Reimagining the Internet

	Reimagining the Internet: If we'd known then what we know now, what would we have done differently? In this video, you will watch Vint Cerf, who along with Bob Khan, is credited with inventing TCP/IP. They are both often referred to as the father of the InterNet. Topics include: • Metcalfe's Law • Mobile Internet • IP address space • Digital Signatures and DNS • Strong authentication • Internet and Copyright • Interplanetary Internet

Table 1 *Vint Cerf Reimaging the Internet video lecture.*

You can find this video tutorial at:
https://www.youtube.com/watch?v=t9M0RPNr9qg

Instructions
For this Assignment, you will first Vint Cerf's Reimaging the Internet video lecture. After viewing the lecture, answer the related questions. When you have completed your answers, post them to your online portfolio..

Questions
1. Vint Cerf has described the InterNet as a homogenous network that connects heterogeneous computers. What did he mean by that?
2. What is Metcalfe's law? (Hint: Use Google.)
3. Where geographically are the majority of Internet Users located?
4. Concerning the percentage of a country's population that uses the Internet, with what are mobiles helping?
5. In design terms, what differentiates the Internet from earlier networks such as the Telephone and Telegraph networks?
6. Was there a particular logic in Vint Cerf's choice of a 32 it address space for IP addresses?
7. How do digital signatures relate to closing an important vulnerability in the DNS system?
8. What is a sensor network? Give an example.
9. What does Vint serve describe as one of the hardest problems that he can imagine?
10. Why is cloud collaboration important?
11. How does Vint Cerf describe the job that his Internet Design did with mobile? Specifically, what was the problem?
12. How does Vint Cerf describe the job that his Internet Design did with broadcast? Specifically, what was the problem?

13. What is strong authentication? Why is the lack of this an issue?
14. In an Internet context, what is the overrun problem?
15. What does Cerf cite as a problem with the Internet and copyright?
16. What does Cerf mean when he talks about rotten bits? Give an example.
17. Briefly describe the InterPlanetary Internet. In your description, describe how this solves the point to point InterPlanetary communications problem.
18. In an Internet context, what is common carriage? What implications does this have for Internet billing?
19. What does Cerf means when he says that in the future, the network will disappear?

Assignment
Internet Resources

In 1992, Vint Cerf, Bob Kahn, and Lyman Chapin released a document called "Announcing the ISOC." This document explained the rationale for establishing the Internet Society. The organization's charter was defined as:

"The Society will be a non-profit organization and will be operated for international educational, charitable, and scientific purposes, among which are:
- To facilitate and support the technical evolution of the Internet as a research and education infrastructure and to stimulate involvement of the academic, scientific, and engineering communities (among others) in the evolution of the Internet.
- To educate the academic and scientific communities and the public concerning the technology, use, and application of the Internet.
- To promote scientific and educational applications of Internet technology for the benefit of educational institutions at all grade levels, industry, and the public at large.
- To provide a forum for exploration of new Internet applications and to foster collaboration among organizations in their operation and use of the Internet."[1]

[1] http://www.internetsociety.org/internet/what-internet/history-internet/announcing-internet-society

You can read the original document at the above URL. At that location, you can also find the10 minute ISOC 20th Anniversary Video. This video includes contributions by Vint Cerf, Bob Kahn, Raul Echeberria, and Lynn St. Amour .

Read "Announcing the ISOC " and view the ISOC 20th Anniversary video. Based upon those two documents, answer the following questions:

1. What is the Internet Society?
2. Who is Vint Cerf?
3. Who is Bob Kahn?
4. As articulated by Lynn St. Amour, what is ISOC's hope for the future?