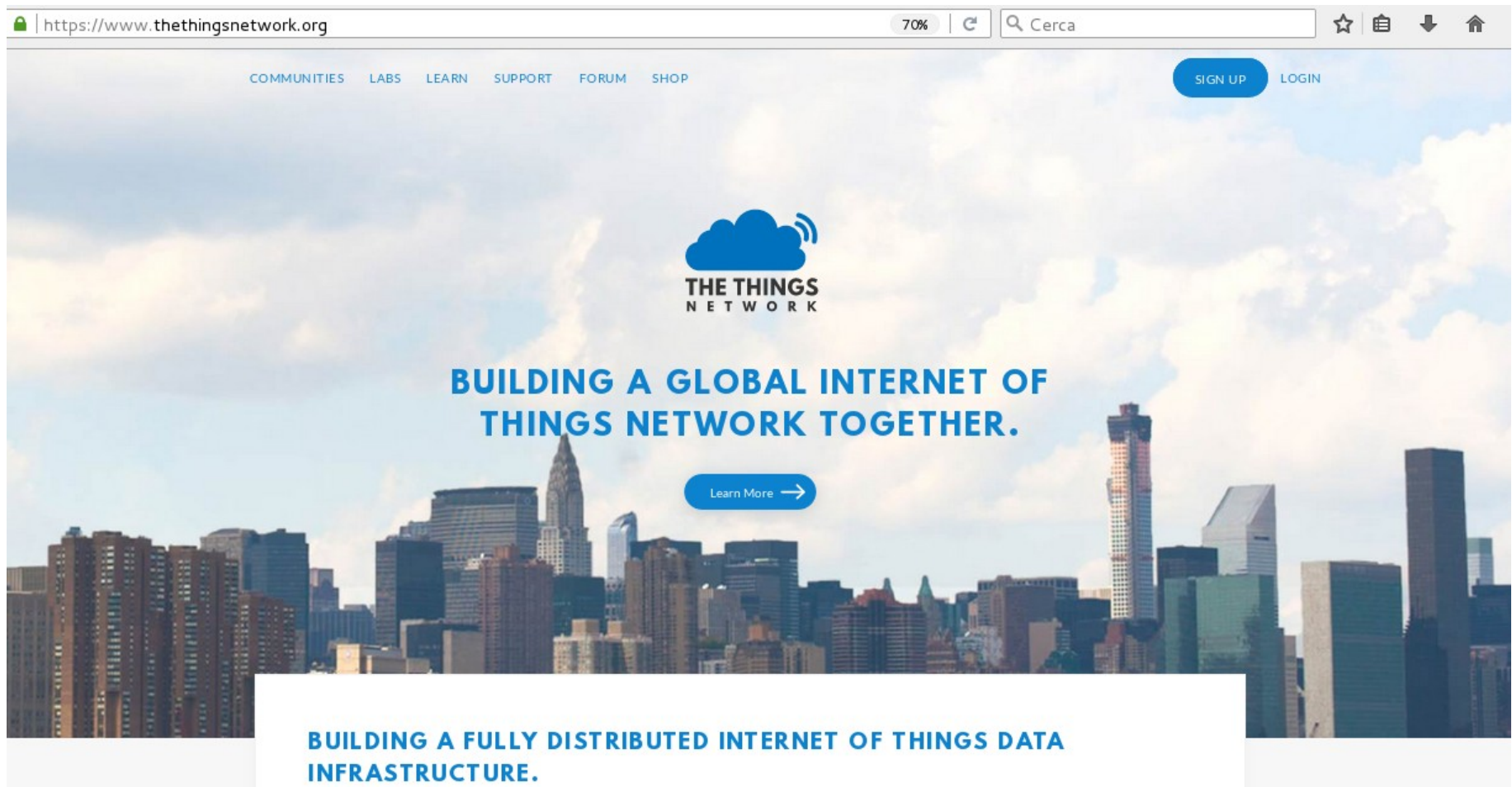


Algunes reflexions sobre l'ús real de The Things Network




The screenshot shows the homepage of the The Things Network website. The browser address bar displays <https://www.thethingsnetwork.org>. The navigation menu includes links for COMMUNITIES, LABS, LEARN, SUPPORT, FORUM, and SHOP, along with SIGN UP and LOGIN buttons. The main content area features the The Things Network logo, the tagline "BUILDING A GLOBAL INTERNET OF THINGS NETWORK TOGETHER.", and a "Learn More" button. A white box at the bottom of the page contains the text "BUILDING A FULLY DISTRIBUTED INTERNET OF THINGS DATA INFRASTRUCTURE."

<https://www.thethingsnetwork.org/>

Algunes reflexions sobre l'ús real de TTN


No hi ha conscienciació per a complir les recomanacions de bones pràctiques (Fair Policy)

 Gateways >  eui-b827ebfffe875de4 > Traffic beta

time	frequency	mod.	CR	data rate	airtime (ms)	cnt	
▲ 17:35:33	868.1	lora	4/5	SF 12 BW 125	2302	37	dev addr: 00 00 00 04 payload size: 50 bytes
▲ 17:34:23	868.5	lora	4/5	SF 12 BW 125	2302	532	dev addr: 00 00 00 05 payload size: 50 bytes
▲ 17:34:04	868.1	lora	4/5	SF 12 BW 125	2302	530	dev addr: 00 00 00 05 payload size: 50 bytes
▲ 17:33:55	868.1	lora	4/5	SF 12 BW 125	2302	529	dev addr: 00 00 00 05 payload size: 50 bytes
⚡ 17:33:41	868.1		4/5	SF 12 BW 125	1482.8		app eui: 39D7 11 9F 92 0F 79 53 dev eui: 36 31 39 54 36 5D 05
▲ 17:33:19	868.1	lora	4/5	SF 12 BW 125	1482.8	528	dev addr: 00 00 00 05 payload size: 25 bytes
▲ 17:32:33	868.1	lora	4/5	SF 12 BW 125	1482.8	528	dev addr: 00 00 00 05 payload size: 25 bytes
▲ 17:32:11	868.5	lora	4/5	SF 12 BW 125	2302	36	dev addr: 00 00 00 04 payload size: 50 bytes
▲ 17:31:54	868.1	lora	4/5	SF 12 BW 125	2302	36	dev addr: 00 00 00 04 payload size: 50 bytes
⚡ 17:31:07	868.3		4/5	SF 12 BW 125	1482.8		app eui: 39D7 11 9F 92 0F 79 53 dev eui: 36 31 39 54 36 5D 05
⚡ 17:27:20	868.5		4/5	SF 12 BW 125	1482.8		app eui: 39D7 11 9F 92 0F 79 53 dev eui: 36 31 39 54 36 5D 05

Algunes reflexions sobre l'ús real de TTN

Anàlisi d'un missatge ABP

Gateways >  eui-b827ebfffe875de4 > Traffic beta

80 04 00 00 00 00 25 00 02 4A 9C B6 9F B6 3A C2 46 65 EE EA 61 E0 94 C4 3E 12 F6 E8 D3 ED 6F 53 31 1A 63 8D 56 2B 9B A1 8B C9 D4 CB F2 C3 CC 7E 77

Event Data

```
1 {
2   "gw_id": "eui-b827ebfffe875de4",
3   "payload": "gAQAAAAAJQACSpy2n7Y6wkZl7uph4JTEPhL26NPtb1MxGm0NViuboYvJ1Mvyw8x+d5U=",
4   "f_cnt": 37,
5   "lora": {
6     "spreading_factor": 12,
7     "bandwidth": 125,
8     "air_time": 2301952000
9   },
10  "coding_rate": "4/5",
11  "timestamp": "2018-06-25T15:35:33.894Z",
12  "rssi": -115,
13  "snr": -15.2
```

Trace

bridge "ttn-bridge-eu"

Algunes reflexions sobre l'ús real de TTN

Anàlisi de connexió (*join request*) i missatges emprant OTAA

Gateways >  eui-b827ebfffe875de4 > Traffic ^{beta}

GATEWAY TRAFFIC ^{beta}

time	frequency	mod.	CR	data rate	airtime (ms)	cnt
⚡ 17:31:07	868.3		4/5	SF 12 BW 125	1482.8	app eui: 39D711 9F 92 0F 79 53 dev eui: 36 31 39 54 36 5D 05
⚡ 17:27:20	868.5		4/5	SF 12 BW 125	1482.8	app eui: 39D711 9F 92 0F 79 53 dev eui: 36 31 39 54 36 5D 05
▲ 17:26:46	868.5	lora	4/5	SF 12 BW 125	1810.4	527 dev addr: 00 00 00 05 payload size: 33 bytes
⚡ 17:26:31	868.3		4/5	SF 12 BW 125	1482.8	app eui: 39D711 9F 92 0F 79 53 dev eui: 36 31 39 54 36 5D 05
⚡ 17:25:07	868.3		4/5	SF 12 BW 125	1482.8	app eui: 39D711 9F 92 0F 79 53 dev eui: 36 31 39 54 36 5D 05
⚡ 17:24:21	868.5		4/5	SF 12 BW 125	1482.8	app eui: 39D711 9F 92 0F 79 53 dev eui: 36 31 39 54 36 5D 05
⚡ 17:23:44	868.5		4/5	SF 12 BW 125	1482.8	app eui: 39D711 9F 92 0F 79 53 dev eui: 36 31 39 54 36 5D 05



Algunes reflexions sobre l'ús real de TTN

Anàlisi de connexió i missatges emprant OTAA



Applications Gateways Support Jordi

Gateways > eui-b827ebfffe875de4 > Traffic ^{beta}

time	frequency	mod.	CR	data rate	airtime (ms)	cnt	
▲ 17:26:46	868.5	lora	4/5	SF 12 BW 125	1810.4	527	dev addr: 00 00 00 05 payload size: 33 bytes

Uplink

Dev Address

00 00 00 05

Network: Experimental nodes
Net ID: 0x00
Region: Local

Physical Payload

80 05 00 00 00 00 0F 02 01 4E 06 14 F6 68 45 0C B8 21 B1 EF A7 37 E7 C0 18 9B 05 67 0F 0C B3 7C 88

Event Data

```

1 {
2   "gw_id": "eui-b827ebfffe875de4",
3   "payload": "gAUA AAAADwIBTgYU9mhFDLghse+nN+fAGJ sFZw8Ms3yI",
4   "f_cnt": 527,
5   "lora": {

```

<https://www.thethingsnetwork.org/>

Algunes reflexions sobre l'ús real de TTN

Anàlisi de connexió i missatges emprant OTAA

Network: Experimental nodes

Net ID: 0x00

Region: Local

Physical Payload

80 05 00 00 00 00 0F 02 01 4E 06 14 F6 68 45 0C B8 21 B1 EF A7 37 E7 C0 18 9B 05 67 0F 0C B3 7C 88


Event Data

```
2   gw_id : eui-p827e0111e875de4 ,
3   "payload": "gAUAAAAADwIBTgYU9mhFDLghse+nN+fAGJsFZw8Ms3yI",
4   "f_cnt": 527,
5   "lora": {
6     "spreading_factor": 12,
7     "bandwidth": 125,
8     "air_time": 1810432000
9   },
10  "coding_rate": "4/5",
11  "timestamp": "2018-06-25T15:26:46.707Z",
12  "rssi": -112,
13  "snr": -6.5,
14  "dev_addr": "000000005",
15  "frequency": 868500000
```

Trace

Algunes reflexions sobre l'ús real de TTN

Anàlisi de connexió i missatges emprant OTAA

Gateways >  eui-b827ebfffe875de4 > Traffic beta

15 "frequency": 868500000

Trace



start 6/25/2018 17:26:46.274944

0ms	bridge "ttn-bridge-eu" receive	backend: packet-forwarder
0.09ms	bridge "ttn-bridge-eu" forward	backend: ttn
1.37ms	router ttn-router-eu receive	gateway: eui-b827ebfffe875de4
1.59ms	router ttn-router-eu build downlink	options: 2
1.61ms	router ttn-router-eu forward	brokers: 7

⚡ 17:26:31 868.3 4/5 SF 12 BW 125 1482.8 app eui: 39D711 9F 92 0F 79 53 dev eui: 36 31 39 54 36 5D 05