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# Multidisciplinary Aspects of Design

Objects, Processes, Experiences and  
Narratives

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Objects, Processes, Experiences and Narratives

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# Telephones in Italy, the Italtel Study-Case

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**Abstract.** The primary objective of the narrative, which spans the 1960s and 1990s, is to verify the contribution of industrial design – through the objects it uses (telephone sets but also fittings) and in their implications of function, form and production [1] – as a lever both in the private market (which Italtel Telematica used) but also considering how, beyond the object, the investment was part of a broader strategy of expansion of the telecommunications sector in Italy. The telephone, an element of connection par excellence that accompanied the physical and immaterial transition from mechanical to electronic and digital technology, in its parallel evolution with the development of communications technology, turns out to be only a piece, albeit an emblematic one, an instrument of cultural and social representation that satisfies the functional, symbolic and communicative dictates of every era.

The essay therefore proposes a reinterpretation of the encounter between a fundamental player in Italy, Italtel – formerly Sit-Siemens (IRI) – with one of the nascent forces of the 1950s, industrial design, the new discipline that, in the years of the economic boom, promised through ‘good industrial product design’ the achievement of market success. The role of design as a catalyst for innovation and as one of the main drivers of Italian innovation in the Sit-Siemens and Italtel entrepreneurial venture is thus argued.

**Keywords:** Italtel · telephone · *Grillo* · *Rialto* · *Notturmo* · *Cobra*

## 1 Methodology and Sources

The intent of the essay and also its innovative angle is to connect existing studies of business history and design history in the light of first-hand information from the analysis of the Italtel Telematica archive and the archives and testimonies of designers involved, in order to support the initial hypothesis.

From a methodological point of view, the historiographical investigation relied mainly on the analysis of primary sources (grey literature, balance sheet reports, correspondence and internal documents, etc.) – deposited in the Italtel historical archive at the Isec Foundation (*from here* IFA, Sesto San Giovanni) – and secondary, bibliographical sources, built on the economic-social analysis of the telecommunications sector and consumption in the period under consideration. The Design Group archives and the testimony of some protagonists then completed the gaps and clarified certain passages.

## 2 From Sit-Siemens to Italtel

The telephone<sup>1</sup>, in its evolution from a mechanical to an electronic object, represented «a revolution in terms of its incalculable effects on customs, social relations, culture, and in general on society and politics itself» [2, 78].

The object has changed its form to respond to new «relations of use» dictated by ergonomics or to contain increasingly innovative technologies, thus translating the choices of designers in functional, productive, aesthetic and communicative terms and proposing itself as a reflection «of more complex forms of human socialisation and thus to some kind of civilisation» [3].

As part of an overall strategy of expansion in the telecommunications sector in Italy since the 1960s, Italtel stands out as innovative both for having found in design a strategic lever for the private product market (which was gradually assuming a numerically significant role), but also for having, in later years, taken advanced avenues, such as electronics, and paying attention to training (technical training school) as well as the creation of a company archive.

The presence of an advertising office that was very active from the 1970s onwards and led by Engineer Bandini Buti bears witness to this path as can be seen in the correspondence relating to national and international expansion projects and in the documents that give an account of the organisation of competitions among the best-known designers of the time.

Italtel – Società italiana telecomunicazioni Spa (Italtel Sit) is the name that the company, founded in Milan with German capital under the name Siemens, assumed from the 1980s onwards. Siemens was the name that would appear in the company name on several occasions, from the 1920s to at least the 1960s, when Società italiana telecomunicazioni Siemens Spa (Sit-Siemens Spa) took over the role of sales representative for Italy for telecommunications from the German Siemens group<sup>2</sup> [4, 14–17].

From the 1950s onwards, Italy witnessed a strong acceleration in economic development that, while not levelling out the socio-redditional divide between north and south, became the backdrop against which the new mass needs related to the idea of comfort, mobility, the technical facilitation offered by household appliances, but also a generalised desire for modernity were projected, to which industrial design responded by systematically redesigning the domestic and non-domestic landscape, often resorting to the use of new materials such as plastics. Since 1954, *l'annus mirabilis* [6, 255] for

<sup>1</sup> Crf. [5].

<sup>2</sup> The Società Italiana Siemens per Impianti Elettrici was founded on 5 December 1898 as the representative for Italy of Siemens, an engineering company for the construction of telephone components. Siemens had already been present in Italy for some time: in 1906 it had inaugurated a first automatic telephone exchange on the occasion of the Great Simplon Exhibition, and from then on in 1913 a plant in Rome, Jesi and Genoa. From 1921, Siemens S.A. was also engaged in the production of telephone equipment until 1945 when it was seized by the International Committee for the Liquidation of German Assets, which decided to hand it over to the Italian Treasury. In 1950, when it was released from seizure, it became part of the IRI-STET group, becoming Società Italiana Telecomunicazioni Siemens (often abbreviated SIT-Siemens, known to most as Siemens Auso Telecomunicazioni) in 1960, again the Italian representative for Siemens.

design, with the 10th Triennale, the birth of the magazine “Stile Industria” and the establishment of the Compasso d’Oro award, the construction of the ‘design system’ as it is still understood today begins in full form. Not only design, but also fashion, tourism and culture then become strongly attractive elements of the Belpaese [7, XXI].

In Italy, thanks to the intervention of the Institute for Industrial Reconstruction (IRI), the telecommunications sector was protected from colonising attempts of American origin<sup>3</sup>. In particular, it was Guglielmo Reiss Romoli, general manager of Stet – a company that had taken control of the Italian section of telephone equipment production since 1949 – who, from the mid-1960s, steered the sector into the promising environment of electronic technologies [7, XI]. The IRI-Stet group was thus configured as an electronics industry cluster that complemented the objectives of Sit Siemens, which was already established in electronics for the production of telecommunications equipment.

The strong interest in the development of electronics applied to telephony<sup>1</sup> began to appear as early as 1963, as evidenced by the pages of the company magazine *Auso* (Corporate periodical of Società Italiana Comunicazioni Siemens) founded in-house in 1961<sup>4</sup>. More generally, it is the focus on telephone consumption data in Europe that is of great interest<sup>5</sup>: Italy spends very little compared to Belgium and France, reflecting the backwardness of the automatic connection service, which is already very advanced in some countries. These early indications help delineate the path towards which the massive transformation of private telecommunications was heading and the unstoppable progression related to international conversations [8, 171]: an average family in Italy spent 15,600 lire in annual fees, while a Belgian the equivalent of 50,000 and a French 73,000, and despite these disparities, the problem in France and Germany remained the demand, which far exceeded the supply of the service. In Italy, on the other hand, it was not until the following decade, the 1970s, that demand for subscriptions exceeded forecasts [8, 173].

It should be remembered that, until the 1960s, private users could not have secondary lines in the home, so the only telephone in the home was the main one (fixed with a wall-mounted socket) which was rented by the company by contract and returned at the end of the service. By virtue of a national telephone master plan that since 1957 had redesigned the territory into 220 national districts, laying the foundations for Italian teleselection, from 1964 Sip (a single telephone operator by decree D.P.R. no. 1594 of 26 October 1964) decided to replace every main telephone with a unified model – the “bigrigio” or *S62* from the year of its diffusion – that could be assembled indifferently by the

<sup>3</sup> IRI, operating in the economic sector, strongly opposed the establishment of a single high-tech production group controlled by Itt. The IRI -Stet Group was a major player in the sector and in the national electronics industry.

<sup>4</sup> The presentation of the first issue clarified the programme and purpose of the company periodical, on the one hand a purely informative purpose about the company, the city and what was going on abroad, but also an attempt to keep alive or arouse an intellectual interest that could be shared among those same people who devoted most of their time to work. See *Auso*, Corporate periodical of Società Italiana Comunicazioni Siemens, 1, year I, 1961, IFA, Sesto San Giovanni.

<sup>5</sup> «Inquiry into telephony in Europe» in *Auso*, Corporate periodical of Società Italiana Comunicazioni Siemens, 1, year III, 1963, p. 20, IFA, Sesto San Giovanni in a column gathering reports from the corporate press of the IRI group.

three manufacturing factories to make maintenance efficient. The actual unification of telephones began in the 1960s (but did not actually take place nationwide until 1974) and the appliance designed by Lino Saltini (1954–1956), in production since 1958, became known as the “unified” replacing the previous *Model 36* (Sit-Siemens 1936)<sup>6</sup>.

Compared to its predecessor, the bigrigio handset represents an intervention of formal simplification, showing ergonomic sensitivity in the redesign of the bevelled bodywork and attention to legibility thanks to the design of larger lettering and numerals (covered by patent as well as the telephone itself) on the transparent dial [9, 170–173].

The appearance of the additional telephones comes with the new possibility of accessorizing the home with up to five additional telephone plugs distributed throughout the rooms. The telephones, which differ in shape and colour, thus fulfil a demand for personalisation of the domestic space, and support an emerging desire for privacy.

In the year that saw an improvement in the market for telephones<sup>7</sup>, 1965, Sit Siemens presented at the Milan Trade Fair<sup>8</sup> the *Grillo* telephone, a device of «revolutionary conception»<sup>9</sup> designed by Marco Zanuso and Richard Sapper in 1964 and displayed in showcases from 1966 onwards alongside the innovative transceiver equipment for satellite data transmission.

Revolutionary from an ergonomic point of view is in fact its ‘clamshell’ opening system and the compactness of its shape, which, by integrating the earpiece and number disc – and eliminating the traditional base – makes it possible to grip the device easily with one hand. In the *Grillo*, produced in white, red and green, as in many contemporary technological objects, colour also becomes a distinguishing feature to identify the object’s predominant purpose, certainly stated by some articles in the company magazine<sup>10</sup> [Fig. 1].

Originally produced in Milan – production was then transferred to the Santa Maria Capua Vetere factory in 1967 – the *Grillo*, which derives its name from the mechanical ‘buzzer’ ringer, is also the first device to be supplied across the Atlantic, sealing its continued and unstoppable success in 1968 with a supply of 500 items to a Brazilian company<sup>11</sup>. The company’s flagship for the private telephone sector, the *Grillo*, which received the ADI Compasso d’Oro in 1967 and the gold medal the following year at the

<sup>6</sup> The *S62* model was to be replaced by the *Pulsar*, designed by Gianni Arduini with Design Group from 1978 and subsequently introduced nationwide.

<sup>7</sup> *Relazione e Bilancio al 31 dicembre 1965*, p. 16, IFA, Sesto San Giovanni; it is interesting to note that in the decade 1954–1963, Italian telephone subscribers rose from 1.5 million to about 4 million [8, 174].

<sup>8</sup> The Report and Financial Statements for the year ended 31 December 1965, p. 16, IFA, Sesto San Giovanni states: «At the last Milan Trade Fair, a new miniaturised telephone *Grillo* was presented, which combines interesting technological features and operational performance with a particularly brilliant industrial design».

<sup>9</sup> Auso, Corporate periodical of Società Italiana Comunicazioni Siemens VI, 2, Juin, 1966, IFA, Sesto San Giovanni.

<sup>10</sup> «The Telephone Reveals You», in Auso, Corporate periodical of Società Italiana Comunicazioni Siemens, Year VIII, No. 2, April 1968, IFA, Sesto San Giovanni.

<sup>11</sup> Auso, Corporate periodical of Società Italiana Comunicazioni Siemens, Year VIII, No. 2, April 1968, p. 1, IFA, Sesto San Giovanni.





**Fig. 1.** Marco Zanuso, Richard Sapper, *Grillo* telephone, 1964 (ISEC Foundation Archive, Sesto San Giovanni/Carlo Milani)

Biennial of Industrial Design in Ljubljana<sup>12</sup>, bears witness, limited to the private market, an unprecedented relationship with the technological object, now playful, colourful, almost domesticated, which visionarily precludes the now symbiotic relationship with smartphones, of which the *Grillo* also anticipates the clamshell opening, in use before the advent of touch technology. The stand design for the presentation of the «smallest telephone in the world»<sup>13</sup> conceived for the trade fair<sup>14</sup> in Genoa in 1967, also contributes, through the use of a contrivance – the deformation of the walls and table tops – to conveying the content related to the informality of the new object.

In the private market, therefore, recourse to the designer's intervention becomes a guarantee of good design, while in the other strategic sectors it is innovation and research (drivers of design in all eras) that drive new initiatives<sup>15</sup>.

<sup>12</sup> Auso, Corporate periodical of Società Italiana Comunicazioni Siemens, Year VIII, No. 4, August 1968, p. 1, IFA, Sesto San Giovanni.

<sup>13</sup> Report and Financial Statements as at 31 December 1965, p. 6, IFA, Sesto San Giovanni.

<sup>14</sup> At the 3rd International Telecommunications Trade Fair, Genoa, in 1967, the Stet Group occupied an entire exhibition floor illustrating the activities of several group companies including Sit Siemens.

<sup>15</sup> Although it is beyond the scope of this essay's analysis, it should be mentioned that the contribution of design is also expressed in the work of Marcello Nizzoli and G. Mario Olivieri for Safnat (Società Anonima Fabbrica Nazionale Apparecchi Telefonici) in 1958, in the design of another archetype in office telephony.

At the beginning of the 1970s, the Italian telecommunications system was experiencing a moment of great dynamism due to various factors: in the private market, the introduction of teletype – the automatic call for long-distance calls – attracted many new subscribers, while on other fronts there was the expansion resulting from the acquisition of control over transoceanic communications (Italcable) and the avant-garde *Telespazio*<sup>16</sup> project for satellite communications which, from the Fucino plain (where the plant was equipped with a parabolic antenna 27 m in diameter), guaranteed the first satellite transmissions and in 1964 also television transmissions, placing Italy at the centre of an important international research network and in an advanced position in the sector.

In the early 1970s, the Stet group launched a campaign of acquisitions in strategic sectors such as radar systems for defence and telecommunications, electronic equipment and automation systems for civil and military use, also opening up to the field of microelectronics and marking a moment of strong innovation in the burgeoning telecommunications industry<sup>17</sup>. At the same time, there was an explosion in the diffusion of the national telephone service, both for private and business users, with an increase in demand for both equipment and infrastructure development, and with Italy catching up with other European countries. It should be remembered that it was only in 1974 that the state-owned company achieved effective telephone unification throughout the country, so much so that the apparatus designed by Lino Saltini in 1954–1956 and in production since 1958, became known as «unified».

Against this backdrop, Sit Siemens, fresh from the huge sales success of the *Grillo* telephone, did not abandon the path of investing in design in an attempt to borrow the previous fortune and appreciation of the national and international market. Investment in design in the round, considering that it was in 1974 that a state-of-the-art factory was inaugurated in Carini (PA), with 27 employees, (whose project was part of the initiatives of the Consortium for the Industrial Development of Palermo), which housed the verticalised production of the unified model (until 1981) and from 1977 the production of the decadic *Grillo*'s keyboard, the first application of an electronic technology to a telephone set. From 1981, in Carini, the production of devices was abandoned in favour of the manufacture of relays and then plates for *Proteo* power stations, devices that marked the definitive transition from electromechanics to electronics.

At the same time, however, the mature Seventies were a period of crisis for the world economy and for Italy, as can be seen from the turnover figures contained in Italtel's Reports and Financial Statements. In particular, unrest and events of a trade union nature were blamed for the industrial weakening of the company, which recorded an increase in turnover that was not commensurate with the increase in labour costs. In those same years, the private market, whose turnover remained solid compared to other sectors, recorded orders exceeding supply capacity, somewhat as had happened years before in other

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<sup>16</sup> Auso, Corporate periodical of Società Italiana Comunicazioni Siemens, Year VII, No. 4, December 1967, pp. 9–10, IFA, Sesto San Giovanni.

<sup>17</sup> However, the Stet group, which in 1971 was an integrated industrial group with 97,000 employees and a turnover of 838.6 billion lire, continued its growth: during the decade, employees increased by 37%, surpassing the 133,000 mark in 1980, crf. [10, 240].

European countries. And while the *Grillo* continued to be happily exported abroad<sup>18</sup> In 1977, Siemens announced an invitation-only competition for the development of two telephones, one normal, inexpensive model to be produced in 15 million units over a ten-year period, and the other additional. Scrolling through the names of the six invited guests (Achille Castiglioni, Design Group, Franco Albini architectural firm, Franca Helg, Antonio Piva and Marco Albini, studio Meda Montanari Architetti Associati, studio Oscar Cagna-Alberto Ferruzzi, GMP arch. Associati di Gandini, Morgantini e Pirovano), it is clear that once again design is considered a guarantee of quality, process competence and a tool for achieving the best desirable design result. In January 1978<sup>19</sup> only the proposals of Design Group Italia and Studio Castiglioni were retained in the tender, and on 12 April '79 the contract with Design Group was concluded to finalise the chosen unified telephone model<sup>20</sup>.

At the same time, while sales on the private market continue to comfort and on the public market the national and international rise of the *Proteo* project continues, another project signed by Design Group is launched, *Rialto*<sup>21</sup> [Fig. 2], entrusted to architect Bandini Buti, who was an in-house collaborator at the time. The handset was initially named the *Bridge* by virtue of its shape that reproduces the miniaturised architectural form of the famous Venetian bridge to scale. The order confirms the desire for continuity with Zanuso's successful experience and reaffirms how industrial design is considered a path to success in the market for products for private use: «the *Rialto* telephone renews the line of aesthetic originality of the 'add-ons' thus continuing those initiatives whose commercial validity is attested to by *Grillo*»<sup>22</sup>.

In the meantime, the Castiglioni studio – whose compact device, characterised by the offset position of the handset [11, 304] was not selected in the competition – is engaged, in collaboration with Max Huber, in the design of approximately 1,000 square metres and 36 stands of the Italian Telecom pavilion in Geneva<sup>23</sup> and, commissioned by the Ministry of Posts, Italcable and *Telespazio*, also in the construction of an important planetarium model representing the main connections between Italy and the world's major countries.

In Italy, modulated by the fortunes of the national economy, promising projects linked to the development of electronics suffered a setback, as in the case of Olivetti, which sold its electronics division to General Electric, or projects linked to the strategic sectors of energy and advanced chemistry, which, together with the decline of the state-entrepreneur, paved the way for the current configurations [12, 64].

<sup>18</sup> There was also a production of company gadgets such as a *Grillo* key ring, of which no pictures remain, supplied to Paul Roche co. Inc. in New York in 1978.

<sup>19</sup> Following the preliminary examination of the models submitted by the designers invited to tender for the new unified telephone (25 October 1977).

<sup>20</sup> Velina Advertising Service, Unified Telephone Design Contract, 12 April 1979, IFA, Sesto San Giovanni.

<sup>21</sup> Reports and Financial Statements at 31 December 1978, p. 13, IFA, Sesto San Giovanni.

<sup>22</sup> Reports and Financial Statements at 31 December 1979, p. 10, IFA, Sesto San Giovanni.

<sup>23</sup> Already the editions of Telecom'71 in Geneva and Telecom'75 were edited by Achille Castiglioni with graphics by Max Huber.



**Fig. 2.** Design Group, Bandini Buti, *Rialto* telephone, 1979 (ISEC Foundation Archive, Sesto San Giovanni/Carlo Milani)

### 3 The Eighties

After the crisis at the end of the decade, the mid-1980s saw the beginning of a real technological revival and a strategic repositioning of the company, which took on the name Italtel from 1981, with a three-lobed brand name, by Marisa Bellisario, the new CEO [10, 255–259]. The corporate identity was completed in 1984 by the group's coordinated image manual designed by Bob Noorda in continuity with the careful strategy of choices drawn up by the advertising office – led by engineer Bandini Buti (brother of the well-known designer) – and with the assignments already commissioned to the well-known Mc Cann Erickson agency such as the Stet/Sip image campaign<sup>24</sup>. After the economic difficulties of the early years and aligning with the international political and economic recovery, the manufacturing conversion process from electromechanics to electronics continued, confirming Carini as the hub of the transformation: since 1986, the complex has been expanded with a series of new buildings covering an area of 10,000 square metres and has established itself as one of the most modern and efficient poles in Europe, mainly due to the investment in employee training: between 1987 and 1990, the software research laboratories in Carini grew to over 250 employees and the highly automated factory centralised the company's largest production and automatic component testing.

<sup>24</sup> Velina Servizio Pubblicità, 1 July 1977 assignment for collaboration on Stet/Sip image campaign, IFA, Sesto San Giovanni.

Italtel Telematica, an Italtel Group company, with headquarters and factory in Santa Maria Capua Vetere (Caserta), dedicated to private and office telecommunications, was created.

The range of products for the private market was enriched in the 1980s by two devices of more or less the same age, the *Pulsar* unified telephone (1985) designed by Design Group and the *Cobra* add-on [Fig. 3], designed by Sandro Pasqui and Gianni Pasini of the Pico Design studio.



**Fig. 3.** Pico Design, *Cobra* telephone, 1985 (ISEC Foundation Archive, Sesto San Giovanni/Carlo Milani)

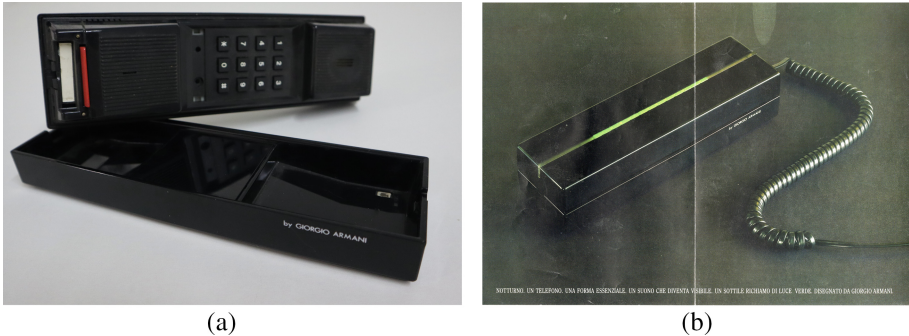
The *Cobra* telephone, designed and engineered entirely by the two designers from the very early 1980s, is light and easy to handle, and has the peculiarity of combining both the receiver – the “handset” – and the base in a single monobloc body. It was awarded the Compasso d’Oro in 1987, for the originality of its shape but above all for the study of the correct ergonomics of the object realised with advanced technological solutions: from mixed dialling (decadic or multi-frequency), the redialling of the last number dialled, the setting of the ring tone and access to additional services.

In the ADI jury report, reference is made to a «more current consideration of relationships of use». It is precisely these relationships of use that are central to this object, which the ergonomics of the object considers by proposing an unusual form in the face of advanced technological services.

The mid-1980s saw the (Italian and international) distribution of *Notturmo*<sup>25</sup> [Fig. 4], a new telephone commissioned by Italtel from a fashion designer, Giorgio Armani. *Notturmo* is a telephone with an essential and rigorous parallelepiped shape, fully electronic with a decadic keypad and made of black Abs.

*Notturmo* (1986), a forerunner of the minimalism typical of the 1990s, is an entirely electronic device with a decadic keypad, which is crossed by a thin line of green light replacing the sound of the call. The designer’s intervention in *Notturmo* is particularly evident on a formal and symbolic level: the device represents a response to the chromatic and sign chaos of the 1980s and marks a fundamental shift in the definition of the technological object with the abandonment of the playful connotation in favour of the alliance between technology and luxury. The sobriety of non-colour black and the

<sup>25</sup> Press release, *Notturmo, The new Italtel telephone*, 27 October 1986, Armani Press.



**Fig. 4.** Giorgio Armani, *Notturmo* telephone, 1986 (ISEC Foundation Archive, Sesto San Giovanni/Carlo Milani)

inherent discretion of a silent object (which uses a visual code to indicate the call) evokes refined (bordering on meditative) and elitist atmospheres typical of the 1990s. *Notturmo* reconfirmed the interest in good Italian design, in the successful combination of technology and design, as already evident in the success of telephone sets such as *Grillo* (1966) and *Cobra* from the early 1980s.

## 4 Conclusion

The contribution of designers can be seen – over and above the aesthetic/formal, technical achievements of individual interventions – as the “added value, satisfying a design demand that sought, sometimes ambiguously, sometimes explicitly, in the aesthetic form of the industrial product the expedient to conceal serious technological backwardness” [13].

The Italtel affair provides an interesting insight into the Italian success of a number of companies that have realised the power of design as a guide to innovation, not only of products, but as the overall direction of a multifaceted strategy centred on training, investment in research and innovation, and sensitivity towards memory preservation through the creation of a company archive.

## References

1. Sottsass, E.: Opinione sul disegno industriale. *Domus* **308**, 34 (1955)
2. Ciuffoletti, Z., Tabasso, E.: Breve storia della comunicazione. Carocci, Roma (2005)
3. Floridi, L.: La quarta rivoluzione Come l’infosfera sta trasformando il mondo. Raffaello Cortina Editore, Milano (2017)
4. Cammarata, P.: La Chiameremo Italtel. Alpha Centauri, Milano (2001)
5. Balbi, G.: Le origini del telefono in Italia. Politica, economia, tecnologia, società. Bruno Mondadori, Milano (2011)
6. Lees-Maffei, G., Fallan, K.: Made in Italy: Rethinking a Century of Italian Design. Bloomsbury, London (2013)
7. Russolillo, F.: Storia dell’IRI, vol. 5, Laterza, Bari (2015). CONTROLLARE ANNO: 2014 O 2015?

8. Scarpellini, E.: I consumi della vita quotidiana. Il Mulino, Bologna (2013)
9. Bassi, A.: Design anonimo in Italia. Electa, Milano (2007)
10. Mariotti, S.: Le telecomunicazioni: dal monopolio tecnologico ai mutamenti degli anni Ottanta e Novanta, alla privatizzazione. In: Russolillo, F. (a cura di) Storia dell'IRI, vol. 5. Edizioni Laterza, Roma-Bari (2015)
11. Polano, S.: Achille Castiglioni 1918–2002. Mondadori Electa, Milano (2006)
12. Amatori, F., Riccini, R.: Copyright Italia: brevetti, marchi, prodotti, 1948–1970. Archivio di Stato, Roma (2011)
13. Bosoni G.: L'elettronica di consumo. Branzi, A. Il design, Electa, Milano (1996)

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