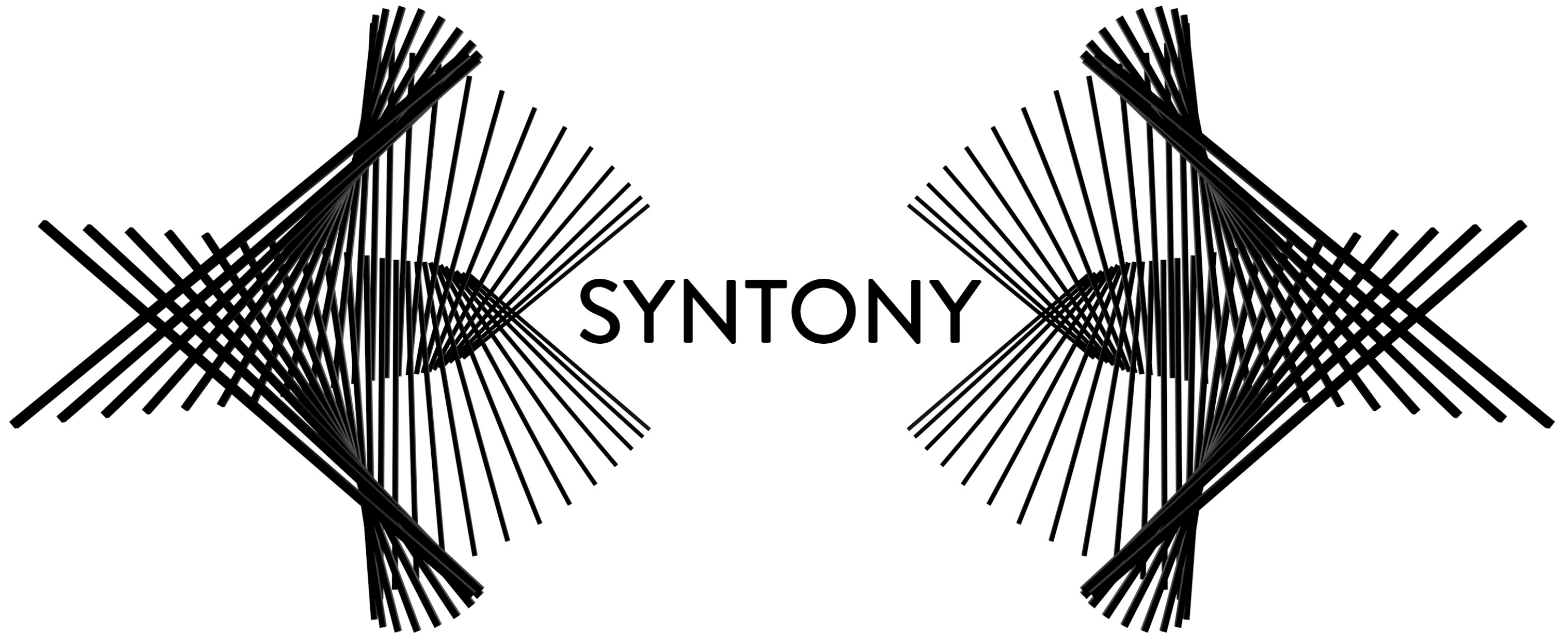


KAKO ĆEMO ŽIVJETI ZAJEDNO?
HOW WILL WE LIVE TOGETHER?

KA TRANSAKTIVNOJ PROSTORNOJ PERCEPCIJI
TOWARDS A TRANSACTIVE SPATIAL PERCEPTION



Biennale Architettura 2020
International competition for the selection of a team
of authors, a concept and contents of the Montenegrin
pavilion at the 17th International Architecture Exhibition
in Venice, 2020

Team
Dr Vasilija Abramovic (MNE)
Dr Ruairi Glynn (IRE)
Parker Heyl (USA)

Commissioner of the Montenegrin pavilion
Dragan Vuković d.i.a

Curator of the Montenegrin pavilion
Dr. Svetlana Perović d.i.a

[MNE] Razlika između multidisciplinarnog i transdisciplinarnog pristupa je veoma važna. Multidisciplinarnost, po definiciji, dekomponuje probleme na pod-djelove, teritorijalno razdvaja područja istraživanja i jača disciplinske tradicije umjesto da ih izaziva. Transdisciplinarni pristup preklapa postojeća i stvara nova hibridna stanja kako bi se pokrenuli novi oblici kolaborativne prakse. Ovim projektom predstavljamo teorijsko kadriranje ovogodišnjeg crnogorskog takmičenja, u cilju prepoznavanja vrijednosti razmišljanja izvan međunarodnih i disciplinarnih granica za podsticanje radikalnih novih oblika prakse.



Edge of Chaos (2018) Kinetic Installation, la Gaité Lyrique Gallery, Paris

DR VASILIJ ABRAMOVIĆ Ing.Arch.

Montenegrin architect, researcher and tutor at the Bartlett School of Architecture. Vasilija's interests are in design and fabrication of responsive environments with recent exhibitions in France, Netherlands and Belgium. Her transdisciplinary PhD Thesis used meta-material kinetic structures to explore an "Artificial Life Approach to Interactive Architecture". She is Exhibitions Director at the Interactive Architecture Lab and a scientific committee member and editorial board member on a number of architectural journals.

INTERACTIVE ARCHITECTURE LAB

A design research lab based at the world leading Bartlett School of Architecture within University College London, one of Europe's leading research institutions. The Interactive Architecture Lab is a transdisciplinary team of designers, engineers and scientists examining the behaviour and interaction of people, things and environments. Based at UCL Here East, a state of the art fabrication facility for architectural scale prototyping, the Lab is able to design, fabricate and thoroughly test large installation projects before deployment in public.

[ENG] The distinction between a multi-disciplinary approach and a transdisciplinary approach is important. Multi-disciplinarity, by definition, decomposes problems into sub-parts, territorialising areas of research and reinforcing disciplinary traditions, rather than challenging them. A transdisciplinary approach overlaps, blurs, and hybridises expertise to initiate novel forms of collaborative practice. We welcome the theoretical framing of this year's Montenegrin competition as it demonstrates recognition of the value of thinking beyond international and disciplinary boundaries to foster radical new forms of practice.



Balls (2013) Kinetic Light Installation,

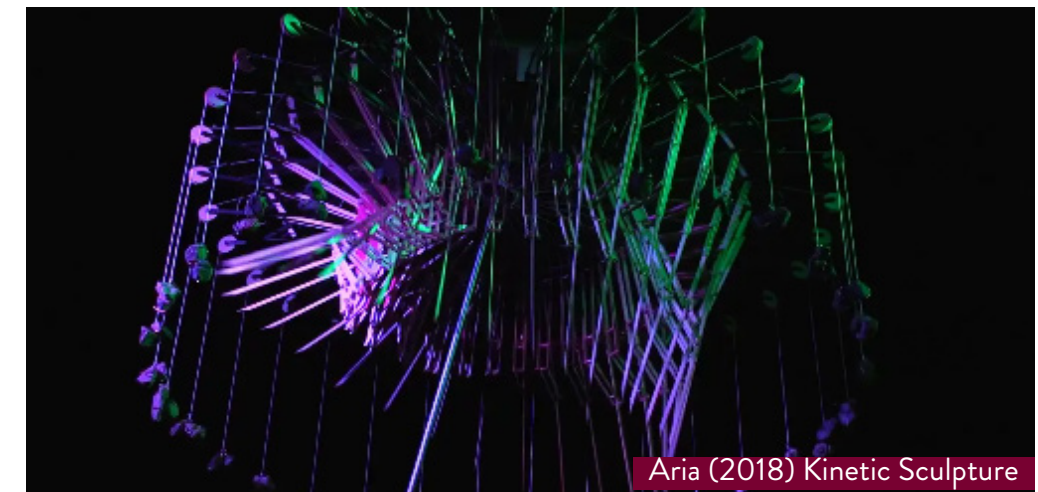
DR RUAIRI GLYNN M.Arch

Irish interaction researcher and Director of the Interactive Architecture Lab at the Bartlett School of Architecture. Ruairi has exhibited internationally with shows at the Centre Pompidou Paris, the National Art Museum of China Beijing, Ars Electronica in Linz and the Tate Modern, London. He has built public installations for clients including Twitter, Nike, Arup, Buro Happold, and Bank of America. He has curated numerous international peer reviewed conferences and edited books on architecture & digital technology.

SCIENTIFIC COLLABORATORS

Prof Stephen Gage: Architectural researcher
 Prof Gabriella Vigliocco: Experimental psychologist
 Dr Fiona Zisch: Neuroscientist and architectural researcher
 Dr Florin Gheorghiu: Neuroscientist
 Dr Gonçalo Lopes: Software engineer & neuroscientist
 Prof Sarah Rubidge: Choreographer
 Sam McElhinney: Architect & researcher in spatial perception

Our team led by a Montenegrin Architect Dr Vasilija Abramovic has formulated a transdisciplinary collaboration with roboticists, neuroscientists, psychologists, computer scientists, lighting and acoustic engineers. The proposal has been developed in the context of transdisciplinary research taking place at the Bartlett's Interactive Architecture Lab and has the ambition of fostering international collaboration.



Aria (2018) Kinetic Sculpture

PARKER HEYL M.Eng

American robotics engineer, educator, and artist. Parker studied in Boston where he became involved in the maker movement, conducting research on maker curriculum at the Developmental Technologies Lab at Tufts University, Scratch Jr. at the MIT Media Lab, the Cambridge Friends School Makerspace, and The Eli Whitney Museum and Workshop. He is now based at the Interactive Architecture Lab where he specialises in design and exhibition of kinetic structures

TECHNICAL COLLABORATORS

Kongpyung Moon: Creative Technologist
 Luca Delatorre: Acoustics engineer
 Francesco Anselmo: Lighting engineering
 Dominik Zisch: Computer scientist
 Paul Bavister: Sound designer and bio-sensing researcher
 Peter Scully: Bartlett Director of Manufacturing

[MNE] Riječ Sintoniya potiče od grčke riječi „Sin“ što znači „zajedno“ i „Tonos“ što znači „ton“ ili „glas“.

Kroz saradnju naučnika iz oblasti neuronauke, percepcije i psihologije, sa arhitektom, dizajnerom prostornih interakcija i inženjerom robotike, razvili smo niz novih interaktivnih eksperimenata za javnost kako bismo istražili prostornu percepciju pokreta, svjetlosti i zvuka. Naše instalacije su transdisciplinarni eksperimenti i istraživačke studije pogodne za diskusiju u organizovanom nizu simpozija i publikacija koje njeguju kritičku debatu o transaktivnom potencijalu arhitekture.

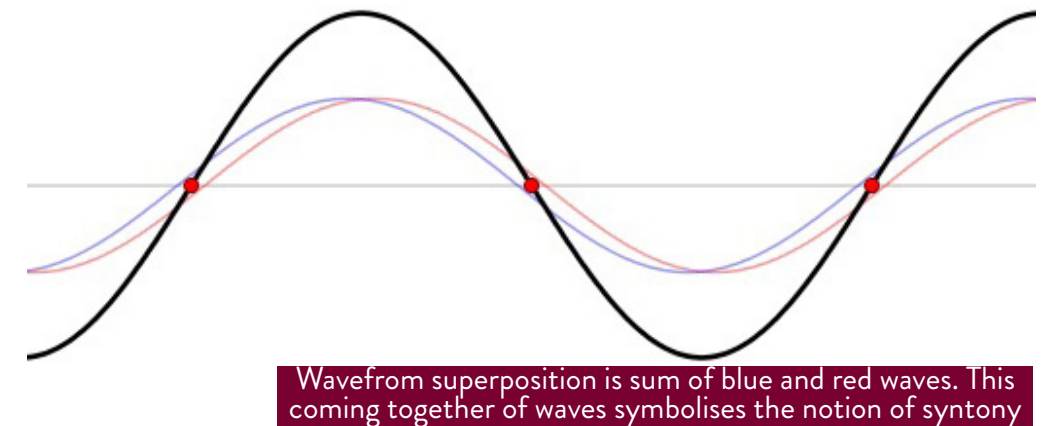
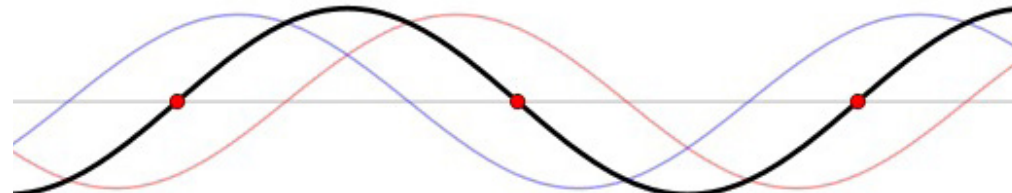
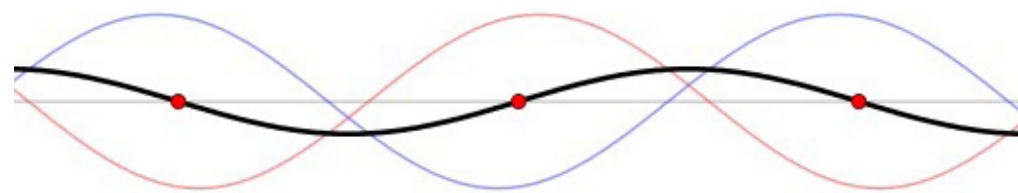
Ovime, postiže se i informiše veća debata o širim izazovima transdisciplinarnosti. U kontekstu Bijenala i postavljene tematike „Kako ćemo živeti zajedno?“, vjerujemo da bi crnogorska izložba mogla da djeluje kao mjesto razmjene znanja i kritičke debate o sposobnosti arhitekture da njeguje transdisciplinarna istraživanja. Debata o naprijed navedenom je važna i neophodna jer smatramo da su transdisciplinarna istraživanja od suštinskog značaja za rješavanje sve složenijih i kompleksnih izazova sa kojima smo danas suočeni u društvu.

[ENG] The word Syntony comes from the Greek “Syn” meaning **Together** and “Tonos” meaning **tone** or **voice**.

Bringing together scientists in the field of neuroscience, perception and psychology with an architect, interaction designer & robotics engineer we have developed a series of novel interactive experiments for the public to explore **spatial perception** of **motion**, **light** and **sound**. Our **installations** are **transdisciplinary experiments**, and case-studies for discussion in a curated series of **symposia** and **publication** to nurture a critical discourse on the **transactive** potential of architecture.

This will inform a meta-discourse on the broader challenges of transdisciplinarity. In the context of the Biennale question “**How Will We Live Together?**”, we believe the Montenegrin exhibition could act as the site for exchange and critical discourse on architecture's ability to cultivate **transdisciplinary research**. This conversation is important and necessary because we suggest transdisciplinary research is essential to tackling the increasingly **complex** and **entangled** challenges we face in society today.

Regrettably current trends in cross-disciplinary architectural research have mixed success in nurturing meaningful transactions and productive outcomes. Architecture, one can argue, has a tendency towards acts of ‘disciplinary imperialism’, taking subject matter and methodologies from other fields of knowledge, separating them from their own discursive contexts, and superficially adopting features whose potency are reduced. Such acts undermine the potential for architecture to be a productive holistic space for arts and sciences to **live and work together**. To achieve deeper, meaningful and productive transactions we must question how architecture should position itself and function within the ecology of disciplines. Rather than continuing the mythology of the necessary central role of the architect, perhaps a humbler, more mutable conceptualisation of future practice is required. One of architecture **oscillating** in and out of central and periphery roles to solve complex and entangled problems.



Syntony is a phenomenon of resonance when multiple waveform frequencies come together in **harmony**. It is also a social concept.

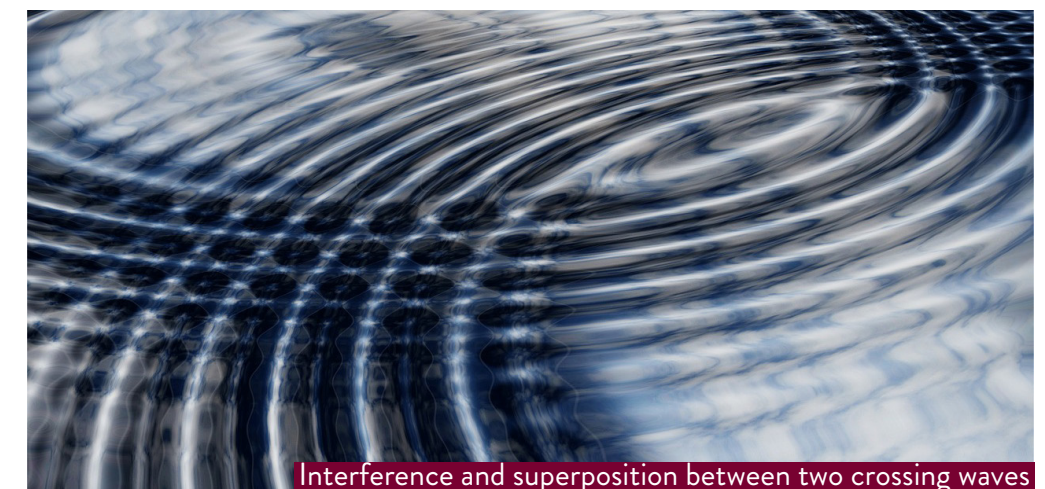
‘Syntony is present in many biological and physiological phenomena, as well as in social ones. The emergence of paradigms, or in German the “Zeitgeist”... are cases of cultural syntony’

International Encyclopedia of Systems and Cybernetics (2004)

Our exhibition proposal uses the visual metaphor of **overlapping waveforms** to symbolise the interaction and transaction of disciplinary

fields. Evocative patterns of propagation, coherence, interference, convolution, and superposition will be used throughout our exhibition using three types of waveforms - **Light**, **Sound** and **Motion**.

Our proposal will **bring disciplines together** through **experimental knowledge exchange** and **discursive events** that develop into a **book** to be published in print and online.



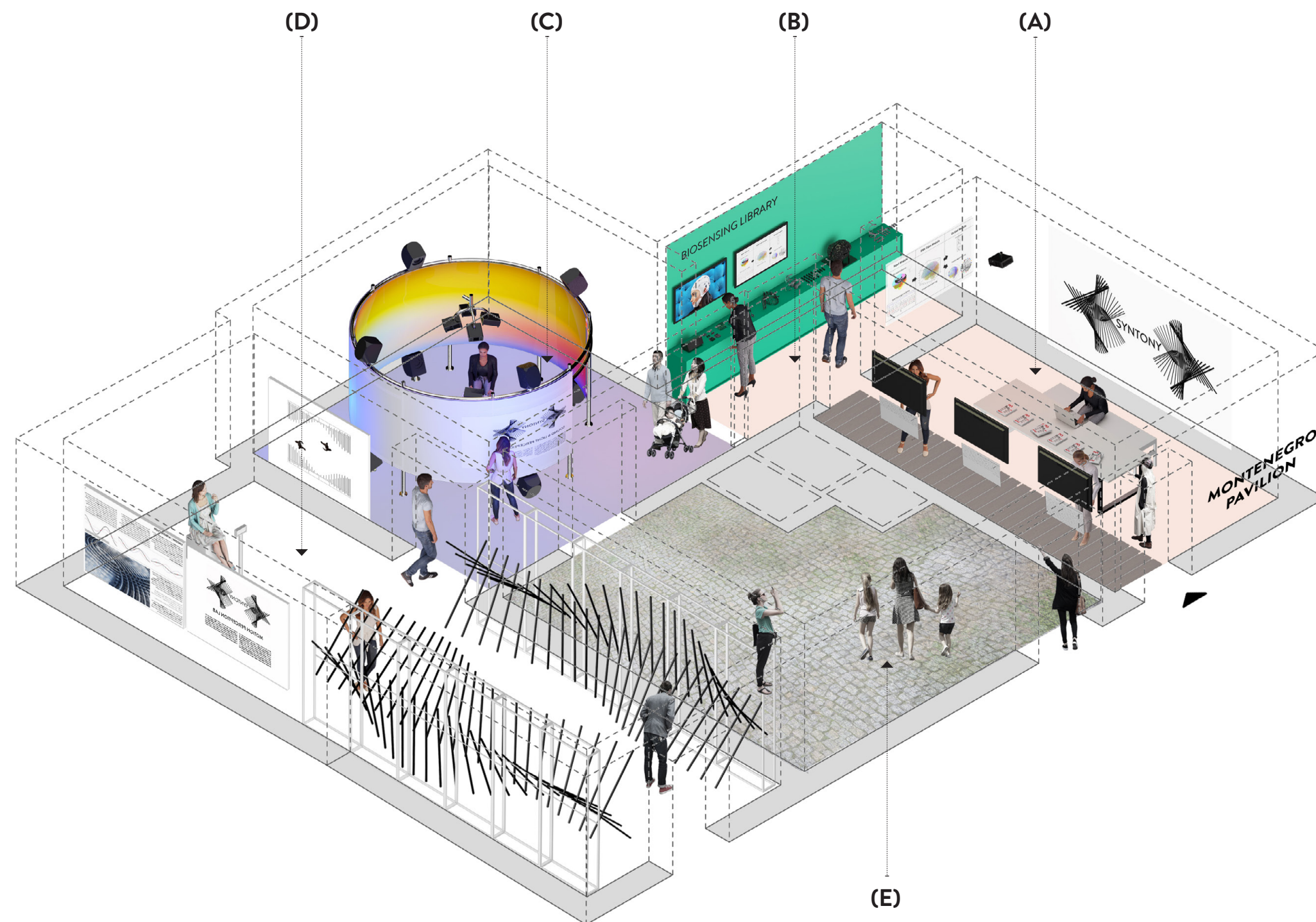
[MNE] Sintonija se sastoji od dvije laboratorije posvećene eksperimentisanju sa talasnim oblicima i to sa svjetlošću, zvukom i kretanjem. Svako laboratorijsko okruženje sastoji se od automatizovanog sistema senzora koji sakuplja podatke o posjetiocima i interaktivno kontroliše talasne oblike u prostoru. Predlažemo odvijanje više događaja u toku izložbe sa ciljem razmjene znanja i dalju produkciju publikacija. Pomenuti događaji bi se odvijali u prostoru za prijem/radionicu kao i u galerijskom dvorištu. Vjerujemo da je cijeli svijet laboratorija, a svaki trenutak eksperiment, tako da i Veneciju možemo posmatrati kao produžetak naših laboratorijskih prostora i prostornog istraživanja. Eksperimenti „U divljini“ odnosno oni koji su smješteni u realnom, kompleksnom okruženju, pružice zanimljivo i potencijalno korisno poređenje sa kontrolisanim uslovima uobičajnih izložbenih prostora.

[ENG] Syntony consists of 2 Laboratories dedicated to experimenting with waveforms - **light**, **sound** and **motion**. Each lab environment consists of an **automated** sensing system that collects occupant data and interactively controls the waveforms in the space. No exhibition invigilation is required. We propose a variety of **discursive events** would take place over the course of the exhibition to support **knowledge exchange** and the production of a **publication**. These would take place in the reception/**workshop** space and courtyard. Importantly we believe all the world is a lab, and every moment an experiment, so we will also use Venice as an extension of our Lab spaces. Experiments 'In the Wild', will provide an interesting and potentially useful comparison to the controlled conditions of our exhibition spaces.

Reception & Workshop Space (A) Visitors enter at reception where they can learn about the theme of 'Towards a Transactive Spatial Perception' and our teams experimental response.

Biometric Sensing Library (B) Spatial and biometric sensing equipment is on display for the public to learn how these technologies are helping us better understand **correlations** between **spatial conditions**, the **human body** and **perception**. This library provides a repository of equipment for experiments in the Labs and in the city.

Sound & Light Perception Lab (C) Interactive installation with 8 Channel surround sound system and 315° projection screen with 360° RGB lighting. This multi-functional space is set up for the public as an experiment in social interaction but can also be adapted to provide a multi-sensory environment for special workshops and visiting architects



and scientist to develop visual and auditory experiments.

Motion Perception Lab (D) Interactive installation with parallel kinetic walls able to manifest 4 simultaneous perceptual illusions of waves travelling through the room. Sensing data is collected of occupant movement inside the installation, while observers looking into the room have their eye movement tracked.

Conversations Courtyard (E) An exterior venue for a range of activities including, lectures, debates, video interviews, and performances.

SYNTONY | RECEPTION & WORKSHOP SPACE + BIOMETRIC SENSING LIBRARY

[MNE] Posjetioci prvo ulaze kroz prostoriju gdje se mogu upoznati sa zadatom temom „Ka transaktivnoj prostornoj percepciji“ kao i eksperimentalnim odgovorom našeg tima. Ova soba ima dvostruku ulogu pa deluje kao i prostor za radionice pogodne za istraživačku saradnju. Preklapanje istraživačke prakse i javnosti podstaći će razgovore i dijeljenje iskustava. U cilju edukovanja posjetilaca o tome kako nam ove interaktivne tehnologije mogu pomoći u boljem razumijevanju prostornih uslova i percepcije istih, osmislili smo prostoriju koja ima edukativno svojstvo, ali ujedno i nudi niz opreme za eksperimente u paviljonu i u gradu.

[ENG] Visitors enter at reception and familiarise themselves with the theme of ‘Towards a Transactive Spatial Perception’ and our team’s experimental response. The room has a dual role acting as a workshop space for research collaborations. The overlap of research practice and public, will stimulate conversations and sharing of experiences. This qualitative data will compliment quantitative data captured by our sensing equipment. To educate the public about how sensing technologies are helping us better understand correlations between spatial conditions, the human body & perception we propose a Biometric Sensing Library. This repository also provides a range of equipment for experiments in the Labs and in the city.

MATERIAL BUDGET

Item	#	Unit	Total
Samsung UE50 4K TV + wall brackets	5	450	2250
Table & 2 Bench	1	300	300
Vinyl and Poster Signage	1	550	550
Biometric Sensing Equipment	1	2257	2257
Optoma HD143X Projector*	1	0	0
RGB Environmental Lighting *	4	0	0
TOTAL (INCL TAX) €5060.00			

* parts supplied by Interactive Architecture Lab Facilities



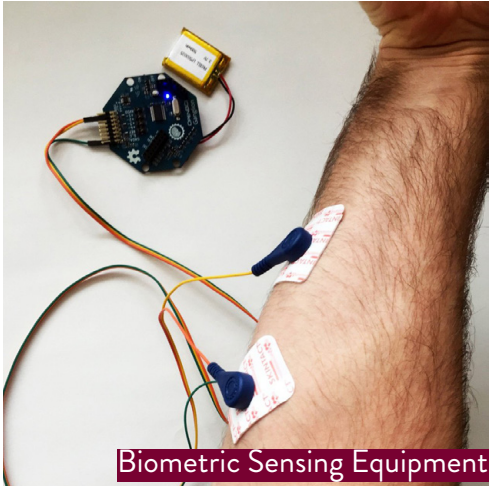
Reception Space that also serves as a workshop space for collaborators



Biometric Sensing Library educating public and facilitating experiments



EEG Brain Sensor



Biometric Sensing Equipment

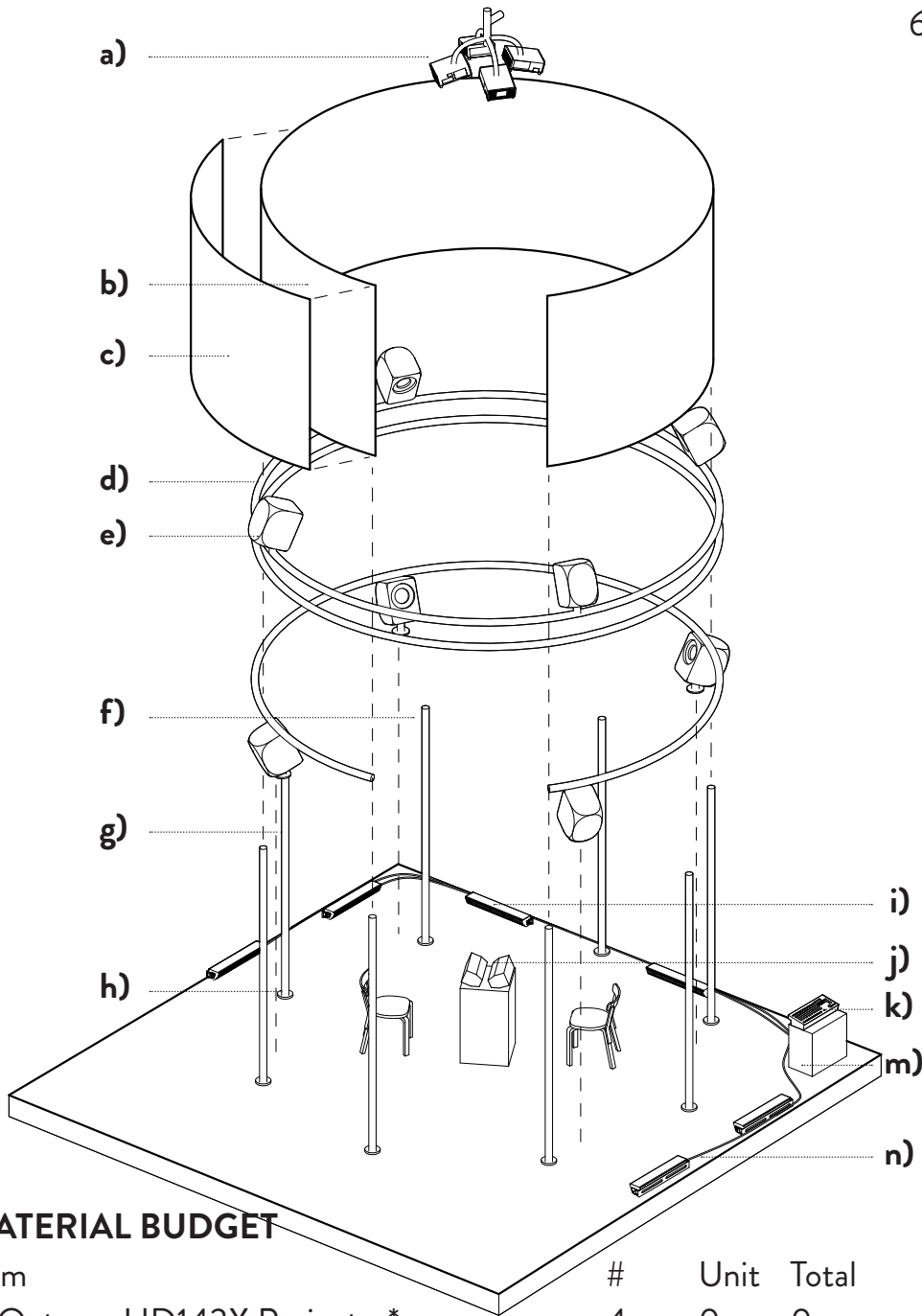
SYNTONY | SOUND & LIGHT PERCEPTION LAB

[MNE] Interaktivna instalacija koncipirana je sa 8-kanalnim sistemom zvuka i projekcionim ekranom od 315° sa 360°RGB osvjtljenjem. Ovaj multifunkcionalni prostor postavljen je za javnost kao eksperiment društvene interakcije, ali može se lako prilagoditi tako da pruža multi-senzorno okruženje za posebne radionice i posjete arhitekata i naučnika za razvoj vizuelnih i zvučnih eksperimenata. Ilustrovani eksperiment ispituje uticaje prostranog zvuka i svjetlosti pri vizuelnom kontaktu posjetilaca koji borave unutar instalacije. Senzor „Tobii Ks120“ mjeri najsuptilnije kretanje oka kod dva učesnika, otkrivajući nivo pažnje koji ta dva učesnika posvećuju jedan drugom, pod uticajem generativnog zvuka i vizuelnih stimulansa.

[ENG] Interactive installation with 8 Channel surround sound system and 315° projection screen with 360° RGB lighting. This multi-functional space is set up for the public as an experiment in social interaction but can be easily adapted to provide a multi-sensory environment for special workshops and visiting architects and scientist to develop visual and auditory experiments. The illustrated experiment examines effects of spatialised sound and light on peoples eye contact. A pair of Tobii X120 sensors measure the subtlest of eye movement in two participants revealing their level of attention to one another under the influence of generative sound and visual stimuli.



Reception Space that also serves as a workshop space for collaborators



MATERIAL BUDGET

Item	#	Unit	Total
a) Optoma HD143X Projector*	4	0	0
b) 315° Projection Surface	1	1700	1200
c) Printed Display	1	250	250
d) Circle Single Point Truss 4m Dia.	3	110	330
e) Genelec 8030C Speaker/Monitors*	8	0	0
f) Truss Spacer Male 200mm	8	8	64
g) Straight Single Point Truss 2m	8	36	288
h) Truss Base Plates & Clamps	8	18	144
i) Enttec Aleph 2ET DMX light bars*	6	0	0
j) Tobii X120 Eye Tracker Sensors*	2	0	0
k) Motu 828 MK3 Audio interface*	1	0	0
l) Desktop PC & Enttec DMX Pro*	1	0	0
m) Genelec 7060B Base Speaker	1	0	0
n) Power, XLR & DMX Cables*	26	0	0

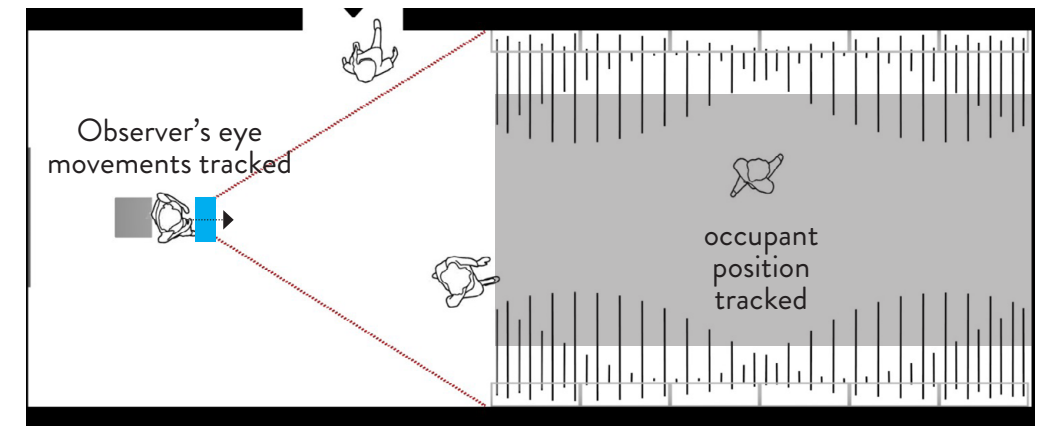
TOTAL (INCL TAX) €2276.00

* parts supplied by Interactive Architecture Lab Facilities

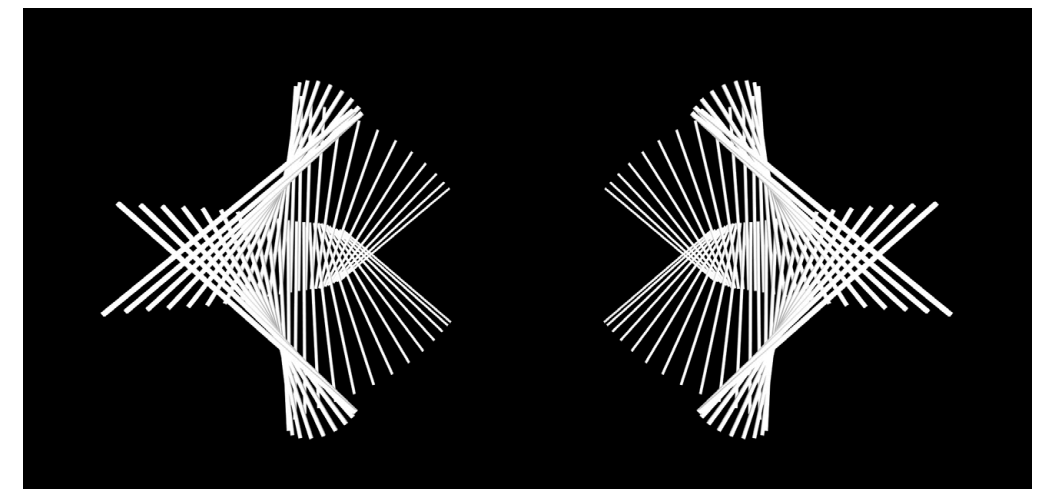
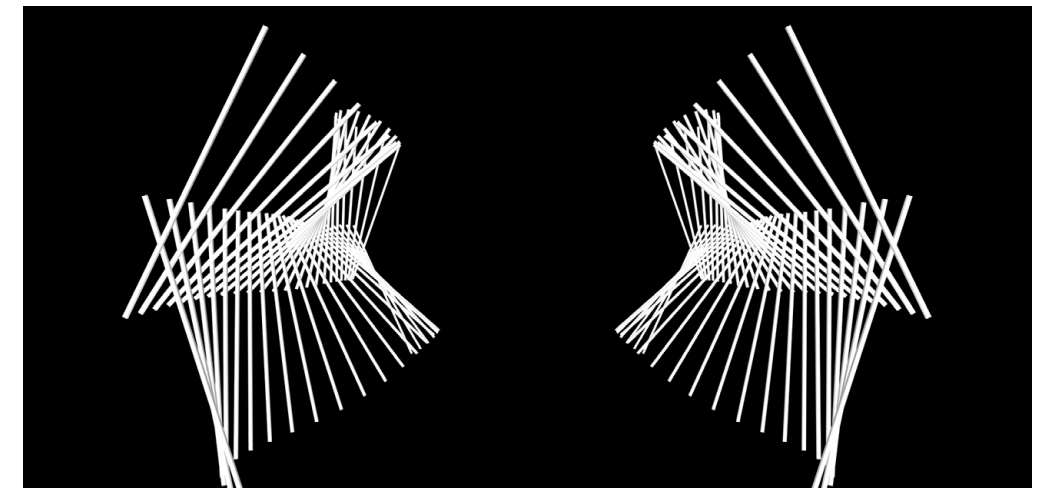
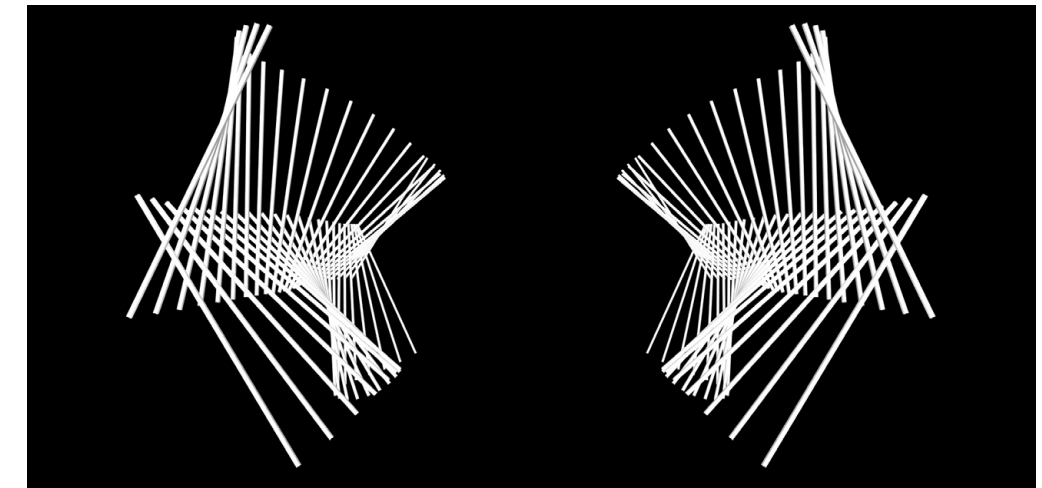
[MNE] Inspirisani studijama kretanja fiziologa Etienne-Jules Mareija, i iluzornim eksperimentima principa „Gestalt“ psihologije, predlažemo instaliranje prostorne interaktivne kinetičke instalacije koja istražuje ljudsku prostornu percepciju. Paralelni kinetički zidovi manifestuju 4 istovremene vizuelne iluzije talasa koji putujući kroz prostor konstantno redefinišu vezu sa okruženjem i posjetiocima. Pozicija posjetilaca prati se pomoću podnih senzora koji reaguju na pritisak, i daljim slanjem podataka pokreću ovaj kinetički prostor koji u zavisnosti od trenutne okupacije prostora, broja ljudi kao i njihove blizine može promijeniti brzinu, smjer i amplitudu talasa. Pri samom ulasku u prostoriju sa desne strane, nalazi se još jedan dio eksperimenta, gdje zahvaljući Tobii senzoru, koji prati pokrete očiju, analiziramo podatke o efektu ovakvih transformišućih okruženja na ljudsku percepciju o prostoru.

[ENG] Inspired by the motion studies of physiologist and chronophotographer Étienne-Jules Marey, and by the illusory experiments of Gestalt Psychology, we propose an inhabitable kinetic installation exploring our spatial perception of motion. Parallel walls manifest 4 simultaneous illusions of waves travelling across them. Occupant position and motion is collected by a pressure sensor floor, meanwhile observers looking into the room have their eye movement tracked.

VIDEO SAMPLE HERE <https://vimeo.com/389897384/284497c23e>



Eye tracking camera (Blue) and pressure sensitive floor (Grey)



[MNE] Talasni oblik je napravljen od modularnih jedinica, od kojih svaka ima po 8 elemenata. Na svakom zidu nalazi se 6 modula što čini ukupno 96 linearnih elemenata koja se mogu kontrolisati pojedinačno. Jedan motor, uz metodu kružnog kabla omogućava kretanje 24 elementa. Po uzoru na ljudsku morfologiju, svaki od ovih elemenata pokreće tetivu ili sponu, a ukupna amplituda talasnog oblika se modulira uz pomoć linearnog aktuatora. Zahvaljujući mreži pažljivo pozicioniranih ležajeva kao i industrijski jakoj ribarskoj žici, ovoj instalaciji je omogućen dugotrajni performans u galeriji.

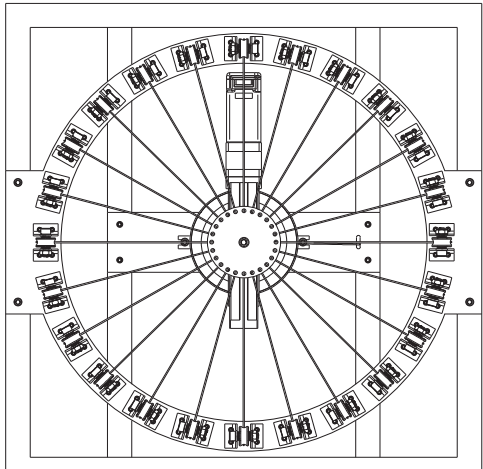
MATERIAL BUDGET

Item	Unit	#	Total
V groove bearing, 5mm	0.90	576	518.40
Cap head bolt, M5 x 18mm	0.10	576	57.60
Nyloc nut, M5	0.10	576	57.60
Washer, M5	0.05	1152	57.60
Cap head bolt, M2.5	0.05	2304	115.20
Aluminium square, 20x20mm	6.50	384	2,496.00
Spectra fishing line	0.10	420	42.00
8mm steel rod	8.00	24	192.00
L bracket, 20 x 20 x 10 mm	0.40	1152	460.80
U bracket, 50 x 30 x 30 mm	0.45	96	43.20
Ball bearing, 8mm flanged	1.00	192	192.00
Shaft collar, 8mm	2.50	192	480.00
Eye bolt, M5	1.00	96	96.00
Cap head bolt, M3 x 12mm	0.05	192	9.60
GR-EP-45 Gear-motor	41.60	4	166.40
Flanged shaft coupler, 10mm	4.00	4	16.00
Linear Actuator CAHB-10	248	4	992.00
Through Hole Slip Ring	26.00	4	104.00
Aluminium sheet, 3mm	28.00	4	112.00
Waterjet cutting, per minute	1.00	60	60.00
12V power supply, 10A	35.00	4	140.00
18V power supply, 10A	55.00	4	220.00
Pressure pad floor	1,700.00	1	1,700.00
Arduino	8.00	2	16.00
White ceiling	500.00	1	500.00
White paint for framework	600.00	1	600.00
Black paint for armatures	140.00	1	140.00
Signage	500.00	1	500.00
Mac Mini (Data Capture) *	0	1	0
Tobii Eye Tracker Sensor *	0	1	0

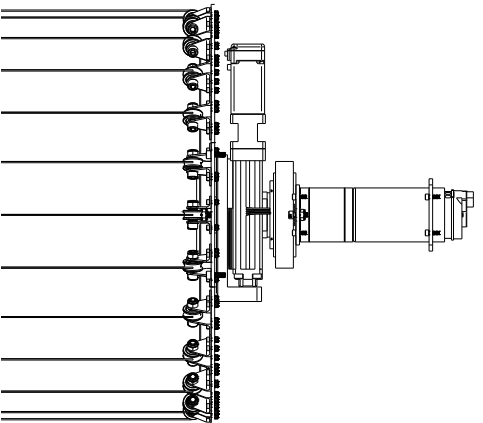
TOTAL (INCL TAX) €10,184.40

* Parts available from Interactive Architecture Lab Facilities

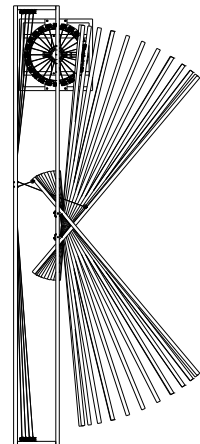
[ENG] The waveform is constructed of modular units, each with 8 armatures. 6 modules on each wall, making a total of 96 individually controllable armatures. A method of circular cable routing allows the motion of 24 armatures to be controlled with a single motor. Each armature is tendon driven, and the overall amplitude of the waveform is modulated using a linear actuator. A network of ball bearing pulleys and high-strength fishing line is employed to guarantee a long lifespan.



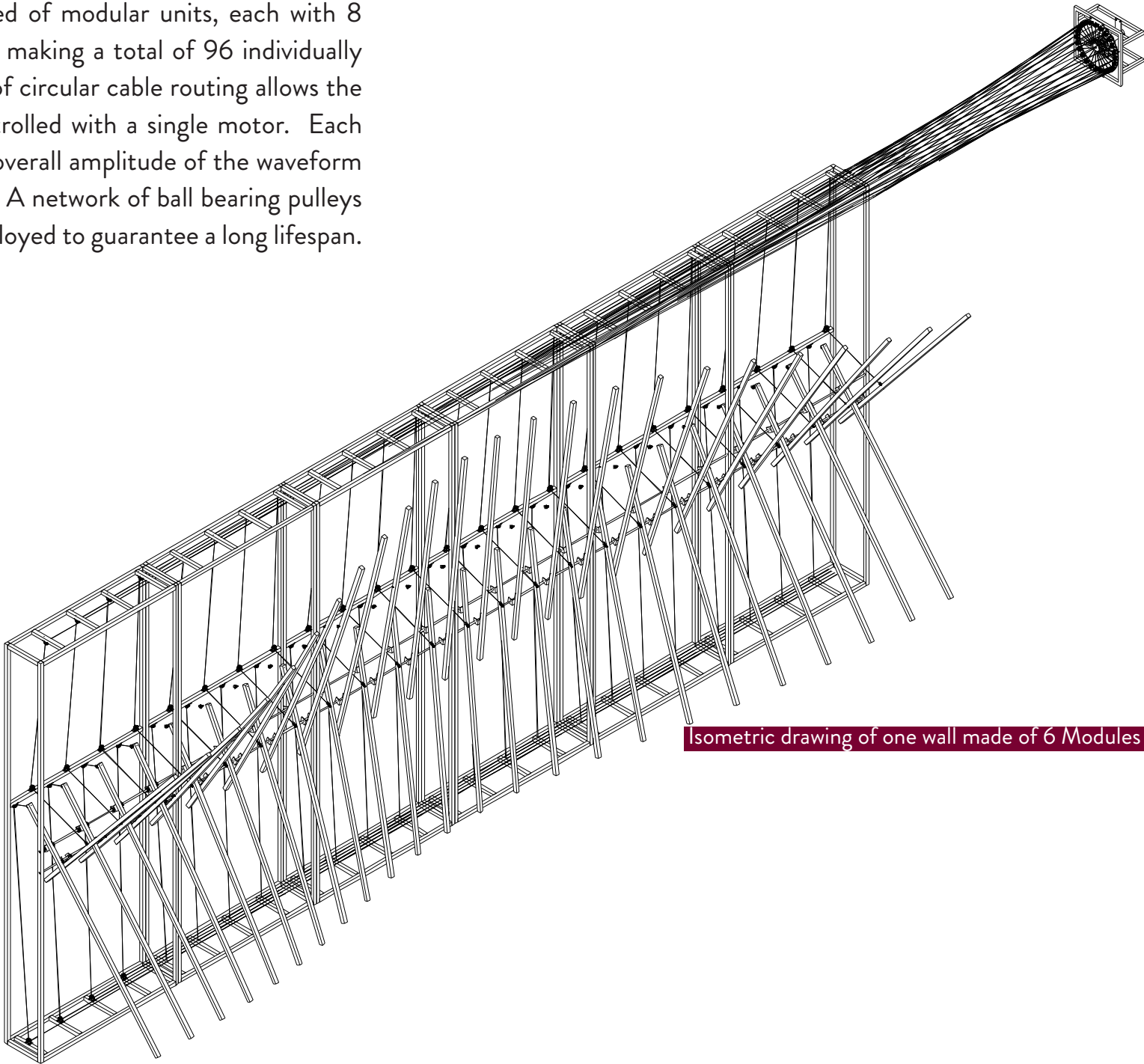
Front view of circular cable mechanism



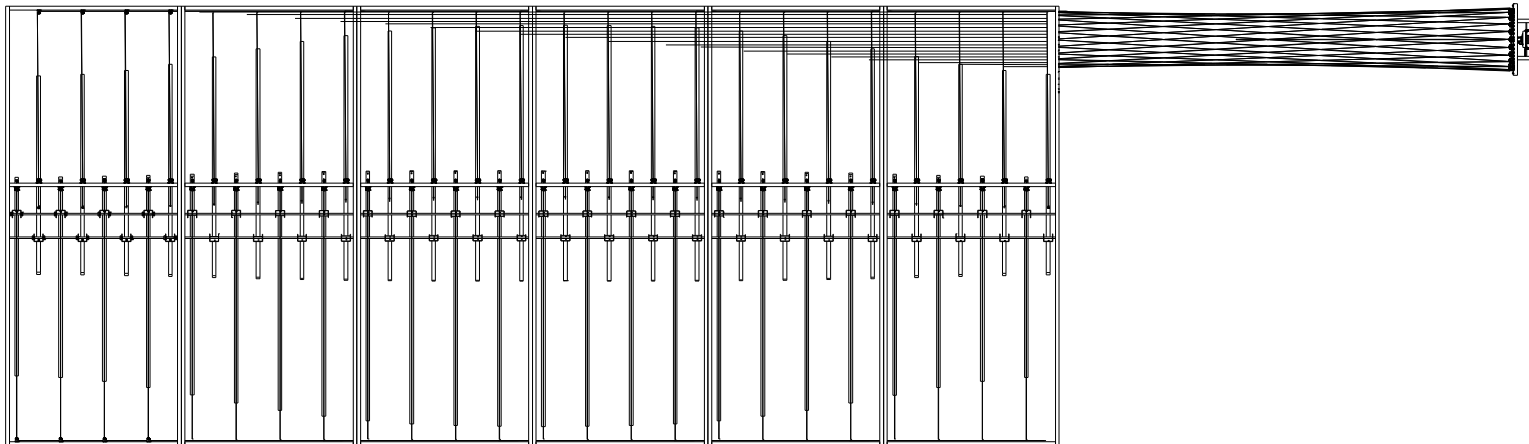
Side view of circular cable mechanism



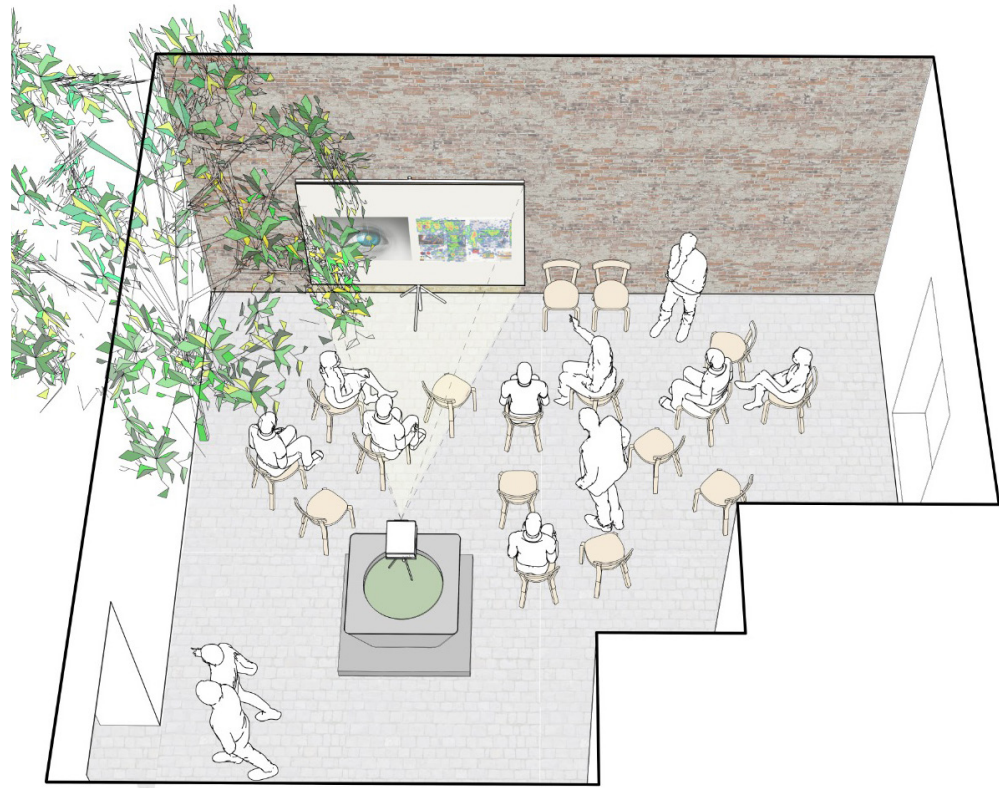
Side Elevation of Kinetic Wall



Isometric drawing of one wall made of 6 Modules



Front Elevation of Kinetic Wall



Conversations Courtyard

Enabling critical discourse is central to our agenda and we wish to stage symposia and workshops at key stages in the timeline of the exhibition. We have extensive experience in organising and hosting such events. Team member Dr Ruairi Glynn has organised over a dozen symposia and conferences. Most notably he is co-founder and co-chair of Fabricate, a peer reviewed international conference run every 3 years: The Bartlett (2011), ETH Zurich (2014), and Institute for Computational Design at Stuttgart University (2017). We would welcome the opportunity to work with the Commissioner and Curator of the Montenegrin pavilion to develop a programme of events in Venice, Montenegro and London.

Naš cilj u toku Bijenala, je stvaranje i vodjenje kritičke diskusije, organizovane u sklopu ključnih događaja – simpozijuma i radionica u toku postavke. Član našeg tima Dr Ruairi Glynn organizovao je preko desetak simpozijuma i konferencija, a ujedno je i suosnivač i ko-predsjednik „Fabricate“ međunarodne konferencije koja se održava svake tri godine na najpoznatijim univerzitetima na svijetu, i to: The Bartlett, UCL (2011), ETH Zurich (2014) i ICD Stuttgart (2017). Našim konkursnim predlogom, predlažemo saradnju na događajima sličnog tipa kako u Veneciji, tako i u Crnoj Gori i Velikoj Britaniji, u saradnji sa komesarom i kustosom crnogorskog paviljona.



Kengo Kuma Keynote at Fabricate 2017



Fabricate 2017 Conference



Transdisciplinary Network Stellarc Lecture in 2018



Fabricate 2014 Conference



Fabricate books published between 2011 and 2017

Dr Ruairi Glynn has extensive experience in the production of publications after overseeing and editing 3 editions of the Fabricate conference proceedings. Unlike traditional conference proceedings, these books were carefully produced with a graphic designer. The digital versions of the publication hosted by our publisher are close to reaching 100,000 downloads in 124 countries. We propose to use our expertise in publishing to produce a book that develops over the months of the exhibition. We would look to bring voices together from arts, architecture, engineering and sciences to discuss the future of collaboration and the transactive potential of architecture to initiate novel forms of collaborative practice.

Dr Ruairi Glynn ima dugogodišnje iskustvo u produkciji publikacija, gdje recimo neke od posljednjih čine 3 konferencijska izdanja radova sa renomirane konferencije „Fabricate“, osnovane u Londonu. Za razliku od klasičnih izdanja konferencijskih publikacija, ove knjige su pažljivo kreirane u saradnji sa grafičkim dizajnerima. Digitalne verzije ove publikacije su do sada preuzete preko 100.000 puta, u čak 124 zemlje širom svijeta. Predlažemo da, shodno našem prethodnom iskustvu u izdavanju, a u saradnji sa kuratorom crnogorskog paviljona, pripremimo knjigu koja bi bila objavljena u toku trajanja izložbe. Ostvarivanjem različitih saradnji i okupljanjem glasova umjetnosti, arhitekture, inženjerstva i nauke, planiramo podstaknuti diskusiju o budućnosti zajedničkih kolaboracija i transaktivnom potencijalu arhitekture ka stvaranju novih formi transdisciplinarnih praksi.



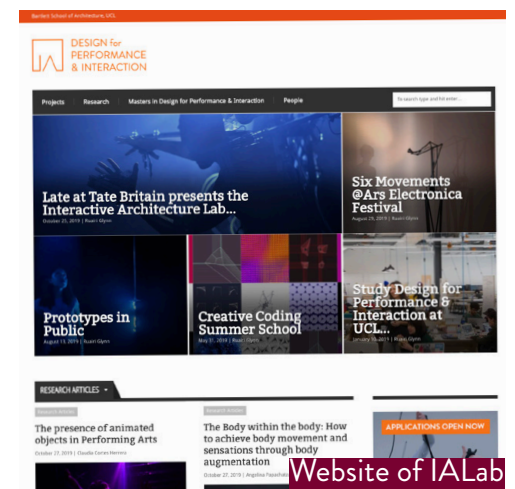
Fabricate (2011) Page Sample



Fabricate (2014) Page Sample



Digital Architecture (2009)



Website of IALab

PLANNING + DETAILED DESIGN

- 13/2 Commissioning confirmed & detailed planning begins
- 17/2 Complete 1st design phase. Begin approaching publishers

PROTOTYPING LAB SPACES

- 24/2 Order materials + tech for prototyping + site visit
- 02/3 Fabrication of structures + begin sensor software dev
- 09/3 Assembly of first prototype of kinetic wall
- 16/3 Wiring and testing of kinetic wall + floor sensor

ASSEMBLE SOUND + LIGHT LAB

- 23/3 Assembly of S+L Lab / Final improvements Kinetic Wall
- 30/3 S+L Lab software testing and development

ASSEMBLE MOTION LAB

- 06/4 Finalise S+L Lab + complete Kinetic Wall fabrication
- 13/4 Finalise assembly + begin website design
- 20/4 Run week long full test + develop website

FABRICATION + TESTING COMPLETE

- 27/4 Ready for transport & distribute press release
- 04/5 Install
- 11/5 Install + Website Launch
- 18/5 Exhibition Install Complete + Film and Photography

EXHIBITION LAUNCH

- 23/5 Opening
- 25/5 Symposium on Transdisciplinarity @ Montenegrin Pavilion

MONTHLY PROGRAM

- June Phase 1. Collaborative experiments + workshops
- July Symposium on Transdisciplinarity in Montenegro
Book design begins
- Aug Symposium on Transdisciplinarity @ Bartlett, London
Chapter content for book developed
- Sep Phase 2. Collaborative experiments + workshops
- Oct Book content finalised and production
- Nov Book completed with digital download launch

CLOSING + DE-INSTALL

- 29/11 Closing of Montenegrin Pavilion
- 03/12 Dismantling and transport of the exhibit to Montenegro
- 10/12 Book Launch in London @ Bartlett
- 19/12 Book Launch in Montenegro

MATERIAL BUDGET

Reception & Workshop Space (A)	} €5,060.00
Biometric Sensing Library (B)	
Sound & Light Perception Lab (C)	€2,276.00
Motion Perception Lab (D)	€10,184.40
Conversations Courtyard (E)	€1,400.00
TOTAL	€18,920.40

FABRICATION BUDGET

Aluminium cutting & drilling	€600.00
Aluminium TIG Welding	€400.00
Pressure Sensitive Floor Electronics	€600.00
Software Development	€2,600.00
Website Design	€600.00
Book Design	€2,600.00
Book Printing	€3,300.00
TOTAL	€10,700

TRANSPORT + PACKAGING

Crates	€850.00
Large Luton Van, London to Venice	€1,450.00
Venice to Montenegro	€900.00
TOTAL	€3,200.00

TRAVEL + ACCOMODATION

Core Team Flights	€2,900.00
Core Team Accomodation	€3,500.00
Scientific Collaborators	€3800.00
Collaborator Accomodation	€2800
TOTAL	€12000

GROSS TOTAL

€44,820.40

