

Viva Voce

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Digital Process PDF Document



Serious Ramifications

Studio Project

2.1

Revisit :

The Domynion Clock

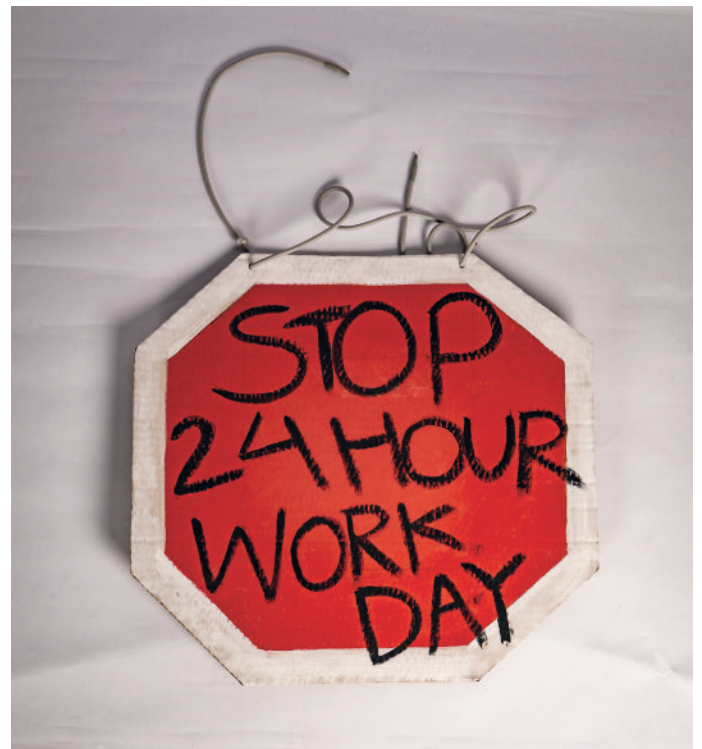
The original patent our group received described a machine that could electrically assist or even replace a person when playing golf. At first it seemed like a simple supporting device, but it also raised questions about how human labour, time, and leisure might be reorganised through automation. As we extended the implications of this device, we naturally imagined a more dystopian direction. It strongly reminded us of *Equilibrium*, the film starring Christian Bale, where an entire society is shaped by strict systems of control.

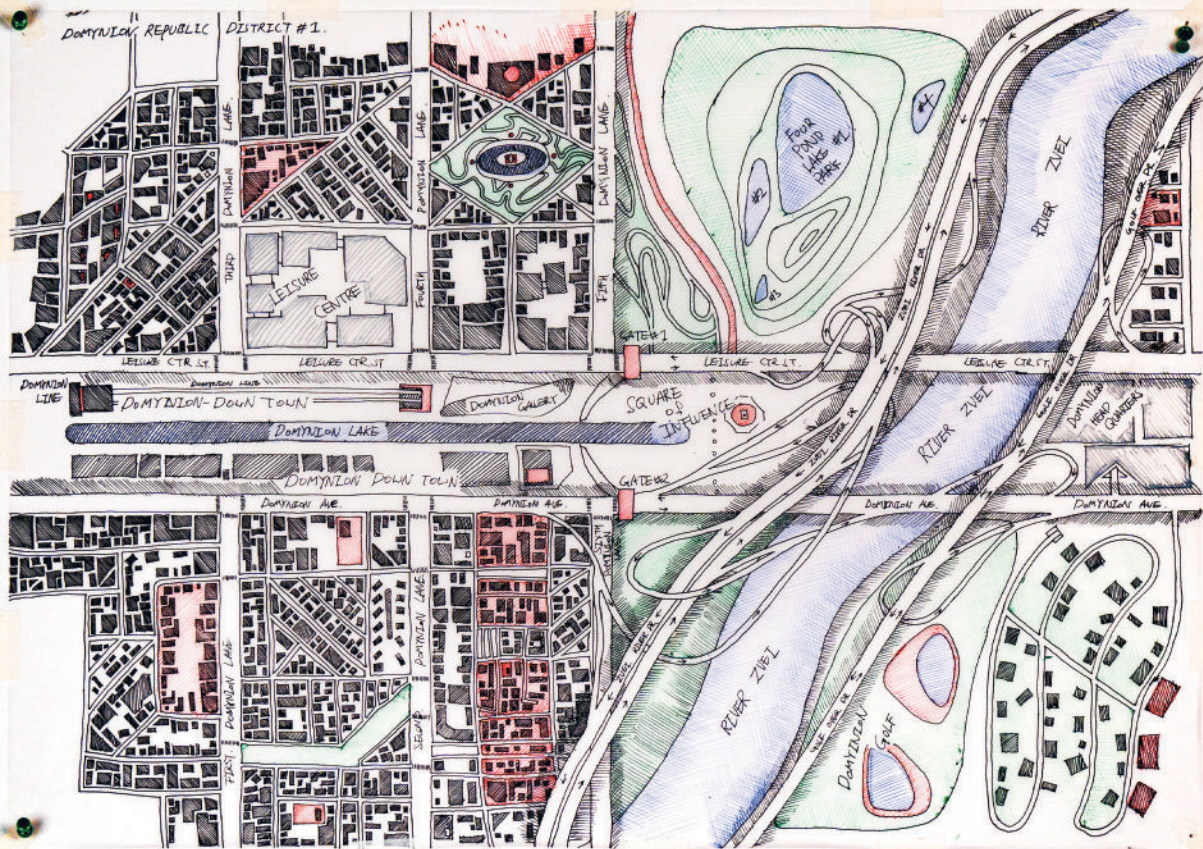
This starting point became important in our world-building process. The patent encouraged us to ask a speculative question: could even our free time be automated, controlled, or managed by a larger system? From this, we began to imagine a society where people worked constantly and had almost no time to rest on their own. In this world, rest was something that needed to be “assisted,” “organised,” or even enforced by an external power. Instead of freeing people, technology risked becoming a tool that monitored and managed their autonomy, including how and when they rested.

One of the central images that emerged during our discussions was a giant corporation that dominated both the city and the lives of the people living in it. We named this company Domynion, choosing a name that clearly reflected themes of dominance and control. In this world, citizens were unable to secure enough rest, and the material and institutional influence of Domynion shaped almost every part of daily life. The company symbolised a system where productivity and discipline outweighed personal wellbeing.

World-building in this project was not simply about creating a fictional setting. It worked as a method for developing a critical lens through which we could examine the relationship between technology, labour, time, and autonomy. For example, when we presented our early ideas at Speakers’ Corner in Hyde Park, we created protest signs used by imagined resistance groups within the world. Slogans such as “Give us our rest!” and “Reduce our working hours!” allowed us to test how social tensions might appear in the fictional society we were constructing. By staging a public performance, we could explore how the themes of our imagined world related to ongoing debates about work, rest, and the pressures of contemporary life.

This method also revealed certain limitations. As our imagination expanded, it became challenging at times to make concrete design decisions or maintain a strong connection to real-world contexts. The freedom of speculative thinking sometimes risked pulling the project too far from practical considerations. However, recognising this tension was itself useful, as it reminded us of the need to balance imagination with clarity. In addition to these critical aspects, the world-building process also acted as a form of cognitive training. Working within a theme that was not fully given encouraged us to stretch our imagination freely and explore ideas from many different angles. It required us to integrate my own thoughts with the perspectives of others, negotiate differences, and build a shared vision together. This collaborative and imaginative work strengthened our ability to think flexibly,





RIGHT-HAND TRAFFIC, DOMYNION Co.-LED AREA,
LAPLAND, FINLAND NOVEMBER 2045.

to combine fragmented ideas, and to form coherent narratives. In this way, world-building became not only a design method but also a way of exercising our thinking and helping us develop new approaches, experiment more openly, and expand the scope of our project.

After the performance at Speakers Corner, our group needed to expand the world we had started to build. The initial ideas were strong, but the world required more detail, structure, and internal logic. We understood that a fictional society

becomes meaningful only when its systems, geography, and values are clearly defined. Therefore we began shaping the foundations of the world in a more systematic way.

One of the first questions we faced was where to begin. We needed a starting point that could hold the rest of the world together. I suggested that we begin with a map because cities and societies always reveal their character through spatial structure. Space is never neutral. The organisation of streets, districts, and borders re-

flects deeper power relations. For this reason I started drawing the first map by hand on an A1 sheet.

The design of the map was strongly influenced by the mood of the world we were imagining. To express a cold and controlled atmosphere, I chose a grid layout that felt strict and mechanical. The design was inspired by the visual language of the Soviet Union and also by the rigid blocks found in places such as New York. Our world is shaped by social hierarchy, so the division of space according to rank made sense. The

map became a tool to visualise a society where every detail of life is organised by a central authority and where freedom is reduced to a minimum.

However the first version of the map revealed several issues. Although we intended to represent the entire city, the scale turned out to be too small for the world we had described. Instead of feeling oppressive, the city looked almost pleasant and spacious. It did not match the atmosphere of extreme control we wanted. After discussing this as a group, we decided to



reinterpret the map. The area I had drawn was no longer the whole city but only District 1. This district became the home of the highest ranking executives of Domynion. It represented wealth, privilege, and access to special resources. Districts 2 and 3 were set outside the map, invisible and unknown, which also reflected how social inequality removes some groups from the visible world altogether. This change clarified the nature of the world and allowed us to strengthen its internal logic.

Our world is built on a background of environmental collapse. Severe pollution has destroyed most forests, and paper production has become almost impossible. Only in Finland did one region remain relatively untouched. The strong protection of Lapland allowed Domynion to buy the land and take control of the remaining forest resources. Domynion became the only company capable of producing paper on a global scale. As demand for paper increased, the number of available workers decreased. To solve this, Domynion created technology that pushed the limits of human labour far beyond what would normally be possible.

In this world, the concept of a day has lost its natural meaning. Domynion measures time only in relation to productivity. A standard day inside the company is now fifty two hours. Lower ranking workers are required to work forty eight hours each day. Middle ranking workers must work forty hours. Only the upper class of executives work twenty four hours and receive more access to rest and resources. Rest is no longer a human right but a tool of management. Time becomes a controlled substance that Domynion distributes in ways that maintain its power.

This labour structure expresses the central values of the society. Productivity is the main moral principle. Efficiency is the highest priority. Citizens are treated as resources whose duty is to serve the company. Autonomy is considered unnecessary because independent decisions slow down work. Even rest is seen as something that should be organised and optimised. These values reveal a society that has replaced human wellbeing with economic logic. Through this world we were able to explore several important questions about our own society. The first question concerns labour. The idea of extremely long work hours is an exaggeration of problems that we already see today. Many people live under pressure to work beyond their limits, and some even lose control of their free time. By extending this into our fictional world, we wanted to make the issue more visible and easier to discuss.

The second question concerns environmental damage. Domynion gains power because natural resources become rare. This reflects real concerns about how companies or governments may control essential materials in the future. When resources become limited, power becomes more concentrated. Our world asks what might happen if one company could control the last remaining forests on the planet.

The third question concerns social inequality. The separation between districts and the extreme differences in working hours reflect how inequality creates different realities for different groups. In our world the



lower classes are almost invisible because they are excluded from the map itself. This exaggeration allowed us to examine how real societies also hide or ignore the suffering of certain groups.

The fourth question concerns control. Domynion uses time itself as a method of discipline. This idea is inspired by thinkers such as Michel Foucault, who explained how modern power systems control bodies and behaviour through everyday structures. In our world this control becomes extreme. People lose their natural rhythm

of life and live according to the artificial schedule of the company. This illustrates how technology can gradually take away freedom even when it appears to make life easier.

Worldbuilding allowed us to connect these issues into one coherent system. Each part of the world supports the others. The environmental crisis explains the rise of the company. The company explains the extreme labour structure. The labour structure explains the social hierarchy. The map expresses the

structure of power in visual form. This interconnected design made the world more believable and allowed us to understand our own society through contrast.

The process of expanding our world also helped us understand the importance of collaboration. Each team member brought different ideas, and the world grew through discussion and negotiation. When we changed the map from representing the entire city to representing only District 1, it showed how world-building requires constant

adjustment. The world becomes stronger when it is shaped by many perspectives. Domynion is not only a fictional company. It is also a mirror that reflects our concerns about the present. Through this world we questioned the direction of technological development, the meaning of labour, the value of rest, and the future of environmental resources. By imagining a society where all these problems are pushed to the extreme, we were able to reveal the hidden structures that shape our real lives.

The Domynion Clock

As our group continued to develop the world of Domynion, we began creating physical objects that could exist inside this society. Each member of the team chose a different artifact that would reflect the rules, values, and atmosphere of the world we had imagined. My role was to design an object that could represent the control of time and labour, which were central themes in our world. Before starting the artifact itself, I attempted to translate the map I had drawn by hand into a three dimensional form. I used the video game Cities Skylines to experiment with the



layout and atmosphere of the city. Although I could not fully recreate every detail, the process helped me visualise the scale and structure of District 1. It also allowed me to see how the city might feel when experienced from a human perspective. Even though I paused this work before completing it, the experiment contributed to my understanding of the world.

After this early exploration, I chose to design a clock that would be used inside the Domynion organisation. The clock was created for the highest ranking



members of the company. In our world, different districts follow different working schedules and every class has a different length of a day. The purpose of the clock was to show all of these work cycles at the same time. It was meant to be a device that only powerful individuals would have access to, because it allowed them to observe the labour rhythms of the entire society.

The main challenge was finding a way to rotate five separate clock faces with different speeds using



one system. At first I considered using separate motors, but that solution felt too simple and would not reflect the strict and centralised nature of the Domynion world. Then I thought about how an engine in a car works. A car engine can turn many parts at the same time by sending power through one drive system. This idea helped me find a direction. I designed the clock so that one motor would rotate all five clock faces. The motor I used was controlled by a small board, the product Arduino. This allowed me to set different speeds for the

rotating parts.

Each district in our world has a unique work schedule. Lower ranking workers labour for forty eight hours while middle ranking workers labour for forty hours and the highest ranking workers labour for twenty four hours. To reflect these differences, each clock face was given a different size and rotation speed. The smallest face represented the most privileged group because their day was the shortest. The largest face represented the lowest class because their day was the longest. The different speeds made the work cycles visible in a clear and physical way.

For the body of the clock, I used MDF and cut the pieces with a laser cutter. To cover the surface, I used paper that was cut to the same size. The use of paper was meaningful inside our world because Domynion controls nearly all remaining forests and produces most of the paper in the world. Using paper allowed the object to feel more connected to the story of the world and reinforced the idea that every part of Domynion society relies on the company. Even though the paper was thin, the final appearance was smooth and did not look cheap. I was pleased with how the material choice supported the concept.

Although the final prototype did not fully function, I managed to understand the system well enough to know why the movement failed and how it could be fixed. I learned how to control the motor speed and how to use belts to transfer rotation from one part to another. I also learned how small changes in distance or weight can affect movement. Even without complete success, the process helped me gain important skills

and improve my understanding of mechanical systems.

Other members of the group also created artifacts that belonged naturally inside the Domynion world. Sonny designed a brain-wave control helmet that allowed workers' brains to rest while their bodies continued working. Rachel created symbolic posters and coded messages for the resistance groups fighting against Domynion's time system. These posters included secret codes that could be used to communicate safely. TJ designed a bracelet connected to Domynion's economy, where rest

time functioned as a form of currency. Emily made a compressed stamp that could hide the symbol of the resistance in different places. My own artifact was the Domynion Clock, a device designed for high ranking executives to see the working hours of different classes and districts at a glance. Together, these artifacts showed many different sides of the world. They demonstrated how Domynion controls labour, how citizens resist, how rest becomes a controlled resource, and how technology shapes behaviour inside this society.



Through the creation of these artifacts, we learned how to design for a world that does not actually exist. This required imagination but also discipline. Every decision had to relate back to the rules and values of the world. We could not simply make objects that looked interesting. They needed to make sense inside the fictional society. This approach helped us understand how design can create meaning and how objects can express social systems.

Working as a group also taught us about collaboration. Although our final results were strong, the process was not always smooth. Communication sometimes became unclear and we did not always manage our time well. Some ideas were not shared early enough and some tasks were divided without enough discussion. If we had communicated more carefully and respected each other's working styles more fully, our results might have been even stronger. Even so, we learned how to combine our ideas into one theme and how to create objects that belong to the same world.

Personally, I realised that I needed to manage my time better. I spent a long period designing the three dimensional map, and this reduced the time I had for the clock. If I had balanced my tasks more effectively, I might have been able to produce a fully working prototype. Still, the project gave me valuable experience. I learned how to design an object with a strong connection to a fictional world, how to think critically about materials and mechanisms, and how to work with others toward a shared goal.



For this first revisit, my aim was to complete the upload process and make the clock physically operate, using the code and mechanism that I had already developed.

However, at the point of uploading this PDF, the clock unfortunately has not been fully completed. During the process, I later realised that, after my Mac had been updated, my version of Rhino was no longer supported and would not open. I also realised too late that I needed to use the school lab computers to continue the work properly.

Although the code and operating principle were completed, I was not able to reach the final stage of uploading the code to the board using the computer at school. Through this revisit, I gained a clearer understanding of the importance of time management, as well as the need to prepare in advance, check technical requirements earlier, and anticipate potential problems before the final stage of a project.



Dunne A and Raby F (2013) Speculative Everything Design Fiction and Social Dreaming. Cambridge Massachusetts: The MIT Press.

Foucault M (1977) Discipline and Punish The Birth of the Prison. New York: Vintage Books.

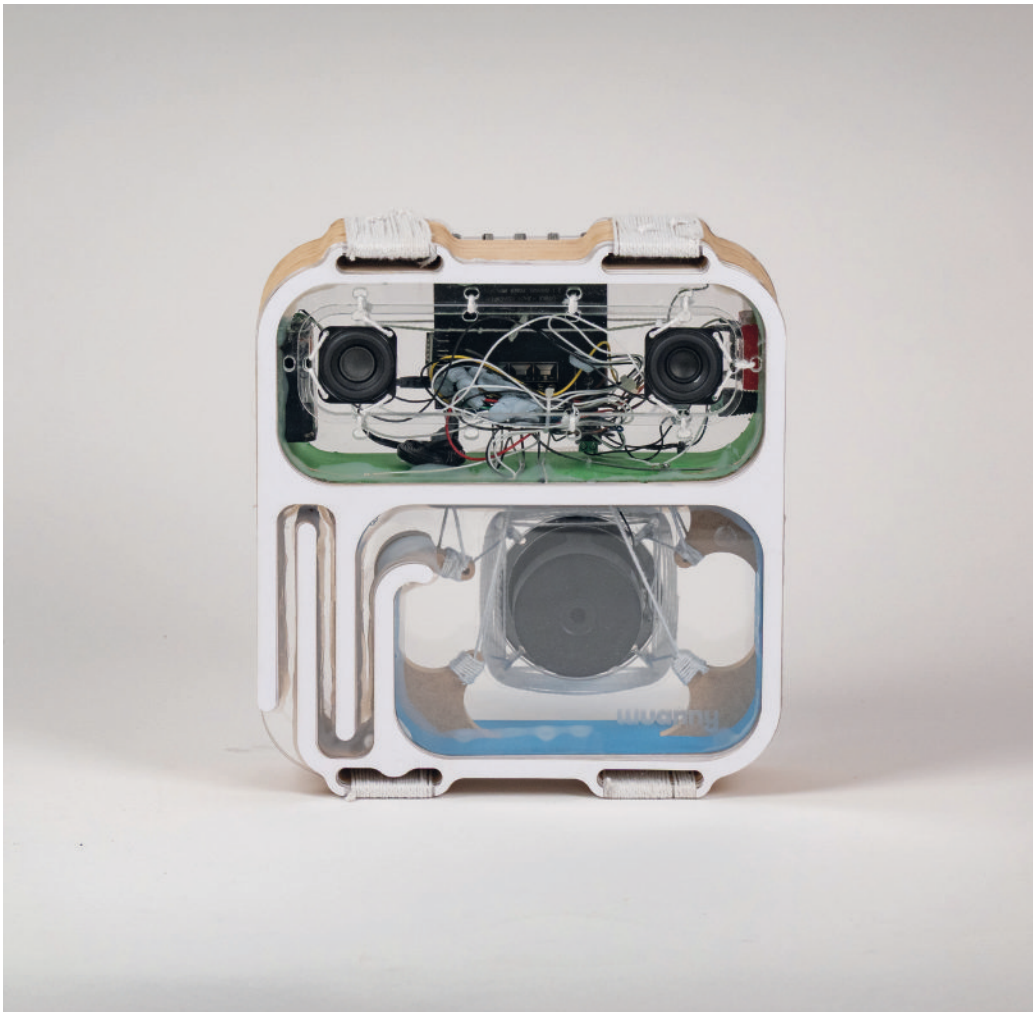
Plot Twist

Studio Project

2.2

Revisit :

Hello? My name is Wave!



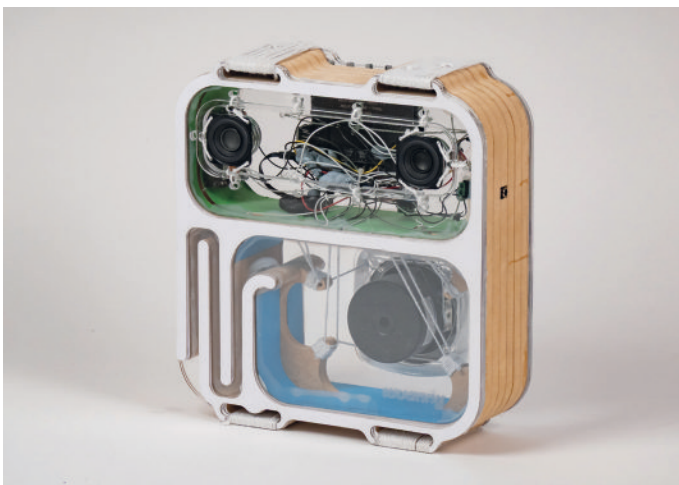
This project began with a simple question. What would happen if we changed the very nature of what a speaker is? Instead of a device that plays only the music we command, I designed a speaker created for a single piece of music.

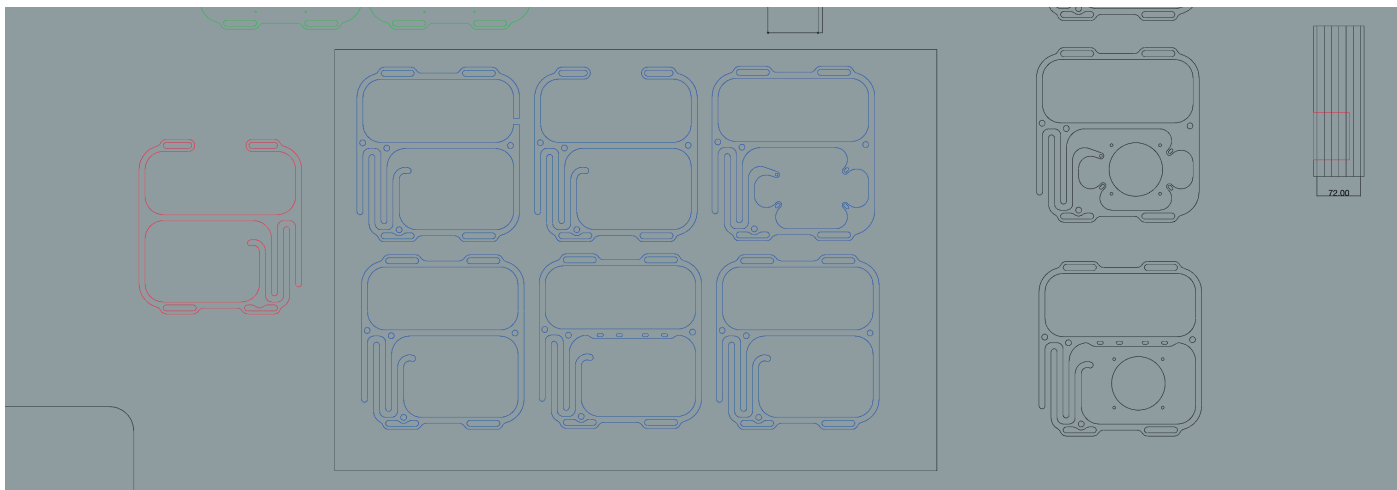
It plays only one song, Wave by Antonio Carlos Jobim. It cannot be paused, and it begins playing the moment it is powered on.

The chip that contains this one piece of music is powered by a battery. The speaker is completely sealed, making the battery impossible to replace. Like a human being, it has a finite lifespan. This object is no longer a machine that obeys our wishes. It possesses its own identity. It is closer to a living being with a soul.

Because Wave belongs to the bossa nova genre, I carefully calculated the length of the bass port to enhance the contrabass range around 50 to 68 Hz. Even the interior colour was matched to the album cover.

Although this speaker has now reached the end of its life, when it was alive, it was a legend. It carried both exceptional sound and a rich soul.



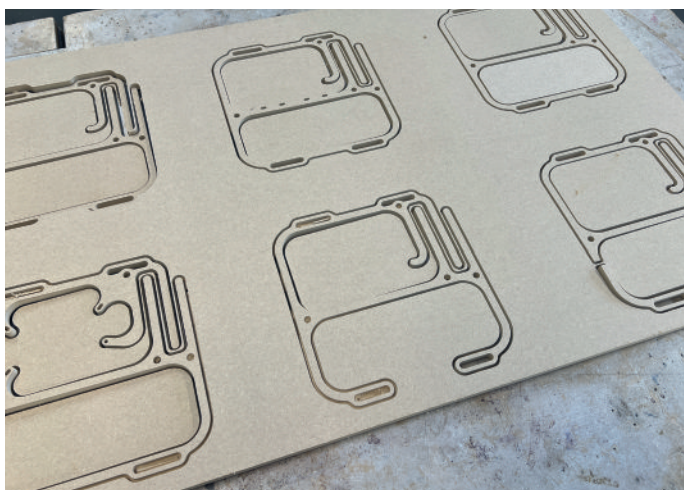


When I first designed this speaker, I considered many different materials. However, I decided that I should first make an initial prototype as easily and quickly as possible. The material that allowed me to make it quickly, cheaply, and relatively easily was MDF.

I did not want the body to feel weak, unstable, or like a simple box roughly assembled from separate panels. I wanted to make it more like a musical instrument, so I also wanted to avoid using nails and screws. If I did not use nails or screws, I thought that simply

joining several flat panels together to make a box would not be strong enough. I also thought the walls would be too thin to withstand the resonance and vibration of the speaker. Because of this, I decided to cut multiple layers of MDF using

CNC machining and stack them together to create one solid body. I believed this method would allow me to create a stronger structure and thicker walls. For the speaker drivers, I decided to use a 2.1 channel structure, so I ordered the woofer driver and the



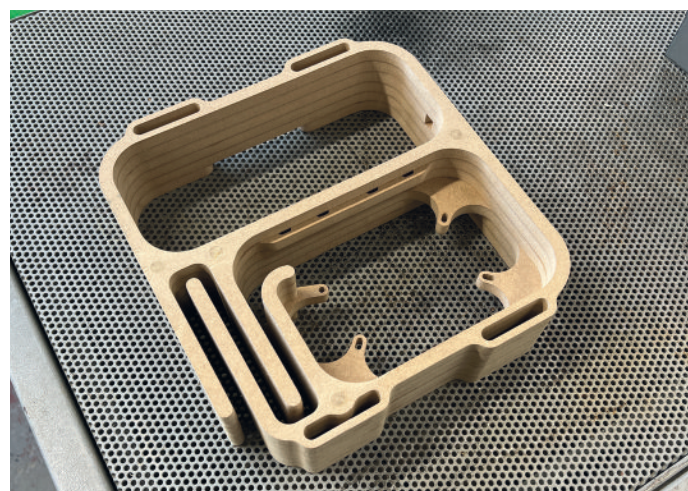
left and right drivers separately. I designed the internal space by separating the chamber for the left and right stereo drivers from the chamber for the woofer.

Antonio Carlos Jobim's Wave is a bossa nova track. In this music, the light, softly resonating bass around 55 to 65 Hz plays an important role. This low frequency resonance gives the sound a sense of depth. Based on the woofer driver I purchased and the size of the woofer chamber, I calculated the port length using a program. Before CNC machining, I

applied this port design to my Rhino file.

While designing the speaker, I was also thinking about fixing the internal driver with thread. Because of this, I created many small holes in different places so that the thread could pass through them if needed. As a result, I was able to complete the final object with the woofer driver fixed only by thread.

There were also many difficulties when designing the internal circuit. Conceptually, this speaker can be seen as a living object with one soul, which



is the song Wave. That was the main idea of the project. To achieve this, the speaker needed to play the music stored inside itself, rather than using Bluetooth or an external input. In order to make this possible, I needed to use a DFPlayer chip.

A DFPlayer chip is a very small module that plays music stored on a memory card. However, problems began when I tried to connect and operate the circuit. The chip required a different power input, so I had to run it with a separate battery. The DFPlayer also often had contact issues and did not work reliably. However, through this problem, I was able to develop a new conceptual idea: that the speaker itself could have a limited lifespan.

Because I did not manage my time properly, I had less time to focus on completing the circuit to a high standard.

There were also many parts of the final assembly where I could not pay enough attention to the finish. I wanted to fix all the stacked MDF layers together and finish the front and back with acrylic panels. However, when I cut the acrylic, I had not properly considered how it would be attached

to the body. Because of this, I had to fix it with glue at the final stage. As a result, the glue could not withstand the internal pressure and vibration produced by the speaker, and it began to leak. The finish also became visually messy, as the glue spread out between the gaps. This made the final appearance less clean than I had intended.

Through this project, I learned that I need to think much more carefully about finishing methods from the beginning of the design process. I also learned how important time management is in order to work more efficiently. In addition, I realised that I had focused too much on making the object itself and did not leave enough documentation files. In future projects, I need to build a stronger habit of documenting each stage of the making process in more detail.

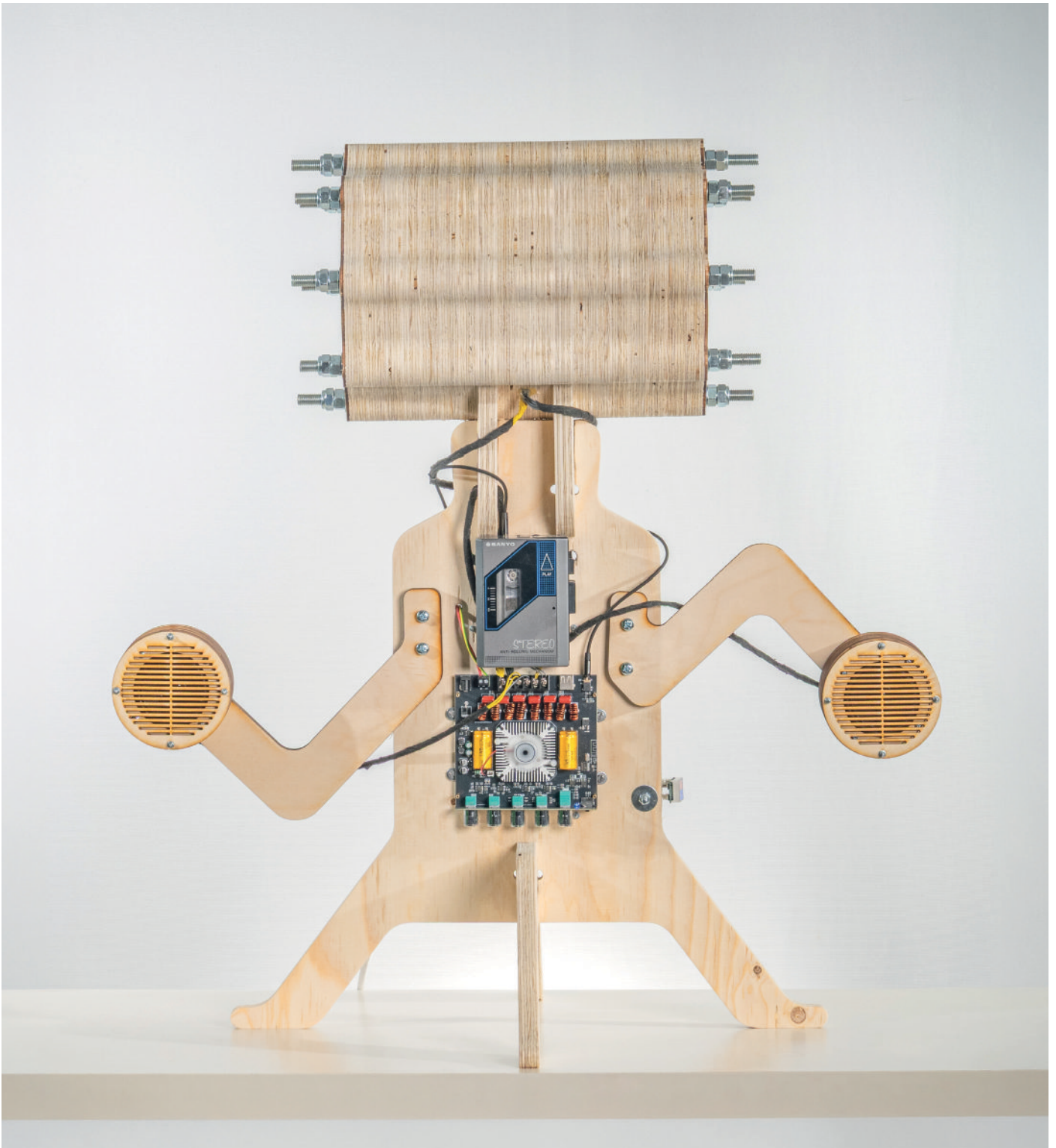


I Need Something More

Studio Project

2.2

Revisit :



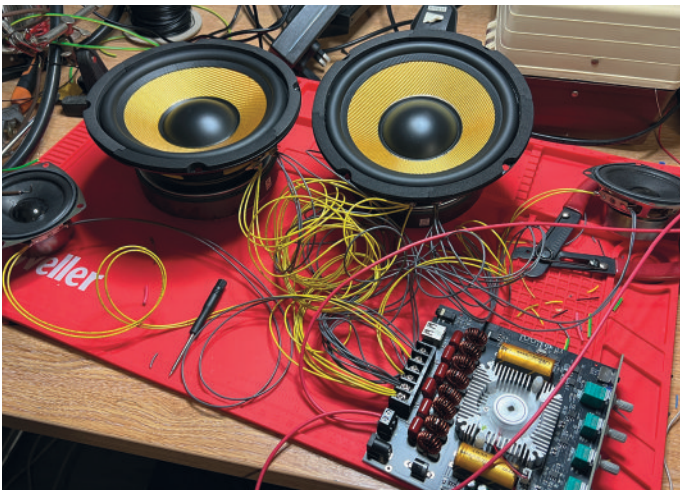


I decided that my second revisit would be to remake Hello? My Name Is Wave with a higher level of completion and on a larger scale. I wanted to make up for the mistakes I had made in the first version, and focus on achieving better sound quality and a better method of playing a single piece of music. I also wanted to move beyond playing one whole song, and instead focus more precisely on one specific part within a piece of music.

I also redesigned the form completely. The original version had a fairly ordinary rectangular speaker

shape, but I began to think that if this object was meant to be a living being with a soul, then it should at least have the appearance of a living creature rather than a conventional speaker. Because of this, I redesigned the entire exterior from the beginning.

When considering what material to use for the speaker body, I decided to use higher quality plywood this time. After making the body, I sanded it carefully to make the surface as smooth as possible. This speaker also has a higher output than the previous version. As the size of the woofer increased,



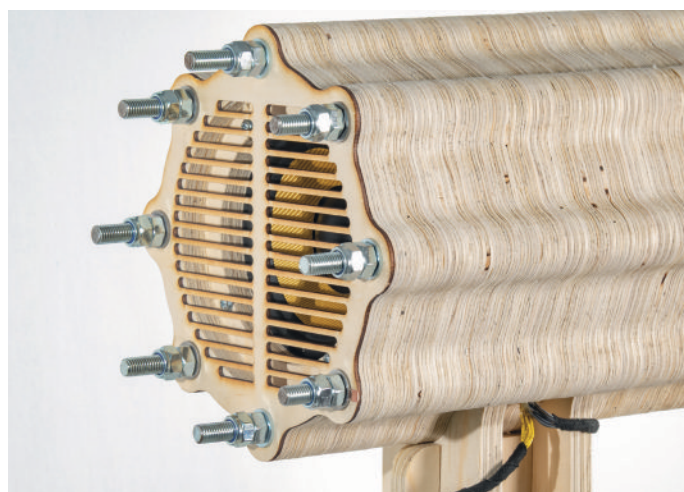
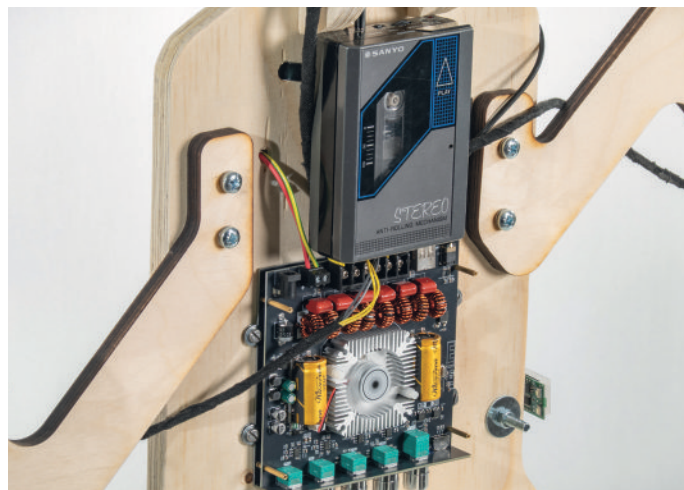
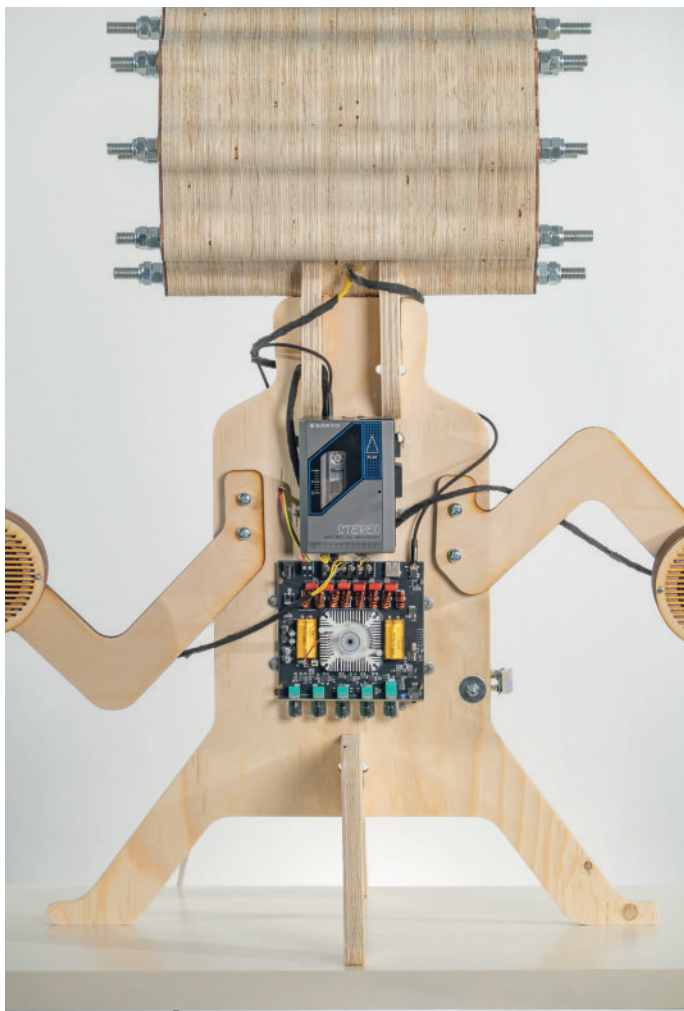
the amount of wood that needed to be cut and shaped also became much greater.

This time, I changed the placement of the woofers. Instead of using the previous bass port method, I placed two woofer drivers symmetrically in the head section and used an isobaric loading technique, which meant that I did not need to calculate a bass port in the same way. Isobaric loading is a technique where two drivers are used together as if they were one driver, allowing a similar level of output to be produced from a relatively smaller volume. It also

helps reduce unwanted vibration on the sides of the speaker.

I installed the left and right speakers in the two arms. In a way, it can be seen as the hands holding the sound, while the head produces the bass.

I also changed the music playback method from the previous DFPlayer chip to a cassette tape system. This was a solution I came up with because of the contact issues I had experienced with the chip. Using a cassette deck, I recorded only the middle instrumental section of Daft Punk's Touch as a one and a half hour loop, giving the speaker its

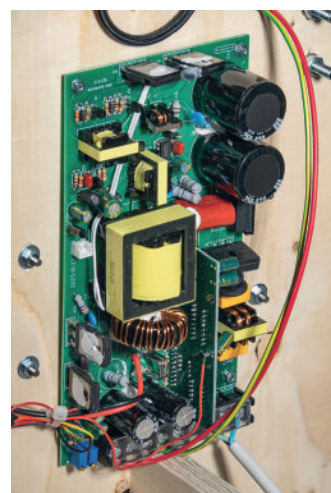
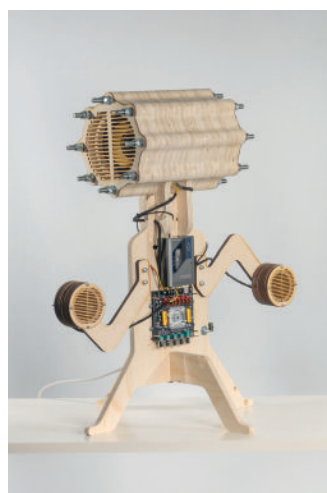
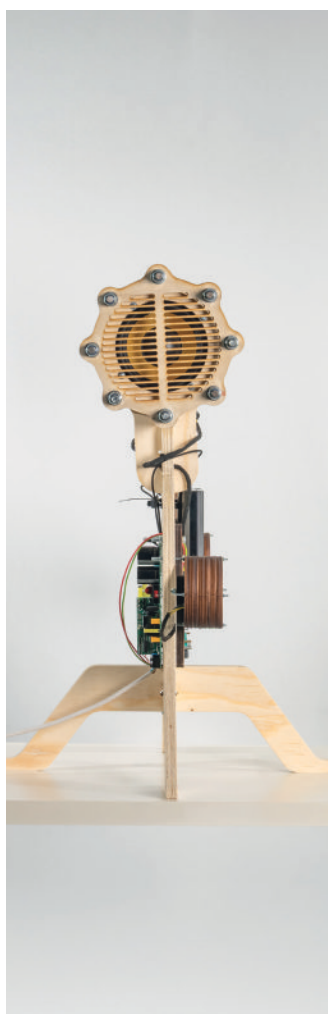


own soul. This speaker now endlessly plays only that instrumental section of the music.

The name of this speaker is I Need Something More. I chose this title because of a lyric that appears in the song.

Compared to the original Wave,

this version has much stronger bass, higher clarity, and a much louder output.



Live Brief

Heatherwick Studio Project

2.4

Revisit :

None





We worked on a live brief and were assigned to Heatherwick Studio. We had the opportunity to visit Heatherwick Studio, look around the space, and gain many valuable experiences. The project brief was that Heatherwick Studio would assign each group a specific high street, and our task was to improve or shift that high street in some way. The place assigned to our group was Old Kent Road.

First, we visited Old Kent Road together. We walked around, visited many restaurants, conducted interviews, and tried to understand as much as possible about the area, including its problems, strengths, weaknesses, and overall character.

As we walked along Old Kent Road, one of the things we noticed most was the presence of old and worn buildings. However, one of the positive aspects was that many different people and cultures seemed to come together in one place, with frequent interactions happening between them. At the beginning, we used the information we had gathered to create a research question, and then developed our ideas based on that question. Our initial research question was: "Do imperfect, authentic materiality

and forms in surrounding infrastructures have the power to shape engaging pedestrian experiences?" However, this question gradually changed during the process. Eventually, our final question became: "Can material, materiality, and identity interplay to create an engaging community experience?"

At first, I wanted to design a space that could bring people together and expose many people to the space at the same time. Based on this idea, as well as the sense of emptiness I had personally felt in the area, we thought, "What if we created something like a shelter above the road?" We brought this idea to our first tutorial, but the result was quite unsuccessful. The tutors advised us that it would be better to do something that Heatherwick Studio would never normally do.

After that, we visited Old Kent Road several more times together, sketching, observing, and developing different ideas. Many possibilities came up, such as canopies, a monorail, and scaffolding-related structures. Through the tutorials, we decided to develop the idea of a modular pop-up store system using scaffolding, which could also help spread and





celebrate the culture of the area. We also discussed creating different objects or parts that would belong to this imagined system and world. Phewa worked on the manual and booklet. Yoojin and Minso created several 3D-modelled examples of pop-up stores.

Ishika made a small physical model of one example of the overall pop-up store system. I decided to make one full-scale 1:1 model. During the tutorial, we received feedback that having one 1:1 model would be helpful. As a group, we decided that among

the different pop-up stores, we should create a table that could be commonly used by all of them. The table was designed using a scaffolding-based structure, and its function could change depending on what was placed on top of it. I made three examples: a sink, a

stove, and a standard table. Through this project, I learned how to work effectively in a group with people whose opinions aligned well, but also how to resolve situations when opinions did not match. It was also a valuable opportunity to learn how to prepare





a presentation, write a script, and make the script work together with the presentation slides. However, one thing I regret is that, even though we were working on a project in collaboration with Heatherwick Studio, we spent too much time at the beginning being uncertain and unable to make clear decisions. Because of that, we lost time that could have been used to properly develop and make more refined models.

Thank you.

