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Let’s Talk About BPS: @Cryptis personal Words

I keep receiving some submissions that are based on misunderstanding—people simply don’t fully get it.

Let’s start with the basics. I’ll try to make it as simple as possible so everyone can follow along:

The Biggest Problems With Fast Blocks

1. Hardware Limits

The more blocks, transactions, and data you have, the more performance your hardware requires. At some point, normal hardware won’t be enough. Users get excluded → **centralization occurs**.

2. Country/Region Latency

Countries are connected to each other with a certain latency (connection time/ping, etc.). Gamers know this—ping is higher when a server is in a different region.

- EU players on a US server or US players on an EU server → **150 ms+ ping**.

You can’t go faster than the networking technology and regional limitations allow. At least not in reality, though on paper, yes—but we’ll get to that later.

Some Data

- **Minimum round-trip latency globally:** ~20,000 km at ~200,000 km/s = 0.1 s = **100 ms**

- **Realistic round-trip latency:** accounting for routing, switches, and internet infrastructure → **150–250 ms**

Data Volume vs. Speed

The more data you try to send, the more speed is impacted.

- Small data → higher speed possible
- More data → slower speed

Why? Simple: data processing, bandwidth limits, feedback loops, network gossip, etc.

Network Health Is a Critical Factor

You don’t know in advance how good the network will be. You don’t know which nodes will be online tomorrow and where they will be. This is an unknown variable.

- **Good nodes** improve network health (fast performance, good connectivity, servers, etc.)
- **Bad nodes** can reduce network health

How Is It Possible for Blocks and Transactions to Be Faster Than Regional Latency?

It’s **not possible**. Even with perfect network health, you cannot beat physics.

So how can some blockchains claim **10 blocks per second**, completing transactions in a tenth of a second?

- They **can’t**.

The trick is that blocks are simply **loaded afterward**. The difference comes from the DAG system (DAG is great technology):

- A blockchain can create many blocks in parallel and later order them → this makes it **appear fast to users**, but the **real final consensus time** for global transactions is always limited by latency.

Does It Make Sense to Do This?

Yes. You can push the network close to its limits.
However, these limits depend on **data rates** and **network health**. The same technology can have different limits depending on these factors.

Real Blocks vs. “Hot Air Blocks”

We need to distinguish between:

- **Real blocks with utility**
- **Hot air blocks** → blocks that only show high numbers on paper

For a true global blockchain with final transaction confirmation, **5–7 BPS is realistic**.
Anything higher is mostly **hot air—not real**.

Depending on your perspective:

- If you count blocks generated locally on your computer as “real,” they are real.
- But if we talk about blocks that truly have a **global blockchain utility**, 5–7 BPS is the limit.

Key difference: apparent speed (local confirmation, DAG) vs. real global consensus speed.

Beyond a certain point, high BPS numbers in blockchains are mostly marketing. This can be easily proven:

- If a blockchain has **50 BPS**, but the transaction arrives in **200 ms**, the effective BPS is **5**.
- Everything else is **on paper, unusable, and hot air**—but it sells well.

Are 30 BPS Possible?

No—**only hot air**.
The maximum, with many hacks, tricks, and technologies, is in my opinion **~20 BPS**.

Even then, it comes with conditions:

- Minimal data per network request
- Good network health
- Not sustainable

It might work one day and crash the next.

Fastchain Technology

This is why I'm working with **Fastchain technology**, a system that **adaptively and dynamically finds the maximum for real blocks** (not hot air on paper).

- **Self-healing:** constantly adjusts every second (or every 10 seconds) to prevent crashes
- **BPS reduction:** automatically reduces by 2% when necessary to maintain stability
- Keeps you **constantly at the true limit**

Key factors:

- Optimal transaction volume
- Compression tricks
- General data management
- Lazy loading for weak nodes
- Creating the best possible network health

Current Blockchain Reality

Are there currently any blockchains with a true **10 BPS (NOT hot air)**?

- **No**, there aren't.
- Marketing BPS ≠ real global consensus BPS.

Developers should focus on **genuine development**, not just increasing perceived value.

Hot Air Blocks

With hot air blocks, **50+ BPS is now possible**, maybe even 100 BPS.

- Possible technically, but **waste of time**
- Brings **no real progress** to the crypto world

Practical Takeaways

- Technology is useful up to **~3 BPS**
- Beyond 3 BPS, focus must shift to **innovation, new ideas, and adaptive systems**, not just higher BPS

My Last Words

We need adaptive systems, not hot air.