

# History of communication

- Prehistoric era: beginnings of human language
- -3600 BC: beginnings of writing
- 15<sup>th</sup> century: printing
- 19<sup>th</sup> century: telephone, radio broadcasting, photography, cinema
- 20<sup>th</sup> century: television broadcasting, computing, networking, Internet, mobile communication
- 19<sup>th</sup> / 20<sup>th</sup> century → major sociological changes (spread of urbanisation & public use of technological inventions)

# Acceleration of inventions

- At least 500,000 yrs between invention of language and invention of writing
- At least 5,000 yrs betw writing and invention of printing
- 400 yrs betw printing and invention of telephone (Bell, 1876), radio (Marconi, 1896), cinema (Lumière Bros, 1894)
- 50 yrs later, beginnings of television broadcasting (1940's)
- 30 yrs later, micro-computing & Internet (1970's)
- 10 yrs later, mobile communication (1980's)
- Today, convergence of technology

# CMC

- End 1970's – Home Personal Computers (Mac, IBM PC, Intel-Microsoft)
- 1980's - Videotex online services (Minitel, Prestel)
- End 1960's - ARPANET → military DoD
- Usenet - research centres / university network
- 1971 – Ray Tomlinson – e-mail
- 1973 – FTP + TCP/IP (Vint Cerf & Robert Kahn)
- 1983 – separation into MILNET




Apple II - 1977



Minitel -1982

# Development of Internet

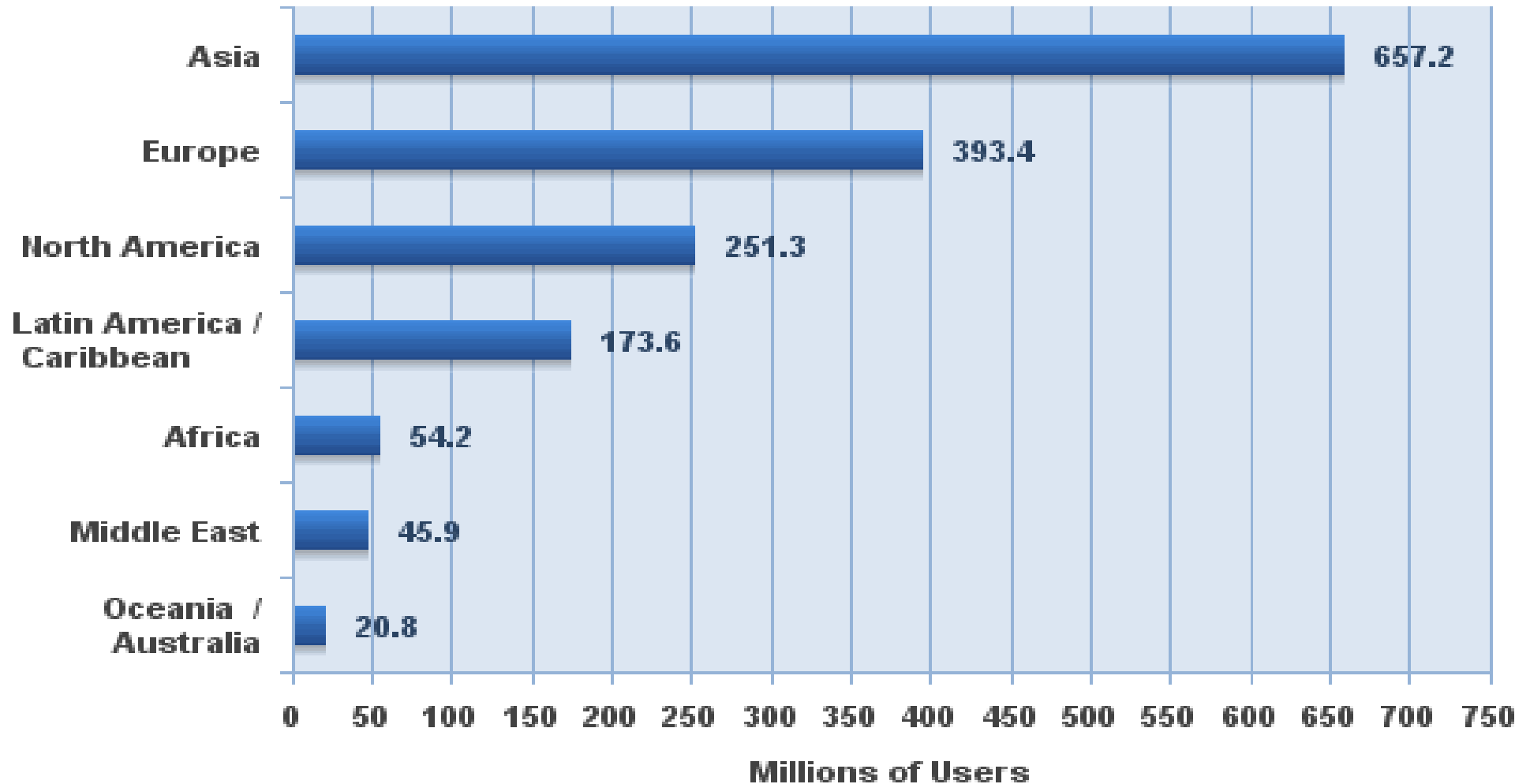
- 1991 – Hypertext - World Wide Web → Tim Berners Lee (CERN)
- 1993 – Mosaic web browser – Marc Andreessen
- Search engines (Archie 1990, Lycos 1993, Yahoo & Altavista 1995, Google 1998) 
- Open Source Software (1998)
- Forums, newsgroups, blogs, wikis, social networks
- 1.66 b people online – 24.5% of world population with 360% growth between 2000 and 2009 (Internet World Stats, June 2009)

## WORLD INTERNET USAGE AND POPULATION STATISTICS

World Regions	Population ( 2009 Est.)	Internet Users Dec. 31, 2000	Internet Users Latest Data	Penetration (% Population)	Users Growth 2000-2009	Users % of Table
<a href="#">Africa</a>	997,269,930	4,514,400	64,153,900	6.4 %	1,321.1 %	3.9 %
<a href="#">Asia</a>	3,822,428,903	114,304,000	700,863,930	18.3 %	513.2 %	42.1 %
<a href="#">Europe</a>	803,490,338	105,096,093	402,380,474	50.1 %	282.9 %	24.2 %
<a href="#">Middle East</a>	202,138,516	3,284,800	47,964,146	23.7 %	1,360.2 %	2.9 %
<a href="#">North America</a>	340,831,819	108,096,800	251,735,500	73.9 %	132.9 %	15.1 %
<a href="#">Latin America/Caribbean</a>	588,614,046	18,068,919	175,834,439	29.9 %	873.1 %	10.6 %
<a href="#">Oceania / Australia</a>	34,853,867	7,620,480	20,838,019	59.8 %	173.4 %	1.3 %
<b>WORLD TOTAL</b>	6,789,627,419	360,985,492	1,663,770,408	24.5 %	360.9 %	100.0 %

NOTES: (1) Internet Usage and World Population Statistics are for June 30, 2009. (2) CLICK on each world region name for detailed regional usage information. (3) Demographic (Population) numbers are based on data from the [US Census Bureau](#) . (4) Internet usage information comes from data published by [Nielsen Online](#), by the [International Telecommunications Union](#), by [GfK](#), local Regulators and other reliable sources. (5) For definitions, disclaimer, and navigation help, please refer to the [Site Surfing Guide](#). (6) Information in this site may be cited, giving the due credit to [www.internetworldstats.com](http://www.internetworldstats.com). Copyright © 2001 - 2009, Miniwatts Marketing Group. All rights reserved worldwide.

# Internet Users in the World by Geographic Regions

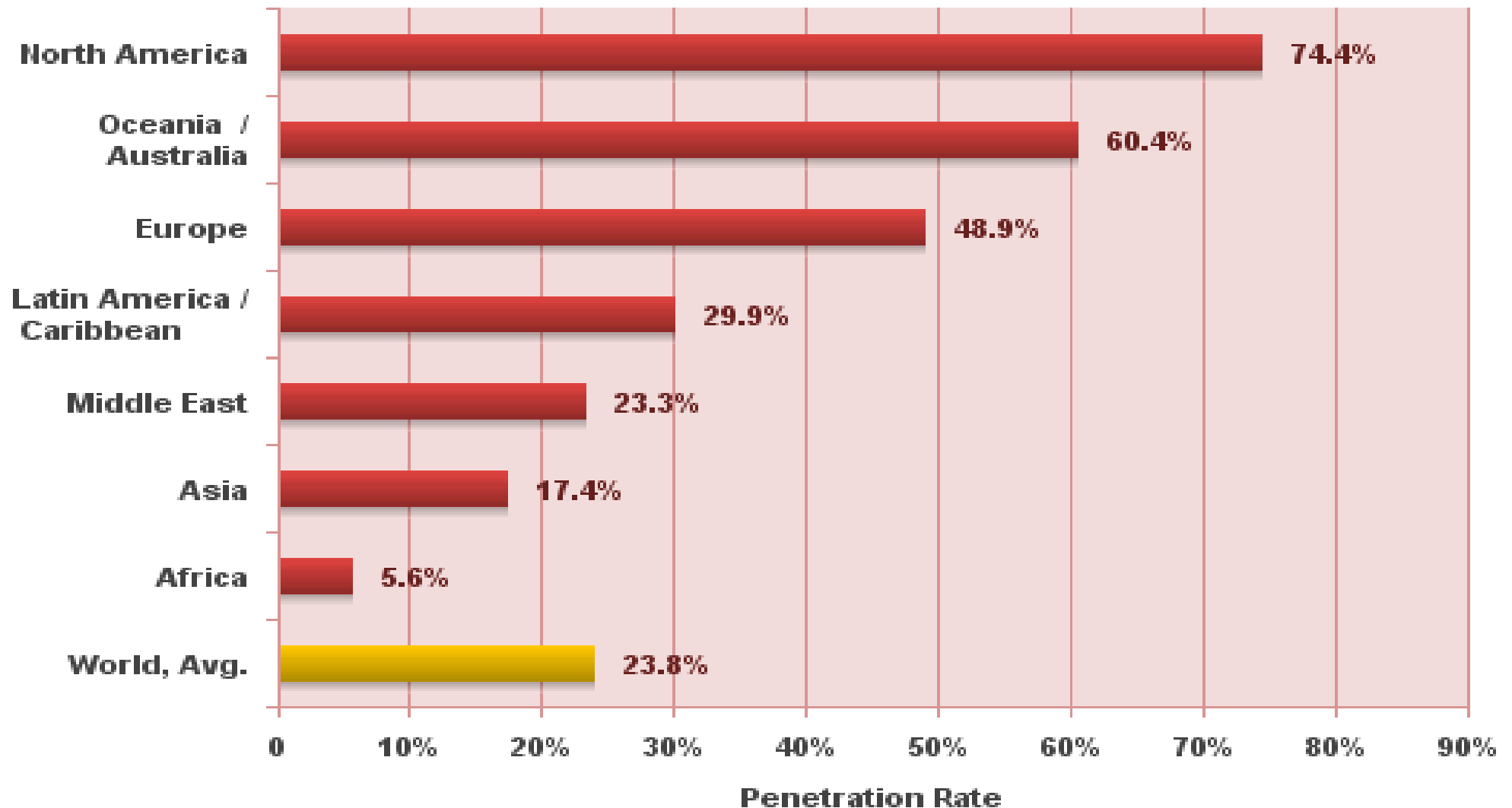


Source: Internet World Stats - [www.internetworldstats.com/stats.htm](http://www.internetworldstats.com/stats.htm)

Estimated Internet users are 1,596,270,108 for March 31, 2009

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# World Internet Penetration Rates by Geographic Regions



Source: Internet World Stats - [www.internetworldstats.com/stats.htm](http://www.internetworldstats.com/stats.htm)  
Penetration Rates are based on a world population of 6,710,029,070  
and 1,596,270,108 estimated Internet users for March, 2009.  
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# Internet

The Internet is a worldwide, publicly accessible network of interconnected computer networks that transmit data by packet switching using the standard Internet Protocol (IP).

It is a "network of networks" that consists of millions of smaller domestic, academic, business, and government networks, which together carry various information and services, such as electronic mail, online chat, file transfer, and the interlinked Web pages and other documents of the World Wide Web.

*Wikipedia*

# ICANN, W3C, WSIS

- ICANN - Internet Corporation for Assigned Names and Numbers - coordinates assignment of unique identifiers, including domain names, IP addresses... --> globally unified namespace
- W3C – World Wide Web Consortium
- WSIS - Nov 2005 - Tunis, established the Internet Governance Forum (IGF) to discuss Internet-related issues.

# Language

- English prevalent - 29.1% of Web visitors
- Chinese - 20.1%
- Spanish – 8.2%
- Japanese – 5.9%
- French – 4.6%

(Internet World Stats, March 2009).

# Mauritius

- 380,000 Internet users - 29.6% of the population (Internet World Stats, June 2009)
- 199,500 internet subscribers end 2008.
- 15.7 % internet subscribers in 2008 (2.9% in 2000)
- DOI: 0.58

(CSO 2009)

# Mobile communication

- 1970's – first tests for cellular mobile phone (Motorola vs ATT Bell)
- 1980's – spread of mobile networks (analogue)
- 1990's – 2G – digital networks - (1991 -1<sup>st</sup> GSM network in Finland)
- 2000's – 3G (e.g. UMTS) – higher data speed



Dr. Martin Cooper of Motorola, made the first US analogue mobile phone call on a larger prototype model in 1973.



Legend:

1. NEC Cellstar 500 series (Early 1990s)
2. Nokia 2110 series (1994)
3. Nokia 5120 (1998)
4. Kyocera 2135 (2002)
5. Audiovox CDM8300 (2002)
6. Samsung SCH-A650 (2004)

# Mauritius

- Emtel = pioneer (1989)
- Cellplus - 1996
- 363,400 fixed phone lines (2008).
  - Teledensity 28.6 per 100 inhabitants betw 2003 & 2006.
- 1,033,300 mobile cellular subscribers
  - Mobidensity 81.2 per 100 in 2008.