Olivetti Early Computers
(at least) two cases
of brand making

Conservatoire National des Arts et Métiers
Paris, 25 June 2013
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)
electronic equipments

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

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

First model M1, released for the 1911 anniversary

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

Barcelona
(1929)

Buenos Aires
(1932)
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)

Teletype (T1, 1937)
New organization

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

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

Bazzi (~1930) vs. Boggeri & Shawinsky (1934)
A detour on Lagomarsino

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)
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)

Courtesy E. Mori
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)
The Mark V attempt (early Fifties)

A joint venture

INAC
Harvard
Olivetti

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 financial 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.
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]
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
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 Physics Dpt.]
The Macchina Ridotta

Alfonso Caracciolo
Elio Fabri
Giuseppe Cecchini
Sergio Sibani
(1957)

The very first
Italian computer
Parallel machine
Ferrite core memory
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]
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 near Milan]
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)
Presented at the 1959 Milan Fair
(here at the Olivetti shop in town)
Design..

Compasso d’oro

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

Ettore Sottsass Jr.

Courtesy E. Mori
...and new ergonomics/signs

Courtesy E. Mori
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
A few more examples

Reasoning on Elaboratore Elettronico Automatico (ELEA school)

...and adding an art market touch!!
Brand advertising, popular

Epoca magazine

Technology popularization (with a bit of hype)
«... 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
The ELEA 9003

LRE moves to Pregnana (Mi)

About 40 sold

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

hmr.di.unipi.it
Now and then...

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

...and the only 9003 that is still working (at ISIS Bibbiena-AR)
Brand advertising, widespread

Christmas 1960
The undone 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)
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 smaller scale 9003

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

ELEA 9004 (1961 on), a prototype...
Advertising 4001 (&drafts for 9004)

Tutte le esperienze realizzate, i risultati già raggiunti, con costante piove di ricerca e rapida espansione sul mercato, dell’elettronica Olivetti, sono racchiusi nell’Elea 4001: elaboratore elettronico medio-piccolo per dimensioni e di basso costo.

Elaboratore di tipo universale, l’Elea 4001 opera con memoria a nastro ed a dischi con supporti di ogni tipo (schede, nastri perforati, caratteri magnetici CMS), con stazioni d’interrogazione e strumenti di misura. Eccellenti le sue caratteristiche di modularità.

Courtesy E. Mori
A well-established division, 2

Still good scientific connections

CINAC refurbishing Olivetti 9104

[A Ferranti emulator, to save software]
A quickly dismissed 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, 60% in US as GE 115
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)