Research Paper Hardware and Software CISY 113

What is the internet and who controls it? The internet is a basically every computer connected to each other and they all communicate. This connection allows people to transfer, send and receive files. The internet connects different part of the world together. But there are different management who works together to manage the Internet.

**IAB**- IAB stands for Internet Architecture Board.

Internet Architecture Board (IAB) strives to keep the internet secure. IAB looks over the network protocols which is used by the Internet. IAB tries to keep the internet a dependable medium. Their main goal is to keep the internet secure and keep people’s privacy. But they don’t want to restrict the internet because it is supposed to be an open medium, which people can use to achieve big things and bring more people.

Internet Architecture Board is doing very well keeping the internet safe and secure but they could do it better. IAB works with other associations as well to meet their goal but they aren’t doing enough. We hear a lot these days about internet not being open to all and the amount of restrictions we have yet our private information could easily get leak.

**ISOC** – ISOC stands for The Internet Society.

The Internet Society (ISOC) is an international organization which supports and brings education in developing countries and anywhere else needed. They are a nonprofit organization whose goal is to keep the internet open so people could expand the internet. They basically govern the internet but with complete freedom. They are open about everything.

The Internet Society’s vision “The Internet is for everyone”. According to their site they have done many things for poor/developing countries to get them better internet by providing them with the resources needed. They are really doing what they say they do. They have helped Africa and India with resources and they are keeping the internet open and accessible to everyone.

**IETF**- IETF stands for The Internet Engineering Task Force

The Internet Engineering Task Force (IETF) is an organization which does not have any employee. Everyone including network engineers, researchers, developers and designers are volunteers. Since 1986 IETF has been involved in Internet standards including protocols.

IETF claims to make the Internet work better. These volunteers over the world are collaborating to make internet standards are doing very well right now. They are working on connecting everything together via the Internet and we are seeing the results. Our smartphones, smart TVs, computer, and everything else are being connected to the internet and with us.

**ICANN**-

ICANN stands for Internet Corporation for Assigned Names and Numbers

Domains and IP addresses were very few in the beginning but as the Internet grew with billions of names in use and many new created, it becomes hard to maintain. This is where ICANN comes in. Internet Corporation for Assigned Names and Numbers is a nonprofit corporation who manages domain names and the related IP address. The maintain the network and keep it secure.

ICANN works on how all these domain names function and expand. Back in the days, there were only .com domain names but today we have basically any extension we want. They say that they try to keep these domains secure but we know that .com and other local domains can’t be trusted unless they end in .edu or .gov or few others.

**IANA**- IANA stands for Internet Assigned Numbers Authority

Today there are billions of IP addresses and to manage these there is the Internet Assigned Numbers Authority (IANA). They manage these IP addresses to provide smoother experience. Now, IANA isn’t the only one who manages these because managing the entire world’s IP addresses is tough. They work with RIR who is responsible for managing the IP addresses given to a specific area or a country by IANA.

IANA’s goal is to manage the IP addresses so that they work when we need them to work and anywhere in the world. We can see that they are doing very well in their promise since we can go to any working ip address anytime, anywhere. We can also track the IP address and its location which is a concern and useful. It just depends on who and how they use the IP address.

**ARIN-** ARIN stands for American Registry for Internet Numbers

American Registry for Internet Numbers is a nonprofit organization who manages the IPv4 and IPv6 address space and IP addresses. They provide the IP addresses or numbers as they call it, behind the domain names. ARIN is only responsible for managing Internet number for the United States, Canada, Caribbean and North Atlantic islands. ARIN is one of the IANA’s helping hand since they manage the North America.

ARIN is improving slowly as the demand increases. We used to have IPv4 which had 32 bits but now we have IPv6, which has 128 bits. This allows them to manage and distribute more IP addresses. As time goes who knows how the Internet will grow and change.

**APNIC-**

APNIC stands for Asia Pacific Network Information Centre

APNIC is similar to ARIN. APNIC distributes and manages IP addresses and AS numbers in the Asia Pacific region. Just like ARIN manages the North America, APNIC manages Asia.

APNIC is providing their service to Asia by managing IP address and they are doing just as well as ARIN because we haven’t heard anything different about IP management.

**LACNI**

LACNIC stands for The Latin America and Caribbean Network Information Centre

LACNIC is responsible for providing the IPv4 an IPv6 and to administer them in Latin America and Caribbean regions. Just like APNIC and ARIN, LACNIC contributes by covering a specific region.

LACNIC is doing the same thing except in a different region. They’re goal is to keep the internet secure and stable by managing the IP addresses which there aren’t any issues so far.

**RIPE -** RIPE stands for Réseaux Internet Protocol Européens

RIPE also deals with providing IP addresses but to Europe. I couldn’t get much information form their site other than that they are similar to APNIC and ARIN but mainly focus on the Internet Service Providers.

Their goal is to enhance the cooperation between the public and private sectors according to a wiki entry. They also provide and manage AS numbers and IP addresses to people to keep the internet flow smoothly. Europe does have a pretty reliable internet because of RIPE for they are successful.

**Network Solutions**

Network Solutions is a technology company based in America to provide small businesses with unique domain name for their website. This name then gets an IP address from one of the registrar who looks at the location and follows all the protocol necessary to get the IP address.

To get your products or voice out, people need websites. To get a website, we first must pick a name which people can easily go to. This is what Network Solutions do, they would tell us if the name we want is taken or not and they would help us get our domain name. They would look out for a specific domain name if we want. They would negotiate with the owner of the domain and they would buy the domain when the owner has it for sell. They also give you many different extensions available for public use. They do very well at explaining what they do but we have to dig little deeper and when we go to their about us they bring us to a different site.

**NameCheap**

NameCheap is a domain name registrar and a hosting company. They provide us with domain names just like the Network Solutions does. But in addition to that they also host our websites. They aren’t as famous as other related companies like GoDaddy. NameCheap claims to be very cheap but they don’t know that there are cheaper options available out there. ICANN charges namecheap certain amount of fee since many domain extensions are by ICANN.

**GoDaddy**

GoDaddy is the world’s largest domain name registrar and has 14 facilities all over the world with more than 6000 employees who are there to help every single day. GoDaddy is a web hosting company and domain name provider just like NameCheap but even cheaper. Even though GoDaddy has higher price for temporary use they are cheaper. So, if someone is new and just wants to get a feel for it, GoDaddy is way better and cheaper option. GoDaddy has a very good reputation and they are the number one domain registrar and a web hosting company. GoDaddy is directly related to ICANN unlike Namecheap since ICANN has more than 40 million domain names under its management.

**Citations**

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