

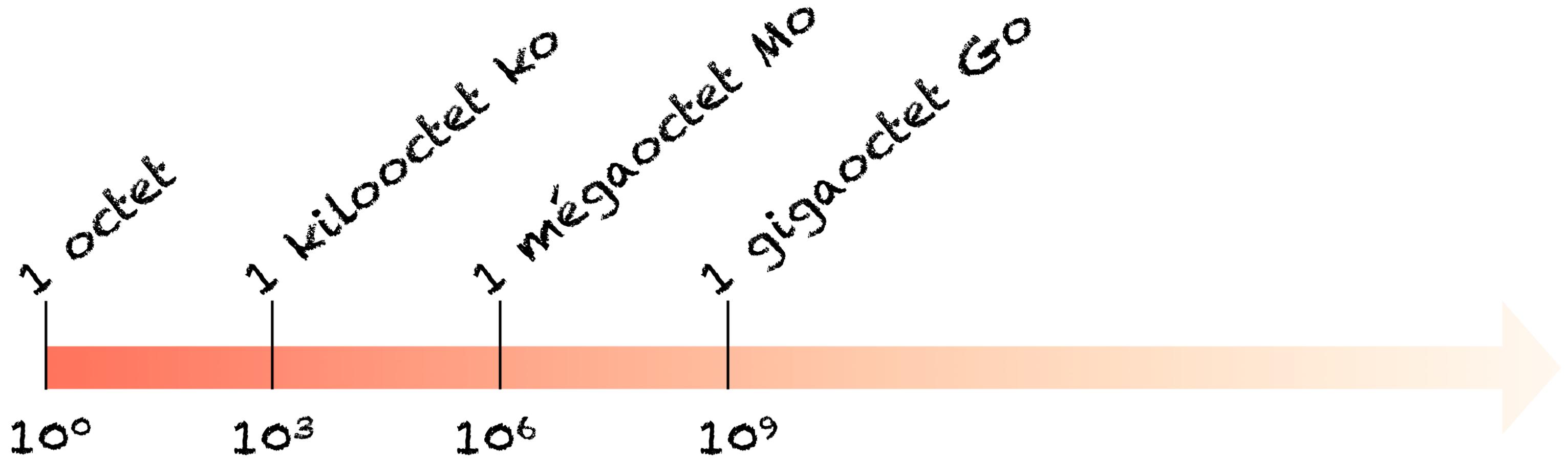
# Internet en chiffres

Atelier n°9 - JM Mermet / SIMSU - 20 novembre 2012

«Mieux se représenter ce qu'est Internet»

1 bit : 0 ou 1

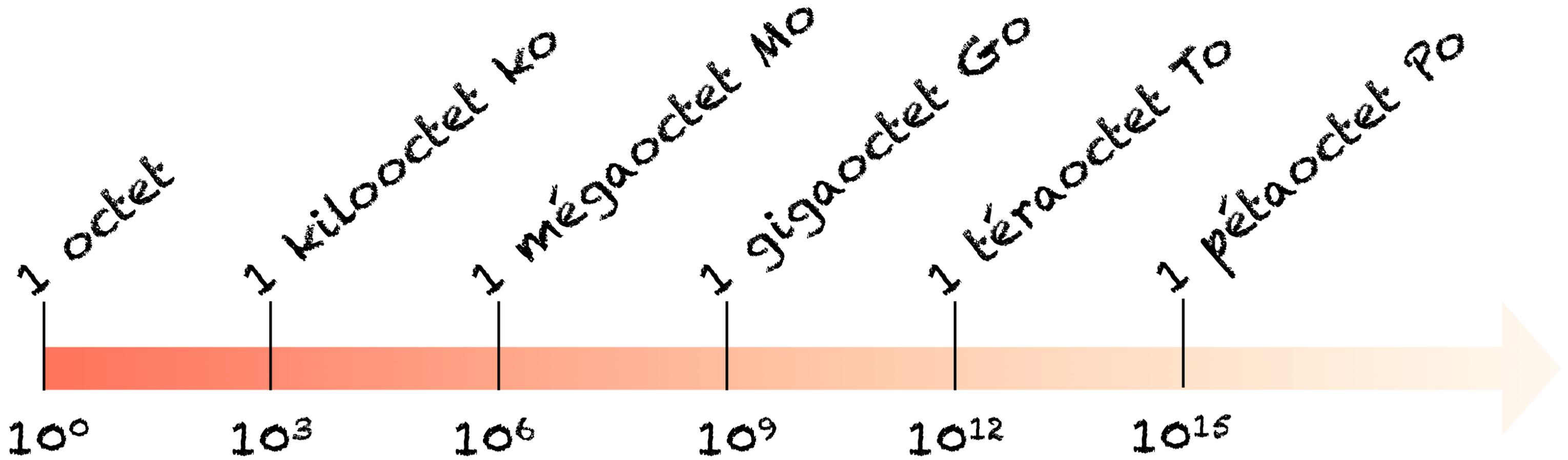
1 octet : 8 bits



4,7 Go = 1 DVD-R

1 bit : 0 ou 1

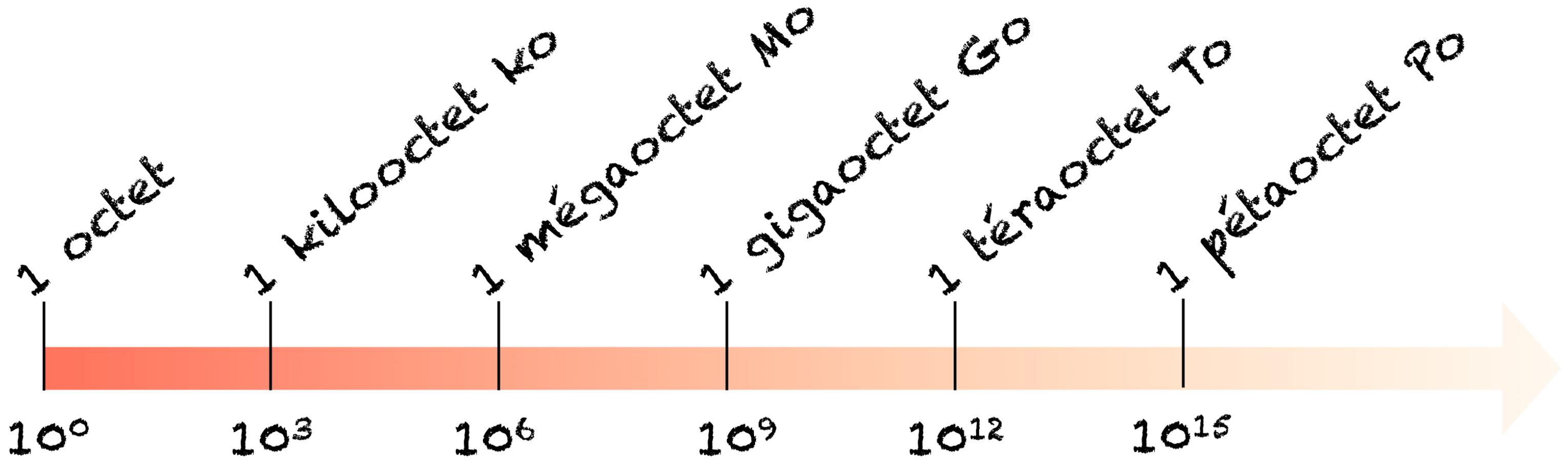
1 octet : 8 bits



1,5 Po = 10 milliards d'images  
sur Facebook

1 bit : 0 ou 1

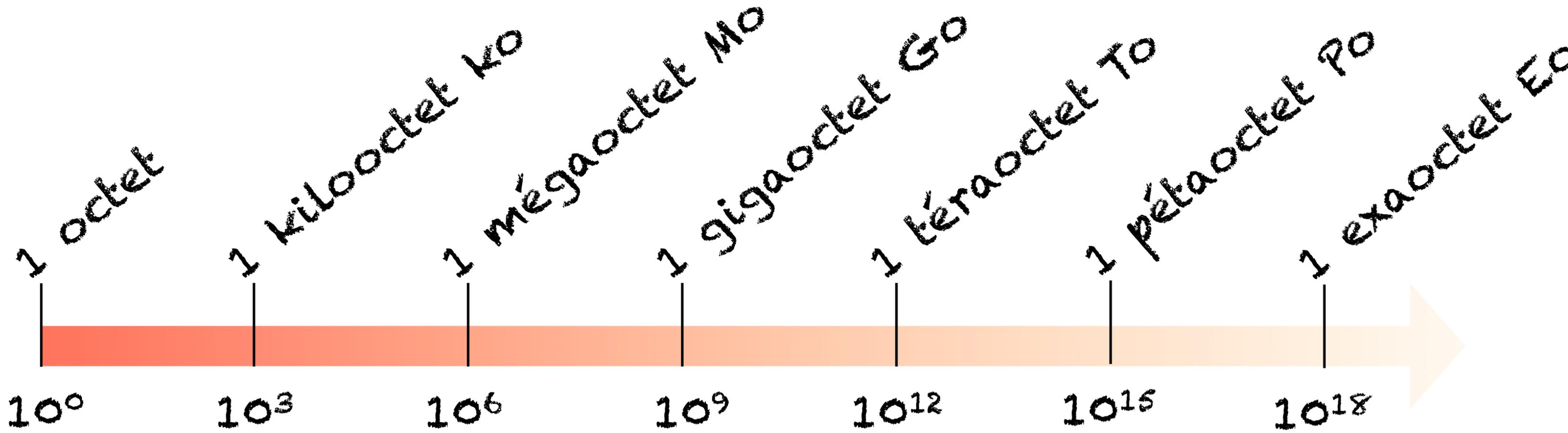
1 octet : 8 bits



20 Po = quantité d'information traitée par Google chaque jour

1 bit : 0 ou 1

1 octet : 8 bits



1 Exaoctet = 1 000 000 000 000 000 000 000 octets

Carte internet globale des réseaux physiques

<http://global-internet-map-2012.telegeography.com>

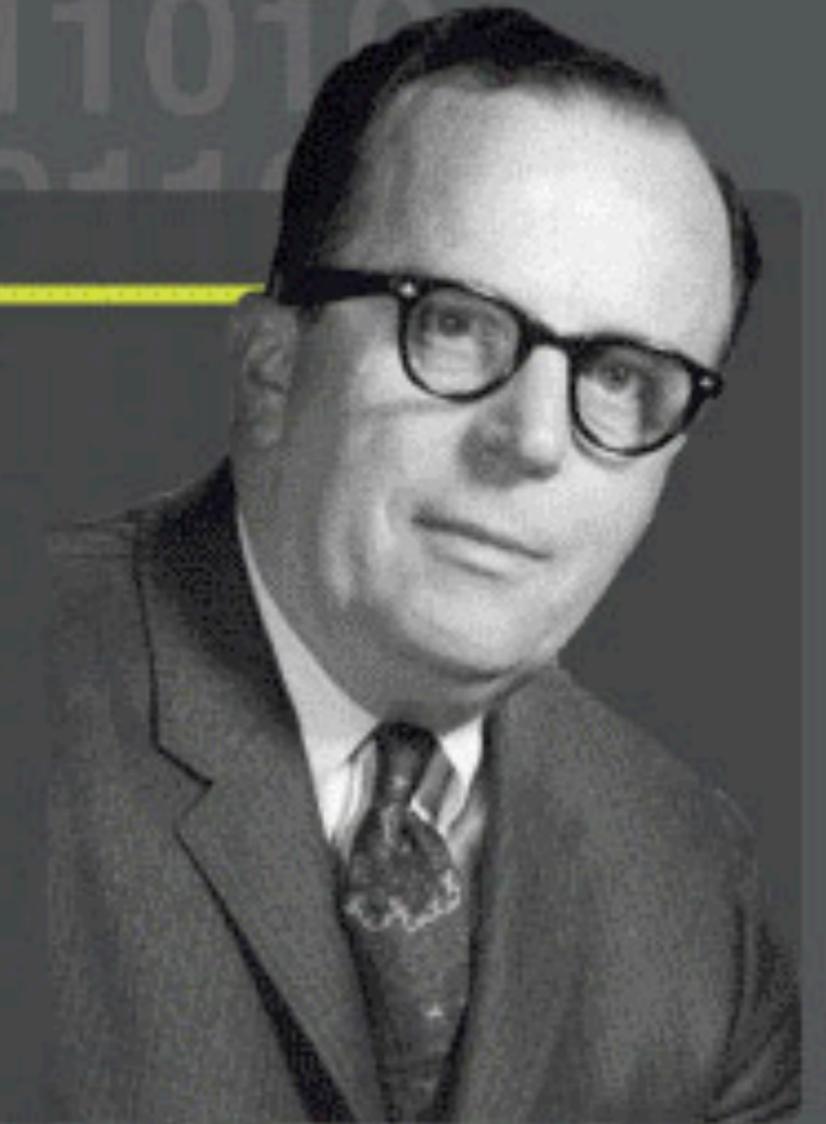
Historique d'Internet en quelques dates

# History of the Internet

## '62

J.C. R. Licklider (1915-1990) introduced the **idea of an 'Intergalactic Network.'**

His idea involved a global computer network that allowed everyone to access information from anywhere in the world. He became head of Defense Advanced Research Project Agency (DARPA), convincing his successors of the importance of the network.

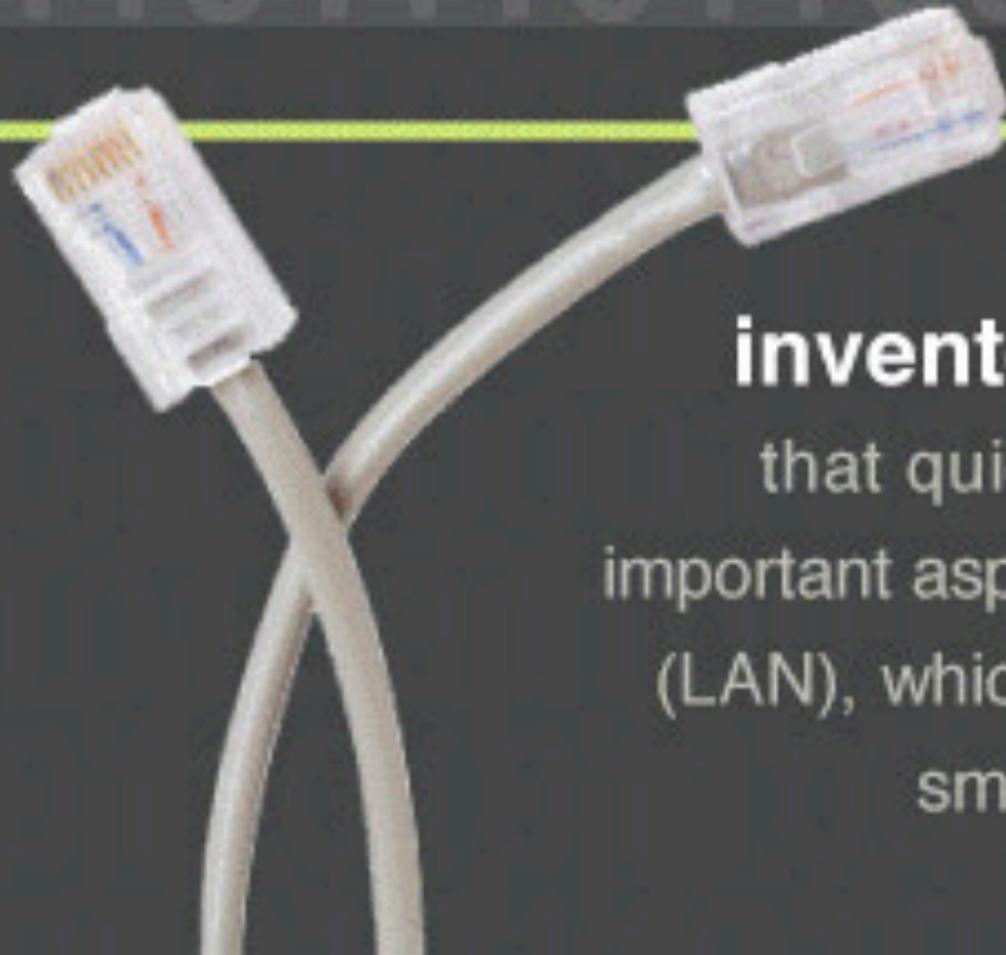


'74

Vint Cerf and Bob Kahn used the term  
**“Internet”**  
in a Transmission Control Protocol paper.

'76

Dr. Robert Metcalfe  
**invented Ethernet, coaxial cables**  
that quickly transport data. Ethernet was an  
important aspect in developing Local Area Networks  
(LAN), which is a computer network that covers a  
small area, like a home, office, or school.



# '92

Corporation for Research and Educational Networking (CREN) **released the World Wide Web.**

NSFNET is **upgraded to 44.739 Mbps.**

# '93



Marc Andreessen, NCSA, and the University of Illinois developed "**Mosaic for X,**" a graphical interface for the World Wide Web. Mosaic was the **first widely used internet browser.**

Marc Andreessen later founded Netscape in 1994. His company also developed Secure Socket Layer (SSL), which encrypts and secures sensitive data. It's still the standard today.

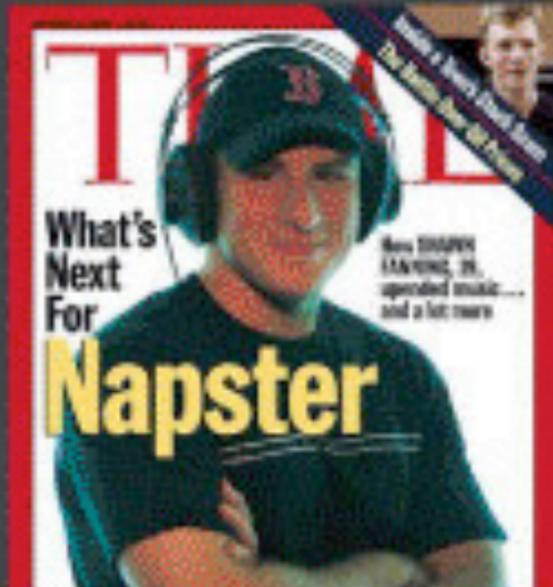
# '98

**Google receives funding** from Andy Bechtolsheim (Sun Microsystems) becoming Google Technology Incorporated.



# '99

**Wi-fi**, wireless internet technology, is **standardized**.



Sean Fanning created and released his infamous **Napster**. He was 18.



'01



**Wikipedia is launched,**  
eventually changing domains from .com to .org.

'03

**Apple launched the iTunes Store**  
with only 200,000 songs. Within 24 hours,  
they'd sold a quarter of a million songs.



'04



On April 1, 2004, Google announced the **launch of Gmail**, which would offer 1GB of storage. Because Hotmail and Yahoo were only offering 2MB and 4MB respectively, some people thought it was an April Fool's joke.

'05

**YouTube is launched**, revolutionizing web-based videos. Google bought YouTube for \$1.6 billion the following year.



'06



Dom Sagolla released **Twitter**.



**Facebook**, once exclusive to college students, is made **available to everyone**.

'09

**Mobile data traffic exceeded voice traffic every single month.**



voice traffic every single month.

Globally, mobile data exceeded an exabyte  
(a billion gigabytes) for the first time.



10100101101011001100

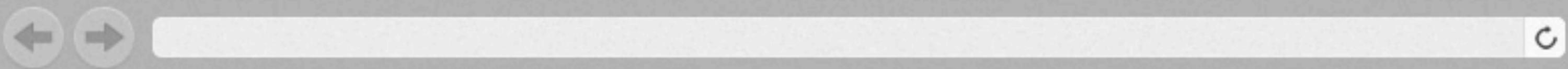
### Sources:

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- [http://en.wikipedia.org/wiki/Dot-com\\_bubble#The\\_bubble\\_bursts](http://en.wikipedia.org/wiki/Dot-com_bubble#The_bubble_bursts)

Design by Jason Powers

[www.OnlineMBA.com](http://www.OnlineMBA.com)

L'usage global d'Internet



# World Wide Web

A COMPREHENSIVE BREAKDOWN OF WEB USAGE ACROSS THE EARTH



*if the world were*

**10000**

*people*



ONLY

**271**

WOULD BE  
INTERNET  
USERS.

57 WOULD BE



35 WOULD BE



11 WOULD BE



9 WOULD BE



6 WOULD BE



3 WOULD BE



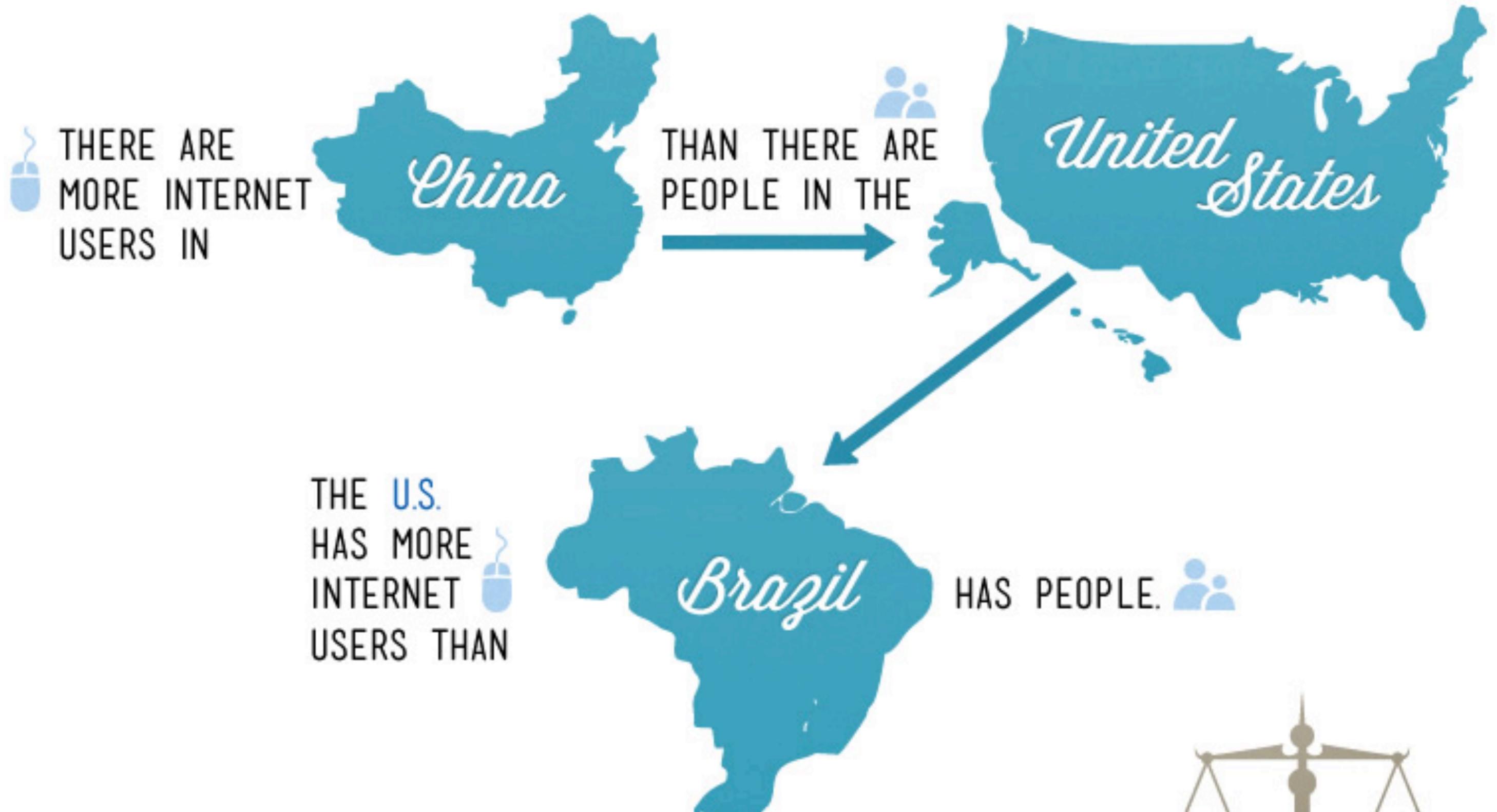
2 WOULD BE



NO OTHER COUNTRY WOULD HAVE MORE THAN ONE INTERNET USER.

(HEADSHOTS TAKEN FROM MISS UNIVERSE, 2012)

# TO BREAK THIS DOWN EVEN FURTHER...





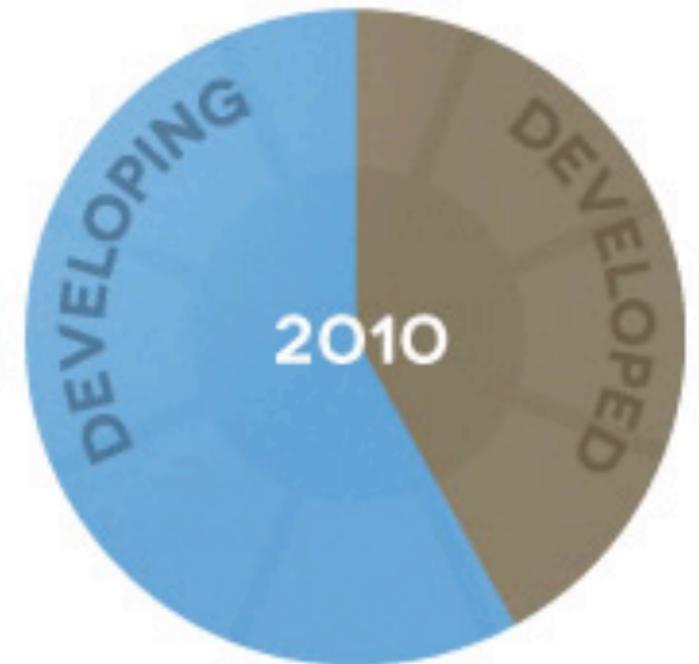
A NUMBER OF COUNTRIES, INCLUDING ESTONIA, FINLAND AND SPAIN HAVE DECLARED ACCESS TO THE INTERNET AS A LEGAL RIGHT FOR CITIZENS.



ONLY **21%** OF THE POPULATION IN **DEVELOPING COUNTRIES** ARE ONLINE



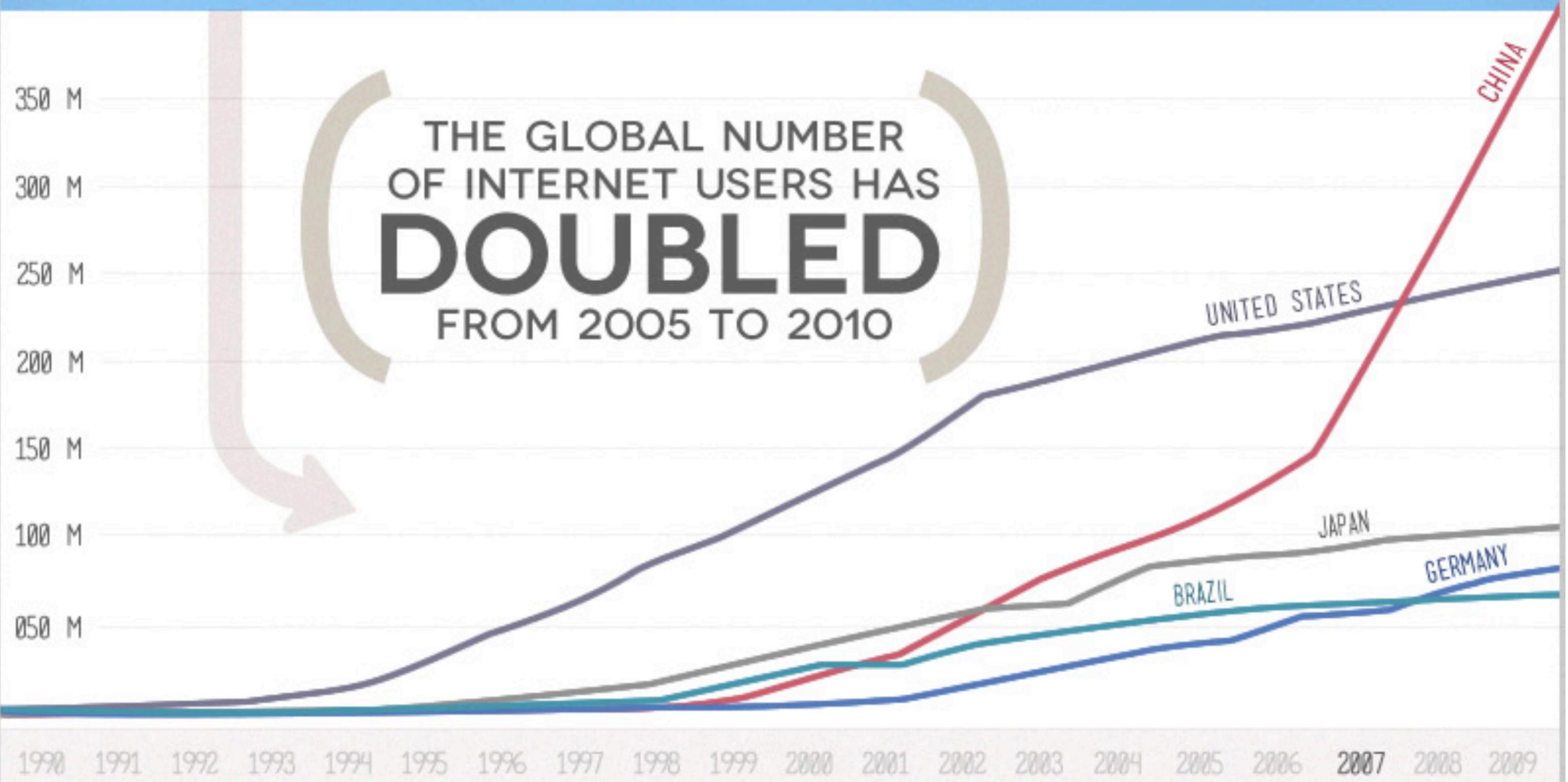
WHILE **71%** OF THE POPULATION IN **DEVELOPED COUNTRIES** ARE ONLINE



FROM 2005—2010, THE NUMBER OF INTERNET USER IN DEVELOPING COUNTRIES VS. DEVELOPED COUNTRIES ACTUALLY REVERSED.

(CHINA SURPASSED THE U.S. IN 2007 AS LEADER IN TOTAL INTERNET USERS.)

THE GLOBAL NUMBER  
OF INTERNET USERS HAS  
**DOUBLED**  
FROM 2005 TO 2010



EACH MONTH,  
**19 MILLION**  
MORE PEOPLE DISCOVER THE INTERNET.



## SOURCES

[INTERNETWORLDSTATS.COM](http://INTERNETWORLDSTATS.COM) / [MOBITHINKING.COM](http://MOBITHINKING.COM) / [GOETHE.DE](http://GOETHE.DE) / [BLOG.NIELSEN.COM](http://BLOG.NIELSEN.COM)

Webpage **FX**

Un jour sur Internet...

# A DAY IN THE INTERNET



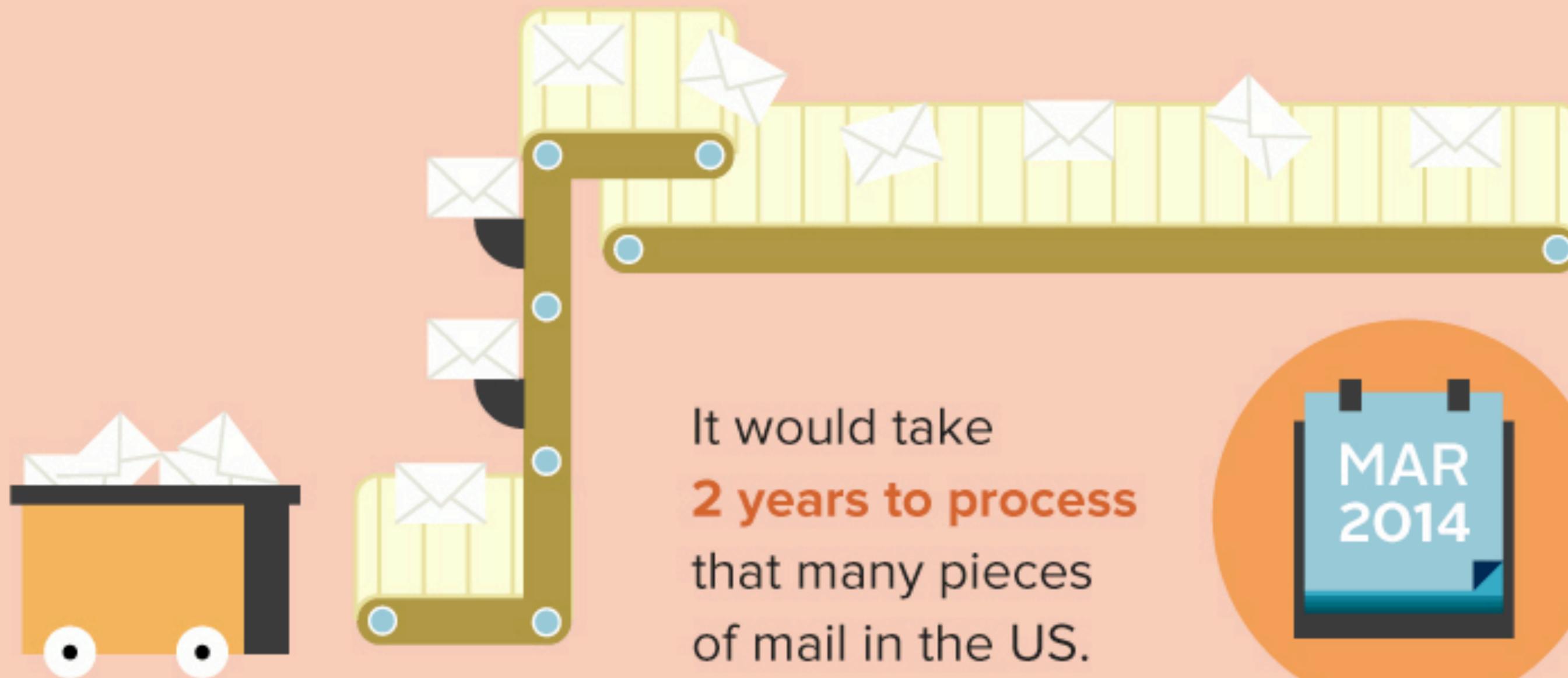
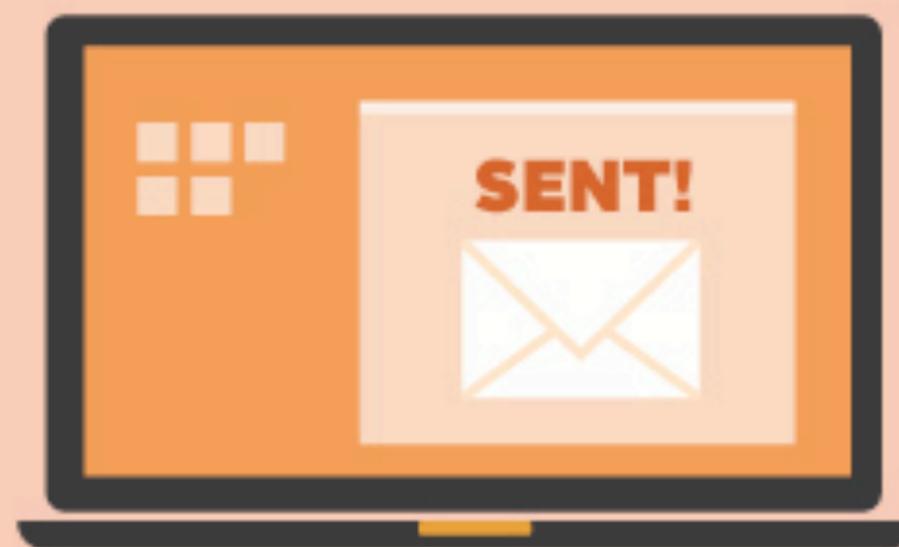


**In one day, enough information is  
consumed by internet traffic to fill**

**168 MILLION DVDS.**

# 294 BILLION

emails are sent.

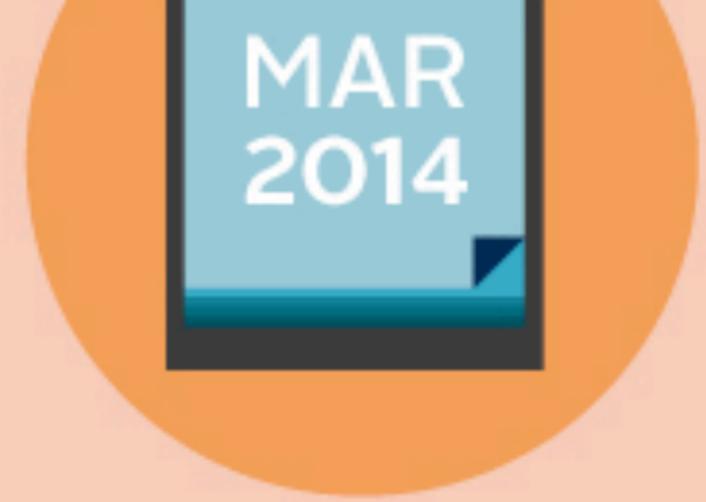


It would take  
**2 years to process**  
that many pieces  
of mail in the US.





It would take  
**2 years to process**  
that many pieces  
of mail in the US.



**2 MILLION  
BLOG POSTS**  
are written.

Enough posts to fill  
**Time Magazine for 770 years.**



# 172 MILLION

different people  
visit Facebook.



f



t



in



+



P

Twitter: **40 MILLION**

LinkedIn: **22 MILLION**

Google+: **20 MILLION**

Pinterest: **17 MILLION**

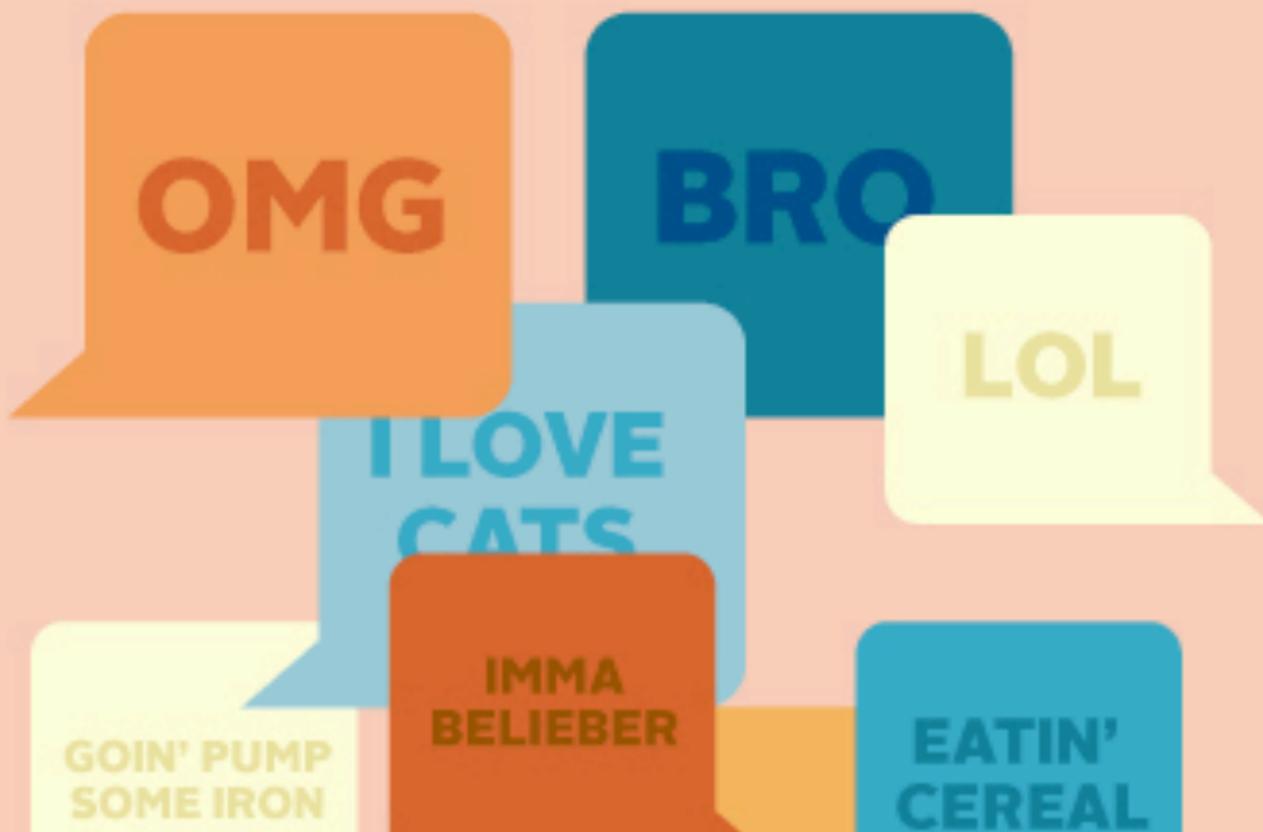
# 4.7 BILLION MINUTES

are spent on Facebook.



# 532 MILLION STATUSES

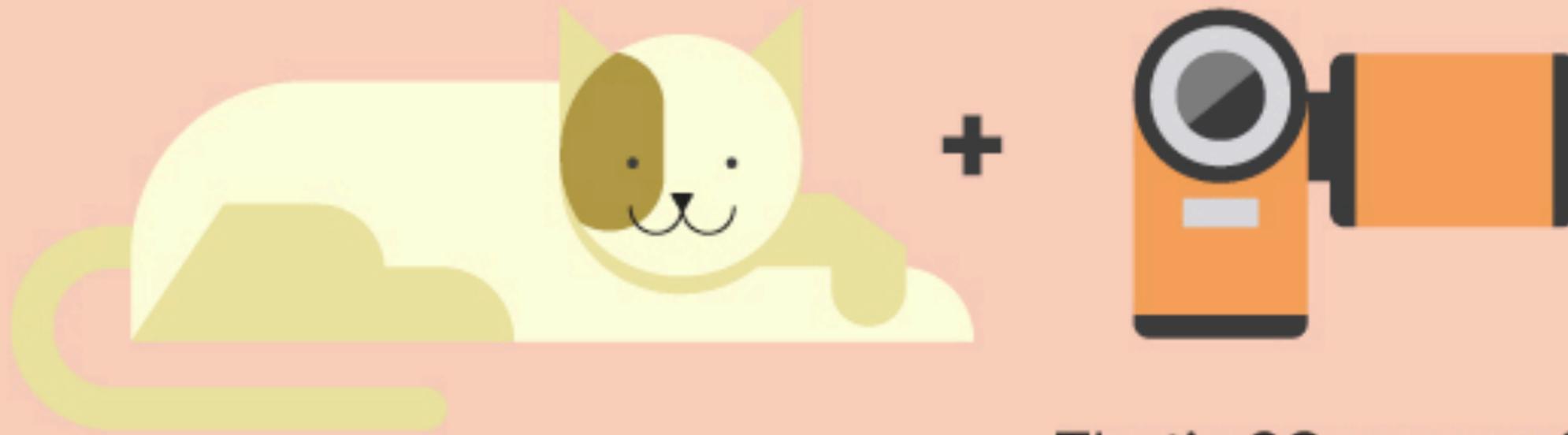
are updated.





# 864,000 HOURS OF VIDEO

are uploaded to YouTube.



That's 98 years of  
**non-stop cat videos.**

# MBAonline.com

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<http://www.businessinsider.com/google-zeitgeist-2011-12>

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<http://www.musicweek.com/story.asp?storyCode=1040591&sectioncode=1>

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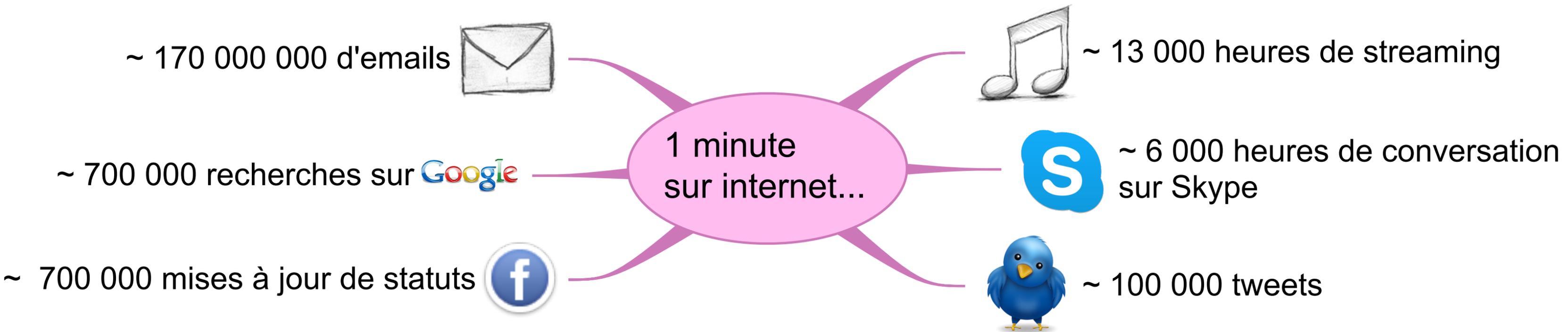
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Chaque minute...



2002-2012, 10 ans d'Internet

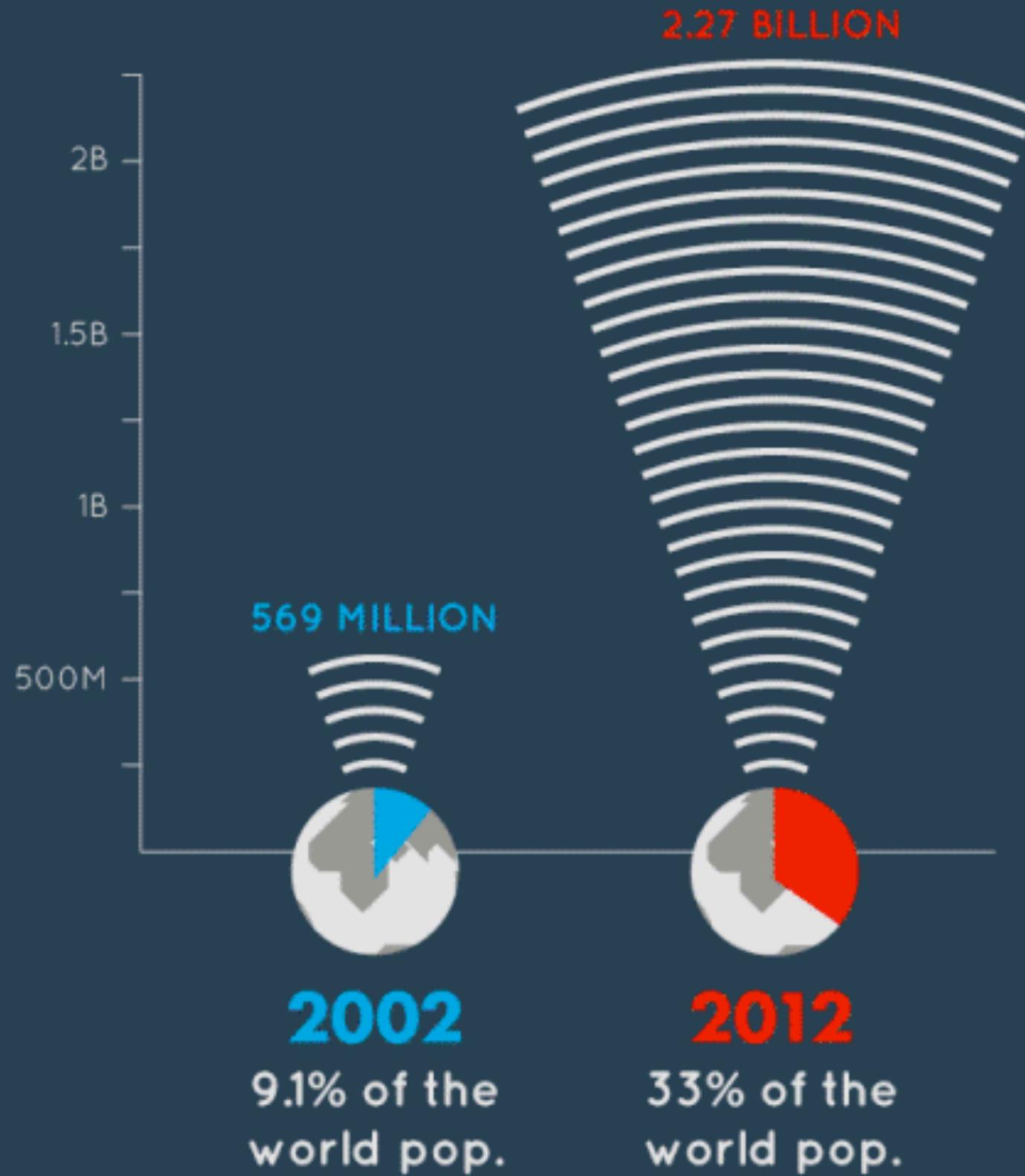
# THE INTERNET

## A Decade Later





# Internet Users





# Internet Usage

**2002**

46 minutes  
a day



**2012**

4 hours a day



# Total Websites

**2002**

3 million

**2012**

555 million

**AND MANY THINGS  
HAVE CHANGED**



# Speeds



**2002**

It took 12.5 minutes to download a song on a 56k modem.

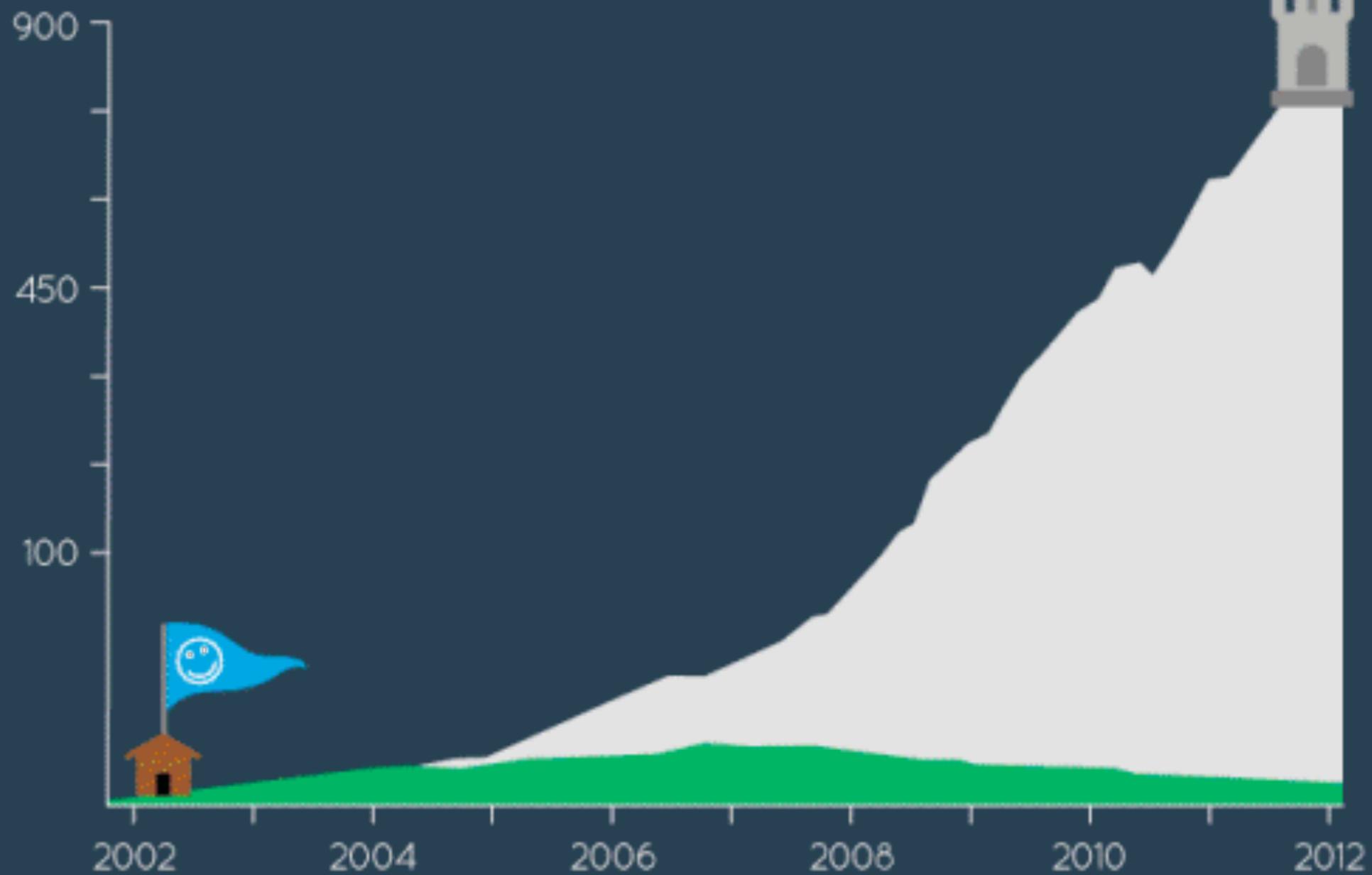


**2012**

Now it takes 18 seconds.



# Social Networking



WORLDWIDE UNIQUE VISITORS (IN MILLIONS)



CREATED BY:

**WWW.BESTEDSITES.COM**

SOURCES:

[http://www.nielsen-online.com/pr/pr\\_030220.pdf](http://www.nielsen-online.com/pr/pr_030220.pdf)

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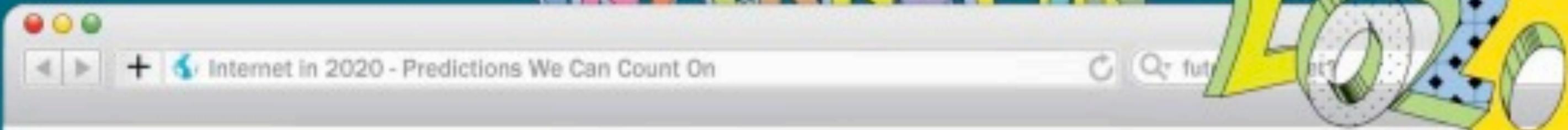
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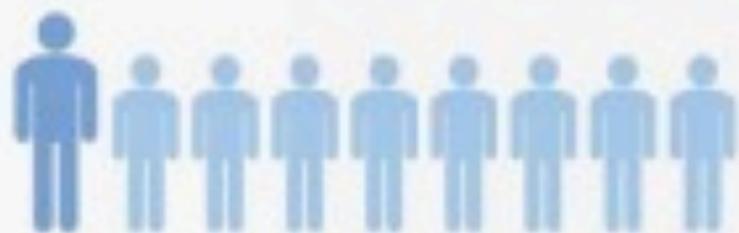
Internet en 2020

# INTERNET IN 2020

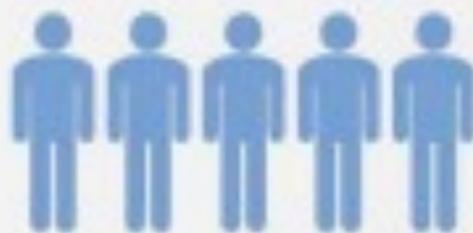


More people will use the Internet

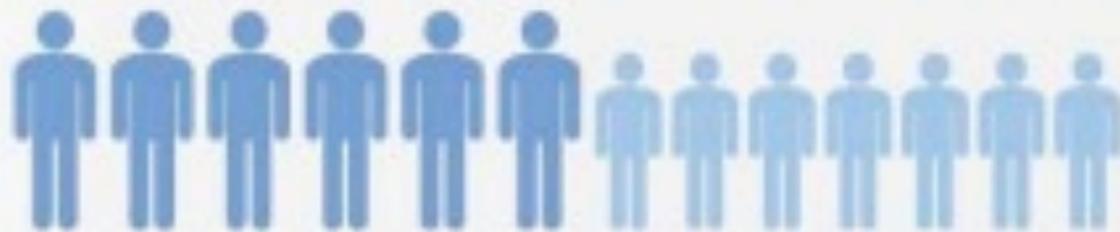
ONE



2010 - *1.8 billion users*



2020 - *5 billion users*



Current World Population - *6.7 billion*



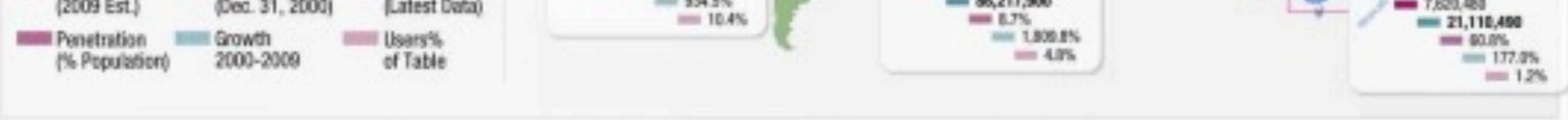
*1 billion*



*100 million*

The Internet will be more geographically dispersed

TWO



# The Internet will be network of things, not computers

## THREE



Today, the internet has **575 million** host computers



Expect **billions of sensors** on buildings and bridges to be connected to the internet

# The Internet will carry exabytes - Perhaps zettabytes - of content

Internet traffic will **GROW** to **44**

# The Internet will be wireless

## FIVE

The Number of Mobile Broadband Subscribers

85% increase



## The Internet will carry exabytes - Perhaps zettabytes - of content

Internet traffic will **GROW** to

# 44 exabytes

per month by **2012**

more than double what it is today

"exaflood"

refer to the rapidly increasing amount of data that is being transferred over the internet



# FOUR

## The Internet will be wireless

# FIVE

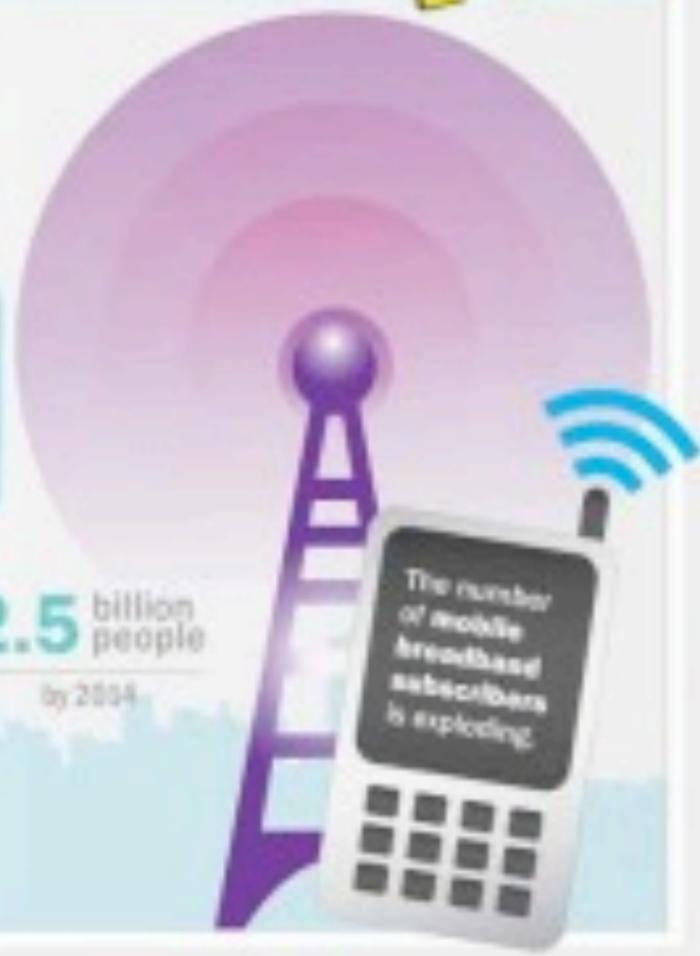
### The Number of Mobile Broadband Subscribers

85% increase year-over-year for 3G, WiMAX and other higher speed data networking technologies

**257** million people  
second quarter of 2009



**2.5** billion people  
by 2014



## More services will be in the cloud

### Cloud Computing n. Leveraging 3rd party computing capability over the network to

cut costs.

Present Day

Cloud Computing Standards

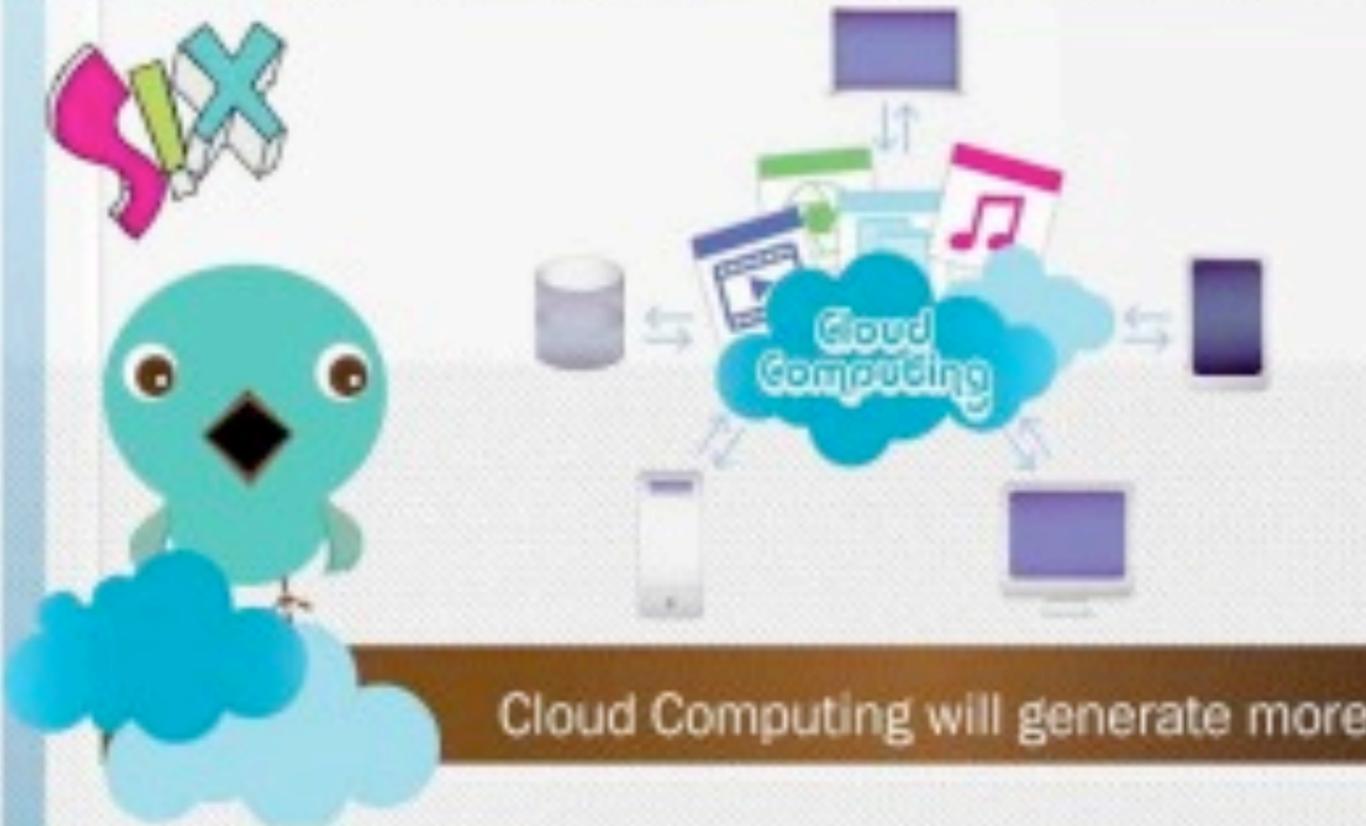
Infrastructure Managing, Network Control

# SIX



# More services will be in the cloud

**Cloud Computing n.** Leveraging 3rd party computing capability over the network to **cut costs, increase scale, improve agility, and access best practices**



Cloud Computing will generate more than **\$45.4** billion in revenue by **2015!**

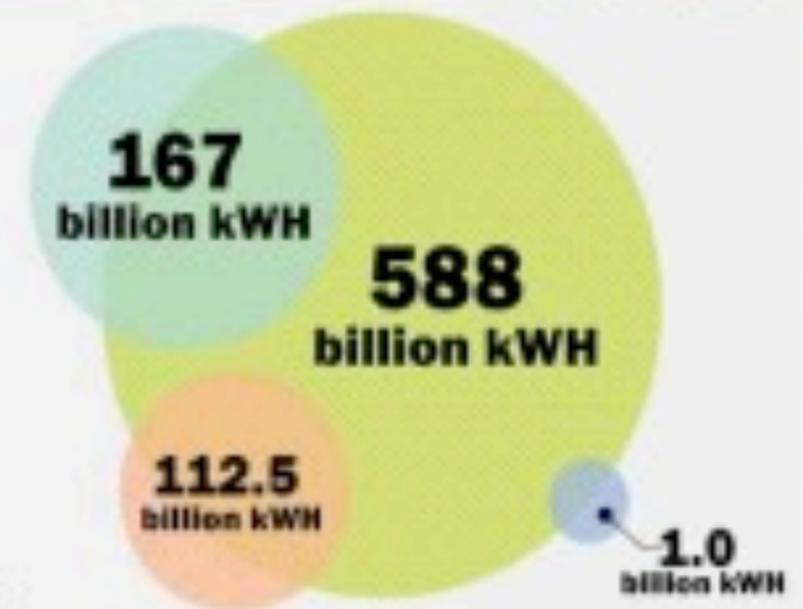
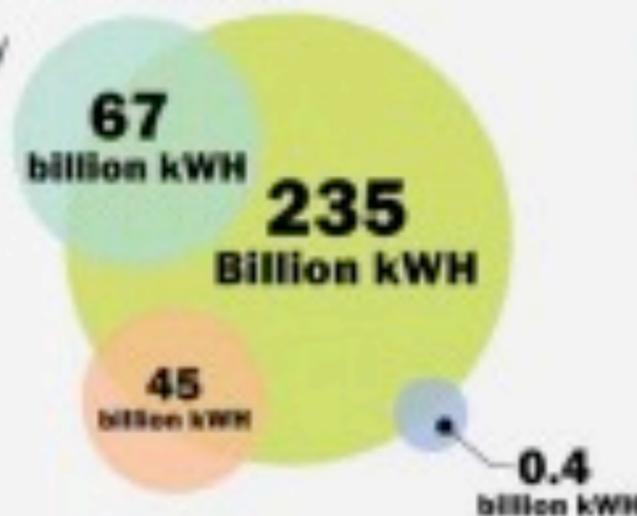
# The Internet will be greener



## Annual Electricity Use for the Internet (US and World)

Internet operations consume too much energy and it needs to be more energy efficient.

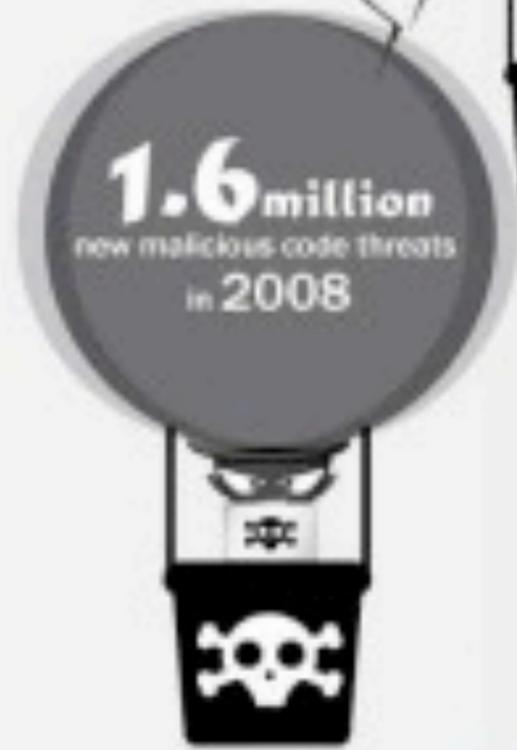
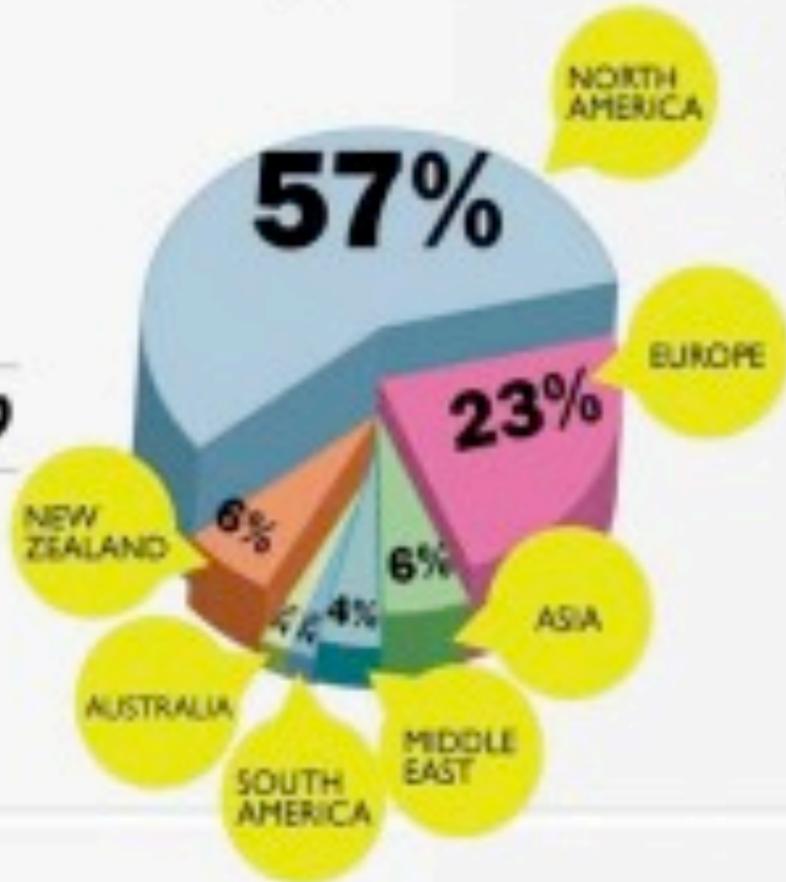
- PCs & Monitors
- Modems/Routers/Etc
- Data Centers (includes cooling)
- Phone Network



# The Internet will attract more hackers

In **2020**, more **HACKERS** will be attacking the Internet because more critical infrastructure like **the electric grid** will be online.

**Hacking Incidents 2009**



TEEN

Sources: Zdnet Internet World Stats, Network World



La croissance d'Internet en direct

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