

## COMMUNICATE

Suzana Faro<sup>1</sup>

### ABSTRACT

Communicating is one of the most complex, challenging and interesting phenomena of human activity, which involves discovering the Other and the technological inventions that have allowed Man to reach further and faster. This is the theme of the Transport and Communications Museum's long term exhibition: COMMUNICATE, opened in December 2012 - a challenge in constant evolution. This exhibition is based on an anthropological concept of Communication and consists of a path that challenges visitors to experiment and reflect upon the forms of communication that Man established to interact with others and with his surroundings. Light is a central concern not only in the exhibition space but especially in its contents:

*.Senses Alert:* sight is the perception of the physical surroundings through the light they emit or reflect.

*.Step into the light:* interactive project where you use your body, voice and senses as a means of communication, combine them with technology and make it a single living, visual and musical instrument.

*.The Message:* it can take many forms and is omnipresent, especially in today's digitised world. The Message acquires meaning in a relationship and requires a code, a context, a medium. The way it spreads and circulates often receives powerful injunctions of technique, art and creativity. The codes broaden the universe of communication and facilitate human interaction: ColorADD (for people incapable of distinguishing colours); Morse (messages transmitted through sound, light or visual signals); Braille (system of reading and writing through touch for blind people); Sign Language (communication using hand movements, facial expression and body language)...

*.Messengers:* the discovery that the chemical element selenium could transform light energy into electric pulses, meant that images could be transmitted through an electric current: TV became a powerful medium, penetrating homes transmitting information, ideas and ideals.

### KEYWORDS

Communication; Light; Exhibition; Message; Challenges

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<sup>1</sup> Museu dos Transportes e Comunicações, [suzanafaro@amtc.pt](mailto:suzanafaro@amtc.pt)

## **COMMUNICATE exhibition**

This contribution aims to focus on a different point of view about something as ancient as humanity itself: communication.

This is the subject of the Transport and Communications Museum's long term exhibition: COMMUNICATE.

The Museum is settled in the former Customs House of Porto: Alfândega Nova do Porto. As any other Customs House, this was a *House of Communication*, both a place of trade and a door open to the world, a meeting place for the exchange of ideas, knowledge and experiences: *This is what Oporto was like: a city of trade, so deeply involved in the phenomenon of exchange, in communication and as a meeting place for different peoples that it chose to call itself the port. As simple as that. That's how it got to be a cultural arena, a place that encapsulated the experiences and lessons lived and learnt during daily life at sea* (Barros / Museu dos Transportes e Comunicações, 2012).

Communicating is one of the most complex and interesting phenomena of human activity. By including this theme in its mission, the Museum accepts challenges that are in constant evolution. This requires a level of permanent creation and renewal of approaches and experiences to surprise and involve the public in moments deeply marked by reflection and interaction. The display attempts to convey *the polysemic wealth of Communication, in its various forms. It also includes the paradoxes of a so-called 'communication' society, which continues to have countless difficulties in integrating differences and in overcoming the barriers facing communication processes, whether their origins are cultural, linguistic or any other* (Museu dos Transportes e Comunicações, 2012).

The paths of Communication have always been open and challenging. They may involve discovering the Other, whether he is on our doorstep or at the far reaches of the galaxy, or technological inventions that have always allowed Man to reach further and faster. The same can be said of this exhibition, which we invite you to visit: our aim is for the visitor to reflect upon a theme that is a key part of the world we live in and of the lives of each and every one of us (Museu dos Transportes e Comunicações, 2012).

This exhibition (FIG. 1) is based on an anthropological concept of Communication and consists of a path that challenges the visitor to experiment and reflect upon the many forms of communication that Man established to interact with others and with his surroundings.

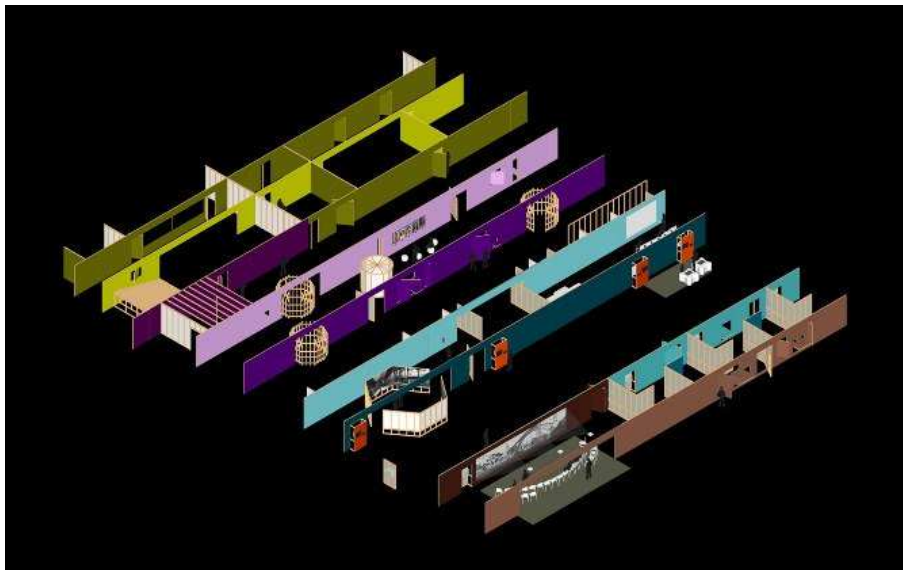


FIG. 1 - Communicate Exhibition plant, 2012, Porto. © Ainda Arquitectura | AMTC Archive.

The project began with the construction of *the idea*, connecting the museum to a small group of volunteers from different scientific backgrounds, meeting regularly for a few months. The approved idea then gave place to *a proposal*, granted by EU funds (QREN-ON2), which allowed the museum to develop the project and construct the exhibition, gathering together all museum professionals and several outer partners. Building the exhibition was a process of research and

reflection; but it was, thus, a path of learning and good practice, tightening the ties between the museum and the community. This dialogue was essential for the making of the exhibition as well as for its former evaluation, before opening to the public. The exhibition was built based on partnerships creating a web of links (such as communication does) which enabled the museum to get closer to its visitors – “enlightening” the museum and its public.

Light is a central concern both in the exhibition space and in its discourse, the same way it is in any museum exhibition. But for COMMUNICATE exhibition it is also a main theme for this path interspersed with stations that challenge the visitor:

- *Senses Alert*: Our senses are the first thing we use to communicate with the world around us. With no technological intervention, human perception results from innate anatomical and cognitive mechanisms: structures such as the skin, eyes, nose, ears or mouth that specialise in detecting *stimuli* and are responsible for encoding and sending information to the brain. Whenever we receive a sensory *stimulus*, it is immediately transformed into a nerve impulse and transmitted to the whole organism so that we can respond adequately. Sight is the perception of the physical surroundings through the light they emit or reflect. It is considered the dominant sense, not only because of the large amount of information it receives, but also because it is visual information that prevails when the records of the various senses come into conflict. The visual process starts at the moment the ray of light enters the eye: the pupil receives and determines the amount of light that enters; the cornea protects the eye and enables it to focus on the visual elements

(close-up or distant); the retina receives the focused images inverted, converting them into electric impulses – the language of the nervous system (Museu dos Transportes e Comunicações, 2012).

- *Arena of the senses*: a sensory experience that frees the imagination, appealing to all our senses, where light and vision play an important role. It puts the visitor at a non-place, a passing point (S. Bento Train Station), where *everyone is no-one, because no-one knows anyone*. But it is, at the same time, a well-known place of the city, full of identities and people that created the city's soul. The memory of these spaces may well be fleeting, but it holds the moments and stories that form what we are today (Museu dos Transportes e Comunicações, 2012).
- *Step into the light* (FIG. 2): it is an interactive light design project that promotes a new way of communicating, where you use your body, voice and senses as a means of communication, combine them with technology and make it a single living, visual and musical instrument: the machine reacts with light and sound, according to the intensity of noise around it.



FIG. 2 - Communicate Exhibition: "Step into the Light", 2012, Porto. © AMTC Archive.

You can use mobile phones or other communication devices to extend the experience outside the Museum, to any part of the world (Museu dos Transportes e Comunicações, 2012).

- *The Message*: it can take many forms and is omnipresent, especially in today's digitised world. A road sign, a metaphor, a symbol, an email, a tear, a silence, a song, a gesture or a photograph – these are just some of the countless possibilities and forms of the Message. It does not constitute communication in itself. To do so, the Message has to come into contact with somebody capable of giving it meaning - someone who understands the code in which it is constructed and is capable of applying it within a framework of senses and, as a result, is able to take decisions, act or react. The Message acquires meaning in a relationship and requires a code, a context, a medium. The way in which it spreads and circulates often receives powerful injunctions of technique, art and creativity. The codes broaden the universe of communication and facilitate human interaction (Museu dos Transportes e Comunicações, 2012) (FIG. 3).



FIG. 3 - Communicate Exhibition: "7 billions of Others" project, 2012, Porto. © Egídio Santos | AMTC Archive.

Language is the human capacity to acquire and use complex communication systems. But there are other linguistic systems that progress through different stimuli: the language of signs, written language and the construction of artificial codes broaden the universe of communication and facilitate human interaction in the widest of contexts. Light performs an important role in many of these codes:

- *ColorADD* - Colour blindness is a congenital alteration, a disturbance in visual perception which consists of the incapacity to distinguish a specific set of colours. In a world in which colour variety plays a fundamental role, misinterpreting colours may constitute an obstacle, even in everyday tasks, and make social and even professional integration difficult. ColorADD is a code created for people who suffer from this incapacity to distinguish colours. This is an inclusive system based on the principle of attributing basic symbols in the three primary colours. These symbols are combined or undergo variations, allowing them to represent other colours or indicate whether the shade of a certain colour is light or dark (Museu dos Transportes e Comunicações, 2012). This universal code for the colour blind was developed by the communication designer Miguel Neiva.
- *Morse Code* - In 1837, Samuel Morse invented a telegraph that used a device with a single key which, when pressed, sent an electric pulse which was converted into a graphic, sound or light signal (Morse code). These signals can be intercepted directly by

anyone who knows the code, without the need for specific equipment. It was the main system of communication in the 19<sup>th</sup> century and beginning of the 20<sup>th</sup>. However, this discovery meant an even greater challenge that would have to be overcome: to transmit voice at the same speed and distance as the telegraph (Museu dos Transportes e Comunicações, 2012).

- *International Flag Code* – Signalling using nautical flags is one common means of communication between ships (which also involves light), normally incorporated into two different systems: the International Flag Code and the Semaphore Code. The former consists of a specific set of flags which represent a letter and a composed message. The latter is based on the movement of two flags, similar to the movement of the hands of a clock, held by a signaller with extended arms. Each position corresponds to a letter, number or punctuation mark, allowing any message to be structured (Museu dos Transportes e Comunicações, 2012).
- *Braille* - This is a system of reading and writing through touch, developed by Louis Braille at the start of the 19<sup>th</sup> century. Blind from birth, Braille was inspired by a military communication system (night writing) which allowed soldiers to read any message in the dark (without light) through raised markings. The Braille system is based on a six-point grid (Museu dos Transportes e Comunicações, 2012).



- *Sign Language* - Communication using hand movements but also facial expression and body language. Sign language has its own lexis, grammar, and inherent semantics, which vary according to country, culture and society. There are perhaps as many or even more sign languages in Europe as there are spoken languages. And for all of them light plays an important role to allow communication to happen (Museu dos Transportes e Comunicações, 2012).
- *Road signs* – They form an essential communication system for keeping traffic in order. The system is therefore fundamental for traffic to circulate safely. There are several types of signs: vertical signs, road markings, traffic lights, temporary signs, traffic regulators' signs and drivers' signals (Museu dos Transportes e Comunicações, 2012).
- *Messengers*: in 1873, Willoughby Smith discovered that the chemical element selenium could transform light energy into electric pulses, which meant that images could be transmitted through an electric current: TV became a powerful medium. Considering all the inventions of the 20th century, few have had such a profound impact as television. The power and fidelity of visual communication had already been proved with photography and heightened with the cinema. But neither of these penetrated homes like television did, making it the most powerful medium ever for transmitting information, ideas and ideals (Museu dos Transportes e Comunicações, 2012) (FIG.4).



FIG. 4 - Communicate Exhibition: “Inside TV”, 2012, Porto. © AMTC Archive.

Despite the technological evolution and the already immense capacities of computers, only Internet came to raise their effectiveness to a completely different level. It enabled the spatial barriers of communication to be eradicated, almost unlimited access to information and the possibility of performing various tasks from home. Much more than just a new medium, the Internet and its development, through social networks, are a new environment, broadening the media eco-system exponentially (Museu dos Transportes e Comunicações, 2012).

What if we could stop being the viewer (FIG. 5) for a while and try the “other side” of a television broadcast? That is one of the many challenges of this exhibition.



FIG. 5 - Communicate Exhibition: “In the first person”, 2012, Porto. © Egídio Santos | AMTC Archive.

3, 2, 1... Lights On...!

## References

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