



**UTM**  
UNIVERSITI TEKNOLOGI MALAYSIA

OPENCOURSEWARE

# Internet



# Internet World Stats

## Usage and Population Statistics

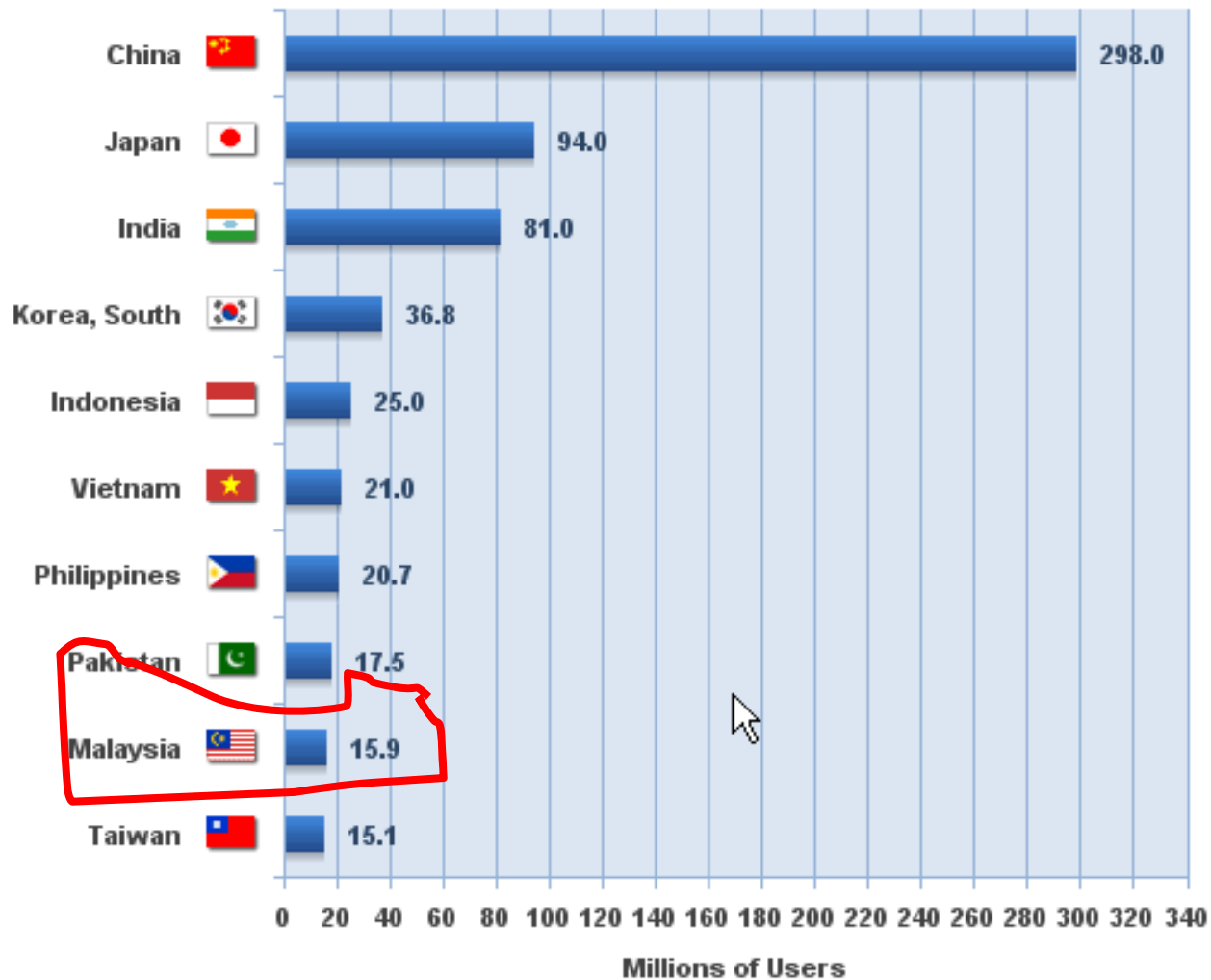
WORLD INTERNET USAGE AND POPULATION STATISTICS						
World Regions	Population ( 2008 Est.)	Internet Users Dec. 31, 2000	Internet Users Latest Data	Penetration (% Population)	Users Growth 2000-2008	Users % of Table
<a href="#">Africa</a>	975,330,899	4,514,400	54,171,500	5.6 %	1,100.0 %	3.4 %
<a href="#">Asia</a>	3,780,819,792	114,304,000	657,170,816	17.4 %	474.9 %	41.2 %
<a href="#">Europe</a>	803,903,540	105,096,093	393,373,398	48.9 %	274.3 %	24.6 %
<a href="#">Middle East</a>	196,767,614	3,284,800	45,861,346	23.3 %	1,296.2 %	2.9 %
<a href="#">North America</a>	337,572,949	108,096,800	251,290,489	74.4 %	132.5 %	15.7 %
<a href="#">Latin America/Caribbean</a>	581,249,892	18,068,919	173,619,140	29.9 %	860.9 %	10.9 %
<a href="#">Oceania / Australia</a>	34,384,384	7,620,480	20,769,419	60.4 %	172.7 %	1.3 %
<b>WORLD TOTAL</b>	6,710,029,070	360,985,492	1,596,270,108	23.8 %	342.2 %	100.0 %

NOTES: (1) Internet Usage and World Population Statistics are for March 31, 2009. (2) CLICK on any world region name for detailed regional usage information. (3)

INTERNET USERS AND POPULATION STATISTICS FOR ASIA						
ASIA REGION	Population ( 2008 Est. )	% Pop. of World	Internet Users, Latest Data	Penetration (% Population)	User Growth ( 2000-2008 )	Users % of World
<a href="#">Asia Only</a>	3,780,819,792	56.3 %	657,170,816	17.4 %	474.9 %	41.2 %
<a href="#">Rest of the World</a>	2,929,209,278	43.7 %	939,099,292	32.1 %	280.7 %	58.8 %
<b>WORLD TOTAL</b>	6,710,029,070	100.0 %	1,596,270,108	23.8 %	342.2 %	100.0 %

NOTES: (1) Asiatic Internet Usage and Population Statistics were updated for March 31, 2009. (2) Population numbers are based on data from the [US](#)

## Asia Top 10 Internet Countries

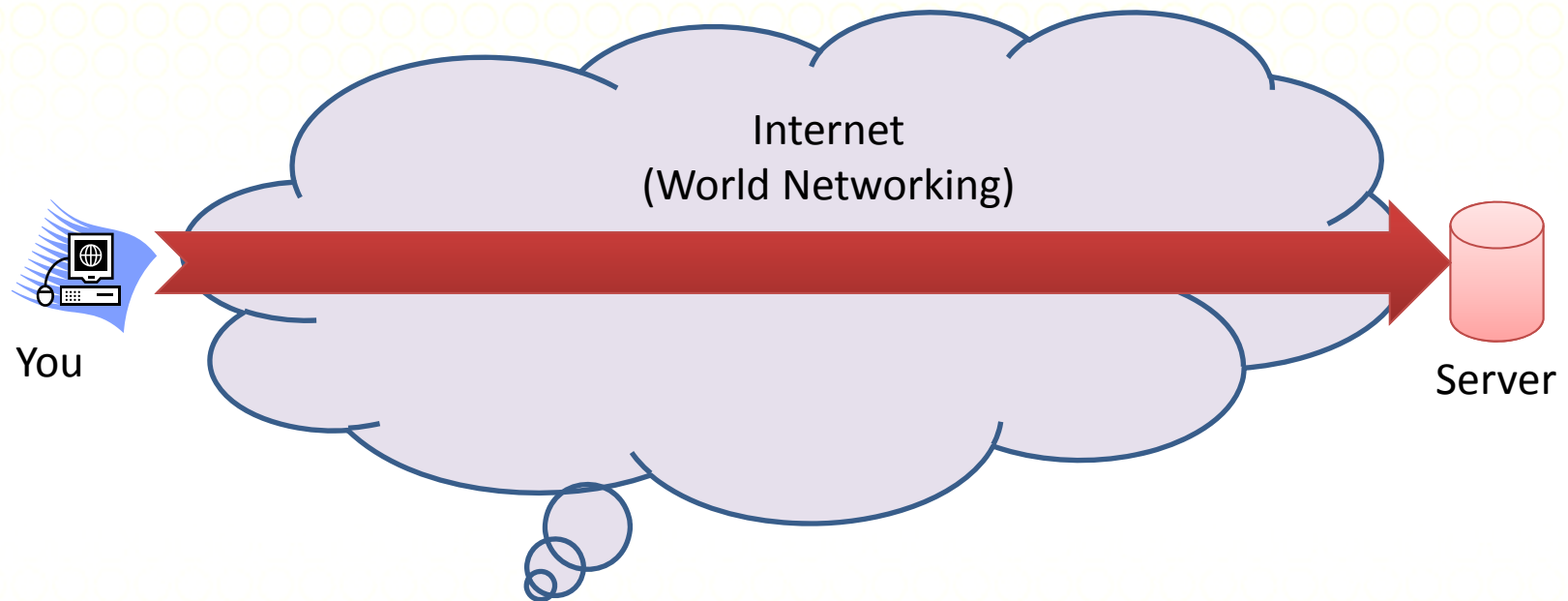


Source: Internet World Stats - [www.internetworldstats.com/stats3.htm](http://www.internetworldstats.com/stats3.htm)

## ASIA INTERNET USAGE AND POPULATION

<u>ASIA</u>	Population ( 2008 Est.)	Internet Users, (Year 2000)	Internet Users, Latest Data	Penetration (% Population)	User Growth ( 2000-2008 )	Users (%) in Asia
<a href="#">China</a> *	1,330,044,605	22,500,000	298,000,000	22.4 %	1,224.4 %	45.3 %
<a href="#">Georgia</a>	4,630,841	20,000	360,000	7.8 %	1,700.0 %	0.1 %
<a href="#">Hong Kong</a> *	7,018,636	2,283,000	4,878,713	69.5 %	113.7 %	0.7 %
<a href="#">India</a>	1,147,995,898	5,000,000	81,000,000	7.1 %	1,520.0 %	12.3 %
<a href="#">Indonesia</a>	237,512,355	2,000,000	25,000,000	10.5 %	1,150.0 %	3.8 %
<a href="#">Japan</a>	127,288,419	47,080,000	94,000,000	73.8 %	99.7 %	14.3 %
<a href="#">Kazakhstan</a>	15,340,533	70,000	1,900,600	12.4 %	2,615.1 %	0.3 %
<a href="#">Korea, North</a>	22,565,347	--	--	--	--	0.0 %
<a href="#">Korea, South</a>	48,379,392	19,040,000	36,794,800	76.1 %	93.3 %	5.6 %
<a href="#">Kyrgyzstan</a>	5,356,869	51,600	750,000	14.0 %	1,353.5 %	0.1 %
<a href="#">Laos</a>	6,677,534	6,000	100,000	1.5 %	1,566.7 %	0.0 %
<a href="#">Macao</a> *	545,674	60,000	238,000	43.6 %	296.7 %	0.0 %
<a href="#">Malaysia</a>	25,274,133	3,700,000	15,868,000	62.8 %	328.9 %	2.4 %
<a href="#">Maldives</a>	385,925	6,000	33,000	8.6 %	450.0 %	0.0 %
<a href="#">Philippines</a>	96,061,683	2,000,000	20,650,000	21.5 %	932.5 %	3.1 %
<a href="#">Singapore</a>	4,608,167	1,200,000	3,104,900	67.4 %	158.7 %	0.5 %

# How does the Internet work ?

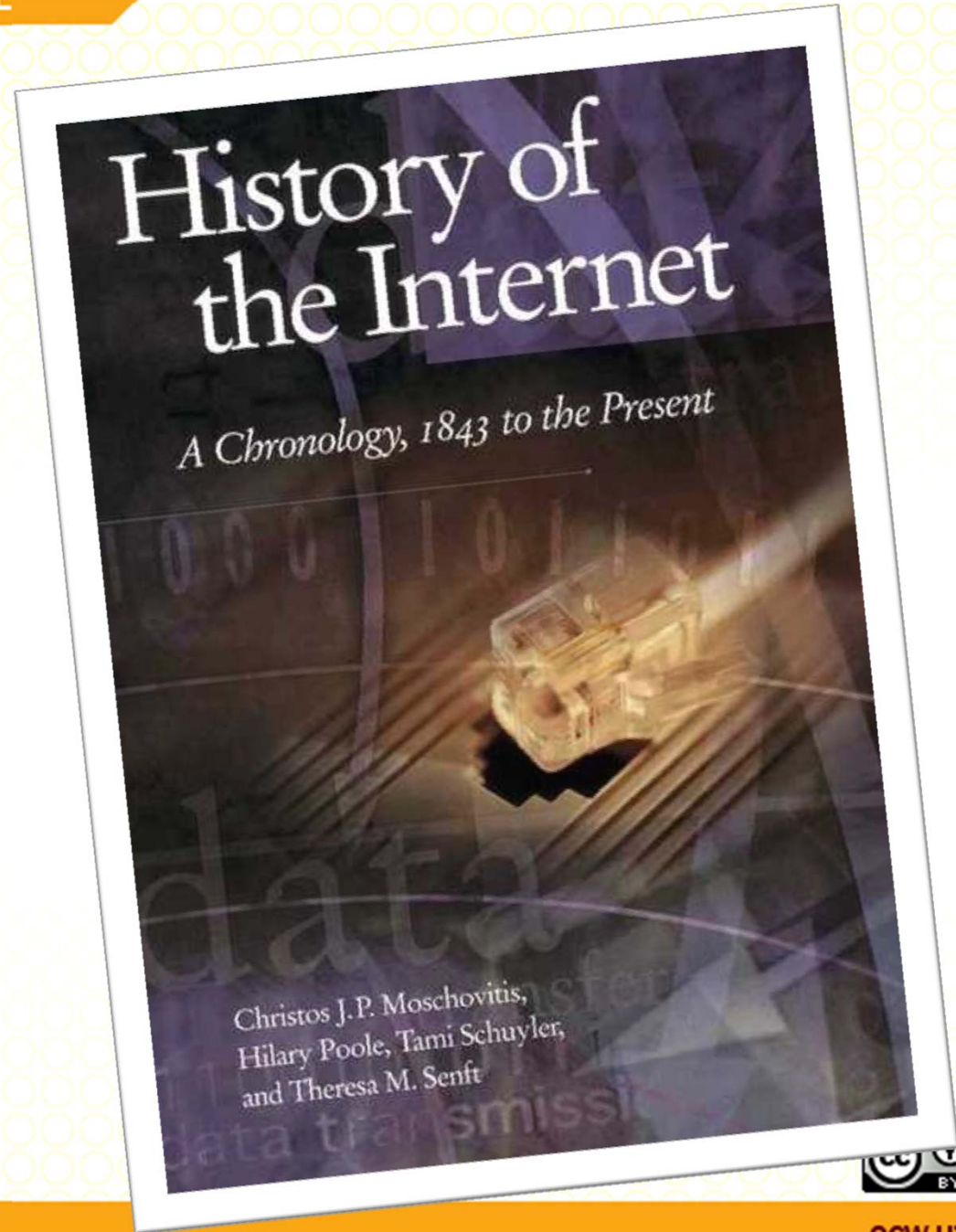




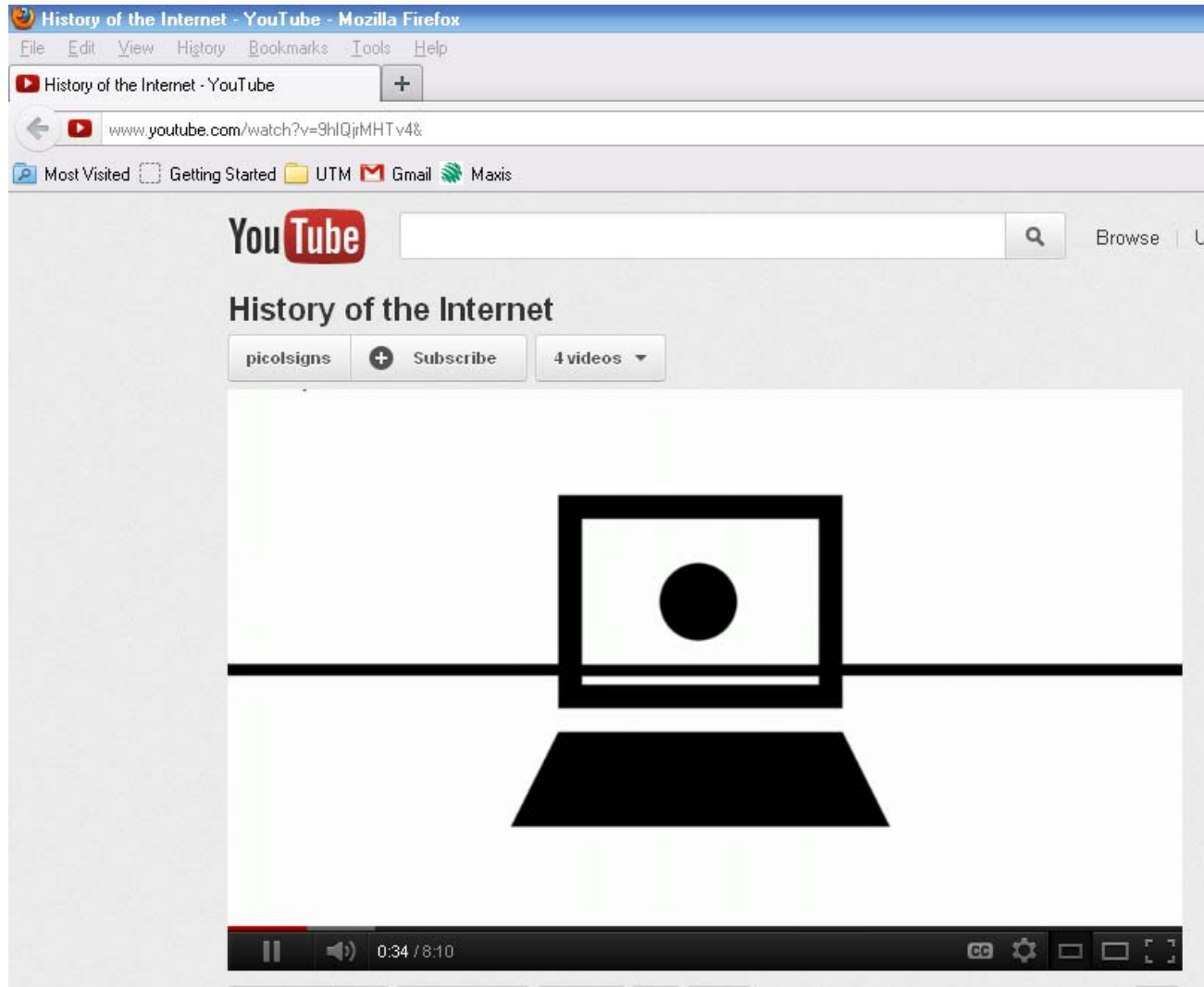
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Read this..



<http://www.youtube.com/watch?v=9hIQjrMHTv4&>



history of the internet starting from the very beginning (1957) upto this year (2009).

# Internet History

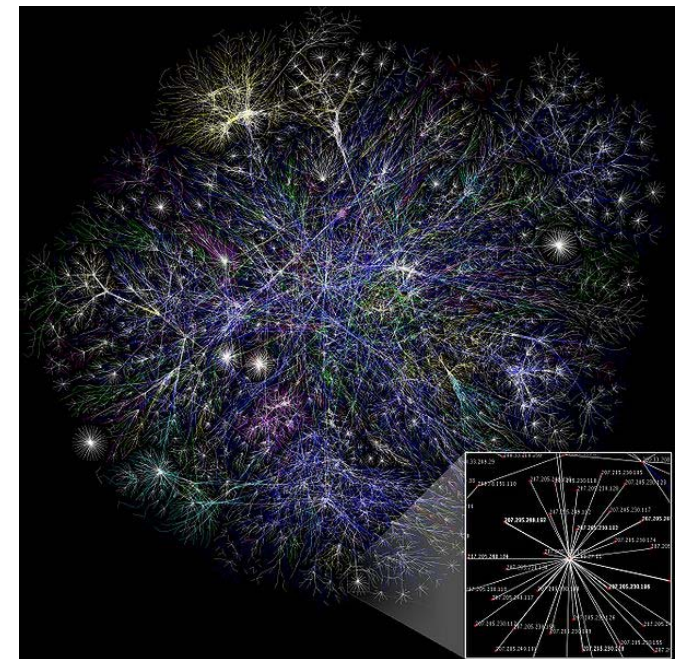
The **Internet** is a *global network of interconnected* computers, enabling users to *share information* along multiple channels.

<http://en.wikipedia.org/wiki/Internet>

- Started in **1969** as **ARPANET** funded by DARPA (Defense Advanced Research Projects Agency)
- Build as packet switching network to recover from a nuclear attack by automatically rerouting data through surviving links

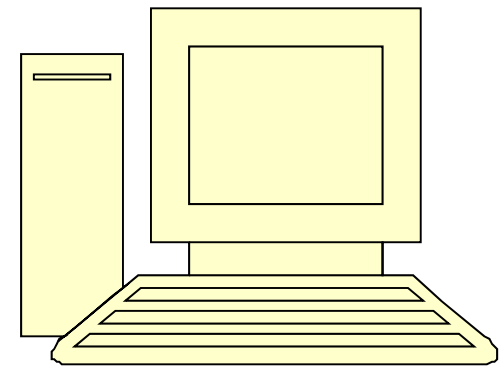
*“When I took office, only high energy physicists had ever heard of what is called the World Wide Web... Now even my cat has it's own page.”*

Bill Clinton





# The User Perspective



New York

## Basic Setup

Each computer must have a **unique identifier**

Computers must be able to **exchange data**

Everyone involved must **speak the same language**  
- TCPIP (Transmission Control Protocol/Internet Protocol)

# Network Identifier

Every computer has at least one unique identifier, usually two:

IP Number: #.#.#.#, where # is an 8 bit number

What is your IP number?

IP Name for easy reference

What is your computer's IP name?

- What is the IP number of “FPUTM”
- What is the IP number of “www.utm.my”
- What is the IP name of “161.139.52.254”

# Protocol

*A mutually agreed-upon convention or standard that controls or enables the connection, communication, and data transfer between computing endpoints.*

[http://en.wikipedia.org/wiki/Protocol\\_\(computing\)](http://en.wikipedia.org/wiki/Protocol_(computing))



The screenshot shows a web browser window with the address bar containing "en.wikipedia.org/wiki/Protocol\_(computing)". The browser's bookmark bar includes "Most Visited", "Getting Started", "UTM", "Gmail", and "Maxis". The Wikipedia page features the globe logo and the text "WIKIPEDIA The Free Encyclopedia". A sidebar on the left lists navigation options: "Main page", "Contents", "Featured content", "Current events", "Random article", "Donate to Wikipedia", "Interaction", and "Help". The main content area has tabs for "Article" and "Talk". The article title is "Communications protocol", with a subtitle "From Wikipedia, the free encyclopedia (Redirected from Protocol (computing))". A note states "For other uses, see Protocol (disambiguation)". A yellow banner with a broom icon indicates "This article may be too long for a summary of the article". The article text begins with "A **communications protocol** is a system of digital messa" and "Protocols may include signaling, authentication and error d".

## Example – Client/Server

*I want to view the main web page from  
www.fp.utm.my*

- **Server computer:** www.fp.utm.my
- **Client computer:** 161.139.52.254

### Server program

web server program (httpd)  
running on www.fp.utm.my  
with access to lots of stored  
web pages

### Client program

Internet Explorer or  
Firefox with extensive  
formatting and display  
capabilities but no data to  
display

## Example – Client/Server

*I want to view the main web page from www.fp.utm.my*

- **Client:** start IE and enter: *http://www.fp.utm.my/*
  - Client sends packet to DNS: *who is www.fp.utm.my*
  - DNS sends packet back: *www.fp.utm.my= 161.139.52.254*
  - Client sends packet to *161.139.52.254* : *give me main page*
- **Server:** receives request for page from 10.4.8.1
  - Retrieves the web page from disk (or database)
  - Sends data to 10.4.8.1 *here is the data*
- **Client:** formats data and display it nicely

## Example – Client/Server

*I want to view the main web page from  
[www.fp.utm.my](http://www.fp.utm.my)*

- **Client:** sends “*give me main page*”  
**Server:** sends data to 10.4.8.1
  - **http** (*Hypertext Transport Protocol*): regulates how a web server and client communicate
- **Client:** formats data and display it nicely
  - **HTML** (*Hypertext Markup Language*): defines how text is supposed to look and where to place it