



ADVANCED CONTEMPORARY & EMERGING TECHNOLOGIES

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TECH INSIGHT

SPACE X SATELLITE DISASTER

Space X expects to lose nearly an entire launch's worth of Starlink satellites after a storm created by the sun struck the Earth's atmosphere.

The company launched 49 Starlink satellites with a Falcon 9 rocket on Feb. 3. The mission was successful in delivering the batch of satellites to orbit, but disaster struck the next day.

A geomagnetic storm disturbed the Earth's atmosphere. The Starlink satellites were in a low orbit, and the company said "up to 40 of the satellites" will be lost because of the storm, burning up in the Earth's atmosphere.

SpaceX said that "the escalation speed and severity of the storm caused atmospheric drag to increase" as much as 50% more than the satellites typically experience in low orbit. After the increased atmospheric drag was detected, the company's operations team put the satellites into a fail-safe mode that rotates the spacecraft onto its edge to reduce drag — a position the company has previously described as a "shark-fin" orientation.



SATELLITE LAUNCH



SATELLITE IN ORBIT

Space did not indicate whether it was aware of the storm, which the National Oceanic and Atmospheric Administration says was generated by a solar flare on Jan. 29 .

NOAA measures geomagnetic storms on an increasing severity scale of G1 to G5. The agency had issued a warning for a “likely” geomagnetic storm of Gby1 to G2 on Feb. 2, the day before SpaceX launched.

There are an average of 1,700 such G1 storms over the course of an 11-year-long solar cycle, according to NOAA data highlighted by Erika Palmerio – a space weather research scientist at Predictive Science, a company that supports solar studies for U.S. government agencies.

As a private company, SpaceX does not disclose the exact cost of its Starlink satellites or its Falcon 9 launches, but losing the majority of the mission could be a financial hit upward of \$50 million

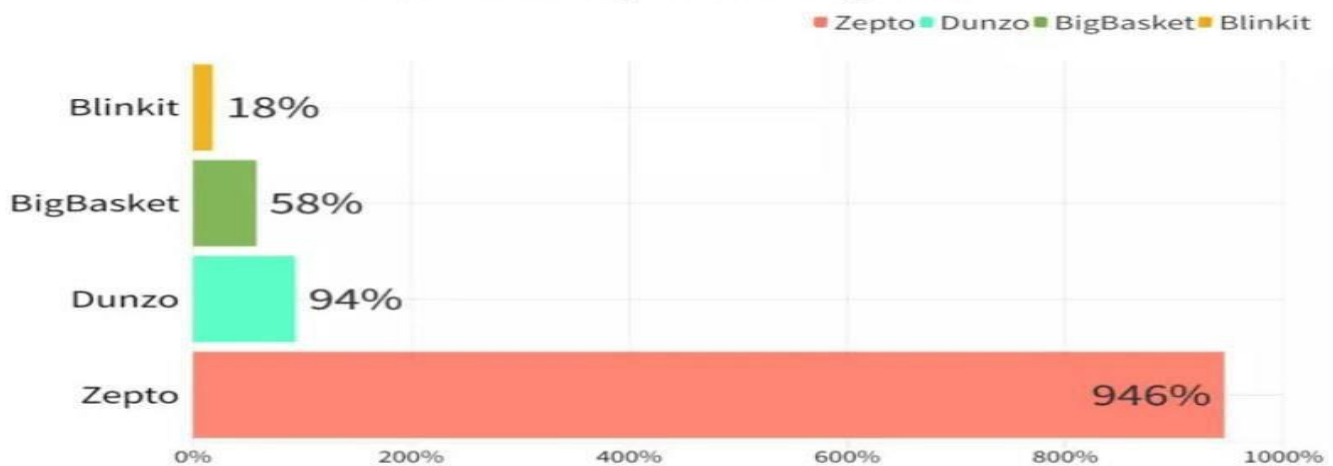
ZEPTO - BUILDING UPON ESTABLISHED IDEAS

The Indian quick commerce industry has been picking up pace after mainstream players like Swiggy, and Tata-owned BigBasket entered the market. Until the first half of 2021, Reliance-backed Dunzo was the only prominent player in this domain while Zepto was still finding its place with its revolutionary 10 minute delivery.

Thanks to big names, big money entering the market, valuations too improved not the least due to the increasing demand for these services. Zepto — a company founded by two teenagers who dropped out of Stanford — is now valued at \$900 million.

The users themselves are lapping up the fast delivery options - thereby expanding the market. Bengaluru-based market research firm RedSeer recently reported that India's 10-15 minute delivery market is anticipated to reach \$5.5 billion by 2025.

Zepto added the most number of users between December 2021 and March 2022
It was followed by Dunzo and BigBasket



Zepto might also be gaining from the low-base effect since it's a new player. Bigbasket was founded in 2011, Blinkit in 2013 and Dunzo in 2014 offering groceries with multiple delivery options for the customers. However, for the latter three, 10-minute delivery is a step up from their existing delivery services whereas for Zepto, it is the main offering .