Olivetti Early Computers

(at least) two cases of brand making

Conservatoire National des Arts et Métiers
Paris, 25 June 2013

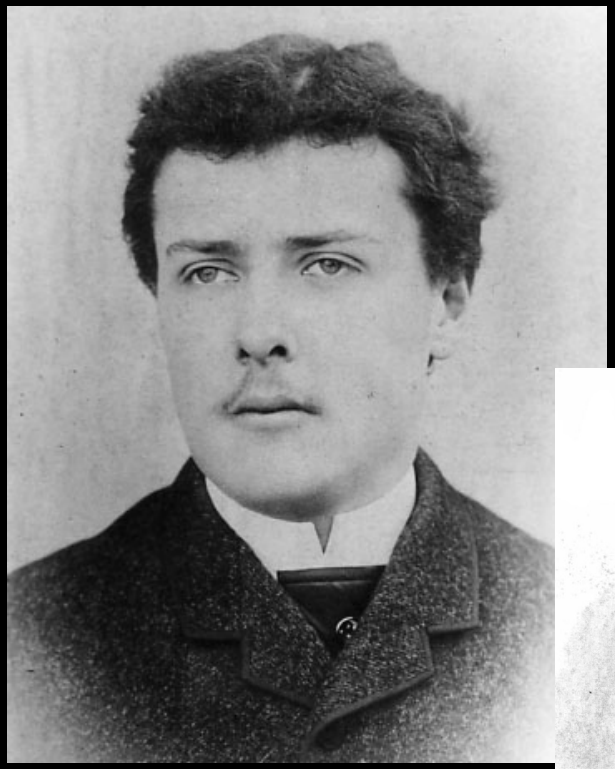
G.A. Cignoni, F. Gadducci

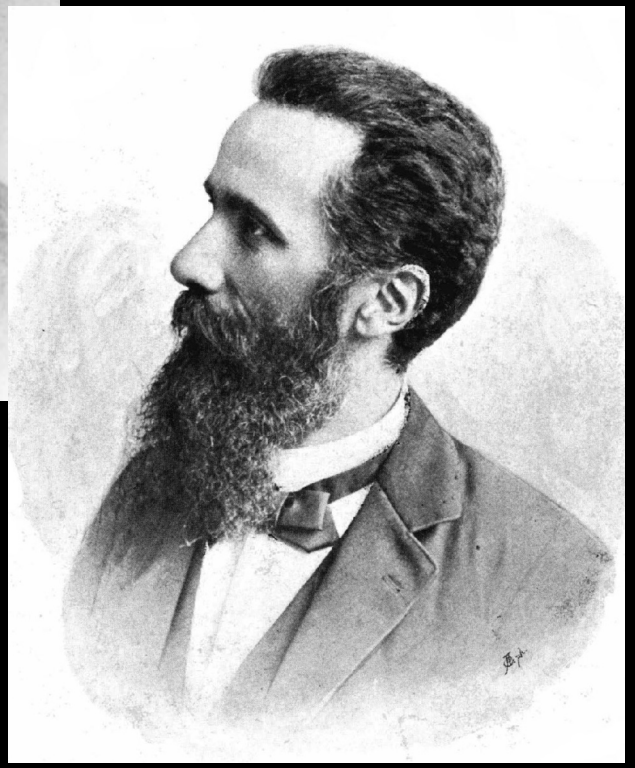
The founder, and its mentor

Camillo Olivetti (1868-1943) was an electrical engineer

Pupil of renowned Galileo Ferraris

Asst. Researcher Stanford 1893/94





The first Olivetti

First enterprise Centimetro-Grammo -Secondo (1896-1907) electric measurement equipments

Ing. C. Olivetti & C. (1908) typewriters

Key element: a social approach to the firm, with faithful people as Domenico Burzio

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Mostly, typewriters

First model M1,
releasead for the
1911 anniversary

...but it's a varied
enterprise, devoted
e.g. to import/export
of mixed goods

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Some partners & branches

Barcelona
(1929)

Buenos Aires
(1932)

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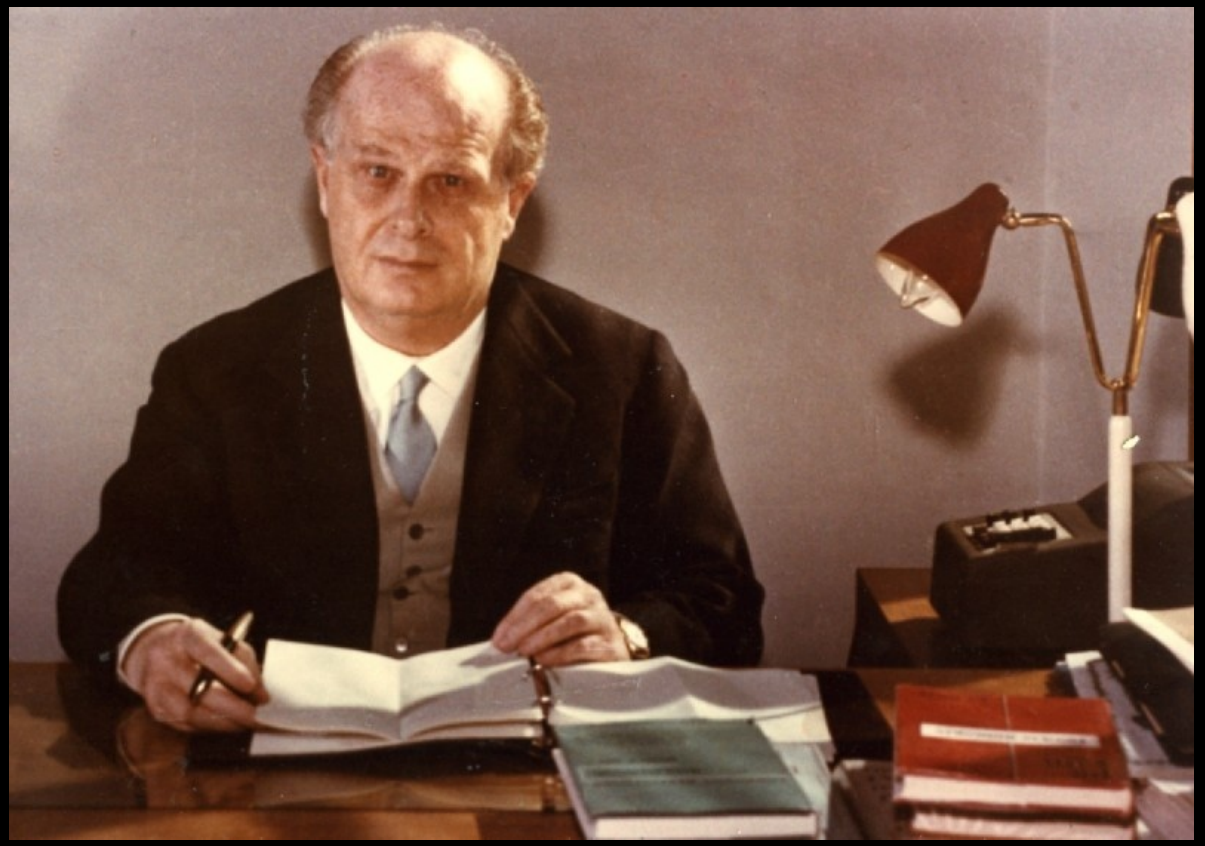
Enters Adriano

Adriano Olivetti (1901-1960) was a chemical engineer

In charge of the family firm (with a large group of relatives!!) since 1932, fully in 1938

Also a politician (1948, Movimento Comunità), along utopic socialism

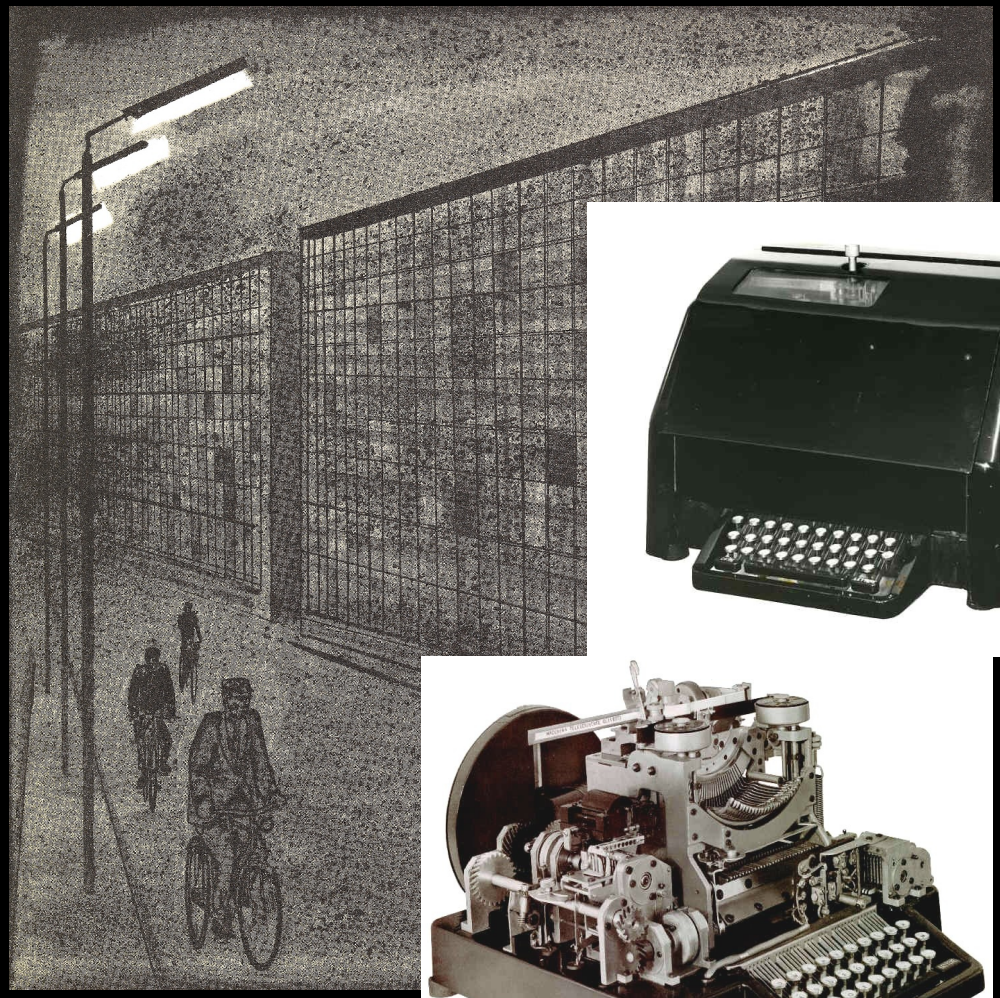


The second Olivetti

Portable typewriter
(MP1, 1932)

New industrial plants
(Figini&Pollini, 1934-36)

Teletypewriter
(T1, 1937)



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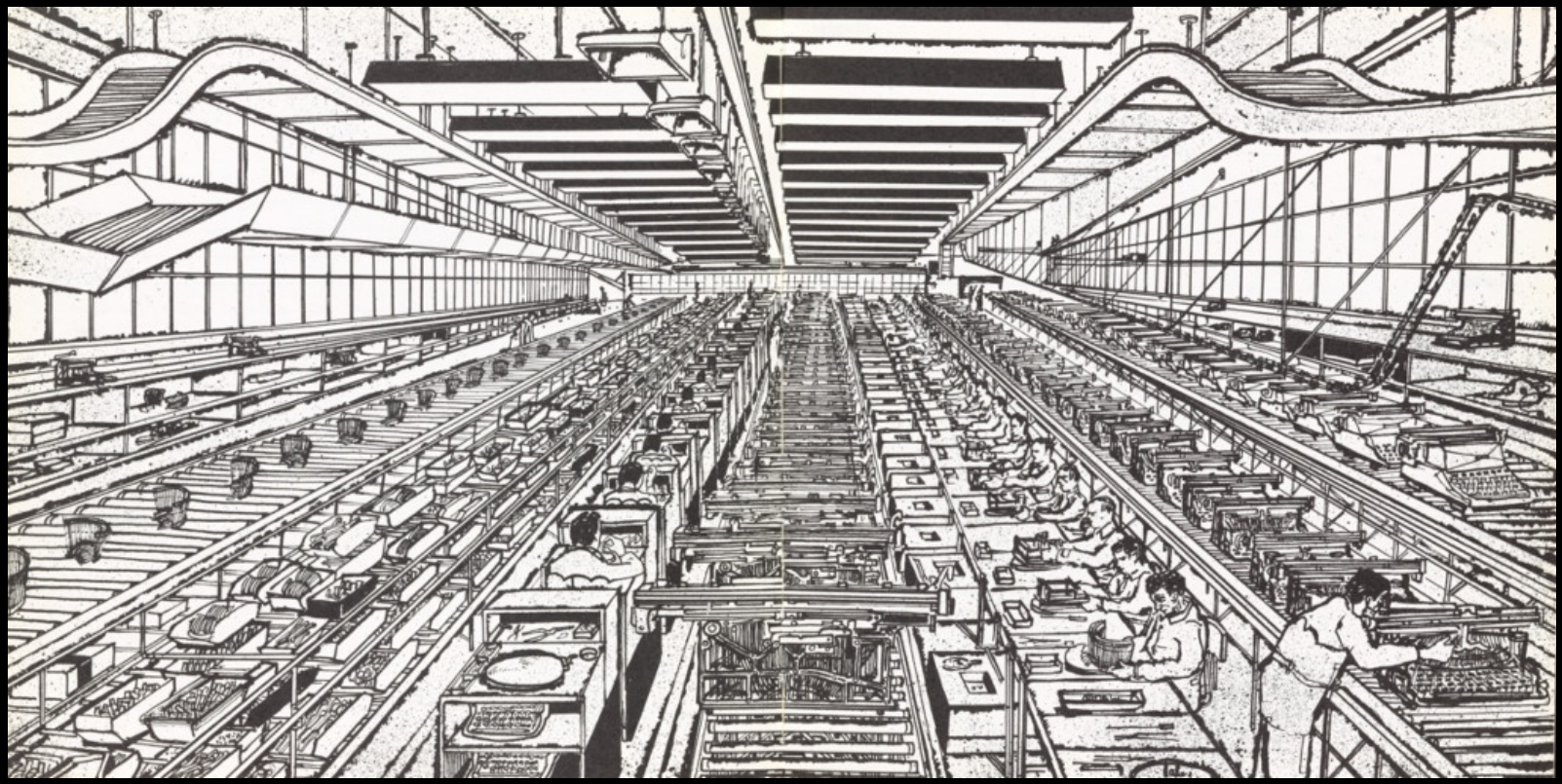
New organization



A more efficient production line [late depiction]
A largely remunerative product
A large stake of the national market

G.A. Cignoni, F. Gadducci

New style

Lagomarsino (i.e. fascist rationalism) vs. Olivetti (i.e. “telefoni bianchi”!!)

Bazzi (~1930) vs. Boggeri & Shawinsky (1934)

A detour on Lagomarsino

Audit 52 (1934)

A Luce newsreel from 1928...

In the meanwhile, Olivetti becomes a world player wrt. typewriters and it starts a chain of Macchine contabili (1933-34)

...with new lines up into WW2!!

Multisumma 4M (1941)

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After the war: New products...

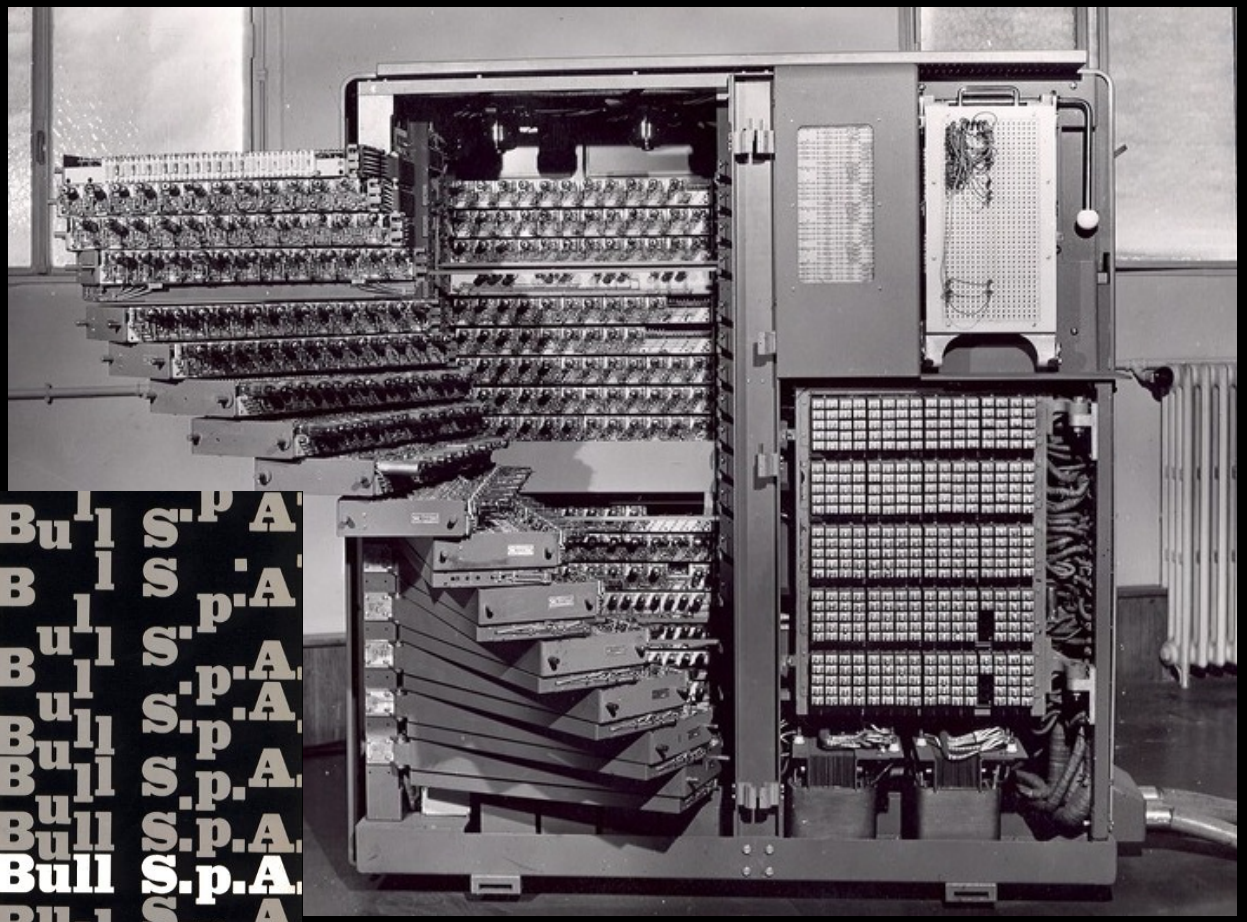
Natale Capellaro (1902-1977), yet another faithful employee

Divisumma 14 (1948)

Divisumma 24 (1956), one million in 1967 (90% net)

...and going into electronics

Bull partnership (1949-64), mostly for importing the Gammas (thus against IBM)



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A journey in the USA (1950)

Ist. Nazionale per
le Applicazioni del
Calcolo (1927)
Mauro Picone

Olivetti Corp.
of America (1950)
Dino Olivetti

Research labs in
New Canaan (Ct)
(1952)
Mario Canepa

MOMA and shops

New shops and subsidiaries in Chicago and S. Francisco (1952)

Most famous in New York (1954)

"Olivetti: design in industry" is held at MOMA (1952)

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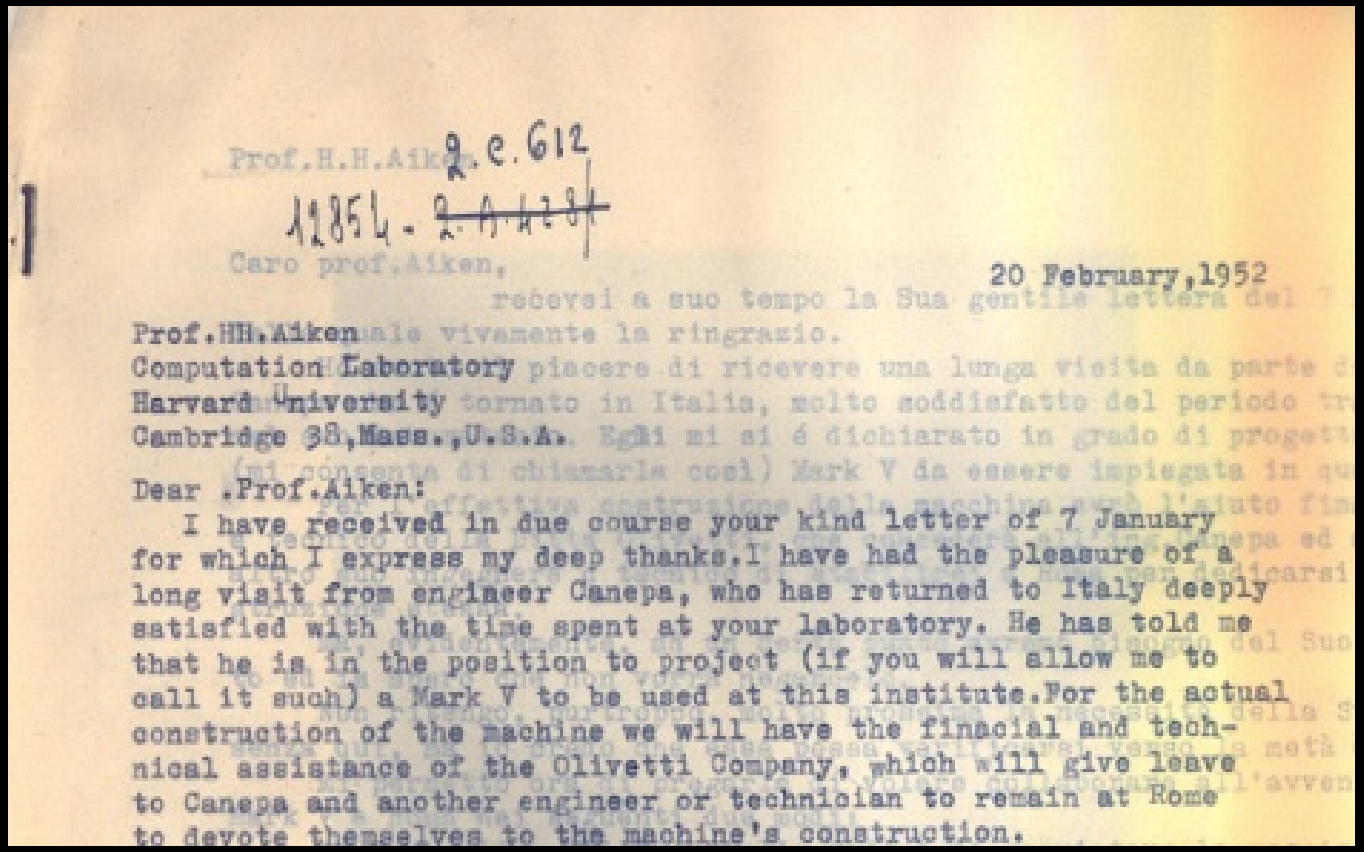
The Mark V attempt (early Fifties)

A joint venture

INAC
Harvard
Olivetti



Prof.H.H.Aiken 2.e.612
12854 - ~~2.A.4284~~

Caro prof.Aiken, 20 February,1952

ricevesi a suo tempo la Sua gentile lettera del
ale vivamente la ringrazio.
piacere di ricevere una lunga visita da parte d
tornato in Italia, molto soddisfatto del periodo tr
Egli mi si é dichiarato in grado di progett
(mi consento di chiamarla così) Mark V da essere impiegata in qu
del Su
l'avven

Prof.HH.Aiken
Computation Laboratory
Harvard University
Cambridge 38,Mass.,U.S.A.

Dear .Prof.Aiken:

I have received in due course your kind letter of 7 January for which I express my deep thanks.I have had the pleasure of a long visit from engineer Canepa, who has returned to Italy deeply satisfied with the time spent at your laboratory. He has told me that he is in the position to project (if you will allow me to call it such) a Mark V to be used at this institute.For the actual construction of the machine we will have the finacial and technical assistance of the Olivetti Company, which will give leave to Canepa and another engineer or technician to remain at Rome to devote themselves to the machine's construction.

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After a long thinking, Picone buys

FINAC (1954)

Ferranti Mk1*

[In those same months, also Politecnico di Milano buys (Luigi Dadda)]

[Somehow, both fundings are related to Marshall Plan]

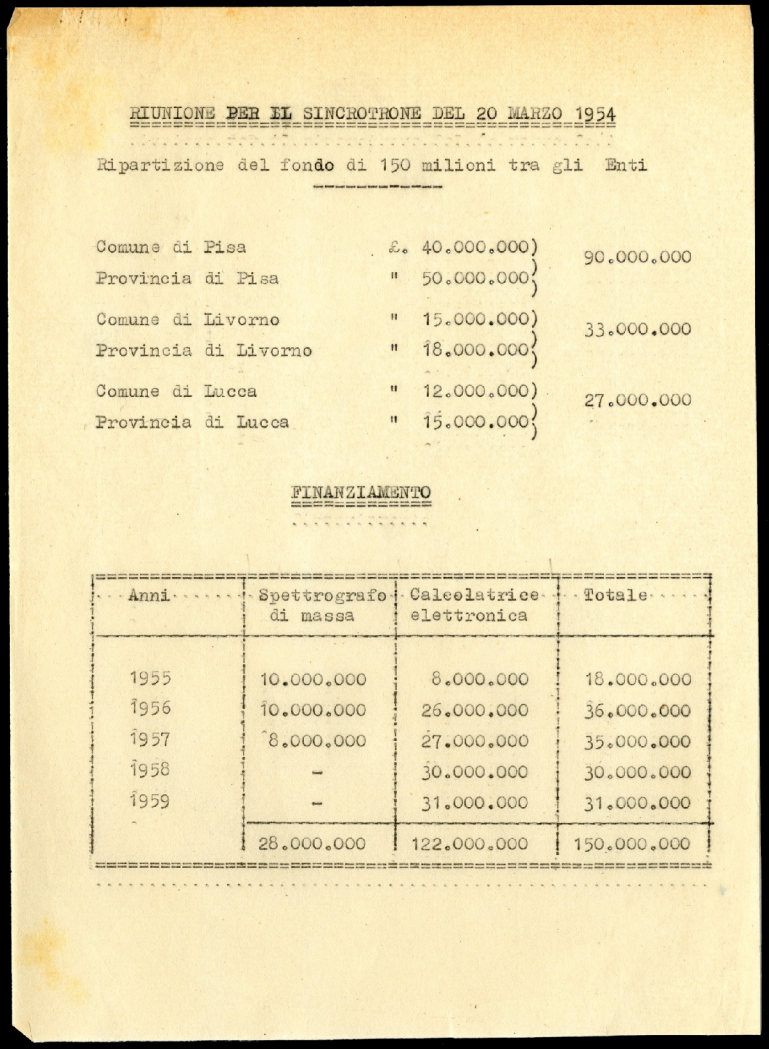
G.A. Cignoni, F. Gadducci

The University of Pisa project

Funded by three (3) local administrations (Pisa-Lucca-Livorno)

Pushed by both the Physics Department & its community

Firmly endorsed by Enrico Fermi



RIUNIONE PER EL SINCROTRONE DEL 20 MARZO 1954

Ripartizione del fondo di 150 milioni tra gli Enti

Comune di Pisa	£.	40.000.000)	90.000.000
Provincia di Pisa	"	50.000.000)	
Comune di Livorno	"	15.000.000)	33.000.000
Provincia di Livorno	"	18.000.000)	
Comune di Lucca	"	12.000.000)	27.000.000
Provincia di Lucca	"	15.000.000)	

FINANZIAMENTO

Anni	Spettrografo di massa	Calcolatrice elettronica	Totale
1955	10.000.000	8.000.000	18.000.000
1956	10.000.000	26.000.000	36.000.000
1957	8.000.000	27.000.000	35.000.000
1958	-	30.000.000	30.000.000
1959	-	31.000.000	31.000.000
	28.000.000	122.000.000	150.000.000

G.A. Cignoni, F. Gadducci

Olivetti joins

Officially in 1956

Funding, materials, and personnel (1956-1961)

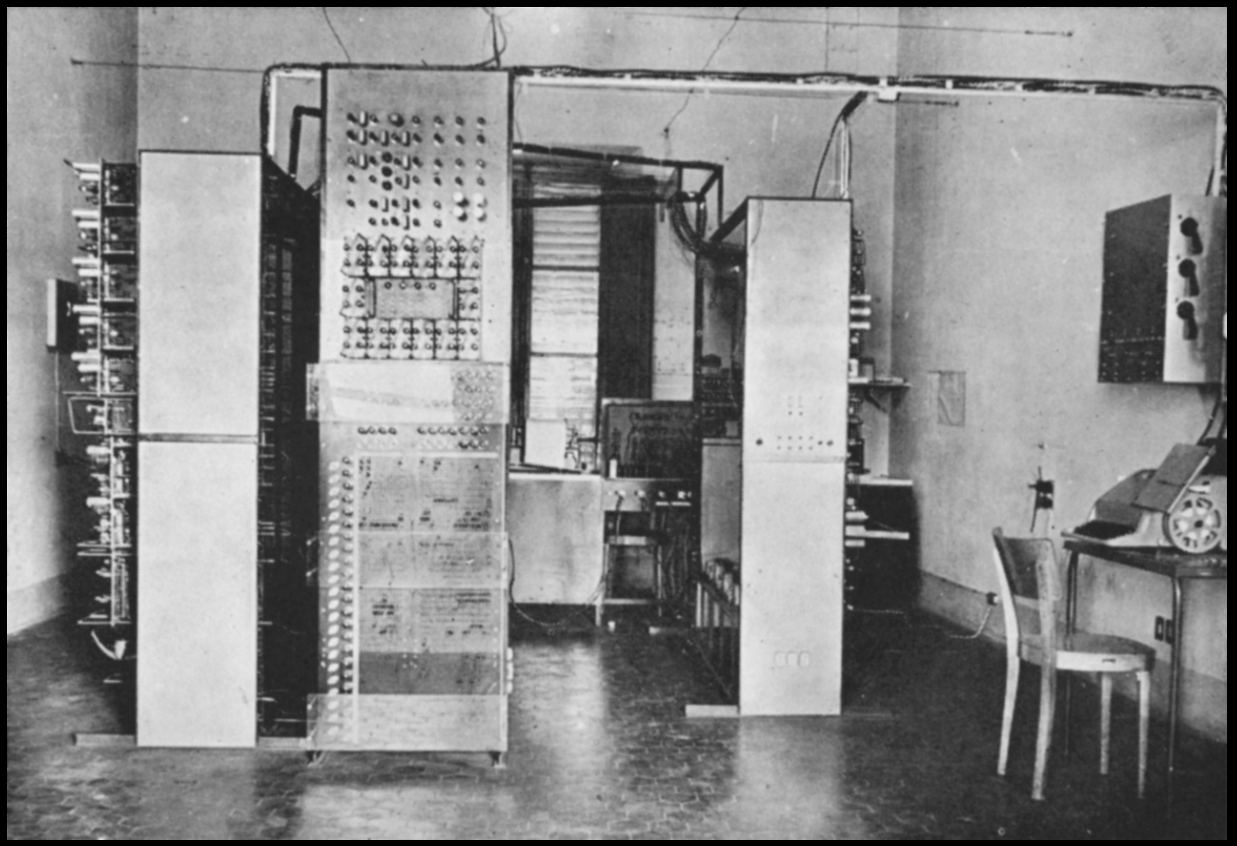
Mario Tchou was helping since 1955

[10k per year, plus 120k total by local funds, plus more by the National Inst. of Nuclear Physics]

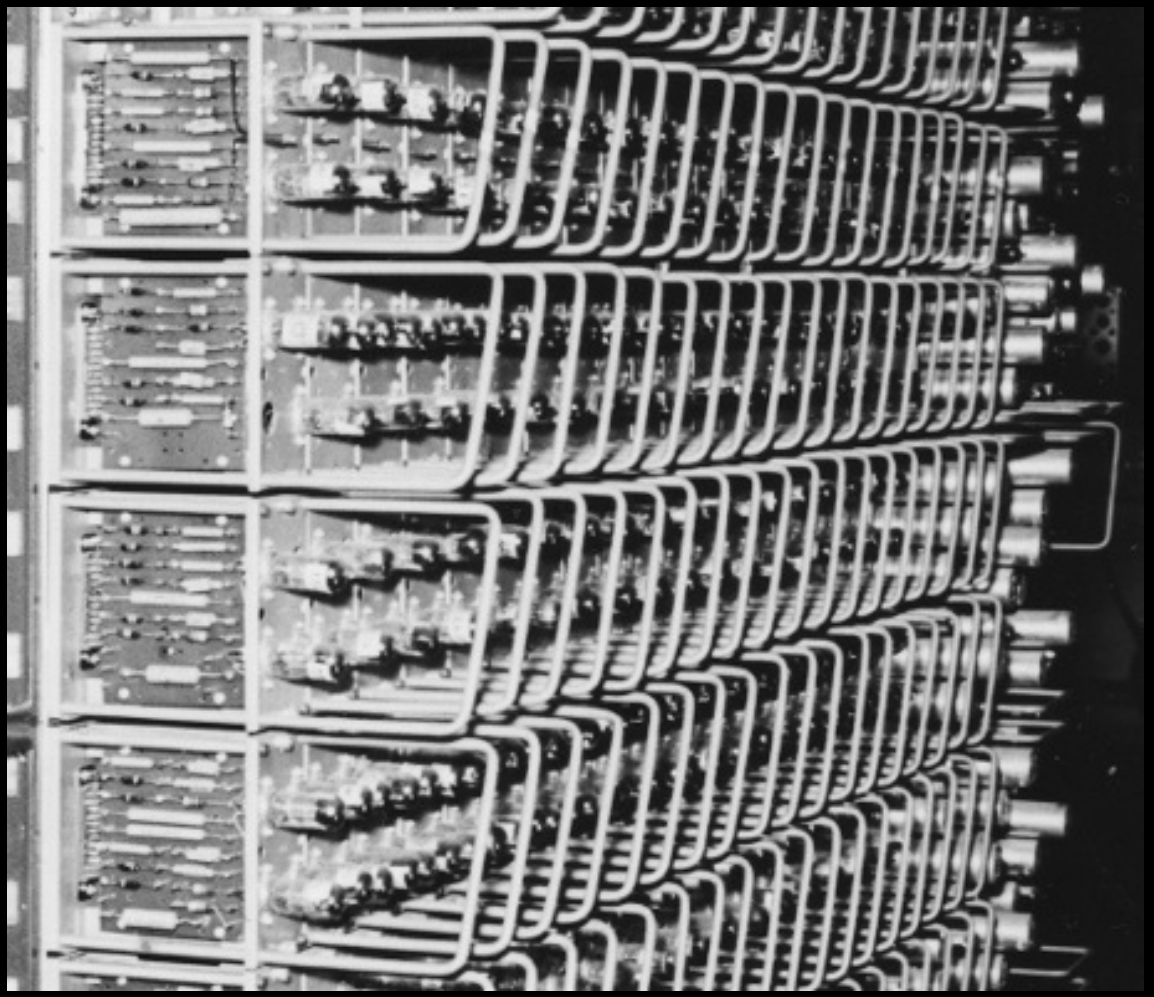
The Macchina Ridotta

Alfonso Caracciolo
Elio Fabri
Giuseppe Cecchini
Sergio Sibani
(1957)

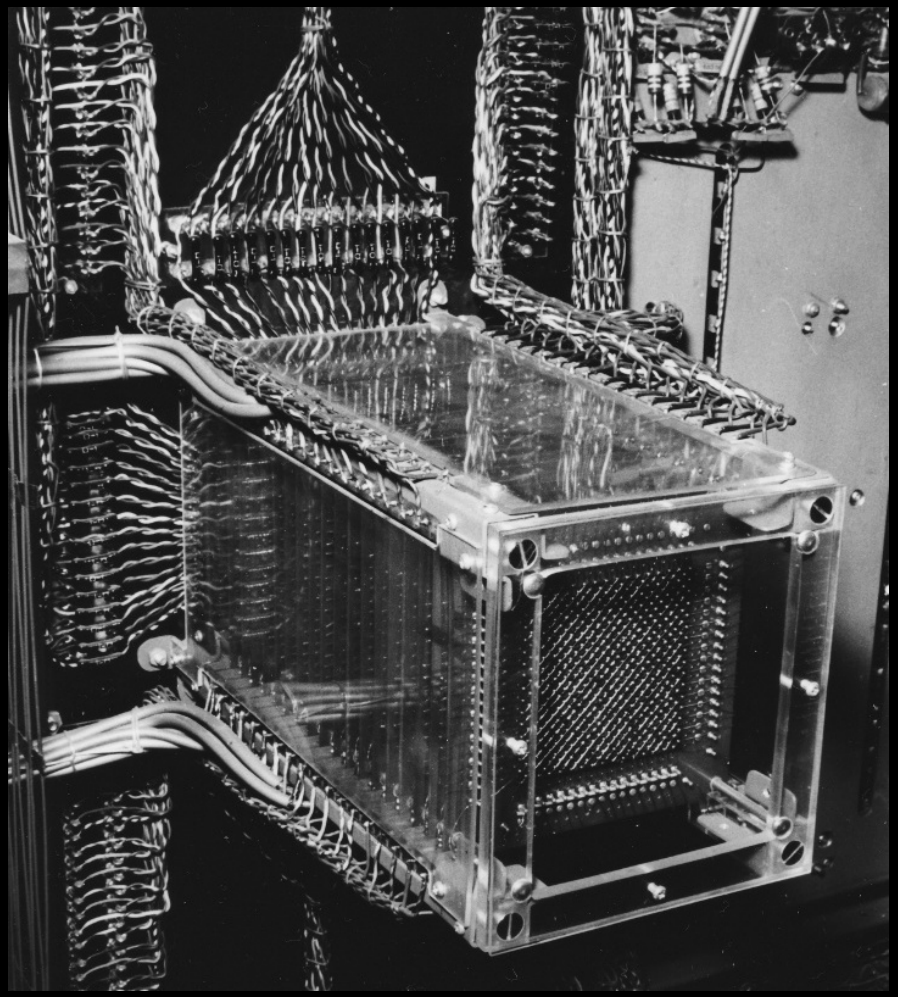
The very first
Italian computer



Parallel machine



Ferrite core memory



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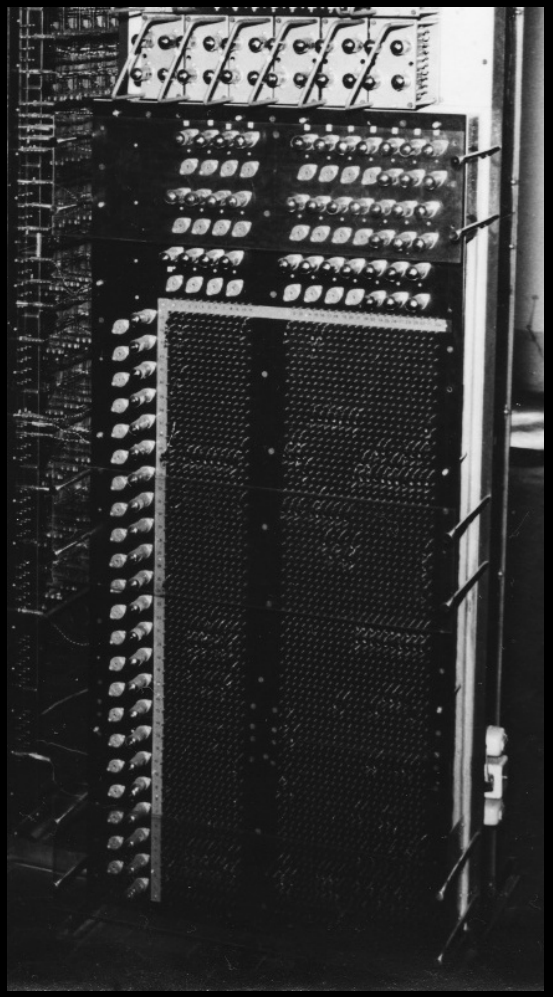
Microprogrammed control



A small but fine machine

State of the art,
for its time

Few interesting
features
  hot breakpoints
  DMA access

[a nice T2 (1949) is
in plain view]

G.A. Cignoni, F. Gadducci

The “other” Olivetti project in Pisa

Laboratorio Ricerche Elettroniche (Barbaricina, Pisa, 1955-58)

...and two of its important protagonists: Roberto O. (1928-1985) - Mario Tchou (1924-1961)

The first Olivetti Computer, called Macchina Zero (1958)

[Here in its later home in Ivrea]

Transistors are coming

W.B. Shockley,
J. Bardeen,
W. Brattain

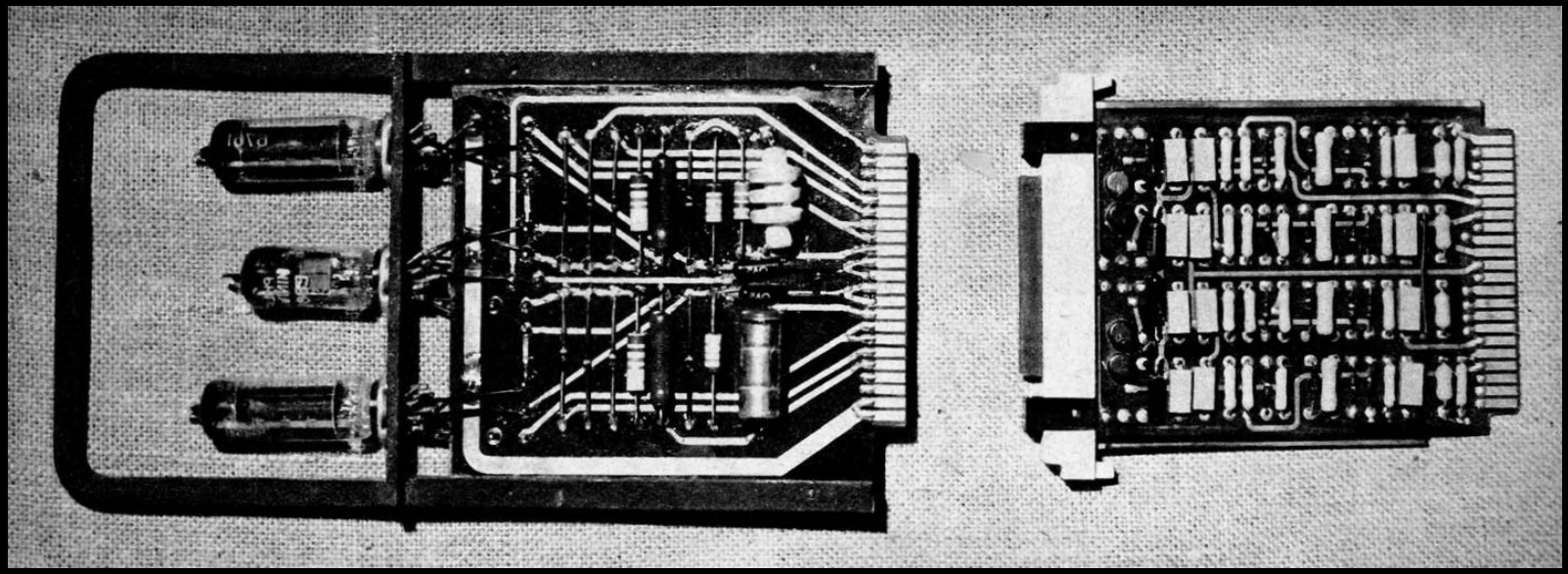
R. Noyce
The Traitoruos Eight
S.M. Fairchild
(1957)

Transistors vs tubes

Smaller,
low voltages,
no heating

Neither faster,
nor more reliable
(at least initially)

The Olivetti technology switch



The ELEA project starts with Macchina Zero (aka ELEA 9001V)

SGS established by Olivetti & Telettra (with Fairchild as partner)
LRE moves to Borgolombardo (near Milan)

ELEA 9002

Presented at the 1959 Milan Fair
(here at the Olivetti HQ in town)

G.A. Cignoni, F. Gadducci

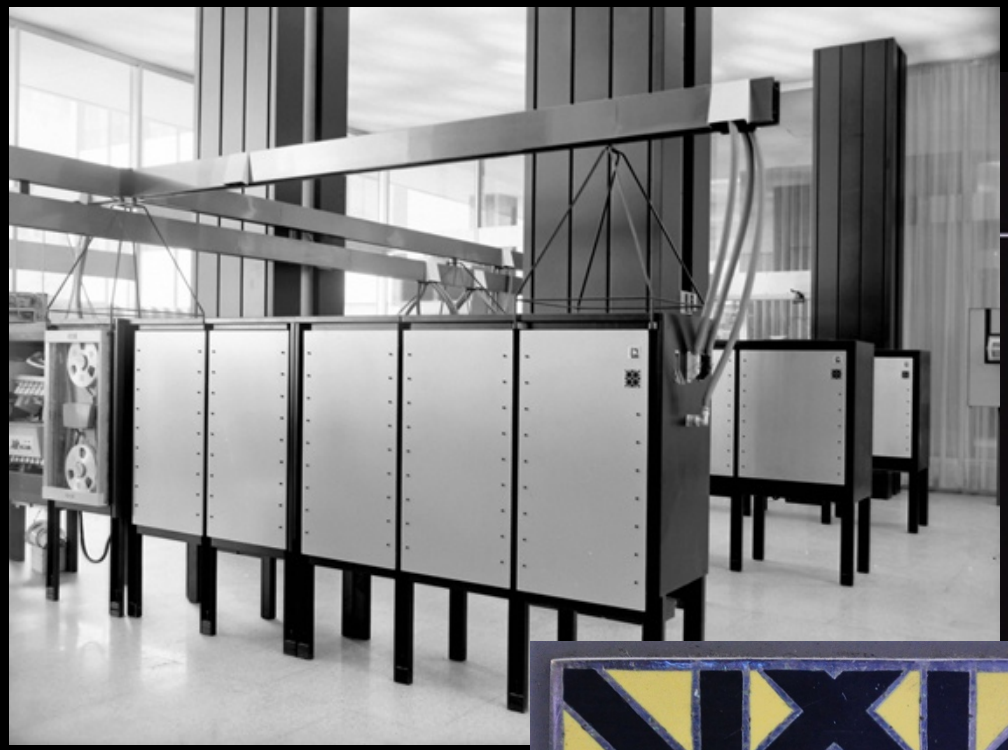
Design..

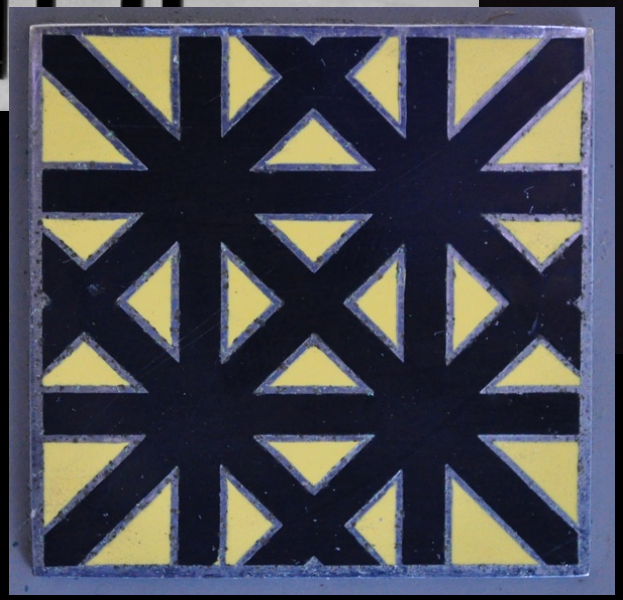
Compasso d'oro

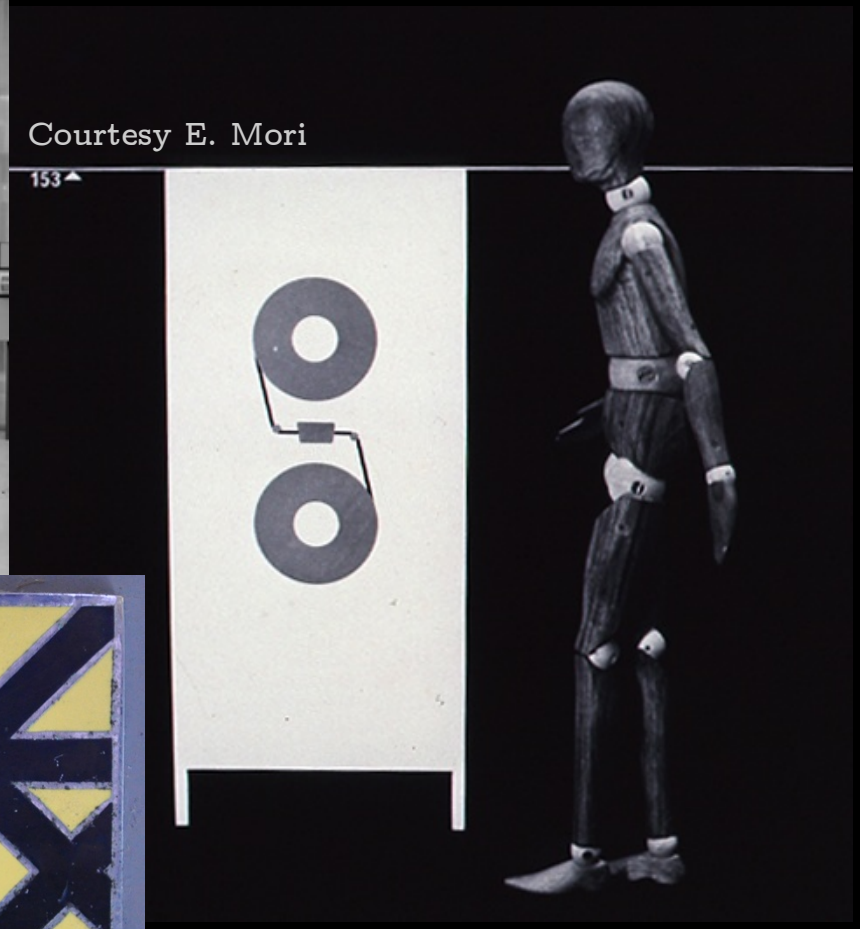
«... delle specie di armadi... molto fantascientifici... un aspetto assolutamente metafisico e impenetrabile...»

Ettore Sottsass Jr.

...and new ergonomics/signs



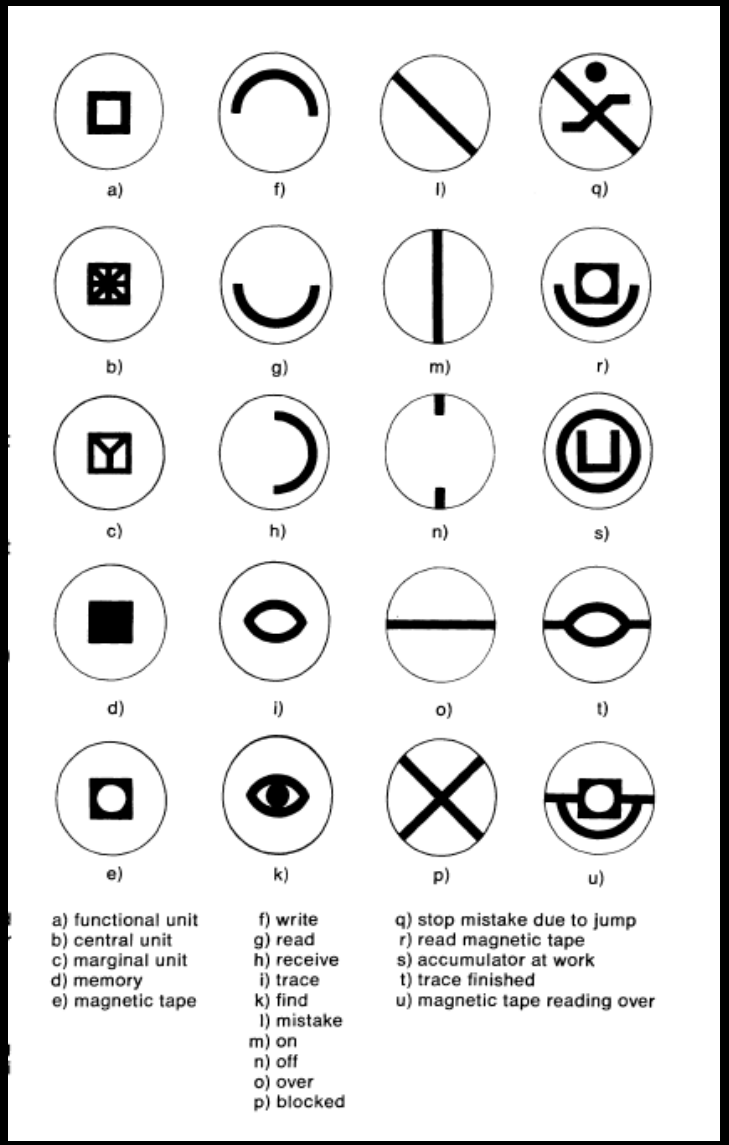




G.A. Cignoni, F. Gadducci

An overall idea of design

Sottsass&Maldonado at ULM (1959)
at work on the chassis of Tekne 3



Bonsiepe&Maldonado signs alphabet
planned for ELEA 9003 (~1959)

Design and branding

Bruno Caruso

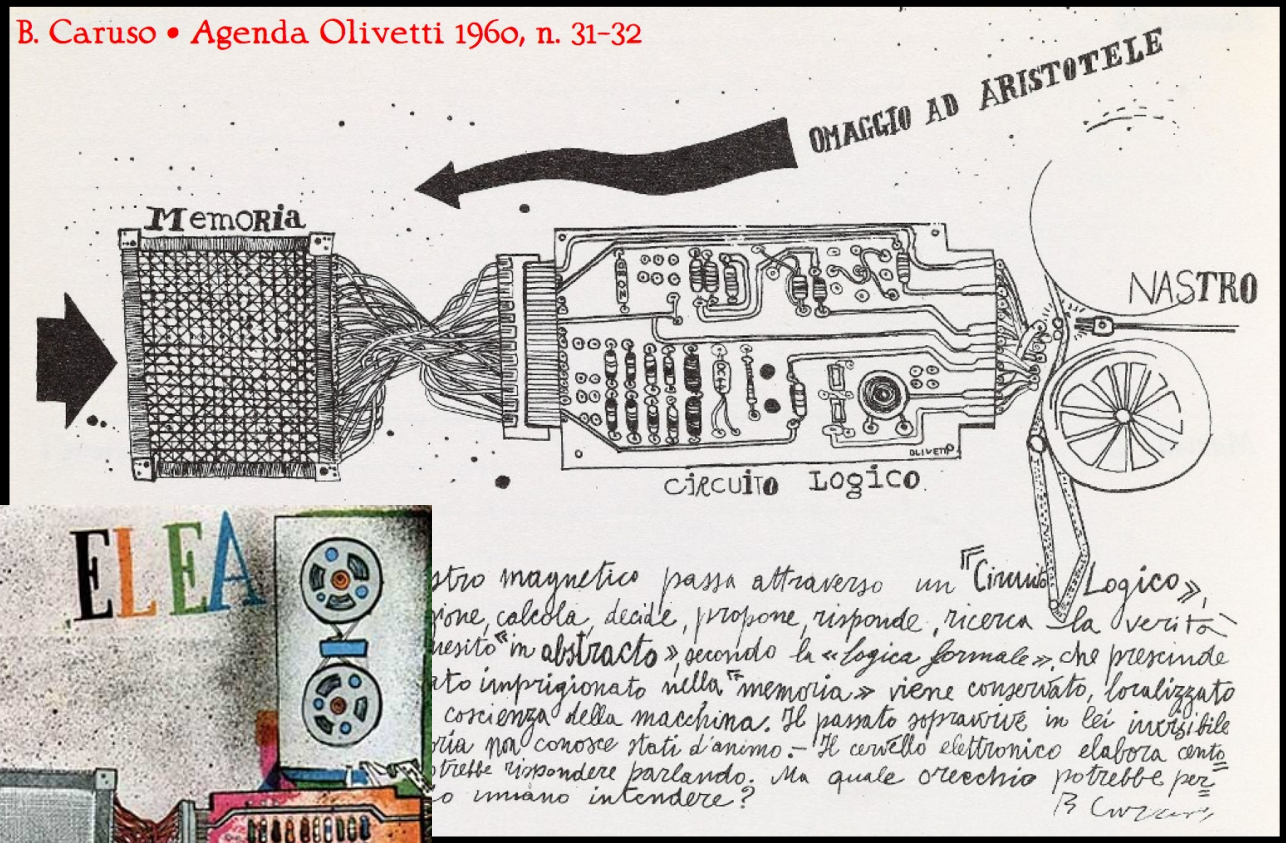
Agenda Olivetti 1960

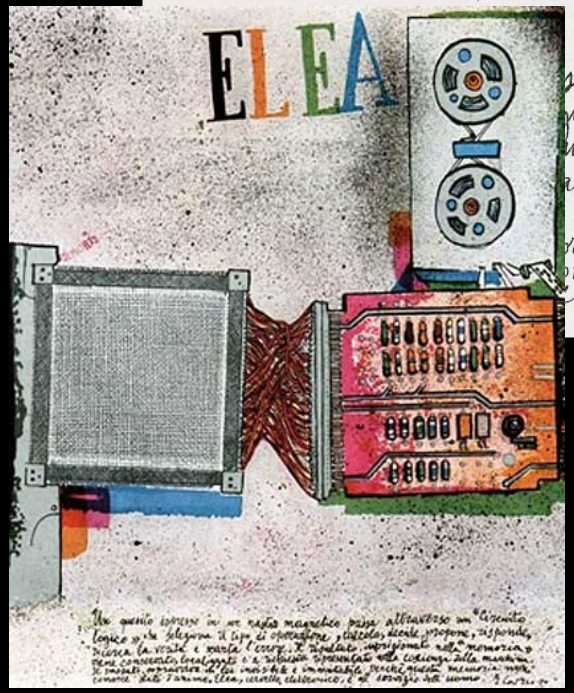
G.A. Cignoni, F. Gadducci

A few more examples

Reasoning on Elaboratore Elettronico Auotomatico (ELEA school)

...and adding an art market touch!!





G.A. Cignoni, F. Gadducci

Brand advertising, popular

Epoca magazine

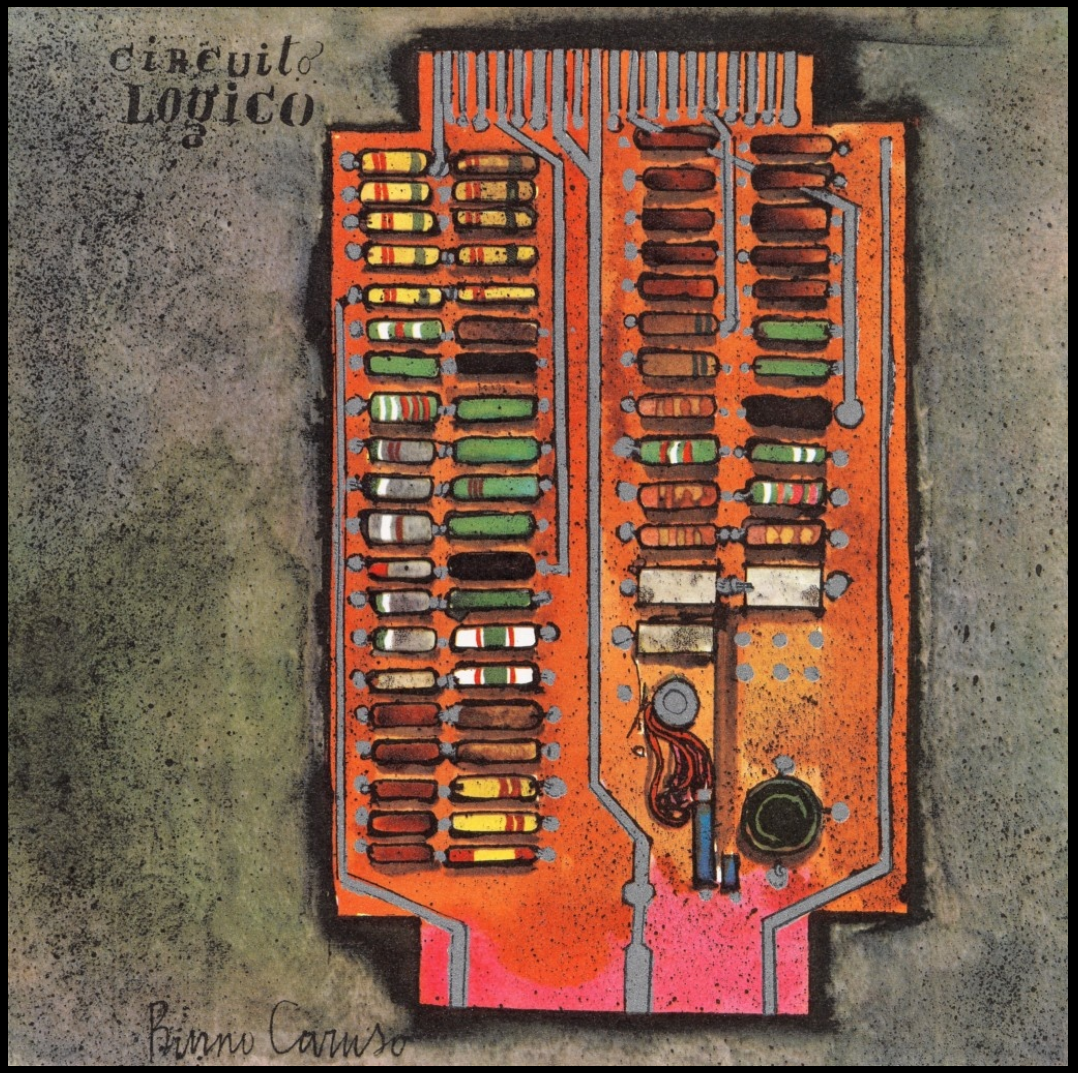
Technology popularization (with a bit of hype)

Brand advertising, cultural

«... calcola, decide,
propone, risponde,
ricerca la verità,
scarta l'errore...

... il passato
sopravvive invisibile
e immutabile
perché questa
memoria
non conosce
stati d'animo...»

Bruno Caruso



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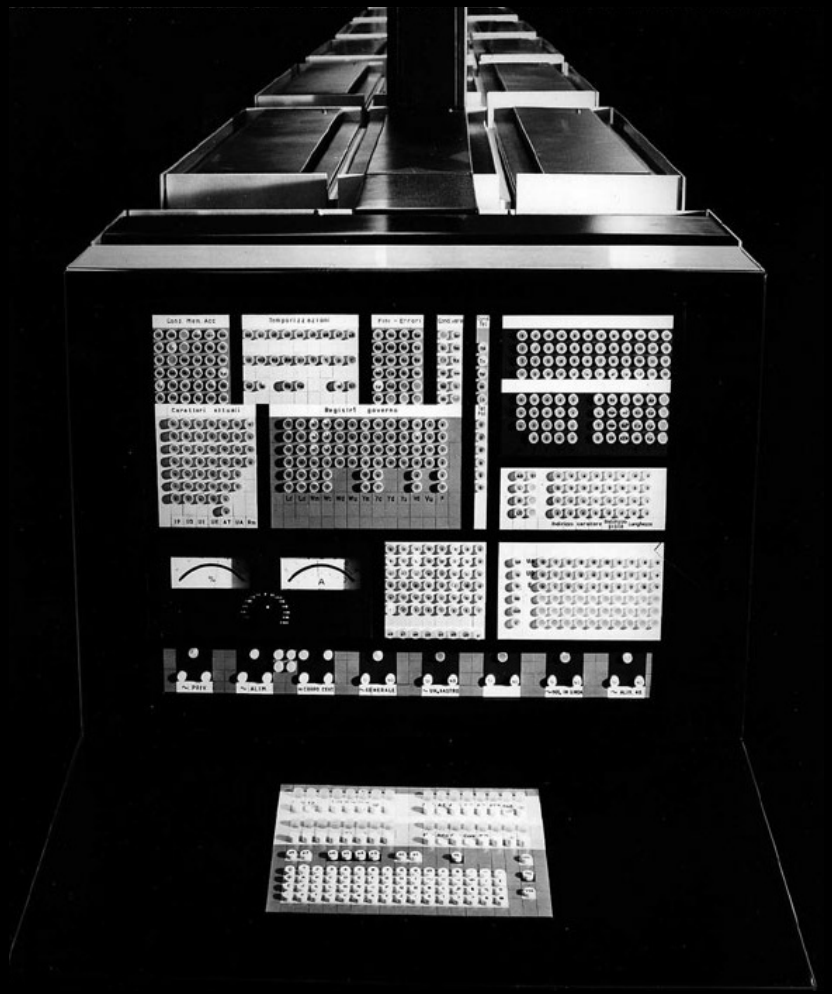
The ELEA 9003

LRE moves to Pregnana (Mi)

About 40 sold

Marzotto (textile)
MPS (bank)
Fiat (automotive)
San Paolo (bank)
Motta (food)
...



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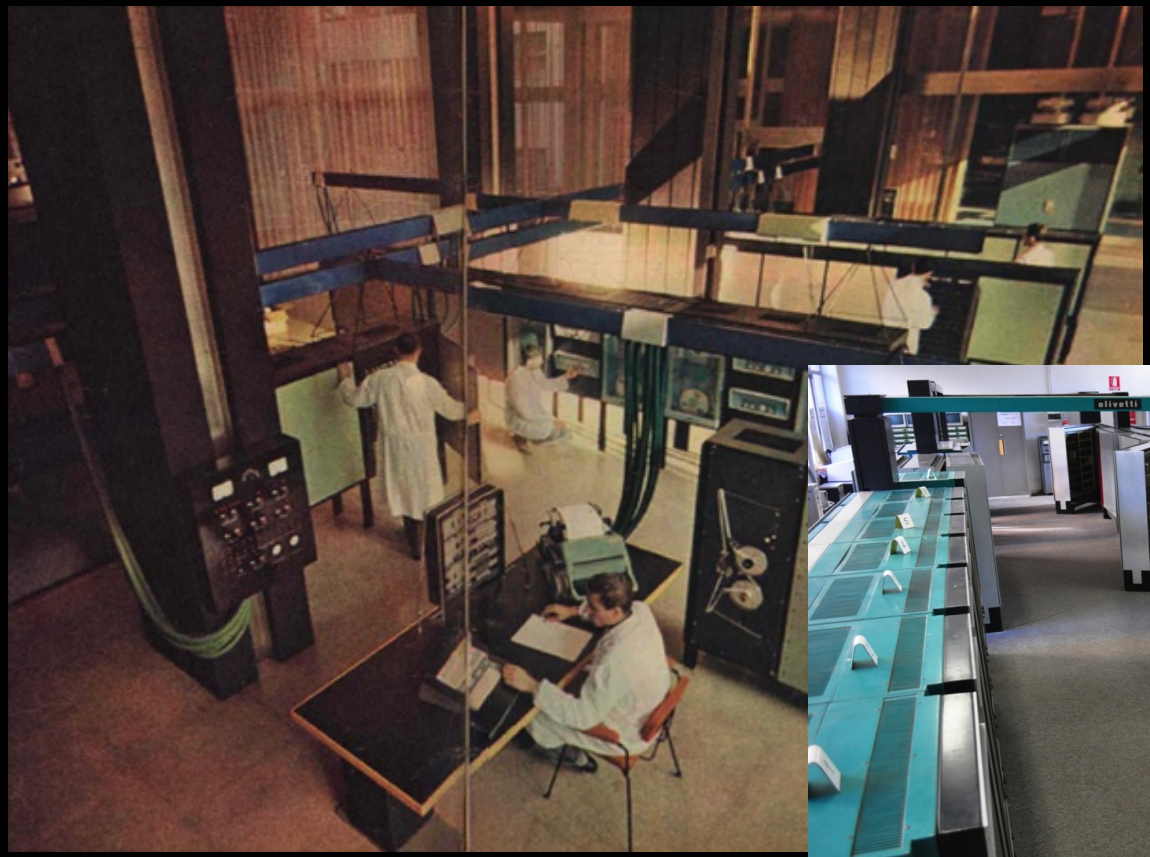
Now and then...



The only surving picture in color of the 9002...

...and the only 9003 that is still complete (at ISIS Bibbiena-AR)

Brand advertising, widespread

Christmas 1960

MODULARIO Telegr. – 61

TELEGRAMMA

N. 222 di recapito. Rimesso al fattorino alle ore

Mod. 30 (Ediz. 1960)

INDICAZIONI D'URGENZA

Ricevuto il 22

Per circuito N.

Qualifica

DESTINAZIONE

= RETTORE PROF ALESSANDRO

= FAEDO UNIVERSITA PISA =

Bollo di Ufficio 22.12.1960

Bollo di ufficio

Via e indicazioni eventuali d'ufficio

Roma - Istituto Poligrafico dello Stato P.V.

DA PISA FN 99 21 23 1330

SEZIONE INGEGNERIA AUGURA BUON NATALE COMUNICANDO CEP GIA' FUNZIONANTE MAGGIORANZA SUE ISTRUZIONI + SEZIONE INGEGNERIA CSCE +

macchine per contabilità e statistica
calcolatori elettronici

olivetti

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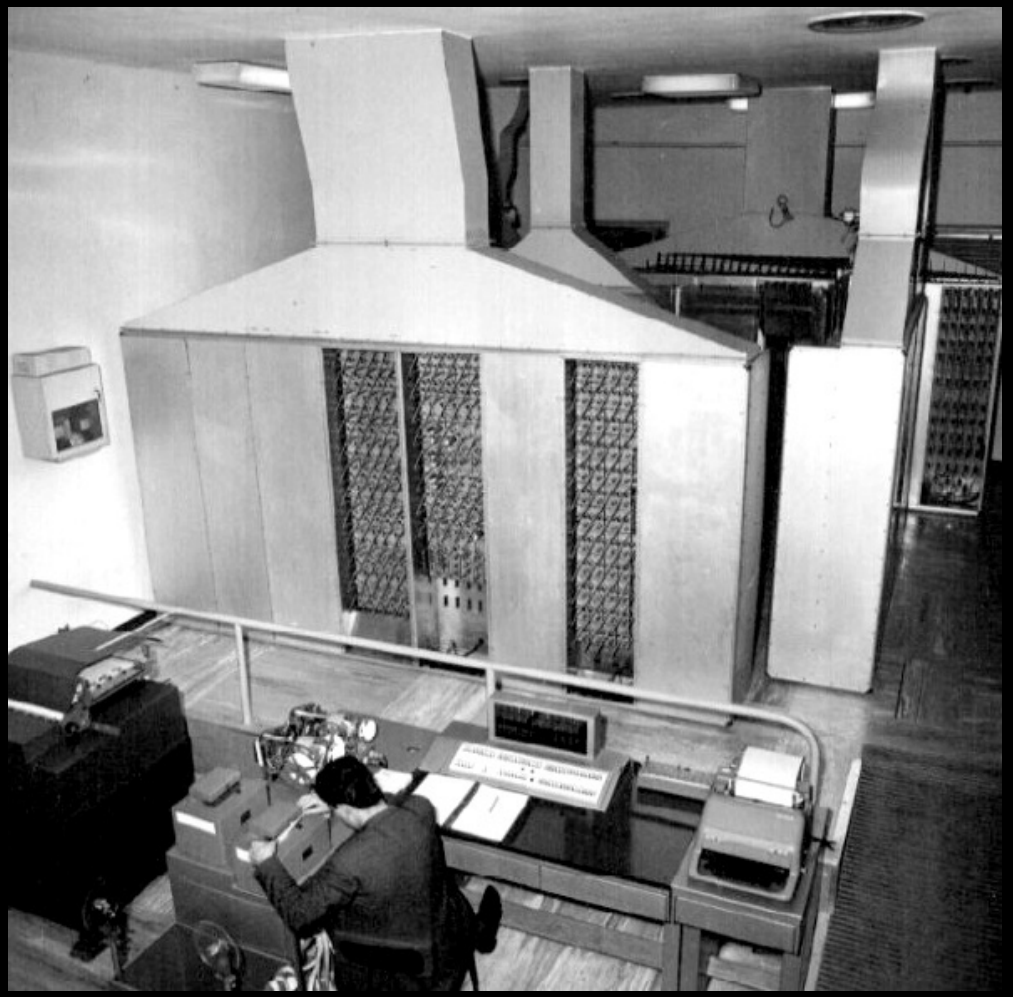
The outdone partner

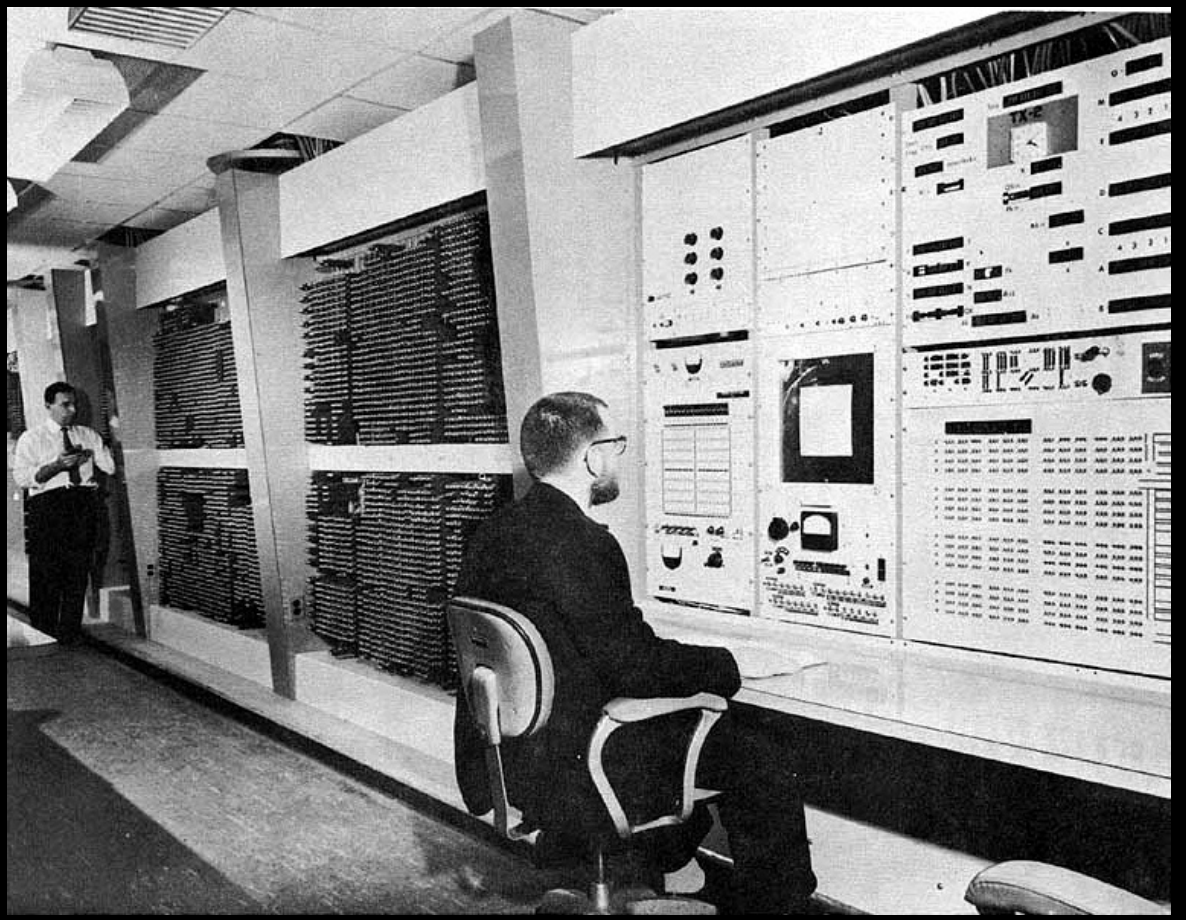
The second computer of the University of Pisa

Ready in early 1961, still based on vacuum tubes (due to a lack of money)



Not the first transistor computer

Few earlier ones:
MIT TX-0 (1956)
IBM 608 (1957)
MIT TX-2 (1958)
Ferranti Argus (1958)
IBM 7090 (1959)
PDP-1 (1960)



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More important than primacy...

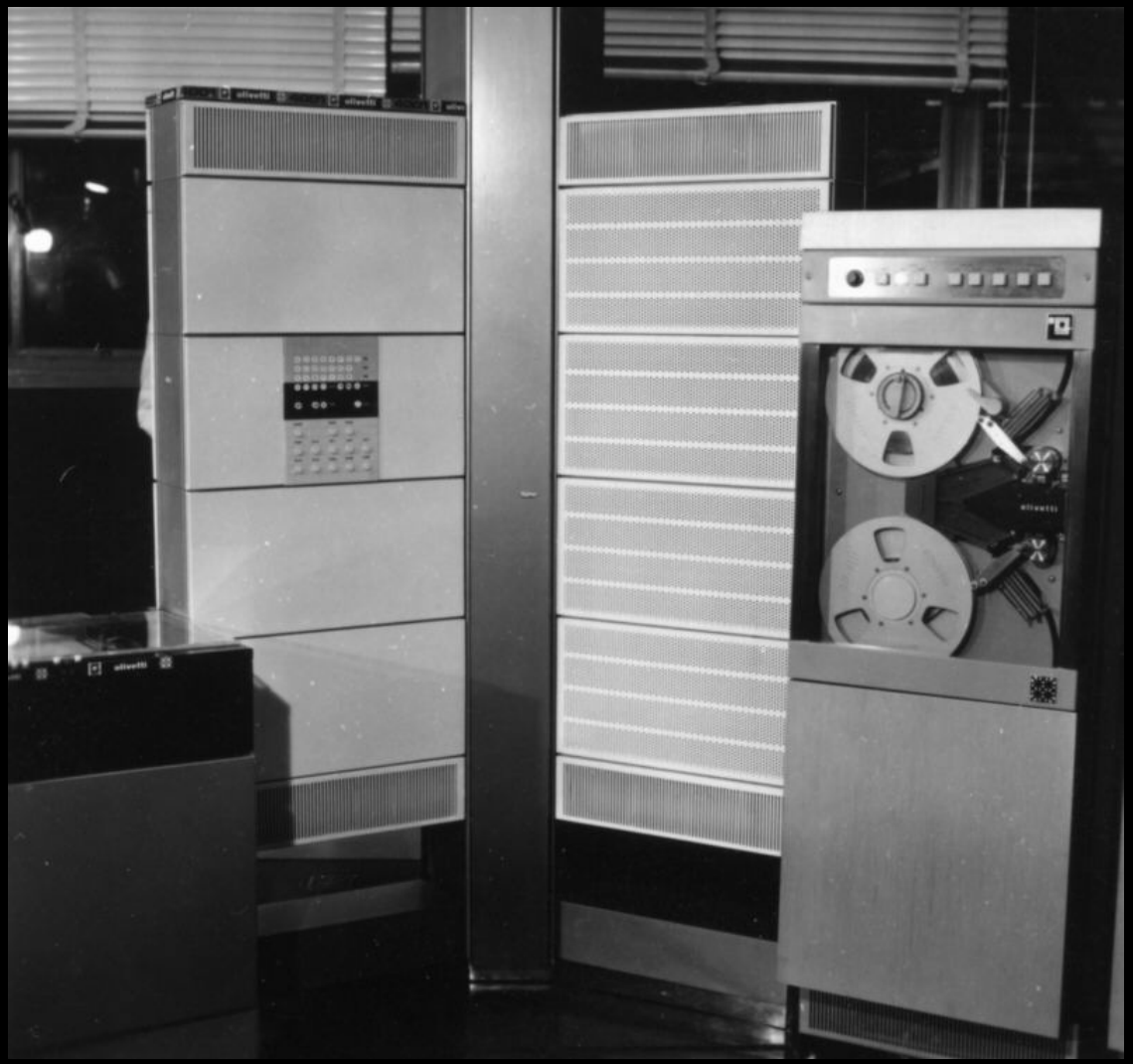
A unique blend of expertise (pivotal for the industry in Italy for so many years to come)

[at Borgolombardo, around 1960]

A well-established division

ELEA 6001 (1961),
a modular, upgraded
version of 9003

ELEA 4001 (1963),
an improved design
(Sottsass & van Onck)



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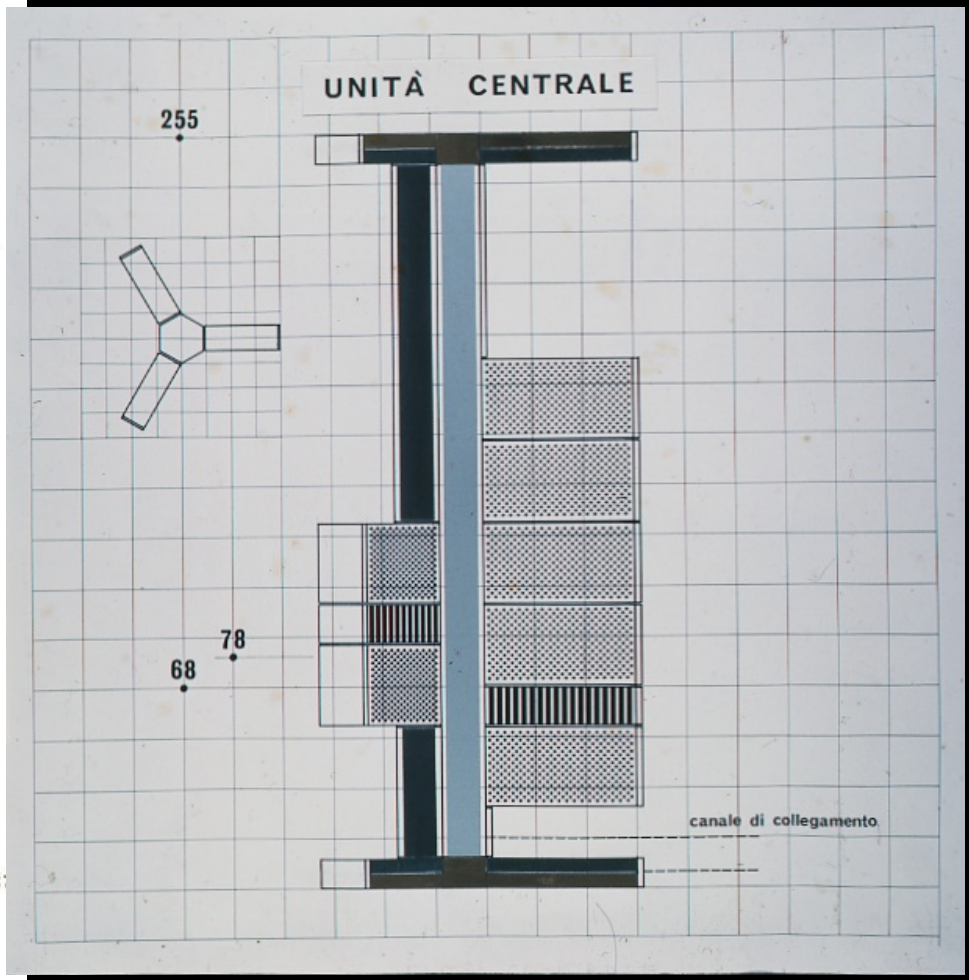
Advertising 4001 (& some drafts)



Courtesy E. Mori

G.A. Cignoni, F. Gadducci

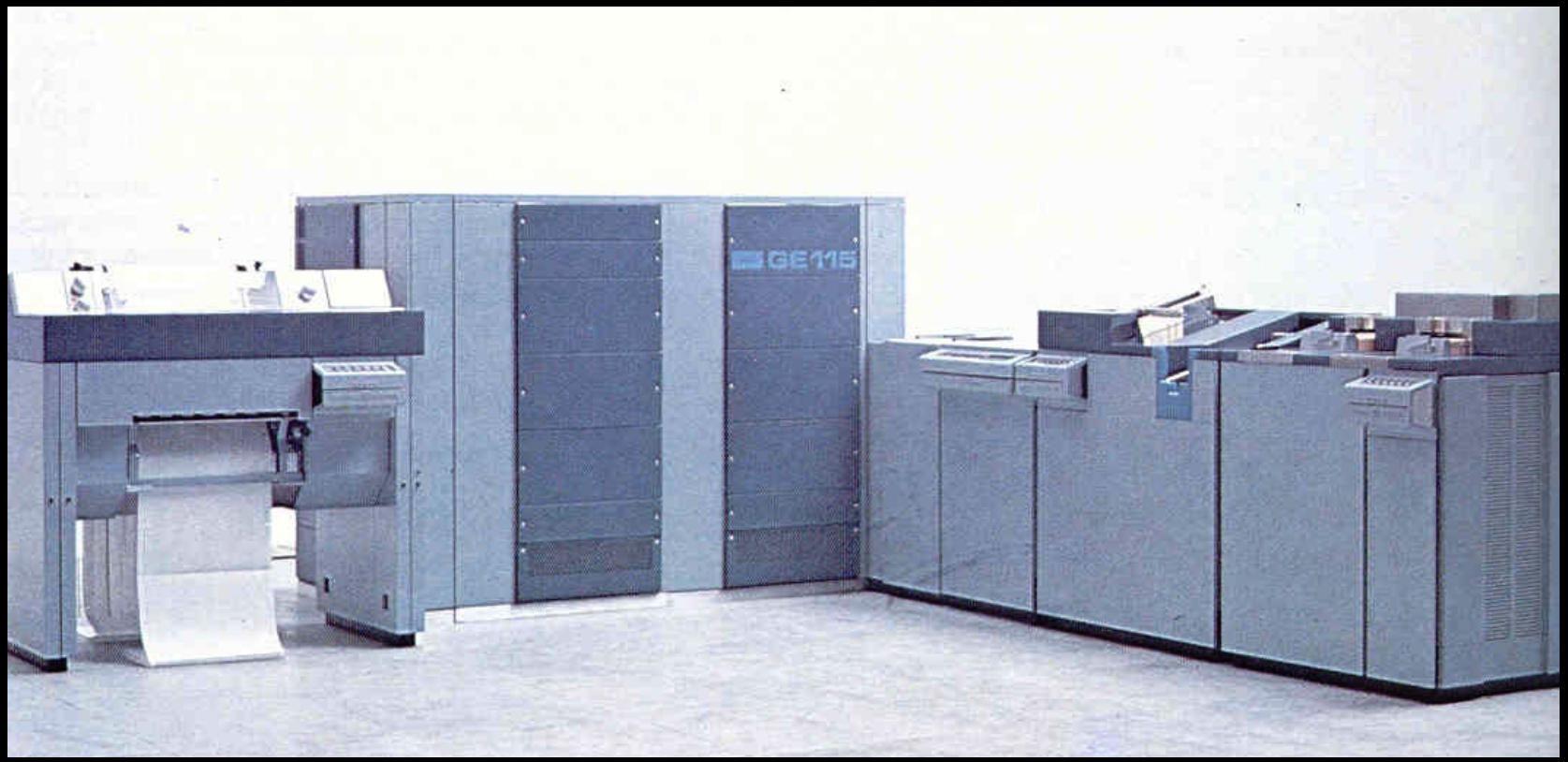
A well-established division, 2

Still good scientific connections

CINAC refurbishing Olivetti 9104

[A Ferranti emulator, to save software]

A quickly dismessed division



Selling out to General Electric in 1965 (various causes: money crunch, success of electric division, lack of vision in the industrial/political complex)
ELEA 4-115: 3300 sold as GE 115, 60% in US

G.A. Cignoni, F. Gadducci

Summing up

Two intertwined threads mark the Olivetti history

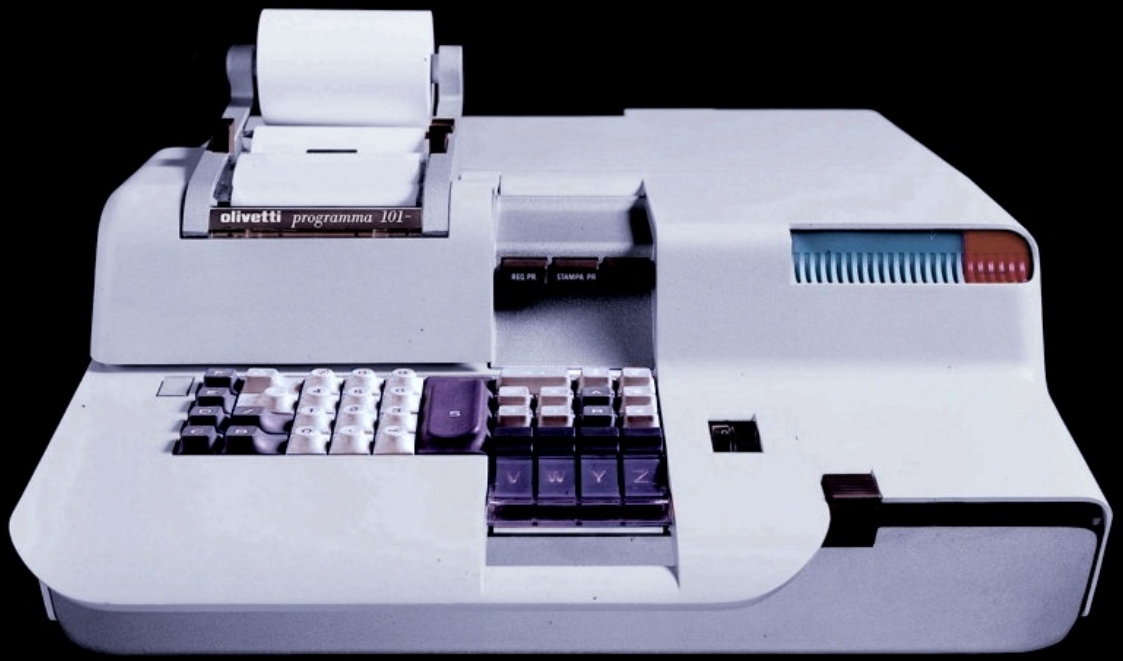
Scientific and technological background (see Camillo&Adriano)
Constant search for technological partners (INAC, Univ. of Pisa)
Planned establishing of the Electronic Division (Tchou)

Careful attention to branding
Social issues
Design style
Cultural utopism

A different story

Programma 101
(aka perottina)

After dismission
of the electronic
division (1965)



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