

Hi. I'm Prabhakar. I'm going to talk to you about the World Wide Web today.
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WWW

- Tim Berners-Lee 1991
- But the conceptual framework is much older
- Vannever Bush 1945

So what is the World Wide Web? We know that traditionally Tim Berners-lee has been credited with creating the World Wide Web in 1991, but actually the concepts existed even before that much before that. The computer science people knew about how to organize text in an interesting fashion and the origin goes to 1945 by a person called Vannever Bush.
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Vannevar Bush, MIT

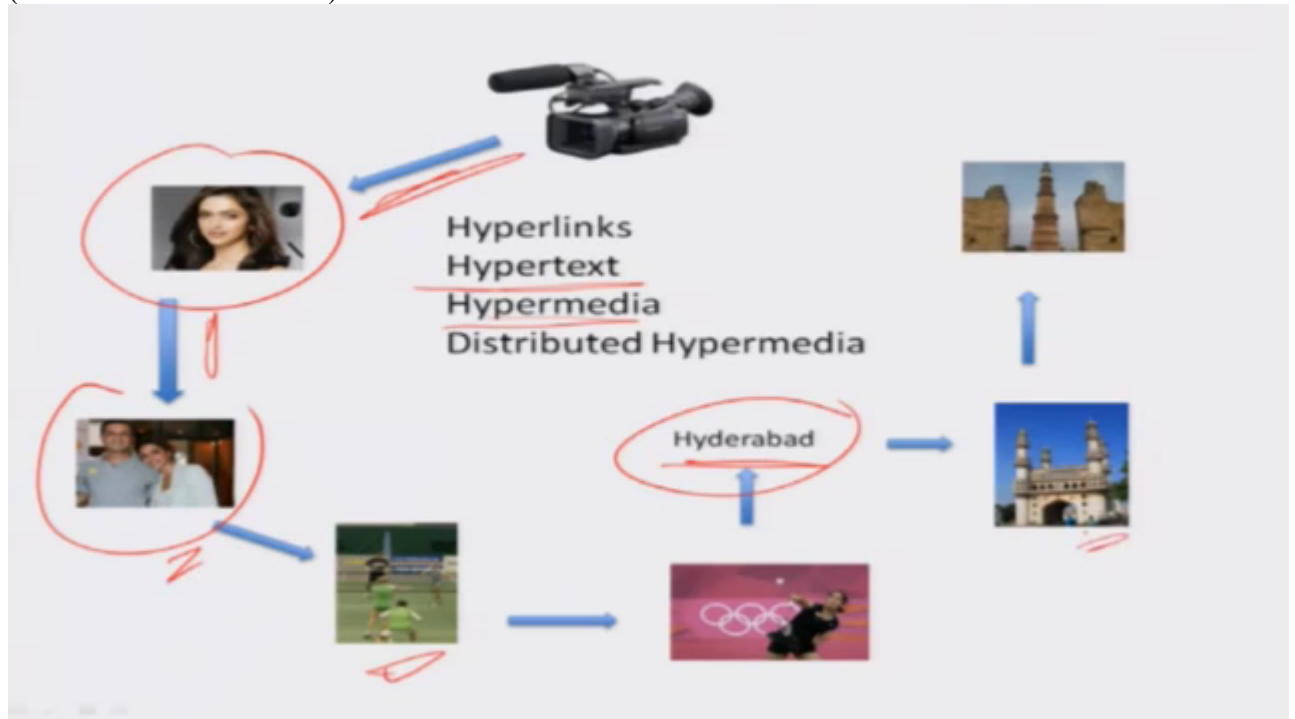
- “The human mind operates by association. With one item in its grasp, it snaps instantly to the next that is suggested by the association of thoughts, in accordance with some intricate web of trails carried by the cells of the brain.”

“As we may think”, *The Atlantic*, July 1945

http://www.theatlantic.com/magazine/archive/1945/07/as-we-may-think/303881/?single_page=true

He was with MIT. He was in the – he was a professor there and later became an Administrator. So he conceptualized something interesting, let us read it. The human mind operates by association with one item in its grasp it snaps instantly to the next that is suggested by the association of thoughts in accordance with some intricate web of trails carried by the cells of the brain. So what he is saying is we organize information in small chunks and they are all connected to each other in some kind of web and the way we think is when I am looking at some concept, some object, my thought because of the association I have with that object jumps to another object that is how humans think, that's how humans organize the information in their brain.

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Let's see an example. So I'm right now looking at the camera. I am imagining all of you behind the camera. So when I look at the camera this is a very high-end camera which can shoot movies I think of movies, films, actors, actresses, Amitabh Bachchan, Hema Malini, in your generation it is Deepika Padukone. But Padukone to me reminds me of Prakash Padukone, who was a very well known badminton player. See how my thought is jumping. From the camera I went to Deepika to Prakash to badminton, but today a badminton is associated with Saina Nehwal. And when I think of Saina Nehwal I think of Hyderabad. And when I think of Hyderabad my thoughts jump to Charminar, right? And when I think of Charminar I go to Kutub Minar. See where I have moved. I've started with the camera in front of me, I moved through a whole lot of web to the Kutub Minar and of course from Kutub Minar it goes on to the history of my country and so on so.

What we have essentially here is some pieces of text which are connected with each other what we call hyperlinks. So if we have it in this fashion it is hypertext. Actually it is little more than that. It is not just hypertext, it is hyper media because what I have is not text like this but images you know these are all images, right? Actually they could -- these need not be just images, they could be movie clips, they could be programs that execute when you go

there. And the interesting thing is all these images and texts and programs and movie clips need not be on the same computer, they can be on multiple machines.

For example the Kutub Minar photograph may be on the Archaeological Survey of India machine and this information about Deepika Padukone is on her personal website or in the Wikipedia and this is on the Badminton Association of India's or the Indian Olympic Association website and so on. So they are on machines which are probably distributed all over the world, but this information is connected with each other through hyperlinks. So that's why we call it hyper media which is distributed which means distributed hypermedia. (Refer Slide Time: 03:59)

- Hyper Text is Text with Hyper Links
- You click on a link and go to the target page
- Web pages are like that!
- The targeted page could be an Image, Movie Clip, Program
- We call this Hypermedia

So essentially what I have is hypertext is text with links between them, these are called hyperlinks and when you click on one link takes you to the target page, right? This is what happens in a web website you know your see looking at some content and there are links emanating from various words or images and so on when you click on them they take you to the next page. Now the targeted page the page you go to may not be just text it could be a movie or an image or a program which executes and so on and that's what we call this hyper media or distributed hypermedia.

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The World Wide Web is a program running on the Internet, implementing Distributed Hypermedia

So if you want a definition for what is the World Wide Web? The World Wide Web is a program running on the internet implementing what we call distributed hypermedia. So you know what is dub dub dub now right?
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- **HTML: Hyper Text Markup Language**
- **HTML Editor: A program which will help you create/edit HTML pages**
- **HTTP: Hyper Text Transfer Protocol – this is how two HTTP servers talk to each other**
- **HTTP Server: A program which can deliver HTML pages**

Now let us look at some simple terminology. This you will encounter so the web. HTML, what is HTML? HTML is stands for Hypertext Markup Language. It is basically simple text in which you insert some tags to indicate the computer's to make it bold or underlined or italics or you know to show it in color and so on. So this is a way to tag the documents that you have to make them appear beautiful, more pleasing and so on. So a program which will allow you to create HTML pages is called a HTML editor.

Now we have seen there is some document sitting here and when I click on this it goes to another computer and brings the document sitting there. So that means this computer is talking to the computer somewhere else anywhere in the world, right? So he talks to that computer through a protocol, through an exchange of what is first and what is next and that protocol is called the Hypertext Transfer Protocol, HTTP and the programs which do this talking on HTTP is called the HTTP server. So you know all about HTML and HTTP and so on. Thank you.