

Resonances of Stones

the International Project

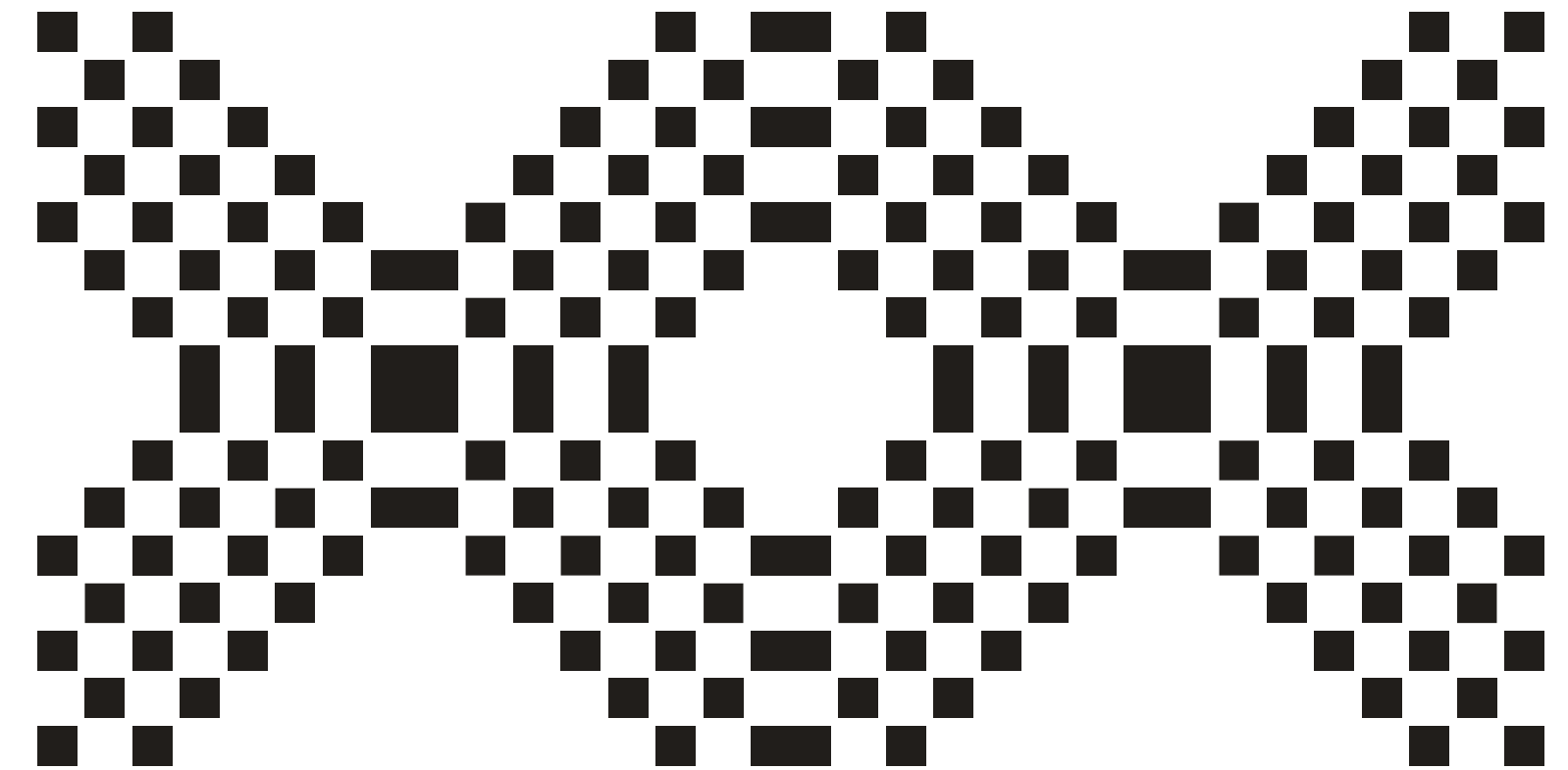
created by

Proff. Dr. Alessandra Montali CP

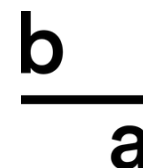
Dr. Bogna J. Gladden-Obidzińska PTE

presented at

Kenyatta University, Nairobi, 30.11.2024



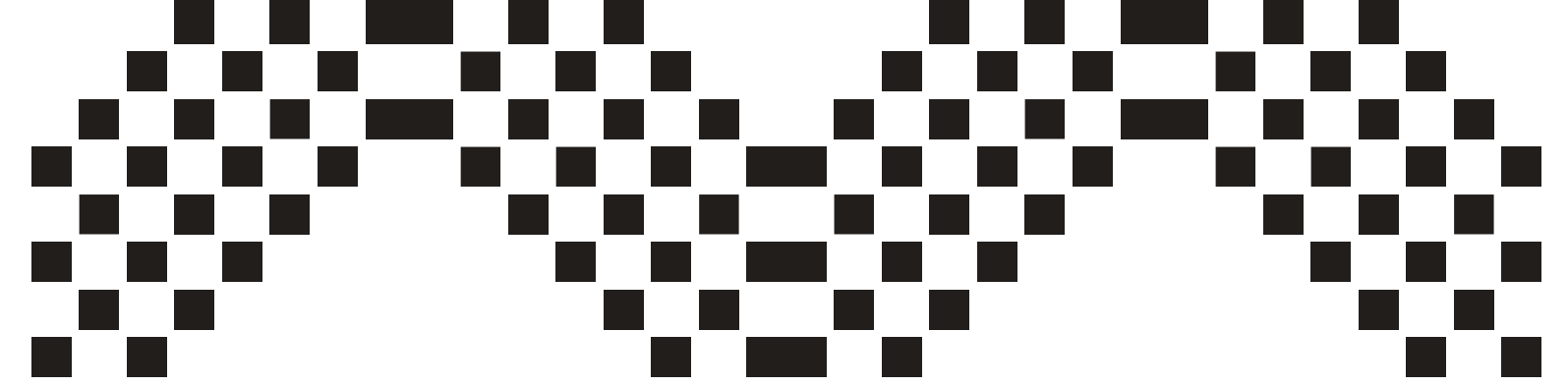
DOI: 10.5281/zenodo.14941187



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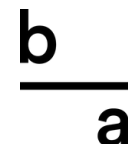


Overview



The project Resonances of Stones aims to develop a new approach to art that goes beyond static exhibitions, instead creating a dynamic and living dialogue between artworks, historical sites, and the audience. The integration of music, architecture, and cultural narrative offers immersive experiences in which art interacts with historical spaces and the surrounding soundscapes, providing a path of knowledge that embraces both the cultural and emotional dimensions.

In this perspective, the project is not only a reflection on diversity and the meeting of cultures, but also an invitation to explore new models of perceiving and understanding art, which embrace the complexity of the cultural contexts in which the artworks are born and evolve. Resonances of Stones thus becomes a prototype that can be applied to a wide range of buildings and historical sites, creating a replicable model for the integration of art, music, and architectural space, with a strong educational and cultural impact.

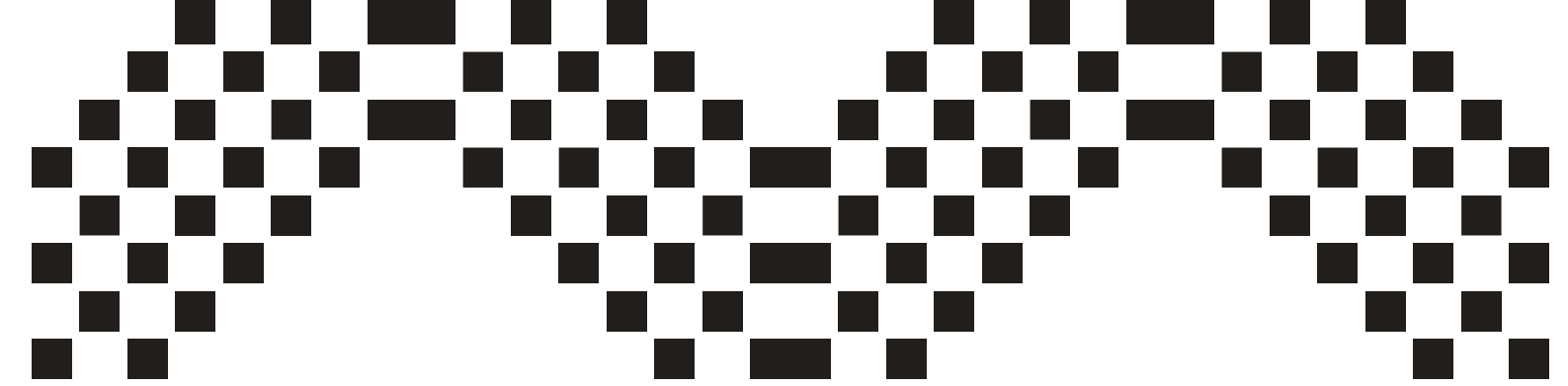


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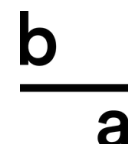
Team



The project involves researchers from Greece, Italy, Poland, and Portugal and is coordinated by **Alessandra Montali** (CP, Italy), **Bogna J. Gladden-Obidzińska** (PTE, Poland), and **José Revez** (FBAUL, Portugal).

The team includes also **Ella Nagy** (musician, CP, Italy), **Silvia Rio** (independent singer, Italy), and **Manolis Llianós** (independent musician & sound engineer, Greece).

The project is possible thanks to the invitation and collaboration of the Director of the Festival Bazeos Tower, Naxos, **Mario Vazeos**.



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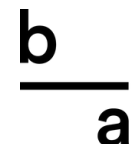
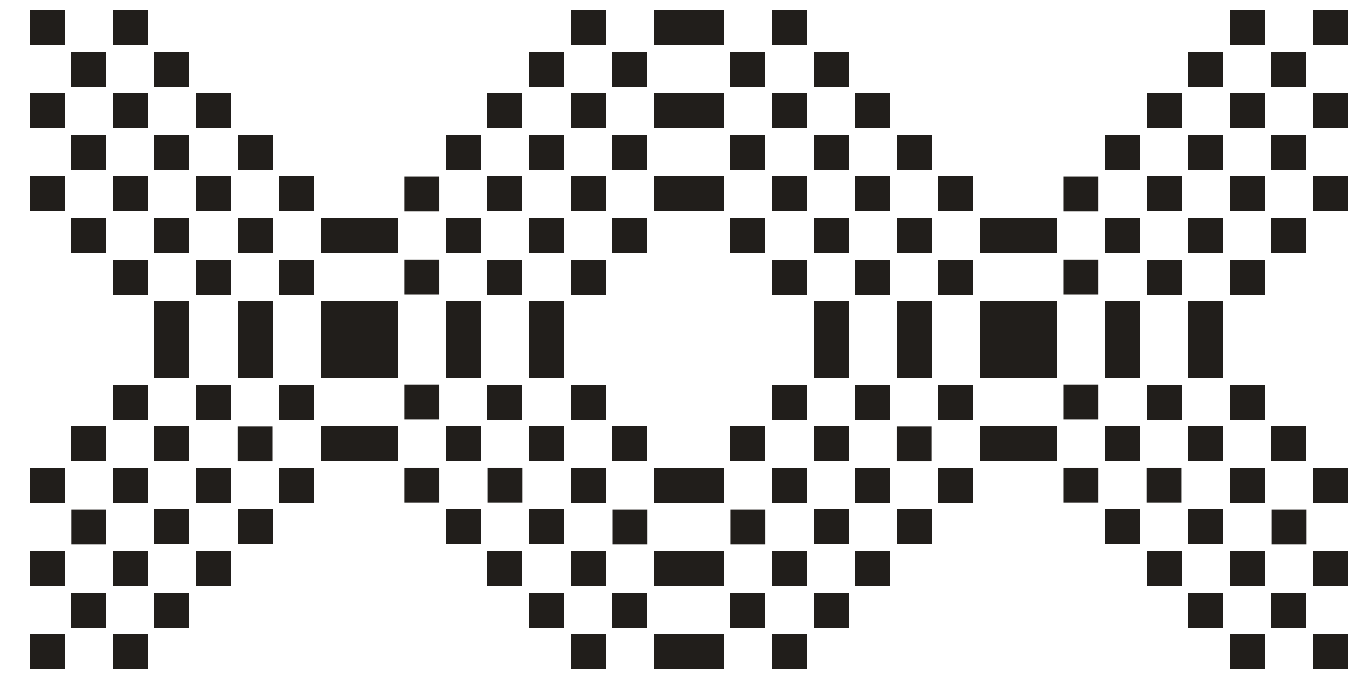
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Why the Bazeos Tower?

This historic building, one of the cultural landmarks of Naxos, is somewhat overlooked by tourists and heritage seekers.

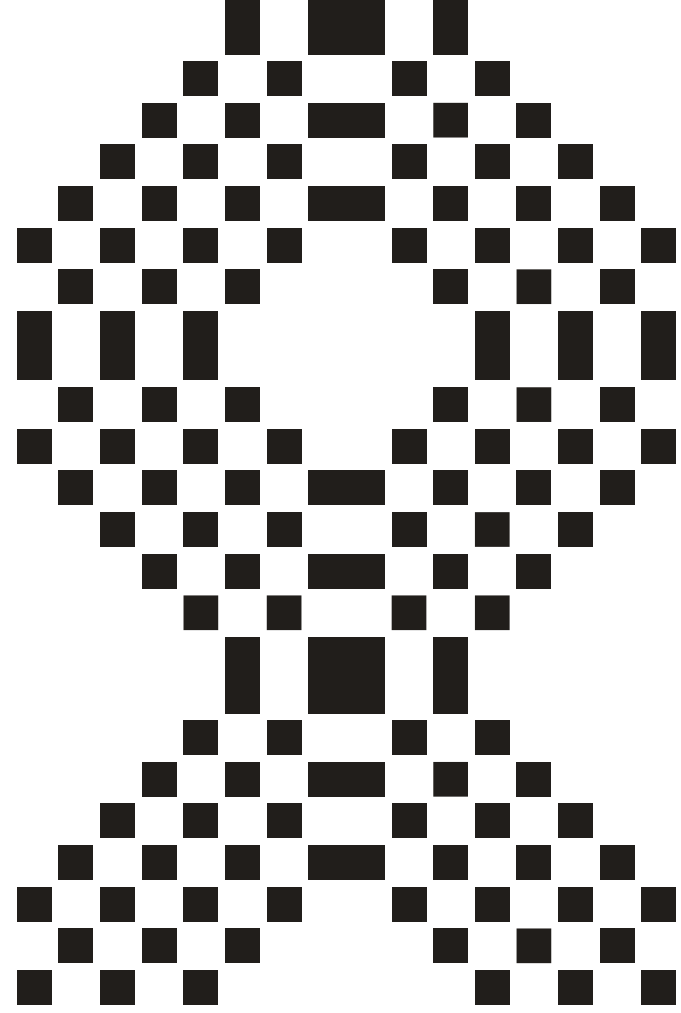
In the context of our research into the acoustic properties of virtual environments, the Tower provides an excellent space for enhancement of the hybrid experience of sound.



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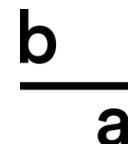
Goals and Objectives

Goal

The main goal of the project was **to improve the recognition of the Bazeos Tower** through the use of immersive technologies.

Objectives

- Experience Focus:
 - Authentic **sonic interpretation** of architectural heritage
 - **Combine ambient sounds and musical performances**
- Technology's Role: **Bridge past and present**, global accessibility

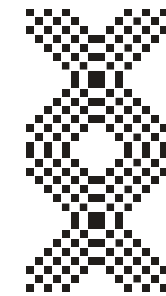


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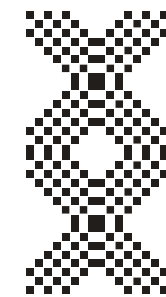


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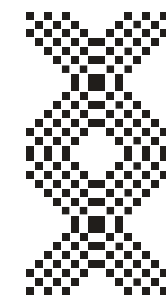
Phases of the project



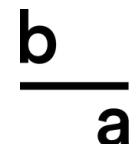
Phase I – Field work at Naxos 2024



Phase II – Postproduction 2025



Phase III – VR Experimentation 2026

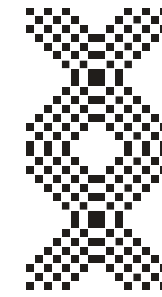


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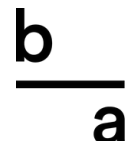
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Phases of the project



Phase I – Field work at Naxos 2024

- Activities:
 - Audio/Video Data Collection
 - Musical and Technical Rehearsals
 - 360-Degree Sound Recordings
 - Collection of data for reconstructing the 3-D building in a virtual environment
- Outcome: Capture the spacial essence – acoustic and visual – of the Bazeos Tower

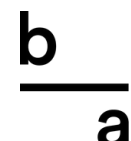
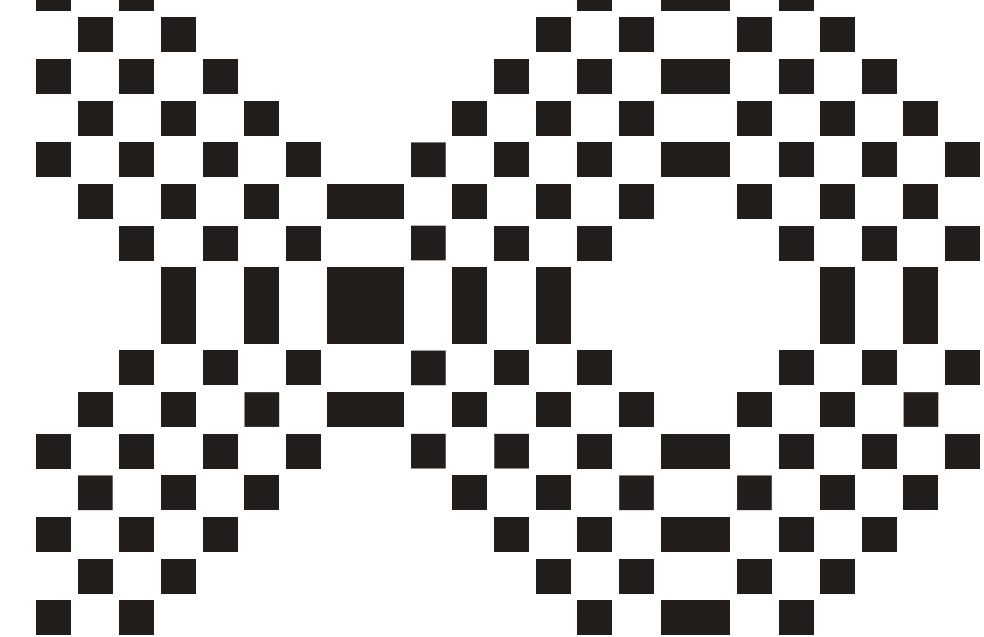
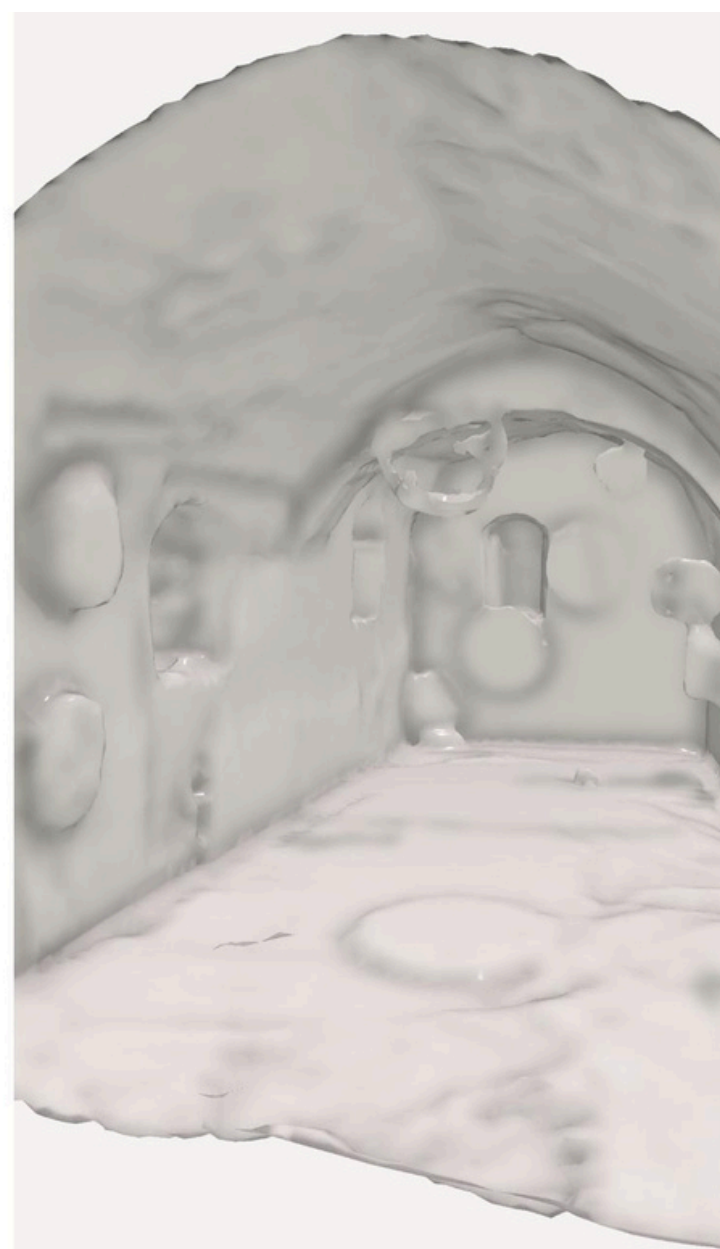
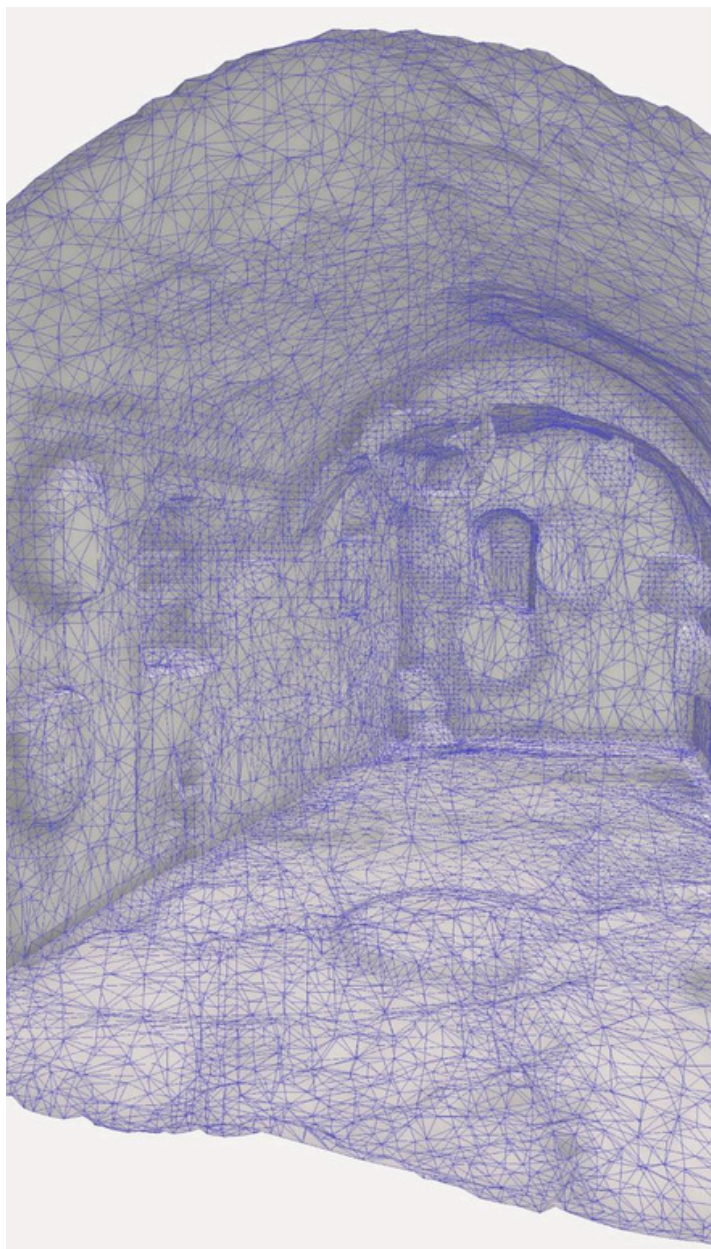


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3D visual scan of the tower

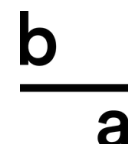
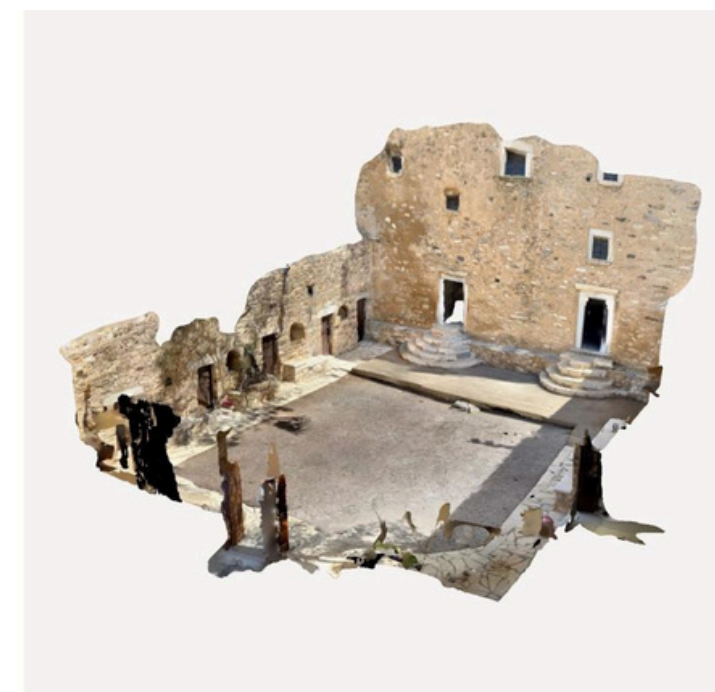
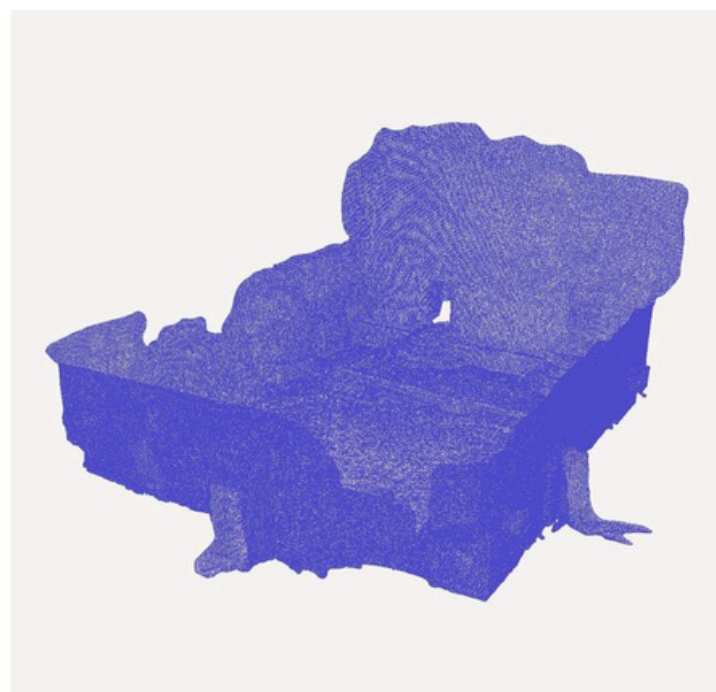
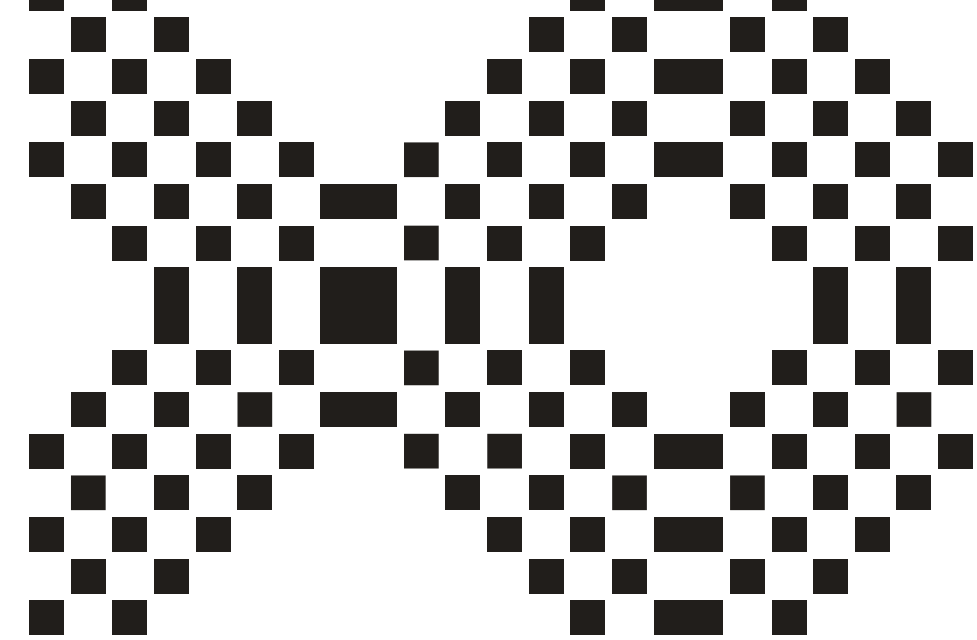


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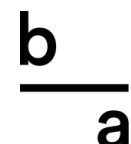
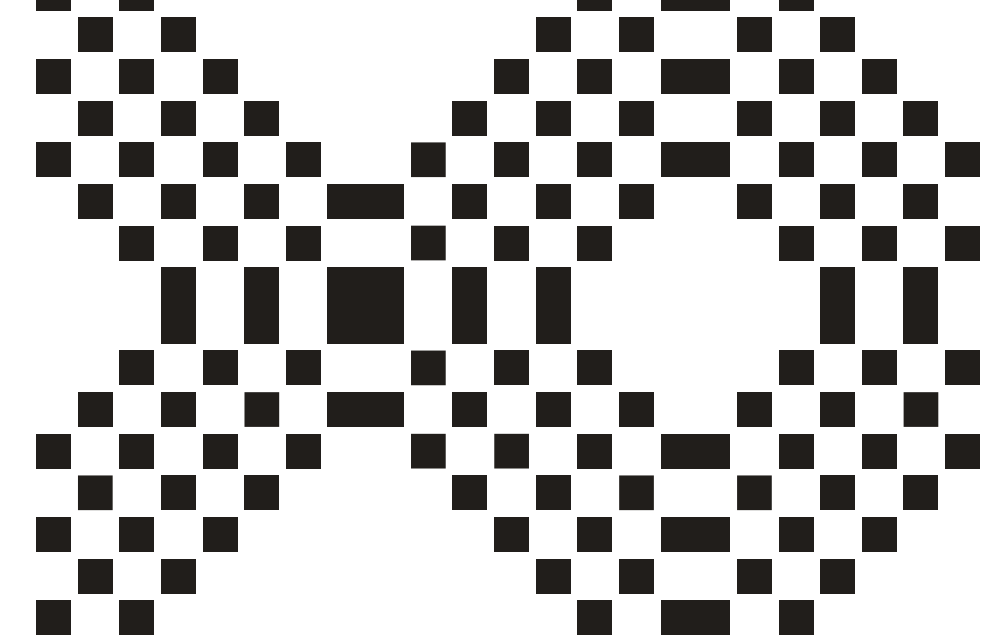


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Sound recording



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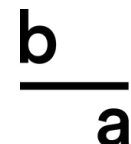
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Phases of the project



Phase II – Postproduction 2025

- Activities:
 - creation of the visual virtual Bazeos Tower in a virtual environment
 - postproduction of acoustic properties of the space
 - postproduction of the environmental and musical sound
 - combining both sets of digital material (visual and acoustic) into a functional set of spaces
 - choice of platforms accessible and functional for the end user to launch the product
- Outcome: Creation of a visually and acoustically realistic virtual version of the Bazeos Tower's space



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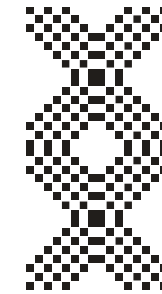


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Phases of the project

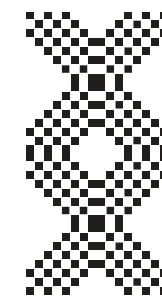


Phase III – VR Experimentation 2026



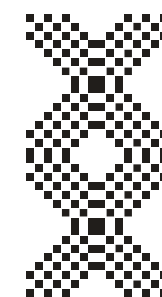
- **Focus:** launch of the Spaces & Experimentation with users

- **Goal:** Multisensory experience of the Bazeos Tower



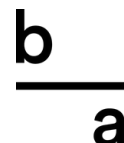
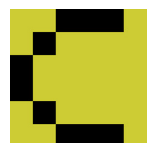
- **Experiences within the experiments:**

- Silent Spaces
- Environmental Soundscapes
- Musically Enhanced Soundscapes
- Musically and Visually (Art) Enhanced Soundscapes



- **Outcome:** Understanding of space perception without or with sound

- **Result:** Book on the sound-enhanced virtual spaces: *Sound-Inspired Time and Space Experience in VR (2026)*



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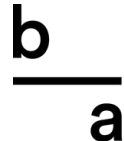
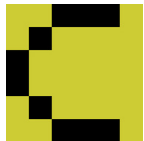


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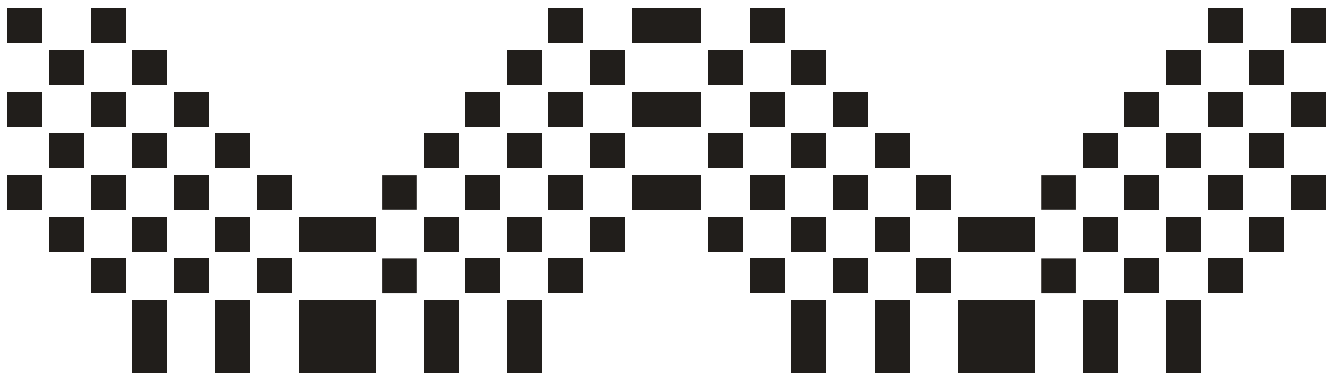
Structure

METHODOLOGY AND TOOLS	CHALLENGES	STRATEGIC TASKS
<ul style="list-style-type: none">• 360-degree microphone recordings• scanning of the physical building for a VR space reconstruction: a) Photogrammetry b) LiDAR on an iPhone 15 Pro Max, c) Polycam (Pro version) d) Blender• taking appropriate photos of the surfaces: 360° photo camera• musical contents: the guitar, singing	<ul style="list-style-type: none">• postproduction of the acoustic material has to be outsourced, CAPHE B1 budgets will not cover the cost• choice of technique: fully digital reconstruction of the acoustic qualities or a combination of the live recordings with digital postproduction• choice of adequate platform for the publication of the final product:<ul style="list-style-type: none">◦ accessible and easy-to-use◦ technologically apt for fully immersive experience• publicity	<ul style="list-style-type: none">• creation of an extended team of experts (CAPHE + outside stakeholders)• application for an additional grant• choosing the VR platform and systems that will allow a growth of the product in the future• possible platform choices: Spatial, Unreel, SimLab VR

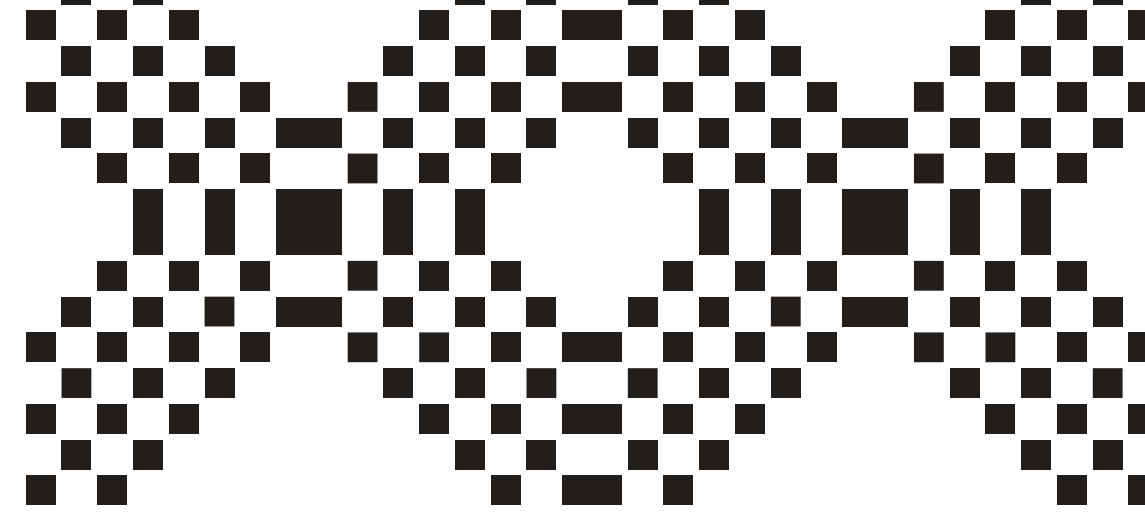
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Expected results

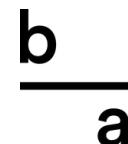


Publication

- Chapter: "Resonances of Stones: An Experimental Research" in *Sound-Inspired Time and Space Experience* by M. Dancewicz-Pawlik, B. J. Gladden-Obidzińska, A. Montali, M. Szyszkowska and (2026)

The final product online

- The Virtual Bazeos Tower with diverse acoustic qualities
- Video (trailer) on the production
- Other types of experiments for various stakeholders – virtual tours, concerts, exhibitions, educational projects
- Collaboration with organisers of art projects *in situ* – parallel physical and virtual editions



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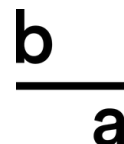
Amendment of 21.11.2024: an additional goal

As a result of a meeting held on the 1st of Nov. 2024 in Nairobi between RoS coordinators and Mr. Mutuma Marangu and Kinya Marangu representing TMMSAC as the Originating Convener, and Prof. Aleksandra Łukaszewicz representing CAPHE / PTE, a decision was made to intersect the RoS project with the realisation of one of the CAPHE project's deliverables, i.e., the Virtual Tour (VT) of selected works from the TMMSAC collection.

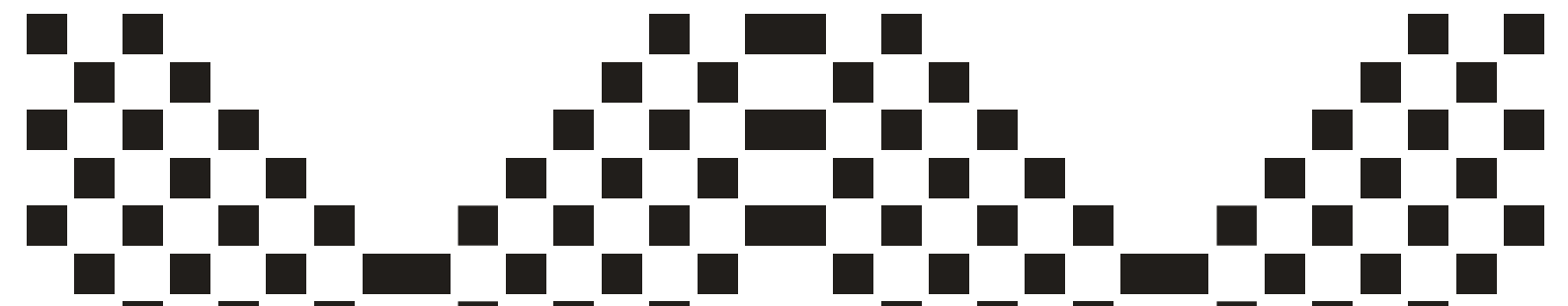
General implementation plan:

1. **procurement of equipment** necessary for the scanning of works: a) selection based on consultations with CAPHE members; b) purchase by TMMSAC as Originating Convener by Feb. 2025;
2. **scanning** of the selected works from the TMMSAC collection in Feb. 2025 with the participation of an expert from CAPHE;
3. securing of the **copyrights** of the Originating Convener and an **open access licence for CAPHE** of the virtual versions of the sculptures – subject for further consideration by Mr. Mutuma Marangu on behalf of TMMSAC;
4. **integration** of the virtual artworks from the TMMSAC collection as Originating Convener in the Bazeos Tower virtual space in the form of an exhibition /tour by the end of July 2025.

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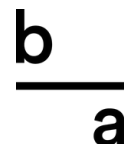


Summary

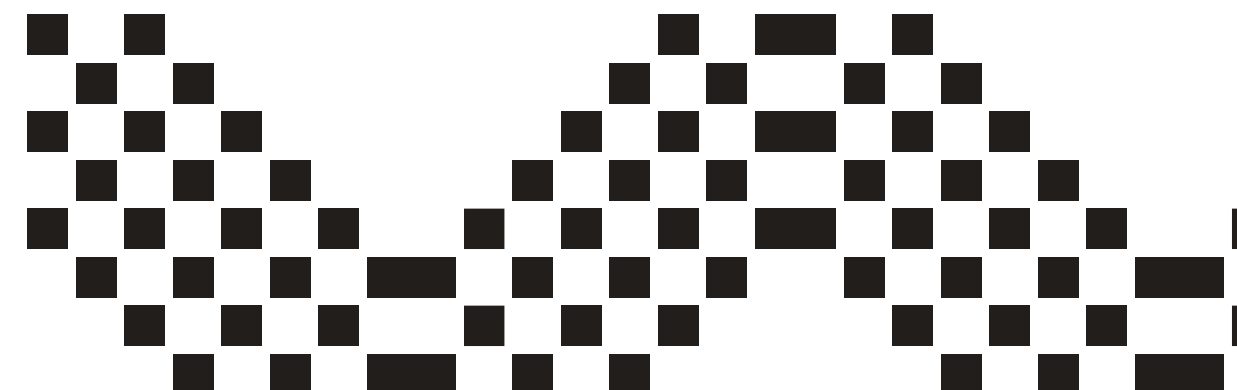
The project RoS consists of two parts:

1. activities that make part of the CAPHE effort in collaboration with outside stakeholders (possibly but not necessarily including financial input):
 - a)** creation of the **virtual – visual and acoustic – space** of the Bazeos Tower;
 - b)** carrying out **experimentation** inside it and **publication of the book**;
 - c)** execution of the **CAPHE Virtual Tour** of a selection of virtual versions of sculptures from the TMMSAC collection defined and acknowledged as Originating Convener.
2. activities that grow out of the CAPHE effort and are developed by initiatives of Alessandra Montali and Bogna J. Gladden-Obidzińska in collaboration with Mario Vaseos and other persons or entities within the virtual and physical spaces of the Bazeos Tower and other locations.

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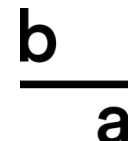
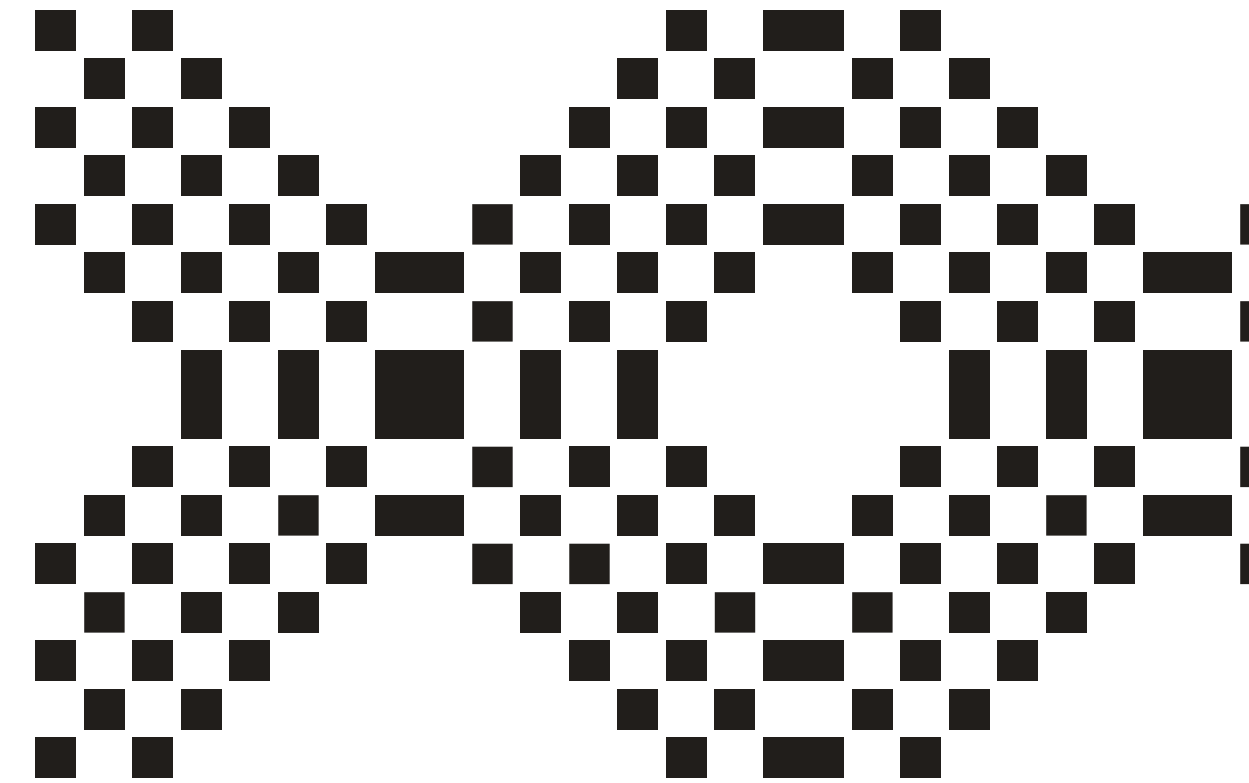
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Thank you

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