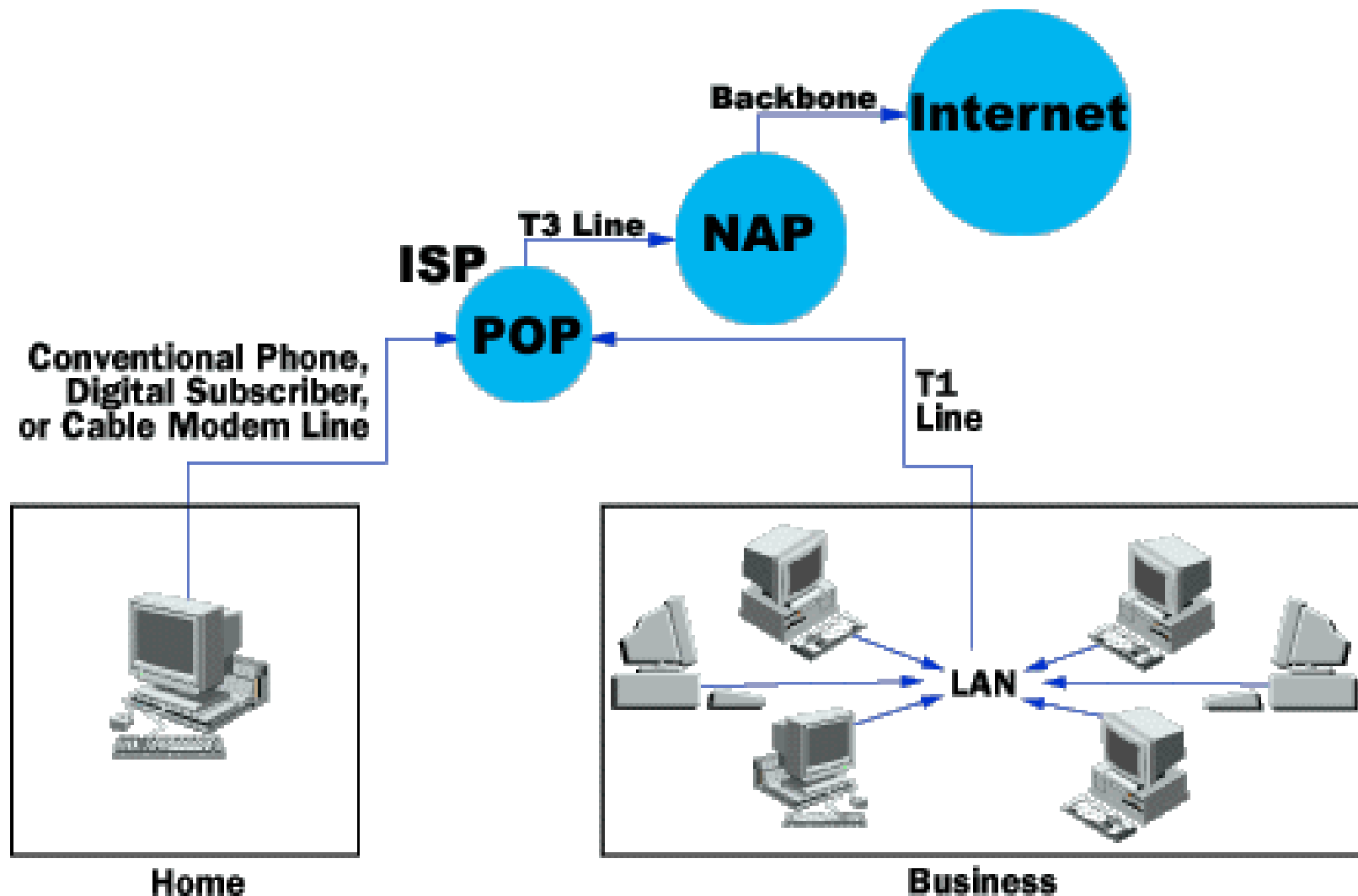# The Idea of a Decentralized Internet

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What is Internet?

A Global computer network providing a variety of information and communication facilities, consisting of interconnected networks using **standardized communication protocols**.

The Current structure of the Internet

What's wrong with Centralization?

- **Fake news**
- **State Sponsored Bots**
- **EU Privacy Laws**
- **Algorithmic Biases**
- **Data Commodification**
- **Privacy Breaches**

How is Centralization a Threat?

₹500, 10 minutes, and you have access to billion Aadhaar

SECURITY BREACH: Group tapping UIDAI data may have sold access to 1 lakh service providers

A QUICK CHAT, AND FULL ACCESS

RACHNA KHAIRA
TRIBUNE NEWS SERVICE

JALANDHAR, JANUARY 3
It was only last November that the UIDAI asserted that "Aadhaar data is fully safe and secure and there has been no data leak or breach at UIDAI." Today, The Tribune "purchased" a service

Tribune INVESTIGATION

being offered by anonymous sellers over WhatsApp that provided unrestricted access to details for any of the more than 1 billion Aadhaar numbers created in India thus far.

running the racket created a "gateway" for this correspondent and gave a login ID and password. Lo and behold, you could enter any Aadhaar number in the portal, and instantly get all particulars that an individual may have submitted to the UIDAI (Unique Identification Authority of India), including name, address, postal code (PIN), photo, phone number and email.
What is more, The Tribune team paid another Rs 300, for which the agent provided "software" that could facilitate the printing of the Aadhaar card after entering the Aadhaar num-

shock over the full data being accessed, and admitted it seemed to be a major national security breach. They immediately took up the matter with the UIDAI technical consultants in Bangaluru.
Sanjay Jindal, Additional Director-General, UIDAI Regional Centre, Chandigarh, accepting that this was a lapse, told The Tribune: "Except the Director-General and I, no third person in Punjab should have a login access to our official portal. Anyone else having access is illegal, and is a major national security breach."

started around six months ago, when some anonymous groups were created on WhatsApp. These groups targeted over 3 lakh village-level enterprise (VLE) operators hired by the Ministry of Electronics and Information Technology (ME&IT) under the Common Service Centres Scheme (CSCS) across India, offering them access to UIDAI data.
CSCS operators, who were initially entrusted with the task of making Aadhaar cards across India, were rendered idle after the job was withdrawn from them. The service was restricted to post offices and designated

12:30 pm: This correspondent posing as 'Anamika' contacted a person on WhatsApp number 7610063464, who introduced himself as 'Anil Kumar'. He was asked to create an access portal.

12:32pm: Kumar asked for a name, email ID and mobile number, and also asked for Rs 500 to be credited in his Paytm No. 7610063464.

12:35 pm: This correspondent created an email ID, aadharjalandhar@gmail.com, and sent mobile number ******5852 to the anonymous agent.

12:48 pm: Rs 500 transferred through Paytm.

12:50pm: This correspondent

ment Agency Administrator for 'CSC SPV'. Your Enrolment Agency Administrator ID is 'Anamika_6677'." Also, it was said that a password would be sent in a separate mail, which followed shortly.

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Is there a solution?

Decentralization

The Idea

- **The initial structure of the internet was Decentralized.**

- **Commercialization killed Privacy.**

- **Tech Giants forced people to use Centralized Services by leveraging unawareness and simplifying services.**

- **Security over convinience.**

- **Faster, Safer and Community Driven.**

- **Open-Source.**

How is it possible?

- **A Community Sets up Servers that are totally independent of each other.**

- **The End-User chooses the server for a service.**

- **Eradicates the need of ISP so you pay directly to the community through Cryptocurrency.**

- **The Infrastructure is simple and does not need heavy setup like servers.**

Architecture?

$$\begin{bmatrix} \text{matrix} \end{bmatrix}$$ **Matrix Topology**

Blockchain Technology

BLOCK CHAIN
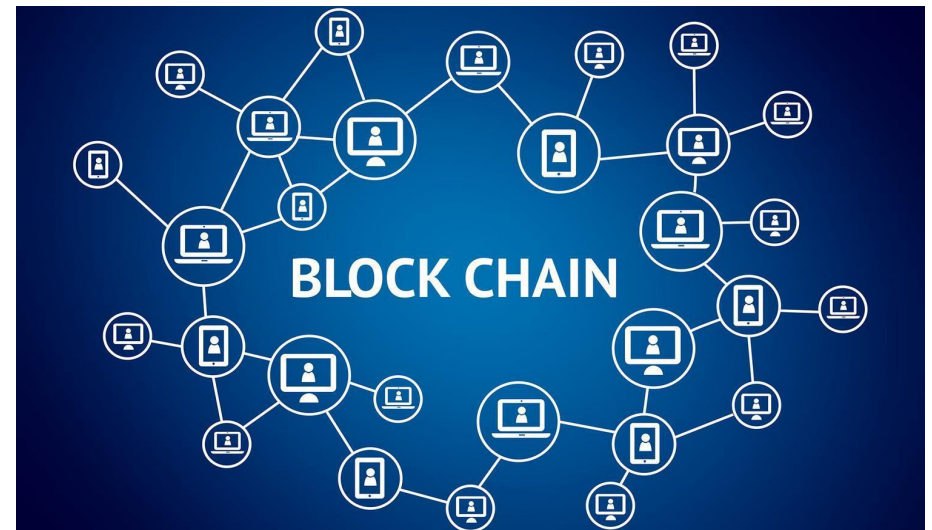
MATRIX PROTOCOL

- **Matrix is an open standard for interoperable, decentralised, real-time communication over IP. It can be used to power Instant Messaging, VoIP/WebRTC signalling, Internet of Things communication - or anywhere you need a standard HTTP API for publishing and subscribing to data whilst tracking the conversation history.**

- **Matrix defines the standard, and provides open source reference implementations of Matrix-compatible Servers, Clients, Client SDKs and Application Services to help you create new communication solutions or extend the capabilities and reach of existing ones.**

Blockchain & Crypto-Networks

- **Blockchains, a distributed networking protocol shows that robust, secure infrastructure doesn't need central authorities or servers.**

- **Enabled by Crypto-Economic networks, a generalization of the ideas first introduced in Bitcoin and further developed in Ethereum. Cryptonetworks combine the best features of the first two internet eras: community-governed, decentralized networks with capabilities that will eventually exceed those of the most advanced centralized services.**

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Lets Discuss Applications:

- ## TORRENTS

    "Peer – Peer communication system using Peers as Seeders and also Clients."

- ## BLOCKSTACK

    "A platform for Decentralized Internet Apps developed by a startup of the same name."

Some More Apps:

- **Storj**

  "An alternative to Google Photos, where images are chopped up, encrypted, and distributed among a network of computers owned by a Community. "

- **IPFS – InterPlanetary File System**

  "Distributed Content Delivery System saves bandwidth and prevents DDoS attacks, which HTTP struggles with."

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Look who's supporting it!

Tim Berners Lee, The Creator of the World Wide Web (WWW) is now working on a SOLID project.

SOLID (derived from "social linked data") is a proposed set of conventions and tools for building decentralized Web applications based on Linked Data principles. Solid is modular and extensible. It relies as much as possible on existing W3C standards and protocols.

Tim Berners-Lee leads call for more transparency over mass surveillance
Open letter claims UK and US governments are contradicting accountability pledge of Open Government Partnership

Alex Hern
Follow @alexhern   Follow @guardiantech
theguardian.com, Wednesday 18 December 2013 19.01 EST

Sir Tim Berners-Lee and free speech groups say that persecution of whistleblowers also contradicts the principle of open government. Photograph: Martial Trezzini/AP

Demerits:

- **Design OverHead.**
- **Security Risks.**
- **Impossible to Reverse-Fraud.**
- **No place for Government Regulation**

Thank You

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