



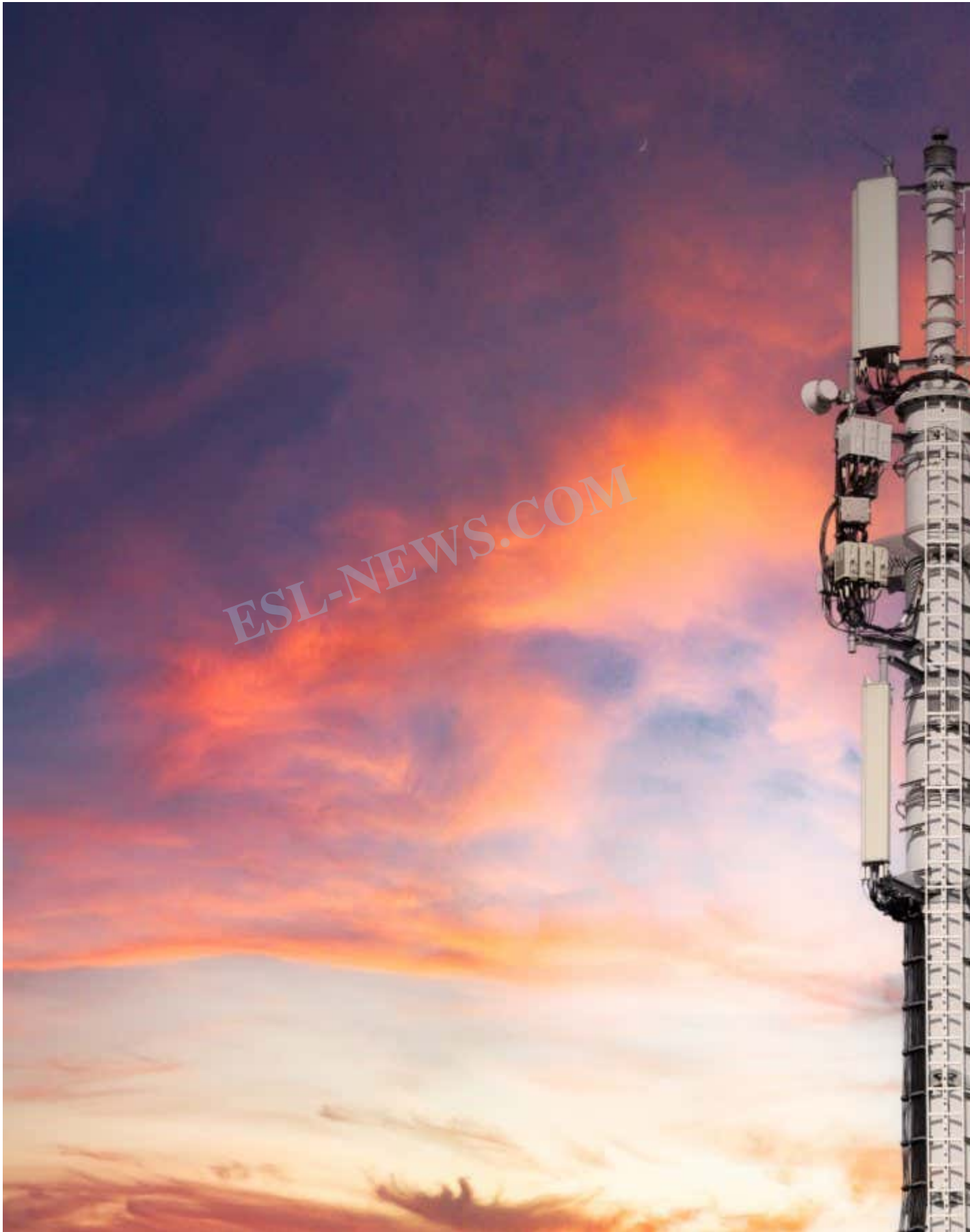
6G Speeds Eclipse 5G: 9000x Faster Networks Ahead

Description

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Researchers have achieved a remarkable feat in wireless data transmission by reaching speeds of 938 gigabits per second. This is more than 9000 times faster than the average 5G connection, allowing for lightning-fast data transfers. Imagine being able to download over 20 movies in just one second!

This breakthrough is essential because current 5G networks struggle to handle the massive demand for data in crowded places like concerts and train stations. The limited bandwidth available restricts the transmission speeds. To address this issue, scientists at University College London expanded the range of frequencies used for data transmission from 5 gigahertz to 150 gigahertz, using both radio waves and light.

The team's innovative approach combines digital-to-analogue converters for lower frequencies and laser technology for higher frequencies, creating a broad bandwidth for data transfer. This advancement could revolutionize communication by enabling faster data rates for future smartphones and enhancing streaming capabilities for large audiences.

The researchers are optimistic about the potential impact of their work on the development of 6G technology. By utilizing wider frequency ranges, they aim to alleviate network congestion and facilitate faster data transmission, opening up new possibilities for applications we haven't even imagined yet.

Vocabulary List:

1. **Transmission** /trænz'mɪʃən/ (noun): The act of sending or conveying data from one place to another.
2. **Bandwidth** /'bænd,wɪðθ/ (noun): The range of frequencies used for transmitting a signal.
3. **Congestion** /kən'dʒɛs.tʃən/ (noun): The state of being overcrowded or filled with excessive traffic leading to slower performance.
4. **Revolutionize** /,rɛvə'lu:ʃə,nəɪz/ (verb): To change something drastically or fundamentally often in a way that creates a new system or method.
5. **Optimistic** /,ɒp.tɪ'mɪs.tɪk/ (adjective): Having a hopeful or positive outlook about a future event or outcome.
6. **Innovative** /'ɪnə,veɪtɪv/ (adjective): Introducing or using new ideas methods or technologies.

Vocabulary quizzes

Multiple Choice (Select the Correct answer for each question.)

1. What term refers to the process of sending data from one place to another?

- Option: Bandwidth
- Option: Congestion
- Option: Transmission
- Option: Harvesting

2. Which word means to bring about a significant change or improvement?



- Option: Revolutionize
- Option: Setback
- Option: Anticipated
- Option: Restored

3. What term is used to describe the influence or effect of one thing on another?

- Option: Extract
- Option: Moisture
- Option: Impact
- Option: Drama

4. Which term refers to a time of intense difficulty or danger?

- Option: Innovative
- Option: Crisis
- Option: Accuracy
- Option: Acknowledge

5. What is an original or model on which something is based or formed?

- Option: Discreet
- Option: Prototype
- Option: Expectancy
- Option: Advancements

6. Which term describes something that is thorough and complete?

- Option: Harvesting
- Option: Revolutionize
- Option: Radical
- Option: Acknowledged

7. What term means to decrease or diminish?

- Option: Decline
- Option: Projections
- Option: Influencing
- Option: Extract

8. Which term refers to the state of thinking or hoping that something especially something pleasant will happen?

- Option: Discreet
- Option: Expectancy
- Option: Innovative
- Option: Setback

9. What term describes the process of gathering a crop or natural resource?



- Option: Harvesting
- Option: Revolutionize
- Option: Projections
- Option: Influencing

10. Which term refers to progress or improvement?

- Option: Radical
- Option: Advancements
- Option: Setback
- Option: Discreet

Gap-Fill (Fill in the blanks with the correct word from the vocabulary list.)

- 11. _____ occurs when the network or a system reaches its maximum capacity.
- 12. It is important to _____ the contributions of others in a team.
- 13. The scientist will _____ DNA from the samples for analysis.
- 14. Experiencing a _____ can be disheartening but provides an opportunity to learn.
- 15. The old building was carefully renovated and _____ to its former glory.
- 16. Plants need a certain level of _____ to grow healthily.
- 17. The long-_____ product launch finally took place to much excitement.
- 18. You should _____ your ability to adapt to different situations during the interview.
- 19. It is advisable to be _____ when handling sensitive information.
- 20. His charismatic personality was _____ in shaping the opinions of others.

Matching Sentences (Match each definition to the correct word from the vocabulary list.)

21. The company was known for its cutting-edge and approach to product development.
22. Effective communication is to building strong relationships within a team.
23. When conducting experiments it is crucial to ensure the of the measurements.



24. The invention of the internet has the way we communicate and access information.
25. The farmers were busy the ripe crops from the fields.
26. He handled the delicate situation with great care and stayed in his actions.
27. The new government proposed a change in policies to address social issues.
28. The financial analyst presented optimistic for the company's growth in the next quarter.
29. The party was filled with an air of joy and as guests awaited the big announcement.
30. The sudden turn of events added an element of to the otherwise routine meeting.

Answer

Multiple Choice: 1. Transmission 2. Revolutionize 3. Impact 4. Crisis 5. Prototype 6. Radical 7. Decline
8. Expectancy 9. Harvesting 10. Advancements

Gap-Fill: 11. Congestion 12. Acknowledge 13. Extract 14. Setback 15. Restored 16. Moisture 17. Anticipated
18. Demonstrate 19. Discreet 20. Influencing

Matching sentence: 1. Innovative 2. Integral 3. Accuracy 4. Revolutionize 5. Harvesting 6. Discreet 7. Radical
8. Projections 9. Expectancy 10. Drama

CATEGORY

1. Sci/Tech - LEVEL3

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