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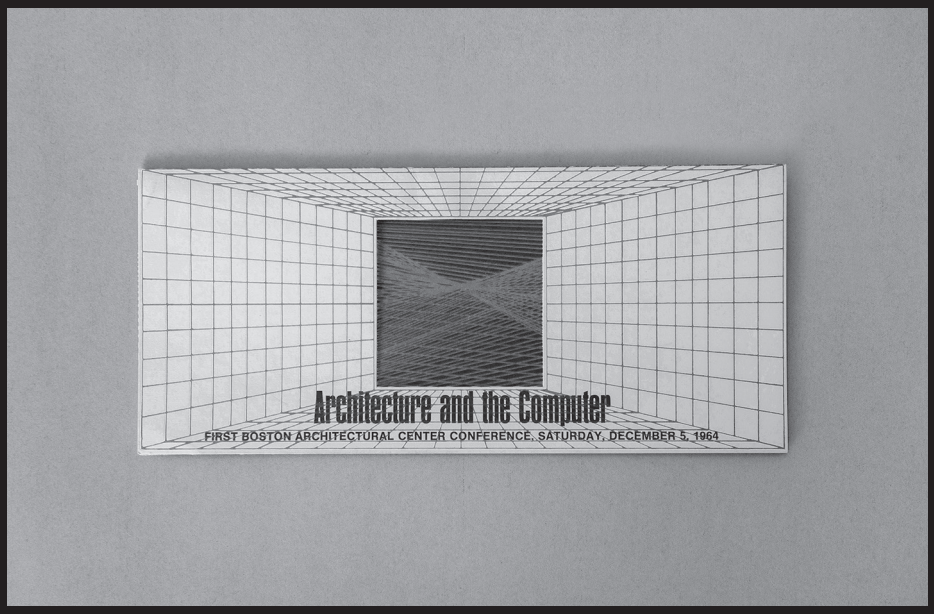
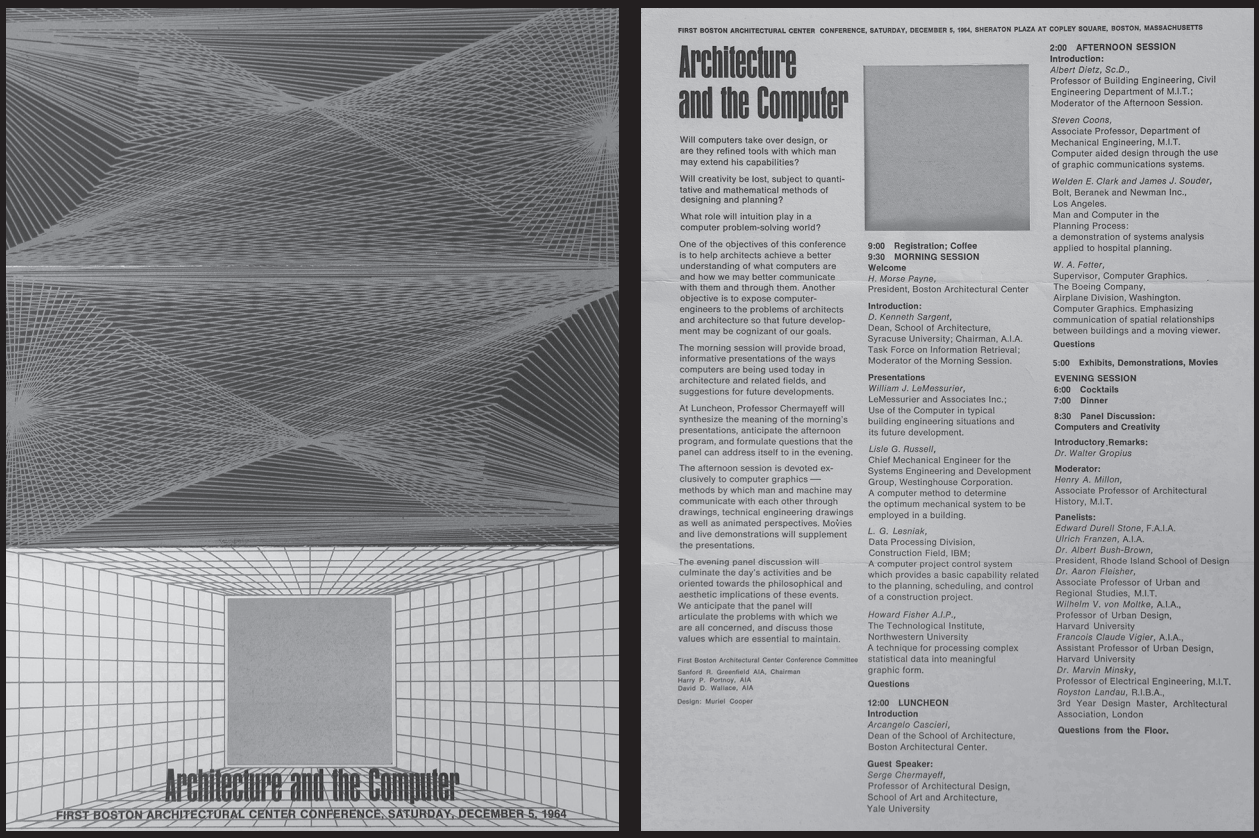


We know that Digital is inevitable and irreversible; and when we think about it, we evoke the present and catch a glimpse of the future. But there is still a story to tell: digital culture is not just about the future. It can be useful to reflect on this according to a historical perspective that is still somewhat obscure and unexplored – some kind of *black box* that unveils the path taken. In this sense, we went back 60 years, to the time when some designers wanted to build architectural and design machines that turned the design process into a dialogue. However, at that time, these ideas proved to be difficult to convey into practice. The existing technology wasn't advanced enough to include ideas and theoretical models. Despite the prominence of the term "Artificial Intelligence" during the 1950s and '60s, it eventually disappeared – until its re-emergence in recent times; its premises were way ahead of its time.
In fact, the development of "digital architecture" does not merely comprehend the use of a new tool; is rather inseparable from a broader cultural framework. Fernando Lisboa (1960–2008), who was a teacher at the Faculty of Architecture of the University of Porto and a key-figure in the integration of computing in the field of architecture in Portugal, stated that "historical experiences show that a new tool does not automatically lead to renewed creativity or to the adequate energies to benefit from it. This fact cannot work as a sedative to stop people from trying to understand and keep on researching"[1] – thus encouraging research on new instruments, in order to increase and reach their full potential.

1 Fernando Lisboa, "www.arquitectura" in Alves, J., Campos P., Brito, PQ (eds.) The *Future of the Internet*, Central Atlantic Editions, Matosinhos, 1999, p. 227.



Trifold Brochure. "Architecture and the Computer", Conference at the Boston Architecture Architectural, 1964. Images collected by Isa Clara Neves at the Boston Architectural College Archives. August, 2018.

During one of the first events that addressed the connection between architecture and computing – *Architecture and the Computer – First Boston Architectural Center Conference* (1964) – Walter Gropius stated: "I wish we architects keep an open mind towards these possibilities offered to us by science. The increasing comprehensiveness of our new tasks in architecture and in urban developments need new elaborate tools for their realization. It will certainly be up to us architects to make use of them intelligently as means of superior mechanical control which might provide us with ever-greater freedom for the creative process of design".[2]

Almost 70 years after the emergence of the computer, we keep discovering new tools and platforms. Digitally assisted design has been driven by technologies with diverse functional, cultural, social and economic goals. These technologies have transformed and continue to transform design by rapidly changing its processes, practices and products. The new design and assessment tools enable designers and architects to imagine, design and create new forms of construction, more ecologically sustainable buildings and new environments that interconnect or integrate themselves into physical spaces.

2 Walter Gropius, "Computers for Architectural Design," in *Architecture and the Computer. Proceed ings of the First Boston Architectural Center Conference* (Boston: Boston Architectural Center at MIT, December 5, 1964), from the department of architecture, MIT, p. 41.

The use of digital technologies in actual construction opens a new field of reflection, quite complex and with many implications. For this reason, *Black Box – Stories of the Future* will also address the new relations between design and computational potential, aiming at a better adaptation of technological improvements to design and focusing on the impact of computer sciences on design and architecture. Nowadays, the design of an object is not the main focus, but rather the possibility of creating guidelines that allow the production of said object – an issue that many educational institutions for design are exploring.

In short, we are interested in reflecting on an era that began in the 1950 and gained a new expression in our time – despite all its ups and downs, breakthroughs and setbacks. Until the beginning of the new millennium, one could say that the "material" was transferred to the "digital", thus creating the *Big Data*. Nowadays, the designers/architects aim to transfer the "digital" to the "material". And we currently have access to computer-operated machines that allow us to accomplish said process. For example, students and researchers can work with these machines at digital manufacturing and robotics laboratories.

With the beginning of the millennium – particularly during the decade that is now ending – "Artificial Intelligence" became part of architectural and design production. Understanding, debating and framing this transformation are the key starting points of 21st century design. Hence, it is important to reflect on what is actually changing: what are the possibilities of digital production? What can we learn from the past about rule-based design and design science? What are the possibilities of digital tools? In addition to the new digital production institutions that are successively inaugurating, is it also crucial to promote a design theory that comprehends a computational perspective? Who will lead this paradigm shift, where Digital materialises like never before?

The *Black Box – Stories of the Future* will contribute to establish a critical view of the influence of computer technology on design and architecture, thus promoting a reflection on emerging technical paradigms that are strongly reshaping the way we live.

Curators of *Black Box - Stories of the Future*