UNIVERSITY
of **SAN CARLOS**
SCIENTIA · VIRTUS · DEVOTIO

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Name: Bebie Grace Balbuena	**PE Schedule**: MW
Activity: Researching Networking Standards	**Teacher**: Mr. Godwin Monserate

Part 1: Research Networking Standards Organizations

- **Gather information about the major networking standards organizations by going on a web surfing treasure hunt.**
- **Identify important characteristics of some of the organizations.**

1. Who is Jonathan B. Postel and what is he known for?

 Answer:

Mr. Jonathan Postel was a member of the Association of Computing Machinery and the Internet Society, serving on its Board of Trustees. He won the International Telecommunication Union's silver medal in 1998 for his pivotal role in the Internet's success. He was an American computer scientist who made significant contributions to the development of the Internet standards, to the creation of Internet Assigned Numbers Authority (IANA) and as the RFC Editor playing a crucial part in the creation and administration of the Internet.

Source: (CCNA WiKi)

2.Which two related organizations are responsible for managing the top-level domain name space and the root Domain Name System (DNS) name servers on the Internet?

Answer:

Internet Corporation for Assigned Names and Numbers (ICANN), which operates the Internet Assigned Numbers Authority (IANA), and is in charge of maintaining the DNS root zone.

Source: (CCNA WiKi)

3.Vinton Cerf has been called one of the main fathers of the Internet. What Internet organizations did he chair or help found? What Internet technologies did he help to develop?

Answer:

Vinton Cerf co-founded Internet Society (ISOC) with Bob Kahn in 1992, helped with the creation of ICANN, and served as the chair of Internet Architecture Board (IAB) from 1989 – 1991. Internet Corporation for Assigned Names and Numbers (ICANN) Cerf served as founding president of the Internet Society from 1992-1995, and in 1999 served a term as Chairman of the Board.

Source: (CCNA WiKi)

4.What organization is responsible for publishing a Request for Comments (RFC)?

 Answer:

Internet Engineering Task Force (IETF)

(Source: IETF CC, MADURO's)

5. What do RFC 349 and RFC 1700 have in common?

 Answer:

Both RFC 349 and RFC 1700 have an assigned number and both have wide standard functions. They also offer applications that offer link, socket, port, and protocol.

Source: (CCNA WiKi)

6. What RFC number is the ARPAWOCKY? What is it?

 Answer:

 RFC stands for Request for Comments, and relates to internet governance. This is actually a type of publication that is released by the Internet Engineering Task Force (IETF) and Internet Society (ISOC).527, almost every April Fools' Day (1 April) since 1989, the Internet RFC Editor has published one or more humorous Request for Comments (RFC) documents, following in the path blazed by the June 1973 RFC 527 called ARPAWOCKY, a parody of Lewis Carroll's nonsense poem "Jabberwocky."

Source: (ARPAWOCKY, CCNA WiKi)

7.Who founded the World Wide Web Consortium (W3C)?

 Answer: The World Wide Web Consortium (W3C) was founded by Tim Berners-Lee after he left the European Organization for Nuclear Research (CERN) in October, 1994. It was founded at the Massachusetts Institute of Technology Laboratory for Computer Science (MIT/LCS).

Source: (MADURO's CCNA WiKi)

8. Name 10 World Wide Web (WWW) standards that the W3C develops and maintains? (Source Hint: W3C)

 Answer:

W3C was founded by Sir Tim Berners-Lee in 1994. It is considered as the home of the Web as well as the Semantic Web. W3C has one main mission which is deriving the web at its full potential.

W3C supports over a 100 standards, among these:

HTML, XML, XHTML, XML Schema, XQuery, RDF,

RDF Schema Language, OWL, XPATH, XSLT, CSS1, PNG,.....and many more.

Source: (MADURO's CCNA WiKi)

9.Where is the Institute of Electrical and Electronics Engineers (IEEE) headquarters located and what is the significance of its logo?

Answer:

Institute of Electrical and Electronics Engineers (IEEE) is headquartered in New York City, New York, United States. The IEEE logo is a diamond-shaped design which illustrates the right hand grip rule embedded in Benjamin Franklin's kite. Corporate office in New York City and its operations center in Piscataway, New Jersey, United States

Source: (IEEE, MADURO's)

10. What is the IEEE standard for the Wi-Fi Protected Access 2 (WPA2) security protocol?

Answer:

The IEEE 802.11i standard also known as Wi-Fi Protected Access 2 (WPA2) is an amendment to the 802.11 standard specifying security mechanisms for wireless networks.Wi-Fi Protected Access (WPA) and WPA2 are concurrent security standards.

WPA addressed the majority of the IEEE 802.11i standard; and the WPA2 certification achieved full compliance. However, WPA2 will not work with some older network cards, thus the need for concurrent security standards.

Source: (
(IEEE 802.11i standard, MADURO's CCNA WiKi)

11. Is the Wi-Fi Alliance a non-profit standards organization? What is their goal?

Anwer:

Yes, Wi-Fi Alliance is a non-profit trade association, and its goals are to ensure interoperability and backward compatibility and provide innovation support. The Wi-Fi Alliance owns the Wi-Fi trademark. Manufacturers may use the trademark to brand certified products that have been tested for interoperability.

Source:(Wi-Fi Alliance, MADURO's CCNA WiKi)

12.Who is Hamadoun Touré?

Answer:

Dr.Hamadoun Touré, Secretary-General of the International Telecommunication Union (ITU) since January 2007, was re-elected for a second four-year term in October 2010. A native of Mali, Dr. Touré has wide experience in both the public and private sectors, and is committed to harnessing the power of technology to meet the challenges of today's rapidly changing world.

Source: (Techonomy, MADURO's CCNA WiKi)

13.What is the International Telecommunication Union (ITU) and where is it headquartered?

Answer:

An organization of public-private partnership since its inception, ITU currently has a membership of 193 countries and some 700 private-sector entities. ITU is headquartered in Geneva, Switzerland, and has twelve regional and area offices around the world.The International Telecommunication Union (ITU), originally the International Telegraph Union is a specialized agency of the United Nations (UN) that is responsible for issues that concern information and communication technologies. The ITU coordinates the shared global use of the radio spectrum, promotes international cooperation in assigning satellite orbits, works to improve telecommunication infrastructure in the developing world, and assists in the development and coordination of worldwide technical standards. It is headquartered at Geneva Switzerland.

14.Name the three ITU sectors?

Answer:

   Radiocommunication Sector. (ITU-R), Telecommunication Standardization Sector. (ITU-T), Telecommunication Development Sector. (ITU-D), ITU TELECOM

15.What does the RS in RS-232 stand for and which organization introduced it?

Answer:

RS-232C. RS-232 stands for Recommend Standard number 232 and C is the latest revision of the standard. The serial ports on most computers use a subset of the RS-232C standard.This standard, which has been developed by the Electronic Industry Association and the Telecommunications Industry Association (EIA/TIA), is more popularly referred to simply as "RS-232" where "RS" stands for "recommended standard". RS-232 was first introduced in 1960 by the Electronic Industries Association (EIA) as a Recommended Standard. The original DTEs were electromechanical teletypewriters, and the original DCEs were (usually) modems.

16.What is SpaceWire?

Answer:

SpaceWire is a spacecraft communication network based in part on the IEEE 1355 standard of communications. It is coordinated by the European Space Agency (ESA) in collaboration with international space agencies including NASA, JAXA and RKA.

17.What is the mission of the ISOC and where are its headquarters located?

Answer:

The Internet Society (ISOC) headquarters are located in Reston, Virginia and Geneva, Switzerland. Its mission is "to assure the open development, evolution and use of the Internet for the benefit of all people throughout the world".

18.What organizations does the IAB oversee?

Answer:

The Internet Architecture Board (IAB) is the committee charged with oversight of the technical and engineering development of the Internet by the Internet Society (ISoc). It oversees a number of Task Forces, of which the most important are the Internet Engineering Task Force (IETF) and the Internet Research Task Force (IRTF).

Source: (IAB, MADURO's CCNA WiKi)

19.What organization oversees the IAB?

Answer: Internet Society (ISOC) oversees Internet Architecture Board (IAB).

Source: (ISOC, IAB)

20.When was the ISO founded and where are its headquarters located?

Answer:

International Organization for Standardization (ISO) was founded in 1947 and its headquarters are located in Geneva, Switzerland.

Source: (ISO)

Reflect on Internet and Computer Networking Experiences

Take a moment to think about the Internet today in relation to the organizations and technologies you have just researched. Then answer the following questions.

1.How do the Internet standards allow for greater commerce? What potential problems could we have if we did not have the IEEE?

Answer:

According to Maduro's CCNA Wiki, it means you can just go online and order something, instead of having to send an order via telegraph, heliograph, carrier pigeon and pony express and probably have the address translated 3 times or back in 1985 or so I could send email, but it probably had to go through a couple of gateways between DECent and Bitnet and Arpanet, and there weren't any attachments, or ways to represent any language other than English, and hardly any vendors had email anyway so you'd have to use telex, or fax, or paper documents. Each company would develop its own protocols and products which may not work with equipment from other companies.

2.What potential problems could we have if we did not have the W3C?

Answer:

No communication means no business, exchanging information or data equals zero.

3.What can we learn from the example of the Wi-Fi Alliance with regard to the necessity of networking standards?

Answer:

If equipment manufacturers follow the same standards/rules, it allows for interoperability and backward compatibility. This encourages competition, allows for consumer choices and encourages the manufacturers to create better products.