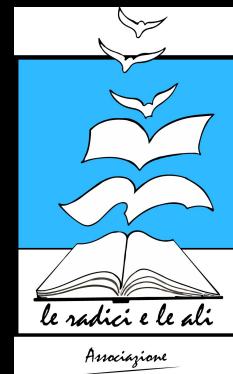


Dal Coding alla Saggezza Digitale



Associazione di Promozione Sociale "Le Radici e le Ali"

5° Incontro
Milano, 3 Aprile 02017

Norberto Patrignani

Digital Literacy

Scientific Method

Problem Solving

Computational Thinking

Coding

Digital Wisdom

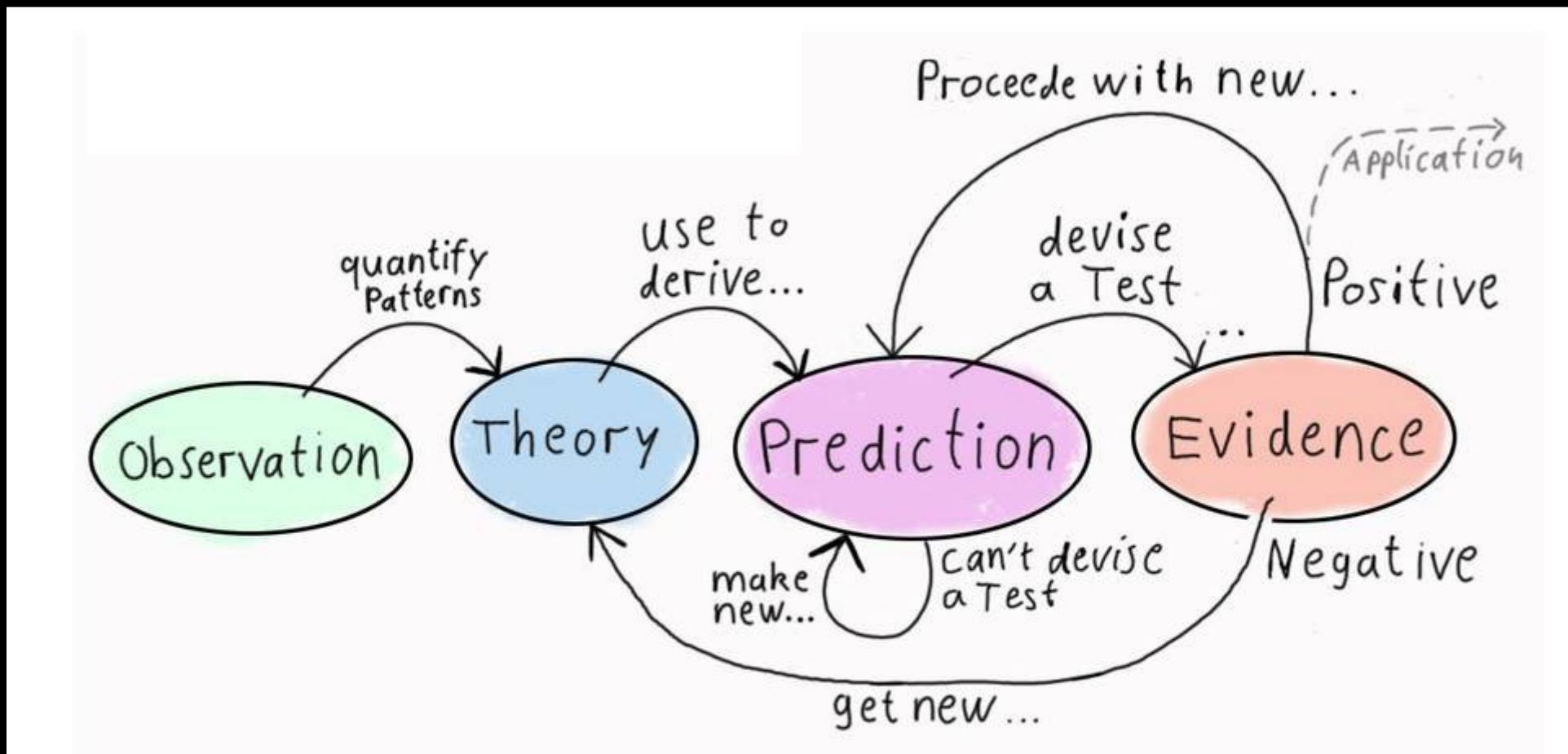
Digital Identity

OnLife (*online & offline blending*)

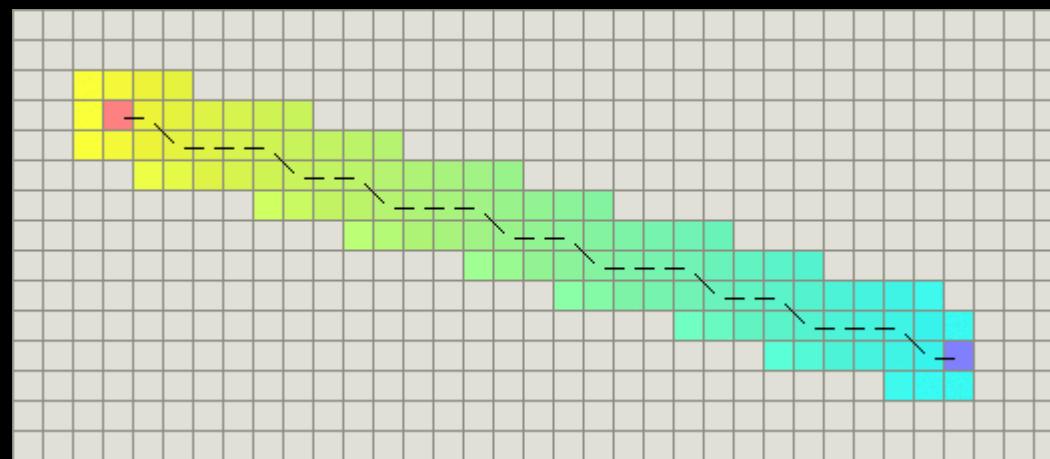
Ethical Hackers

Slow Tech

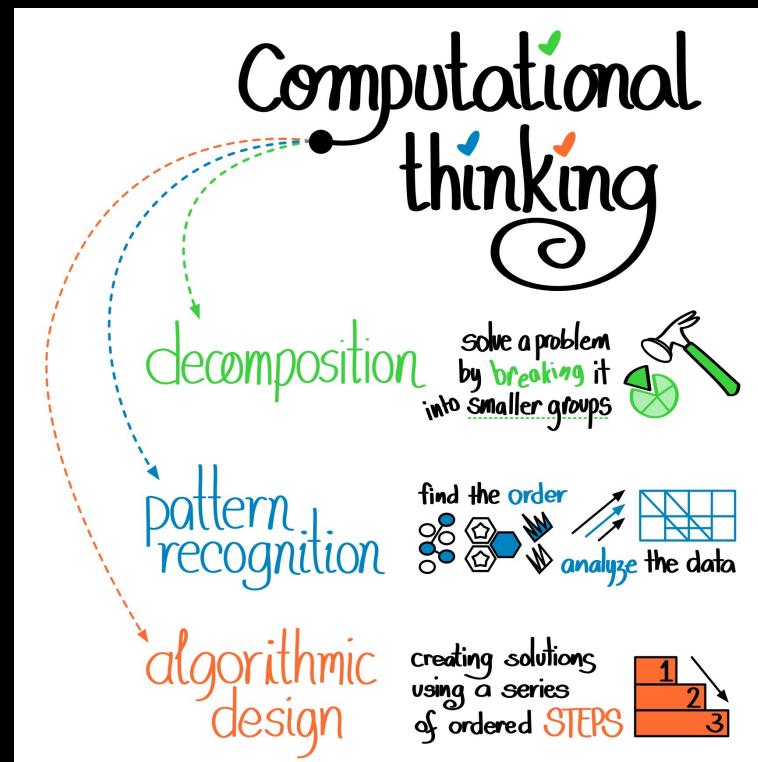
Scientific Method



Problem Solving (& Critical Thinking)



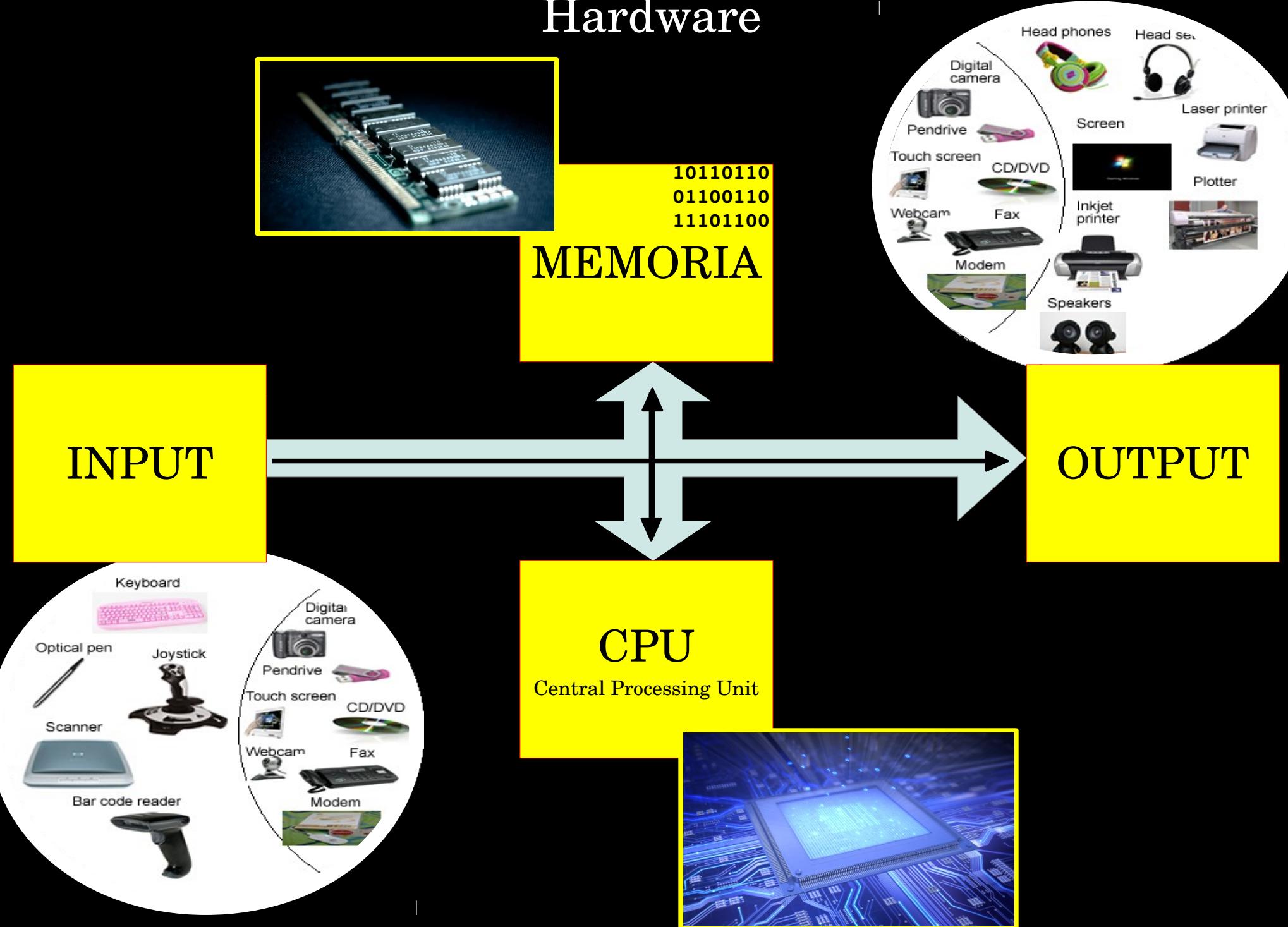
Computational Thinking



Coding



Hardware

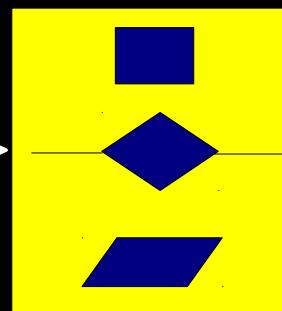


Software

Algoritmo
(Flow Chart)



P



Analista

1. ANALISI

Programmatrice

2. FLOW CHART

3. CODING

4. TESTING

5. SHARING!

Programma
(espresso con un
Linguaggio di Programmazione
es. Pascal, C++, Java, etc.)



```
begin
read (X)
if ( X <= 0)
then goto begin
else Y = SQRT (X)
write (Y)
end
```

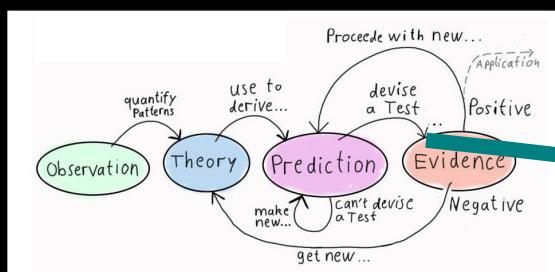
Compilatore

01101101
11001101
01101111
11110000

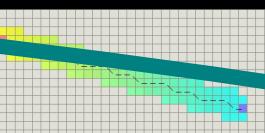
Programma
ESEGUIBLE
(espresso in
BINARIO)

Il computer e' una macchina per eseguire algoritmi

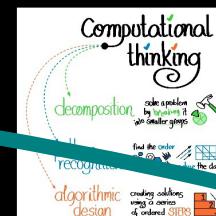
Scientific Method



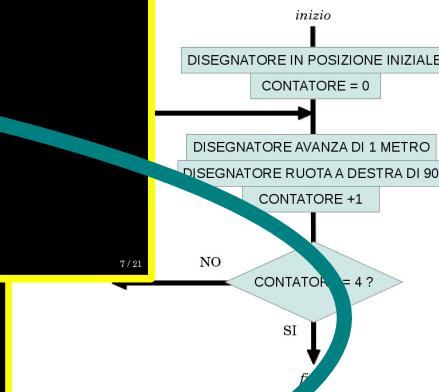
Problem Solving (& Critical Thinking)



Computational Thinking



Progetto "Quadrato"
DIAGRAMMA DI FLUSSO



Source: aiphysicist.deviantart.com

Source: Verrier, August 21, 1898, Galileo presenting telescope potentialities to Russian Senate from San Marco clock tower, (Giuseppe Bertini, 1888, Villa Pichi, Verone)

6 / 21

6 / 21

Coding

```
if (true){  
    console.log("Hello World");  
}  
  
var arr = [1, 2, 3, 4, 5];  
for (let i = 0; i < arr.length; i++) {  
    console.log(arr[i]);  
}  
  
function add(a, b) {  
    return a + b;  
}  
  
add(2, 3);  
  
const obj = {  
    name: "John",  
    age: 30,  
    address: "Highway 22",  
    ...  
};  
  
obj.name = "Jane";  
obj.age = 31;  
obj.address = "Highway 22";  
  
console.log(obj);
```

8 / 21

INPUT



10 / 22

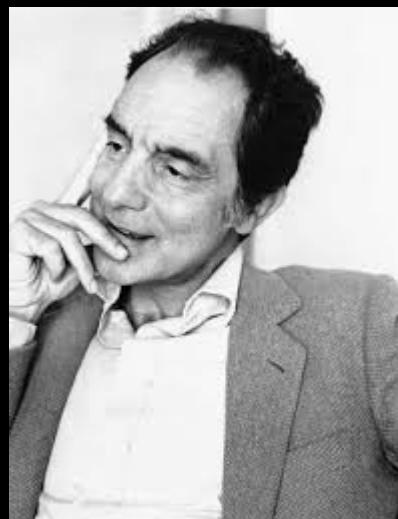
```
begin  
read (X)  
if ( X <= 0)  
    then goto begin  
else Y = SQRT (X)  
write (Y)  
end
```

*"... Il software non potrebbe esercitare i poteri della sua **leggerezza** se non mediante la pesantezza dell'hardware; ma e' il software che comanda, che agisce sul mondo esterno e sulle macchine, le quali esistono solo in funzione del software ...*

Le macchine di ferro ci sono sempre, ma obbediscono ai bits senza peso".

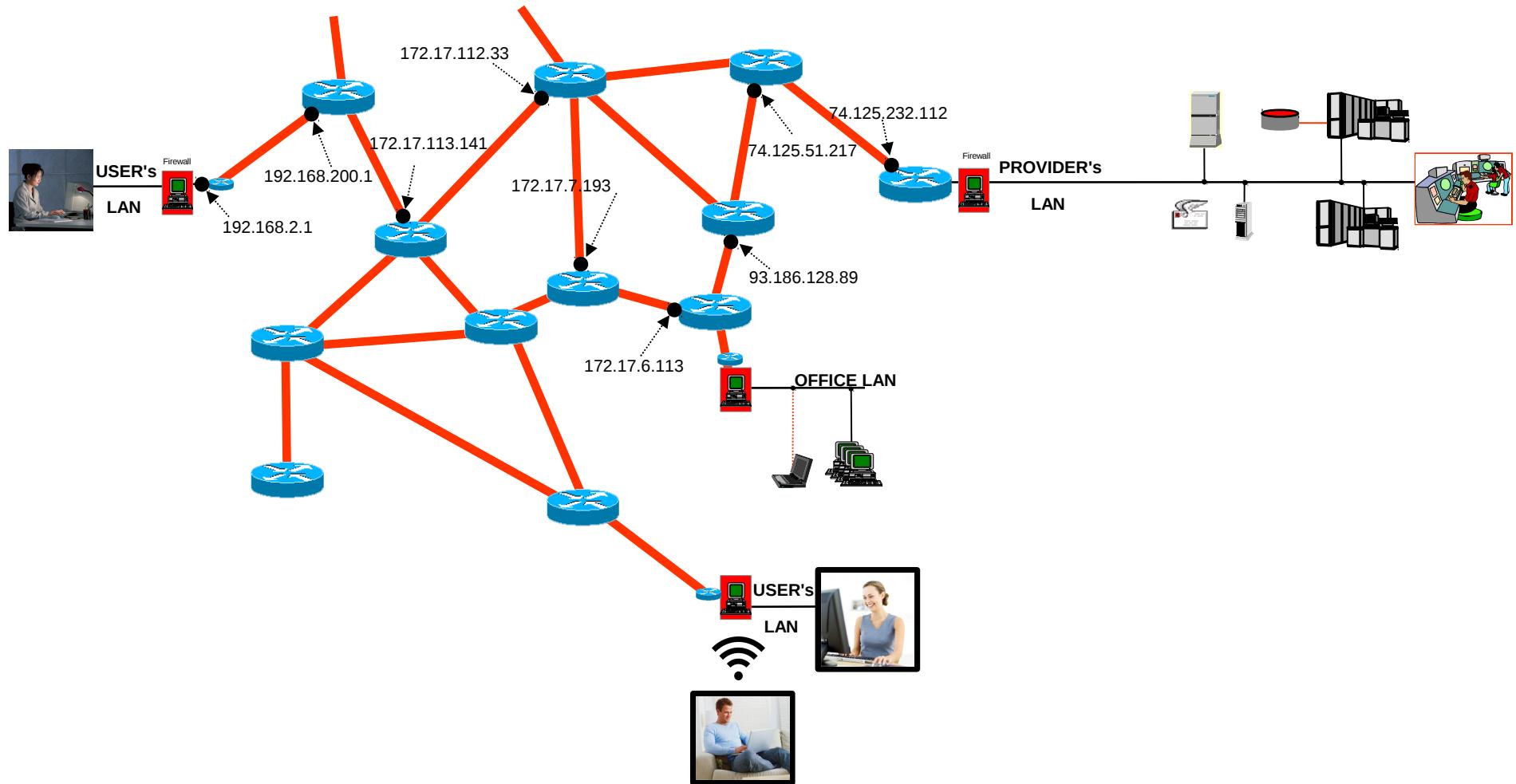
Italo Calvino,
Leggerezza

*"Six Memos for the Next Millennium", Harvard Universiy, 1984;
Lezioni Americane. Sei proposte per il prossimo millennio", Garzanti, 1988. p.10*

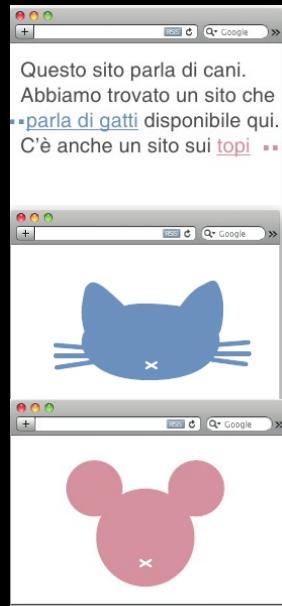


Italo Calvino
(1923-1985)

Internet



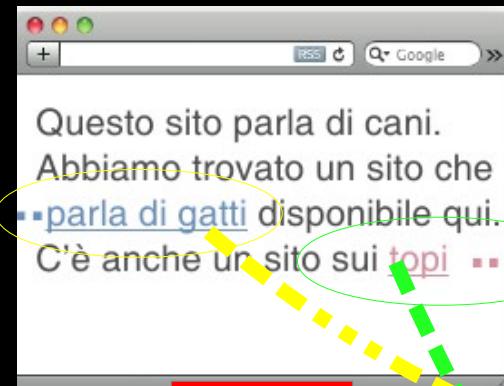
World Wide Web



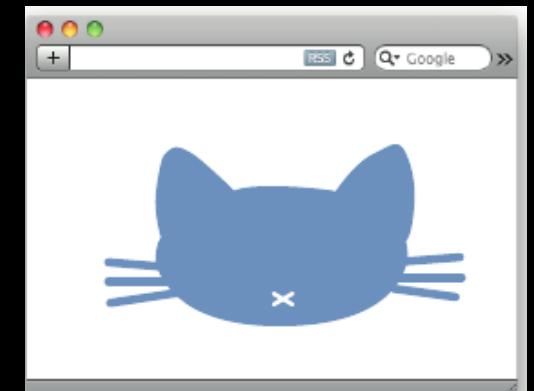
www.cani.it



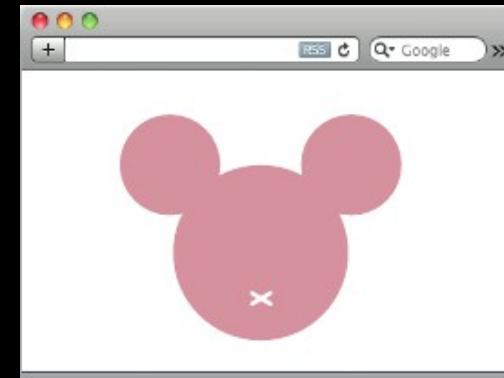
www.cani.it



1

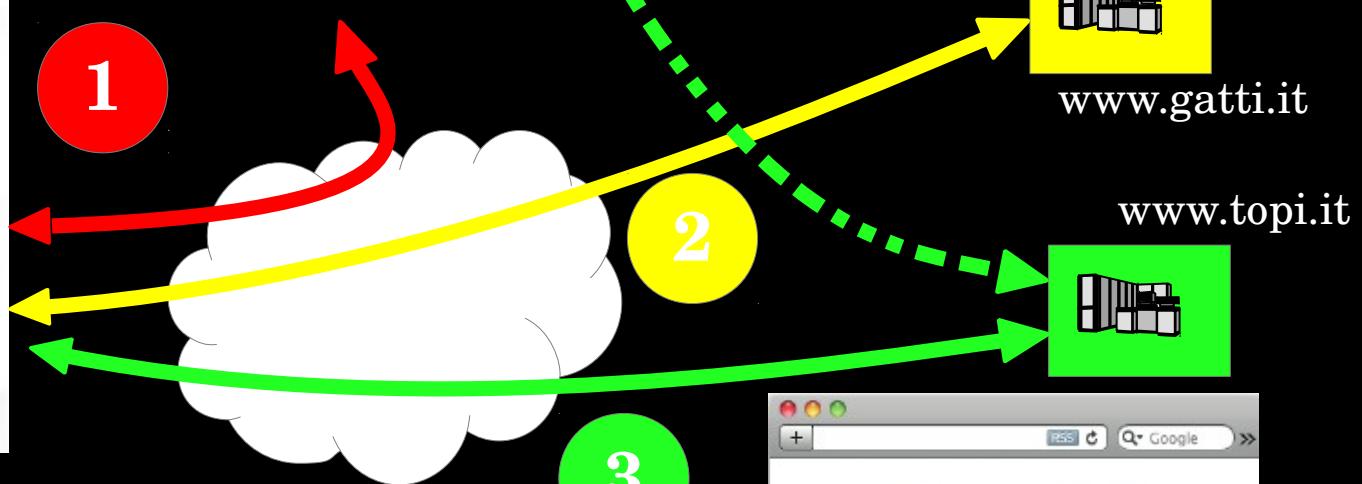


www.gatti.it

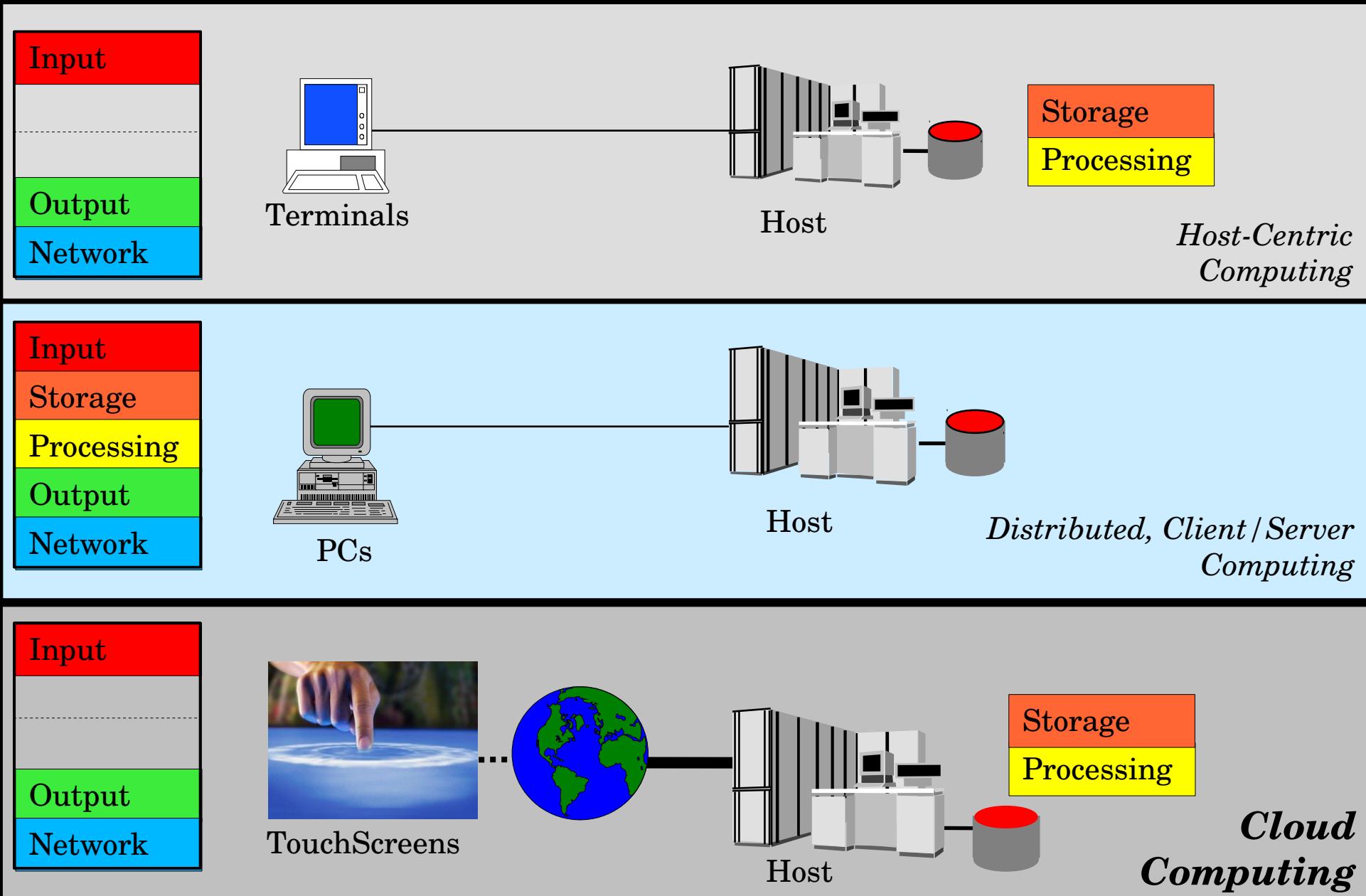


www.topi.it

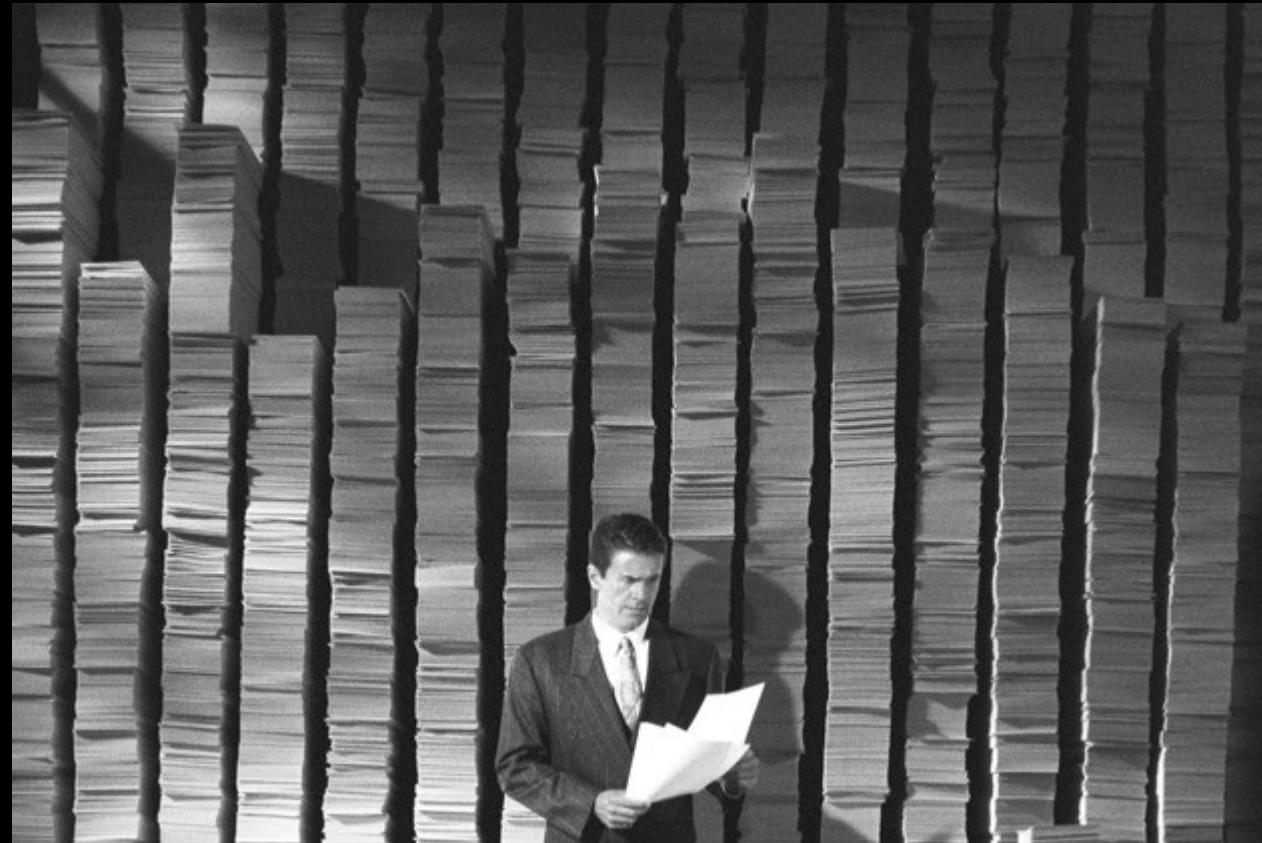
2



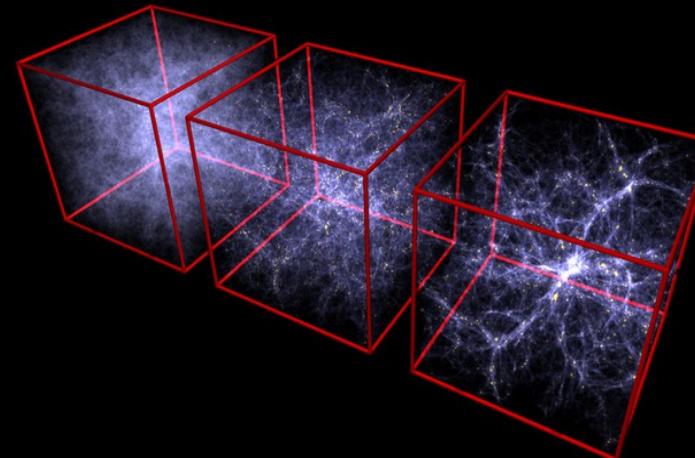
Cloud Computing: Back to the Future



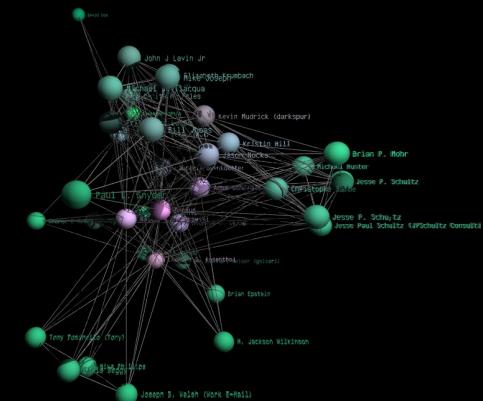
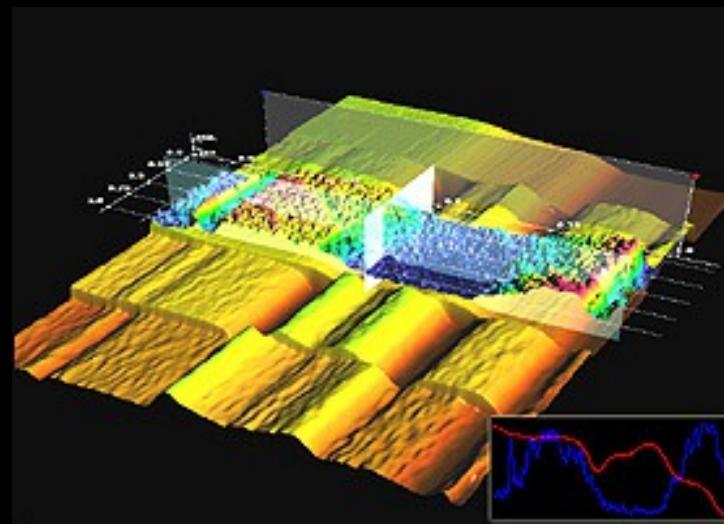
BigData (2012) = 1 Exabyte = 10^{18} byte



Knowledge



Information



Data



*"... At the heart of the change,
the next 20 years will be
intelligence drawn from information
Information will be the 'oil of the 21st century'.
... It will be the resource running our economy
in ways not possible in the past."*

Peter Sondergaard
Gartner Symposium/ITxpo 2010,
October 17-21, Orlando

On the road to the Fourth Industrial Revolution

| From Industry 1.0 to Industry 4.0

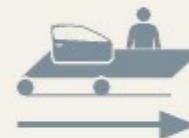
1.0 | 1784

based on mechanical production equipment driven by water and steam power



2.0 | 1870

based on mass production enabled by the division of labor and the use of electrical energy



3.0 | 1969

based on the use of electronics and IT to further automate production



4.0 | tomorrow

based on the use of cyber-physical systems

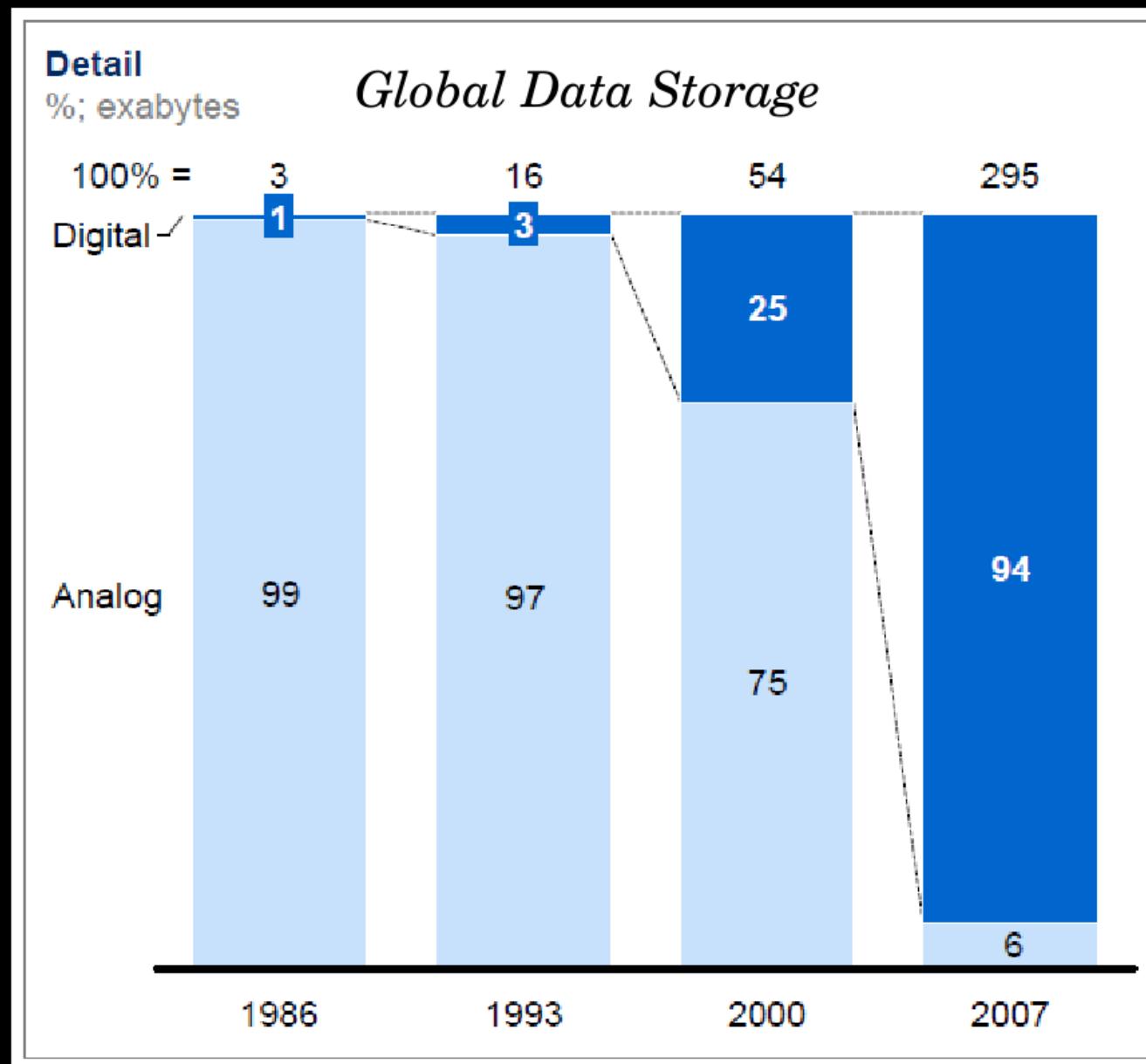


Energy

Information

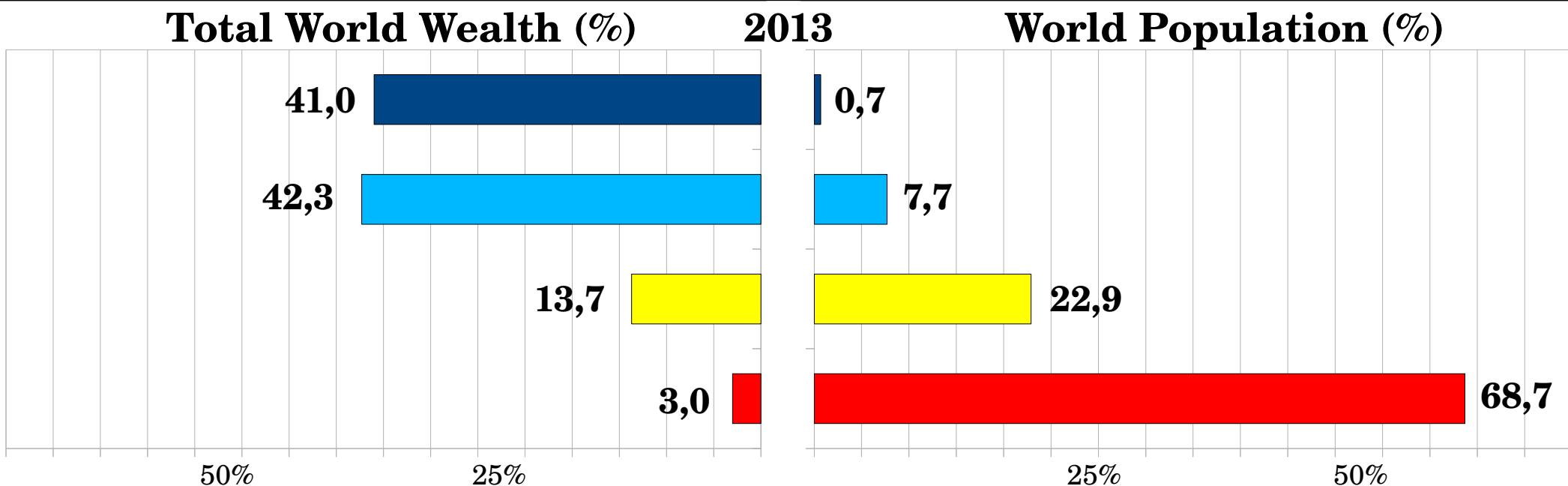


Farewell to Analog Data



World (2013)

41,0% Wealth = 0,7% Population



3,0% Wealth = 68,7% Population

World (2014)

44,0% Wealth = 0,7% Population

Total World Wealth (%)

2014

World Population (%)

44,0

41,3

11,8

2,9

0,74

7,94

21,49

69,83

50%

25%

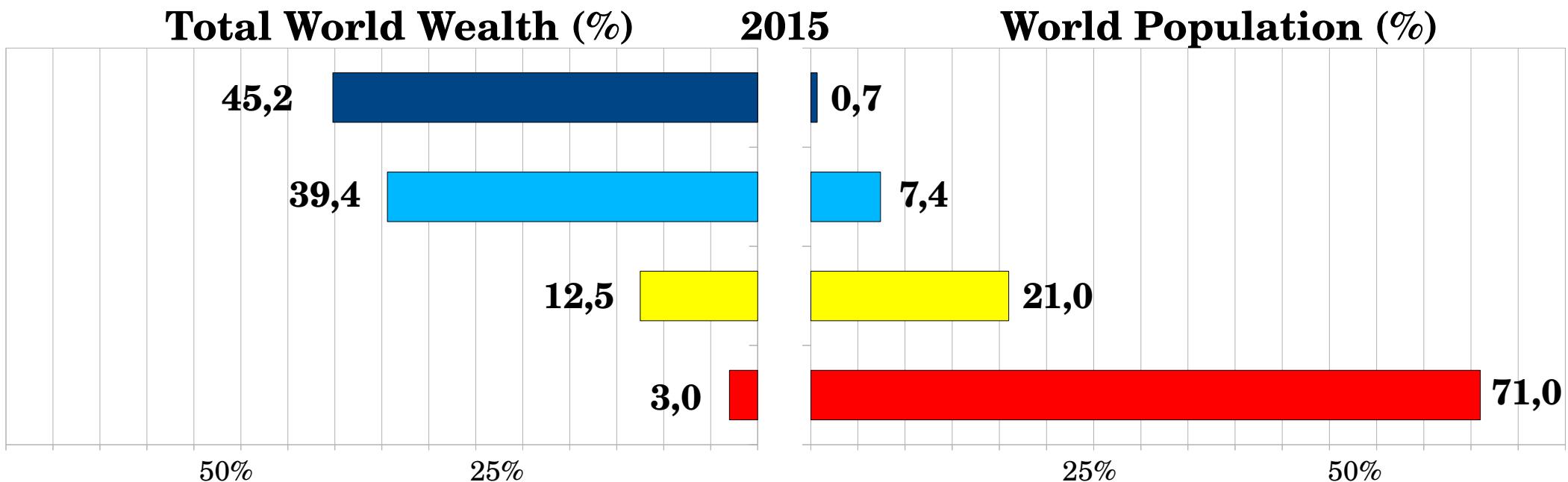
25%

50%

2,9% Wealth = 69,8% Population

World (2015)

45,2% Wealth = 0,7% Population



3,0% Wealth = 71,0% Population

World (2016)

45,6% Wealth = 0,7% Population

Total World Wealth (%)

2016

World Population (%)

45,6

40,6

11,4

2,4

0,7

7,5

18,5

73,2

50%

25%

25%

50%

2,4% Wealth = 73,2% Population

Rank	Company	Country	Sales	Profits	Assets	Market Value
	#8 Apple	United States	\$233.3 B	\$53.7 B	\$293.3 B	\$586 B
	#27 Alphabet	United States	\$77.2 B	\$17 B	\$149.7 B	\$500.1 B
	#23 Microsoft	United States	\$86.6 B	\$10.2 B	\$181.9 B	\$407 B
	#9 ExxonMobil	United States	\$236.8 B	\$16.2 B	\$336.8 B	\$363.3 B
	#4 Berkshire Hathaway	United States	\$210.8 B	\$24.1 B	\$561.1 B	\$360.1 B
	#188 Facebook	United States	\$17.9 B	\$3.7 B	\$49.4 B	\$314.8 B
	#32 Johnson & Johnson	United States	\$70.2 B	\$15.4 B	\$133.4 B	\$312.6 B
	#237 Amazon.com	United States	\$107 B	\$596 M	\$67.7 B	\$292.6 B
	#68 General Electric	United States	\$122.4 B	\$1.7 B	\$492.7 B	\$285.6 B
	#7 Wells Fargo	United States	\$91.4 B	\$22.7 B	\$1,849.2 B	\$256 B

Rank	Company	Country	Sales	Profits	Assets	Market Value
#8	Apple	United States	\$233.3 B	\$53.7 B	\$293.3 B	\$586 B
#27	Alphabet	United States	\$77.2 B	\$18.2 B	\$181.9 B	\$407 B
#23	Microsoft	Belgium	454,039	\$336.8 B	\$363.3 B	
		Iran	425,326			
		Thailand	395,282			
		Norway	388,315			
		Austria	374,056			
		Venezuela	371,337			
		United Arab Emirates	370,293			
		Egypt	330,779			
		South Africa	312,798			
		Hong Kong	309,929			
		Malaysia	296,218			
		Israel	296,075			
		Denmark	295,164			
		Singapore	292,739			
		Colombia	292,080			
		Philippines	291,965			
		Pakistan	269,971			
		Chile	240,216			
		Ireland	238,020			
		Finland	229,810			

Apple = 586 \$B

Belgium = 454 \$B (GDP)

Digital Literacy

Scientific Method

Problem Solving

Computational Thinking

Coding

Digital Wisdom

Digital Identity

OnLife (*online & offline blending*)

Ethical Hackers

Slow Tech

Digital Wisdom

Digital Wisdom means to be able of Questioning Information Technology and be Aware of its Social and Ethical Implications.

*A Successful and Socially Responsible Digital Citizen should be able to:
Learn (up to Programming Software and easily playing with Hardware);
Select and Use the Devices and Services needed for daily life;
Know Applications and Open Standards and Formats;
Properly Manage her Online Identity and Reputation;
Find the Right Blending between Online and Offline Life;
Ensure that Information Technology are developed with a Human-Centred Approach, by minimizing the Environmental Impact, and
Verifying the Fairness of the Manufacturing Supply-Chain.
The Development of Digital Wisdom implies the Introduction of Digital Literacy and Computer Ethics into Educational Context*

Norberto Patrignani

Towards Tomorrow's Successful Digital Citizens: A Policy Think Tank

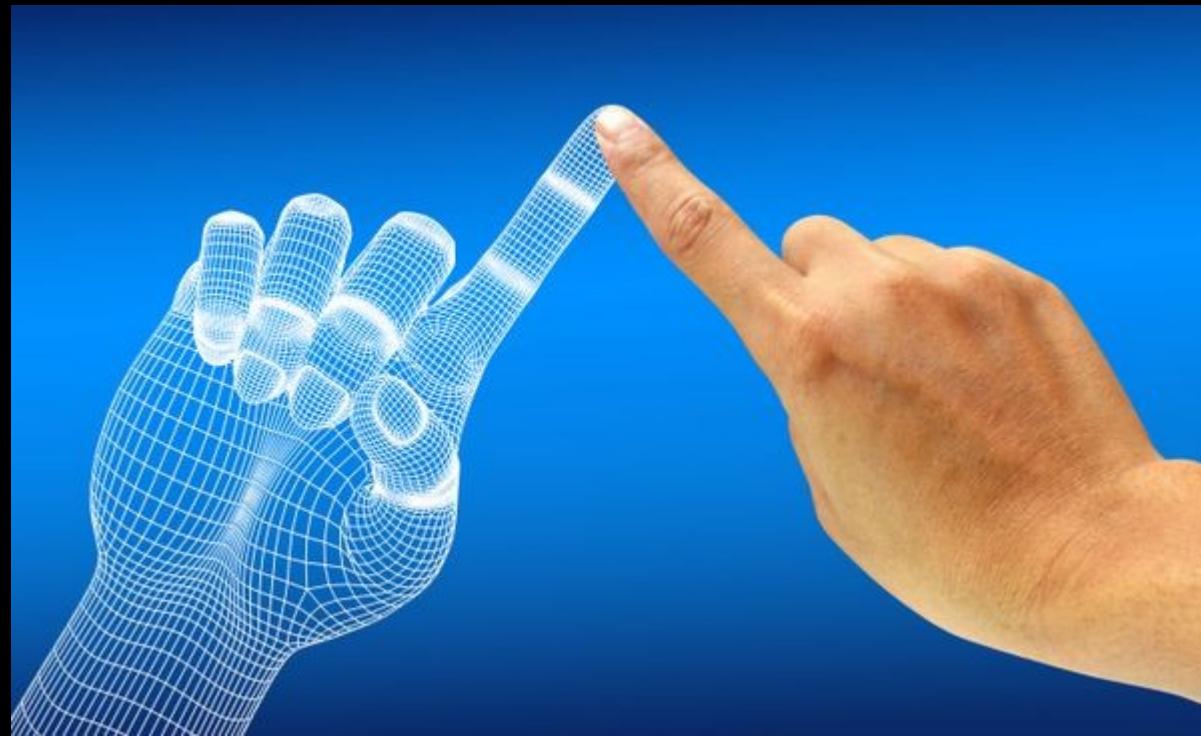
London Knowledge Lab, Institute of Education

London, 24 February 2015

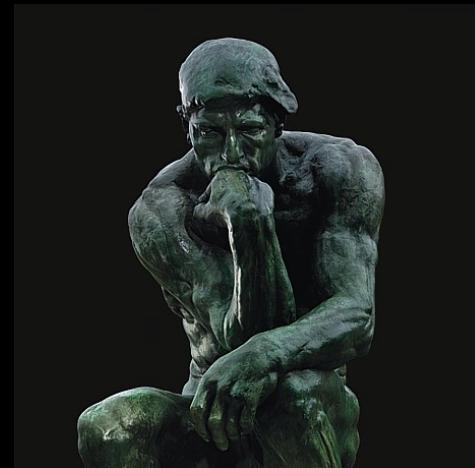
Digital Identity



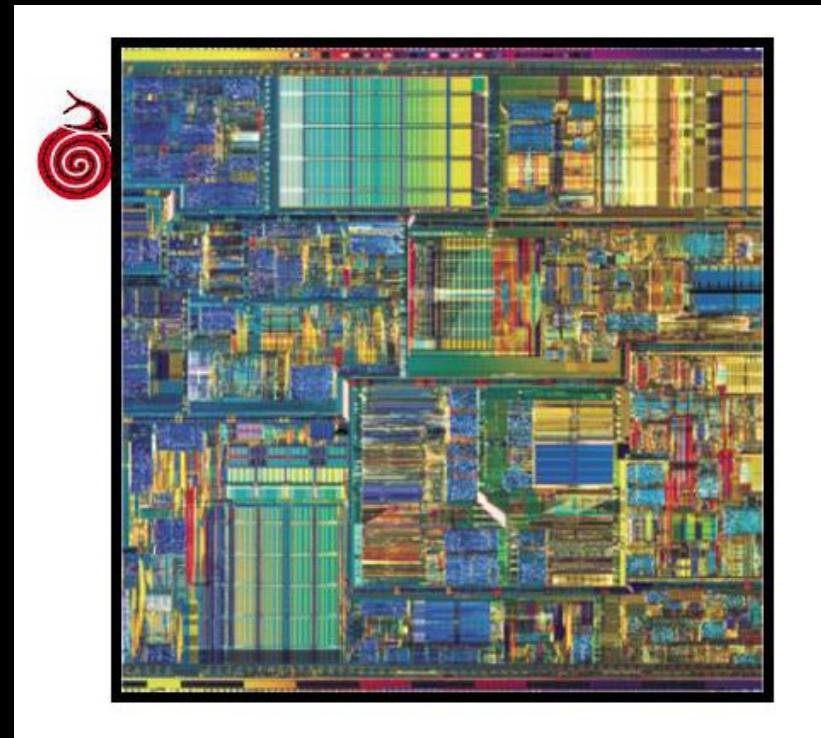
Onlife



Ethical Hackers



Slow Tech



1955: Olivetti "Ai lavoratori"

*"Può l'industria darsi dei fini?
Si trovano questi semplicemente
nell'indice dei profitti?"*

Adriano Olivetti, 23 Aprile 1955

Discorso "Ai lavoratori di Pozzuoli",

per l'inaugurazione dello stabilimento di Pozzuoli

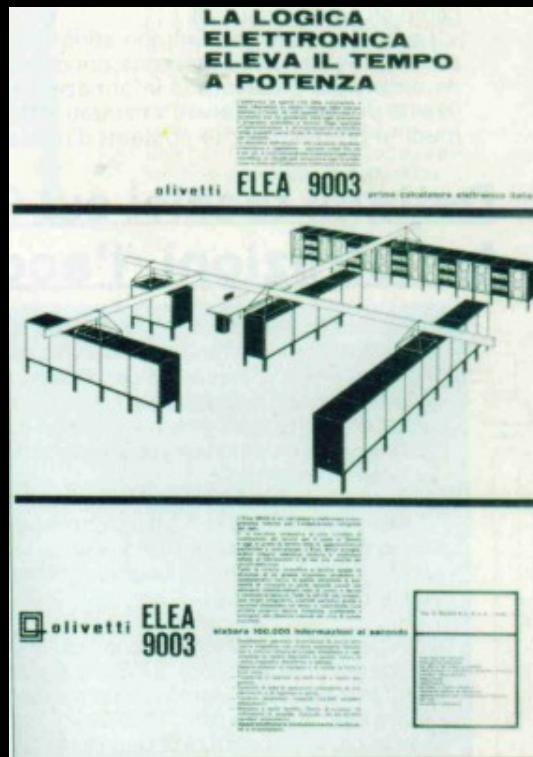
Tratto da: A.Olivetti (1959), "Citta' dell'uomo", Edizioni di Comunita', Milano.



Adriano Olivetti
(1901-1960)

1959: Olivetti Elea 9003

*"Con la realizzazione dell'Elea, la nostra Società ...
tocca una meta in cui direttamente si invera
quello che penso sia l'inalienabile,
più alto fine che un'industria deve porsi di operare, ...
per il progresso comune - economico, sociale, etico -
della intera collettività"*



Olivetti Elea 9003
Primo Mainframe a Transistor

Adriano Olivetti, 8 Novembre 1959

Discorso in occasione della presentazione del calcolatore Olivetti Elea 9003,
in "Il mondo che nasce", Edizioni di Comunità, 2013



Adriano Olivetti
(1901-1960)

1994: Alexander Langer

"... *Come può risultare desiderabile
una civiltà ecologicamente sostenibile?*
“lentius, profundius, suavius”
(più lento, più profondo, più dolce)
al posto di
“citius, altius, fortius”
(più veloce, più alto, più forte)"

Alexander Langer, 10 Settembre 1994
Intervento ai *Colloqui di Dobbiaco 94* su "Benessere ecologico"
in "*Il viaggiatore leggero. Scritti 1961-1995*", Sellerio, Palermo 2011, p.145



Alexander Langer
(1946-1995)

ICT, Made for Humans



Dal Coding alla Saggezza Digitale

Grazie!

Home

Chi siamo

PROGRAMMI

Relatori

VIDEO

AUDIO

Articoli

Cerca

FILOSOFIA SUI NAVIGLI

Filosofia per diletto e per passione

Feeds: Articoli Commenti



– Benvenuto!

ottobre 22, 2013 di filosofiasuinavigli

RIPRENDONO GLI INCONTRI di FILOSOFIA sui NAVIGLI

alla domenica mattina dalle ore 10,15 alle ore 12

al ristorante Officina 12

Alzaia Naviglio Grande n. 12 Milano

PROGRAMMA 2017-1

LINK

- Affari Italiani – Parla del 'Salotto Caracci'
- Affari Italiani – Parla di 'Filosofia sui Navigli'
- Aperitivi Filosofici
- Booklet
- Festa della Filosofia
- Mantova – Festival della letteratura
- Oretta Dalle Ore
- Orizzonti Filosofici
- Philosophical News
- WIKIPEDIA – Portale di Filosofia
- Alboversoaria

Iscriviti ...

Domenica 11 Giugno, 10:15

“Perché l’Informatica ha bisogno dell’Etica”

Prof. Norberto Patrignani, Docente di Computer Ethics,
Scuola di Dottorato del Politecnico di Torino.