

# Reimagining the Internet

1. Vint Cerf has described the InterNet as a homogenous network that connects heterogeneous computers. What did he mean by that?

The network has the same protocols but connects different devices.

2. What is Metcalfe's law? (Hint: Use Google.)

Metcalfe's law that the value of a telecommunications network is proportional to the square of the number of connected users of the system.

3. Where geographically are the majority of Internet Users located?

In Asia.

4. Concerning the percentage of a country's population that uses the Internet, with what are mobiles helping?

Helping people start using the global Internet

5. In design terms, what differentiates the Internet from earlier networks such as the Telephone and Telegraph networks?

Wired connections to wireless

6. Was there a particular logic in Vint Cerf's choice of a 32 bit address space for IP addresses?

No, it was an experiment; he didn't expect that experiment would work

7. How do digital signatures relate to closing an important vulnerability in the DNS system?

Signatures can bind domain and IP address

8. What is a sensor network? Give an example.

Sensor that sense peak electricity consumption, for example a power grid is sensor network.

9. Why is cloud collaboration important?

It is important because we want to be able to move data back and forth or share with another cloud-based server.

10. What is strong authentication? Why is the lack of this an issue?

Strong authentication is employed to identify and verify communications. There will be many anonymous machines attempting to gain access without strong authentication verification.

11. What does Cerf cite as a problem with the Internet and copyright?

The problem is that what is created today might not be the interpretation in the future.

12. What does Cerf mean when he talks about rotten bits? Give an example.

Cerf is referring to the concept of data decay. Information on the web becomes outdated and can be misinterpreted in the future. For example, windows office 2009 and windows office 2013

13. Briefly describe the InterPlanetary Internet. In your description, describe how this solves the point to point InterPlanetary communications problem.

Transmitting data from one planet back to earth. Using a reply satellite that allow data to store and forward

14. In an Internet context, what is common carriage? What implications does this have for Internet billing?

Same rules to everybody and all customers are served under the same terms and condition

15. What does Cerf means when he says that in the future, the network will disappear?

Everything is network capable