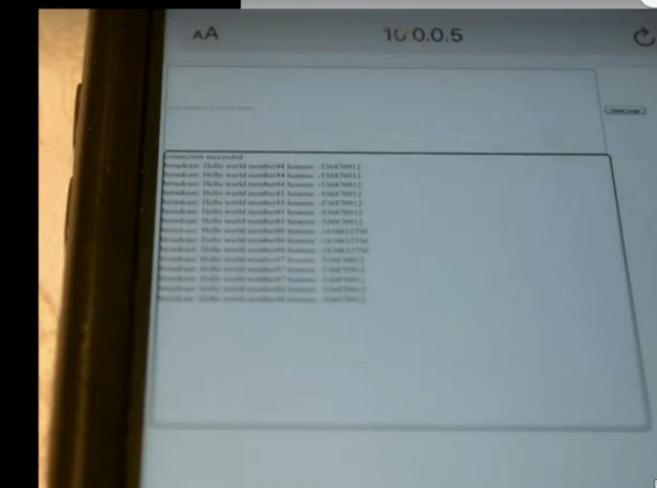


Heltec ESP32 LoRa V2



"Fun with BlockChain, IoT, and the web (or something)" -- redo of a Thunderplains2020 Lightning Talk



localhost/phpmyadmin/sql.php?server=1&db=scandalux&table=BH1750&pos=0&token=b7c4f8aa9790cb46dd83328aa31cd4ea

phpMyAdmin

Recent Favorites

New information_schema mysql performance_schema scandalux New BH1750 sys tempid test time

Server: localhost > Database: scandalux > Table: BH1750

Browse Structure SQL Search Insert Export Import Privileges Operations Triggers

	ID	lux	date
<input type="checkbox"/>	497	27	2021-02-01 03:47:08
<input type="checkbox"/>	498	27	2021-02-01 03:47:11
<input type="checkbox"/>	499	27	2021-02-01 03:47:12
<input type="checkbox"/>	500	27	2021-02-01 03:49:47
<input type="checkbox"/>	501	27	2021-02-01 03:49:51
<input type="checkbox"/>	502	27	2021-02-01 03:49:52
<input type="checkbox"/>	503	27	2021-02-01 03:49:53
<input type="checkbox"/>	504	27	2021-02-01 03:49:57
<input type="checkbox"/>	505	27	2021-02-01 03:49:59
<input type="checkbox"/>	506	27	2021-02-01 03:50:00
<input type="checkbox"/>	507	27	2021-02-01 03:50:01
<input type="checkbox"/>	508	27	2021-02-01 03:50:06
<input type="checkbox"/>	509	27	2021-02-01 03:50:07
<input type="checkbox"/>	510	27	2021-02-01 03:50:09
<input type="checkbox"/>	511	27	2021-02-01 03:50:10
<input type="checkbox"/>	512	27	2021-02-01 03:50:16
<input type="checkbox"/>	513	27	2021-02-01 03:50:17
<input type="checkbox"/>	514	27	2021-02-01 03:50:19
<input type="checkbox"/>	515	27	2021-02-01 03:50:23
<input type="checkbox"/>	516	27	2021-02-01 03:50:24
<input type="checkbox"/>	517	27	2021-02-01 03:50:25
<input type="checkbox"/>	518	27	2021-02-01 03:50:26
<input type="checkbox"/>	519	27	2021-02-01 03:50:30
<input type="checkbox"/>	520	27	2021-02-01 03:50:31
<input type="checkbox"/>	521	27	2021-02-01 03:50:33

Identity Woman

mmADT any(processor,language,storage)

Kim Hamilton Duffy

Marko Rodriguez

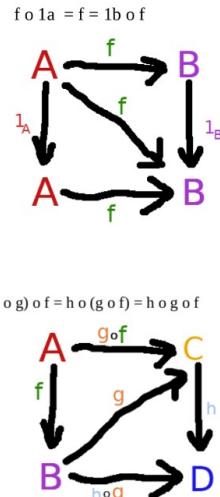
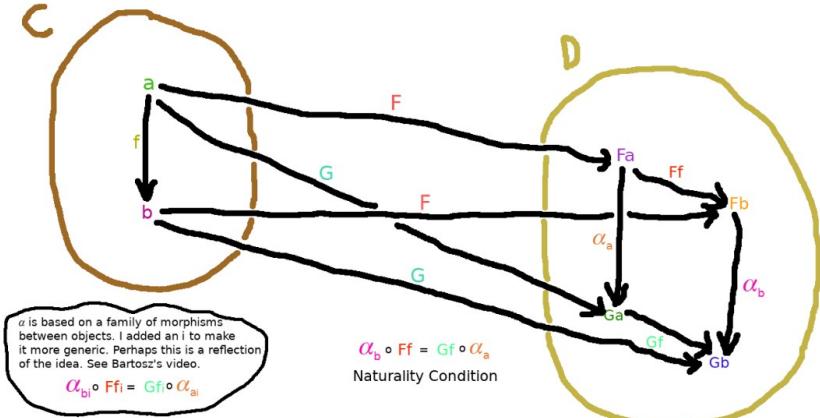
Friend: LoRa Drone Tracking

Ryan Wisnesky

Cassandra

CQL

Hyperledger Indy



EthDenver 2021

Daniel G. Helm

SkyDB

Ceramic

Cambria

Dragon

“Ceramic is a decentralized protocol that enables the creation of mutable, tamper-resistant, smart documents on a worldwide public network. Smart documents are achieved through a combination of digital signatures, document update rules, and blockchain anchoring.”

<https://github.com/ceramicnetwork/ceramic/blob/master/SPECIFICATION.md>

Go through :: <https://developers.ceramic.network/build/quick-start/>

Possibly use the web interface:

<https://github.com/ceramicstudio/idx-assignment>

```
{  
  "$id": "https://example.com/arrays.schema.json",  
  "$schema": "http://json-schema.org/draft-07/schema#",  
  "description": "A representation of a person, company, organization, or place",  
  "type" : "object",  
  "title" : "basicTranscript",  
  "properties" : {  
    "notes" : {  
      "type": "array",  
      "items": {  
        "type": "object",  
        "properties": {  
          "name": {  
            "type": "string",  
            "maxLength": 150  
          },  
          "description": {  
            "type": "string",  
            "maxLength": 420  
          },  
          "issuanceDate": {  
            "type": "string",  
            "format": "date",  
            "maxLength": 24  
          },  
          "items": {"$ref": "#/definitions/transcriptJWE"}  
        }  
      }  
    }  
  },  
  "definitions": {  
    "transcriptJWE": {  
      "type": "object",  
      "properties": {  
        "protected": { "type": "string" },  
        "iv": { "type": "string" },  
        "ciphertext": { "type": "string" },  
        "tag": { "type": "string" },  
        "aad": { "type": "string" },  
        "recipients": {  
          "type": "object",  
          "items": {  
            "type": "object",  
            "properties": {  
              "header": { "type": "object" },  
              "encrypted_key": { "type": "string" }  
            },  
            "required": [ "header", "encrypted_key" ]  
          }  
        }  
      },  
      "required": [ "protected", "iv", "ciphertext", "tag" ]  
    }  
  }  
},
```

CIP-79 : CREATE, READ, UPDATE, DELETE

<https://github.com/ceramicnetwork/CIP/blob/main/CIPs/CIP-79/CIP-79.md>

CREATE

```
const threeID = async (key: string): Promise<string> => {  
  const doc = await window.ceramic?.createDocument('tile', {  
    metadata: {  
      controllers: ['did:key:' + key], // secp256r1 did:key  
      family: '3id'  
    },  
    content: {  
      publicKeys: {  
        "key" : key, // secp256r1 public key  
      }  
    },  
    deterministic: true  
  })  
  return `did:3:${doc?.id}`  
}
```

Work in Progress...

<https://github.com/bshambaugh/key-did-provider-secp256r1>



READ

develop

Js-ceramic / packages / key-did-resolver / src / secp256r1.ts / <> Jump to ↗

Go to file

...



bshambaugh changed publicKeyJwK to publicKeyJwk in accordance with the did spec ...

Latest commit 929ca61 4 days ago



1 contributor

51 lines (47 sloc) | 1.44 KB

Raw Blame



```
1 import * as u8a from 'uint8arrays'
2 import multicodec from 'multicodec'
3 import multibase from'multibase'
4
5 /**
6  * Constructs the document based on the method key
7 */
8 export function keyToDidDoc (pubKeyBytes: Uint8Array, fingerprint: string): any {
9   const did = `did:key:${fingerprint}`
10  const keyId = `${did}#${fingerprint}`
11  const key = pubKeyBytesToXY(pubKeyBytes);
12  return {
13    id: did,
14    verificationMethod: [
15      id: keyId,
16      type: 'JsonWebKey2020',
17      controller: did,
18      publicKeyJwk: {
19        kty: "EC",
20        crv: "P-256",
21        x: key.xm,
22        y: key.ym,
23      },
24    ],
25    authentication: [keyId],
26    assertionMethod: [keyId],
27    capabilityDelegation: [keyId],
28    capabilityInvocation: [keyId],
```

Ceramic Network:

<https://www.ceramic.network/>

<https://developers.idx.xyz/learn/welcome/>

<https://developers.ceramic.network/learn/welcome/>

Integrating Ceramic + IDX + SkyDB

<https://www.youtube.com/watch?v=-Y36JvYXwrw> (SkyDB + IDX Workshop : GitCoin Media)

<https://github.com/ceramicstudio/web-playground> (GitHub Repository)

React App With SkyNet:

<https://www.youtube.com/watch?v=TDiLdHQidBE>

(Built to Explore Kickoff Session : GitCoin Media)

<https://github.com/SkynetHQ/skynet-workshop> (GitHub Repository)

<https://siasky.net/developers> (Developer Website)

Ockam is about 3 Things:

End-to-end encrypted, mutually authenticated secure channels.

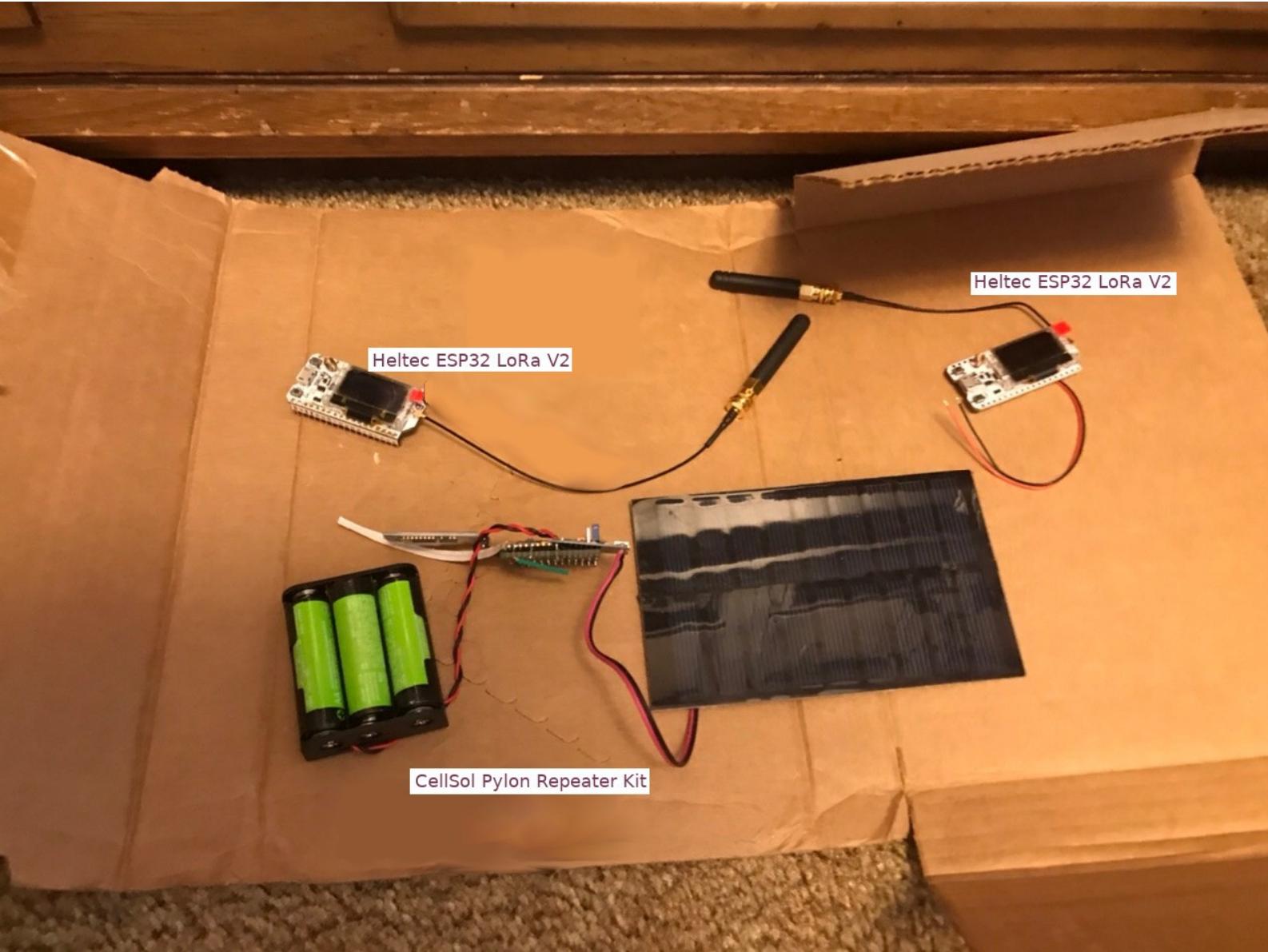
Identity and Key Lifecycle Management

Attribute-based Access Control with Credentials that Support Selective Disclosure.

Across machine types, across programming languages.

Mrinal Wadhwa @mrinal (CTO at <https://www.ockam.io/>)

Verifiable Credentials, have been thus far too heavy for the devices that Ockam wants to support.



Options for Extending the Range of a LoRa Module

Connect it to a Satellite Network

TinyGS: LoRa Satellite Ground Station Network Software

<https://github.com/G4lile0/tinyGS>

Connect it to the Helium Network

LongFi Ardunio

<https://github.com/helium/longfi-arduino>

Connect it to a Repeater

CellSol

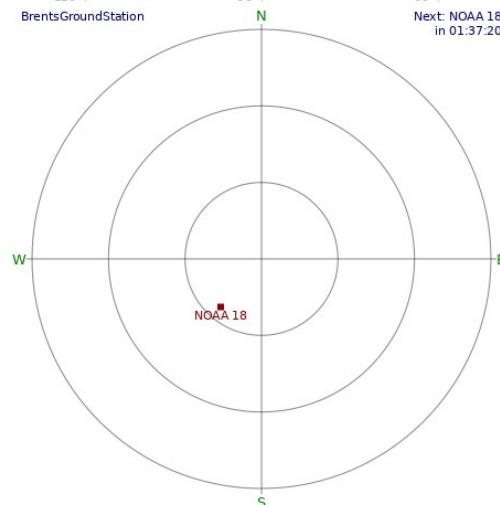
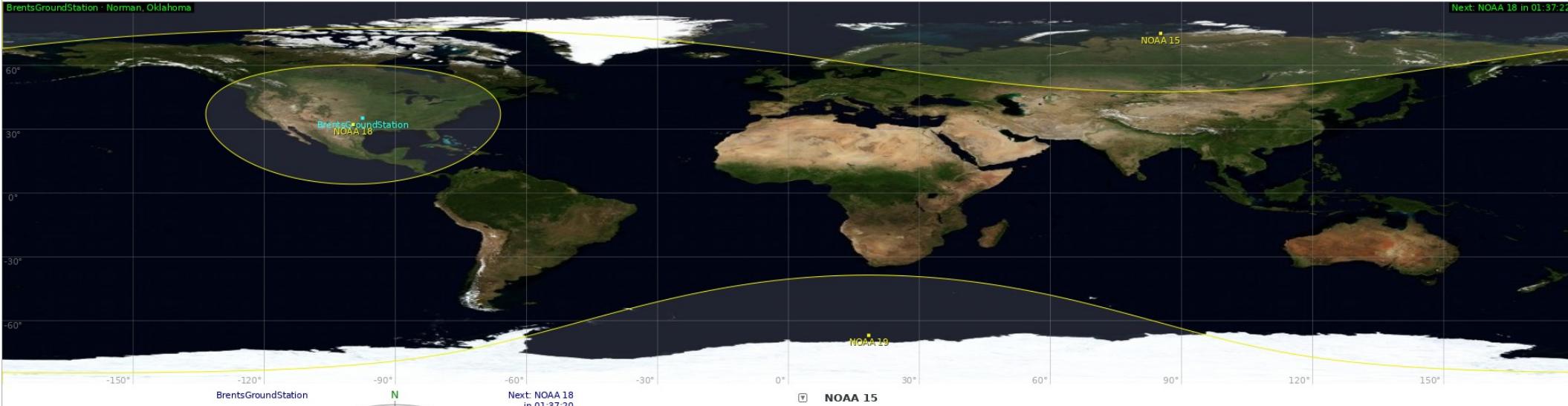
<https://www.f3.to/cellsol/about-cellsol/user-guide/>



2021/04/19 04:01:15

BrentsGroundStation · Norman, Oklahoma

Next: NOAA 18 in 01:37:22

**NOAA 15**

Azimuth : 359.34°
Elevation : -30.05°
Slant Range : 7800 km
Range Rate : 4.792 km/sec
Next Event : AOS: 2021/04/19 12:33:32
SSP Loc. : NQ24KX
Footprint : 6115 km
Altitude : 810 km
Velocity : 7.459 km/sec
Doppler@100M : -1598 Hz
Sig. Loss : 150.24 dB
Sig. Delay : 26.02 msec
Mean Anom. : 9.69°
Orbit Phase : 13.63°
Orbit Num. : 19280
Visibility : Daylight

