

Domain Name

The Concept of Domain Names

- Domain names are the human-friendly forms of Internet addresses, and are commonly used to find websites on the Internet.
- For example, the domain name www.iitg.ac.in is the Internet address of the IIT Guwahati website.
- The cyber world is created by networking of large number of computers. In order to reach any particular computer on this network, it is necessary to know its precise address, just the way we know a telephone number of a person which is in the form of country code, area code and local telephone number.

The Concept of Domain Names

- In cyber world, the computers are identified by their unique IP (internet protocol) addresses.
- The IP address is a string of four numbers, separated by periods. Each number can be from zero to 255. For example 201.64.108.132 can be an IP address.
- These numbers are not easy to remember. Hence these IP addresses are coded in form of familiar strings of letters called domain names.
- These names map to unique IP numbers that serve as routing address on the Internet, allowing users to access websites on the Internet.

The Concept of Domain Names

- It also forms the basis of other methods or applications on the Internet, such as file transfer (ftp) or email addresses - for example the email address abcdef@iiitg.ac.in is also based on the domain name iiitg.ac.in.
- Domain names are more than just addresses, since they can be selected by the "addressee" and are usually closely associated with a particular service or product.
- The domain name system is essentially a global addressing system.
- It is the way that domain names are located and translated into Internet Protocol (IP) addresses, and vice versa.

Origin & Evolution of Domain Names

- Prior to December 1999, a company called Network Solutions Inc. ("NSI") was almost solely responsible for the registration of second level domain names for the most popular top-level domains, including .COM, .NET, and .ORG.
- Since the vast majority of domain names are under one of these top-level domains (the Internet and Domain Names most common being .COM domain names), Network Solutions had a great deal of control over how domain names were registered, and how disputes would be resolved.

Origin & Evolution of Domain Names

- To avoid having to be the arbitrator between two parties who both desire the same domain name, NSI decided to simply adopt a first come, first serve arrangement with respect to domain names.
- Under this scheme, NSI would not question an applicant's right to have a particular domain name. If the domain name was available, the applicant was given the name.

Origin & Evolution of Domain Names

- As of December 1999, the ability to register .COM, .NET, and .ORG domain names was spread out among many registrars.
- These registrars are accredited to the Internet Corporation for Assigned Names and Numbers (or "ICANN"),
- It is an non-profit corporation formed specifically to control Internet domain name management and similar functions.
- NSI continues to assign domain names, but now they are just one of many domain name registrars.
- Following NSI's precedence, all of these registrars assign names on a first-come, first-serve basis, and do not do any prescreening before assigning a new domain name.

Management of Domain Names

- The management of domain names involves several key activities and considerations to ensure effective use, protection, and administrative control of a domain name on the internet.
- **Registration:** The first step is to register a domain name with a recognized domain registrar.
 - This process includes choosing a unique name that's not already in use and paying a registration fee.
 - Registrations typically last for a period of one to ten years, with the option to renew.
- **Renewal:** Domain names are registered for a specific period. Managing a domain name includes keeping track of renewal dates and renewing the registration before it expires to prevent the domain from becoming available to the public again.

Management of Domain Names

- **DNS Configuration:** The Domain Name System (DNS) translates domain names into IP addresses.
 - Managing a domain involves configuring DNS settings to point to the correct web hosting server, email server, and handling other DNS records.
- **Security:** Protecting a domain name from unauthorized access or transfer is crucial.
 - This includes setting up domain locks, enabling two-factor authentication for the domain account, and using domain privacy services to hide registration details.

Management of Domain Names

- **Portfolio Management:** For individuals or organizations with multiple domain names, management includes keeping track of all domain names in the portfolio, ensuring consistent renewals, and making decisions about the purchase or sale of domain names as part of broader digital strategy.

Management of Domain Names

- **Dispute Resolution:** Managing domain names also involves dealing with potential disputes, such as claims of trademark infringement or cybersquatting. This may require engaging in dispute resolution processes under the Uniform Domain-Name Dispute-Resolution Policy (UDRP) or other applicable mechanisms.

Management of Domain Names

- **Subdomains and Redirects:** Managing a domain may also involve creating subdomains (e.g., `blog.example.com`) for different sections of a website or setting up redirects to guide visitors from one domain or webpage to another

Role ICANN in Domain Name Management

- ICANN (Internet Corporation for Assigned Names and Numbers) oversees the global DNS.
- **Responsibilities:** Coordinates IP address allocation and manages the DNS, ensuring stable and secure operation.
- **Global Coordination:** Maintains the central directory for domain names to IP addresses.
- **Policy Development:** Facilitates DNS policy, internationalization, and introduction of new TLDs.
- **Registry Authorization:** Accredits domain name registrars for TLD assignments.
- **Stability Preservation:** Helps preserve operational stability of the Internet.
- **Global Representation:** Aims for broad representation of the global Internet community through policy development

Types of Domain Names

- Domain names are organized in subordinate levels (subdomains) of the DNS root domain.
- The first-level set of domain names are the top-level domains (TLDs), including the generic top-level domains (gTLDs), such as the prominent domains .com, '.net and .org, and the country code top-level domains (ccTLDs).
- The second-level and third-level domain names that are typically open for reservation by end-users that wish to connect local area networks to the Internet, create other publicly accessible Internet resources or run web sites.

Types of Domain Names

- **Top-Level Domains (TLDs):** These are the highest level of domain names in the DNS structure. Examples include generic TLDs like .com for commercial businesses, .org for organizations, and .net typically used by networks.
- **Country Code Top-Level Domains (ccTLDs):** These are two-letter domains assigned to specific countries or territories. For example, .uk represents the United Kingdom, and .jp is for Japan.

Types of Domain Names

- **Generic Top-Level Domains (gTLDs):** These are generic domain extensions that are not tied to a specific country. They often describe the type of entity that registers them, such as .app for applications or .edu for educational institutions.
- **Second-Level Domains (SLDs):** These are directly below a TLD in the DNS hierarchy. They are often specific to an organization or the particular name that an entity registers, like example in example.com.

Types of Domain Names

- **Subdomains:** These are subdivisions of a domain and are used to organize or navigate to different sections of a website. A common example is `blog.example.com`, where `blog` is the subdomain of the `example.com` domain.
- **Reserved Domains:** Certain domains are reserved for special purposes or to prevent misuse. Examples include `.localhost` for local servers and `.example` for use in documentation

Importance of Domain Names

- **Brand Identity and Recognition**

- **Brand Identity:** Domain names establish a unique identity and professional credibility for a business.
- **Memorability:** A good domain name is easy to remember, promoting brand recall.
- **Authority:** A domain that matches your company name enhances perceived authority.
- **Example:** www.nike.com instantly associates with Nike's brand identity.

Importance of Domain Names

- **Marketing and Online Presence**

- **Visibility:** A domain name increases the online visibility of a business.
- **SEO:** Relevant domain names can improve search engine rankings.
- **Advertising:** A clear domain name makes for effective advertising; customers know where to go.
- **Example:** www.bestbuy.com directs to a leading electronics retailer, simplifying marketing.

Importance of Domain Names

- **Commercial Potential and Protection**

- **E-Commerce:** Domains facilitate e-commerce, opening up digital markets for a business.
- **Sales Platform:** Acts as a direct channel for sales and customer engagement.
- **IP Protection:** Protects your brand from intellectual property theft and squatting.
- **Example:** www.amazon.com is not just Amazon's online address; it's a vast sales platform.

Summary

- Domain names are user-friendly forms of internet addresses commonly used to find websites.
- Domain names are created as per the procedures and rules of the Domain Name System (DNS), and the names registered in the DNS are domain names.
- A domain name is an identity of one's business online.
- Every web server requires a DNS server to translate domain names into Internet Protocol (IP) addresses.
- Since domain names are easy to use and remember, they have become business identifiers.

Summary

- Domain name performs the same functions as that of a trademark.
- A domain name serves the same functions online that a trademark performs offline in business dealings and transactions.
- A trademark is a graphic signifier of the company product or service, while the domain name is a navigator of the company on the internet and the virtual image of the business.

Summary

- A registered and protected trademark and the domain name offers the following benefits:
 - A trademark protects and promotes the brand name, while a registered domain name protects unauthorised use by any entity or person.
 - Trademark supports the face value of a profession or business, while a domain name increases the contact value of the business from any remote place of the world.
 - A trademark makes a product or service prominent in the market, while a domain name can deliver the service or product to customers worldwide.

Summary

- The registered proprietors of a trademark get the exclusive right to use the mark regarding the goods and services.
- It serves to distinguish the company products from those of their competitors in trade. Therefore, a trademark and domain name serves the same function as business identifiers.
- A well-protected domain name is beneficial for the security and profitability of a business, just like an internationally protected trademark. Thus, registration of both the trademark and domain name is necessary.

Summary

- However, the procedure of acquiring a domain name involves no examination of whether it is capable or distinctive of distinguishing itself, unlike trademarks.
- Descriptive words can be registered as domain names.
- Some businesses use their registered trademarks as domain names.
- Once a domain name is chosen, the holder can apply to obtain trademark protection for the domain name to prevent any third party from using the name.

Trademark Registration for Domain Name

- Domain names obtain trademark registration at both the national and international levels, provided the domain names satisfy all the conditions required to obtain a trademark registration.
- The domain name must act as a reliable source identifier for the business goods and services on the internet to be registered as a trademark.
- A domain name as a trademark must be unique from all other well-known trademarks and domain names on the internet so that it does not deceive or mislead customers of other companies or violate morality or public order.

Domain Name Protection in India

- A domain name is not protected under any law in India.
- Thus, any person or business obtains protection to a newly created domain name in India under the Trade Marks Act, 1999 and the Trade Marks Rules, 2002.
- At the international level, the domain names as trademarks are registered by only the ICANN (Internet Corporation for Assigned Names and Numbers) organisation.
- At the international level, the domain names as trademarks are protected by the ICANN along with the diverse International Trademark Treaties of the world and the directly concerned national Trademark Law.

End of Lecture_07