

Introduction

The world is familiar with telecommunication technologies. The same cannot be said about the places telling their stories. As a matter of fact, they are rarely seen in the cultural heritage scene, like on the prominent UNESCO World Heritage List. To date, Grimeton Radio Station in Sweden remains the only site connected to telegraphy that is acknowledged on a global scale. Recently, in 2019, Jodrell Bank Observatory in the United Kingdom was added to the list. It is, undoubtedly, a very welcome recognition of a XXth century astronomical observatory¹. However, being a research centre related to the use of radio waves to study astronomical objects, it can be questionable to label it as a “telecommunication heritage site” and, by extension, that it falls under the theme of industrial heritage.

Identification

Telecommunication appeared with the second industrial revolution and kept evolving with unforeseeable advances. Two references provide a good foundation to define the scope of its heritage. The first one is from the Constitution of the International Telecommunication Union (ITU), which defines the phenomenon as “any transmission, emission or reception of signs, signals, writing, images and sounds or intelligence of any nature by wire, radio, optical or other electromagnetic systems”². The second one is Huurdeman’s work on the history of telecommunication and its tree of developments³. In this metaphor, science and industrialization are the roots, and successive breakthroughs spawn new technological branches that keep growing. The metaphor can be reapplied to give an idea on the numerous kinds of movable, tangible and intangible heritage that could embrace the label of telecommunication heritage (figure 1).

Therefore, places such as telegraphy sites, telex buildings, and radio ships raise the tricky question of their affiliation to the umbrella theme of industrial heritage. They have a unique character that differs from the majority of acknowledged industrial sites in conventional discussions.

For instance, their assessment requires the knowledge to comprehend technologies related to electrical engineering and its applications for communications. Furthermore, they can have unusual locations and a recurrent transnational profile. An example of this aspect is the Telegraph Field of Valentia Island in Ireland that aspires to become world heritage since 2013. Interestingly, it is planned as a transnational nomination together with Heart’s Content Cable Station in Canada⁴.

Most importantly, understanding telecommunication heritage sites requires an informed knowledge about the dynamics that shaped their roles. In addition to fulfilling technological functions, they create immaterial goods and meanings, which can have commercial, social, scientific, political, and military impacts on a large scale. This is best demonstrated by TV

towers⁵, the Fernsehturm Berlin being the ne plus ultra of this characteristic. Built by the German Democratic Republic, it was a symbol of power as much as a broadcasting building⁶, which is reflected in its recognition as a heritage site.

Loaded values

The discussed background is a helpful basis to further explore the significance of telecommunication heritage sites. Three European cases from the radiocommunication branch are chosen to deduct the cluster of values embodied in their remains and conveyed with their stories.

Starting with the globally recognised site of Grimeton Radio Station in Sweden, it operated from the early 1920s to 1995 as a wireless telegraphy centre. It gained the prestigious heritage status in 2004 and became a site museum. The criteria of selection highlight its technological values. Interestingly, analyzing the nomination process reveals additional significance: the station was an identity landmark. A large network of stakeholders was involved in the preservation efforts, including the Royal Swedish Navy, the Swedish telecommunication services, and the employees' association⁷. Their complementary actions were key in meeting the essential integrity, authenticity, and protection and management requirements of UNESCO.

The second example is Pleumeur-Bodou Ground Station in France. It is a place of great technological significance as well. Its counterparts were located in Andover in the United States and Goonhilly Downs in England. Both the French and American stations were twins in their design. Their vedettes were the tracking horn-antennas and their protective inflatable buildings, the radomes. They performed the first transatlantic TV signal in 1962 via the Telstar satellite, a moment recognized as a milestone by The Institute of Electrical and Electronics Engineers (IEEE).

While Andover's radome was torn down and its antenna scrapped, the French ones in Pleumeur-Bodou were luckily protected by a heritage status. This partial protection can be interpreted as a focus on the ground-breaking scientific achievement rather than the subsequent technological life of the site. The re-use projects confirm this view: the property is redeveloped in two sections. The first one, *Cité des Télécoms*, includes a new museum built next to the radome (figure 2). It is the largest European centre for culture and leisure dedicated to telecommunication. The second one, *Pôle Phoenix*, is a regional centre for the development of new technologies and contains upgraded facilities.

Additional aspects of the significance relate to reflecting the issues at stake in the tense historical context of the XXth century. The ground station conveys the climate of collaboration to nurture the alliance between the United States, France and Great Britain after the second world war, in times where the popularity of the American culture was on the rise⁸. On another note, the radome and antenna are an ensemble of exquisite futuristic design that sparks curiosity and fascination. This conveys the actors' expectations through aesthetics' choices⁹.

The next case further supports the suggested importance of aesthetics. *La Maison de la Radio* in Belgium is a broadcasting building that was constructed in 1938 and operated during the golden age of radio. After two contests, the project that best responds to both technical and aesthetic requirements was chosen. The winning entry was a pioneer building, compared to a sound factory and an ocean liner, adopting the avant-garde international style and Dutch functionalism, developing a new spatial layout, and anticipating the arrival of television¹⁰. There is no shortage of other media houses with strong architectural concepts that convey the ideals of a globalized world, where the immaterial, delocalized character of the media phenomenon inspired the creation of their physical, centralized form¹¹.

Brussels' *Maison de la Radio* turned obsolete after three decades of operations. Parts of the building and its interior had gained the status of Brussels' architectural heritage, but conservation work was a daunting task due to the presence of asbestos. Interestingly, Sint-Lukasarchief, a local architecture research centre, was the main actor prompting action to save the building. After a successful nomination to the World Monuments Watch programme, a conversion with a new use was prioritized. This former radiocommunication site survives as an important cultural venue named *Le Flagey*.

Heritage sites of radiocommunication and beyond

Based on the previous cases, there are five categories of values that can be embodied in a radiocommunication site. The technological values relate directly to the main function. If the site has seen major breakthroughs, it is additionally significant for its scientific contribution to the adoption of new communication technologies, but also to new approaches in building engineering to accommodate the sites' activities. Next are the aesthetic values, with an appeal coming from architectural expressions and the creative design of the equipment. Important are also the values mirroring historic contexts, especially in the era of the two world wars and the cold war. Last, but not least, come the social values, with a sense of belonging pertaining to former employees and extending to larger communities with more complex identity constructions.

To verify these deductions, a single site-oriented assessment follows. The chosen place is a listed monument at a turning point of its life: Europe 1 Transmitter Building in the state of Saarland, in Germany (figure 3). Starting its operations in 1955, it is the first transmission site of the well-known French radio station Europe 1. It worked for more than six decades on airing its programmes to the target audience, mainly the French-speaking public in France, Luxembourg, Belgium, and Switzerland.

In 1999, the transmitter building became a listed monument under the Saarland Monument Protection Act. After discontinuing its activities in 2015, the Municipality of Überherrn acquired the building and 23 hectares surrounding it, which brought up the reuse challenges and opportunities. The stakeholders constantly discuss the cultural significance of the building with great awareness about its multilayered profile¹². The following early advertisement of the radio station is used to reveal the main aspects of each value category:

[“300 Km from Paris, as the crow flies, in the Saar, EUROPE N°1, the most important private radio broadcasting station in the world will come into being with the new year. The transmitters’ radiation, which power is 400 Kilowatts, will be multiplied and oriented with a directive screen consisting of two pylons-antennas having respectively 300m height - that is to say two Eiffel Towers. EUROPE N°1 will bring you, eighteen hours a day, joy in your home and the reflection of the world”]¹³.

Beginning with the historical values, mentioning the site’s location is a hint to Saarland’s post-war history. Imagined as an autonomous territory under French economic integration, leading figures in politics, telecommunication, and journalism aimed to create a commercial, transnational radio/television project. As a result, the building was implemented a stone’s throw from the French border, and Europe N°1 became one of the four peripheral stations in Europe to bypass the public monopoly on radio waves in France. The private profile of the station had far-reaching consequences, challenging the public broadcasting models, and shaping the media landscape with innovative ideas and styles.

The second revelation relates to the aesthetic values. The design aspects mirror the actors’ goal to create a station of international importance. The building is implemented in harmony with the region’s green landscape, offering open views on the Lorraine in France, the meadows of Saarland, and the nearby mining industrial landscapes. Multiple meanings attached to the immateriality of radio are conveyed through neo-expressionist architecture, and the interior features complement this distinguished style of the 1950s.

This aesthetic merit was attained thanks to the building’s roof. It is a concrete shell that bears the stamp of three eminent French experts in civil engineering and architecture: Bernard Lafaille, René Sarger, and Eugène Freyssinet. The uncommon roof model was a first and has a noteworthy story of an unsuccessful construction attempt. Later on, the lessons learnt from the failure inspired René Sarger to pioneer in the creation of tensile structures¹⁴.

The core part of the advertisement expands on the technical equipment to convey the leading transmissions’ outreach. Europe 1 transmitter building remained the most powerful radio station in the world adopting the long-waves technology for most of its working life. It was a perfect representative example of its typology and a testimony to its development in the second half of the XXth century.

Last, but not least, Europe 1 programmes were a success. This required extensive efforts from a dedicated team to fulfill the technical side of broadcasting. The former employees feel a strong sense of belonging to the place¹⁵. Also, other groups with no direct link to the site’s operations have shown their interest in its significance including the Saarland’s community, the station’s audience, radio amateurs, civil engineers, architects, and researchers. Taking the radio amateurs, for instance, a Facebook group called “radios du monde” received no less than 400 reactions on the news of imploding the sites’ antennas in 2020, with many comments expressing their disapproval of this decision¹⁶.

Conclusion

With the collapse of the antennas of Europe 1 Transmitter Building, the property lost crucial attributes of its technological integrity. This is not an individual situation as discussed with the cases above. In fact, it is very difficult to find telecommunication sites that preserved all significant technological attributes. Even worse, many of them become endangered after their obsolescence, because they are either left to decay or face demolition.

Therefore, it is important to put places embodying telecommunication stories under the spotlight in order to push their appreciation forward. The richness, diversity, and complexity of the sub-theme of telecommunication heritage remain overshadowed because the dominant discourse on industrial heritage is still focused on the other sub-themes. This should be addressed promptly, especially to establish a consensus about the scope of telecommunication heritage, and a comprehensive list of outstanding sites so that they can be protected before they are lost.

Developing best conservation practices for telecommunication heritage places would be a thrilling journey. They have a transnational character and multiple categories of values that can manifest in an equally compelling way. They are loaded with technological, scientific, historical, aesthetic, and social meanings. As such, it is a legacy that invites professionals from multiple disciplines to look beyond the sphere of their specialized technologies, geographical location, and associated communities.

This character offers them opportunities to expand the scenarios for reuse projects. They can become testimonies to technologies that changed the world, landmarks of their territories, and hubs for their communities and beyond. With all-encompassing conservation tools, the general public, whose relationship with telecommunication is close, will learn more about this different “industry”, and celebrate the legacy of the XIXth and XXth centuries that allows today’s societies to instantly connect beyond borders.

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Illustrations

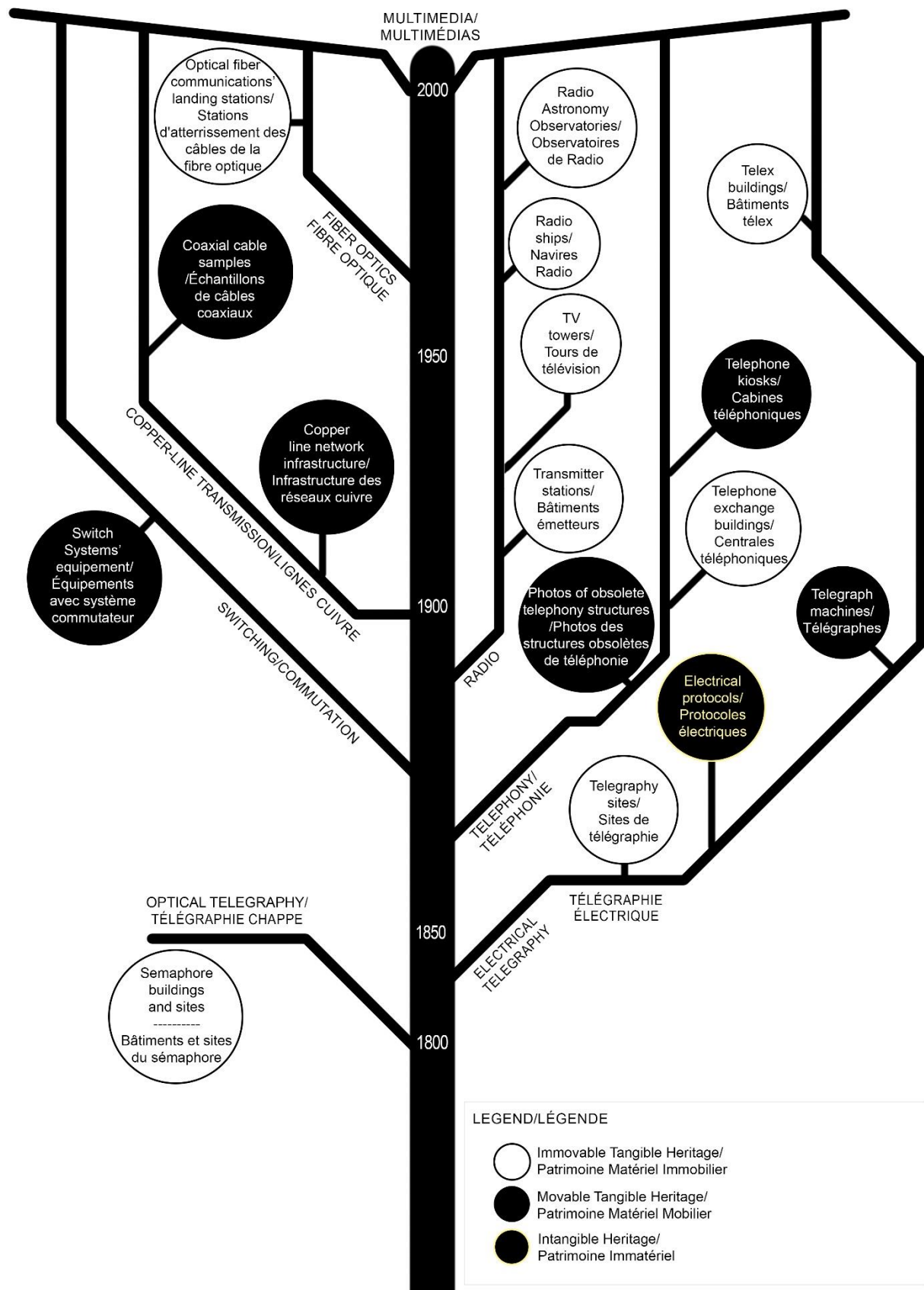


FIGURE 1. Examples of telecommunication heritage, 2018, El Moumni Maryam¹⁸



FIGURE 2. Radome and museum of telecommunication, 2017, Cité des télécoms.



FIGURE 3. Europe 1 transmission site, 2017, Maryam El Mounni.

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