

10,000 NODES

GT Systems had planned to achieve 10,000 SPAN-AI nodes over a decade. Our distributed gaming partners, Ceden, have 20,000 “nascent” nodes NOW, after 1 month of operation. These 20,000 nodes are like bees buzzing in an active hive, waiting to burst out on the world. When they do, it will change the Content Distribution Network business forever.

The following table starkly illustrates that change.

CDN	Servers	Locations - PoPs	When
Ceden	20,000	1 (AWS)	now
Ceden SPAN	100,000	5,000? 10,000?	12 months
Ceden SPAN	1,000,000	100,000?	10 years
Akamai	365,000	4,100	now
Netflix	17,000	158	now
Google “Edge”	?	100	now
AWS	?	450	now
Azure	?	192	now

Content Distribution Networks are all about reach. The closer to the consumer, the better. Most hyper-clouds and CDNs reach as far as regional datacentres in capital cities. There are 195 countries in the world. At an average of 5 cities per country, this puts the limit of most CDNs at about 1,000 PoPs. Some, such as Akamai and Netflix, have penetrated further. But they are still limited to Internet eXchange Points in partner telcos and ISPs. Not much better. And the telcos hate them because they force the telco to house their servers and carry their traffic for free.

As a result, most people think “the edge” is a local hyper-cloud datacentre. This is the **top** of the Ceden SPAN network. The optimum location for content servers is in the local exchange area. Given an average number of 1,000 local exchanges per country, that requires **200,000 PoP LOCATIONS GLOBALLY** (not servers!) for true global coverage. And 10x that for mobile.

No single telco, CDN, content producer or even country can fund a global network on this scale. It needs the sheer economic power of a contemporary, distributed systems approach. Pioneered by early blockchain business and technical models, this method of funding and rolling out networks has gathered power and sophistication since Bitcoin launched on January 3, 2009. Some, such as Bitcoin and Ethereum, are still going strong. Others such as Filecoin and its IPFS protocol have suffered from unfortunate technical and business model choices. Newer initiatives such as Zero Knowledge Proofs, layer 0/2 and cross chain networks are showing the path to scale. All have informed SPAN-AI and Ceden. We have taken the best learnings from these and applied them to produce the next generation of Content Distribution Network. We call it the [Universal Content Distribution Network](#).

The Ceden SPAN-AI network is being built by highly successful web3 and distributed systems experts and entrepreneurs. We have the skills, resources, funding and risk profile to get this done. We are not limited by old, outdated technical models and do not have the massive sunk investment that often limits and even stifles innovation.

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As a result, we are free to pursue excellence and optimum design. Our state of the art, graph-edge-based modelling shows improvements in capital and operational efficiencies of 10-100X and reductions in latency of 10X. This new architecture enables the delivery of **studio quality**, 8K video and distributed gaming, **anywhere in the world, without a dropped frame**. It is also immune to the legacy design failures that cause extraordinary global outages of the scale seen in July 2024.

We utilise the best of current technology such as coherent terrestrial and satellite WDM optical networks spanning the earth and in space. Where necessary, we tunnel across legacy networks. To the extent possible, SPAN-AI is backwards compatible with legacy protocols such as TCP/IP and web2.0. SPAN is easily retrofittable to legacy networks by the addition of a SPAN protocol stack to open switch/routers or servers. **This** is the network of the future.

SPAN-AI™. The edge of the future™. Join the resolution today™.

