash> OP_EQUALVERIFY<br>OP_CHECKSIG                                     | Top stack item is hashed.                               |
| <sig> <pubKey><br><pubHashA><br><pubKeyHash> | OP_EQUALVERIFY OP_CHECKSIG                                                     | Constant added.                                         |
| <sig> <pubKey>                               | OP_CHECKSIG                                                                    | Equality is checked between<br>the top two stack items. |
| true                                         | Empty.                                                                         | Signature is checked for top<br>two stack items.        |





# INVISIBLE INTERNET PROJECT



Omni\*Web: Set Up YrOwn GLOBALLY ACCESSIBLE Web Server w/o Domain Name System in 4 Simple Steps (I2P)



MI4 Metaprogramming in Forth  
56 subscribers



12



Share



Download



Clip



ONCE YOU UNWRAP  
YOU CAN'T GO BACK







Activities

Firefox

Sel 11 Feb, 22:07

yo6sgmfq7pfvvp2e4kcuhtfg7wfltt63igwcukhbmumq6lu3a3a.b32.i2p/oxm/oxm.php?nn=adam

170%

adam session\_id:adam-fer4f9qk69m9nj562u7kj5n2u9\_31  
session\_id:adam-fer4f9qk69m9nj562u7kj5n2u9\_31

Omni\*Search Demo

Copy the following code and execute it in

f(': B\_F ' + JSON.stringify({w:'like', t:'recipe

1602 Phos 1611 S 1621 B\_F start omni:

fgl\_s 340 < 2 > array ( 0 => array ( 0 => {  
'lcdw:', 5 => 'B\_AUTH', ), 1 => array ( 'SP'  
'LS0tLS1CRUdJTiBQVUJMSUMgS0VZLS0tLS0KU0Q0LQ0FhRUFyU0R1TWJCL3NS  
'NN' => 'adam', ), )  
fgl\_s 340 < 4 > array ( 0 => array ( 0 => {  
["SESSION:", "AUTH", "i:", "PBK", "i:", "o\_ha  
1 => 'jd:', 2 => 'cdw:', 3 => 'am:', 4 => 'lcdw'  
array ( 'a\_cmd' => array ( 0 => 's:', 1 => ';  
'Graph/dmeta/CXAGcRkevA==', ) [{"a\_cm  
{"r": "Graph/dmeta/CXAGcRkevA==", "t":  
fgl\_s 340 < 2 > array ( 0 => array ( 0 => {  
'lcdw:', 5 => 'B\_AUTH', ), 1 => NULL, )  
fgl\_s 340 < 2 > array ( 0 => array ( 0 => {  
["B\_AUTH": ["SESSION:", "AUTH", "i:", "s:", "i:", "o\_ha  
'lcdw:', 5 => 'B\_AUTH', ), 1 => array ( 'SP' => 'e3235h7f', 'PASS' => '20250211\_042724', 'PBK' =>

yo6sgmfq7pfvvp2e4kcuhtfg7wfltt63igwcukhbmumq6lu3a3a.b32.i2p

post ajax:  
fgl\_s 340 < 2 > array ( 0 => array ( 0 => {  
["SESSION:", "AUTH", "i:", "s:", "i:", "o\_ha  
'lcdw:', 5 => 'B\_AUTH', ), 1 => array ( 'SP' => '93b164de', 'PASS' => '20250211\_220742', 'PBK' => 'LS0tLS1CRUdJTiBQVUJMSUMgS0VZLS0tLS0KU0Q0LQ0FhRUFyU0R1TWJCL3NSc2dXNmNSeGhOUdlWkNVRkJKdER5VXV1b3ozSC9XT05nYU0QWExG NHVwZFNUTHU0QXhWNUtUnFBTWlMRzI2ZTZkajBqczEzS3MvQlVNd0p3VW1Jd1EyYmtFL0NsZFdcDcweExVXNnQUl2OVNGOTRCSGpmWEZMODVJL2Vaa1NSEm5RWHRsZnQvYzZjTG4yMDFyelB3OGL0dEl1Z2RvNHB5anBLVzNuS095SIAwZ2Nrckt0dWJCSG1HSjIjOW5YeXZraSszUUV4bSt3Z0JRWFhOR28yaHl2UF83akhTSVUvdhwbzZKYkpiVm8vTlZRTU9vK2tStkLSZW1manpyYTFENzdyZDMrZjMveER4bGQraTg2K3dyRlBkNwZlcDQzOElpK0pZMklkTnZkd1hxaVZSeGlrTU1ENUJpNDNmTnBiS0JsZXJBYSUpY2pRTGhUZEVE1Vlk0d2pUczNMZVMxaytLRHBZQVNR0StZTElsVWVaSjVNVNDhtMnBodGt1M0V4WHAYa0JtZml2ZmxPRXRRdmdaZm1OQzJPbUcyYXNYZ3pWLS05QzZk5kakd2ZWp0VU0YkZ6WfdZKzNRQ3o4UGxpbUZZeWtJZll0eVBMNzQ5Mw9tVmZjeU0FuzBWB1hQ1VnblNsdUxPMFBxBk5oODdyTWpvczJYYTg4THpmQmh1UFJIN2pwVXd1Y0pvcG1GU3ZlYUfhdl1NjNW1WNWl1ZUZvMlJlV3UxWlhuK1pzRzhEekdMR3lCci9XYXkuNVo1NktuZzdYVzBMVDRGTlXNWE1VG95VNVNDbi9ua1d1Ukpw6UlhRcGFwQutMVGNPekFDUEVtak9GYnZEQWNkbGMrVWpBK0U1bXVBYmVtNnNpcVQwN3pzNkt0Qk9rbWRtNVJjMXVvOENBd0VBQVE9PQotLS0tLUVORCBQVUJMSUMgS0VZLS0tLS0=, 'NN' => 'adam', ), )  
☐ Don't allow yo6sgmfq7pfvvp2e4kcuhtfg7wfltt63igwcukhbmumq6lu3a3a.b32.i2p to prompt you again

DSC

cmd

123

Encrypted\_Message

Any\_other\_remarks

Misc

SEND

GET

adam session\_id:adam-fer4f9qk69m9nj562u7kj5n2u9\_31  
 session\_id:adam-fer4f9qk69m9nj562u7kj5n2u9\_31

## Omni\*Search Demo

Copy the following code and execute it in the browser console:

```
f(': B_F ' + JSON.stringify({w:'like', t:'recipient_hash', f:'sender_hash'}) + ' jd: rghe: g_
```

1602 Phos 1611 S 1621 B\_F start omni:

```
fgl_s 340 < 2 > array (0 => array (0 => '{"B_AUTH":["SESSION:","AUTH","i:","s:","

'lcdw:', 5 => 'B_AUTH',), 1 => array ('SP' => '9fa64665', 'PASS' => '20250210_00:

'LS0tLS1CRUdJTlBQVUJMSUMgS0VZLS0tLS0KTUIJQ0lqQlU5C72tvaGtnRzI3ME

'NN' => 'adam',),)
```

```
fgl_s 340 < 4 > array (0 => array (0 => '{"B_AUTH1":

["SESSION:","AUTH","i:","PBK","i:","o_hash.json","l_cdwjs","t

1 => 'jd:', 2 => 'cdw:', 3 => 'am:', 4 => 'lcdw:', 5 => 'B_AUTH1'

array ('a_cmd' => array (0 => 's:', 1 => ';',), 't_f0' => '2025-0:

'Graph/dmeta/CXAGcRkevA==',) [{"a_cmd":["s:",";"], "t_f0":"2

{"r":"Graph/dmeta/CXAGcRkevA==","t":"2025-02-10T00:38:

fgl_s 340 < 2 > array (0 => array (0 => '{"B_AUTH":["SESSI

'lcdw:', 5 => 'B_AUTH',), 1 => NULL,)
```

```
fgl_s 340 < 2 > array (0 => array (0 => '{"B_AUTH":["SESSI

'lcdw:', 5 => 'B AUTH') 1 => array ('SP' => 'e3235b7f' 'PASS' => '20250210_042724' 'PBK' =>
```

DSC

cmd

123

Encrypted\_Message

Any\_other\_remarks

Misc

adam

s: x:

AUTH GenKeys SEND GET

Front End

Back End

PBK (Public Key)

PBK (Public Key)

+

Secret Phrase (SP)

Ciphertext

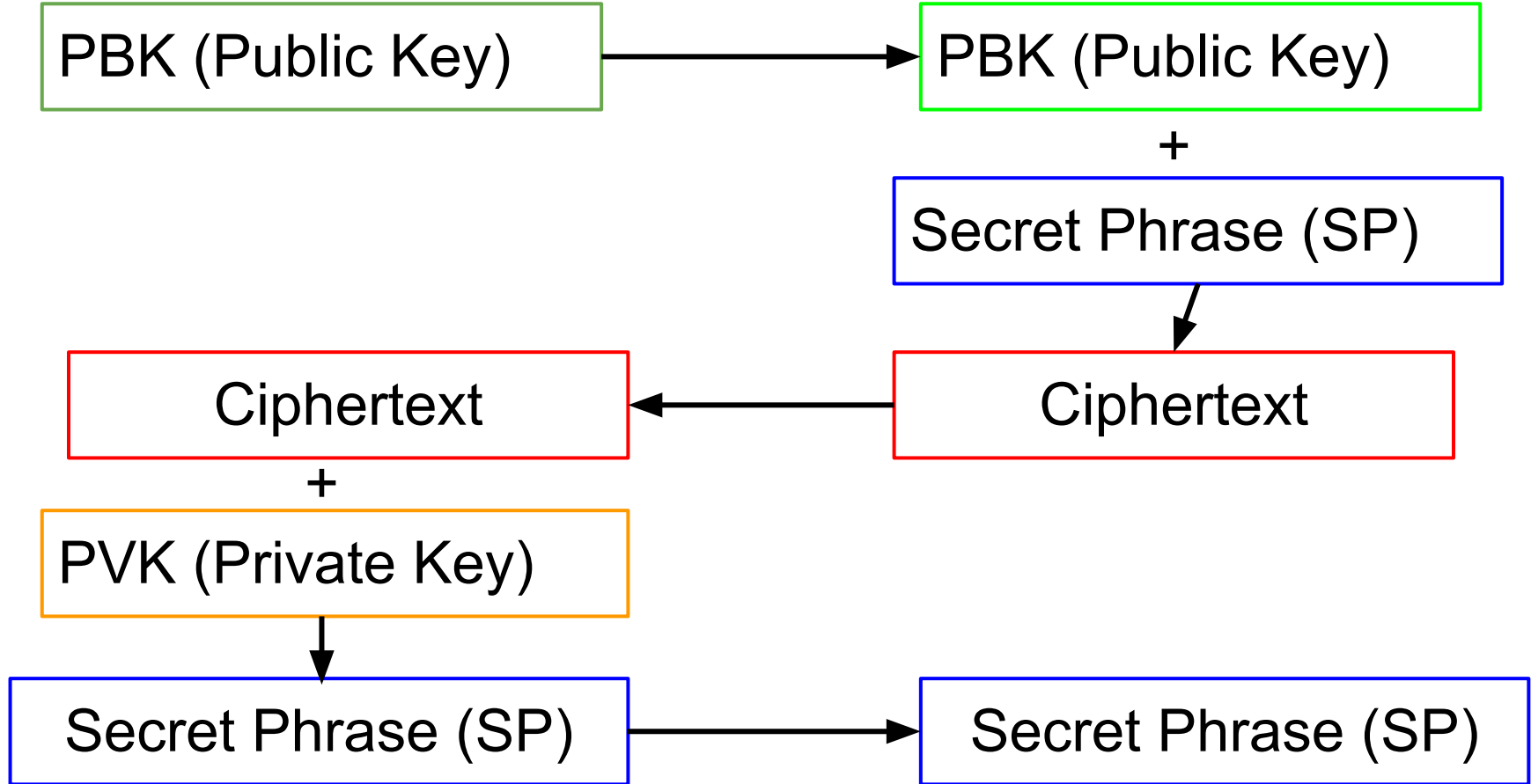
Ciphertext

+

PVK (Private Key)

Secret Phrase (SP)

Secret Phrase (SP)





```
"req_auth_sc":["b64d:","4","orpb:","hex:","dup2:","rsa:","2","pick:","lkey:","swap:","r
ecr:","b64e:","ON","ECHO","bv:","ec:","2","pick:","SP","ka:","AUTH","uss:",";"]
```

```
i:","dts:","over:","over:","jsp:","rot:","rot:","swap:","_","jsd:","=chat","dc0:","_","jsd:","rot:","
"rot:","jsp:","jnl:","swap:","log","\/","jsd:","wa:",";"],"nick":["NN","ka:","AUTH","uss:",";"],"req
auth_sc":["b64d:","4","orpb:","hex:","dup2:","rsa:","2","pick:","lkey:","swap:","recr:","b64e:","ON
","ECHO","bv:","ec:","2","pick:","SP","ka:","AUTH","uss:",";"],"b_cdw":["=\/Backup\/o_cdw.json\/","
dw.json","3","mssx:","o_cdw.json","s:","copy:",";"]
```

```
553 function fgl_lkey()
554 {
555 global $S;
556 $keystr = array_pop($S);
557 $key = end($S);
558 $key->loadKey($keystr);
559 }
```

```
344 function fgl_rsa()
345 {
346 global $S;
347 $key = new RSA();
348 $S[] = $key;
349 }
```

```
560 function fgl_recr()
561 {
562 global $S;
563 $str = array_pop($S);
564 $key = end($S);
565 $key->setHash('sha256');
566 $key->setMGFHash('sha256');
567 $S[] = $key->encrypt($str);
568 }
```

```
libfogl.php
/var/www/dmeta/o/auth

c_pvk.pem x d_pvk.pem x rsa.sh x libphos.js x e_pvk.pem x donald_keypair.js x libphos.php x init.js x libfogl.php x libuui.php x alias.php x gui_dsc.js x

1268 }
1269 }
1270 }
1271 }
1272
1273 function FGL($a)
1274 {
1275 global $argv, $S, $SS, $xk, $xs, $SC, $SL, $CDW, $BV;
1276 $a = preg_replace('/\\s+/', ' ', $a);
1277 $a = explode(' ', trim($a));
1278 $SS[] = array(0, $a);
1279 if (isset($D)) {
1280 echo "\n\n" . __FUNCTION__ . " " . __LINE__ . " " . var_src($SS);
1281 }
1282 $xc = count($SS);
1283 $xk =& $SS[$xc - 1][0];
1284 $xs =& $SS[$xc - 1][1];
1285 $xl = count($SS[$xc - 1][1]);
1286 $vk = $xk;
1287 $Z = $xl;
1288 if (isset($D)) {
1289 echo "\n" . __FUNCTION__ . " start " . __LINE__ . " vk " . $vk . " Z " . $Z . " SS " .
var_src($SS) . "\n";
1290 $S[] = $vk;
```

```
var_src($SS) . "\n";
1290 $S[] = $vk;
1291 $t = array_pop($S);
1292 $CC = $t[0];
1293 }
1294 do {
1295
1296 // 20230609 Exception handling / errors etc.
1297 if (gettype(end($S))=="string") {
1298 if (substr(end($S),0,9)=="__ERROR__") { // exit; // break;
1299 echo "\n\n FGL :post ".array_search(":post", $S[0])." ".var_src($BV)." ".var_src(
$SS)." \n";
1300 // exit; // break;
1301 // array_pop($SS);
1302 /*
1303 $xk=array_search(":post", $S[0])+1;
1304
1305 $xc = count($SS);
1306 // $xk =& $SS[$xc - 1][0];
1307 $xs =& $SS[$xc - 1][1];
1308 $xl = count($SS[$xc - 1][1]);
1309 $vk = $xk;
1310 */
1311 echo " ERROR xl ".$xl." xk ".$xk." xs ".var_src($xs)." SS ".var_src($SS);
```



ActivitiesText EditorJum 22 Ogos, 17:22libfgl.php/var/www/dmeta/o/authSave

c\_pvk.pem x d\_pvk.pem x rsa.sh x libphos.js x e\_pvk.pem x donald\_keypair.js x libphos.php x init.js x libfgl.php x libuui.php x alias.php x gui\_dsc.js x

```
1360 } while (1),
1361 } else {
1362 if ($v[$l - 1] == ":") {
1363 $l = strlen($v);
1364 $fn = substr($v, 0, $l - 1);
1365 if (function_exists("fgl_" . $fn)) {
1366
1367 if (isset($D)) {
1368 echo "xs: line " . __LINE__ . " fgl_" . $fn . " ";
1369 }
1370
1371
1372 // if (gettype(end($S))=="string") if (substr(end($S),0,9)=="__ERROR__") { // exit;
1373 /* if (gettype(end($S))=="string") if (substr(end($S),0,6)=="==POST") { // exit;
1374 echo "\n xs: " . __LINE__ . " ";
1375 echo " v " . $v . " length " . strlen($v) . " ord " . ord($v) . " vk " . $vk . " " .
var_src($xs);
1376 exit;
1377 }
1378 */
1379
1380 call_user_func("fgl_" . $fn);
1381
1382
1383 // if (gettype(end($S))=="string") if (substr(end($S),0,9)=="__ERROR__") { // exit;
```

PHP Tab Width: 2 Ln 1383, Col 31INS



```

1273 function FGL($a)
1274 {
1275 global $argv, $S, $SS, $xk, $xs, $SC, $SL, $CDW, $BV;
1276 $a = preg_replace('/\\s+/', ' ', $a);
1277 $a = explode(' ', trim($a));
1278 $SS[] = array(0, $a);
1293 }
1294 do {
1295 // 20230609 Exception handling / errors etc.
1296 if (gettype(end($S))=="string") {
1297 if (substr(end($S),0,9)=="__ERROR__") { // exit; // break;
1379
1380 call_user_func("fgl_" . $fn);
1381
1382 } else {
1383 if ($v == '===') {
1384 $S[] = array_pop($S) === array_pop($S);
1385 } else {
1386 $S[] = $v;
1387 }
1388 }
1389 },
1390 } while ($vk < $xl); // LOL $xk++ but $vk is not?
1539
1540 array_pop($SS);
1541 }
1542

```

# Overview

Introduction (5 min)

Fundamentals (3 min)

What can CMP & FORTH do?

- From Web-based Omni\*Web to FORTH Triple-less Card Computer (TCC)
- Artificial Intelligence & Beyond?
- (4 min)

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*( President Trump to arrive in Kuala Lumpur on 26 October 2025. Will 3-letter-agencies be watching? ....)*

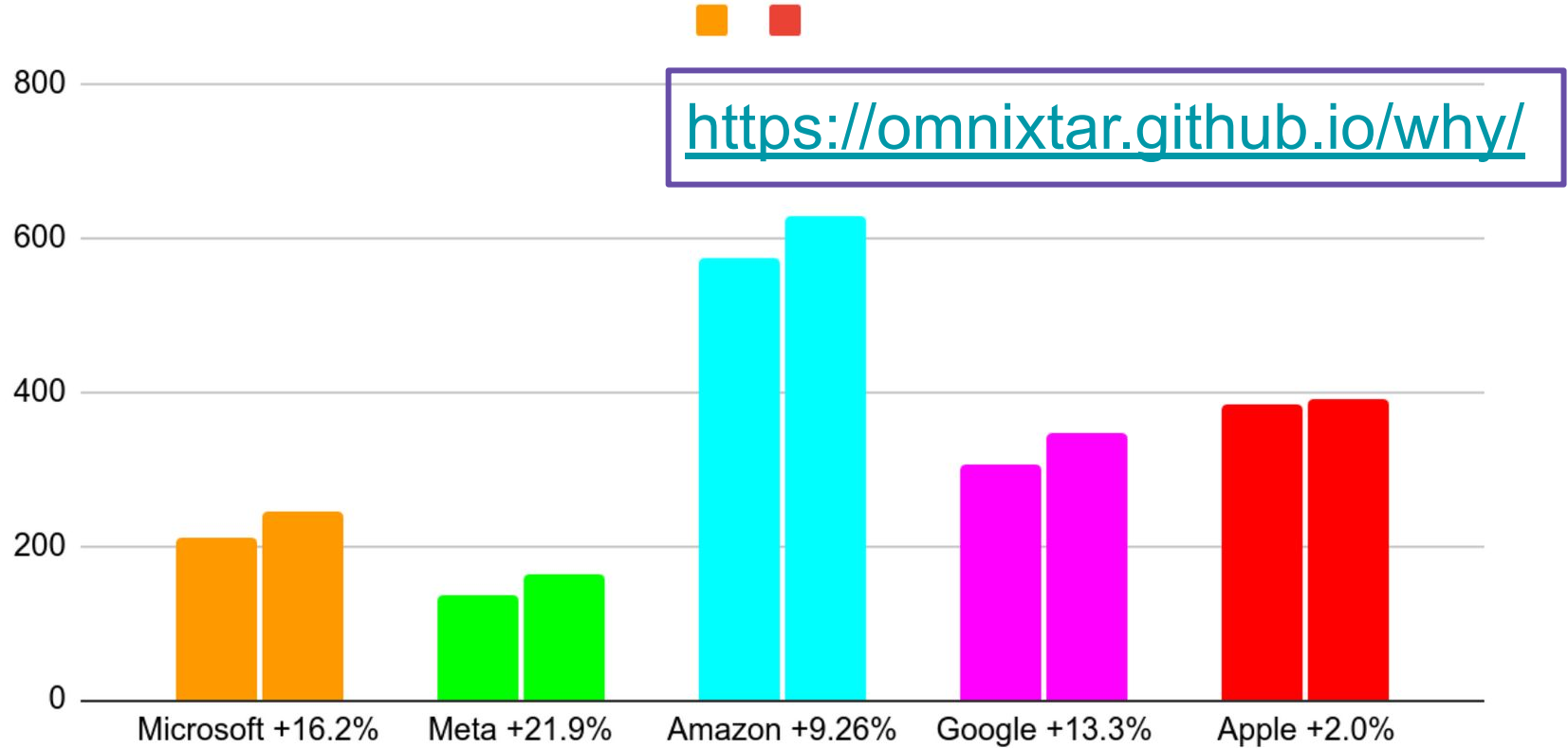
### 4. Metanarchy = Decentralised Autonomous Organizations (plus plus) = global governance structure based on decentralised transactions in the Metaverse

- “politically incorrect in English speaking countries” like the other M-word?
- start in “smaller countries” outside USA & China e.g. Bouncy Castle (cryptographic libraries):

*- On 18 October 2013, a not-for-profit association, the Legion of the Bouncy Castle Inc. was established in the state of Victoria, Australia, by the core developers and others to take*

# MMAGA Revenues 2023/24 (USD billions)

**Total 2024: USD 1.776 Trillion (+10.27%)**





Omni\*Web

<https://omnixtar.github.io/contract/>

## Omni\*Contract: Ownership & Rights of Use of Digital Asset (Source Code)

Like

- On the Separation of Disclosure and Royalties of the Source Code July 21, 2024

1. You, a human agent of a company or government agency, may read the source code without making payments to the author or authors, but if you execute this program on your own, we reserve the rights to claim royalties from you or your company. **MMAGA 2024 Revenues USD 1.8 trillion**
2. Your copy of source code shall be attached with at least one copy of the Agent and your own Omnihash, to authorise you the use of the source code. **Separation of Disclosure & Royalties (SDR)**  
You shall pay maximum penalties allowed by a legal court in your country for deploying the source code pertaining to clause (1).

```
>> s
```

```
← ► Array [{...}]
```

```
>> s
```

```
← ► Array [{...}, "EG86Y81yJg=="
```

```
>> f('hello h53: b64:')
```

“Chaining” or “Chained” (depending on grammar) properties:

1. Concatenation of strings.
2. Concatenation of functions or operations.

Use Hilbert’s Grand Hotel paradox to explain properties of hashcodes:

1. Room number is a hash number, derived from the Guest’s public key.
2. Each room has an “infinite cabinet”, with an infinite number of drawers. Each drawer is identified by a hash number, derived from the contents of documents in the drawer.

(Interesting research in abstract mathematics?)



```
793 function fgl_h53() {
794 global $S; $s = array_pop($S); $h = cyrb53($s, 0); $S[] = $h;
795 }
796 function cyrb53($str, $seed=0) {
797 $h1 = 0xdeadbeef ^ $seed;
798 $h2 = 0x41c6ce57 ^ $seed;
799 $h1 = i32($h1);
800 $h2 = i32($h2);
801 // echo "$h1 $h2\n";
802 for ($i = 0; $i < strlen($str); $i++) {
803 // $ch = $str.charCodeAt($i);
804 $ch = charCodeAt($str, $i);
805 // $h1 = Math.imul($h1 ^ $ch, 2654435761);
806 $h1 = i32(i32($h1 ^ $ch) * 2654435761);
807 // $h2 = Math.imul($h2 ^ $ch, 1597334677);
808 $h2 = i32(i32($h2 ^ $ch) * 1597334677);
809 // echo "$ch $h1 $h2\n";
810 }
811 $h1 = m32(i32($h1 ^ r32($h1,16)), 2246822507) ^ m32(i32($h2 ^ r32($h2,13)), 3266489909);
812 $h2 = i32(m32($h2 ^ r32($h2,16), 2246822507)) ^ i32(m32($h1 ^ r32($h1,13), 3266489909));
813
814 return 4294967296 * (2097151 & $h2) + r32($h1,0);
815 }
816
```

```
725 function fgl_b64(){
726 global $S; $s = array_pop($S); $h = bnToB64($s); $S[] = $h;
727 }
728
729 function bnToB64($bn) {
730 $a = gmp_init($bn);
731 $hex = gmp_strval($a,16);
732 if (strlen($hex) % 2) { $hex = '0' . $hex; }
733
734 $bin = [];
735 $i = 0;
736 while ($i < strlen($hex)) {
737 $d = hexdec(substr($hex, $i, 2));
738 $b = chr($d);
739 $bin[]=$b;
740 $i += 2;
741 }
742 return base64_encode(implode($bin));
743 }
744
745
746
747 // if (!Math.imul) Math.imul =
748 function m32($a, $b) {
```



(Pop Quiz: Tron MCP vs.  
CMP?) Decentralisation?

## Hilbert Hotel & Infinity Cabinet

Hilbert Hotel (1924)

Turing machine (1936)

Room number is a hash number.

Each room has a cabinet with infinite number of drawers.

Drawers are identified by a hash number, derived from the contents of documents in the drawer.

### Chained Hash Properties:

1. Concatenation of strings
2. Concatenation of hash functions

Discovered not Designed: Mathematical properties are discovered, by algorithms designed by programmers.

Recursive structures: Containing substructures – [hotel, rooms, cabinets, files, documents, texts] shown in JSON and DJSON.



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Omnihash = Hash for any type of digital asset (photos, documents, videos, animations, simulations, PROGRAM SOURCE CODE etc.) = Hash of DJSON

DJSON Decentralised JSON = JSON string (object) containing at least one Omnihash (recursive definition)

Omni\*Web: \* = anything in Linux, cannot be copyrighted in English speaking countries? (NVIDIA, OpenAI, etc, all has “Omni” products.)

Crypto-Metaprogramming. Links.

<https://omnixtar.github.io/djson/>

**Omni\*Web: Crypto-Metaprogramming (CMP) as alternative to Model-View-Controller; towards Metanarchy**

[https://www.youtube.com/watch?v=P\\_M3PVn9J7I](https://www.youtube.com/watch?v=P_M3PVn9J7I)

---

DJSON Decentralised JSON is a JSON object or its encoded string where at least one of the fields is an Omnihash, representing the owner of this JSON object.

- `["2025-10-24T14:25:28.207+0000", "like", "CXAGcRkevA==", "CXAGcRkevA==", "HymWBzfj9A==", {"repo": "https://github.com/omnixtar/omnixtar.github.io/", "contract": "https://omnixtar.github.io/contract/", "ghh": "https://github.com/omnixtar/omnixtar.github.io/commit/19bb258190d57d6246840bf8ccc8957ae880e341", "datetime": "2025-10-24T04:41:21.000Z"}]`
- Omnihash: DgV6\_qnujw==

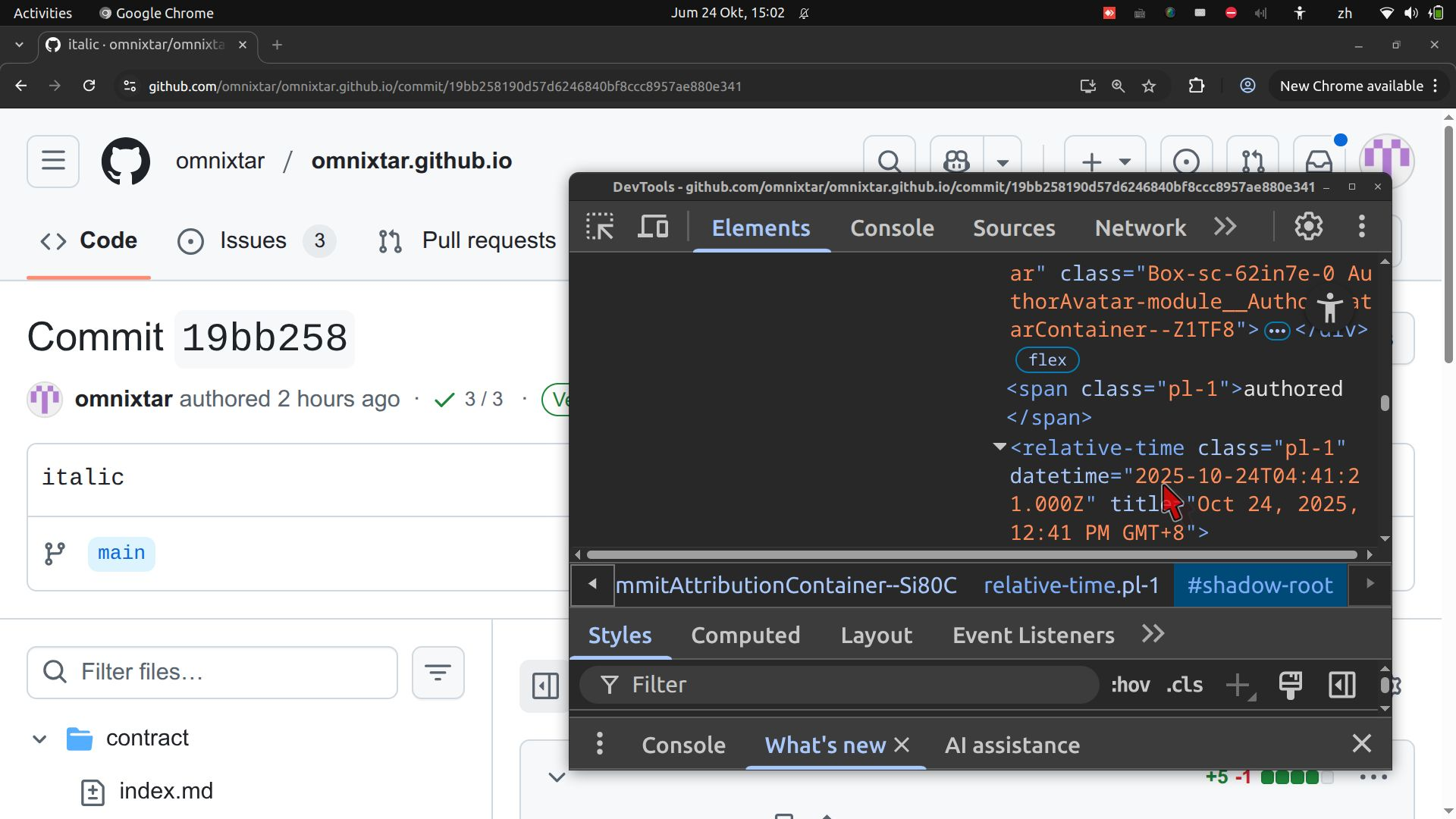
Try this yourself:

1. Press F12 to bring up browser console.
2. Run the following code:

```
omnistart()
j0=["2025-10-24T14:25:28.207+0000", "like", "CXAGcRkevA==", "CXAGcRkevA==", "HymWBzfj9A==", {"repo": "http
s.push(JSON.stringify(j0))
f('h53: b64: path:')
s[s.length-1]
```







## Commit 19bb258

omnixtar authored 2 hours ago · 3 / 3 ·

italic

main

Filter files...

contract

index.md

DevTools - github.com/omnixtar/omnixtar.github.io/commit/19bb258190d57d6246840bf8ccc8957ae880e341

Elements

Console

Sources

Network

```
ar" class="Box-sc-62in7e-0 AuthorAvatar-module__Authc arContainer--Z1TF8">...</div>
flex
authored

<relative-time class="pl-1"
datetime="2025-10-24T04:41:21.000Z" title="Oct 24, 2025,
12:41 PM GMT+8">
```

commitAttributionContainer--Si80C relative-time.pl-1 #shadow-root

Styles

Computed

Layout

Event Listeners

Filter

:hov .cls

Console

What's new

AI assistance

```
["2025-10-24T14:25:28.207+0000", "like",
 "CXAGcRKeV==", "CXAGcRKeV==", "HymWBzFj
9A==", {"repo": "https://github.com/omnix
tar/omnixtar.github.io/", "contract": "ht
tps://omnixtar.github.io/contract/", "gh
h": "https://github.com/omnixtar/omnixta
r.github.io/commit/19bb258190d57d624684
0bf8ccc8957ae880e341", "datetime": "2025-
10-24T04:41:21.000Z"}]
```

- Omnihash: DgV6\_qnujw==

1. The existence of (Omni)hash implies the input string concerned has been fed into a hash function to obtain the (Omni)hash.
2. A second party (anyone other than the first party) may feed the same input to the same hash function to obtain the same (Omni)hash, to verify the hash is correct, and therefore the first party has indeed performed step (1).
3. Step (2) implies *the input string is as intended* by the first party.
4. Step (3) is the default inference, as agreed by all parties concerned.

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r/Forth

## Search in r/Forth

Log In



# r/Forth

**+ Create Post**

Join

Hot ▾  ▾

**u/Alternative-Grade103** • 1 day ago

## Big Int Exponentiation

As of today, and after a few false starts, I now have exponentiation working for arrays holding big integers of any size up to limit of memory. That both with and without modulo, on any width stack. Also a word to solve greatest common factor on said arrays.



9



0



Share



u/Tradu APAC • Promoted

**Start with Tradu and get our free\* TradingView Premium! Save up to \$67.95 /month. Benefit from this seamless integration at no cost, no**

**Forth - The programming language for low-fat computing.**

"In particular you need to avoid writing code for situations that will never arise in practice. You need to avoid writing code to handle a general problem that you are never going to encounter. I don't need to solve the general problem when I only have to solve these specific cases." -- Chuck Moore



Created Jul 1, 2008



Public

1.2K

## Forthers

26

### Weekly contributions







# r/programming

+ Create Post Join

Best



u/Enigma\_1769 • 1mo ago  
**Vibe Coding Is Creating Braindead Coders**

1.8K 301 comments 1 award Share Report



u/Old-Resolve-1036 • Promoted  
**The record-breaking deal on Dragon Den.**  
nextadsagency.com

Vote 0 comments Share Report

**programming**  
Computer Programming  
Created Feb 28, 2006  
Public  
**336K** **4.9K**  
Weekly visitors Weekly contributions

6 million members visible from app search field



×



## Share

```
>>> driver.get('https://www.reddit.com/r/forth')
```

×



r/Forth

## Search in r/Forth

Log In



u/A\_kirisaki • 11 days ago

...

39 

19



Share



u/Mak4th • 21 days ago

...

<https://github.com/mak4444/tc-riscv-forth> This is <https://github.com/JimMarshall35/riscv-forth> but building by target compiler means. For trace the compilation process, use the F7\_ED command [https://github.com/mak4444/tc-riscv-forth/blob/main/riscv/Meta/riscv32\\_4th#L227](https://github.com/mak4444/tc-riscv-forth/blob/main/riscv/Meta/riscv32_4th#L227)



9



6



hare

[https://www.reddit.com/r/Forth/comments/1o2z76d/ray\\_tracing\\_that\\_was\\_anything\\_but\\_a\\_weekend\\_in/](https://www.reddit.com/r/Forth/comments/1o2z76d/ray_tracing_that_was_anything_but_a_weekend_in/)

```
>>> driver.get('https://www.reddit.com/r/forth')
```



I realized that while I was doing it. But I figured it was fine for this time. It seemed like an extension anyway.

↑ 1 ↓ Reply Award Share ...



Specific\_Cheek5325 • 9d ago

I enjoyed reading the blog post. Really cool man :)

⊖ ↑ 2 ↓ Reply Award Share ...



A\_kirisaki OP • 9d ago



↑ 2 ↓ Reply Award Share ...



Wootery • 3d ago

Very cool, thanks for posting.

It would be interesting to see the performance difference between gforth-fast (which enables its primitive JIT, a.k.a. *dynamic superinstructions*) and gforth using traditional code.

↑ 2 ↓ Reply Award Share ...

DevTools - www.reddit.com/r/Forth/comments/1o2z76d/ray\_tracing\_that\_wa... - □ ×

Elements Console >> 2 3 2 ⚙️ ⋮

```
9 days ago" class="relative" award-count=
"0" aria-hidden="false">...</shreddit-
comment>
<shreddit-comment-tree-ad comment-id="t1_n
k44rg3" class="-mt-md" should-track-
position>...</shreddit-comment-tree-ad>
...
<shreddit-comment author="Wootery"
thingid="t1_nk44rg3" depth="0" permalink=
"/r/Forth/comments/1o2z76d/comment/nk44rg
3/" reload-url="/svc/shreddit/comment/t1_n
k44rg3?depth=0&subredditName=Forth" score=
"2" postId="t3_1o2z76d" content-type="tex
t" previous-actions-feature arialabel="Com
ment from Wootery 3 days ago" class="relat
ive" award-count="0" aria-hidden="false">
...</shreddit-comment>
</shreddit-comment-tree>
</faceplate-batch>
</div>
</main>
```

lit-comment-tree#comment-tree.mt-sm shreddit-comment.relative

Styles Computed Layout Event Listeners >>

Filter :hov .cls + 🗑️ 📏

⊖ ↑ 2 ↓ Reply Award Share ...

 A\_kirisaki OP • 9d ago



↑ 2 ↓ Reply Award Share ...

shreddit-comment.relative 641.87 × 174.53



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DevTools - www.reddit.com/r/Forth/comments/1o2z76d/ray\_tracing\_that\_wa...

Elements Console >> 2 3 2

previous-actions+feature-attributes+Com

ment from  
ive" award  
...</shred

><shreddit-  
thingid="t  
"/r/Forth/  
3/" reload  
k44rg3?dep  
"2" postid  
t" previou  
ment from  
ive" award  
...</shred

</shreddit-c  
</faceplate-ba  
</div>  
</main>

><div id="right-si  
restore class="ri  
[316px] xs:max-w-

lit-comment-tree#comment-tree

Styles Computed Layout

Filter

- Add attribute
- Edit attribute
- Edit as HTML
- Duplicate element
- Delete element
- Cut
- Copy
- Paste
- Hide element
- Force state
- Break on
- Expand recursively
- Collapse children
- Capture node screenshot
- Scroll into view
- Focus
- Badge settings
- Store as global variable
- Ask AI



⊖ ↑ 2 ↓ Reply Award Share ...

 A\_kirisaki OP • 9d ago



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↑ 2 ↓ Share ...

- Open link in new tab
- Open link in new window
- Open link in incognito window
- Save link as...
- Copy link address
- Inspect



Wootery

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↑ 2 ↓ Reply Award Share ...

Elements Console >> 2 3 2

```
<div class="flex flex-row items-center overflow-hidden author-name-meta">
 <faceplate-tracker source="post_detail" action="click" noun="comment_author" class="contents">
 ...
 Wootery

</div>
</faceplate-tracker>
</div>
<div slot="content"> ... </div>
```

a.truncate.font-bold.text-neutral-content-strong.text-12.focus-visible

Styles Computed Layout Event Listeners >>

Filter :hov .cls +

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↑ 2 ↓ Reply Award Share ...

 OMNI\*WEB-USER-X • 3d ago

Lorem ipsum blah blah blah

Lorem ipsum blah blah blah `gforth-fast` Lorem ipsum blah blah blah *dynamic superinstructions* Lorem ipsum blah blah blah

↑ 2 ↓ Reply Award Share ...

DevTools - www.reddit.com/r/Forth/comments/1o2z76d/ray\_tracing\_that\_wa...

Elements Console >> 2 3 2

```
</div>
</div>
<div class="md text-14-scalable rounded-2 pb-2xs overflow-hidden" id="t1_nk44rg3-comment-rtjson-content" slot="comment">
 <div id="t1_nk44rg3-post-rtjson-content" class="py-0 xs:mx-xs mx-2xs max-w-full scalable-text" style="--emote-size: 20px">
 <p>Lorem ipsum blah blah blah</p>
 <p>
 "Lorem ipsum blah blah blah"
 <code>gforth-fast</code>
 "Lorem ipsum blah blah blah"
 dynamic superinstructions
 "Lorem ipsum blah blah blah" == $0
 </p>
 </div>
</div>
```

n-content.py-0.xs\;mx-xs.mx-2xs.max-w-full.scalable-text p (text)

Styles Computed Layout Event Listeners >>

Filter :hov .cls +

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DevTools - www.reddit.com/r/Forth/comments/1o2z76d/ray\_tracing\_that\_wa... - □ ×

Elements Console >> 4 3 28 ⚙️ ⋮

⏏️ 🔍 top ▾ 👁️ Filter Default levels ▾

28 Issues: 28 | 1 hidden ⚙️

```
> j0={u:document.querySelector('a.truncate')
[16].innerHTML, c:document.querySelector('div.md')
[17].innerText,
t:document.querySelector('time.text-12')
[17].getAttribute('datetime')}
}

< {u: 'OMNI*WEB-USER-X', c: 'Lorem ipsum blah blah b
lah\n\nLorem ipsum blah blah ...namic superinstructi
onsLorem ipsum blah blah blah', t: '2025-10-18T09:
14:37.921Z'}

> j0={u:document.querySelector('a.truncate')
[16].innerHTML, c:document.querySelector('div.md')
[17].innerText,
t:document.querySelector('time.text-12')
[17].getAttribute('datetime'), h:'H-xchGCVBg='}
}

< {u: 'OMNI*WEB-USER-X', c: 'Lorem ipsum blah blah b
lah\n\nLorem ipsum blah blah ...namic superinstructi
onsLorem ipsum blah blah blah', t: '2025-10-18T09:
14:37.921Z', h: 'H-xchGCVBg='}

>
```

```
j0={ u:document.querySelectorAll('a.truncate')[16].innerHTML,
c:document.querySelectorAll('div.md')[17].innerText,
t:document.querySelectorAll('time.text-12')[17].getAttribute('datetime'),
h:'H-xchGCVBg==' }
```

```
{u: 'OMNI*WEB-USER-X', c: 'Lorem ipsum blah blah blah\n\nLorem ipsum blah
blah ...namic superinstructionsLorem ipsum blah blah blah', t:
'2025-10-18T09:14:37.921Z', h: 'H-xchGCVBg=='}
```

```
{"http":["ctmp:","Graph/hg/tmp","fgc:","trim:","dup:","h53:","b64:","path:","Graph/hg
","swap:","2","msss:","w:",";"]} // php phos.php http
```

```
hongwu@hongwu-Latitude-5480:/var/www/dmeta/oxm/auth$ ls -tl Graph/hg|head
total 1064
-rw-rw-r-- 1 hongwu hongwu 183 Okt 23 16:33 AQCuXRWuKQ==
```





⊖ ↑ 2 ↓ ⬆ Reply ⬇ Award ➦ Share ...



A\_kirisaki OP • 9d ago



↑ 2 ↓ ⬆ Reply ⬇ Award ➦ Share ...

<https://www.reddit.com/r/Forth/comments/1o2z76d/comment/nk44rg3/>



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Lorem ipsum blah blah blah `gforth-fast` Lorem ipsum blah blah blah *dynamic superinstructions* Lorem ipsum blah blah blah

↑ 2 ↓ ⬆ Reply ⬇ Award ➦ Share ...

```

hongwu@hongwu-Latitude-5480:/var/www/dmeta/oxm/auth$ ls -tl Graph/hg|head -2
total 1068
-rw-rw-r-- 1 hongwu hongwu 64 0kt 23 19:39 HwCnRhZKIw==
hongwu@hongwu-Latitude-5480:/var/www/dmeta/oxm/auth$ cat Graph/hg/HwCnRhZKIw\=\= ;echo
https://www.reddit.com/r/Forth/comments/1o2z76d/comment/nk44rg3/

hongwu@hongwu-Latitude-5480:/var/www/dmeta/oxm/auth$ ls -tl Graph/hg|head -2
total 1072
-rw-rw-r-- 1 hongwu hongwu 95 0kt 23 19:58 GWJkI9-B7w==
hongwu@hongwu-Latitude-5480:/var/www/dmeta/oxm/auth$ cat Graph/hg/GWJkI9-B7w\=\= ;echo
https://www.reddit.com/r/Forth/comments/1o2z76d/ray_tracing_that_was_anything_but_a_weekend_in/

```

DJSON for like, share, follow, etc, on HwCnRhZKIw==, GWJkI9-B7w==

- [\["2025-02-11T14:25:28.207+0000", "like", "CXAGcRKEvA==", "CXAGcRKEvA==", "HymWBzfj9A==", "HymWBzfj9A== s: x:"\]](#)
- ["2025-02-11T14:25:28.207+0000", "like", "CXAGcRKEvA==", "GWJkI9-B7w==", "HwCnRhZKIw==", "HwCnRhZKIw== like: s: x:"]
- ["2025-02-11T14:25:28.207+0000", "share", "CXAGcRKEvA==", "GWJkI9-B7w==", "HwCnRhZKIw==", "HwCnRhZKIw== share: s: x:"]
- ["2025-02-11T14:25:28.207+0000", "follow", "CXAGcRKEvA==", "GWJkI9-B7w==", "HwCnRhZKIw==", "HwCnRhZKIw== follow: s: x:"]



r/Forth • 11d ago  
A\_kirisaki  
**Ray Tracing That Was Anything \*But\* a Weekend — in Forth**

# kirisaki/forth-raytracing



An implementation of ray-tracing in Forth.

1 Contributor

0 Issues

2 Stars

0 Forks



<https://github.com/kirisaki/forth-raytracing>

### New to Reddit?

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 Continue with Email

 Continue With Phone Number

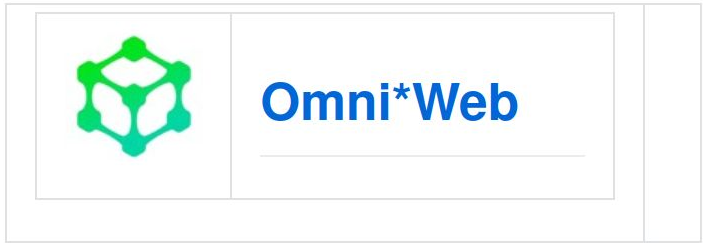
By continuing, you agree to our [User Agreement](#) and acknowledge that you understand the [Privacy Policy](#).

 r/allinpodofficial • 10d ago

### Paging crypto czar, this is all normal stuff right?

478 upvotes · 219 comments





## DJSON: Decentralised JSON

Like

DJSON Decentralised JSON is a JSON object or its encoded string where at least one of the fields is an Omnihash, representing the owner of this JSON object.

- `[ "2025-02-11T14:25:28.207+0000", "like", "CXAGcRKevA==", "CXAGcRKevA==", "HymWBzfj9A==", "HymWBzfj9A== s: x:" ]`

In the DJSON above, the fields are:

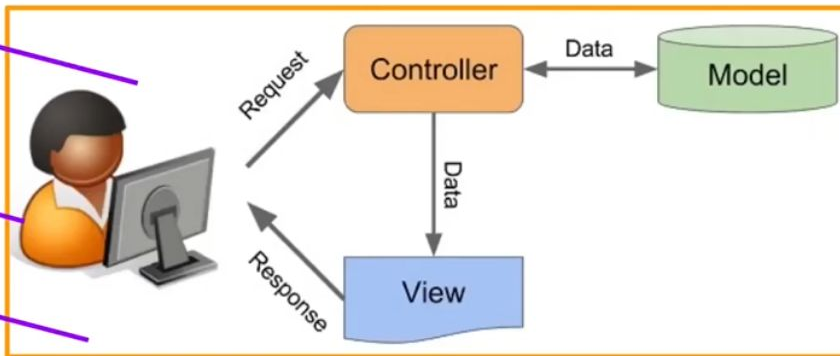
- timestamp, action, current\_user\_ID, prev\_msg\_owner, doc\_hash, messages



Omni\*Web

Crypto-  
Meta-  
Programming  
(CMP)

[https://www.youtube.com/watch?v=P\\_M3PVn9J7I](https://www.youtube.com/watch?v=P_M3PVn9J7I)



Omni\*Web: Crypto-Metaprogramming (CMP) as alternative to Model-View-Controller; towards Metanarchy



MI4 Metaprogramming in Forth  
56 subscribers



Share



Download



Clip



All

Computer programming

Computer Science



Singapore's Tharman Destroys  
an Arrogant BBC Host

## What can CMP & FORTH do?

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*( President Trump to arrive in Kuala Lumpur on 26 October 2025. Will 3-letter-agencies be watching? ....)*

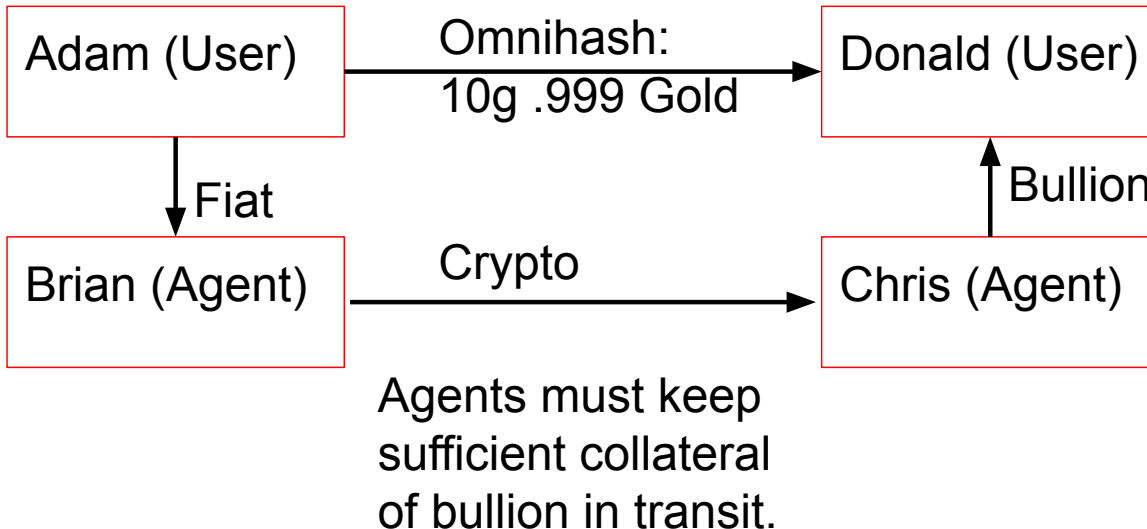
### 4. Metanarchy = Decentralised Autonomous Organizations (plus plus) = global governance structure based on decentralised transactions in the Metaverse

- “politically incorrect in English speaking countries” like the other M-word?
- start in “smaller countries” outside USA & China e.g. Bouncy Castle (cryptographic libraries):

*- On 18 October 2013, a not-for-profit association, the Legion of the Bouncy Castle Inc. was established in the state of Victoria, Australia, by the core developers and others to take*

## HBC: Omnihash Bullion Coins

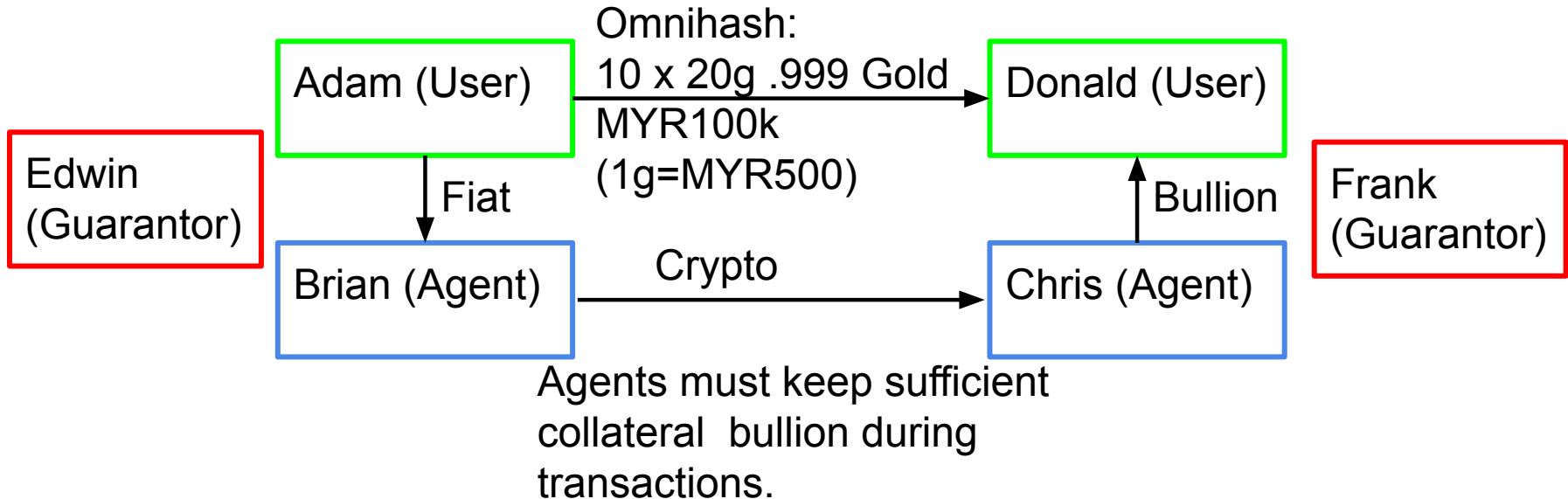
1. HBC: Omnihash Bullion Coins (Physical Gold/Silver),
2. Trispecies Monetary System: Bullion, Fiat, Cryptocurrencies
3. Liberalism vs. “Omnipotent Government” (OGism!!)





## HBC: Omnihash Bullion Coins

1. HBC: Omnihash Bullion Coins (Physical Gold/Silver),
2. Trispecies Monetary System: Bullion, Fiat, Cryptocurrencies
3. Liberalism (Metanarchy ) vs. “Omnipotent Government”





Hashcode

```
hongwu@hongwu-Latitude-5480:/var/www/dmeta/oxm/auth$ cat Graph/hg/FtyMvMgeoA\=\= ;echo
{"a":"1","t":"2025-10-16 09:04:43.683200","n":"Adam in MY wish to send MYR 100k to Donald in TH.","s
n":"1","job":"payment","n2":"variables","MYR":"currency","amount":"100k","sender":"Adam","recipient
:"Donald"}
```

Hash of JSON is FtyMvMgeoA==

```
hongwu@hongwu-Latitude-5480:/var/www/html/oxw/auth/Graph/dmeta$ \
> cat H-xchGCVBg\=\=/BtiFODs5CQ\=\= ;echo
["2025-10-18T00:10:43.684+0000","reply_to","H-xchGCVBg==","G5bClrzsVg==",
"Ge6NiA5cLw==","Graph\/hg\/FtyMvMgeoA=="]
```

User Adam H-xchGCVBg== sends FtyMvMgeoA== to User Donald G5bClrzsVg==

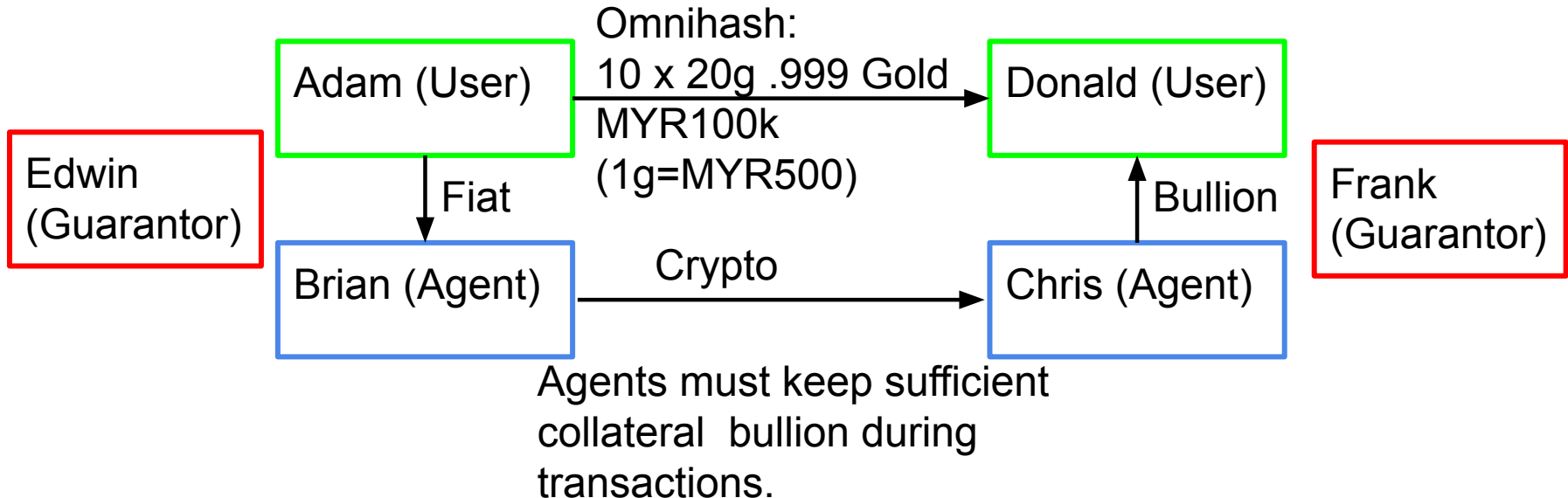
```
hongwu@hongwu-Latitude-5480:/var/www/html/oxw/auth/Graph/dmeta$ \
> cat H-xchGCVBg\=\=/CxenfQAHxw== ;echo
["2025-10-18T00:58:01.196+0000","reply_to","G5bClrzsVg==","H-xchGCVBg==",
"BtiFODs5CQ==","ACCEPT chris agent apk:"]
```

User Donald replied ACCEPT and appointed User Chris as his agent.

- a. Adam in MY (Malaysia) wish to send MYR 100k to Donald in TH (Thailand).
- b. Adam sends message to Brian (Agent in MY).
- c. Brian shows gold 20g worth MYR 10k via live camera feed and weighing machine, generates sensor hash code.
- d. Brian sends message to Christ (Agent in TH)
- e. Adam sends Brian 10 batches of MYR 10k, in MYR, by cash or local bank transfer.
- f. Brian sends Chris 10 batches of MYR 10k, in cryptocurrencies USDT etc.
- g. Chris sends Donald 10 batches of THB 77.5k, by cash or local bank transfer.
- h. Guarantors Edwin and Frank (or a “chain” of Guarantors) may provide their hashcodes to all the parties above, to be included in DJSON for verifying each steps.
- i. All parties concerned “may” choose to disclose the transactions to local authorities.

## HBC: Omnihash Bullion Coins

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# Overview

Introduction (5 min)

Fundamentals (3 min)

What can CMP & FORTH do?

- From Web-based Omni\*Web to FORTH Triple-less Card Computer (TCC)
- Artificial Intelligence & Beyond?
- (4 min)

Phoscript-Linux/C-FORTH Sandwich Model (5 min)

Conclusions (3 min)

***Triple-less Card Computer  
(Domain-Kernel-Database-less)***

***Phoscript-Linux/C-FORTH Sandwich  
Model***

French Revolution, Ownership of  
Property & Decentralised Digital Assets

**Omnihash & DJSON Decentralised  
JSON**

Hash as Pointer & Mask, encrypt hash  
with PBK

Chained Hash Properties  
(String & Function)

DJSON Decentralised JSON is a JSON object or its encoded string where at least one of the fields is an Omnihash, representing the owner of this JSON object.

- ```
[ "2025-02-11T14:25:28.207+0000", "like", "CXAGcRkevA==", "CXAGcRkevA==", "HymWBzfj9A==",  
{"repo": "https://github.com/omnixtar/omnixtar.github.io/", "contract": "https://omnixtar.github.io/  
contract/", "ghh": "https://github.com/omnixtar/omnixtar.github.io/  
commit/19bb258190d57d6246840bf8ccc8957ae880e341", "datetime": "2025-10-24T04:41:21.000Z"} ]
```

FORTH predated C-style compilation programs.

Phoscript can become a bridge between C-style & FORTH?

Phoscript-Linux/C-FORTH Sandwich Model

1. Minimal VM: Linux Java I2P Apache php
2. Sandwich Model (user space programs):
 - a. Top: P2C (Phos to C) P2J (Phos to Java) P2PHP (Phos to PHP)
[start: 0, end: replace host language functions]
 - b. Middle: C-lib, J-lib (Java), PHP-lib in .o (object);
[start: 100%, end: replaced by Top & Bottom]
 - c. Bottom: need equivalent F-lib (FORTH)
[start: 0, end: replace Middle layer host language libraries]
3. Replace Kernel? (Need experience from Phase 2)
 - a. Use P2C to replace C code with Phoscript code.
 - b. Write FORTH code to replace low level C code.

```

1272 function FGL($a)
1273 {
1274     global $argv, $S, $SS, $xk, $xs, $SC, $SL, $CDW, $BV;
1275     $a = preg_replace('/\\s+/', ' ', $a);
1276     $a = explode(' ', trim($a));
1277     $SS[] = array(0, $a);
1278 }
1293
1294 do {
1295
1296     // 20230609 Exception handling / errors etc.
1297     if (gettype(end($S))=="string") {
1298         if (substr(end($S),0,9)=="__ERROR__") { // exit; // break;
1379
1380             call_user_func("fgl_" . $fn);
1381
1382             } else {
1383                 if ($v == '===') {
1384                     $S[] = array_pop($S) === array_pop($S);
1385                 } else {
1386                     $S[] = $v;
1387                 }
1388             }
1389         }
1390     } while ($vk < $xl); // LOL $xk++ but $vk is not?
1538
1539     array_pop($SS);
1540 }
1541
1542

```

3 4 +
Phoscript
Metashell

1

Inverse Shunting
Yard Algorithm
(ISYA)

Infix: 3 + 4
C, C++, PHP, Python
Java, JavaScript

Sandwich API
Model

(internal operations
of compilers,
interpreters)

2

Shunting Yard
Algorithm (SYA)



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{"repo": "https://github.com/omnixtar/omnixtar.github.io/", "contract": "https://omnixtar.github.io/
contract/", "ghh": "https://github.com/omnixtar/omnixtar.github.io/
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