World Wide Web:
its creation - its lessons – its future

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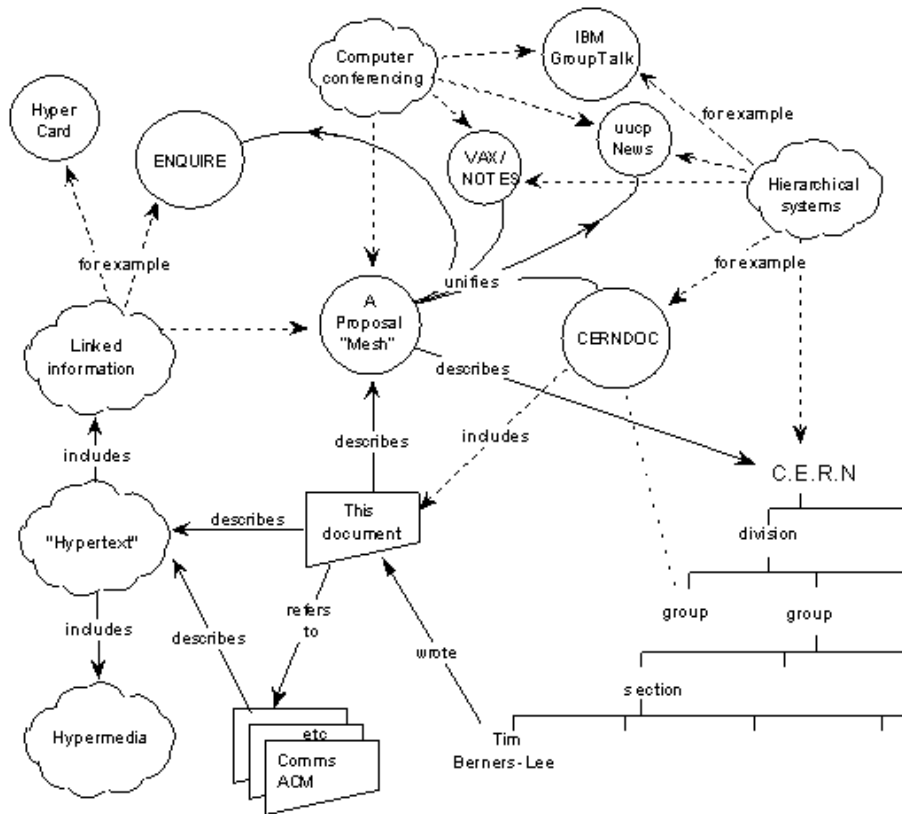**b.segal@cern.ch**

www.cern.ch/ben

30th Anniversary of the World Wide Web

UK Mission at CERN: March 26, 2019

"Vague but exciting"

(reaction of Mike Sendall to the 1st proposal by Tim Berners-Lee, March 1989)

One man's dream…

"People just need to agree on a few simple things…"

Tim Berners-Lee to present speaker - 1989

What is WWW?

"HTML": Hypertext Markup Language

"HTTP" : HyperText Transport Protocol

"URL" : Uniform Resource Locator

plus a CLIENT ("Browser") and a SERVER.

Entirely developed and programmed by

Tim Berners-Lee

(prototyped from September to December, 1990)

Any British influence?

For:

TBL, his S/L, his G/L and his D/L were all British

Against:

His main collaborators RC(B), J-FG(F) were not

and:

Britain, like other European countries, opposed the
Internet standards…

So what else was needed?

- his manager's tolerance and interest
- CERN spirit: "hands-on" plus pragmatism
- Internet technology: just accepted at CERN
- Open Source movement gaining strength
- the NexT machine and NextStep OS
- "underground" spirit of the project
- "just enough" space to work in…
- the "KISS" principle: Keep It Simple, Stupid…

Inside CERN : 1980-90

The Political Order:

- Physics
- Accelerators
- *THE REST (…… Computing)*

Order in Computing:

- **Big mainframes (IBM, etc)**
- **Big peripherals (Tape robots, etc)**
- *THE REST (…… Networking)*

Order in Networking:

- External (X.25, DECnet, SNA)
- Internal (CERNET, Ethernet)

====> *(Internet + Distributed Computing)* <====

Summary

WWW was "accidentally" created at CERN:

from within its *weakest* part
and using *"underground"* resources,

but in fact its "weakness" helped, because:

it had to be kept simple

and:

it had to use existing standards and outside resources

(thus spreading it faster)

Black Swans…

"History does not crawl, it jumps…"

Nassim Nicolas Taleb, 2007
"Black Swan: *The Impact of the Highly Improbable*"

The future

after …

WWW, Google, Facebook, YouTube …

+

Wikileaks, Fake News, Dark Web …

… what's next ??

We can only prepare the ground …
… and defend the "Web We Want" !