

# Rise of the **Crypto** Mesh

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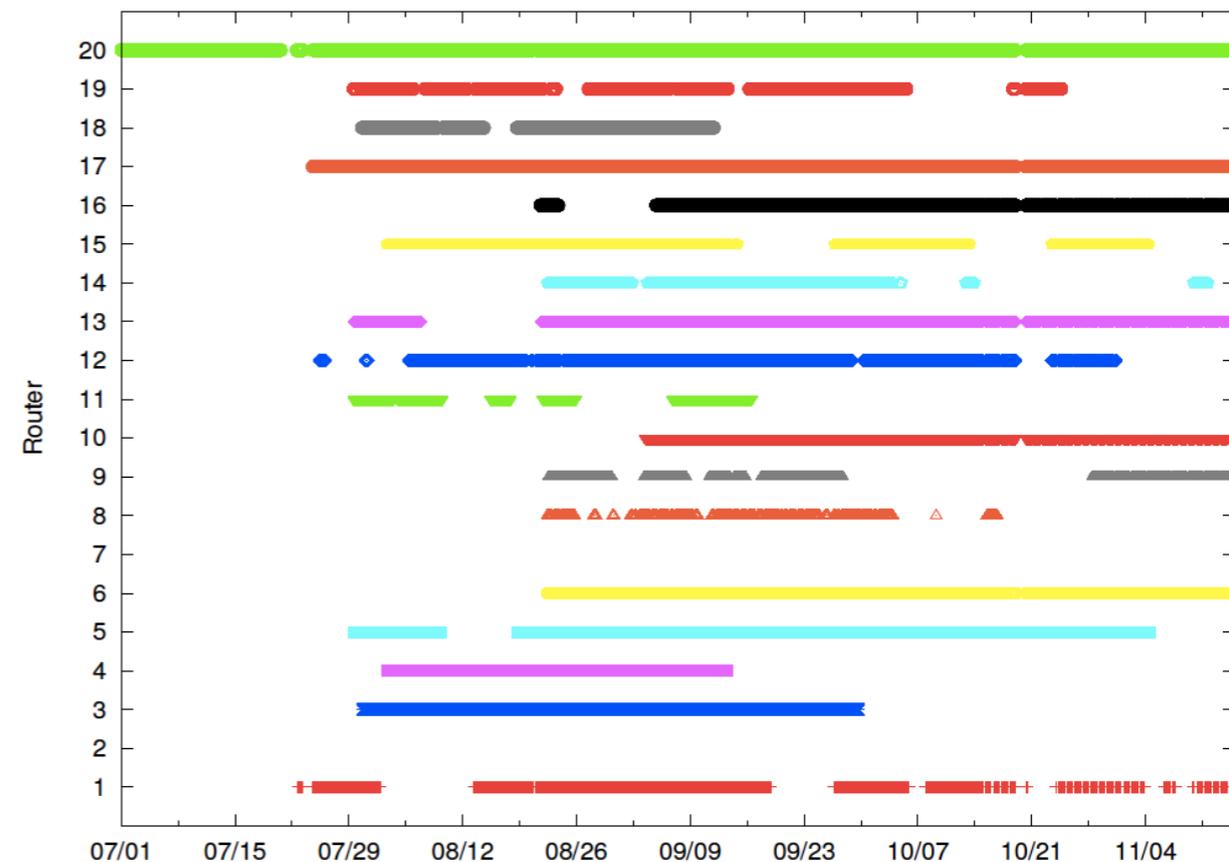
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# Problem Statement

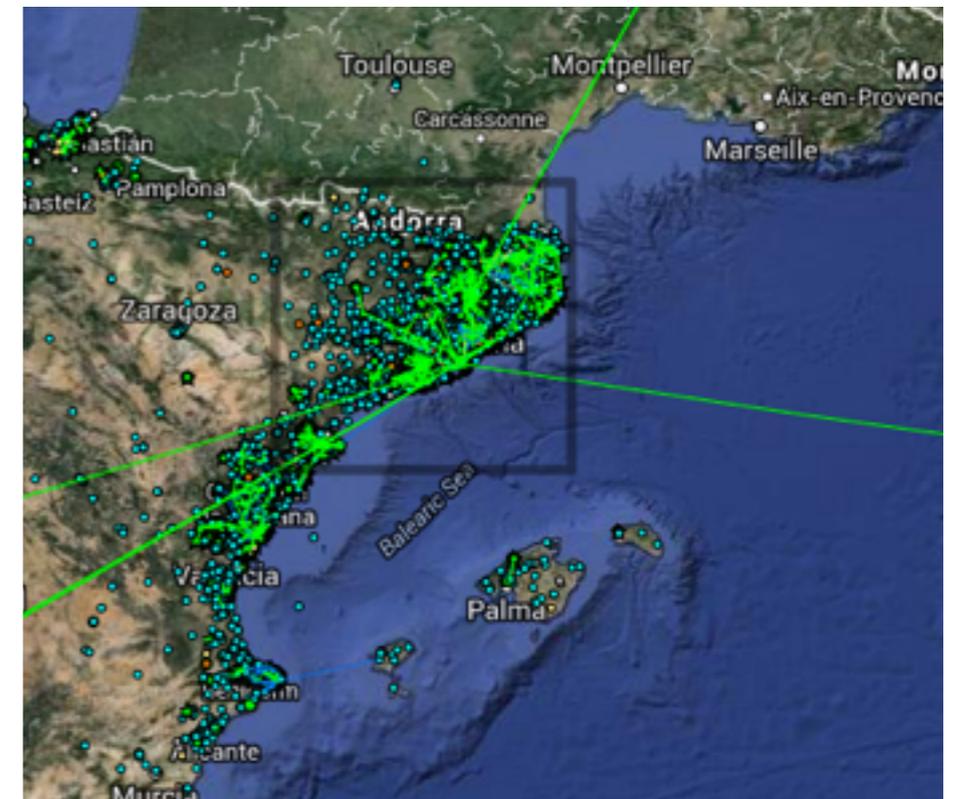
- Internet access requires actual physical infrastructure
- Several innovations addressing a variety of problems
- In 2012, we deployed an adhoc WiFi crowdshared network in Nottingham, UK (called PAWS)
- Can we share the unused bandwidth with your poor neighbour on a less than best effort QoS?
- Interesting outcomes - ideas for new business models: new VNOs (e.g. local council, charity), reverse payment models etc..
- But project failed, no socio-economic incentives for keeping the PAWS nodes alive and to share the network for free
- Technical - better WiFi coverage requirements



PAWS Router Deployment

# Problem Statement

- Community networks + WISP models across the globe have been successful
  - e.g. [guifi.net](http://guifi.net) (~100K users) - social cohesion + a good economic compensation system (manual and cumbersome)..
  - Taknet (500+ users) - community mesh + WISP model + amortised backhaul costs
- **4.1 billion** yet to be connected | we need more & more....

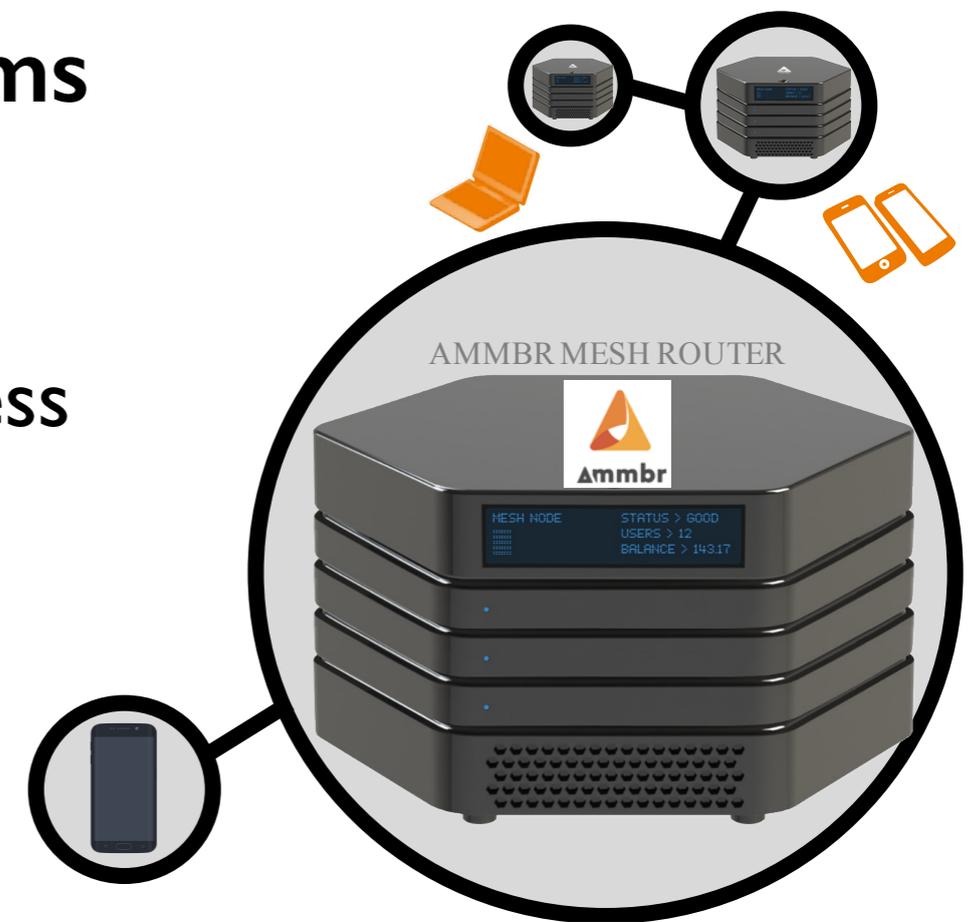


**How do you incentivise network deployments@scale in underserved communities in emerging markets?**

# Autonomous Modular Mesh Blockchain Router (AMMBR)

## The Sharing Economy for telecoms infrastructure

- Multi-frequency, unlicensed spectrum, wireless connectivity
- Modular Edge Computing Platform
- Micro Payments layer for true Peer to Peer marketplace



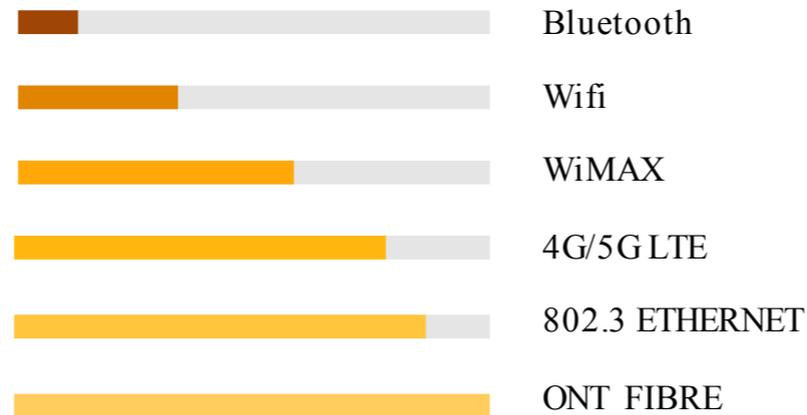
*Bringing fast Internet and digital inclusion to everybody*

# Multi-Spectrum Mesh

Ambr is built to connect -  
whatever the network

Compatible modules for specific  
networks and devices can be added  
as required

- ✓ Cat-NB I
- ✓ Cat-M1
- ✓ Sigfox
- ✓ ANT
- ✓ LoRA
- ✓ BLE
- ✓ Zigbee/Thread





# Self Sovereign Digital Identifier

Each Ammbr owner manages their Digital Identity and Digital Currency Wallet with a secure, air-gapped, management appliance the size of a credit card, and not much thicker



DIGITAL  
IDENTITY

No Identity Theft  
No Hacking

Digital identity is the unique representation of a subject engaged in an online transaction. A digital identity is always unique in the context of a digital service, but does not necessarily need to uniquely identify the subject in all contexts. In other words, accessing a digital service may not mean that the subject's real-life identity is known.

~ National Institute of Standards and Technology | NIST

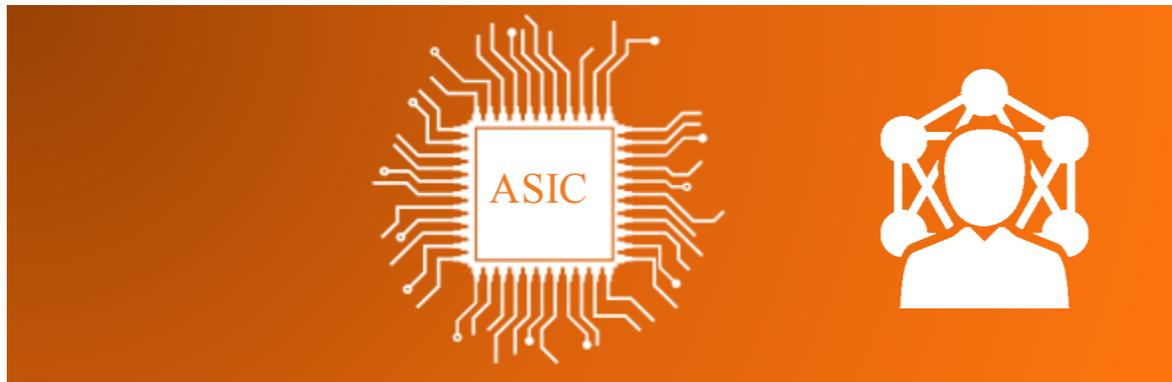
# Blockchain

Configuration and transaction data are all controlled via the immutable ledger that is the Ammbr Blockchain

- ✓ Rating and Price Discovery
- ✓ Pricing
- ✓ Metering
- ✓ Billing
- ✓ Payment
- ✓ Reconciliation
- ✓ Reporting
- ✓ Auditing



# Blockchain



No Mining Arms Race  
No Electricity Armageddon  
No Centralization

EFFICIENT ”  
SECURE consensus



Ambr uses an extremely high-speed ASIC processor in each device, uniquely identified and linked to its owner's KYC compliant **digital identity**, to implement a “green”, energy-efficient Proof of Work based consensus mechanism

**Proof of Velocity/Proof of Elapsed Time (PoV/PoeT)**

**Micropayments for Telecommunications in Real Time**

# Edge Computing Platform



**AMMBR**  
EDGE COMPUTING PLATFORM

**AUTONOMOUS MODULAR MESH BLOCKCHAIN ROUTER**

Spring Loaded Connector Bus  
Magnetized Foot Recess

Need more services?  
*Simply drop in the module*



Edge Cloud Server  
Edge Cloud Storage/Cache  
Edge IoT Management

# Ammbr | Solution for GAIA

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- **Startup cost:** minimal initial financial investment as devices paid from service usage
- **Feasibility:** training and assistance to local initiatives & pilots
- **Flexibility:** local operators instead of a global/national single operator
- **Modularity:** diverse access technologies adapted to local conditions (wired, wireless, mobile) + new (disruptive) services (e.g fintech)
- **Extensibility:** open source and open hardware components
- **Sustainability:** local revenue from operation to maintain and expand capacity & coverage of service

# FULL SPECTRUM MESH NETWORK



Earn Ammbr Tokens To Carry Telecom Traffic

Become a micro-telecoms provider

Questions?

[www.ammbr.com](http://www.ammbr.com)