

WEB 1.0 TO WEB 3.0 - EVOLUTION OF THE WEB AND ITS VARIOUS CHALLENGES

OUTLINE

Difference Between Web & Internet.

- Web 1.0(Read-only Static web).
- Sad Facts of Web 1.0.
- Web 2.0(Read-write interactive web).
- Principles of Web 2.0.
- Web 1.0 vs Web 2.0.
- Sad Facts of Web 2.0.
- Web 3.0 (Read-write intelligent web).
- Technologies of Web 3.0
- Comparison Among Existing Web
-



Before describing web we need to understand one thing very clearly

INTRODUCTION

World Wide Web \neq Internet Service

We must remember that both are not the same
Web is different then Internet

A black and white photograph of a spider web. The web is a complex, multi-layered spiral structure, with many concentric circles and radial lines. It is set against a background of dark, out-of-focus foliage. On the left side, there are some lighter-colored, serrated leaves. The text "What is the Web?" is written in a large, white, sans-serif font across the center of the web. The overall image has a high-contrast, grainy quality.

What is the Web?

WORLD WIDE WEB

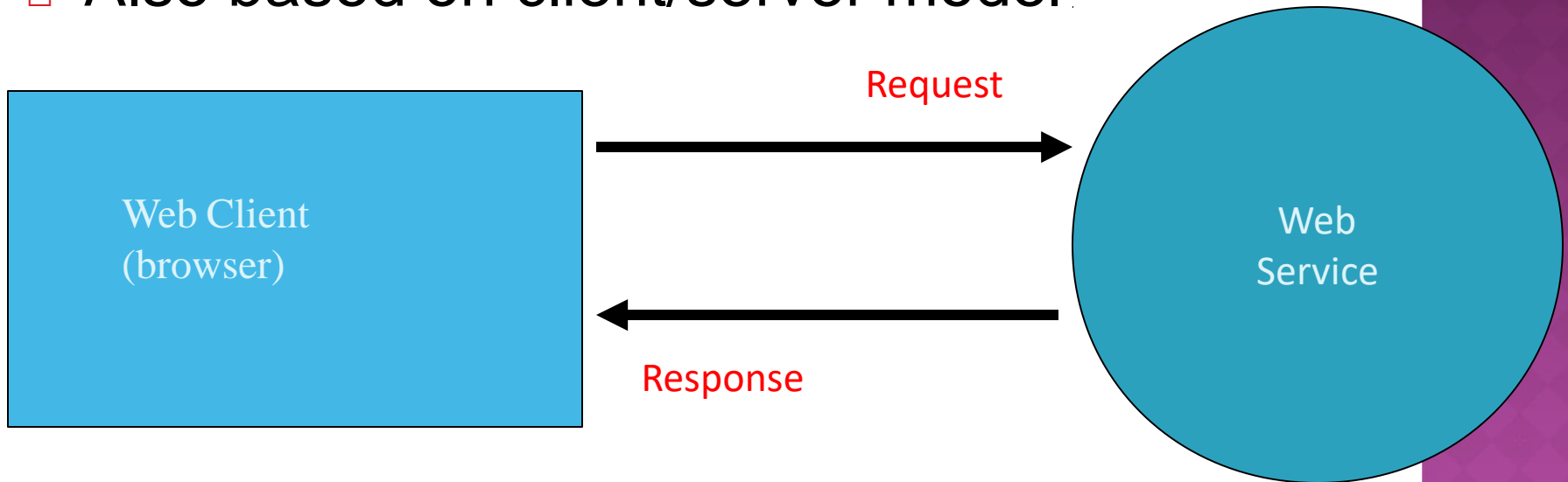
- The world wide web is larger collection of interconnected Documents or Content
- Facilitates communication between peopleand also computers



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- ❑ Web based on Hypertext
- ❑ Also based on client/server model



INTERNET

The Internet is the collection of interconnected computer Networks.



WEB 1.0

Web 1.0 [Push]

Web 1.0 is an old internet that only allows people to read from the internet.



Web1.0 is a one-way
platform

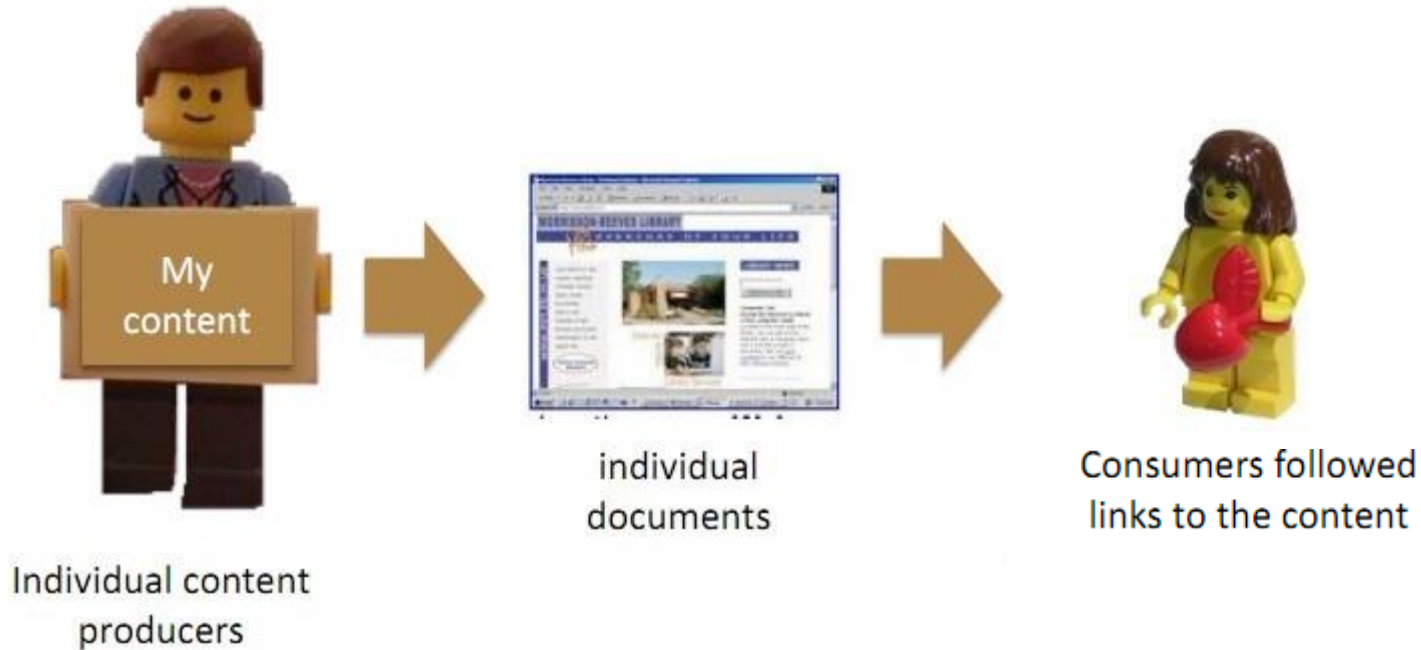
WEB 1.0(READ-ONLY STATIC WEB)

- First stage of the World Wide linking web pages and hyperlink
- Most read-only Web. It focused on companies home pages
- Dividing the world wide web into usable directories
- It means Web is use as “Information Portal”.
- Everyone has their personal own little corner in the cyberspace
- It started with the simple idea “Put content together”
- Media companies put content in the web and pushes it to user. using web 1.0 Companies Like BBC,CNN able to get online.

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Things works in web 1.0



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Hotmail®

SAD FACTS OF WEB 1.0

SAD FACTS

- Read only Web
- Limited user interaction
- Keyword based (dumb) search ----- Web Directories
- The Lack of standards ----- • Browsers war

NEXT STEP

When we got a grip on the technical part, web became clearer and then we discover

- Power of Networks
- Power of Links
- Power of Collaboration
- Power of content and reach
- Power of Friends

15

Web 2.0

And then the Next step is





Producer/Consumer



□ Web 2.0 [Share]

Web2.0 is a two-way
Platform

A term used to describe a new generation of Web services and applications with an increasing emphasis on human collaboration.

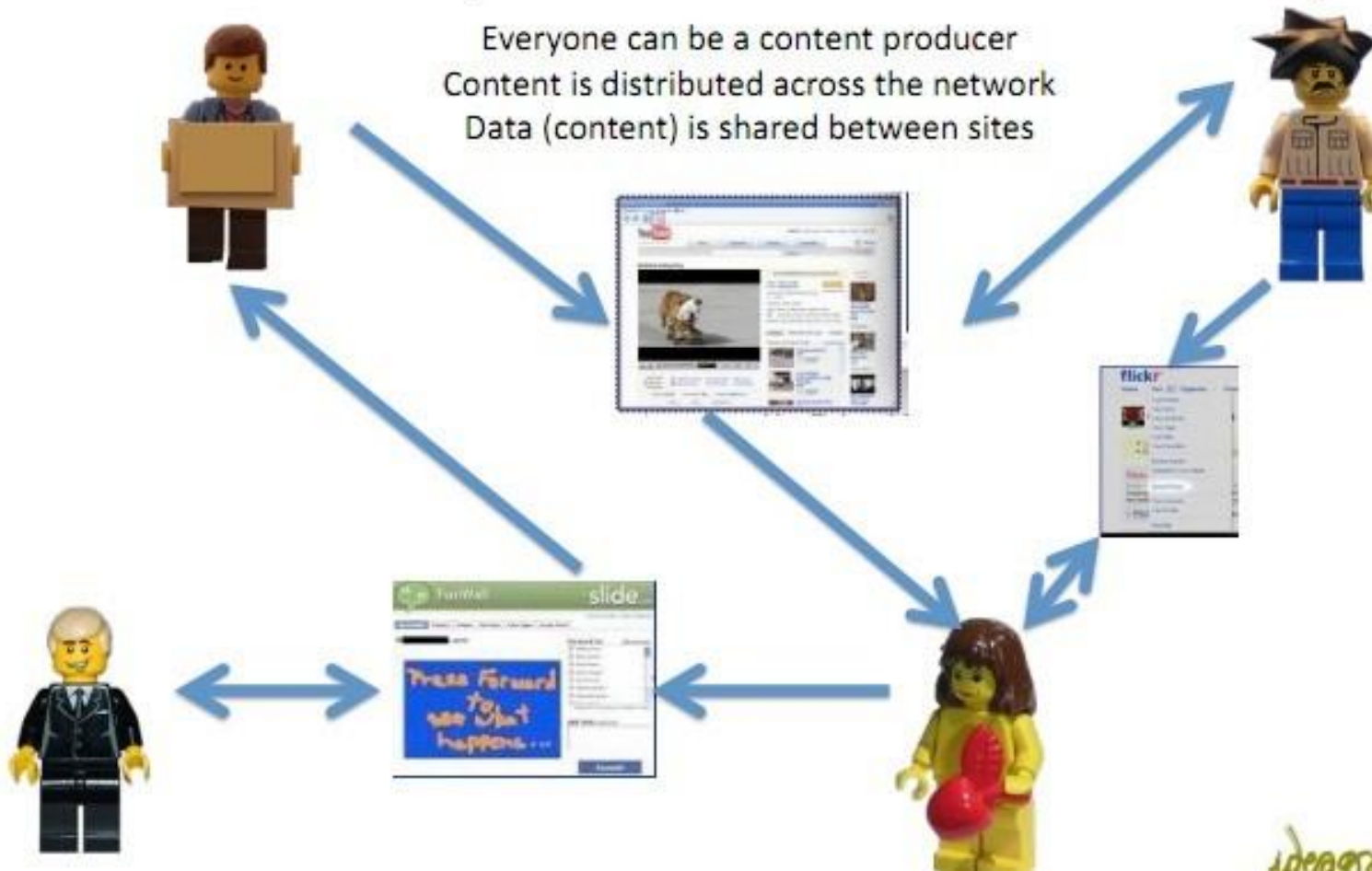
WEB 2.0(READ-WRITE INTERACTIVE WEB)

- It is a platform that gives users the possibility (liberty) to control their data.
- This is about user-generated content and the read-write web.
- People are consuming as well as contributing information through blogs or sites like Flickr, YouTube, Digg, etc.



In Web 2.0 you have a distribution relationship

Everyone can be a content producer
Content is distributed across the network
Data (content) is shared between sites





PRINCIPLES OF WEB 2.0

No Products but Services

- “There are no products, only solutions”
- A problem solving approach
- Must Provide Simple Solutions

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Customization



- Every individual is unique
- Some people want to be different
- Allow him to choose instead of forcing him to use what you have made
- Make him feel home
 - e.g. My yahoo, Google Homepage, MySpace , Firefox extensions

Concepts

Web 2.0 can be described in 3 parts which are as follows:

- Rich Internet Application (RIA) - It defines the experience brought from desktop to browser .whether it is from a graphical point of view or usability point of view. Some people relate RIA with *AJAX* and *Flash*.
- Service-oriented Architecture (SOA) - It is a key piece in Web 2.0 which defines how Web 2.0 applications expose its functionality so that other applications can
- integrate the functionality and produce a set of much richer applications (Examples are: Feeds, RSS, Mash-

ups)

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Social Web – It defines how Web 2.0 tend to interact much more with the end user and making the end user an integral part.



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Social Web

- A third important part of Web 2.0 is the Social Web. The term is currently used to describe how people socialize or interact with each other throughout the Web .
- The social web consists of a number of online tools and platforms where people share their perspectives, opinions, thoughts and experiences
- Web 2.0 Applications tend to interact much more with the end user. As such, the end user is not only a user of the application but also a participant

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User can participate by :-

- ❑ Podcasting
- ❑ Blogging
- ❑ Tagging
- ❑ Contributing to RSS
- ❑ Social bookmarking
- ❑ Social networking



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Technologies

The client-side/web browser technologies used in Web 2.0 development are :

Ajax(Asynchronous JavaScript +XML)

Ajax programming uses JavaScript to upload and download new data from the web server without full page reload.

Adobe Flex

Flex makes it easier for programmers to populate large data grids, charts, and other heavy user interactions. Applications programmed in Flex, are compiled and displayed as Flash within the browser

WEB 1.0 VS WEB 2.0

Web 1.0

- ❑ The mostly read only Web
- ❑ 45million global user(1996).
- ❑ Focused on companies
- ❑ Home pages
- ❑ Owning content
- ❑ HTML,portals
- ❑ Web forms.
- ❑ Netscape
- ❑ Page views

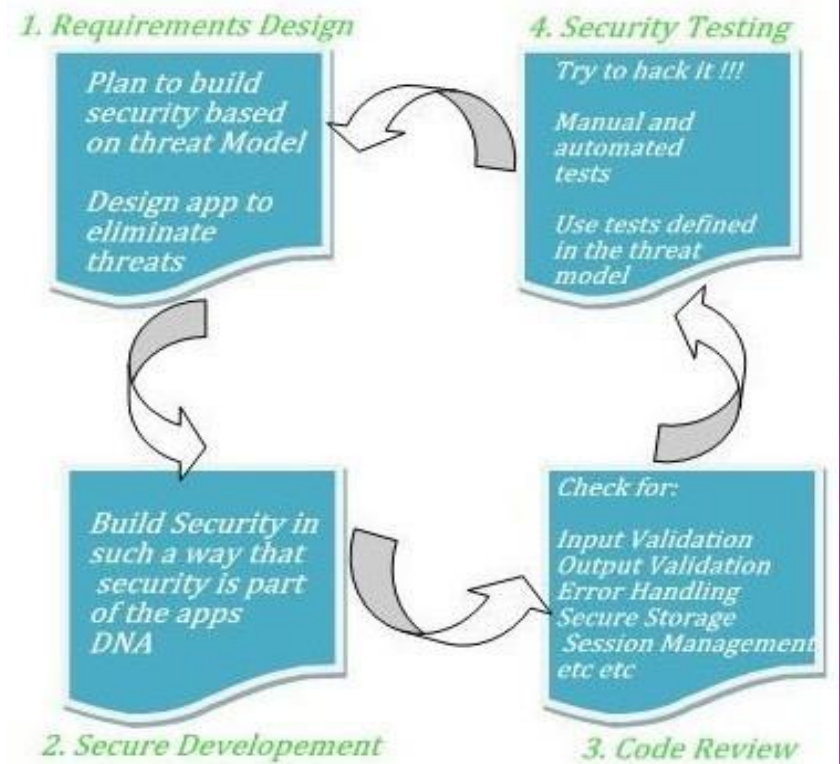
Web 2.0

- ❑ The widely read -write web
- ❑ 1 billion + global user(2006)
- ❑ Focused on communities
- ❑ Blogs
- ❑ Sharing content
- ❑ XML,RSS
- ❑ Web Application
- ❑ Google
- ❑ Cost per click

WEB 2.0

Sad Facts

- ❑ Same old Keyword based search.
- ❑ Web application are still rigid
- ❑ Each Website have its own data and it is not sharing it.
- ❑ Computers can not understand any thing
- ❑ Web 2.0 is Social change. The technical part has not change much.



INTRODUCING NEW KIND OF WEB

Main Reasons

- How will our information be organized.
- Will we still do the “surfing” or will the machine surf for us

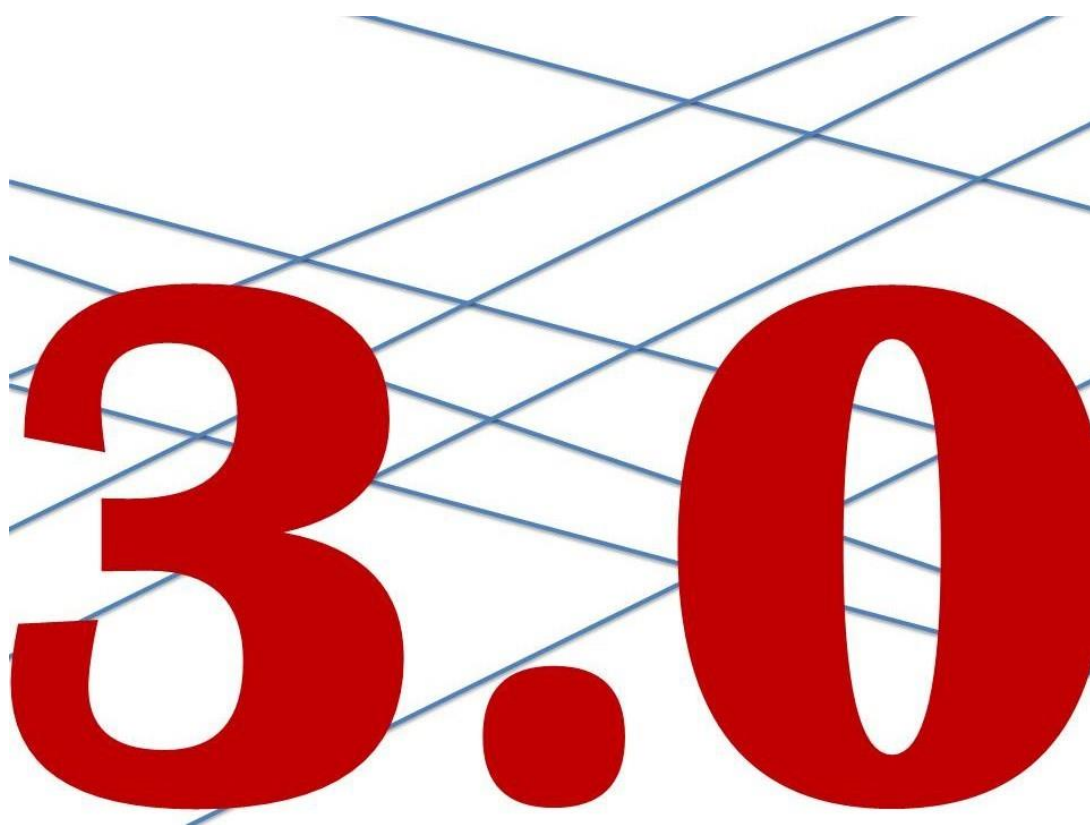
NEW CONCEPT IS WEB OF DATA

Beyond the present Web Lets move towards the web
of Data

WEB OF DATA

New kind of Web capable of reading and understanding content and context.

When the web can understanding content it can better satisfy the request of people and machines.



3.0

WEB 3.0 READ-WRITE INTELLIGENT

Semantic Web

- It is a Web of data.
- changing the web into a language that can be read and categorized by the system rather than humans.



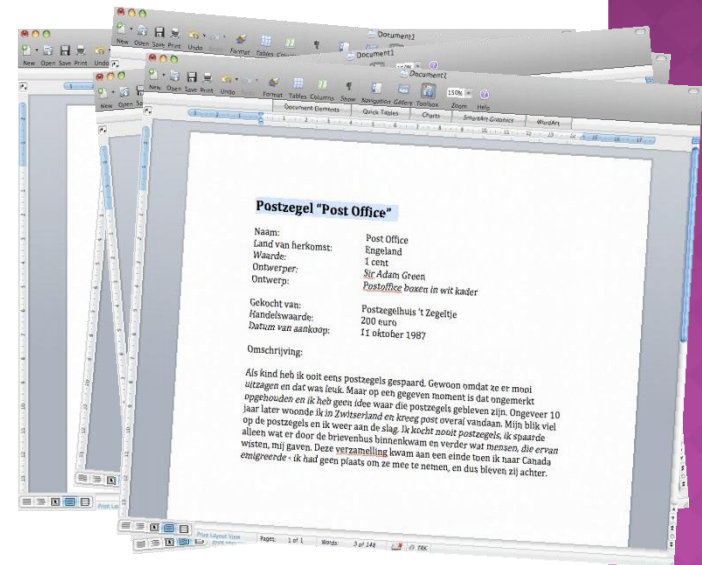
Artificial Intelligence

- Extracting meaning from the way we people interact with the Mobility
- everything, everywhere



EXAMPLE

- Suppose, I am a stamp collector...
- Over the years I've collected a lot of stamps.
- About every stamp, I made a document
- That's a lot of documents



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- How can I find a specific stamp?
- Google?
- This is the web we have today: a huge collection of documents
- The words of all those documents are indexed. We can search for keywords.



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- Now, suppose I Google for all red stamps
- Not very intelligent...



Red stamps
Stamps from Cambodia
(Khmer Rouge)
Stamps from the Red Sea
Stamps from the 140th
anniversary of the Red Cross
Stamps with red dragons

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- Not very intelligent, but how can a computer know what I mean?
- When we structurally describe that a stamp is a stamp and red is a color.
- Describing data in a structured way can best be done in a database.
- Different databases can be connected.

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In 1980 you could buy this stamp for 1 cent

Now it's worth 3 euros

This is a stamp

This stamp is from the United Kingdom



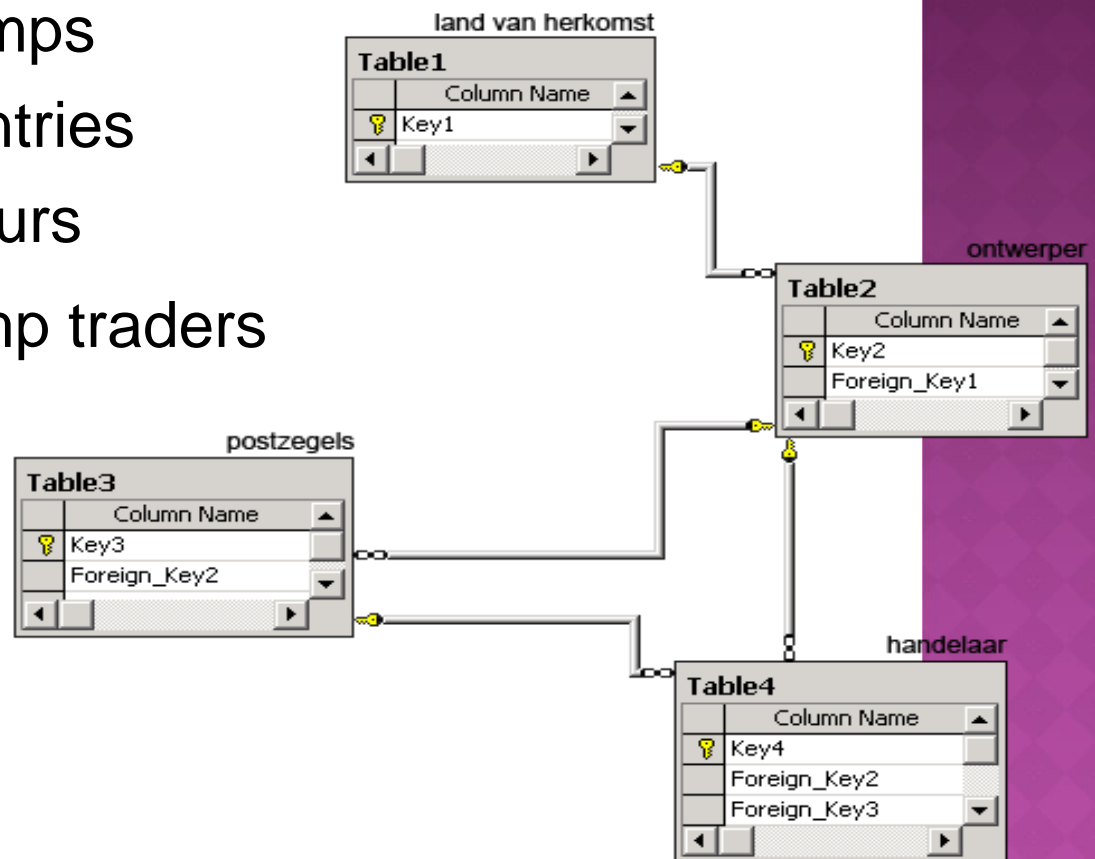
This stamp is used between 1978 - 1981

The picture on the stamp is a PO Box

This stamp is designed by John Bryan Dunmore

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- A database with stamps
- A database with countries
- A database with colours
- A database with stamp traders



Paper ID: 97

EXAMPLE - WEB 3.0 AS DATABASES INTEGRATION

- One view of Web 3.0 is the web being a big collection of databases which can be connected on demand.
- Agreements are made on the structure of data and the way data is described. Where the data is located is irrelevant.
- Linking data is the power of web 3.0.
-

SOME TECHNOLOGIES OF WEB 3.0

- RDF
- XML
- URI
- SPARQL
- XDI
- XRI
- SWRL
- XFN
- OWL
- API
- OAUTH

WEB 3.0

In computing, a Uniform Resource Identifier (URI) is a string of characters

used to identify a name or a resource on the Internet.

e.g

PHP is programming Language

POWL is an application written in PHP

It use triple {subject,property,object} model

hasWebSite("#php", "<http://www.php.net/>")

isA("#php", "#language")

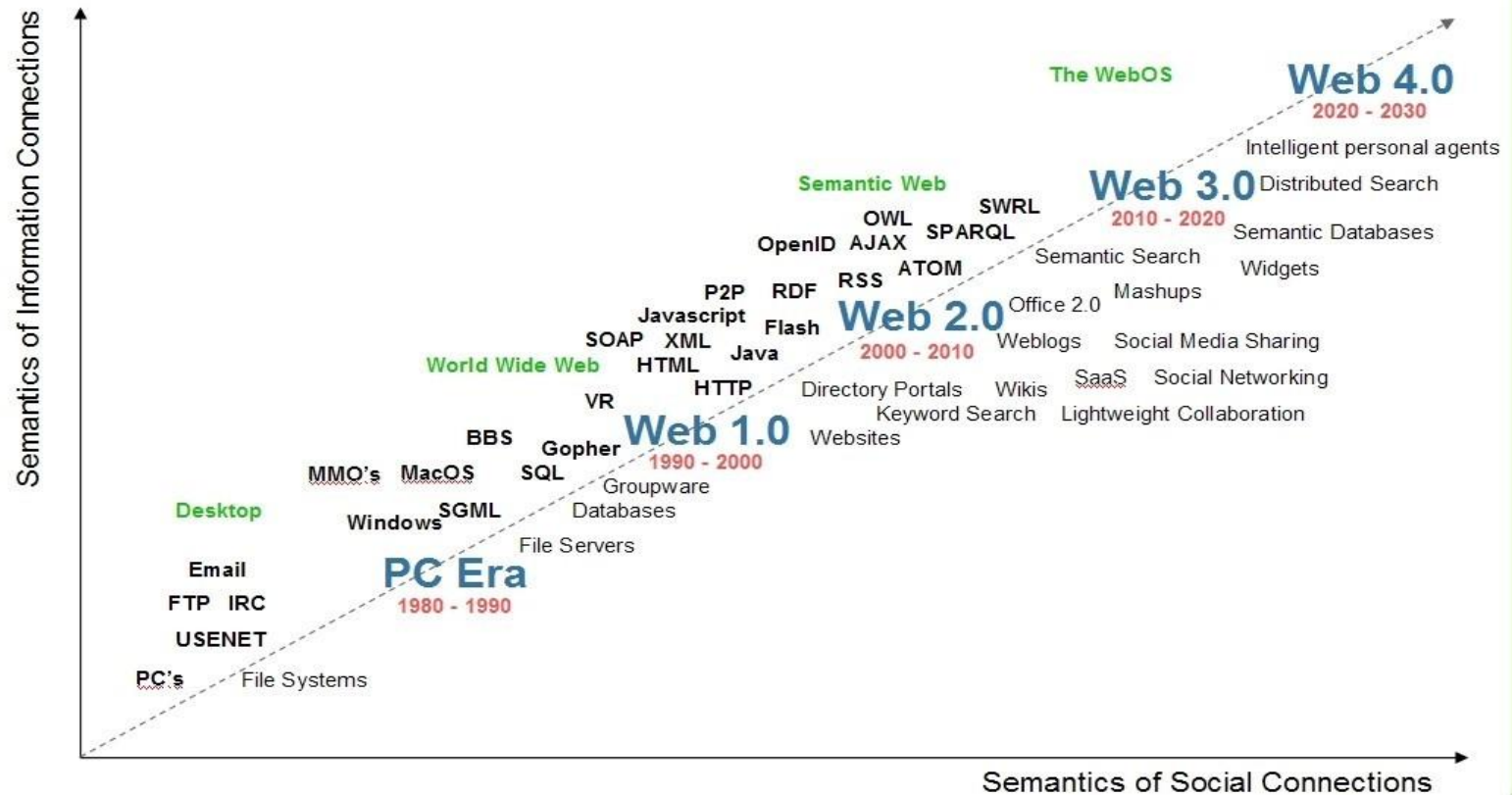
isWrittenIn(<http://powl.sf.net/>, "#php")

It is all about triple of URIs

WEB 2.0 VS 3.0

- Web 2.0 is all about the power of networks
- Basically, web 2.0 is a social change. The technical part of the web hasn't changed very much.
- But, web 3.0 will be driven by technological changes
- Web 3.0 - the semantic web - is about the meaning of information.

WEB HISTORY AND FUTURE



Source: Radar Networks & Nova Spivack, 2007 – www.radarnetworks.com

EXAMPLE WEB 3.0

- Freebase
 - <http://www.freebase.com>
- Amazon (“If you liked this, you will like this!”)
 - <http://www.amazon.com>
- Netvibes (pull your Web 2.0 apps together!)
 - <http://www.netvibes.com>