



# ITALIAN INTERNET DAY

FESTEGGIAMO I TRENT'ANNI DI INTERNET IN ITALIA

## L'evoluzione della Rete

**Giuseppe Augiero**

29 aprile 2016 - Italian Internet Day - Area della Ricerca del CNR di Pisa - Giuseppe Augiero



# Le applicazioni

## WEB 2.0 Landscape

Widget/  
component



WEB APPLICATION



Aggregation/  
recombination

CONTENT  
SHARING



RECOMMENDATIONS/  
FILTERING



Collaborative  
filtering

SOCIAL NETWORK

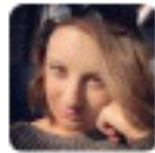
Note: Each of these Web 2.0 applications has multiple functionality – for each service the primary positioning has been used

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**Hashtag**

**#ItalianInternetDay**

# 30 anni



**Barbara Vellucci**  
@barbaravellucci



Segui

#italianinternetday: 30 anni fa scoprivamo il web  
fashiontimes.it/2016/04/italia ... via  
@FashionTimesMag



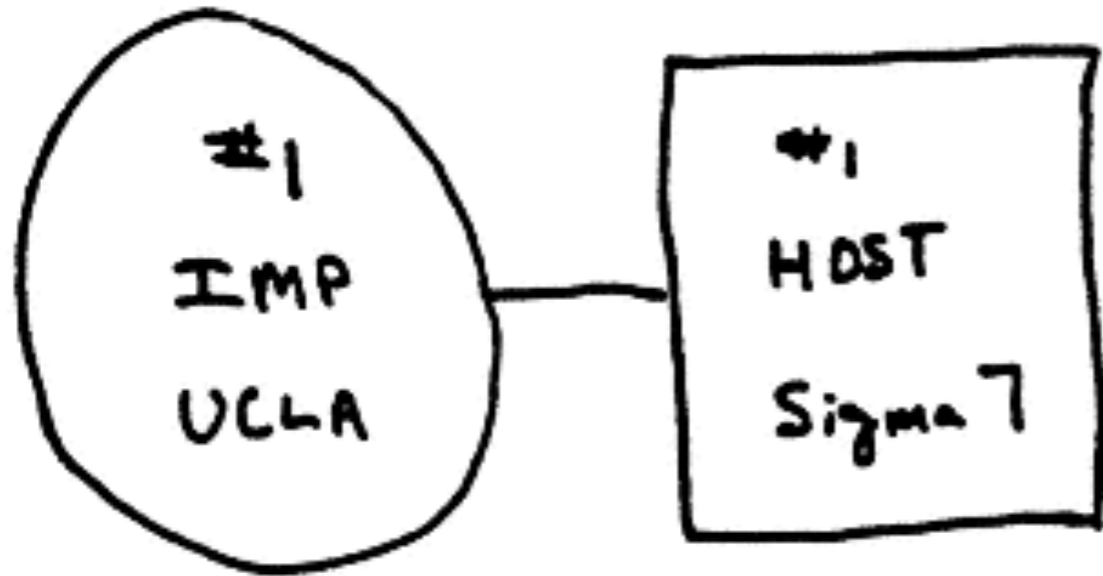
# Internet e il Web sono la stessa cosa?



# Internet



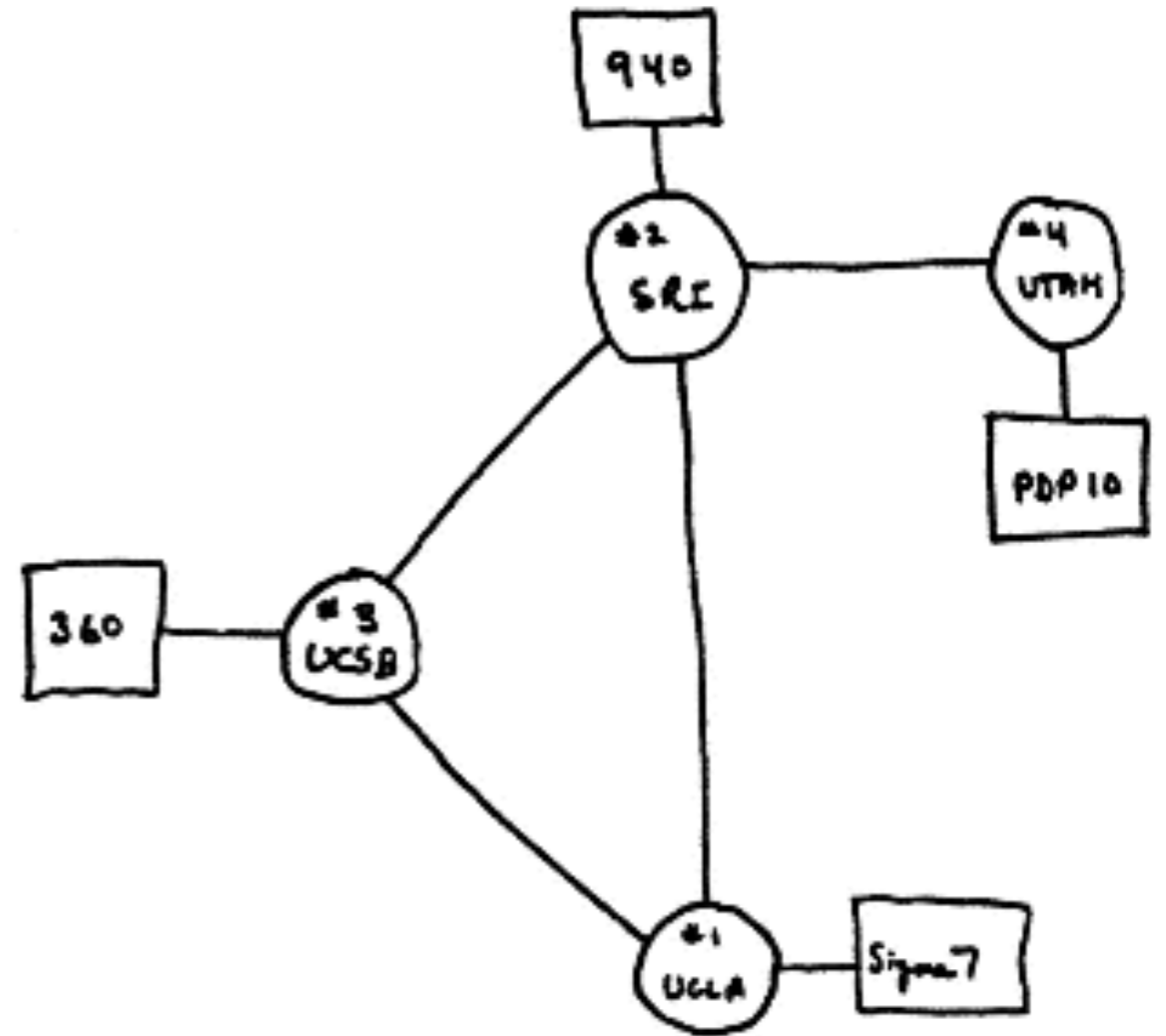
# Arpanet



THE ARPA NETWORK

SEPT 1969

1 NODE

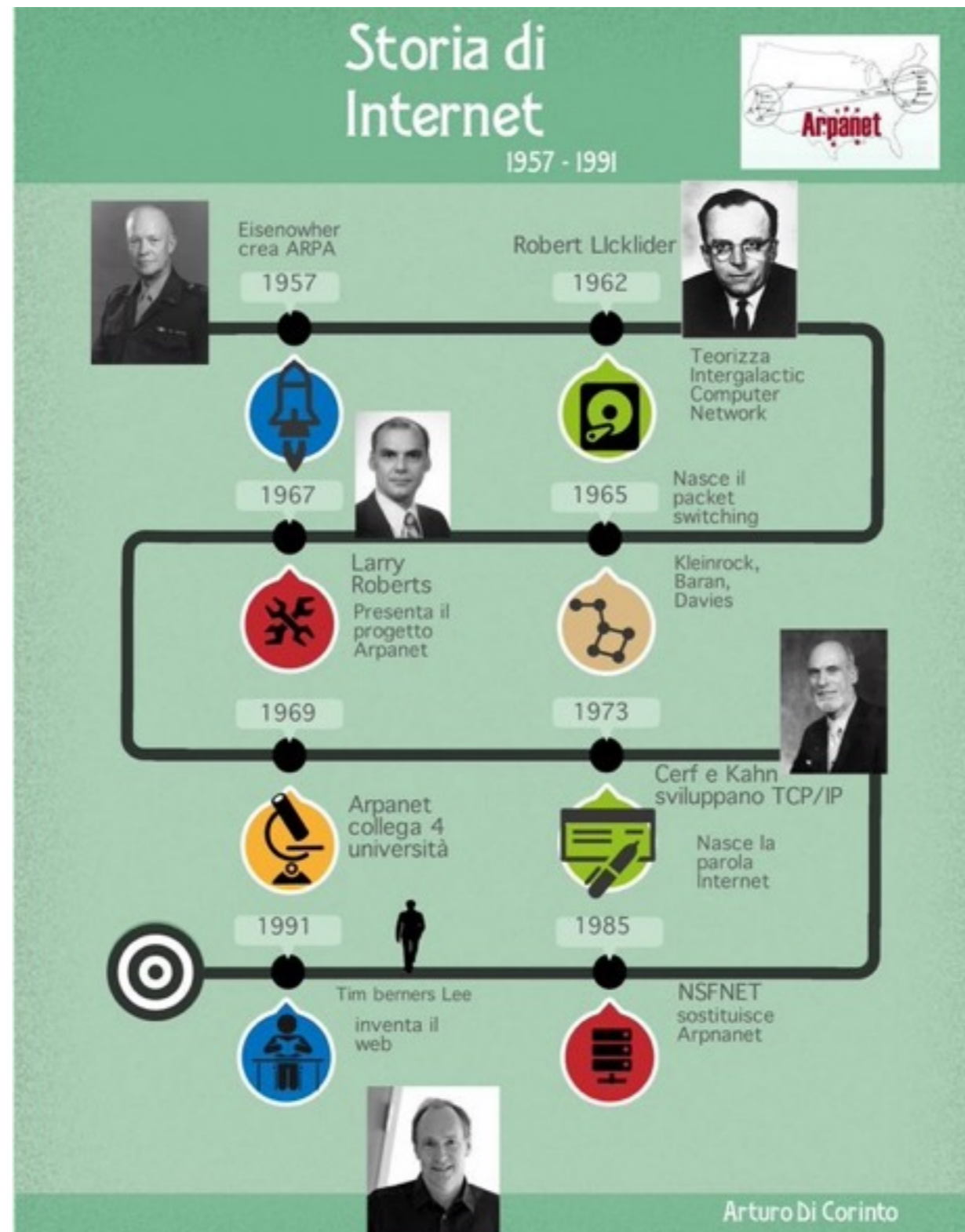


THE ARPA NETWORK

DEC 1969

4 NODES

# L'evoluzione





# Web

**https://www**



# Protocollo



# Tcp/Ip

## 7 APPLICATION LAYER

- Provides interface to end-user processes
- Provides standardized services to applications

## 6 PRESENTATION LAYER

- Specifies architecture-independent data transfer format
- Encodes and decodes data; encrypts and decrypts data; compresses data

## 5 SESSION LAYER

- Establishes, manages, and terminates the sessions between network applications

## 4 TRANSPORT LAYER

- Manages network layer connections
- Provides reliable packet delivery mechanism

## 3 NETWORK LAYER

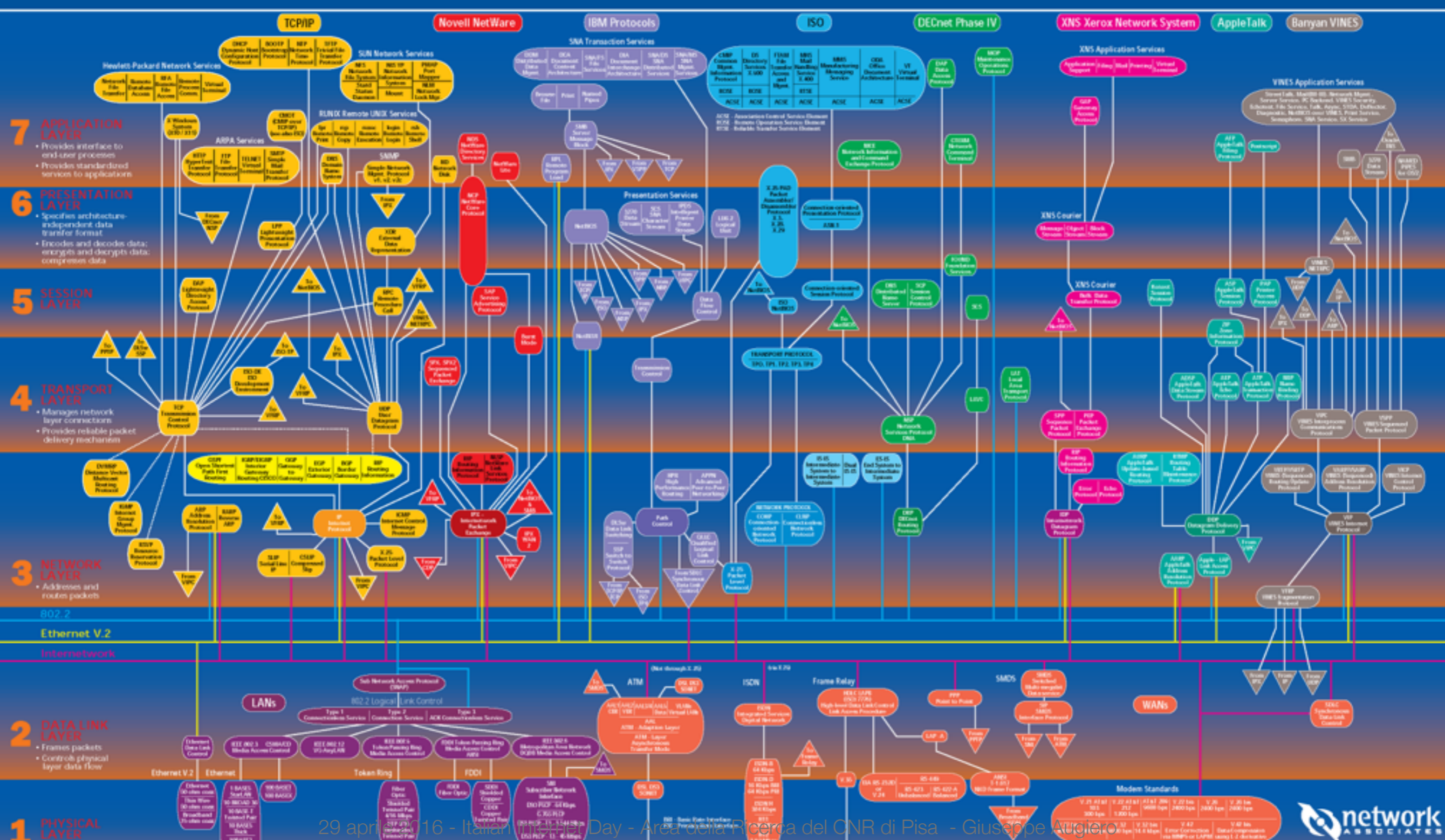
- Addresses and routes packets

## 2 DATA LINK LAYER

- Frames packets
- Controls physical layer data flow

## 1 PHYSICAL LAYER

- Transmits raw bit stream over a physical medium



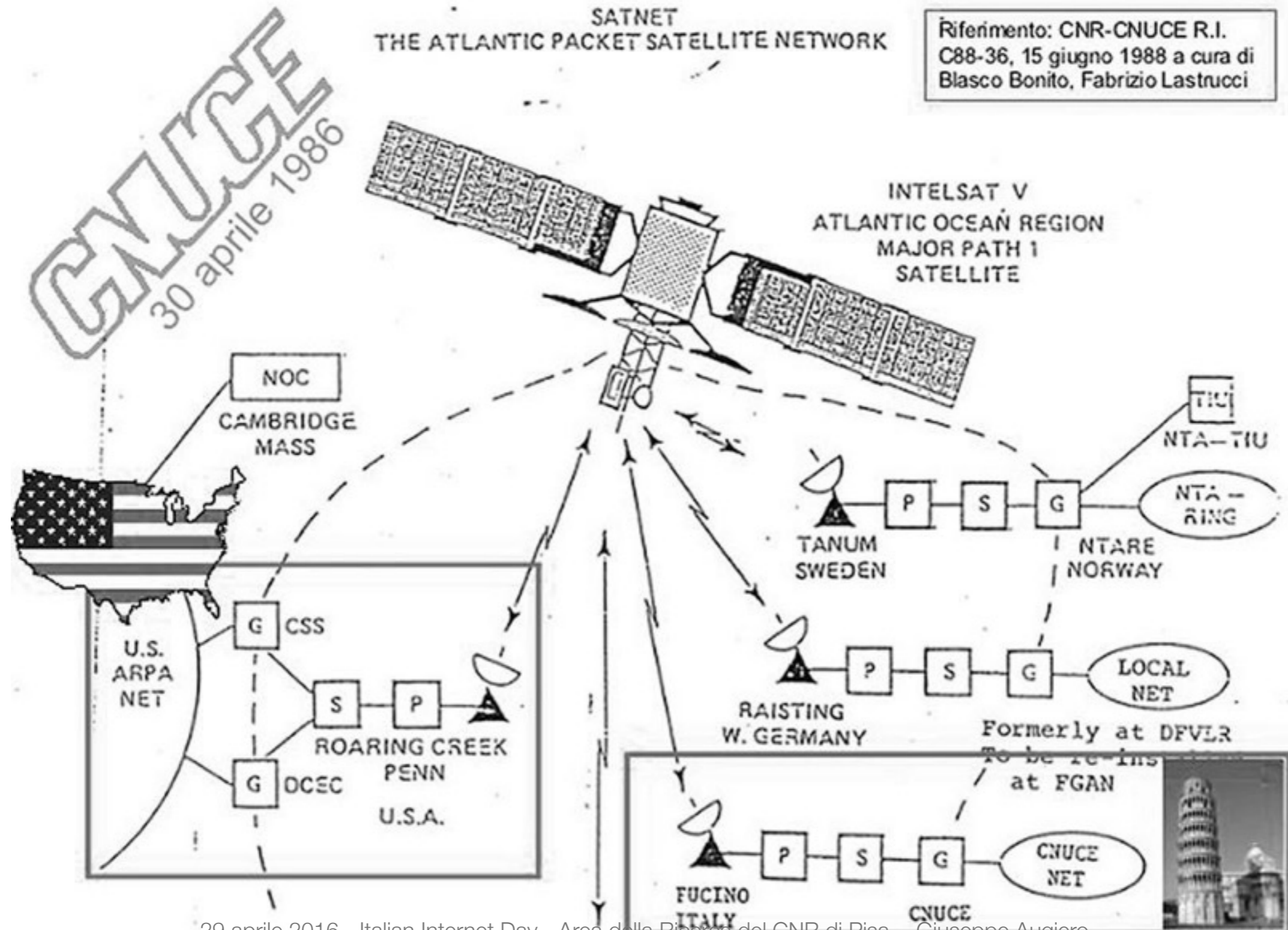
# Cerf e Kahn



# Quali furono i primi caratteri inviati su Internet?



# In Italia?



# Funziona?

```
Risposta da 192.168.100.1: byte=32 durata=151ms TTL=126
Risposta da 192.168.100.1: byte=32 durata=148ms TTL=126
Risposta da 192.168.100.1: byte=32 durata=148ms TTL=126
Risposta da 192.168.100.1: byte=32 durata=147ms TTL=126
Risposta da 192.168.100.1: byte=32 durata=148ms TTL=126
Risposta da 192.168.100.1: byte=32 durata=156ms TTL=126
Risposta da 192.168.100.1: byte=32 durata=148ms TTL=126
Risposta da 192.168.100.1: byte=32 durata=148ms TTL=126
Risposta da 192.168.100.1: byte=32 durata=147ms TTL=126
Risposta da 192.168.100.1: byte=32 durata=148ms TTL=126
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Risposta da 192.168.100.1: byte=32 durata=147ms TTL=126
Risposta da 192.168.100.1: byte=32 durata=147ms TTL=126
```

TLD .it

Registro **it**



# Segreto Militare



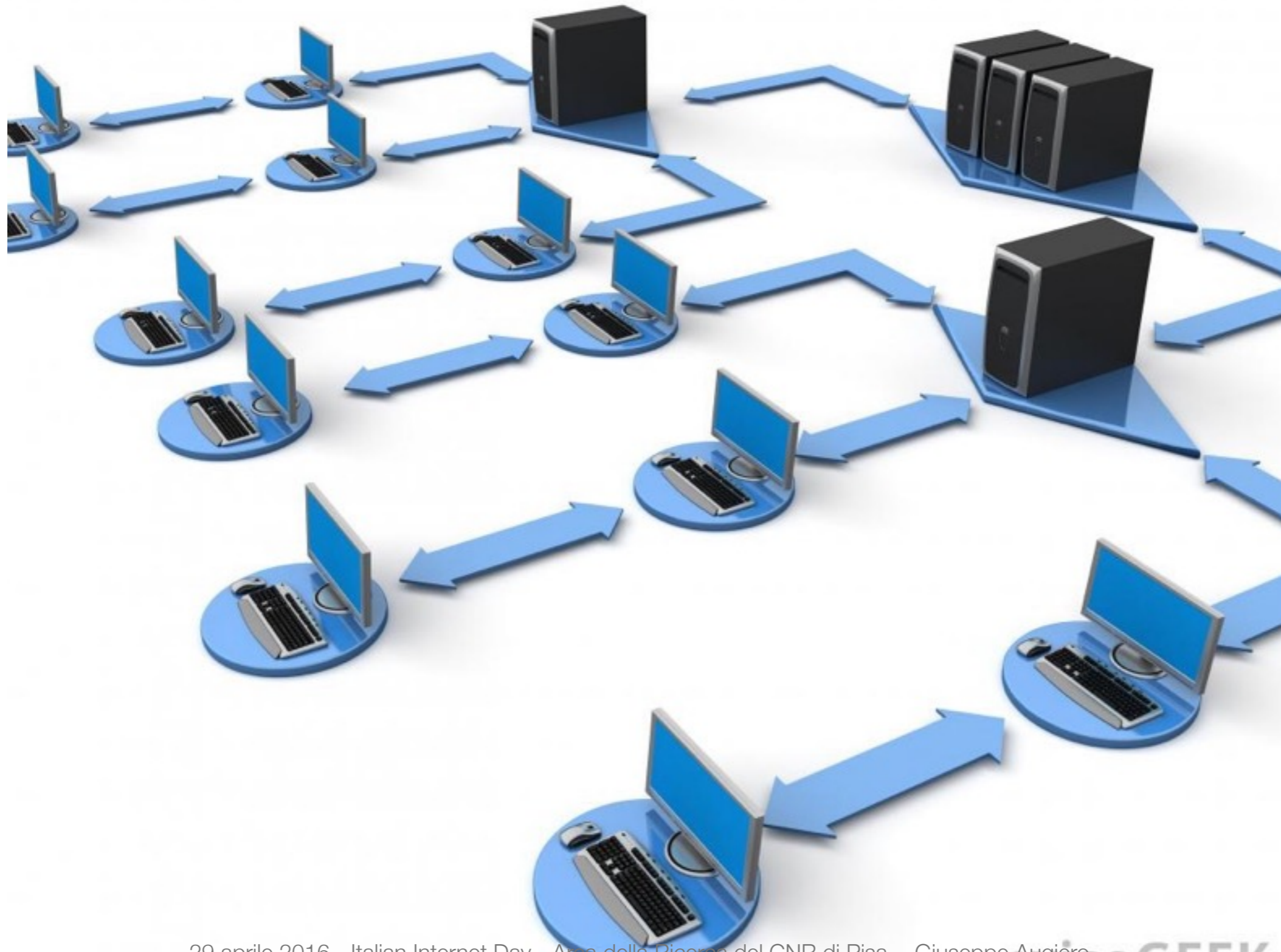
# Internet “Commerciale”



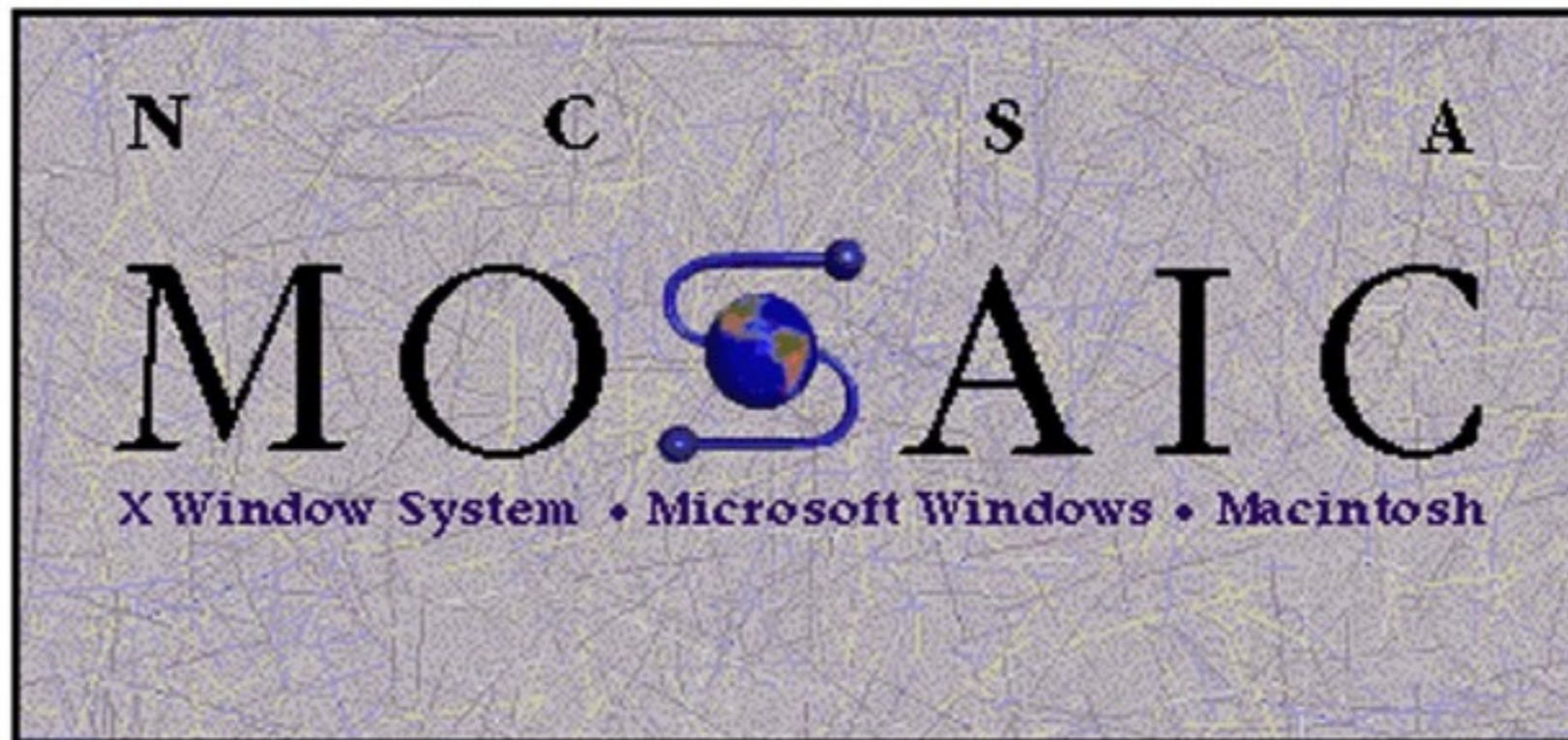
# Come connettersi



# Packet Switching



# Mosaic



Welcome to NCSA Mosaic, an Internet information browser and [World Wide Web](#) client. NCSA Mosaic was developed at the [National Center for Supercomputing Applications](#) at the [University of Illinois](#) in Urbana-Champaign. NCSA Mosaic software is [copyrighted](#) by The Board of Trustees of the University of Illinois (UI), and ownership remains with the UI.

# Yellow Page



# Le (vecchie) app



# web.Archive.org

The screenshot shows the Wayback Machine website. At the top left, there is a logo for 'INTERNET ARCHIVE' with a classical building icon. To the right, the 'WayBackMachine' logo is displayed in a stylized font. Below the logo, a navigation bar contains links for 'Web', 'Moving Images', 'Texts', 'Audio', and 'Patron Info'. A secondary bar below that lists 'Researcher Access', 'FreeCache', 'SELog', and 'Open Source Media'. A search bar is present with the text 'Wayback Machine' and a 'GO!' button. The user is identified as 'Anonymous User'. The main content area is divided into two columns. The left column, titled 'About the Wayback Machine', contains a paragraph explaining the service and a link to a mirror at 'http://archive.bibalex.org'. The right column, titled 'The Wayback Machine', features a search input field with 'http://www.bju.edu', a 'Take Me Back' button, and a link to 'Advanced Search'. Below this is the 'Recall' logo with 'Full text search' and a search input field with a 'Go!' button. At the bottom, there is a section titled 'Take The Wayback Machine With You' with instructions on how to use the service in a browser.

**INTERNET ARCHIVE**  
WayBackMachine

Web | Moving Images | Texts | Audio | Patron Info

Researcher Access | FreeCache | SELog | Open Source Media

Search:

Anonymous User (last 10 min)

### About the Wayback Machine

Browse through 30 billion web pages archived from 1996 to a few months ago. To start surfing the Wayback, type in the web address of a site or page where you would like to start, and press enter. Then select from the archived dates available. The resulting pages point to other archived pages as close a date as possible. Keyword searching is not currently supported, but there are some researcher tools that perform similar functions (see the researcher tool section).

<http://archive.bibalex.org>, the Internet archive at the New Library of Alexandria, Egypt, mirrors the Wayback Machine. Try your search there when you have trouble connecting to the Wayback servers.

### The Wayback Machine

**INTERNET ARCHIVE**  
WayBackMachine

[Advanced Search](#)

**Recall** Full text search

[Advanced Search](#) | [About Recall](#) | Recall is in **beta**

### Take The Wayback Machine With You

Put the Wayback Machine right in your browser!

The Wayback Machine Bookmarks

Drag this link to your browser's toolbar: [Wayback](#)

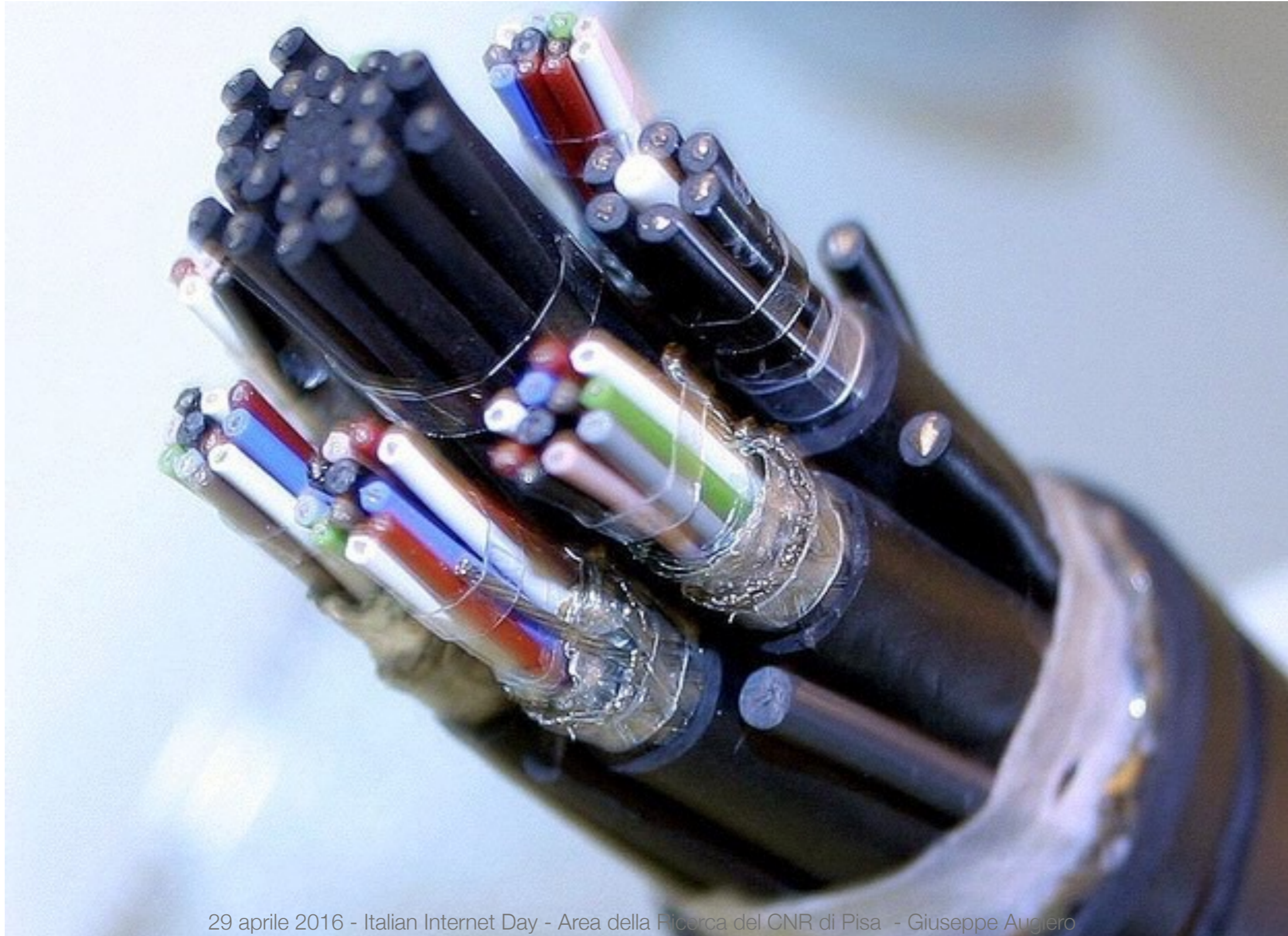
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Oggi

**Nel 2015 gli utenti  
connessi a Internet  
sono 3,3 miliardi**

# Fibra ottica



# Neutralità della rete

NET NEUTRALITY

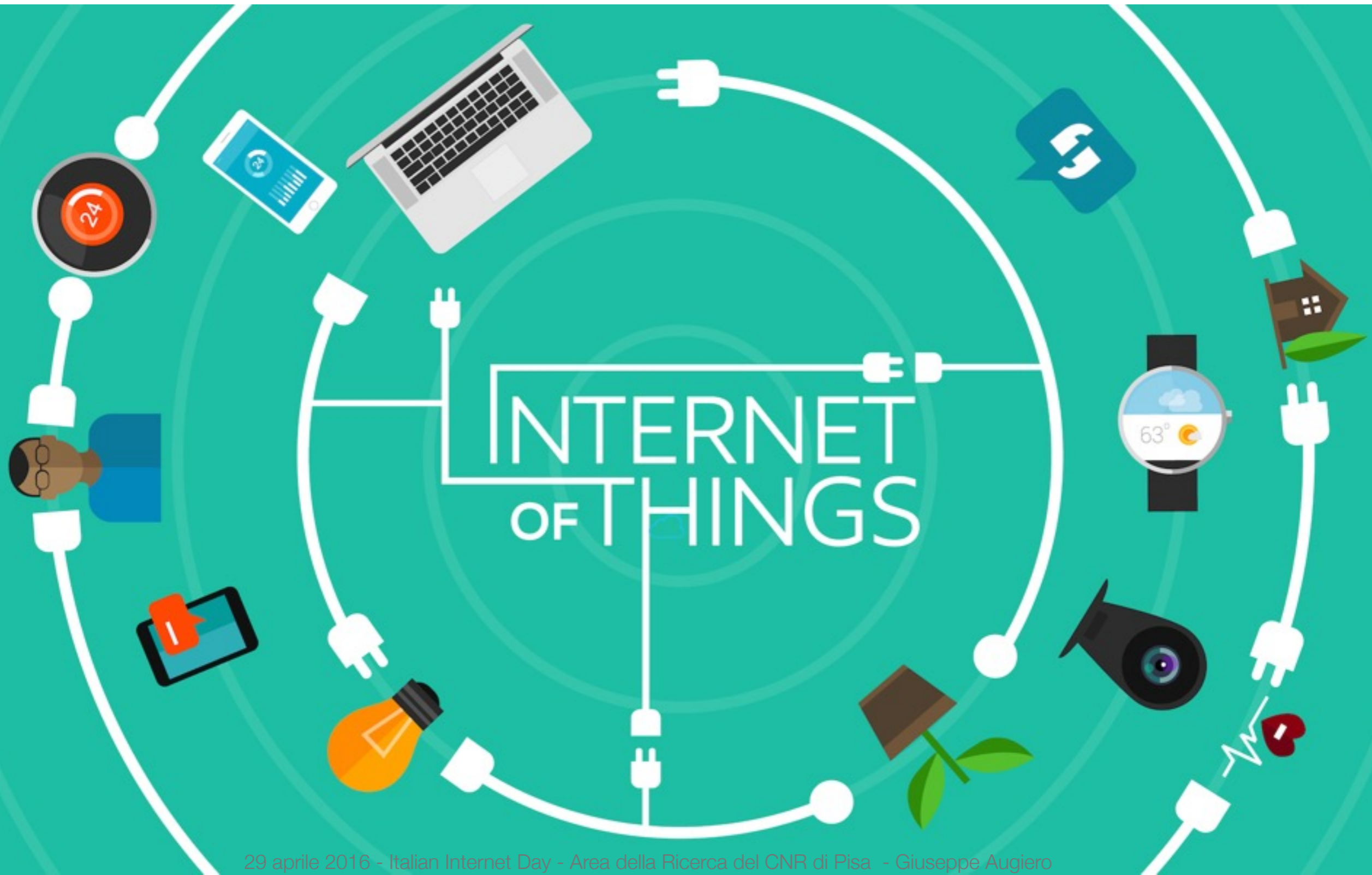
ALL BITS ARE CREATED EQUAL

It's not just a good idea,  
It Ought to be the LAW.

# Esigenza di comunicare



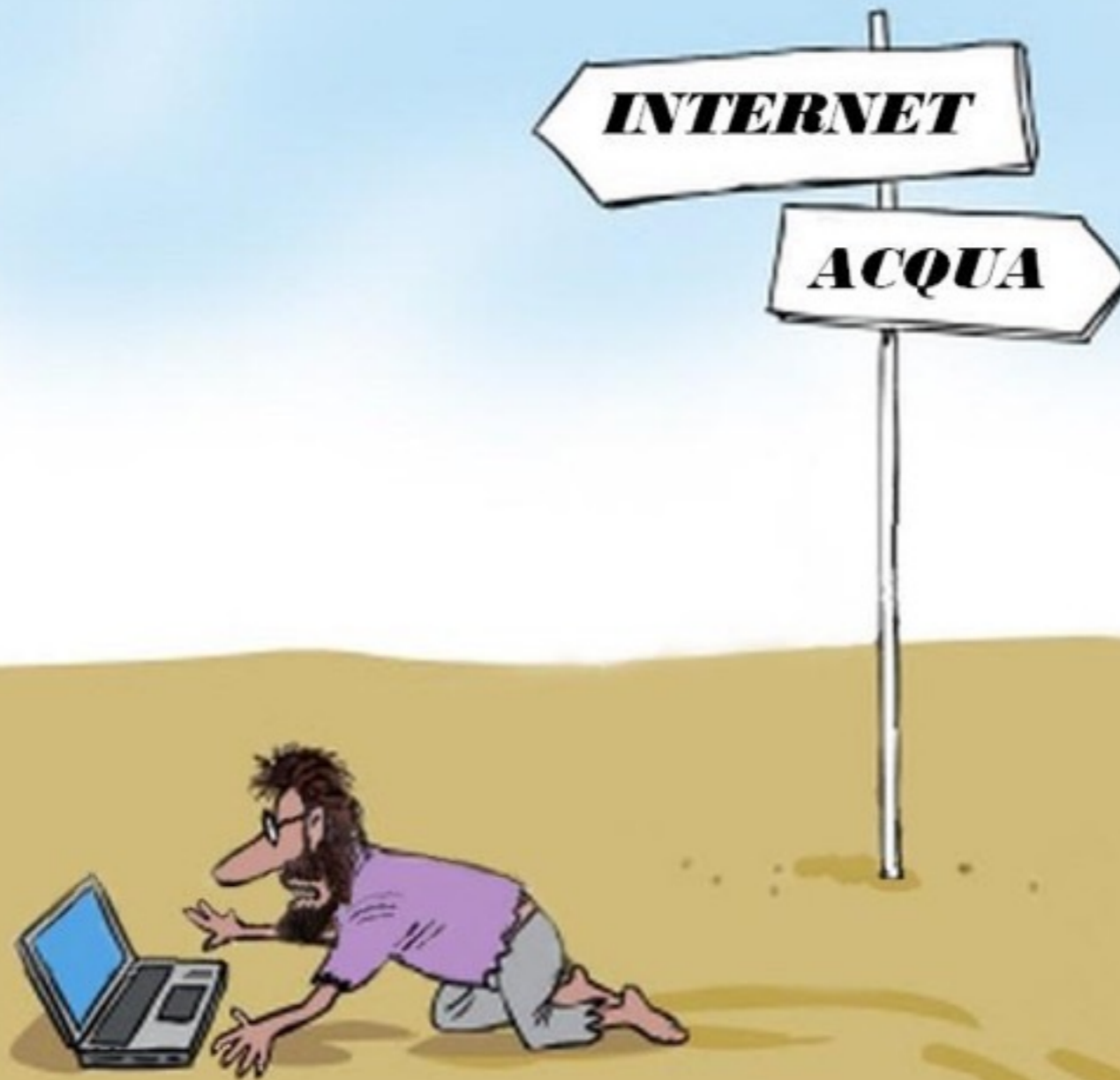
# IoT



# 1Tb/s



# Conclusioni



**Hashtag**

**#Consapevolezza**





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## L'evoluzione della Rete

Giuseppe Augiero

**Web:** <http://augiero.it> **Twitter:** @Giuseppe Augiero

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