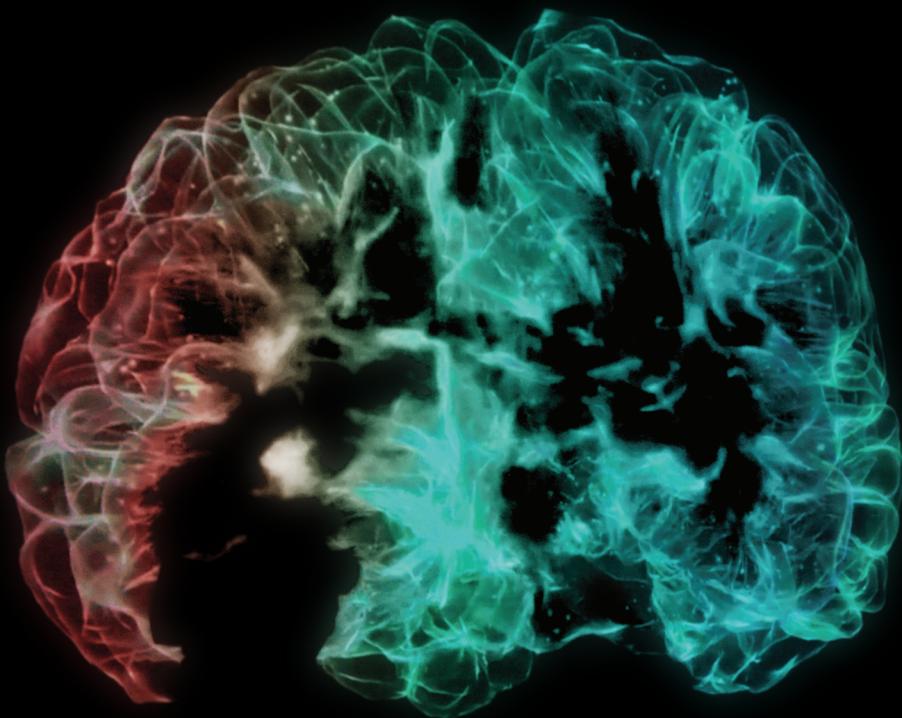




MREŽA CENTROV RAZISKOVALNIH UMETNOSTI IN KULTURE
NETWORK OF ART AND CULTURAL RESEARCH CENTERS



KIBLA **DDT** **pīla**

DELAVSKI DOM TRBOVLJE



MREŽA CENTROV RAZISKOVALNIH UMETNOSTI IN KULTURE
NETWORK OF ART AND CULTURAL RESEARCH CENTERS

Kazalo

Table of Contents



- 9 Festival Speculum Artium
- 17 Pilotni projekti / Pilot Projects
- 27 Rezidence / Residencies
- 39 Koprodukcije / Coproductions
- 47 DDTLAB
- 53 Ostali pomembni projekti / Other Important Projects



- 87 RUK Raziskav, umetnosti in kulture / RUK – Research, Art and Culture
- 101 Festival KIBLIX
- 117 Pilotni projekti / Pilot Projects
- 133 Rezidence / Residencies
- 151 Koprodukcije / Coproductions
- 161 KIBLA2LAB



- 173 Festival IZIS
- 187 Pilotni projekti / Pilot Projects
- 197 Producije / Productions
- 211 Rezidence / Residencies
- 231 HEKA

Pregled projekta MCRUK

Javni zavod za kulturo Delavski dom Trbovlje (DDT), Kulturno izobraževalno društvo KIBLA iz Maribora in Kulturno izobraževalno društvo PiNA iz Kopra že več kot desetletje snujejo projekte na presečišču umetnosti, znanosti, izobraževanja in tehnologije. Od leta 2019 smo povezani konzorcijski partnerji v projektu Mreža centrov raziskovalnih umetnosti in kulture – RUK, katerega vizija je spodbujanje uporabe novih tehnologij za namene povezovanja umetnosti z gospodarstvom, izobraževanjem in znanostjo.

Mreža centrov RUK je sestavljena modularno iz treh lokalno-regionalno-nacionalno-mednarodno umeščenih platform – DDT, PiNA in KIBLA – ki kapilarno vpenjajo akterje iz svojih okolij in mrež. V partnersko sodelovanje se uvrščajo znanstvene organizacije in institucije, podjetja, univerze in druge izobraževalne institucije. Povezovanje domačih deležnikov in njihovih kapacet ter spodbujanje razvoja prebojnih in integriranih novih produktov in storitev skozi kreativne procese, ki se udejanjajo na različnih poljih delovanja sodobne družbe, omogočata vključevanje v pripravo in izvedbo zahtevnejših razvojnih projektov, ki jih prinaša pokoronsko obdobje in vključujejo nova partnerstva, sestavljena iz subjektov popolnoma različnih izvorov.

Ustvarjalni laboratoriji RUK so vozlišča inovativnih odgovorov na izzive sodobnega časa in generatorji znanja prihodnosti, saj ustvarjajo bazo kompetenc za poklice prihodnosti in s tem ponujajo rešitev novim potrebam v gospodarstvu, ki bodo nastajale v prihodnjih letih, tako v zvezi z uvajanjem novih tehnologij kot z nujnim ustvarjanjem alternativnih zaposlitev, ki se bodo oblikovale znotraj ali zunaj obstoječih podjetij kot posledica uvažanja digitalne transformacije in novih tehnologij. RUK laboratoriji zagotavljajo ustrezeno tehnoško opremo za načrtovanje in realizacijo kreativnih rešitev ter usposabljanja in prenos inovativnega načina razmišljanja v podjetja. Vključevanje konceptov umetniškega ustvarjanja in dizajna odpira prostor za integracijo rešitev, ki spodbujajo humanizacijo storitev in produktov, trajnost ter uporabo krožnih modelov in družbenih inovacij. Hkrati s prenosom inovativnih aplikacij na tržišče se krepijo mala in srednja podjetja s čim večjim zajetjem znanj in potencialov mladih.

Mreža centrov raziskovalnih umetnosti in kulture – RUK sodeluje z različnimi akterji s področja izobraževanja ter varovanja kulturne in naravne dediščine, z gospodarskimi družbami, z umetniškimi kolektivi, z inštituti, z referenčnimi galerijami po Sloveniji, z raziskovalnimi institucijami, s številnimi posamezniki in z različnimi organizacijskimi enotami civilne družbe.

Pomemben del njenega delovanja predstavlja področje izobraževanja, na katerem vodimo različne strateške poti. Javnost izobražujemo o osnovnih predpostavkah intermedijске kulture in tehnologije, udeleženci izobraževanj pa skozi teorijo in timsko delo spoznavajo njune osnovne elemente ter se srečujejo z načeli ustvarjalnosti, kritičnega razmišljanja, vzajemnosti, interaktivnosti in tehnološkega opismenjevanja.

Z izvajanjem praktičnega dela šolskega izobraževanja podpiramo dijake in študente pri raziskovalnem delu ter formalnem in neformalnem izobraževanju. V projekt aktivno vključujemo tudi študente študijskih smeri, ki so neposredno povezane z načelom ustvarjalnosti na področju tehnologije, znanosti in umetnosti. Večletne izkušnje smo povezali v predlogu za nacionalno poklicno kvalifikacijo: operater novih tehnologij.

S poletno šolo Design+Science spodbujamo raziskovanje in eksperimentiranje na stičišču oblikovanja in različnih znanstvenih področij, ki jih vodijo priznani strokovnjaki. Pristop poletne šole temelji na multidisciplinarnem skupinskem delu, udeležijo se je lahko študenti in mladi strokovnjaki s področja oblikovanja, arhitekture, umetnosti, računalništva, družboslovja, naravoslovja in drugih področij.

Kulturalni management je usposabljanje, na katerem udeleženci pridobijo praktične izkušnje in spoznajo načine, kako v praksi izpeljati kulturne dogodke. Na usposabljanju se poleg teoretičnega znanja naučijo tudi uporabnih metod in orodij za razvoj idej ter načrtovanje projektov.

Creatorship je program, ki krepi vodstvene sposobnosti podjetnikov, obrtnikov, ustvarjalcev in drugih vodij v sodobni družbi. Program ponuja izkušnjo usposabljanja, ki združuje znanost vodenja z močjo umetniške iznajdljivosti, z namenom opolnomočenja vodij s spremnostmi za vodenje skupin in reševanje izzivov.

Z aktivnostjo Kreativni Start Up – Meet Up zagotavljamo ustvarjalnost pri razvijanju metodologije, ki raziskuje potrebe po drugačnih oblikah medsektorskega sodelovanja. V raziskovanje so vključena tako uveljavljena podjetja, zagonska podjetja in podjetniške ideje ter pobude kot tudi izvajalci umetniških praks.

Vrhunce interdisciplinarnega delovanja partnerjev na nacionalni osi Koper – Trbovlje – Maribor, predstavljajo jesenski festivali novomedijske umetnosti in kulture IZIS, Speculum Artium in KIBLIX. S projektom RUK smo podprli, nadgradili in posodobili obstoječe programe partnerjev ter razširili njihovo vsebino, ki temelji na večsektorskem povezovanju, na osi civilna družba – akademski svet – javni sektor – gospodarstvo.

STATISTIKA

Skozi celotno obdobje projekta smo izvedli 16 mednarodnih rezidenc, pri katerih smo združili umetnike iz različnih področij s podjetji in nastali so novi zametki bodočih produktov. Izvedli smo 10 koprodukcij in 16 pilotnih projektov, ki smo jih predstavili na številnih prireditvah. Z dijaki in s študenti različnih smeri izobraževanja smo opravili 22 praktičnih izobraževanj. Izvedli smo preko 40 različnih sodelovanj, pri katerih se je pokazal potencial kreativnega ustvarjanja z novimi medijimi, ki je združeno z izobraževanjem in gospodarskim sektorjem.

mag. Špela Pavli Perko
direktorica Zavoda za kulturo Delavski dom Trbovlje
vodja projekta Mreža centrov raziskovalnih umetnosti in kulture – RUK

MCRUK project overview

The Public Institution for Culture Delavski dom Trbovlje (DDT), the Association for culture and education KIBLA from Maribor and the Association for culture and education PiNA from Koper have been designing projects at the intersection of art, science, education and technology for more than a decade. Since 2019, we have been associated consortium partners in the project Network of art research and culture centers - RUK, whose vision is to promote the use of new technologies for the purpose of connecting art with economy, education and science.

The network of RUK centers consists modularly of three local-regional-national-internationally located platforms – DDT, PiNA and KIBLA – which capillary clamp actors from their environments and networks. Scientific organizations and institutions, companies, universities and other educational institutions are included in the partnership. Connecting domestic stakeholders and their capacities and promoting the development of breakthrough and integrated new products and services through creative processes that take place in various fields of activity of modern society, enable involvement in the preparation and implementation of more demanding development projects brought about by the post-coronavirus era and involving new partnerships, composed of subjects of completely different origins.

RUK's creative laboratories are hubs of innovative responses to the challenges of modern times and generators of future knowledge, as they create a competence base for the professions of the future and thus offer a solution to the new needs in the economy that will arise in the coming years, both in relation to the introduction of new technologies and the urgent by creating alternative jobs that will be formed inside or outside existing companies as a result of the introduction of digital transformation and new technologies. RUK laboratories provide appropriate technological equipment for the planning and realization of creative solutions, as well as training and the transfer of an innovative way of thinking to companies. The integration of the concepts of artistic creation and design opens up space for the integration of solutions that promote the humanization of services and products, sustainability and the use of circular models and social innovation. At the same time as the transfer of innovative applications to the market, small and medium-sized companies are strengthened by capturing the knowledge and potential of young people as much as possible.

The network of art research and culture centers – RUK cooperates with various actors in the field of education and protection of cultural and natural heritage, with economic companies, with art collectives, with institutes, with reference galleries in Slovenia, with research institutions, with many individuals and with various organizational civil society units.

An important part of its operation is the field of education, in which we lead various strategic paths. We educate the public about the basic assumptions of intermedia culture and technology, and through theory and teamwork, participants learn about their basic elements and encounter the principles of creativity, critical thinking, reciprocity, interactivity and technological literacy.

By implementing the practical part of school education, we support pupils and students in research work and formal and informal education. In the project, we also actively involve students of study courses that are directly related to the principle of creativity in the field of technology, science and art. We have combined many years of experience in the proposal for the national professional qualification: operator of new technologies.

With the Design+Science summer school, we encourage research and experimentation at the intersection of design and various scientific fields, led by renowned experts. The approach of the summer school is based on multidisciplinary group work, students and young professionals from the fields of design, architecture, art, computer science, social sciences, natural sciences and other fields can participate.

Cultural management is a training course in which participants gain practical experience and learn about ways to carry out cultural events in practice. During the training, in addition to theoretical knowledge, they also learn useful methods and tools for developing ideas and planning projects.

Creatorship is a program that strengthens the leadership skills of entrepreneurs, craftsmen, creators and other leaders in modern society. The program offers a training experience that combines the science of leadership with the power of artistic ingenuity to empower leaders with the skills to lead teams and solve challenges.

With the Creative Start Up – Meet Up activity, we ensure creativity in developing a methodology that explores the needs for different forms of intersectoral cooperation. Established companies, start-ups and entrepreneurial ideas and initiatives as well as performers of artistic practices are included in the research.

The highlights of the interdisciplinary work of the partners on the national axis Koper – Trbovlje – Maribor are represented by the autumn festivals of new media art and culture IZIS, Speculum Artium and KIBLIX. With the RUK project, we supported, upgraded and updated existing partner programs and expanded their content, which is based on multi-sector integration, on the axis civil society – academia – public sector – economy.

STATISTICS

Throughout the entire period of the project, we held 16 international residencies, where we united artists from various fields with companies, and new germs of future products were created. We carried out 10 co-productions and 16 pilot projects, which we presented at numerous events. We conducted 22 practical trainings with pupils and students of various educational fields. We have carried out over 40 different collaborations, in which the potential of creative creation with new media combined with education and the economic sector has been demonstrated.

M.Sc. Špela Pavli Perko
director of Delavski dom Trbovlje
project manager of the Network of Art Research and Culture Centers – RUK

DDT

FESTIVAL
SPECULUM
ARTIUM

Festival novomedijske kulture SPECULUM ARTIUM¹

Festival novomedijske kulture Speculum Artium je prvič potekal leta 2008 v organizaciji Akademije za likovno umetnost in oblikovanje Univerze v Ljubljani in ArtNetLaba, Društva za povezovanje umetnosti in znanosti, z namenom širjenja intermedijске kulture in prezentacije ter povezovanja predvsem umetniških akademij širom Evrope. Organizacijo je v naslednjih letih prevzel Delavski dom Trbovlje, ki s širjenjem termina »humanizacija tehnologije« spodbuja lokalno in širšo skupnost ter intermedijске umetnike k sodelovanju in povezovanju različnih sektorjev, kot so: gospodarstvo, umetnost in kultura, izobraževanje, znanost in tehnologija. Znanost in umetnost sta prek skupnih akcij pokazali in dokazali, da sta kompatibilni znotraj tehnološke paradigme 21. stoletja.

Trbovlje so skozi zgodovinski razvoj vedno dokazovale svojo avantgardnost na področju kulture, intermedijска paradigmа pa nudi priložnost, da se v lokalnem prostoru ponovno vzpostavi občutek samozavesti in vere v bodočnost. Čeprav je sodobna umetnost prišla v rokah parcialnih znanj, interesov in brezkompromisnega diktata postkapitalistične miselnosti ter se je nekako izmuznila objemu poetov – raziskovalcev, to izpodriva produkcija, predstavljena na festivalu Speculum Artium. Festival spodbuja tendence, ki se porajajo znotraj strukture intermedijskih praks v svetu in vključujejo:

- sintezo principa umetnosti in tehnologije,
- socializacijo intermedijске produkcije,
- vzpostavljanje rdeče niti med tradicionalnimi vizualnimi in intermedijskimi praksami,
- revitalizacijo degradiranega socialnega okolja skozi intermedijске prakse,
- načine, kako sistem produkcije in prezentacije vrniti v upravljanje avtorju,
- vzpostavljanje kritične refleksije oziroma subverzivnega vmesnika med umetnostjo, tehnologijo in družbo.

Vodilo pri izboru festivalskih vsebin je raziskovanje novih dimenzij, ki jih omogoča sodobna tehnologija, ter sodelovanje z različnimi sektorji, ki krojijo podobo družbe. Skozi vsa leta je festival gostil tako študentske produkcije in produkcije manj uveljavljenih umetnikov, kot tudi zveneča imena na področju slovenske in tuje intermedijске scene, med njimi: humanoidnega robota Asima podjetja Honda, profesorja Hiroshija Ishiguro, enega od pionirjev androidne znanosti, avstralskega umetnika Stelarca, prvo kibernetiko skulpturo Senster avtorja Edwarda Ihnatowicza ter robotsko glasbeno skupino Compressorhead. S projektom Mreža centrov raziskovalnih umetnosti in kulture – RUK je Delavski dom Trbovlje postal producent oziroma koproducent del, ki se redno predstavljajo na festivalu.

Pomemben segment festivala je sodelovanje z umetniškimi akademijami, saj z njihovimi projekti nakazujemo smer nadaljnega razvoja intermedijске scene. Univerze, s katerimi redno sodelujemo, vključujejo: Akademijo za likovno umetnost in oblikovanje Univerze v Ljubljani; Akademijo umetnosti Univerze v Novi Gorici; Fakulteto za humanistične študije Univerze na Primorskem; Fakulteto za računalništvo in informatiko Univerze v Ljubljani;

Fakulteto za elektrotehniko Univerze v Ljubljani; Fakulteto za elektrotehniko, računalništvo in informatiko Univerze v Mariboru; Naravoslovnotehniško fakulteto Univerze v Ljubljani; Universität für angewandte Kunst Wien; Kunstudienanstalt Linz; Paris College of Art; Art & Science Center, ITMO University; Akademie výtvarných umění v Praze; Tampere University of Applied Sciences; Osaka University; University of Tsukuba; Ben-Gurion University of the Negev; Goldsmiths, University of London; Monash University.

Sodelovanje z izobraževalnimi institucijami smo v okviru projekta RUK dodatno nadgradili. DDTlab omogoča dijakom opravljanje obveznega praktičnega pouka skozi celo leto, njihova produkcija pa je predstavljena na festivalu Speculum Artium. Intermedijске vsebine so del formalnega izobraževanja na srednješolski ravni v lokalnem okolju, z delavnicami in učnimi urami pa v formalno izobraževanje vstopamo tudi na osnovnošolski ter predšolski ravni. Delavnice in prezentacije za interesne skupine spodbujajo pomen vizualne in intermedijске umetnosti ter njuno vpetost v vse pore našega življenja.

Projekt RUK je omogočil izpopolnitve tako vsebinskega kot izvedbenega dela festivala, krepitev raziskav in razvoja novih znanj ter povečanje prepoznavnosti sodelujočih in povezovanja z drugimi evropskimi partnerji v aktualnih in bodočih projektih. Kreativno razmišlanje in medsektorsko povezovanje, ki sta temelj festivala Speculum Artium, smo nadgradili z implementacijo v družbo kot celoto, hkrati pa smo v praksi utemeljevali koristi procesov kreativnega sodelovanja med umetnostjo, znanostjo, izobraževanjem in gospodarstvom. Tem ciljem bomo sledili tudi v bodoče v okviru festivala Speculum Artium, ki svoj vrhunc sicer doživi v štirih festivalskih dneh, prav zares pa spremljevalne dejavnosti festivala potekajo celo leto.

¹ "Speculum artium - med umetnostjo in politiko je zelo prefinjen odnos, ki ga lahko označimo kot speculum artium ali zrcalo umetnosti." (Peter Weibel, *Postmedijsko stanje v: 12. mednarodni festival računalniških umetnosti*, ArtNetLab društvo za povezovanje umetnosti in znanosti, Ljubljana 2006)

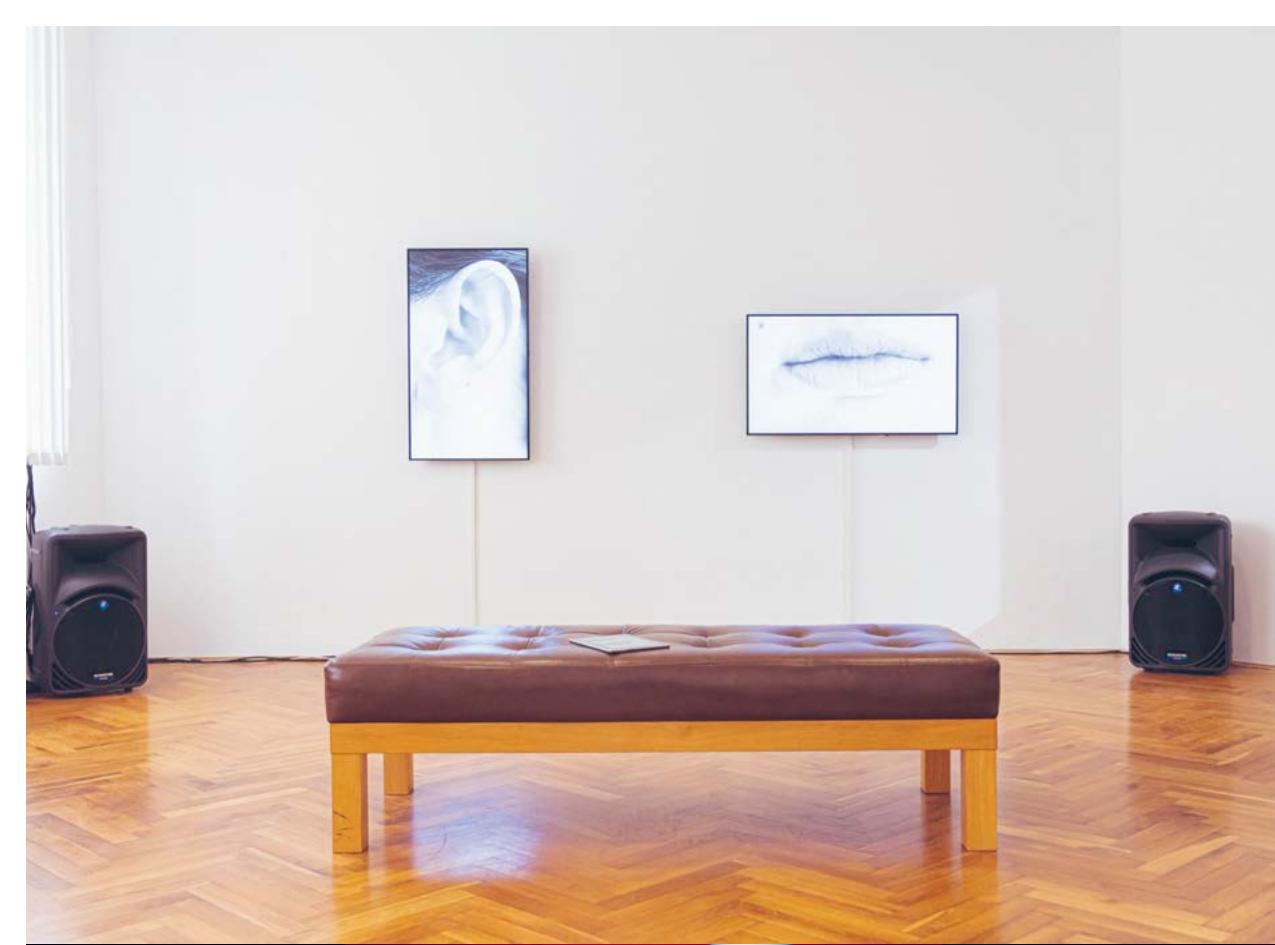


Foto / Photo: arhiv DDT

Festival of new media culture SPECULUM ARTIUM¹

The festival of new media culture Speculum Artium was held for the first time in 2008, organized by the Academy of Fine Arts and Design of the University of Ljubljana and ArtNetLab, Association for the Integration of Art and Science, with the aim of spreading intermedia culture and presentation and connecting mainly art academies throughout Europe. In the following years, the organization was taken over by Delavski dom Trbovlje, which, by spreading the term "humanization of technology", encourages the local and wider community and intermedia artists to participate in the integration of various sectors, such as: economy, art and culture, education, science and technology. Through joint actions, science and art have shown and proven that they are compatible within the technological paradigm of the 21st century.

Throughout its historical development, Trbovlje has always demonstrated its avant-garde in the field of culture, and the intermedia paradigm offers an opportunity to restore a sense of self-confidence and faith in the future in the local area. Although modern art has fallen into the hands of partial knowledge, interests and uncompromising dictates of the post-capitalist mentality and has somehow escaped the embrace of poets - researchers, the production presented at the Speculum Artium festival displaces this. The festival promotes tendencies that arise within the structure of intermedia practices in the world and include:

- the synthesis of the principles of art and technology,
- socialization of intermedia production,
- establishing a red thread between traditional visual and intermedia practices,
- the revitalization of the degraded social environment through intermedia practices,
- ways to return the production and presentation system to the control of the author,
- establishing a critical reflection or a subversive interface between art, technology and society.

The guiding principle in the selection of festival content is the exploration of new dimensions made possible by modern technology, as well as cooperation with various sectors that shape the image of society. Throughout the years, the festival has hosted both student productions and productions by less established artists, as well as well-known names in the field of the Slovenian and foreign intermedia scene, among them: the humanoid robot Asimo from the Honda company, Professor Hiroshi Ishiguro, one of the pioneers of android science, the Australian artist Stelarc, the first cybernetic sculpture Senster by Edward Ihnatowicz and the robotic music group Compressorhead. With the project Network of Art and Cultural Research Centers - RUK, Delavski dom Trbovlje became a producer or co-producer of works that are regularly presented at the festival.

An important segment of the festival is cooperation with art academies, as their projects indicate the direction of further development of the intermedia scene. The universities

with which we regularly cooperate are: Academy of Fine Arts and Design of the University of Ljubljana; School of Arts of the University of Nova Gorica; Faculty of Humanities of the University of Primorska; Faculty of Computer and Information Science of the University of Ljubljana; Faculty of Electrical Engineering of the University of Ljubljana; Faculty of Electrical Engineering and Computer Science of the University of Maribor; Faculty of Natural Sciences and Engineering of the University of Ljubljana; Universität für angewandte Kunst Wien; Kunsthochschule Linz; Paris College of Art; Art & Science Center, ITMO University; The Academy of Fine Arts in Prague; Tampere University of Applied Sciences; Osaka University; University of Tsukuba; Ben-Gurion University of the Negev; Goldsmiths, University of London; Monash University.

Cooperation with educational institutions was further upgraded within the framework of the RUK project. DDTlab enables students to take compulsory practical lessons throughout the year, and their production is presented at the Speculum Artium festival. Intermedia content is part of formal education at the secondary school level in the local environment, and with workshops and lessons we also enter formal education at the elementary and preschool levels. Workshops and presentations for interest groups promote the importance of visual and intermedia art and their involvement in all aspects of our lives.

The RUK project made it possible to perfect both the content and implementation of the festival, strengthen research and the development of new skills, and increase the visibility of the participants and connections with other European partners in current and future projects. Creative thinking and cross-sector integration, which are the foundation of the Speculum Artium festival, were upgraded by implementation in society as a whole, while at the same time we substantiated in practice the benefits of creative cooperation processes between art, science, education and economy. We will continue to pursue these goals in the future as part of the Speculum Artium festival, which reaches its peak during the four festival days, but the festival's accompanying activities take place throughout the year.

¹"Speculum artium - there is a very sophisticated relationship between art and politics, which can be characterized as speculum artium or the mirror of art." (Peter Weibel, *The Postmedia State in: 12th International Festival of Computer Arts*, ArtNetLab Society for Connecting Art and Science, Ljubljana 2006)

DDT

PILOTNI
PROJEKTI
•
PILOT
PROJECTS

NeuroFly

simulator letenja, ki ga upravljamo z mislimi

NeuroFly simulator je pilotni projekt raziskovalnega laboratorija DDTLab in letalskega podjetja AFormX. Cilj projekta je združitev VR letalskega simulatorja z možganskim računalniškim vmesnikom, ki omogoča neposredno komunikacijo med uporabnikovimi možgani in simulatorjem ter s tem neposredno usmerjanje letalnika v simulaciji.

Uporabnik upravlja NeuroFly letalnik z BCI vmesnikom (ang. BCI - Brain Computer Interface). To je zmogljiv računalniški sistem, ki omogoča neposredno komunikacijo med možgani in napravo, ki jo želimo krmiliti ali upravljati. S projektom NeuroFly nam je uspelo povezati tehnologijo BCI z napredno tehnologijo simulatorjev letenja. Razvili smo krmilo in protokol, ki nam omogočata upravljanje letalnika v simulatorju z golj z močjo naših misli. Tako lahko prostoročno izbiramo smer letenja. Oblikovali smo tudi svojo tipkovnico, ki vsebuje znake, s katerimi lahko upravljamo letenje letalnika v simulaciji. Uporabili smo metodo prikazovanja človeških obrazov, ki olajša izbiranje z mislimi, saj so človeški možgani dobri v prepoznavanju obrazov in imajo celo možganski center, ki je namenjen le tej nalogi.

Projekt NeuroFly smo premierno predstavili na festivalu novomedijске kulture Speculum Artium 2020 v Trbovljah, v decembru 2021 pa tudi na svetovni razstavi EXPO 2021 v Dubaju. NeuroFly je prejemnik regionalnega bronastega priznanja za inovacijo 2021 pri Gospodarski zbornici Slovenije.

Projekt je bil razvit skupaj s podjetjem AFormX d.o.o. in dr. Urošem Ocepkom.

Foto / Photo: arhiv DDT



NeuroFly

mind-controlled flight-simulator

The NeuroFly simulator is a pilot project of the DDTLab research laboratory in collaboration with the AFormX aviation company. The aim of the project is to combine a VR flight simulator with a brain-computer interface, allowing the user to establish direct communication between their brain and the simulator, thus enabling them to mentally direct the aircraft in the simulation.

The user operates the NeuroFly aircraft via BCI interface - a powerful computer system that facilitates direct communication between the brain and the device that we want to control and manage with the help of brain function. With the NeuroFly project, we have succeeded to combine the BCI technology with advanced flight-simulation technology. We have developed a helm and a protocol that allow us to operate the simulation aircraft exclusively with the power of our thoughts, while selecting the direction of flight without using our hands. In addition, we have also designed a special keyboard, which contains symbols that can be used to operate the simulated flight. The method of displaying human faces allows us to improve choosing with our thoughts, as the human brain is good at recognizing faces and even has a center dedicated solely to this task.

The NeuroFly project was first presented at the Speculum Artium Festival of new media culture in 2020, followed by another presentation at the worldwide EXPO 2021 in Dubai in December 2021. The same year, the project received the regional 2021 Bronze Innovation Award, awarded by the Chamber of Commerce and Industry of Slovenia.

Project was developed together with AFormX d.o.o. and dr. Uroš Ocepek.

Foto / Photo: arhiv DDT



Reciklaža plastike - 3D tiskalnik

študija in prototip stroja

Plastika je v dolgih letih uporabe postala globalen problem. Namen stroja za reciklažo je izdelava izdelkov, ki se vrnejo v uporabo, namesto da pristanejo v smeteh. Pri ideji pilotnega projekta Reciklaže plastike - 3D tiskalnik je najboljše to, da bomo vse, česar ne bomo več potrebovali, lahko ponovno uporabili. Za ta namen je bil izdelan prototipni stroj, ki iz odpadne plastike izdeluje filament (polnilo) za 3D tiskalnike, ki so zadnja leta vse bolj priljubljeni.

Študija in pilotna izvedba prototipa stroja za reciklažo sta nastali v sodelovanju s podjetjem GNS plus. Gre za 3D tisk, ki deluje na osnovi blockchain tehnologije in celotne verige od plastičnega odpada do različnih možnosti ponovne uporabe.

Sodelujoči: GNS plus d.o.o.

Plastic Recycling 3D printer

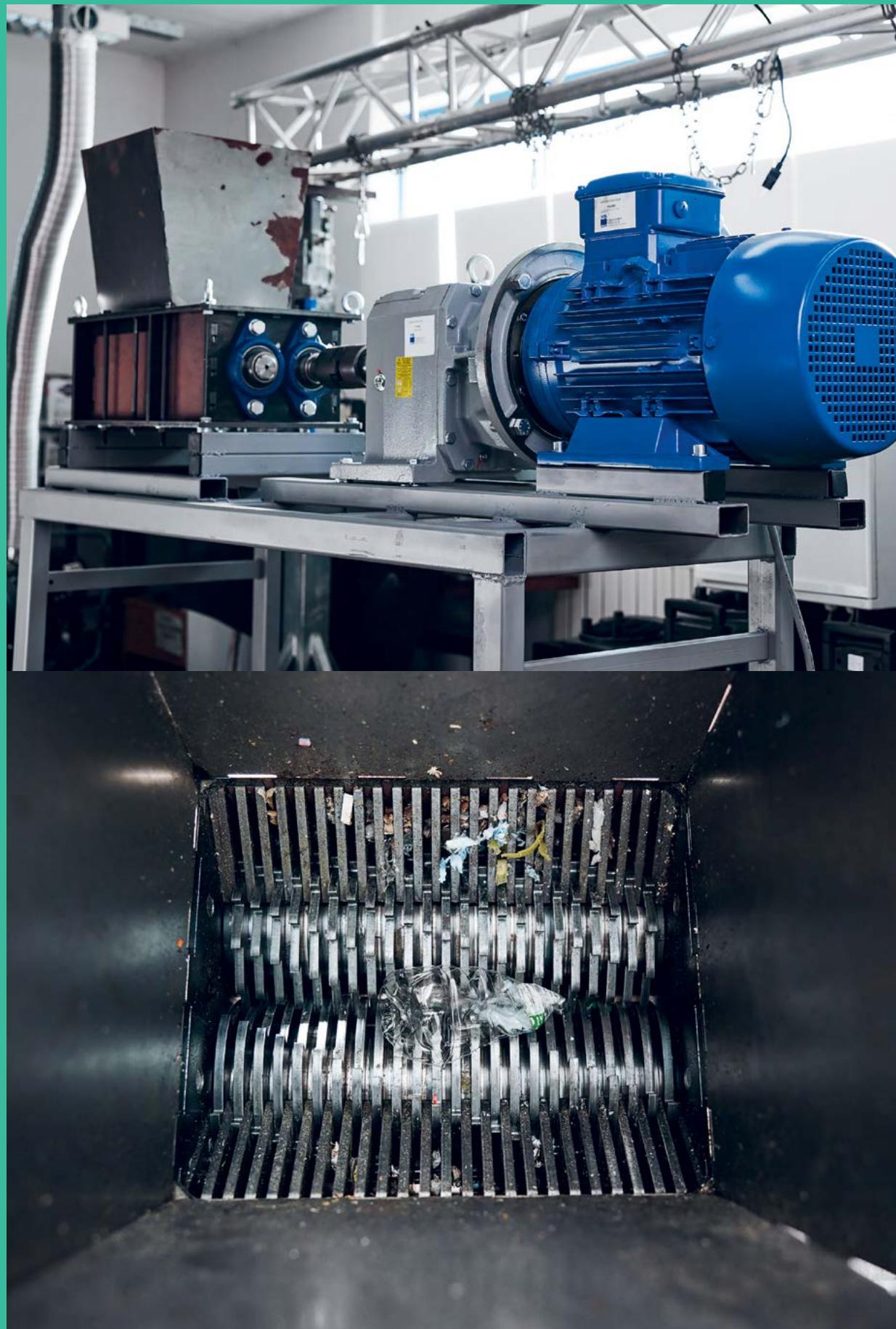
study and machine prototype

Through years of use, plastic has become a global problem. The best thing about the idea of this pilot project is that everything that is no longer needed can be recycled and reused. For this purpose, we built a prototype machine that recycles waste plastic and produces a filament for the increasingly popular 3D printers.

The study and the pilot implementation of the machine prototype was created in collaboration with the GNS Plus company. The prototype is based on blockchain technology and uses the principle of 3D printing for the entire chain from plastic waste to various options of reuse.

Participants: GNS plus d.o.o.

Foto / Photo: arhiv DDT



Sprehod spomina

Sprehod spomina je virtualna simulacija sprehoda skozi najbolj obljudene ulice Ptuja iz obdobja med letoma 1955 in 1960. Sprehod obsega vizualno perspektivno, ki zajema tako takratno arhitekturo in urbanistične posebnosti obdobja kot izgled in ritualne ljudi na ulici, ter zvočno perspektivo. Slednjo gradijo domnevna zvočna krajina takratnega časa: od uličnih dialogov, priljubljenih in ljudskih skladb tistega časa do kompozicij petja takrat živečih ptic ob Dravi.

Prvotni namen projekta je osebam z demenco iz Ptuja in okolice (ponovno) približati čas njihove mladosti. Na tak način jim želijo avtorji nuditi obliko sproščanja in stimulacije, s čimer bi se idealno zmanjšala uporaba medikamentih sredstev in obremenitev zapošlenih, osebe z demenco pa bi z več čuti lahko podoživljale spomine, ki so zaradi narave bolezni njihova vsakodnevna stalnica.

Projekt je oblika re-kreacije določenega obdobja oziroma fiktivna replika časa, ki je še najbolj živ v spominih trenutne tretje generacije in se danes kaže v raznih oblikah retro. »Sprehod spomina« je za nekaj minut mogoč.

Sodelujoči: Mojca Kamnik, Umetniški klub 101, Tomislav Gangl

Walk of Memory

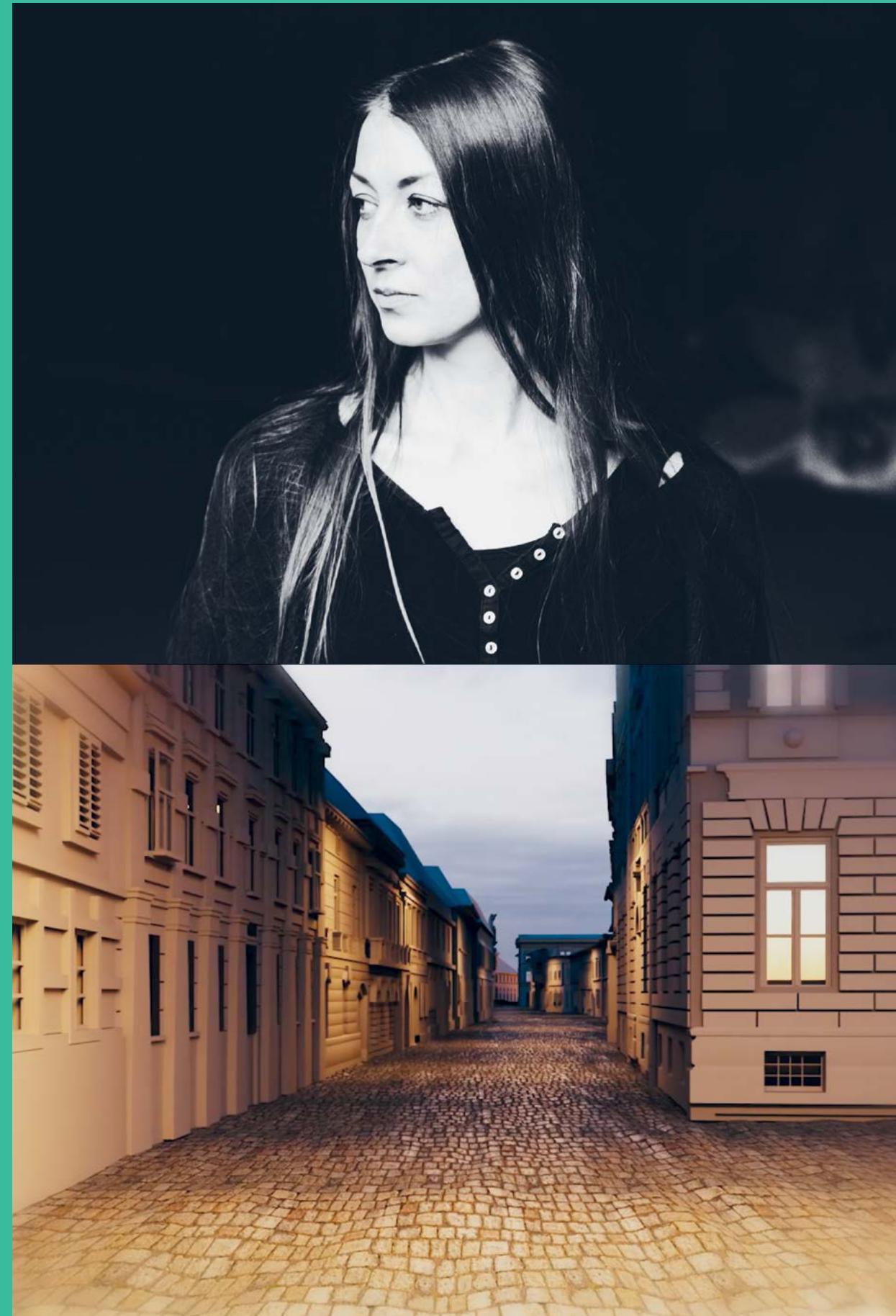
Sprehod spomina, or Walk of Memory is a virtual simulation of a walk through the most populated streets of Ptuj from the period between 1955 and 1960. The walk includes a visual perspective, which covers both the architecture and urban peculiarities of the period, as well as the appearance and rituals of the people on the street, along with an audio perspective. The latter is built on the supposed soundscape of the time: from street dialogues, popular and folk songs of that time to birds singing along the Drava River.

The original purpose of the project is to bring people with dementia from Ptuj and the surrounding area closer to the time of their youth. In this way, the authors want to offer them a form of relaxation and stimulation, which would ideally reduce the use of medication which are, due to the nature of the disease, their daily constant. Meanwhile, the project can offer the people with dementia the chance to relive memories with more of their senses.

The project is a form of re-creation of a certain period, or a fictitious replica of time, which is still most alive in the memories of the current third generation and today manifests itself in various forms of retro. In this way, "Time travel" is possible for a few minutes.

Participants: Mojca Kamnik, Umetniški klub 101, Tomislav Gangl

Foto / Photo: arhiv DDT



Deus Machina Theater (DMT) in NeuroRobo Theater (NRT)

Projekta Deus Machina Theater in NeuroRoboTheater predstavljata še en korak naprej k dosedanjemu delu DDTlab-a, ki se je zelo dobro uveljavil v Sloveniji na področju robotike. DMT predstavlja presečišče različnih aktualnih področij kot so industrijska robotika, marionetna umetnost in performativnost. Industrijska robotska roka v minimalistični senčni sceni izvaja več lutkovnih marionetnih predstav. Projekt se nadgrajuje z implementacijo BCI tehnologij, ki omogoča aktivno izvajanje marionetnega gledališča tudi gibalno oviranim osebam (NRT). V projektu sodeluje več akterjev iz različnih področij, kot so: intermedejska umetnost, lutkovno gledališče, mehatronika, programiranje, gospodarstvo in medicina oz. nevrologija.

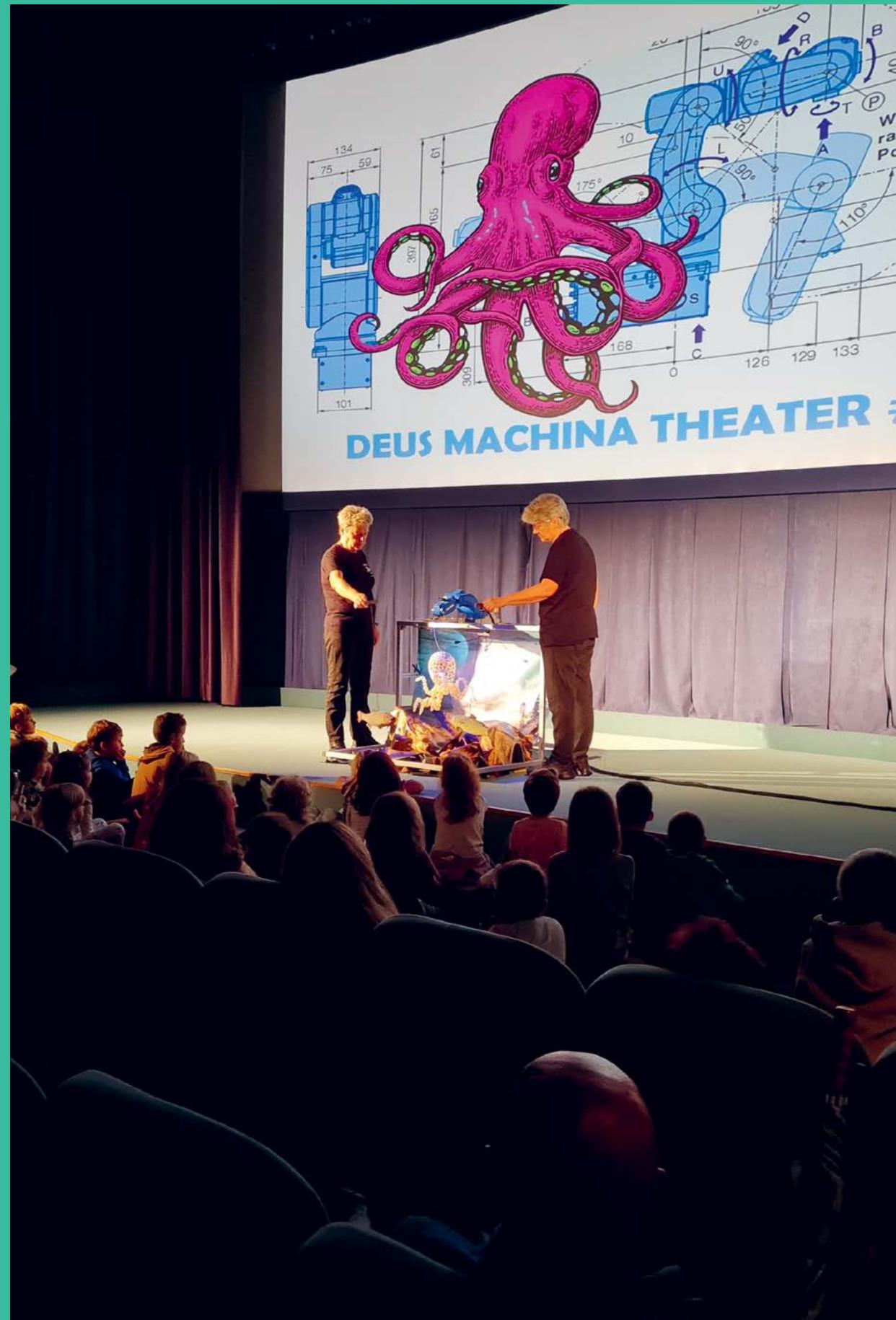
Sodelujoči: TNM – Trbovlje novomedijsko mesto, Društvo Marionetno gledališče Jurček, dr. Blaž Koritnik, Aleksander Klemenčič

Deus Machina Theater (DMT) and NeuroRobo Theater (NRT)

The Deus Machina Theater and NeuroRobo Theater projects represent another step forward in the work of DDTlab, which has established itself very well in Slovenia in the field of robotics. DMT represents the intersection of various current fields such as industrial robotics, marionette art and performativity. An industrial robot arm performs several puppet marionette shows in a minimalist shadow scene. The project is being upgraded with the implementation of BCI technologies, which enables the active performance of marionette theater even for people with physical disabilities. Several actors from various fields participate in the project, such as: intermedia art, puppet theater, mechatronics, programming, economy and medicine - neurology.

Participants: TNM – Trbovlje novomedijsko mesto, Društvo Marionetno gledališče Jurček, dr. Blaž Koritnik, Aleksander Klemenčič

Foto / Photo: arhiv DDT



DDT

REZIDENCE
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RESIDENCIES

dr. Tiago Martins

Come out and play / igrifikacijski koncepti za razvoj sledilnika osebnih predmetov Chipolo

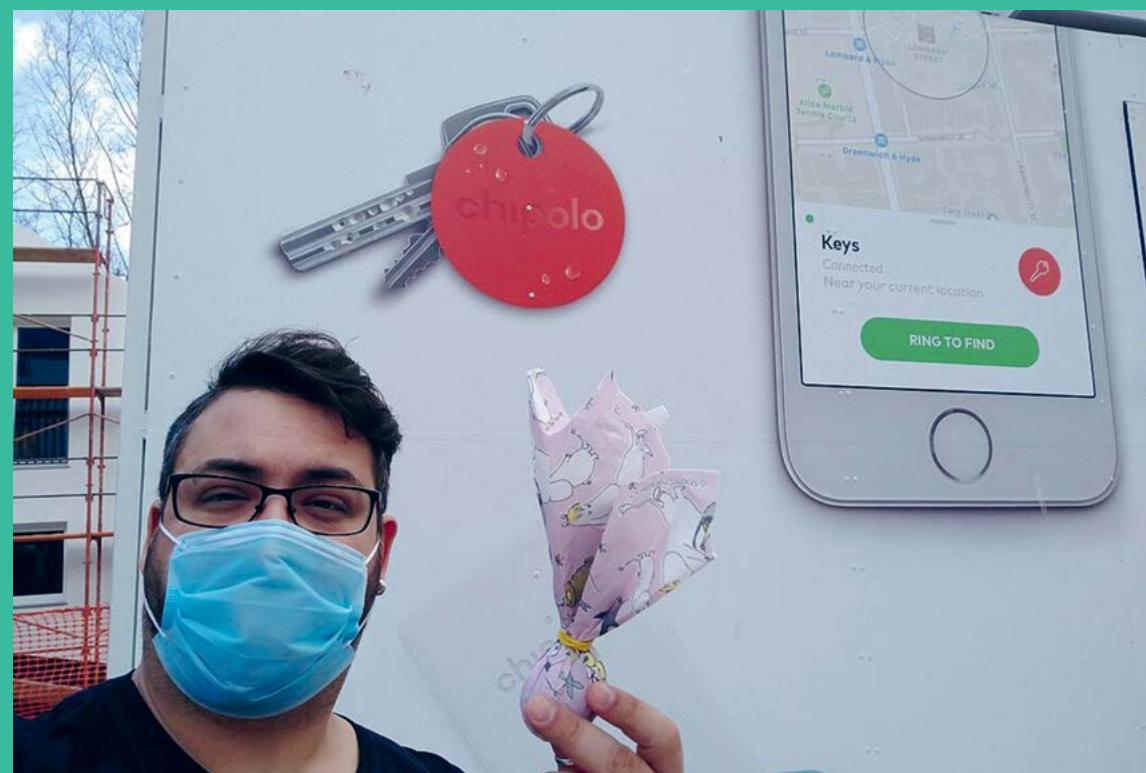
Izdelki Chipolo so namenjeni pametnemu sledenju predmetom, ki smo jih morebiti izgubili (npr. telefon, denarnica, ključi). Dodano vrednost, ki jo je pri svojem delu uporabljal dr. Tiago Martins, predstavlja proces igrifikacije, ki v sledenje izgubljenemu predmetu vpeljuje principe igre.

Sami sledljivosti predmeta je dodajal vsebino in razvijal možne koncepte uporabe, ki se opirajo na elemente igre. Prvi zamenki idej so vsebovali tri koncepte: Chipper - mobilna igrica, ki črpa navdih iz igrice Pokémón Go ter se ukvarja z navideznimi hišnimi ljubljenčki in igranjem vlog; Eight days - promocijska igra, katere cilj je aktivirati obstoječo skupnost uporabnikov, doseči nove uporabnike in ustvariti zavest o Chipolu na zabaven in igriv način. Tretji koncept nosi ime Lokacijska igra brez naslova in se ukvarja z rekontekstualizacijo igre, v smislu igrivega odnosa in možnostjo ustvarjanja lastnih iger s strani uporabnika.

Končni cilj izvedenega rezidenčnega programa, ki ga bo dr. Tiago skupaj s Chipolom v prihodnje še realiziral, predstavlja produkt imenovan Chipolo Family Play Kit.

Sodelujoči: dr. Tiago Martins, Chipolo d.o.o.

Foto / Photo: arhiv DDT



dr. Tiago Martins

Come out and play / gamification concepts for the development of the Chipolo personal tracker

Chipolo products perform the task of smart object tracing; they track objects we might have lost (e.g., phones, wallets, keys).

The added value of dr. Tiago Martins' work is the process of gamification, which introduces principles of play into the idea of lost object tracking. This means that he added content to the object's traceability, and developed possible usage concepts, which rely on elements of play. His first conceptions under the working title Come out and play, contained three concepts: the Chipper mobile game, which draws inspiration from Pokémón Go and deals with virtual domestic pets and role-playing. Eight days is a promotional game, the goal of which is to activate an existing community of users, reach new users, and generate an awareness about Chipolo in a fun and playful way. The third concept is called the Untitled location game, and was dubbed the "bonus round" concept by dr. Tiago Martins. It deals with the re-contextualization of playing in the sense of developing a playful attitude, and also with the possibility of users creating their own games.

The ultimate objective of the residency program which dr. Martins, together with Chipolo, is going to realize in the future, is a product called the Chipolo Family Play Kit.

Participants: dr. Tiago Martins, Chipolo d.o.o.

Foto / Photo: arhiv DDT



AR Laibach

aplikacija obogatene resničnosti, ki digitalno oživi plakate

Obogatena resničnost nadgrajuje klasično uporabo pametnih naprav z namenom doda-janja novega sloja virtualnosti v resničnost. Obogatena resničnost (angl. augmented reality) je v svetu IT industrije navzoča že nekaj časa, na področju umetnosti in kulture pa je v Sloveniji še vedno v manjšinski uporabi.

V letu 2020 je skupina Laibach praznovala 40-letnico delovanja. Eden od sodobnih arte-faktov glasbene skupine ob njenem jubileju je tudi inovacija AR Laibach, ki je nastala v sodelovanju s Srednjo tehniško in poklicno šolo Trbovlje.

Aplikacija AR Laibach deluje tako, da na izbranih kulnih plakatih skupine prikaže dodatno vsebino. Rešitev predstavlja tudi alternativno obliko podajanja novih vsebin, saj je nastala tudi kot odgovor na situacijo covid-19. Uporabnik potrebuje le slike plakatov in brez-plačno aplikacijo.

Aplikacija AR Laibach je bila sestavni del razstave Laibach 4 dekade v Zasavskem muzeju Trbovlje. Za projekt smo prejeli regionalno srebrno priznanje za inovacijo 2021 pri Gospodarski zbornici Slovenije.

Sodelujoči: Matic Bernot, Jani Novak – Laibach

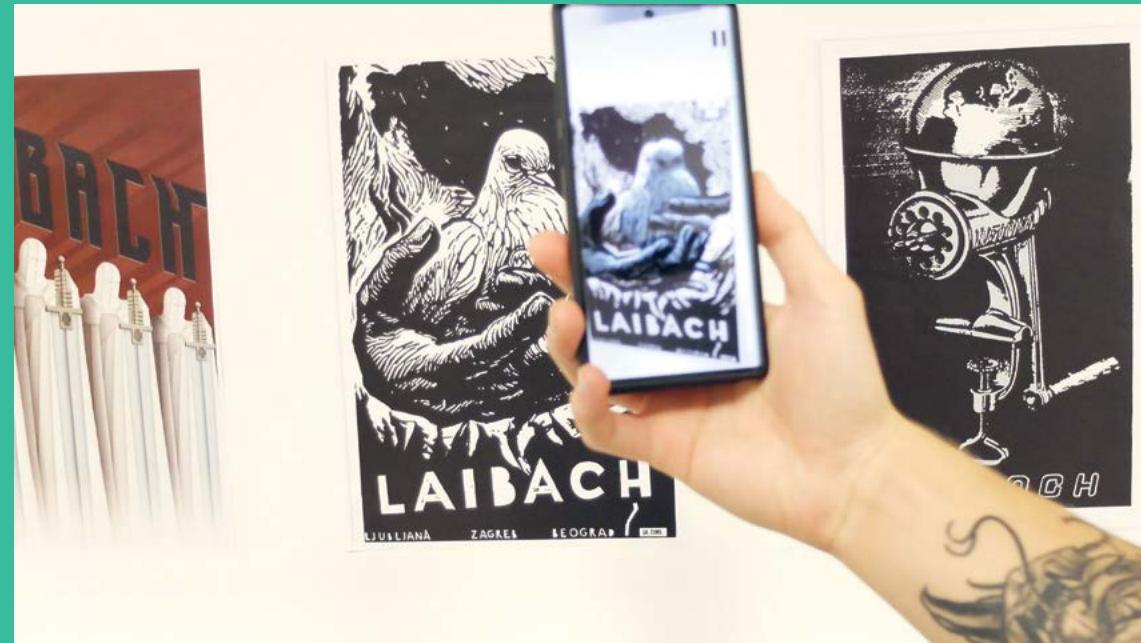


Foto / Photo: arhiv DDT

AR Laibach

an augmented reality application that digitally brings posters to life

Augmented reality enhances the classic use of smart devices with the goal of adding a new layer of virtuality to reality. While augmented reality has been present in the world of the IT industry in Slovenia for quite some time, its use in the sphere of art and culture is still far less common.

In 2020, Laibach celebrated their 40th anniversary. On the occasion of this jubilee, AR Laibach was created in cooperation with the Technical and Vocational School STPS Trbovlje as one of the band's contemporary artifacts.

AR Laibach is designed to add a dimension of augmented reality to the cult group's already existing printed posters. It also represents an alternative way of providing new content, as it was created as a reaction and solution to the Covid-19 situation. It allows the user to read the content on the poster photos with the help of a free app.

The AR Laibach application was an integral part of the Laibach 4 Decades exhibition at the History Museum of Zasavje in Trbovlje. The project has received the regional 2021 Silver Innovation Award awarded by the Slovenian Chamber of Commerce and Industry.

Participants: Matic Bernot, Jani Novak - Laibach

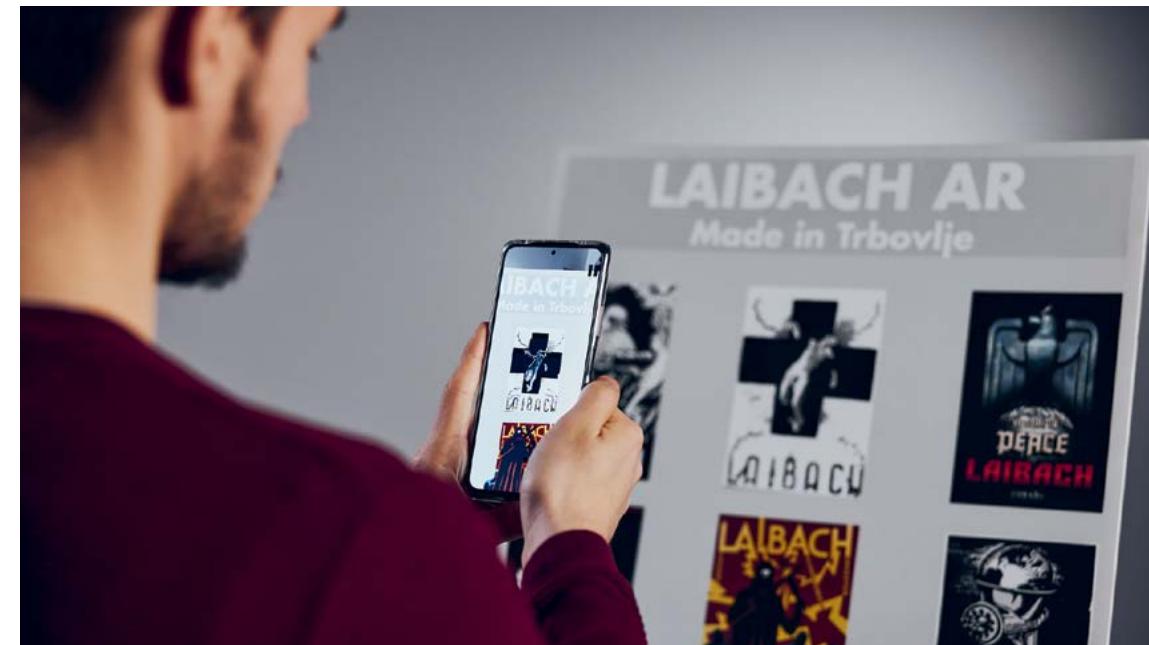


Foto / Photo: arhiv DDT

Varvara & Mar

Varvara & Mar sta v času rezidence delala na dveh projektih, »Jaz, človek in Eva« in »Risalni avtomat«. V nadaljevanju predstavljamo oba projekta.

Jaz, človek in Eva robotska zgodba v stripu

Projekt z rabo robotov, umetne inteligence in sodelovanjem občinstva ustvarja stripe, ki so skupni izdelek človeka in robota. Medtem ko se človek pogovarja z enim od robotov in se z njim fotografira, druga robotska roka v realnem času na papir izriše strip. Združevanje komunikacije, podob in besed skupaj ustvari vizualno zgodbo, h kateri doprinašata tako človek kot stroj.

Kaj se zgodi, ko robot postane naš partner v pogovoru? Kakšne zgodbe in odnosi lahko vzniknejo iz takšnega scenarija? V publicistiki obstaja vse več sintetičnih knjig, ki so delno ali v celoti ustvarjene z jezikovnimi modeli, ki temeljijo na umetni inteligenci. Kot umetnike nas bolj zanimajo sintetični odnosi med ljudmi in roboti ter romani, ki jih opisujejo. Poleg interakcije med človekom in računalnikom ter ustvarjalne robotike, želimo raziskati tudi nove oblike jezika, vključno z vizualnostjo.

Sodelujoči: Varvara & Mar – Varvara Guljajeva & Mar Canet Sola



Foto / Photo: arhiv DDT

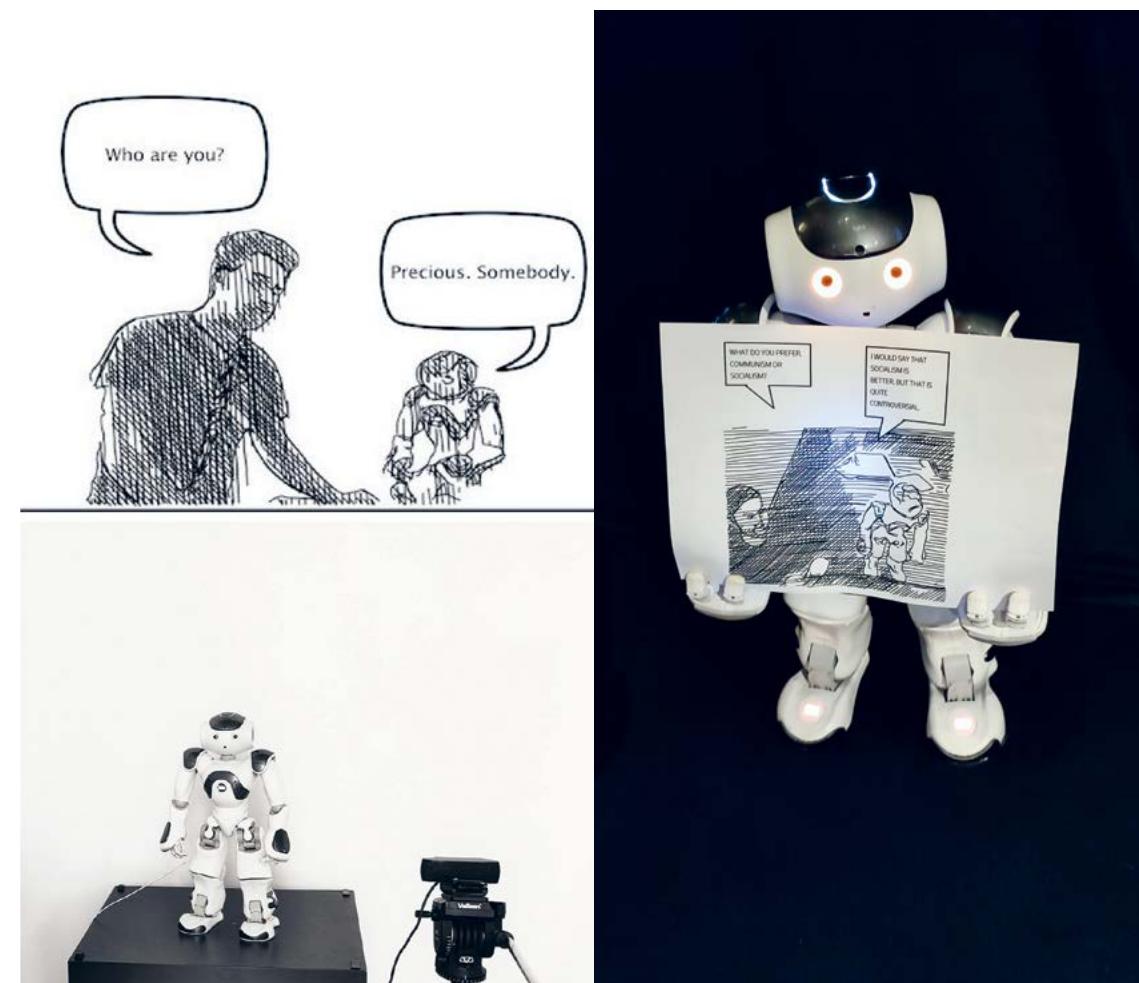
I, human and Eva AI comic story

The aim of the project is to produce comics created through collaboration of a human and a robot. To do this, the installation uses robots, AI and audience participation. While the human and the robot are talking and posing for a picture, the robotic arm draws a comic strip on paper in real time. The combination of communication, images and words creates a visual story, produced by both the human and the robot.

What happens when a robot becomes our partner in conversation? What sorts of stories and relationships can be born out of this scenario? There is a growing number of synthetic books, which are completely or partially created by AI-based language models. As artists, we are more interested in the synthetic relations between humans and robots, and the novels which describe them. Apart from the HCI and creative robotics, the project aims to explore new forms of language, including the visual one.

Participants: Varvara & Mar – Varvara Guljajeva & Mar Canet Sola

Foto / Photo: arhiv DDT



Risalni avtomat

robotska umetniška instalacija

Risalni avtomat je robotska umetniška instalacija, ki ustvarja skice in risbe ljudi. V instalaciji predstavljena robotska ruka se običajno uporablja v industrijski proizvodnji, medtem ko jo tukaj želimo osvoboditi in ji dodeliti umetniško nalogu.

Ta interaktivna namestitev za pretvorbo slike spletnega kamere v risbo, ki jo skicira robotska ruka, uporablja knjižnico Python Linedraw. Čeprav so vsi procesi algoritmični, se zdi, da je rezultat ročno narisana slika.

Sodelujoči: Varvara & Mar – Varvara Guljajeva & Mar Canet Sola



Foto / Photo: arhiv DDT

Drawing automata

a robotic art installation

Drawing automata is a robotic art installation that creates sketches and drawings of people. While the type of robotic arm seen in the installation is normally used in industrial production, the project wants to liberate it, assigning it an artistic task.

This interactive installation uses Python Linedraw Library to transform webcam images into drawings, sketched by the robotic arm. Although all the processes behind their creation are algorithmic, this gives us the impression the sketches are hand-drawn.

Participants: Varvara & Mar – Varvara Guljajeva & Mar Canet Sola

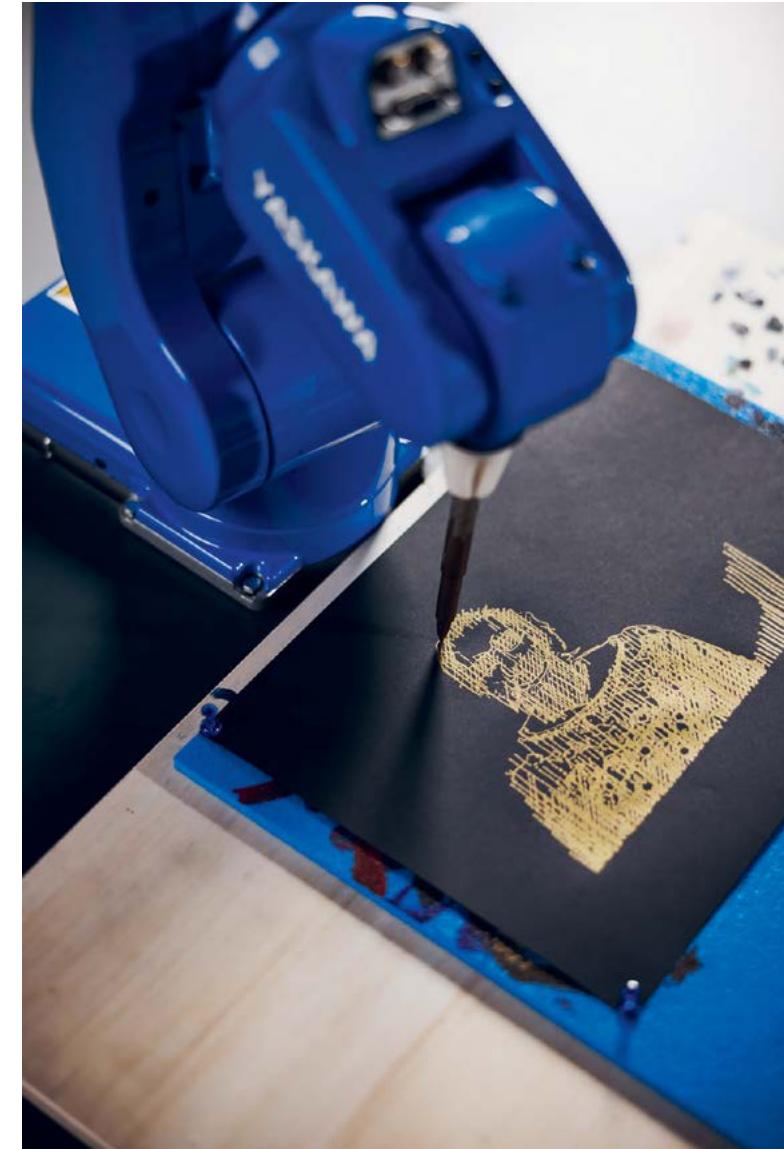


Foto / Photo: arhiv DDT

Zvezdni Prah

Zvezdni prah je interaktivna video instalacija, ki jo je navdihnila rudarska dediščina Trbovelj. Skoraj celo stoletje od pričetka obratovanja elektrarne leta 1915 so trboveljski rudarji in delavci garali, da so zagotovili elektriko na Slovenskem. Rudarstvo in pridobivanje elektrike sta postala osnova lokalne ekonomije in tudi pomembna gradnika lokalne identitete. Z zaprtjem elektrarne leta 2015 je mesto odprlo novo poglavje svoje inovativne transformacije. Uporaba premogovega in zvezdnega prahu kot metafore v pričajočem delu povezuje premogov prah, ki predstavlja zgodovino in tradicijo Trbovelj, z zvezdnim prahom, ki predstavlja inovacijo in prihodnost mesta. Drobcem prahu podaja organski ritem algoritem, ki uporablja sistem roja. Obiskovalci vplivajo na prah v instalaciji z gibi telesa. Različni položaji sprožajo mnoge vizualne učinke, ki se prikažejo na projiciranem zaslonu in tako spreminjačjo premogov prah v zvezdnega.

Sodelujoča: Qian Xu



Foto / Photo: arhiv DDT

Stardust

Stardust is an interactive video installation inspired by the mining culture in the city of Trbovlje. For almost a century since the construction of the power plant in 1915, the miners and power plant workers of Trbovlje have been working hard to provide Slovenia with electricity. Mining and power generation became the backbone of the local economy and also a proud cultural symbol for the citizens. With the shut-down of the power plant in 2015, the city has opened a new chapter in its innovative transformation. Using coal dust and stardust as metaphors, this work links the coal dust, which represents the history and culture of Trbovlje, with the stardust, which represents the innovation and future of the city. A swarm system algorithm is designed to give these dust particles an organic rhythm. Visitors interact with the coal dust in the installation using their body movements. Multiple visual effects are triggered by different body postures and will appear on the projected screen, turning these coal dust into beautiful stardust.

Participant: Qian Xu



Foto / Photo: arhiv DDT

DDT

KOPRODUKCIJE
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COPRODUCTIONS

Časovni tunel II

Projekt nadaljuje raziskavo Časovnega tunela 1 avtorja Sreča Dragana, pri katerem se je obiskovalec gibal skozi virtualni prostor vesolja. V Časovnem tunelu 2 se obiskovalec giblje skozi nano cevko v obogateni resničnosti s pomočjo očal Hololens. Virtualni model nano cevke je zgrajen na osnovi meritev, pridobljenih na Kemijskem inštitutu v Ljubljani. Med kroglicami, ki predstavljajo atome, se obiskovalec sprehaja po longitudinalnem realnem prostoru. Ko se odloči, da nano cevko zapusti, izbere enega od atomov in nanj vpiše svojo EMŠO. Na ta način obiskovalci pustijo svojo sled v nano strukturi, ki ima prostorsko razsežnost. V drugem modulu projekta obiskovalec barva simetrično razdelitev slikovne površine s pomočjo možganskega vmesnika. Projekt ponudi vstop v dve ravni resničnosti, ki sta dostopni šele prek tehnoloških naprav.

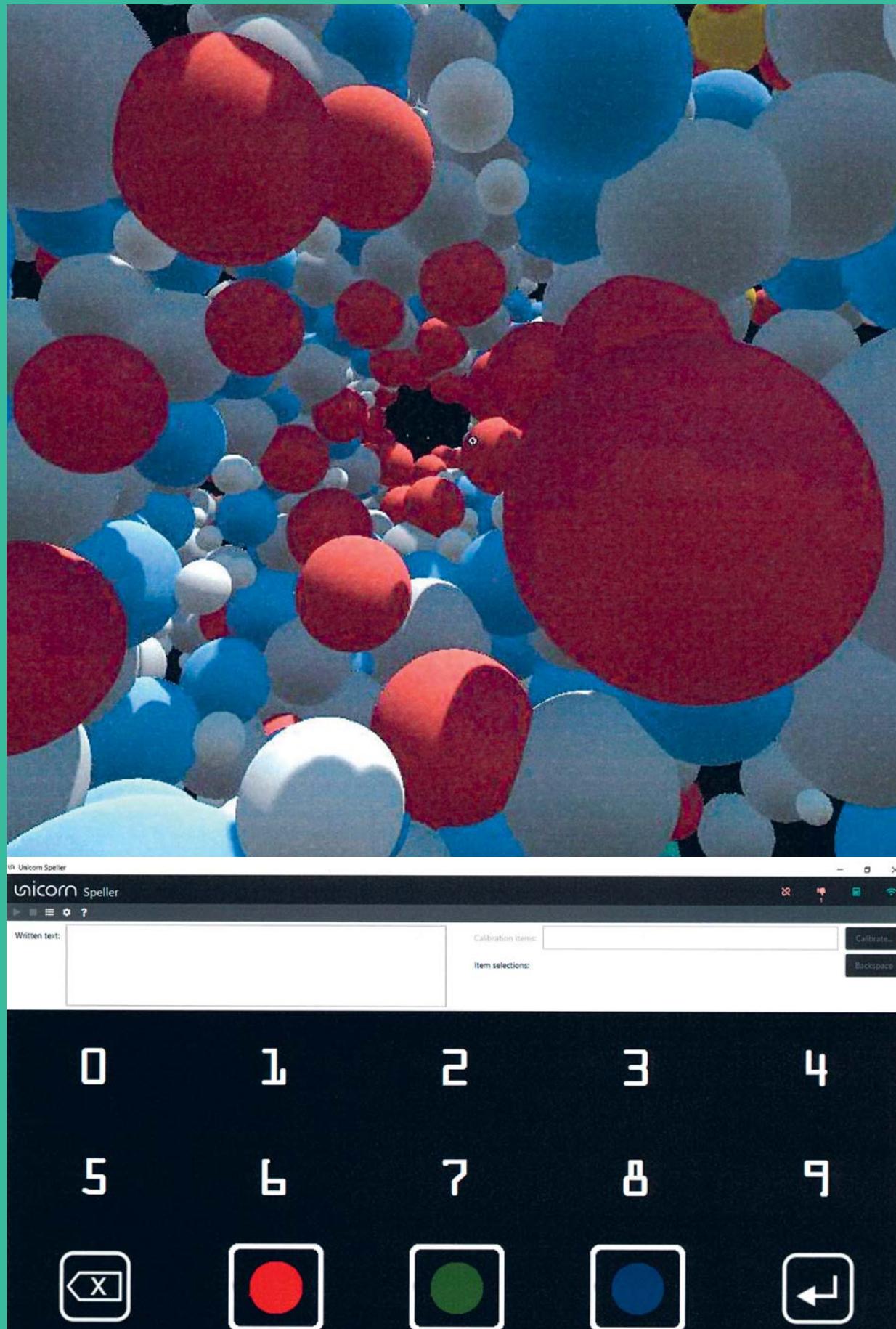
Koncept: Srečo Dragan, Borut Batagelj, Narvika Bovcon
 Programiranje instalacije z obogateno resničnostjo: Kristjan Kostanjšek
 Programiranje instalacije z možganskim vmesnikom: Luka Žontar

Time tunnel 2

The project continues the research of Časovni tunel 1, or Time Tunnel 1 by Srečo Dragan, in which the visitor moved through the virtual space of the universe. In Time Tunnel 2, the visitor moves through a nano tube in augmented reality with the help of HoloLens glasses. The virtual model of the nanotube is built on the basis of measurements obtained at the Institute of Chemistry in Ljubljana. Between balls that represent atoms, the visitor walks through longitudinal real space. When he decides to leave the nanotube, he chooses one of the atoms and writes his EMŠO on it. In this way, visitors leave their mark on a nano-structure and its spatial dimension. In the second module of the project, the visitor colors in the symmetrical division of the image surface with the help of a brain interface. The project offers entry into two levels of reality that are only accessible through technological devices.

Concept: Srečo Dragan, Borut Batagelj, Narvika Bovcon
 Programming the installation with augmented reality: Kristjan Kostanjšek
 Programming the installation with a brain interface: Luka Žontar

Foto / Photo: arhiv DDT



Igre podatkov

V seriji projektov Igre podatkov avtor raziskuje spekulativno naravo računalniških algoritmov, ki s pomočjo generativnih adversarnih mrež (GAN) in preko sinteze slik že obstoječih javno dostopnih zbirk 3D-modelov ustvarjajo nove potencialne oblike, vrste in prostore. Za namen serije projektov je bila razvita aplikacija, ki se lahko uči in ustvarja nove 3D-modele z uporabo tehnologije strojnega učenja in računalniške obdelave podatkov. Avtor namerava v večletnem procesu raziskati številne mogoče konceptualne okvire, ki bodo imeli skupno nit in bodo pod vprašaj postavljali uporabo računalniško generiranih podatkov in morebitnih alternativnih zgodovinskih narativ.

V prvem konceptualnem okviru, imenovanem Kamenine, je bil uporabljen obsežen nabor podatkov skeniranih zgodovinskih artefaktov, natančneje doprsnih kipov. Zbirko 3D-skenov doprsnih kipov je avtor pridobil v sodelovanju s platformo Scan The World, ki skrbi za dokumentiranje in hranjenje historičnih artefaktov najpomembnejših muzejev in galerij po vsem svetu. Doprsni kip je likovna forma, ki je zgodovinsko prevladovala pri predstavljanju eminentnih figur in veljakov iz najrazličnejših področij. Rezultati generiranih modelov, ki so predstavljeni v fiktivnem meta svetu, pa odražajo slabo spolno, kulturno in rasno reprezentacijo, ki izhaja iz že v osnovi zgodovinsko pristranskih muzeoloških praks in pomanjkljivih zbirk v sodobnih muzejih.

Sodelujoči: Anže Sekelj

Acts of Data

In the Data Games series of projects, the author investigates the speculative nature of computer algorithms that create new potential forms, types and spaces with the help of generative adversarial networks (GAN) and through the synthesis of images from existing publicly available collections of 3D models. For the purpose of a series of projects, an application was developed that can learn and create new 3D models using machine learning and computer data processing technology. In a multi-year process, the author intends to explore a number of possible conceptual frameworks that will share a common thread and question the use of computer-generated data in the creation of possible alternative historical narratives.

The first conceptual framework, called Stones, used an extensive dataset of scanned historical artifacts, specifically busts. This collection of 3D scans of busts was obtained by the author in cooperation with the Scan The World platform, which takes care of documenting and storing historical artifacts of the most important museums and galleries around the world. The bust is an art form that has historically dominated the presentation of eminent figures and dignitaries from a wide variety of fields. The results of the generated models, which are presented in the fictitious meta world, reflect poor gender, cultural and racial representation, which stems from already fundamentally historically biased museological practices and deficient collections in modern museums.

Participant: Anže Sekelj

Foto / Photo: arhiv DDT



Polarni sij ljudi

Delo odpira vpogled v avtorjevo življenje in omogoča intimno spoznavanje umetnika. Skozi instalacijo gledalec podoživi razpoloženja in dejavnosti avtorja v različnih trenutkih. Ob priložnosti lahko gledalec postane tudi aktivni udeleženec instalacije in svoje misli odkrije ostalim.

Možgani so razdeljeni na dve polovici, zato je tudi instalacija razdeljena na dva dela. Na levi strani, ki predstavlja logični del možganov, laserski projektor skozi difrakcijsko lečo projicira podobe, ki spremajajo barvo in obliko v skladu z možanskim valovanjem. V projekcijo so vključeni beta valovi, ki so prisotni pri razmišljjanju in med dejavnostmi, alfa valovi, ki so prisotni v stanju sproščenosti, in teta valovi, ki se pojavijo med spanjem ali v stanju močne utrujenosti.

Na desni strani, ki predstavlja kreativni del možganov, so prikazana duševna stanja, kot so fokus, interes, sproščenost in stres, v obliki grafov. Grafi se spreminja v skladu z intenzivnostjo posameznega duševnega stanja. Ker je tehnologija zaznavanja čustev še v povojuh, se vsi grafi premikajo kot v vetru in tako opozarjajo, da gre le za predvidevanja. Oblike, ki nastajajo, spominjajo na polarni sij, kar je dalo projektu ime.

Sodelujoči: Jaka Waldhütter

Aurora

The work offers an insight into the author's life and enables an intimate acquaintance with the artist. Through the installation, the viewer relives the author's moods and activities at different moments. On occasion, the viewer can also become an active participant in the installation and reveal his thoughts to others.

The brain is divided into two halves, so the installation is also divided into two parts. On the left side, which represents the logical part of the brain, a laser projector projects images through a diffractive lens that changes color and shape according to brain waves. Included in the projection are beta waves, which are present when thinking and during activities, alpha waves, which are present in a state of relaxation, and theta waves, which occur during sleep or in a state of severe fatigue.

On the right side, which represents the creative part of the brain, mental states such as focus, interest, relaxation and stress are displayed in graph form. The graphs change according to the intensity of an individual's mental state. Since emotion detection technology is still in its infancy, all graphs move like the wind, warning that these are only predictions. The resulting shapes resemble the aurora borealis, which gave the project its name.

Participant: Jaka Waldhütter

Foto / Photo: arhiv DDT



DDT

DDTLAB

DDTLab

Smer razvoja tehnologije se je spremenila. Od znanosti in inženiringa, kjer je poudarek na sami tehnologiji (koda, programi, aplikacije), je krenila proti umetnosti in oblikovanju. Tu so najpomembnejše kakovost izkušenj, vrhunskost in uporabniška angažiranost. Družba, soočena z dvema skrajnima poloma, teži k ponovni usklajenosti med levo in desno možgansko hemisfero, med trdimi spretnostmi in mehkimi veščinami. Humanizacija tehnologije, z zasnovno, ki združuje umetnost, tehnologijo in znanost, pomaga pri obnovi tega pomembnega ravnoesa.

Humanizacija tehnologije pomeni oblikovanje tehnologije v korist in po meri ljudi. V človeški družbi in politiki po vsem svetu je opazen trend, da neslutena hitrost tehnološkega razvoja povzroča zavračanje le-tega. Pa ne zato, ker si ga ne želimo. Pravzaprav naša želja po boljši, hitrejši in cenejši tehnologiji (programske in strojne opreme) še nikoli ni bila tako nenasitna. Vendar pa nas hkrati skrbi, da nas te mehanske, algoritično vodene in vse bolj invazivne tehnologije, potiskajo v hladen, nadzorovan in ironičen odklop od resničnega sveta. Desetletja smo razvijali tehnologijo, ki bi človeku omogočila večjo učinkovitost in odpravila potrebo, da sodeluje pri opravilih, kot je denimo pomivanje posode ali sestavljanje avtomobilov. Sedaj smo prišli do točke, ko učinkovitost in avtomatizacija nista več dovolj, saj družba dobiva občutek, da nas tehnologija dehumanizira.

Robotizacija na začetku 21. stoletja predstavlja eno izmed ključnih vej napredka. Razvoj gre v smeri vse večje avtonomnosti, prilagodljivosti in trajnosti. Sodobni stroji tako niso več namenjeni zgolj mehanskemu izvrševanju ene same funkcije, temveč postajajo vse bolj samostojne enote, ki naj bi reševali kompleksne probleme, s katerimi se soočajo posamezniki, gospodarstvo, družba in človeštvo.

Raziskovalni laboratorij DDTLab deluje na področju kibernetike, virtualizacije, BCI sistemov in robotike. Pod geslom Made in Trbovlje laboratorij omogoča regionalno, državno in mednarodno povezovanje.

V DDTLab-u so v dobrih štirih letih delovanja nastali številni interdisciplinarni projekti, kar pet projektov pa je bilo nagranih s priznanji za inovacije, ki jih vsako leto podeljuje Gospodarska zbornica Slovenije. Za inovacijo BCI slikar je DDTLab prejel zlato priznanje za inovacije ter se uvrstil tudi na državno raven, kjer je prejel posebno državno priznanje za inovacijski iziv sodelovanja kulturno - kreativnih industrij in gospodarstva.

Splošni cilji DDTLab-a so:

- ohranjanje in razvoj novomedijske kulture,
- razumevanje temeljnih terminov, povezanih z digitalizacijo, virtualizacijo, novimi naprednimi tehnologijami in robotiko,
- seznanjanje ljudi s tehnologijo, tako na ravni delovanja in ustvarjanja, kot tudi na ravni uporabnosti ter umeščenosti v okolje in družbo,
- predstavitev načel ustvarjalne rabe tehnologije za razvoj v kulturi,
- ozaveščanje o odgovorni uporabi in humanizaciji tehnologije ter razumevanje njenega vpliva na okolje, družbo in posameznika,
- opolnomočenje udeležencev za samostojno raziskovanje, načrtovanje in vodenje projektnih nalog,
- učinkovito povezovanje umetnosti in kulture z izobraževanjem, gospodarstvom in znanostjo.



DDTLab Research Laboratory

The development of technology has changed its direction and started to shift its orientation from science and engineering, that focus on technology as such (codes, programs, applications), towards art and design, which stress the quality of experience, excellence and user engagement. Society, faced with the division between the two opposing extremities, is seeking to reconcile the left and the right brain hemisphere, the hard and the soft skills. Humanization of technology, designed to combine art, technology and science, helps us to restore this important balance.

To humanize technology means to design technology for the benefit of people and in accordance with their needs. Throughout the world, there has been a noticeable trend in human politics and society that the unforeseen speed of technological development is causing its rejection. Not because we would not want it. In fact, our desire for better, faster, and cheaper technology (software and hardware) has never been more insatiable than it is today. But at the same time, we are concerned that these mechanical, algorithmically controlled and increasingly invasive technologies are pushing us into a cold, controlled and ironic disconnection from the real world. For decades, we have been developing technology that would enable us to become more efficient while it would no longer be necessary for us to participate in tasks, such as washing dishes or assembling cars.

Today, human society has reached a point when efficiency and automation of technology no longer suffice, as we are starting to perceive and fear their dehumanizing capacity.

At the beginning of the 21st century, robotization has become one of the key branches of progress. The goal of all development is to increase autonomy, flexibility and sustainability. Thus, a modern machine is no longer intended only for the mechanical execution of a single function, but is becoming an increasingly independent unit designed to solve complex problems that the economy, society and humanity are facing today.

DDTLab Research Laboratory works in the fields of cybernetics, virtualization, BCI systems and robotics, and facilitates regional, national and international connectivity, under the banner 'Made in Trbovlje'. In a bit more than four years of operation, DDTLab has created numerous interdisciplinary projects, five amongst which received innovation awards, that are given out every year by the Chamber of Commerce and Industry of Slovenia. The BCI Painter project received the Golden Innovation Award as well as a special National Award for the Innovation Challenge of innovative collaboration of cultural and creative industries and the "traditional" economy.

The general objectives of DDTLab are:

- preservation and development of new media culture.,
- understanding of basic terms related to digitization, virtualization, new advanced technologies, and robotics,
- informing and teaching people about technology on the level of operation and creation, as well as on the level of purpose, use, and social and environmental placement,
- introducing the principles of creative use of technology for development in culture,
- raising awareness about responsible use and humanization of technology, while studying the influence it has on the environment, society and the individual,
- empowering participants for independent research, planning and project tasks management,
- effectively connecting art and culture with education, economy and science

OSTALI
POMEMBNI
PROJEKTI

•
OTHER
IMPORTANT
PROJECTS

DDTstudio

dostopnost novih avdio-vizualnih tehnologij v lokalni skupnosti

DDTstudio je nadgradil razvoj vizualne kulture na lokalnem območju; z njim pokrivamo dejavnosti projekta RUK znotraj Delavskega doma Trbovlje ter ostalih konzorcijskih partnerjev. Omogoča promocijo projektov DDT in drugih kulturnih ter kreativnih akterjev, eksperimentiranje in izobraževanje na področju vizualnih praks.

DDTstudio je naravnost trajnostno, saj omogoča uporabo širši lokalni skupnosti. V letu 2020 se je pokazala močna potreba po izvajjanju produkcije in predvsem postprodukcije vizualnih vsebin, namenjenih širši javnosti. V aktivnosti so vključeni mladi med 12. in 29. letom, društva in javni zavodi ter zainteresirani posamezniki v lokalni skupnosti in širšem regionalnem okolju.

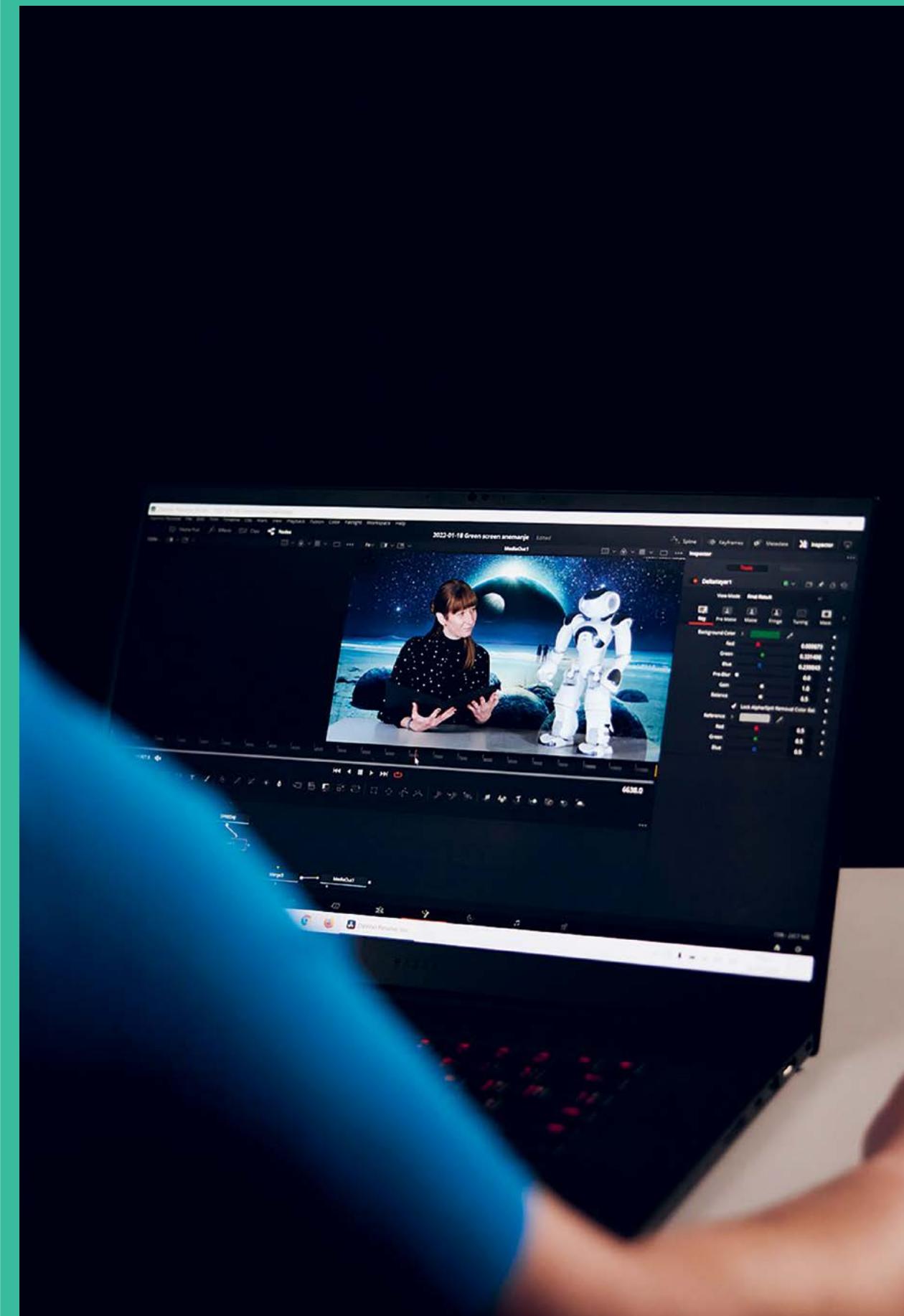
DDTstudio

availability of new audio-visual technologies in the local community

The DDTstudio facilitates development of visual culture in the local area. It comprises all the activities of the RUK project within Delavski dom Trbovlje, as well as those of other consortium partners. The studio promotes different projects in the field of culture and creativity, and facilitate experimentation and education in the field of visual practices.

Striving for sustainability, the DDTstudio is open for use to the wider local community. In 2020, we discovered an urgent need for implementation of production and especially post-production of visual content intended for the general public. The activities of the studio involve young people between the ages of 12 and 29, associations and public institutions, as well as interested individuals from the local community and from the wider regional environment.

Foto / Photo: arhiv DDT



NeuroYaski kreativna rehabilitacija

Rehabilitacijski prototip NeuroYaski je nastal v sodelovanju s podjetjem za industrijsko robotiko Yaskawa. Sestavljen je iz posameznih komponent, ki združene poskrbijo za izjemno uporabniško izkušnjo. Pri projektu gre za unikaten prenos tehnologije z industrijskega na družbeno področje, kar repetitivni robotski roki vnese vrlino humanosti. Uporabnik upravlja Yaskawino robotsko roko MotoMini preko možgansko-računalniškega vmesnika (BCI), kar mu omogoča, da robotsko roko krmili neposredno z mislimi.

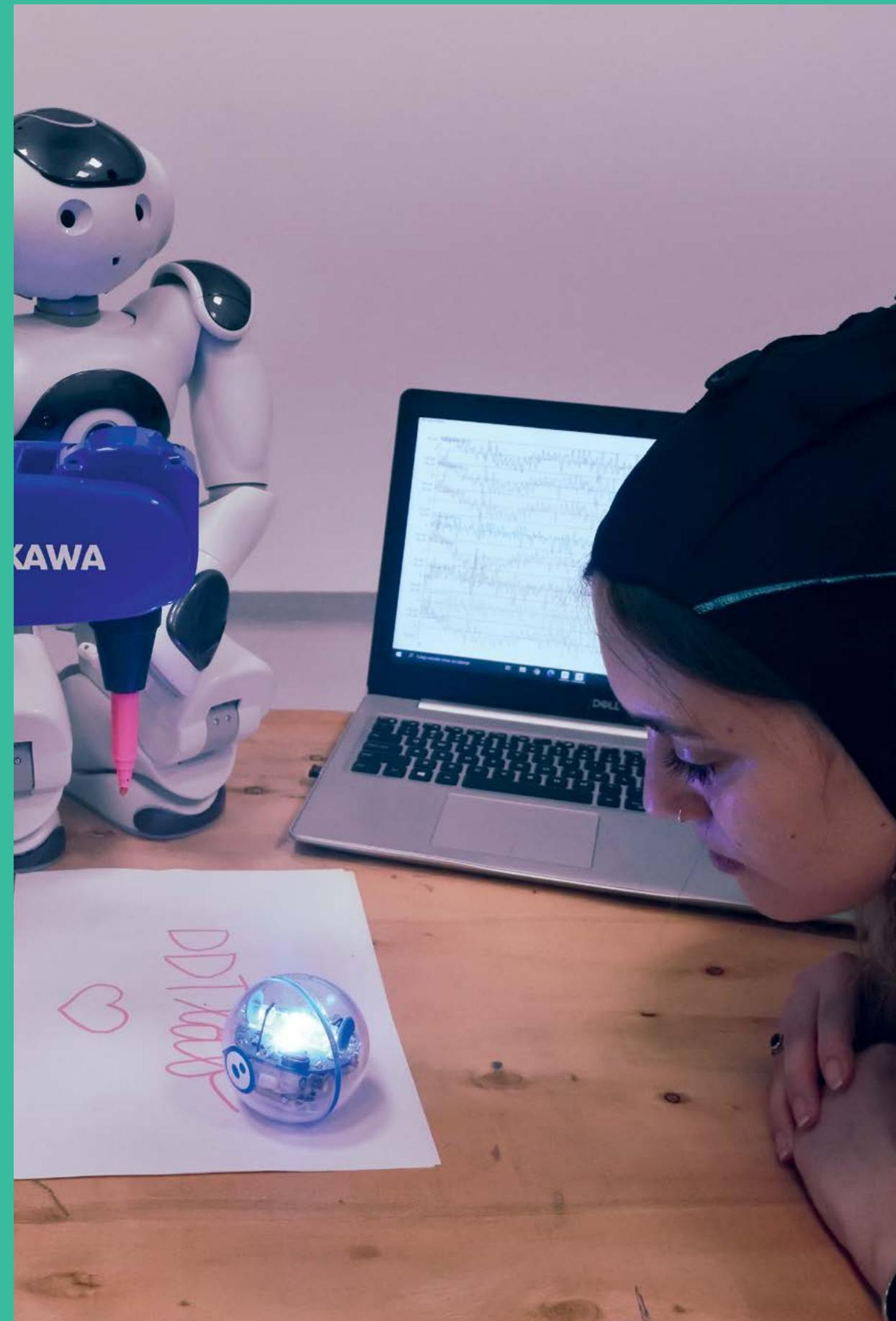
NeuroYaski je prejemnik Regionalnega srebrnega priznanja za inovacijo 2021 pri Gospodarski zbornici Slovenije.

NeuroYaski creative rehabilitation

The NeuroYaski rehabilitation prototype was created in collaboration with an industrial robotics company called Yaskawa. NeuroYaski consists of individual components combined to provide a unique user experience. The project is an unparalleled transfer of technology from the industrial to the social field, aimed at infusing a repetitive robotic arm with the virtue of humanity. The user operates Yaskawa's MotoMini robotic arm via a brain-computer interface, thus controlling it with his mind.

In 2021, NeuroYaski received the regional Silver Innovation Award, awarded by the Slovenian Chamber of Commerce and Industry.

Foto / Photo: arhiv DDT





nacionalna poklicna kvalifikacija

Kinematografska reprodukcija je ena od končnih stopenj v verigi filmske industrije. Celotna osrednja veriga vsebuje:

- filmsko produkcijo (svetovno, evropsko, domačo), kjer se ustvarijo nove filmske vsebine
- distribucijo, ki deluje kot vmesni člen med produkcijo ter kinematografi ter drugimi mediji, ki prikazujejo filme (televizija, platforme za prenos filmov na zahtevo)
- kinematografe različnih velikosti, tipov (mednarodne verige komercialnih kinematografov z multipleksi – pri nas Cineplex, lokalni mestni kinematografi, ki lahko vključujejo tudi program umetniškega filma, kinoteke, ki prikazujejo starejše filme)
- filmsko kritiko
- gledalce

Zraven spadajo tudi različni

- filmski festivali in drugi dogodki – od svetovno znanih, kot so podelitev oskarjev, filmski festival v Cannesu, Sundance film festival, pa do lokalnih, žanrskih, kot so v Sloveniji Grossmannov festival fantastičnega filma in vina, Kamerat - festival dela vskega filma Hrastnik
- nacionalni filmski centri
- filmski arhivi
- nacionalna in mednarodna profesionalna združenja (igralcev, scenaristov, producentov, kinematografov)
- Na svetovnem nivoju gre za industrijo, v kateri se letno obračajo desetine milijard evrov, neposredno zaposluje več sto tisoč ljudi, skozi svoje zgodbe pa se dotakne slehernika.

Prav zaradi slednjega ima film poleg svoje pomembne ekonomske vloge v Evropski uniji priznano posebno mesto tudi v evropskem in nacionalnem pravu. EU se na različnih nivojih zaveda vpliva filma kot pomembnega kulturnega elementa na posameznika, identiteto, svetovni nazor. EU tako že od Maastrichtskega sporazuma išče ravnotežje med zahtevami odprtega, svobodnega trga (kjer obstaja resna težava ekonomske in predvsem kulturne prevlade ekonomsko zelo močne ameriške filmske industrije), podporo evropskim vrednotam in skupni identiteti ter nacionalnim kulturam članic.

Izhajajoč iz teh dilem je EU vzpostavila različne programe in mehanizme za promocijo evropskemu filmu. En takšen mehanizem je na primer podprogram MEDIA programa Creative Europe, ki podpira evropski filmski in avdiovizualni sektor.

Zaradi njenega pomena na področju kulturne dediščine in gradnje evropske identitete za to področje obstajajo izjeme na področju državnih pomoči.

Kinematografska reprodukcija je kot rečeno ena od končnih stopenj poti filma od produkcije do končnega gledalca. Obisk kinematografa je hkrati najstarejši način gledanja filma, ki kljub razvoju tehnologij, ki omogočajo ogled filma doma, še vedno omogoča najbolj pristno in kvalitetno izkušnjo. Od svojih začetkov na prehodu iz 19. v 20. stoletje

je kinematografska reprodukcija doživela mnogo vzponov in padcev, verjetno največja sprememba (po iznajdbi zvočnega filma) pa se je zgodila v zadnjih dveh desetletjih. Kinematografi so se digitalizirali.

Vse od svojih začetkov so bile filmske vsebine posnete na filmski trak. Seveda je prihalo do manjših tehnoloških sprememb, ampak v osnovi je vseskozi šlo za polprosojen trak s sličicami, katerega je presvetlila žarnica kinematografskega projektorja in s tem ustvarila sliko na platnu. Vsak kinematograf, ki je hotel prikazati film, je tako moral dobiti (ponavadi na izposojo) fizično kopijo filmskega traku. Zaradi cene izdelave kopije je bilo teh omejeno število in so krožile med kinematografi. Filmi so se najprej predvajali v večjih središčih, nato so si jih lahko ogledali tudi v manjših krajih.

Vzopredno z obstojem filma so se razvijale alternativne oblike zajema in distribucije filmskih vsebin (različne video kasete, video disk, ...), vendar nobeden izmed teh formatov ni dosegel nivoja kvalitete ter varnosti (piratstvo), ki so ga zahtevali svetovni producenti filmov za prikazovanje filmov v kinodvoranah.

Digitalizacija kina se je zgodila zelo hitro. DCI (Digital Cinema Initiatives) je nastala 2002 kot skupna pobuda največjih svetovnih filmskih studiev z namenom določitve arhitekture in standardov za digitalno prikazovanje filmov. Šlo je torej za usklajen pritisk najmočnejših igralcev filmske industrije. Tehnologijo filmskega traku, ki je prevladovala več kot sto let, je v le nekaj letih skoraj povsem izpodrinilo digitalno predvajanje filma po DCP standardu. V Evropi je v šestih letih, med 2009 in 2015 delež digitaliziranih platen narastlo iz 13% na 93%. Kdor se ni pravočasno digitiziral, je zaradi pomanjkanja novih filmskih vsebin na filmskem traku lahko propadel. Filmski trak je v kinematografski reprodukciji postal nišna tehnologija, namenjena predvsem festivalom, kinotečnim filmom ter arhivom (produkcija nekaterih filmov še vedno poteka na filmski trak s kasnejšo digitalizacijo), vendar je tudi to v upadu).

Z digitalizacijo se je celoten način dela v kinematografih zelo spremenil. Digitalne kopije filma v kombinaciji z varnostnimi (KDM) ključi, ki omogočajo ogled filma le v terminu, dogovorjenim s distributerjem, omogočajo, da se namesto čakanja na fizično kopijo filma, ki je krožila od enega do drugega kinematografa, film lahko začne predvajati na dan premiere v vseh kinematografih v državi hkrati. S tem se zelo zmanjša težava piratских vsebin, ki so pogosto bile nelegalno dostopne na internetu, preden so filmske kopije prispele do manjših kinematografov. Hkrati je priprava programa postala bolj dinamična, kinematograf lahko na spored uvrsti filme hitreje, v istem tednu predvaja več različnih naslovov, kot prej.

Sočasno pa se je zelo spremenilo delo kinooperaterja v sedaj digitaliziranem kinematografu. Kinooperater danes ne operira s preciznim, finomehaničnim strojem, v katerega vstavlja fizični filmski trak. Danes je poklic kinooperaterja predvsem vezano na IT opravila z računalnikom, povezanim na visokokvalitetni projektor ter ozvočenje. Poklica sta si tako različna, da kinooperater, ki je delal s filmskim trakom, brez dodatnega usposabljanja ne bi mogel izvesti projekcije na digitalnem projektorju, in obratno. Zato smo ugotovili potrebo po izdelavi poklicnega standarda in nacionalne poklicne kvalifikacije (NPK): kinooperater v digitalnem kinematografu.

Pred sam oddajo (v fazi priprave) pobude za razvoj poklicnega standarda in NPK je bila izvedena analiza stanja. Izkazalo se je, da gre za zelo pomemben poklic znotraj filmske industrije, ki pa je slabo prepoznan. Na ravni EU nismo našli posodobljenega poklicnega standarda, ki bi govoril o delu kinooperaterja v digitalnem kinu. Vsi standardi so bili zastavili in so opisovali dela s tehnologijo, ki takrat ni bila več v uporabi.

V okviru priprav na oddajo pobude smo zato izvedli anketo med člani Art kino mreže Slovenije – združenja kinematografov in prikazovalcev kakovostnega in umetniškega filma Slovenije, ki združuje 30 kinematografov po Sloveniji. Z njo smo ugotavljali, kaj sploh je delo kinooperaterja v digitaliziranem kinematografu. Izluščili smo ključna dela kinooperaterja, hkrati pa ugotovili, da gre za delo, ki zahteva velik spekter znanj ter širše poznavanje kinematografske industrije.

28. 3. je bila oddana pobuda za razvoj poklicnega standarda na Center za poklicno kvalifikacijo (CPI). S tem smo dosegli kazalnik projekta RUK.

Lahko poročamo, da s tem naše delo ni bilo končano.

Prek Zooma smo tudi izvedli uspešno predstavitev pobude, ki je bila tudi sprejeta. CPI sedaj pripravlja poklicni standard in nacionalno kvalifikacijo, pri tem pa v delovni skupini za pripravo poleg predstavnikov iz Kinodvora, Cankarjevega doma, predstavnika filmske industrije in predstavnika Ministrstva za kulturo sodelujemo tudi zaposleni v Delavskem domu Trbovlje.

NPK national vocational qualification

Cinematic reproduction is one of the final stages in the chain of the film industry. The entire central chain contains:

- film production (world, European, domestic), where new film content is created
- distribution, which acts as an intermediate link between production and cinemas and other media showing films (television, platforms for downloading films on demand)
- cinemas of different sizes and types (international chains of commercial cinemas with multiplexes - in our case Cineplexx, local city cinemas that may also include an art film program, cinemas showing older films)
- film criticism
- viewers

It also includes various

- film festivals and other events - from world-famous ones such as the Oscars, the Cannes Film Festival, the Sundance Film Festival, to local, genre ones, such as the Grossmann Fantastic Film and Wine Festival in Slovenia, Kamerat - the working-class film festival Hrastnik
- national film centers
- film archives
- national and international professional associations (actors, screenwriters, producers,

cinematographers)

At the global level, it is an industry in which tens of billions of euros are turned over annually, it directly employs hundreds of thousands of people, and through its stories, it touches the poor.

It is precisely because of the latter that, in addition to its important economic role in the European Union, film has a recognized special place in European and national law. At various levels, the EU is aware of the influence of film as an important cultural element on the individual, identity, and worldview. Ever since the Maastricht Agreement, the EU has sought a balance between the requirements of an open, free market (where there is a serious problem of the economic and, above all, cultural dominance of the economically very powerful American film industry), support for European values and common identity, and the national cultures of the members.

Based on these dilemmas, the EU established various programs and mechanisms for the promotion of European film. One such mechanism is, for example, the MEDIA sub-programme of Creative Europe, which supports the European film and audiovisual sector.

Due to its importance in the field of cultural heritage and the building of European identity, there are exceptions for this area in the field of state aid.

Cinematic reproduction is, as mentioned, one of the final stages of the film's journey from production to the final viewer. Visiting the cinema is at the same time the oldest way of watching a movie, which, despite the development of technologies that allow watching a movie at home, still provides the most authentic and high-quality experience. Since its beginnings at the turn of the 19th and 20th centuries, cinematographic reproduction has seen many ups and downs, but probably the biggest change (after the invention of sound film) has occurred in the last two decades. Cinemas have gone digital.

Since its inception, film content has been recorded on film tape. Of course, there were minor technological changes, but basically it was always a semi-transparent tape with thumbnails, which was illuminated by the lamp of a cinema projector and thereby created an image on the screen. Any cinema that wanted to show the film thus had to obtain (usually on loan) a physical copy of the filmstrip. Due to the cost of making a copy, these were limited in number and circulated between cinemas. Films were first screened in larger centers, then they could also be seen in smaller towns.

Parallel to the existence of film, alternative forms of recording and distribution of film content (various video cassettes, video discs, etc.) were developed, but none of these formats reached the level of quality and security (piracy) required by global film producers for showing films in cinemas.

The digitization of cinema happened very quickly. DCI (Digital Cinema Initiatives) was created in 2002 as a joint initiative of the world's largest film studios with the aim of defining the architecture and standards for the digital display of films. So it was a coordinated

pressure from the most powerful players in the film industry. Filmstrip technology, which dominated for more than a hundred years, was almost completely superseded in just a few years by digital film playback according to the DCP standard. In Europe, in the six years between 2009 and 2015, the share of digitized canvases grew from 13% to 93%. Those who did not digitize in time could fail due to the lack of new film content on film tape. Filmstrip has become a niche technology in cinematographic reproduction, mainly intended for festivals, cinematographic films and archives (production of some films still takes place on film strip with later digitization, but this too is in decline).

With digitization, the entire way of working in cinemas has changed a lot. Digital copies of the film, combined with security (KDM) keys, which allow the film to be seen only at a time agreed with the distributor, allow the film to start showing on the day, instead of waiting for a physical copy of the film that has been circulated from one cinema to another premieres in all cinemas in the country at the same time. This greatly reduces the problem of pirated content, which was often illegally available on the Internet before film copies reached smaller cinemas. At the same time, the preparation of the program has become more dynamic, the cinema can schedule films more quickly, showing more different titles in the same week than before.

At the same time, the work of the cinematographer in the now digitized cinema has changed a lot. Today, the cinematographer does not operate with a precise, fine mechanical machine into which he inserts a physical film strip. Today, the profession of a cinematographer is primarily related to IT tasks with a computer connected to a high-quality projector and sound system. The two professions are so different that a cinematographer who worked with filmstrip would not be able to project on a digital projector without additional training, and vice versa. Therefore, we identified the need to create a professional standard and national professional qualification (NPK): cinematographer in digital cinema.

Before the submission (in the preparation phase) of the initiative for the development of the professional standard and NPK, a situation analysis was carried out. It turned out to be a very important profession within the film industry, but one that is poorly recognized. At the EU level, we did not find an updated professional standard that spoke about the work of a cinematographer in a digital cinema. All standards were outdated and described work with technology that was no longer in use at the time.

As part of the preparations for the submission of the initiative, we therefore conducted a survey among the members of the Art Cinema Network of Slovenia - an association of cinematographers and exhibitors of quality and artistic films in Slovenia, which unites 30 cinemas across Slovenia. With her, we found out what the job of a cinematographer in a digitized cinema is. We extracted the key jobs of a cinematographer, and at the same time found that it is a job that requires a wide range of skills and a wider knowledge of the cinema industry.

On March 28, the initiative for the development of a professional standard was submitted to the Center for Professional Qualification (CPI). With this, we achieved the indicator of the RUK project.

We can report that this is not the end of our work.

We also conducted a successful presentation of the initiative via Zoom, which was also accepted. The CPI is currently preparing the professional standard and the national qualification, and in addition to representatives from Kinodvor, Cankarjev dom, a representative of the film industry and a representative of the Ministry of Culture, employees of the Trbovlje Workers' Home also participate in the working group for the preparation.

Praksa

V času trajanja projekta RUK smo v DDTlabu gostili več kot 20 dijakov in študentov, ki so pri nas opravljali praktično izobraževanje. Predstavljeni so eno izmed ciljnih skupin dejavnosti Izobraževalnega pospeševalnika, katerega namen je spodbujanje k aktivnostim in zagotovitev dostopa do učenja, izmenjave znanja in razvoja za realizacijo projektov, s pomočjo mentorja. Nekaj praktikantov je bilo tudi precej uspešnih, saj so skupaj z zaposlenimi in zunanjimi sodelavci razvili projekte, ki so zaradi svoje inovativnosti prejeli tudi nagrade. Eden takšnih projektov je BCI slikar, ki je prejel zlato priznanje za inovacijo Zasavske gospodarske zbornice in posebno nacionalno priznanje za inovacijski izziv 2020 Gospodarske zbornice Slovenije.

Practice

During the duration of the RUK project, we hosted more than 20 pupils and students in the DDTlab, who did practical education with us. They represented one of the target groups of the Educational accelerator, whose purpose it is to encourage activities and ensure access to learning, knowledge exchange and development for the realization of projects, with the help of mentor. Some practitioners were also quite successful, as they developed projects together with the employees and external collaborators. They also received awards for their innovation. One such project is the BCI painter, which received a gold award for innovation from the Zasavje Chamber of Commerce and a special national award for the Innovation Challenge 2020 from the Chamber of Commerce of Slovenia.

BCI slikar digitalno slikanje z mislimi

Upravljanje naprav z mislimi ni več znanstvena fantastika, ampak je del sedanjosti, saj to področje pokriva razvoj naprav, ki temeljijo na tehnologiji BCI. Področje BCI je namenjeno tako analizi delovanja človeških možganov kot uporabi tovrstne tehnologije za pomoč in podporo govorno in gibalno oviranim.

Projekt BCI slikar je plod sodelovanja s Srednjo tehniško in poklicno šolo Trbovlje in temelji na virtualni tipkovnici, s pomočjo katere uporabnik z mislimi preko BCI vmesnika izbira možnosti – kretnje čopiča, ki spominjajo na potege čopiča zasavskega akademškega slikarja Janeza Kneza.

BCI slikar je prejel regionalno zlato priznanje za inovacijo 2021 ter posebno nacionalno priznanje za inovacijski iziv 2020 sodelovanja kulturno-kreativnih industrij in gospodarstva pri Gospodarski zbornici Slovenije.

Sodelujoči: dr. Uroš Ocepek, Jon Tavčar, Matic Bernot

BCI Painter thought-controlled digital painting

Thought-controlled devices are no longer science-fiction, but a part of contemporary reality, made possible by the development of BCI devices. The BCI technology is used to analyze the functioning of the human brain, and especially to empower people with speech and mobility impairments.

BCI Painter has been developed in cooperation with the Technical and Vocational School STPŠ Trbovlje, and uses a virtual keyboard that helps the user select different options – different brush strokes, similar to those of Janez Knez, the renowned painter from Zasavje. In this way, the user operates the keyboard via thoughts with the help of the BCI.

The BCI Painter received the regional 2021 Golden Innovation Award and a special 2020 National Innovation Award for cooperation between the Slovenian economy and the cultural and creative industries, awarded by the Slovenian Chamber of Commerce and Industry.

Participants: dr. Uroš Ocepek, Jon Tavčar, Matic Bernot

Foto / Photo: arhiv DDT



Vertigo Bird 2020

360° video izkušnja plezanja na najvišji dimnik v Evropi

Povzpnite se na najvišjo točko zasavske preteklosti, da bi videli prihodnost!

Ustvarili smo prav posebno doživetje – virtualni vzpon na najvišji dimnik v Evropi. Vzpon smo dokumentirali s 360° video tehnologijo in tako omogočili širši javnosti izkušnjo plezanja na dimnik. Uporabnik se tako lahko skupaj s člani akrobatike skupine Dunking Devils virtualno povzpne na dimnik in na vrhu od blizu opazuje njihov perfomans.

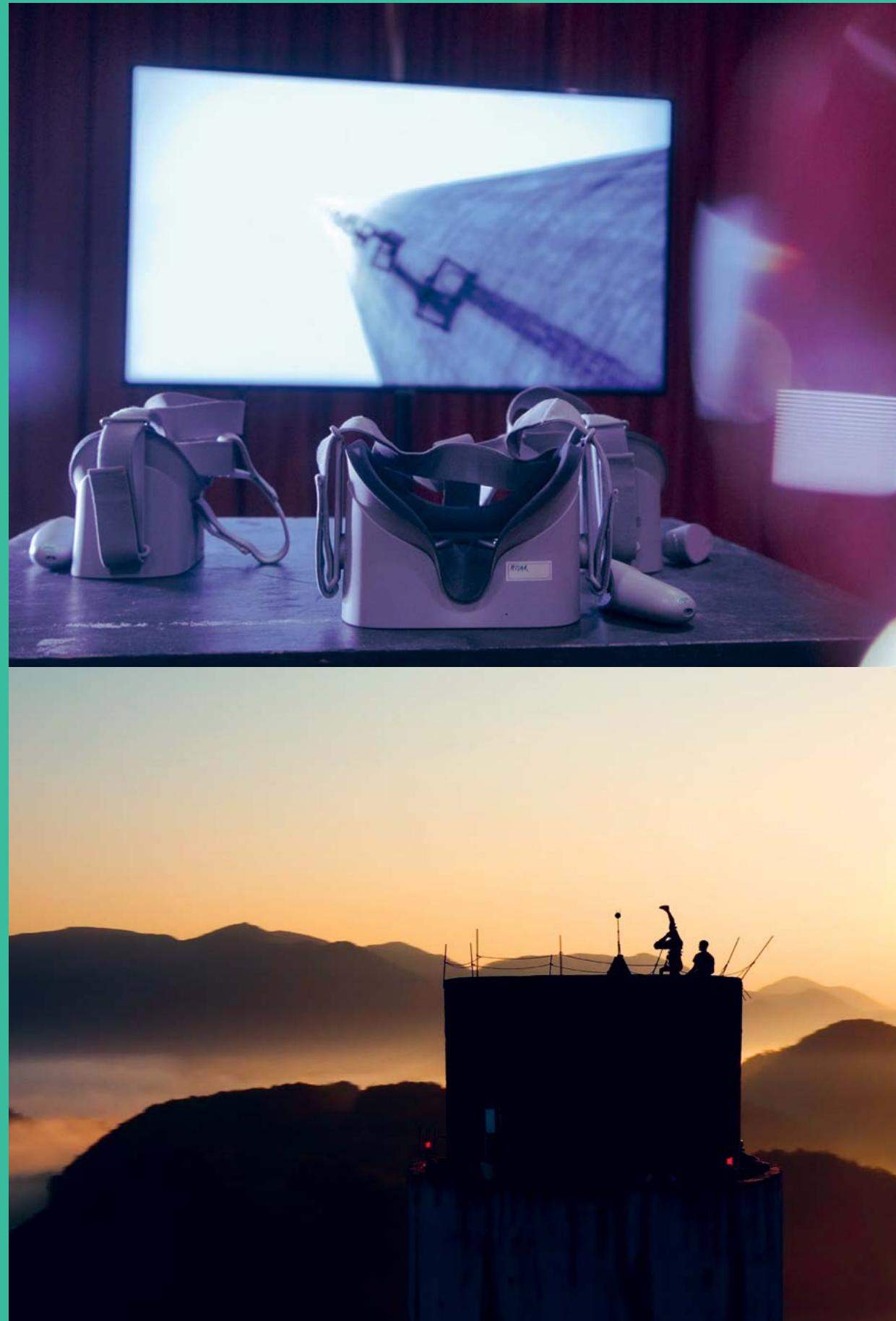
Vertigo Bird 2020

360° video - virtual ascent to Europe's highest chimney

Climb to the peak of Zasavje past to see the future!

We have created a very special experience – a virtual ascent to the highest chimney in Europe. The physical ascent was documented with 360° video technology to recreate the experience of the climb in virtual reality. Together with the members of the Dunking Devils acrobatic group, the user can now virtually climb the highest chimney in Europe, and observe their performance at the top of the chimney from up close.

Foto / Photo: arhiv DDT



AR LesARIus

aplikacija obogatene resničnosti obiska muzeja lesarske obrti

Raziskava je pokazala, da se muzeji (še posebej lokalni) mlajšim generacijam ne zdijo zanimivi. Zato muzeji poskušajo v obstoječe razstave vključiti sodobno tehnologijo, s čimer vsebine prikažejo na zanimiv in interaktiven način. V Zasavju se je pred nekaj leti odprl prvi slovenski Muzej lesarskih mojstrov Lesarius. Izhodišče za njegovo postavitev je bila tudi zamisel o vključenosti sodobne informacijske tehnologije, zato je muzej naročil izdelavo aplikacije z obogateno resničnostjo, ki bi obiskovalcem, še posebej tistim mlajšim, približalo poklice, ki so povezani z lesom. Aplikacija AR LesARIus prikazovanju vsebin doda še animacijo muzejske maskote ter zvočni in besedilni nagovor, s čemer obiskovalcu omogoči, da samostojno sledi razstavi. Večina muzejev uporablja zvočne naprave oz. aplikacije, ki vsebujejo zvočne posnetke, z aplikacijo AR LesARIus pa smo naredili korak naprej, saj smo ji poleg zvočne in besedilne razlage dodali še sodobnejši sloj obogatene resničnosti (angl. augmented reality). Tako smo obisk muzeja naredili zanimivejši in uporabniku omogočili inovativno izkušnjo.

AR LesARIus je prejemnik Regionalnega Bronastega priznanja za inovacijo 2021 pri Gospodarski zbornici Slovenije.

Sodelujoči: Matic Bernot

AR LesARIus

augmented reality application for the woodworking museum

Due to a decline in the interest for museums in the younger generations, museums have been trying to attract new audiences. They have upgraded the existing exhibitions by incorporating modern technology and presenting the information in a new, interesting and interactive way. Lesarius, Slovenia's first Museum of Woodworkers, was founded in Zasavje a few years ago. One of its starting points was the inclusion of modern information technology. On the initiatives of the museum, we have created an augmented reality application that would pique the curiosity for the museum-related professions in the museum visitors, especially the younger ones. Through content display, the museum mascot animation, and audio and text renditions, the LesARIus AR App facilitates a self-guided visit of the exhibition. Adding augmented reality is a step up from the audio recording or applications that are normally used in museums, and provides the user with an augmented, innovative and altogether more interesting experience.

The LesARIus AR App has received the regional 2021 Bronze Innovation Award awarded by the Slovenian Chamber of Commerce and Industry.

Participant: Matic Bernot

Foto / Photo: arhiv DDT



LoRa kot omrežni sistem za komunikacijo ljudstev Nubskih gora

Razvili smo sistem z majhnimi napravami – LoRa oddajniki – s katerimi bi ljudem v Nubskih gorah omogočili mrežo za komunikacijo s pametnimi telefonimi. Tak sistem bo zelo olajšal komunikacijo v vsakdanjem življenju ter služil kot učinkovito sredstvo v nevarnih izrednih okoliščinah, hkrati pa bo omogočal tudi monitoring pri doziranju zdravil proti gobavosti. Gre za vzpostavitev komunikacijske mreže brez interneta, zgolj preko pametnih telefonov.

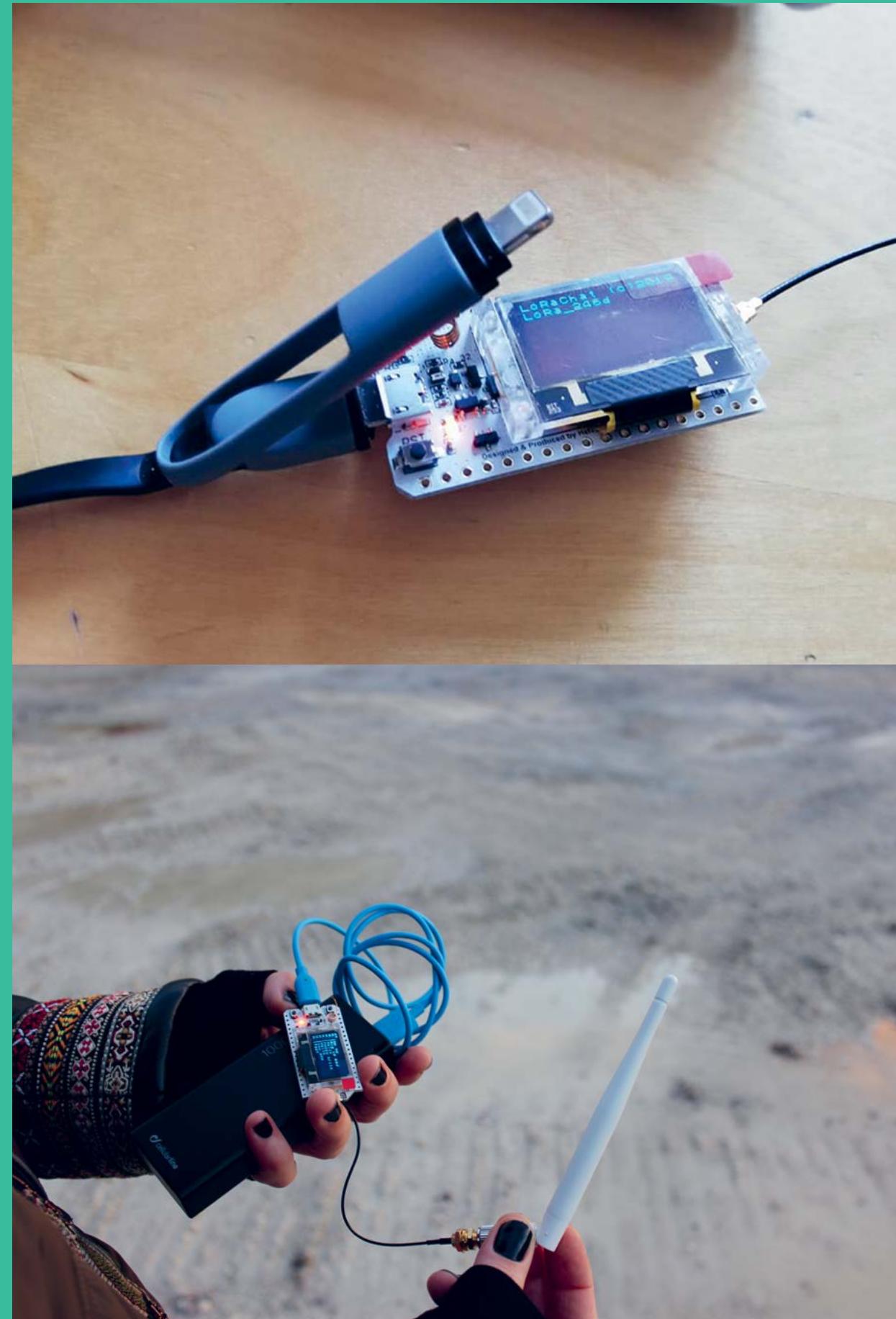
Sodelujoči: TNM – Trbovlje novomedjisko mesto, Tomo Križnar, Bojana Pivk Križnar, Cesar Escudero Andaluz, Martin Nadal

LoRa as a network system for communication in the Nuba mountains

We developed a small devices system – the LoRa transmitters – to make it possible for the people in the Nuba mountains to communicate via a smartphone network without the internet. Such a system will greatly assist everyday communication and serve as an effective means in emergencies. It will also provide drug dosage monitoring for anti-leprosy drugs.

Participants: TNM – Trbovlje novomedjisko mesto, Tomo Križnar, Bojana Pivk Križnar, Cesar Escudero Andaluz, Martin Nadal

Foto / Photo: arhiv DDT



Nube 360°

360° video izkušnja življenja staroselskih kultur

Tomo Križnar je borec za človekove pravice in svetovni popotnik, ki se že desetletja ukvarja s staroselskimi kulturami po svetu. Kot človek vseskozi vztrajno sledi svoji viziji občutenja njihovega vsakdana in prikazovanja njihove ranljivosti skozi različne družbene medije. Vedno znova išče inovativne medijske pristope, da bi zaščitil preživelna staroselska ljudstva pred zunanjimi vdori v njihovo intimno.

S staroselskimi kulturami se lahko srečate z očali za virtualno resničnost tudi v DDTLabu. Prve 360° video posnetke je Tomo Križnar zabeležil skupaj s svojo ženo, aktivistko in borko za človekove pravice Bojano Pivk Križnar. Tehnologija nas kot gledalca in poslušalca doživeto popelje v staroselski svet igranja, petja in plesa v Nubskih gorah, na Modrem Nilu, v Sharafatu in Komoganzi.

Sodelujoči: Tomo Križnar in Bojana Pivk Križnar

The Nuba people 360°

360° video – virtual experience

For decades, Slovenian human rights activist and world traveler, Tomo Križnar, has been exploring indigenous cultures, faithfully following his own vision of empathizing with their experience of everyday life, and drawing attention to their vulnerability through social media. He has been seeking innovative approaches in using the media to protect surviving indigenous people from intrusion into their intimacy.

Križnar recorded the first 360° videos together with his wife, activist and human rights defender, Bojana Pivk Križnar.

A sneak peek into the indigenous reality of music, song and dance in the Nuba mountains, on the Blue Nile, in Sharafat and Komoganza, is available in its VR rendition at the DDTlab.

Participants: Tomo Križnar in Bojana Pivk Križnar

Foto / Photo: arhiv DDT



Prototip projekta »Igla v senu«

Vsi vemo, da je nemogoče najti šivanko v senu. Ampak, ali je nemogoče tudi za robota ali sistem umetne inteligence? Naš namen je točno to: ustvariti industrijsko robotsko roko, ki bo iskala šivanko v senu. Yaskawina robotska roka bo stala v starem skednju, polnem sena, kjer bo skrita zlata šivanka. Če bo robotska roka našla šivanko, bomo v kup sena skrili naslednjo. Vse najdene šivanke bodo razstavljene poleg instalacije.

Umetniško delo lahko razumemo kot dajanje izziva tehnologiji z nalogo, ki je za človeka nemogoča. Umetno inteligenco pogosto razumemo kot črno skrinjico, ki lahko čara. Ampak ali je res tako inteligentna kot trdijo? Veliko je ekspertov – kot Kate Crawford –, ki pravijo, da umetna inteligenca ni niti umetna niti inteligentna. Ali pa jo – kot Jeff Bezos – okličejo za "umetno umetno inteligenco", ker je konec koncov umetna inteligenca podprtta z izkoriščanjem množice delavcev in slabo plačanih uslužbencev. Poleg postavljanja intelligentnosti tehnologije pod vprašaj, umetniško delo tudi komentira razmerje med človekom in zemljo, kar predstavlja še en konceptni sloj dela.

Sodelujoči: Varvara Guljajeva & Mar Canet Sola, Maajaam Estonia

A Needle in a Haystack

Everyone knows that finding a needle in a haystack is an impossible task. But is it for a robot and AI system? Our intention is literally making an industrial arm robot to search for a needle in a haystack. The idea is to place a Yaskawa industrial robot into an old barn full of hay, where a golden needle will be hidden. If the needle is found, then the next needle will be hidden. All found needles will be displayed along with the installation.

The artwork can be viewed as an act of challenging technology with an impossible task from a human point of view. AI is often treated as a black box that can do magic. But is it as intelligent as it is claimed? There are many experts, like Kate Crawford, saying that AI is neither artificial nor intelligent. Or like Jeff Bezos calls it "artificial artificial intelligence", because in the end AI is backed up by exploitation of crowd workers and badly paid employees. Apart from questioning the intelligence of technology, the artwork makes a comment on the relation of man and land as well, which is another concept layer of the work.

Participants: Varvara Guljajeva & Mar Canet Sola, Maajaam Estonia

Foto / Photo: arhiv DDT



Kreativni Meet Up - Start Up ali Futur_o_mat

Sodelovanje je ustvarjalnost

Kako inovativno pristopiti k medsektorskemu povezovanju, izobraževanju in interdisciplinarnosti? Kreativni Meet Up - Start Up je začel nastajati v trenutku, ko smo že izkusili spremembe in vplive covidnega časa, zato nas je zanimal inovativen pristop z razvito metodologijo, ki bo prednostno raziskovala potrebe po novih oblikah medsektorskega srečevanja in peer-to-peer izobraževanja; ki bo ozaveščala in spodbujala medsebojno razumevanje sektorjev, povezovala podjetja in umetniško-kreativne prakse ter pomagala pri razvijanju novih trgov in tržnih pristopov.

Futur_o_mat je odprt prostor razprav za boljše sodelovanje. S sodelovanjem lahko oblikujemo sedanji trenutek in trenutke v prihodnosti. Odstranjujemo meje in zagotavljamo možnosti, da lahko posel, umetnost in tehnologija resnično sodelujejo.

S Futur_o_matom si ustvarjate priložnosti, vzpostavljate stike, se povezujete danes in v prihodnosti. Se pogovarjate in sodelujete z drugačno mrežo. Pridobite novo gledišče. Raziskujete raznolikost razmišljanja. Raziskujete drugačne načine sodelovanja.

Futur_o_mat uporablja zdaj že vgrajeno kuturo 'selfijev' za spodbujanje meddisciplinarne komunikacije in sodelovanja. S tem, ko poenostavimo postopek intervjuja do samostojnega vodenja (selfie intervju) in izvajanja na široko dostopni mobilni napravi, želimo odpraviti številne ovire pri opravljanju intervjujev. Gre za 'deformalizacijo' procesa intervjuja in spodbujanje bolj odkritega odziva.

Futur_o_mat zastavlja preprosta, toda pomembna vprašanja, ki spodbudijo ljudi k povedovanju in večji odprtosti za sodelovanje. V fizičnem okolju spodbujamo udeležbo s kabino, ki naj bo preprosta, poceni, trajnostna, reciklrana, enostavna za izdelavo in ponovljiva, kjer koli po svetu, z uporabo lokalnih materialov. Končni cilj je, da je kabina vsak prostor na svetu, kjer lahko snemate z mobilnim telefonom.

Sodelujoči: Creative Nomads

Creative Meet Up - Start Up or The Futur_o_mat

Cooperation is creation

How to ensure innovative cross-sectoral cooperation, education and interdisciplinarity? As the Creative Meet Up - Start Up began to emerge at a time when we have already experienced the changes and impacts of the corona virus pandemics, we were interested in developing an innovative approach with developed methodology, that would primarily explore the need for new forms of intersectoral exchange and peer-to-peer education; it would raise awareness and promote cross-sectoral understanding, connect companies and artistic/creative practices, and help develop new markets and marketing approaches.

The Futur_o_mat is an open discussion space that promotes better collaboration. By working together, we are removing obstacles and providing opportunities for business, art and technology to really work together.

The Futur_o_mat offers you a way to create new opportunities, establish new contacts, connect and collaborate today and in the future. To chat and collaborate with a different network. To get a new perspective. To explore the diversity of thinking and different ways of collaboration.

The Futur_o_mat uses the already pervading selfie-culture to promote interdisciplinary communication and collaboration. By simplifying the interviewing process, we are making it widely accessible through a selfie-interview on an easily available mobile device. It is about 'deformalizing' the interviewing process and encouraging a more open response.

The Futur_o_mat asks simple but important questions that encourage people to talk and be more open to collaboration. In the physical environment, we encourage participation by the means of a booth that is simple, inexpensive, sustainable, recyclable, easy to manufacture, and can be recreated anywhere in the world, by using local materials. The final goal is that every place, anywhere in the world, where you can record with a mobile phone, becomes a booth.

Participants: Creative Nomads



Foto / Photo: arhiv DDT

Projekt Black Box

Kvadrofenija

Velika črna Laibachova kocka, 'made in Trbovlje', je lahko tudi Laibachov 'črni kamen' modrosti, oziroma kamen spotike, meteorit, sestavljen iz množice fragmentov, kamor so ujete izgubljene duše Laibachovih sledilcev, ki so kamen-kocko polirale do gladkega. Vse kar velja za Laibach, velja tudi za Laibachovo kocko, ki je njegovo simbolično, metaforično opredmetenje. Kocka v svojem naravnem stanju miruje in meditira, zvok pa ustvarja in sproža v stiku z zunanjim svetom interaktivno, v prepletu naključnih postopkov in odzivanja na energijo obiskovalcev/uporabnikov/vsiljivcev. Seštevek toplotne energije obiskovalcev vpliva na navidezno oziroma naslušno kaotičnost in nasičenost zvočnega jezika. Vsakemu prejemniku je dodeljen po en motiv iz Laibachove kolektivne podzavesti, kinetična energija obiskovalca pa nadzoruje hitrost in smer predvajanja tega motiva. Obiskovalci tako s svojimi telesi in njihovim gibanjem poganjajo energetski tok in prispevajo k shizofreničnem, oziroma kvadrofeničnem mentalnem ustroju in odzivanju kocke.

Sodelujoči: Društvo TNM, Dewesoft, Tadej Droljc, Laibach, Mizarstvo Cestnik

Black Box Project

Quadrophenics

The great black Laibach cube "made in Trbovlje" can also be the Laibach "black stone" of wisdom. The stumbling block - the meteorite, composed of a multitude of fragments, where the lost souls of Laibach followers, who polished the stone-cube smooth, are trapped. Everything that pertains to Laibach also pertains to the Laibach cube, which is its symbolic and metaphoric tangibility. The Cube rests and meditates in its natural state, but creates and releases sound when it comes into interactive contact with the outside world in a mix of random procedures and responses to the visitors/users/intruders. The sum of thermal energy of the visitors influences the seeming, or auditory chaoticness and saturation of the sonic language. Every receiver is assigned one motif from the Laibach collective subconsciousness, while the kinetic energy of the visitor controls the speed and directionality of the playing of this motif. The visitors thus drive the energy flow with their bodies and their movements, contributing to the schizophrenic, or rather the quadrophenic, mental framing and response of The Cube...

Sodelujoči: TNM Society, Dewesoft, Tadej Droljc, Laibach, Mizarstvo Cestnik

Foto / Photo: arhiv DDT



AR Rudarske grafike aplikacija obogatene resničnosti

V sodelovanju z umetnikom grafične obrti smo nadgradili vsebine rudarskih grafik suhe igle z digitalno tehnologijo AR. Obiskovalec s pametnim telefonom poskenira grafiko in tako aktivira določeno rudarsko orodje, ki digitalno oživi. Poleg animacije so na voljo tudi informacije o uporabi izbranega orodja. Projekt predstavlja inovativen turistični produkt.

Sodelujoči: Jože Potokar Cvrčo, Matic Bernot

AR Mining graphics augmented reality application

In collaboration with a graphic artist, we have upgraded drypoint mining graphics with AR digital technology and created an innovative tourist product. By scanning the graphics with a smartphone, the visitor activates one of the mining tools and digitally animates it. In addition to the animation, they can also read the information on the use of a certain mining tool they have selected.

Participant: Jože Potokar Cvrčo, Matic Bernot

Foto / Photo: arhiv DDT



Projekt NAO Tamagotchi

Tamagotchiji so bili linija igrač v 90. letih preteklega stoletja, ki so omogočale, da se igrate z digitalnimi živalmi. Čeprav so bili namenjeni predvsem otrokom, so bili eni izmed prvih primerov človekovega povezovanja s tehnologijo na osebni ravni. Ljudje so rasli in se prilagajali svojim ljubljenčkom ter jih zato videli kot bolj človeške.

Cilj NAO Tamagotchi projekta je prenesti enak občutek v robota NAO. Udeleženci ne samo skrbijo za digitalnega hišnega ljubljenčka, ampak ga tudi vidijo kot v živo. Poleg tega želimo tudi nadaljevati programiranje in razvoj aplikacij, ki običajno ne bi delovale na robotu NAO.

Čeprav gre zgolj za program na robottu, upamo, da bo instalaciji uspelo še bolj povezati ljudi in stroje, ne le v obliki skrbi za robota, ampak tudi skozi občutek medsebojnega simboličnega odnosa.

Sodelujoča: Avery Odlazek

The NAO Tamagotchi Project

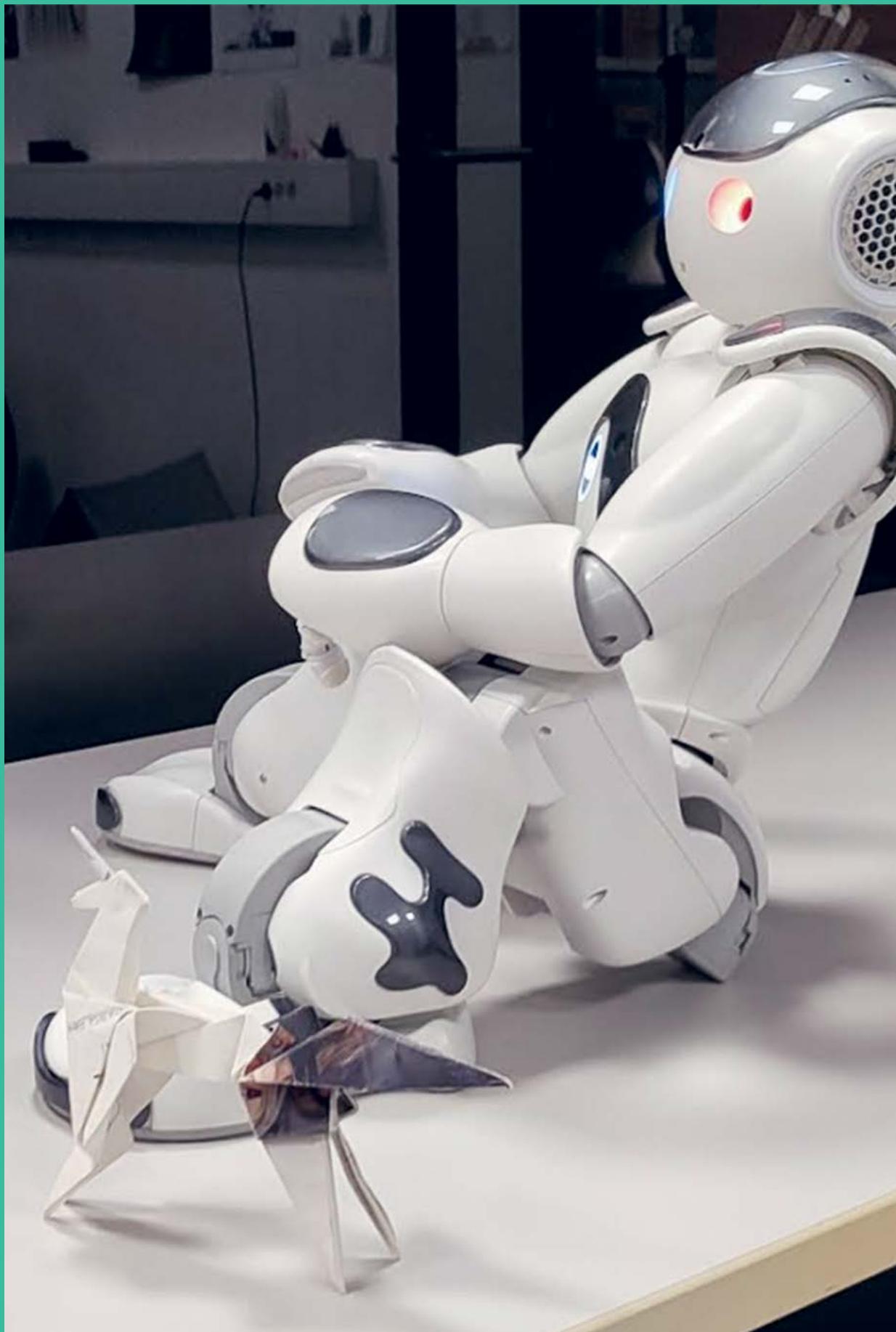
The Tamagotchi was a line of toys in the 90s, that let you play with a digital pet. Although it was mainly intended for kids, it was one of the first examples of humans connecting with technology on a personal level. The people grew and adapted with their pets, and with that saw them as more human.

The NAO Tamagotchi project aims to deliver that same feeling into a NAO Robot, so that not only do the participants get to care for a digital pet, but also see it in person, as well as continue to program and develop apps that would normally not be able to function on the very event-based NAO Robot.

Although it is just a program on a robot, we hope the installation manages to connect humans and machines even further together, not only in the form of caring for the robot, but through the feeling of a mutual symbiotic relationship.

Participant: Avery Odlazek

Foto / Photo: arhiv DDT



You from 3rd person perspective

eksperimentalna instalacija navidezne resničnosti

Ta eksperimentalna instalacija navidezne resničnosti nam omogoča, da vidimo svoje telo iz tretje perspektive oziroma od zgoraj. Tako lahko izkusimo, kako hitro izgubimo sposobnost orientacije in koordinacije gibov lastnega telesa.

You from 3rd person perspective

experimental installation in VR

An experimental VR installation that allows us to see our body from a third person perspective or from above. In this way, we can experience how quickly we lose orientation and the ability to coordinate our own body movements.

Imaginary/Namišljen

izkušnja navidezne resničnosti

Namišljeno je sedeča izkušnja navidezne resničnosti, ki nas popelje skozi štiri različna okolja in nam na koncu vsakega zastavi vprašanja, ki vzbujajo dvome o naši resničnosti. Da bi dramatični učinek še povečali, potovanje spremljajo skladbe pomembnih klasičnih skladateljev, kot so Čajkovski, Beethoven in Tartini, da bi uporabnika vzpodbudile h globljemu razmišljanju o nerazrešenih skravnostih življenja.

The Imaginary

virtual reality experience

The Imaginary is a seated VR experience which takes the user through four different environments that make us question our reality. The journey through each of the environments is accompanied by the music of classic composers, such as Tchaikovsky, Beethoven, and Tartini, which serves to increase the dramatic effect and evoke a deeper reflection on the unsolved mysteries of life.

Foto / Photo: arhiv DDT



RUK
RAZISKAV,
UMETNOSTI IN
KULTURE

•
RUK -
RESEARCH,
ART AND
CULTURE

RUK raziskav, umetnosti in kulture

Analogno in kvantno v domačem okolju

Ko so se tudi v Sloveniji v 90. letih 20. stol. pojavili prvi projekti novomedijске umetnosti, predstavitve, razstave, performansi in javne razprave z upoštevanjem računalnika kot ustvarjalnega medija, smo začeli s pobudami o vzpostavljivosti tovrstnih institucij in vključevanja teh programov v umetniško resničnost. Glede na zelo razvito ustvarjalnost na področju videa in performansa ter izpostavljanje »celostne umetnine« in vključevanje raznih medijev pri nas v 80. letih 20. stol. je bil tak razvoj generičen. Fizično je računalnik različne medije povezal v multimedijo, ki je s programjem omogočala, da smo ustvarjali besedila, slike in zvoke, jih združevali, modulirali in modificirali.

Nastale so zaslove prvih novomedijskih središč in 1. mednarodnega festivala računalniške umetnosti, leta 1995 v Mariboru. Leta 1996 se je odprl Multimediji center KIBLA kot prvo tovrstno okolje daleč naokoli, leta 1998 pa Primorski informacijski atelje – PiNA v Kopru. Leta 1999 smo vzpodbudili Mrežo multimedijskih centrov Slovenije (M3C), ki je vključevala »kulturno-umetniško IKT hrbtenico« Maribor-Ljubljana-Koper, in projekt predali Ministrstvu za informacijsko družbo (MID). Projekt M3C je kot primer najboljše prakse v EU v letih 2004–2006 prejel sredstva iz Evropskega sklada za regionalni razvoj kot eden dveh projektov s področja kulture in edini iz sodobne umetnosti. Iz prvotno treh slovenskih centrov leta 1999, nas je bilo v M3C leta 2004 vključenih devet. Ministrstvo za kulturo je vpeljalo novo področje »intermedijske umetnosti«, s čimer je bila Slovenija edinstvena v Evropi.

Ob vsespolni digitalizaciji številnih področij delovanja, razširjenosti medmrežja, dostopnosti naprav in njihovi najširši uporabnosti so se v finančni perspektivi EU 2014–2020 ponovno pojavila razmišljanja o uporabi sodobnih tehnologij za kulturne in umetniške namene, ustvarjalnih pristopih, povezavi umetnosti in znanosti in možnostih apliciranja teh projektov v gospodarstvo. Digitizacija kulturne in naravne dediščine je z novimi načini prikazov postala nujna za ohranitev muzejskih zbirk in privabljanje novih občinstev. Kot nekdaj »digitalno opismenjevanje« za splošno izobrazbo.

Dolgoletno sodelovanje treh entitet, Delavskega doma Trbovlje ter centrov KIBLA in PiNA, največjih institucij na področju intermedijske umetnosti pri nas, ki smo edinstvene tudi po vzpostavljenih festivalskih platformah, Speculum Artium v Trbovljah, KIBLIX v Mariboru in IZIS v Kopru, smo poimenovali RUK – kot mrežo centrov, projektov, festivalov, programov in ljudi – in osnovali tri laboratorije, DDTLab, KIBLA2LAB in HEKA. Zagovarjali smo naše različnosti in poudarjali komplementarnosti naših dejavnosti v svojstvenih usmeritvah vsakega vozlišča: DDT v robotiko in možgansko-računalniške vmesnike (BCI), KIBLA v digitalne resničnosti, 3D skeniranje, fotogrametrijo in računalniško modeliranje ter umetno inteligenco, PiNA v 360-stopinjski zvok in recikliranje morskih ostalin (hitinjače, lupine školjk, naplavljena morska trava).

V obdobju 2020–2023 smo pandemični zaprtosti navkljub gostili številne projekte, izvedli

festivale, izpeljali rezidence in postavili pilotne projekte. Na razstavi predstavljamo produkcijo mreže RUK, ki je nastala v treh odprtih središčih sodobne umetnosti in ustvarjalnosti bodisi v lastnih ekipah bodisi v sodelovanju z drugimi organizacijami in institucijami, posamezniki in posameznicami, umetniki in umetnicami ter tujimi rezidentkami in rezidenti, ki so mesec dni ali več tukaj bivali in ustvarjali in uporabljali vsa sredstva, ki jih imamo na razpolago.

Soočenje z deli, ki izhajajo iz postulatov upoštevanja in (od)sevanja, odprtosti in sodelovanja, medsebojne vzajemnosti in spoštovanja, zamisli in delovanja so bile ideje samo poriv sestavljanju delov v koherentno skupnost in odpiranju prostorov uresničevanja projektov z znanjem in vedenjem, iznajdljivostjo, raziskovanjem in eksperimenti kot umetniškimi elementi.

Ob vseh aktivnostih, pilotnih in lastnih projektih, rezidencah in sodelovanjih z drugimi ustanovami in organizacijami omenimo zgolj pilotne projekte: DDTLab z GNS Plus v projektu Reciklaža plastike s 3D tiskalnikom z letalskim podjetjem AformX v projektu NeuroFly simulator; KIBLA2LAB z Javnim zavodom Arboretum Volčji Potok v projektu VRTN!CA in s Fakulteto za kmetijstvo in biosistemski vede Univerze v Mariboru v projektu Nadvojvoda Janez, oče Meranovega, za katerega sta prejela posebno zahvalo fakultete, ki želi hibridno muzejsko razstavo obdržati za zmerom; HEKA v koprodukciji z Družtvom Trajna in v sodelovanju s ProstoRož in Družtvom za permakulturo Slovenije v projektu Ustvarjalni laboratorij Krater, v projektu in koprodukciji s Stran22 in v sodelovanju z Občino Izola, JZP Izola, Italijansko samoupravno narodno skupnostjo Izola, Glasbeno šolo Koper, Turističnim združenjem Izola, ZRS Koper, Inštitutom IRRIS in Mestno knjižnico Izola v projektu Dante Copiosus, v projektu Exxplorers – Take a Walk on the Invisible Side pa v sodelovanju s Kooperativo Puntozero iz Vidma, VRTeam iz Slovenije in Slovenskim planinskim muzejem Mojstrana.

Kar smo izvajali in izvedli, je naše videnje humanizacije tehnologije. Tudi naše delo sedaj in razmišljanja o naprej nadaljujejo zasnovno mrežo raziskovalnih centrov umetnosti in kulture na presečišču sodobnih tehnologij, znanosti in gospodarstva – RUK kot interdisciplinarnega vozlišča za razvoj inovativnih produktov in storitev za mehko in humano tehnologijo prihodnosti. Integracija umetnosti in kulture v znanstvene in tehnološke raziskave, razvoj in inovacije, digitalizacijo, podjetništvo, usposabljanje in izobraževanje s poudarkom na humanistiki in družboslovju, ekologiji, krožnem gospodarstvu in trajnostnem razvoju je tudi vzpodbuda regijsko enakopravnejši Sloveniji, saj prispeva k enakomerjnemu razvoju regij in trem temeljnim stebrom razvojne strategije: digitalnemu razvoju, krožnemu gospodarstvu in Industriji 4.0.

Ustvarjalni laboratorijsi so generatorji znanja prihodnosti, saj ustvarjajo bazo zahtevanih znanj in kompetenc za poklice prihodnosti in s tem ustvarjajo potrebne pogoje za zadostitev novim potrebam v gospodarstvu, ki bodo nastajale v prihodnjih letih, tako v zvezi z uvajanjem novih tehnologij, kot z nujnim ustvarjanjem alternativnih zaposlitev, ki se bodo oblikovale zunaj obstoječih podjetij kot posledica uvajanja digitalne transformacije in novih tehnologij v podjetja. Laboratorijsi so vozlišča inovativnih odgovorov na izzive sodobnega časa. Zagotavljajo ustrezno tehnološko opremo za načrtovanje in realizacijo kreativnih rešitev in usposabljanje ter prenos inovativnega načina razmišljanja v podjetja,

z vključitvijo konceptov umetniškega ustvarjanja in dizajna z namenom humanizacije storitev in produktov ter odpiranjem prostora za integracijo teh rešitev za spodbujanje trajnosti, uporabe krožnih modelov in družbenih inovacij. Hkrati s prenosom inovativnih aplikacij na tržišče je cilj tudi krepitev inovativnih malih in srednjih podjetij s čim večjim zajetjem znanj in potenciala mladih.

Naše pobude niso omejevanje, ampak prost dostop in splošna, javna in prostovoljna uporaba. Naša pot je izobraževanje, ne cenzura. Predstavljanje in informiranje. Razstavljanje in performiranje. Odprtost in sodelovanje. Zatorej se kot RUK, mreža sestavljena modularno iz treh lokalno-regionalno-nacionalno-mednarodno umeščenih platform DDT, PiNA in KIBLA, ki kapilarno vpenjajo akterje iz svojih okolij, platform in mrež in v partnersko sodelovanje uvrščajo znanstvene organizacije in institucije, podjetja, univerze in druge izobraževalne institucije, zavedamo vzporedne vloge promoterjev tehnologij, opreme in programja ter informacijsko-komunikacijskega sistema za računanje, komunikacijo in nadzor in jo sprejemamo kot neizpodbitno dejstvo, ki je hkrati največja vrednost in nujno zlo. Z vsemi odtenki vmes.

Zavedamo se, da sodobne tehnologije niso »zelene«. Prav tako ni »zelena« uporaba medmrežja, saj računanje in komunikacija sprožata operativne emisije ogljika. Vzpon umeđne inteligence je privadel do znatne rasti podatkovnih centrov, objektov, namenjenih namestitvi IT infrastrukture za obdelavo, upravljanje in shranjevanje podatkov, tako da so se moč podatkovnih centrov in posledične emisije ogljika, povezane s podatkovnimi centri, med letoma 2017 in 2020 podvojile. Velika rast pomeni veliko porabo energije in umeđna inteligenco je velik potrošnik energije. Vse naloge, ki jih naši stroji opravljajo, so transakcije med pomnilnikom in procesorji, vsaka od teh transakcij pa zahteva energijo. Ko postanejo te naloge bolj dodelane in podatkovno intenzivne, začneta dve stvari eksponentno naraščati: potreba po več pomnilnika in potreba po več energije.

Kmalu bomo naleteli na zid, kjer naše dobavne verige silicija ne bodo mogle dohajati količine ustvarjenih podatkov. Če to povežemo z dejstvom, da naši računalniki trenutno porabijo približno 20-25 % svetovne oskrbe z energijo, vidimo še en razlog za skrb. Če bomo nadaljevali s to hitrostjo, bo do leta 2040 vsa energija, ki jo proizvedemo, potrebna samo za računalništvo, kar bo še poslabšalo energetsko krizo. Naši računalniki in druge naprave postajajo nenasitne energetske zveri, ki jih še naprej hranimo. To ne pomeni, da je treba umeđno inteligenco in njeno napredovanje ustaviti. Samo zavedati se moramo učinkov in si še naprej prizadevati za bolj trajnostne pristope k načrtovanju, proizvodnji in uporabi.

Razvoj pomeni več. Več vsega. Več surovin in več stvari za več ljudi, več potrošnih materialov in naprav ter več energije. Razmišljati moramo o humanizaciji tehnologije, da jo jemljemo vseobsegajoče. Od prostega in splošnega dostopa do spletja, odprtega programa do kreativnih rešitev, ki bodo podpora in vzpodbuda ljudem in prostor interakcije v navidezni in resnični resničnosti. Toda resničnost je drugačna. Doslej? Kot je leta 1954 na radiju BBC razlagal Leon Bagrit v šestdelni oddaji Doba avtomatizacije (The Age of Automation), je avtomatizacija sistem, ki temelji na tako imenovani »povratni informaciji«. Uporablja senzorske naprave, komunikacijske mehanizme, računalniške ali odločilne elemente in nadzorne mehanizme oziroma računalnik kot orodje za računanje, komunikacijo

in nadzor (Computation, Communication and Control – 3C).

Ker se zdaj, po vseh naših mrežnih letih zdi, da smo odrasli, nam definicija ne more biti (pretirano) sporna. Vedno je ključno vprašanje, kdo poseduje kodo. In dodaten nadzor z uvedbo »digitalnih zdravniških potrdil« oziroma »digitalnih potrdil o cepljenju«, brez katerih ne bi mogli rezervirati ne letala ne hotela, ne iti v gledališče, kino, na koncert ali razstavo, ne v knjižnico ali v knjigarno, ne v trgovino ali v restavracijo, ne v šolo ali na fakulteto, niti v vrtec ne v dom upokojencev – bi bil ena od vstopnic v to očiščeno in ozdravljeno družbo. Nič novega in nenavadnega, saj smo tako že živelji. Kamor vodi koncept tako imenovanih 15-minutnih mest, ki so zasnovana kot bivanjska okolja, kjer je vse potrebno dosegljivo v največ petnajstih minutah. Seveda povsem ekološko in s čim manjšim, najbolje z ničnim (net zero) ogljičnim odtisom.

Umetno inteligenco je ustvaril, ustvarja človek in ob razpravah o njej bi se lahko vprašali, ali je res umetna, saj jo soustvarjamo z zbranimi deli, znanjem, vedenjem človeštva, in ali je inteligenco in ne le skupek zbranih in kodiranih informacij analiziranih v računalnikih in nato sintetiziranih v rezultatih. Nemara bi bilo primernejše poimenovanje »strojno učenje«, saj gre za kopiranje čim več informacij in njihovo čim hitrejšo obdelavo. Pri čemer informacija ni pomembna le kot podatek, ampak tudi kot uporabno sredstvo za nadzor in manipulacijo. Kot metamedij sveta temelječega na kodi, ki ga poganjajo programi. Nemara tudi res, a zanemarjamo razmislek o nečem drugem, o »vesoljni«, »vesoljski«, »naravni« inteligenci, ki nam je neznana vsaj v razmerju »temna stvar« proti raziskanemu, poznanemu.

Kot naravna bitja živimo v analognem svetu. Kot vesoljna bitja smo kvantni. Možgani delujejo kot kvantni računalnik in potrošijo največ energije od vseh delov telesa, tudi mišic ob naporu. Možgani usmerjajo telo, kot ga srce poganja. Dvojnost je princip, ki v naravnih procesih rojeva življenje. Premika stvari. Spreminja in nadaljuje. 1 in 0. Dvojina. Ženska in moški. Samec in samica. Digitalno je binarno. Z binarno kodo zaobjamemo ves digitalni svet, toda digitalno je apropiacija, simulacija, simulaker, 0 in 1 v raznih kombinacijah kot človekova poenostavitev narave, reducirana na naše predstave o svetu v dvojicah: dobro-slabo, toplo-hladno, črno-belo, vzhod-zahod, sever-jug, preteklost-se danost ... Nemara smo morali izumiti digitalnost, da smo si poenostavili predstave o naravi. In o vesolju. Najbolj pa si v strojnih procesih skušamo predstaviti sebe. Si nastaviti ogledala, se pogledati in zazreti, ogledati v stvaritvah sebe. Telesno, srčno in umsko. Model, motor in procesor s krmilno enoto, pomnilnikom in zvočno-slikovnim izhodom. In kaj bo, če oziroma ko izklopimo, izklopijo električno? Še vedno bomo mi na Svetu in v Vesolju. Sami ali ne. Bomo videli.

KIBLA se je v projektu RUK osredotočala na nove oblike predstavljanja in razstavljanja kulturne in naravne dediščine z razširjeno, navidezno in mešano resničnostjo, snemanjem 360-stopinjskih fotografij in videov (talnih in dronskih), laserskim oziroma 3D skeniranjem – LIDAR (Light Detection and Ranging / Svetlobno zaznavanje in merjenje), ki se uporablja v geodeziji, geometriki, arheologiji, geografiji, geologiji, geomorfologiji, seizmologiji, gozdarstvu, gradbeništvu, urbanizmu in tudi pri umetniških projektih – fotogrametrijo s platformo Arago, 3D računalniškimi modeli, simulacijami in animacijami ter vključevanjem umeđne inteligence v celovite izvedbe projektov.

Sodelovali smo s številnimi javnimi ustanovami, nevladnimi organizacijami in podjetji ter umetniki in umetnicami in drugimi ustvarjalci in ustvarjalkami iz Slovenije in tujine. Slednji so v KIBLA2LAB v okviru rezidenc izvajali prijavljene projekte, katerih koproducenti smo bili, domačim pa smo bili (praviloma) producenti. Z Društvom za razvoj in raziskovanje kulturnih industrij KIT4 in v sodelovanju s Posavskim muzejem Brežice smo virtualizirali Vodovodni stolp v Brežicah, z Društvom za sodobno umetnost X-OP in v sodelovanju z Lutkovnim gledališčem Maribor smo za Lutkovni muzej Maribor postavili AR aplikacijo LutkAR in v sodelovanju s podjetjem Vinag 1847 smo Vinagovi kleti dodali novomedijsko podobo, z Društvom starodobnih vozil rojaka Janeza Puha Juršinci smo z računalniškima animacijama nadgradili muzej Janeza Puha v hibridno okolje.

Nadaljevali bomo v tej smeri, izobraževali, iskali in raziskovali, oplajali kulturno in umetniško krajino, se povezovali z domačimi in tujini podjetji in institucijami ter nadgrajevali našo tehnološko podstat skupaj z ekipo in njenimi strateškimi usmeritvami. Usklajevanje kot premla, spajanje lastnega, avtorskega dela za drugimi, ki na svojih področjih sodelujejo in so odprti. (Samo)odgovornost in razumevanje. Spoštovanje in prekipavanje. Z energijo, ki jo imamo. In zmoremo. V tem, kaj smo in kaj nameravamo. Postati in obstati.

O sodobnih tehnologijah ter njihovi vlogi v kulturi, kulturni, industrijski in naravni dedičini, o prostorih sedanjosti in o vizijah prihodnosti se je treba odločiti in dogovoriti v skupnosti. Svetovni splet je omrežje. In obratno. V tem omrežju delujemo in sodelujemo – smo odprti. Različno programirani, a sinhronizirani. Kakorkoli. A predvsem odprtakodno, z vključevanjem čim več zainteresiranih deležnikov in umetniško. Z občutki, kako fragilna je naša struktura in kako šibke so družbe. A so in smo. V skupnosti. Tako je prihodnost mreže RUK in KIBLA2LAB nadaljevati začeto in ostati na izhodiščih raziskovalne umetnosti in kulture, ki deluje v skupno dobro in služi tudi kot podpora gospodarstvu, pri čemer v gospodarstvo štejemo vse ustvarjajoče osebe ter pridobitne in nepridobitne dejavnosti.

Poudarjam povezovanje domačih deležnikov in njihovih kapacet, spodbujanje razvoja prebojnih in integriranih novih produktov in storitev, razmišljamo tudi o načinu in poteh do njih. Odprta koda je ena izmed možnosti, tudi v kombinaciji z licenčnimi programi. Odprtakodnost je namreč evropska pogruntavščina, v katero nismo in še vedno ne vlagamo sredstev, ki bi ji omogočala razvoj. Četudi sta njena zasnova in filozofija evropski, renesančni in razsvetljenski, tradicionalni in reformatorski, odprti, sodelujoči, vključujoči in brezplačni, se je Evropa odločila za licenčno, zaprto, korporativno, zaprto in plačljivo programje, ki je v nasprotju do evropskega prostega dostopa do znanja in informacij.

Znanost in umetnost naj bi odpirali in skrbeli za brezplačno splošno dostopnost do medmrežja kot zbirnika svetovnega znanja in vedenja, navsezadnje sta tudi javno subvenzionirani, zato zapiranja ne moremo podpirati. Splet na ta ali oni način upravlja zasebne družbe iz Silikonske doline, zato je najpomembnejše umestiti »oblast nad medmrežjem« na OZN oziroma na Mednarodno telekomunikacijsko zvezo (International Telecommunication Union - ITU). Šele takrat bomo v kombinaciji z odprtakodnim programjem, s katerim bi pridobivali vsaj nekaj kibernetske e-samostojnosti in seveda z razvojem lastne tehnologije in naprav, lahko govorili o »novem svetovnem redu«.

Humanizacijo tehnologije jemljemo vseobsegajoče. Od prostega in splošnega dostopa

do spleta, odprtega programja do kreativnih rešitev, ki bodo podpora in vzpodbuda ljudem in prostor interakcije v navidezni in resnični resničnosti. Upravljanje letal z možgani, recikliranje odpada za proizvodnjo uporabnih stvari in interpretiranje kulturne in naravne dedičine ter z novimi pomagali so le ene izmed zadev, s katerimi se ukvarjamo. Bistvo seveda ostaja: raziskovalna umetnost in kultura. RUK kot ga razumemo. Vsak od treh laboratorijev RUK ima seveda svojo usmeritev in razvojno pot. Zaenkrat smo prišli do umetne inteligence. Kako dalje, do inteligentne Zemlje, inteligentnega Vesolja ...?

Peter Tomaž Dobrila

RUK – research, art and culture

Bridging analogue and quantum worlds

Already at the end of the 1990s, when the first projects, presentations, exhibitions, performances and public discussions in the field of new media appeared also in Slovenia, which considered the computer as a medium for creation, there were initiatives to establish this kind of institutions and to integrate these programs into the art reality. Given that in the 1980s the fields of video and performance art were highly developed, that they focused on the "total work of art" and the incorporation of different media, this kind of development was generic. The computer physically connected different media into multimedia and gave us programs to create texts, images and sounds, to mix them, to change them and to modulate them.

The first new media centers were founded and in 1995 the first International Festival of Computer Arts was opened in Maribor. In 1996 the Multimedia Center KIBLA was opened as the first institution of its kind far and wide, and in 1998 PiNA (Primorje Information Atelier) in Koper. In 1999, the M3C Multimedia Centers Network of Slovenia was established, covering the "cultural and artistic ICT backbone" Maribor-Ljubljana-Koper, and was later handed over to the Ministry of Information Society. The M3C project was selected as an example of best practice in the EU and was one of two projects from the cultural sector and the only one from the contemporary arts sector to be funded by the European Regional Development Fund from 2004 to 2006. Starting with three centers in Slovenia in 1999, by 2004 there were already nine partners involved in the M3C network. The Ministry of Culture introduced a new field, intermedia art, which made Slovenia a unique example in Europe.

Alongside the ubiquitous digitalization of many activities, the widespread availability of the Internet, access to devices and the many ways to use them, the 2014–2020 EU Financial Framework stimulated ideas about the use of contemporary technologies for cultural and artistic purposes, creative approaches, the link between art and science, and the possibilities of their application in the economy. The new forms of presentation promoted the digitization of cultural and natural heritage, preserving museums' collections and engaging audiences in new ways. Just as the "Digital Literacy Projects" used to do.

Years of collaboration between the three largest institutions in the field of intermedia art in Slovenia, Delavski dom Trbovlje, KIBLA and PiNA, with established festival platforms, Speculum Artium in Trbovlje, KIBLIX in Maribor and IZIS in Koper, has developed into a network of centers, projects, festivals, programs and people – RUK, and three labs have been established: DDTLab, KIBLA2LAB and HEKA. We highlighted the differences between us, but also emphasized that our activities complement each other in the unique directions each of the labs is taking: DDT in robotics and brain-computer interfaces (BCIs), KIBLA in digital reality, 3D scanning, photogrammetry and computer modeling and artificial intelligence, PiNa in 360-degree sound and recycling of marine sediments (crustacean and mollusk shells, washed-up seaweed).

From 2020–2023, despite the pandemic closures, we have organized numerous projects, held festivals and residencies, and launched pilot projects. The exhibition presents the production of the RUK network created in three open centers of contemporary art and creativity in their own teams or in collaboration with other organizations and institutions, individuals, artists and residency artists who lived and created here for over a month, with all our resources at their disposal.

Given the works that emerged from the postulates of recognition and reflection, openness and collaboration, reciprocity and respect, concepts and action, these ideas represented an impetus to bring them together in a coherent community and open the spaces to projects created with knowledge, know-how and ingenuity, through research and experimentation as artistic elements.

In addition to all the activities, projects, residencies and collaborations with other institutions and organizations, let us just mention our pilot projects: DDTLab and GNS Plus in the project Recycling Plastic with 3D printing and with the aviation company AformX in the project NeuroFly Simulator; KIBLA2LAB and the Arboretum Volčji Potok in the project VRTN!CA and with the Faculty of Agriculture and Life Sciences of the University of Maribor in the project Archduke John, Father of Meranovo, which was awarded a special recognition by the Faculty, which also plans to preserve this hybrid museum exhibition forever; HEKA in co-production with the Trajna Association and in cooperation with ProstoRož in the Slovenian Permaculture Association in the project Creative Laboratory Crater; in co-production with Stran22 and in collaboration with the Municipality of Izola, the Italian national community in Izola, the Koper Music School, the Izola Tourist Board, the Koper Science and Research Center, the IRRIS Institute and the Izola City Library the project Dante Copiosus, and the project Exxplorers – Take a Walk on the Invisible Side in collaboration with the Cooperative Puntozero from Videm, the VRTeam from Slovenija and the Slovenian Alpine Museum Mojstrana.

What we have implemented and realized is our vision of humanizing technology. Our current work and thoughts about the future continue our conception of the network of arts and culture research centers at the intersection of contemporary technologies, science and economy – RUK as an interdisciplinary hub for the development of innovative products and services for a soft and humane technology of the future. The integration of art and culture in scientific and technological research, development and innovation, digitalization, entrepreneurship and education, with a focus on humanities and social sciences, ecology, circular economy and sustainable development, is also an incentive for a more regionally equitable Slovenia, as it contributes to the even development of regions and the backbone of the development strategy: digital development, circular economy and Industry 4.0.

Creative labs are generators of the knowledge of the future. They create data on the knowledge and skills needed for the professions of the future, and thus the necessary conditions to meet the new needs in the economy that will arise in the coming years, both in terms of the introduction of new technologies and the necessary creation of alternative jobs that will be created within or outside existing companies as a result of the introduction of digital transformation and new technologies in companies. Laboratories

are hubs for innovative responses to the challenges of the present. They guarantee adequate technological equipment for the planning and implementation of creative solutions and the training and transfer of innovative thinking in companies, including concepts of artistic creation and design, in order to humanize services and products and open the space for the integration of these solutions to promote sustainability, circular models and social innovation. Simultaneously with the transfer of innovative applications to the market, the goal is to strengthen innovative small and medium enterprises and bring in the largest possible pool of knowledge and potential of young people.

Our initiatives are not restrictions, but free access and general, public and voluntary use. Our way is education, not censorship. Presenting and informing. Exhibiting and performing. Openness and collaboration. As RUK, a modular network of three local-regional-national-international platforms DDT, PiNA and KIBLA, which involves actors from their environment, platforms and networks and establishes partnerships with scientific organizations and institutions, companies, universities and other educational institutions, we are aware of the parallel role of the promoters of technologies, equipment and software and the information and communication system for computing, communication and control and accept it as an undeniable fact, which is at the same time something very valuable and the necessary evil. With all the nuances that lie in between.

We are aware that today's technologies are not "green". Nor is the use of the Internet "green" because computing and communications generate operational carbon emissions. The expansion of artificial intelligence has led to significant growth in data centers, objects designed to install the IT infrastructure to process, manage, and store data, doubling the strength of data centers and consequently the carbon emissions associated with data centers from 2017 to 2020. Big growth means high energy consumption, and artificial intelligence is a big energy consumer. All the tasks we let our computers do are transactions between computer memory and processors, and each of those transactions requires energy. As these tasks become more sophisticated and the amount of data becomes larger, two things increase exponentially: the need for larger memory and the need for more energy.

We are about to hit a wall where our silicon supply chains can no longer keep up with the amount of data being generated. Couple this with the fact that our computers currently consume about 20% to 25% of the world's energy supply, and we see another cause for concern. If we continue at this rate, by 2040 all the energy we produce will be needed for computers, exacerbating the energy crisis. Our computers and other devices have become voracious energy beasts that we keep feeding. This is not to say that artificial intelligence and its development should be stopped. We just need to be aware of the implications and strive for more sustainable approaches to design, production and use.

Progress means more. More of everything. More materials and more things for more people, more consumer goods and devices, and more energy. We need to think about and embrace the humanization of technology across the board. From free and universal access, to open source software, to creative solutions that support and encourage people and create a space for interaction in virtual and real reality. But reality is different. Until now? As Leon Bagrit said in 1954 in his six-part BBC radio program The Age of Atomation,

automation is a system based on what he called "feedback information". It uses sensing devices, communication mechanisms, computers or critical elements and monitoring mechanisms, and the computer as a tool for processing, communication and control (3C).

Now that we seem to have matured, after all these years of networking, our definition cannot be (overly) controversial. The crucial question is always who has the code. Additional control with the introduction of "digital health certificates" and "digital vaccination cards", without which you cannot book an airline ticket or book a hotel, go to the theater, cinema, concert or exhibition, or to the library or bookstore, not to the store or restaurant, school or faculty, kindergarten or retirement home, would be one of the tickets to this purified and healed society. This is nothing new or unusual – we have lived this way before. This is also where the concept of 15-minute cities comes from, which are designed as living spaces where everything you need can be reached in 15 minutes. Completely ecological and with a reduced, in the best case net zero carbon footprint.

Artificial intelligence was and is created by humans, and when we discuss it, we can ask ourselves if it is really artificial, since it was created by collecting works and human knowledge, and if it is really intelligence and not just a mere collection of collected and codified information that is analyzed in computers and then synthesized into results. Perhaps it would be more appropriate to call it "machine learning", because the idea is to gather as much information as possible and process it as quickly as possible. Information is important here not only as data, but also as a useful means of control and manipulation. As a meta-medium of the world based on code and controlled by software. Maybe this is true, but we neglect a consideration about something else, about the "universal", "cosmic", "natural" intelligence, which is known to us at least in the ratio of "dark matter" to the known, discovered.

As natural beings, we live in the analogue world. As cosmic beings we are quanta. The brain functions like a quantum computer and uses more energy than any other part of the body, including the muscles it uses. The brain controls the body and the heart drives it. Duality is a principle that sustains life in natural processes. Moves things. Transforms and continues. 1 and 0. Dual. Woman and man. Male and female. Digital is binary. The binary code can encompass the entire digital world, but the digital is an appropriation, a simulation, a simulacrum, 0 and 1 in various combinations as man's simplification of nature, reduced to our representations of the world in binary form: good/bad, hot/cold, black/white, east/west, north/south, past/future... Maybe we had to invent digitality to simplify our representations of nature. And of the universe. But above all, we want to see ourselves through the hardware processes. To hold up a mirror to ourselves, to look at ourselves, to observe ourselves in our creations of the self. Ourselves as body, heart and mind. A model, a motor and a processor with a control unit, a memory and an output for sound and image. And what will happen if or when we, when they turn off the power? We will still be in the World and in the Universe. Alone or not. We will see.

In our RUK project, KIBLA focused on new formats of presentation and exhibition of cultural and natural heritage with augmented, virtual and mixed reality, 360-degree photography and video (ground and drone), laser and 3D scanning – LIDAR (Light Detection and Ranging), which is used in geodesy, geomancy, archeology, geography, geomorphology,

seismology, forestry, civil engineering, urban planning, as well as art projects – photogrammetry using the Arago platform, 3D computer models, simulations and animations, as well as the incorporation of artificial intelligence in the full realization of projects.

We have cooperated with many public institutions, non-governmental organizations and companies, as well as with artists and other cultural workers from Slovenia and abroad. The latter came to KIBLA2LAB for residencies and we were co-producers of their projects, while for the locals we were mostly the producers. With the KIT4 Association for the Development and Research of Cultural Industries and in cooperation with the Museum of the Posavje Region, Brežice, we virtualized the Water Tower in Brežice, with the Association for Contemporary Art X-OP and in cooperation with the Maribor Puppet Theatre, we created the application AR LutkAR for the Maribor Puppet Museum, in cooperation with the company Vinag 1847 we provided the cellar of Vinag with a new media image, and with the company The Compatriot Johann Puch – Janez Puh Juršinci we upgraded the Janez Puh Museum with two computer animations to a hybrid environment.

We will continue in this direction, sharing knowledge, searching and researching, enriching our cultural and artistic landscape, establishing links with domestic and foreign companies and institutions, and developing our technological base together with the team and its strategic direction. Coordination as a premise, bridging our own work with others who cooperate and are open in their fields. “(Self-)responsibility and understanding. Respect and exuberance. We can make it work. With the energy we have. With who we are and what we want to do. To become and to withstand.

We will have to talk about modern technologies and culture, cultural, industrial and natural heritage, about the space of the present and the visions of the future and decide about them in the community. The World Wide Web is a network. And vice versa. We work and cooperate and are open in this network. Programmed differently, yet synchronized. In whatever way. But above all, open code, involving as many interested actors and artists as possible. Knowing well how fragile the structure is and how frail our societies are. But they exist and so do we. In a community. The goal of the RUK network and KIBLA2LAB is to continue what we have started and to stay true to the idea of an investigative art and culture that works for the common good and serves as a support for the economy, involving all creators and all for-profit and non-profit activities.

We value bringing together domestic actors and their capacities, encouraging the development of breakthrough and integrated new products and services, and also thinking about how to develop them. Open source is one of the ways, also in combination with licensed programs. Open source is a European invention in which we have not invested enough and still do not invest enough to enable its development. Although European in its idea and philosophy, renaissant and of the enlightenment, traditional and reformatory, open, collaborative, inclusive and free, Europe has opted for licensed, closed, corporate, and payable software, which goes against the free access to knowledge and information in Europe.

Science and the arts should open up and provide free, universal access to the Internet as a repository of the world's knowledge – after all, they are subsidized by the public,

so such closures are unacceptable. One way or another, the Web is managed by private Silicon Valley companies. So the most important thing is to transfer “the power over the Internet” to the UN or to the International Telecommunication Union. Only then, i.e. in combination with open source software that could give us at least some cyber independence, and of course together with the development of our own technology and devices, will we be able to talk about a “new world order”.

We see the humanization of technology as all-encompassing. From free and universal access to the Internet, to open source software, to creative solutions that will support and motivate people and spaces to interact in virtual and real reality. Controlling airplanes with your brain, recycling waste to make usable things, and interpreting cultural and natural heritage with new tools are just some of the things we are doing. The essence remains the same: investigative art and culture. RUK as we understand it. Each of the three RUK labs has its own focus and development path. So far, we have arrived at artificial intelligence. How should we continue, to the intelligent Earth, to the intelligent Universe ...?

Peter Tomaž Dobrila

KIBLA

FESTIVAL
KIBLIX

FESTIVAL KIBLIX

Festival KIBLIX je svojo pot začel kot odprtakodni festival, ki je povezoval oziroma pričel povezovati umetnost, tehnologijo in znanost. Problematiziral je vpliv znanosti in tehnologije na (socialno) življenje posameznika ter se pred več kot 20. leti poglabljal v teme, ki so nam ali nam še narekujejo prihodnost. Tako pred časom je bil. Leta 2002 je kot festival operacijskega okolja Linux nagovarjal področje IKT in kot odprta koda za umetniško rabo z uporabnimi delavnicami za entuziaste (in druge) širši javnosti predstavljal mejnike človeštva (mobilna tehnologija, UMTS, brezžični internet ipd.). Čas je kasneje pokazal, kakšni mejniki so to bili. In so še. Izobraževalna narava festivala je nagovarjala in še vedno nagovarja širok nabor ciljnih publik in kot tak je vedno predstavljal tudi most med teoretskimi in praktičnimi vsebinami za vse generacije; za strokovno in poslovno javnost ter navdušence. Naslavljanje digitalnih medijev se je prepletalo z znanstvenimi dosežki in tehnološkimi novostmi. Bil je platforma, bil je laboratorij, bil je performans; spodbujal je (interaktivno) sodelovanje različnih smeri digitalnih umetnosti ter njihovo integracijo v praktično okolje. V času festivala so bile na ogled razstave, gosti iz tujine in predstavniki podjetij so dodajali nove dimenzije; svojo podporo je festival našel v evropskih projektih (Soft Control/RACIF/gRig/Risk Change), večkrat je aktivno in plodno sodeloval z Mednarodnim festivalom računalniških umetnosti v Mariboru, v čast EPK Maribor 2012 je razširjena verzija festivala KIBLIX obsegala dve razstavi z intenzivnim spremiščevalnim programom. V dveh dekadah sprememb, tako organizacijskih kot vsebinskih, se je zgodilo marsikaj: roboti, avatarji, vpliv znanosti in tehnologije na socialno življenje posameznika, pretreseni temelji sodobnega sveta, digitalna era in njena naslednica – umetna inteligenca, enormne baze podatkov, navideznost v vseh pojavnih oblikah; skratka, realno in virtualno je vedno bolj eno in isto.

Javno razumevanje in zanimanje za umetnost, tehnologijo ter znanost sta iz ozkega in zaprtega kroga vedno bolj segali na širše in odprto področje iskanja rešitev za premoščanje nemoči posameznika v sodobni družbi.

Kiblix se je v časovnem paketu 2019–2023 usmeril v raziskavo in kritiko sodobnih tehnoloških medijev ter njihovo mehko uporabo v sodobni umetnosti, kulturi in izobraževanju. Vprašanja in problemi, predvsem pa izzivi, ki so jih zaznavala predstavljena dela in udeleženci festivala, so ključna vprašanja naše sedanjosti, a še bolj prihodnosti.

FESTIVAL KIBLIX

The KIBLIX festival began its journey as an open source festival that connected, or rather began to connect, art, technology and science. It problematized the impact of science and technology on the (social) lives of individuals and dove into the issues that determined or still determine our future already 20 years ago. In other words, it was ahead of its time. In 2002, focusing on the operating system Linux, it addressed the field of ICT and presented as open source for artistic use the milestones of humanity (mobile technology, UMTS, wireless Internet, etc.) with workshops for enthusiasts (and others). Later we saw how important these milestones were. And still are. The educational character of the festival was and is aimed at a wide target audience, so it has always bridged the gap between theoretical and practical content for all generations, professionals and enthusiasts. The engagement with digital media was linked to scientific achievements and technological innovations. The festival was a platform, a laboratory, a performance; it promoted the (interactive) collaboration of different orientations of digital art and their integration into practice. The festival offered exhibitions, hosted artists from abroad and business representatives. It found its support in European projects (Soft Control/RACIF/gRig/Risk Change); several times it actively and productively cooperated with the International Festival of Computer Art in Maribor; during the European Capital of Culture Maribor 2012, the extended version of the festival KIBLIX included two exhibitions with an additional accompanying program. In the two decades of change, both organizational and thematic, a lot has happened: robots, avatars, impact of science and technology on people's social life, the foundations of the world turned upside down, the digital age and its successor – artificial intelligence, huge databases, virtuality in all its manifestations. In short, the real and the virtual are becoming more and more similar.

Public understanding of and interest in art, technology and science has expanded from the narrow and closed circle of people to the broader and open field of searching for solutions to overcome the helplessness of the individual in modern society.

In the period from 2019 to 2023, KIBLIX focused on the exploration and critique of contemporary technological media and their soft use in contemporary art, culture and education. The questions and issues, but above all the challenges identified by the works presented and the participants of the festival, are the key questions of our present, but even more of our future.

KIBLIX 2019

Stopnja prisotnosti

Mednarodni festival umetnosti, tehnologije in znanosti

4.–6. 12. 2019

MMC KIBLA, Ulica kneza Koclja 9, Maribor

Lekcija ∞: virtualna, obogatena in mešana resničnost Pri vsakem tehnološkem mediju je conditio sine qua non tista tehnologija, ki brezhibno deluje, saj se pri konceptualizaciji, prepletu tehničnih zakonitosti in vsebin, torej pri izvrševanju idej in konceptov v kreativnih laboratorijsih zaradi pomanjkanja učinkovite tehnološke podpore vedno zaplete. Pod okriljem velikih korporacij se namensko in sistematično podpira vedno hitreje rastoč razvoj velikih tehnoloških dosežkov, nenehna optimizacija tehnologije je plod številnih raziskav in osredotočenega dela, da bi se lahko na tržišču ponudila strojna in programska orodja za izdelavo novih vizij in produktov za najrazličnejše uporabnike.

Umetniški medij, da ali ne? Po eni strani gre za preslikavo, imitacijo umetniškega dela, razporejanja v galeriji, arhiviranja, dokumentiranja, zgodovinjenja in po drugi strani medij kot umetnost, ki ni nujno podobotvorna, ampak lahko raziskuje medij kot tak in njegove meje, kreativna nadgradnja medija, kreativna raba medija. Dokler medija ne poznaš postopkovno, procesualno, ne moreš z njim manipulirati, ustvarjati, kritično razmišljati o njem – razen o vsakodnevnih učinkih in socialnih posledicah, ki jih opažamo v smeri dehumanizacije tehnologije ali trde digitalizacije.

KIBLIX 2019

Level of Presence

International Festival of Arts, Technology and Science

4 December–6 December 2019

MMC KIBLA, Ulica kneza Koclja 9, Maribor

Lesson ∞ : virtual, augmented and mixed reality With every technological medium, the conditio sine qua non is the technology that functions flawlessly – because during the conceptualization, and during the stage when technical demands meet content, or in other words, during the implementation of ideas and concepts in creative labs, things always get complicated due to a lack of effective technological support. Under the auspices of big corporations, there is a deliberate and systematic support of an increasingly fast-growing development of major technological breakthroughs, while a constant optimization of technology is the result of countless studies and focused work, in order to offer to the market hardware and software for creating new visions and products for diverse users.

Art medium, yes or no? On the one hand, it is about mapping, about the imitation of an artwork, about gallery setups, archiving, documenting, historicizing. On the other hand, it is about the medium as art, which is not necessarily image-forming, but can explore the medium as such, together with its boundaries; i.e., a creative upgrade of the medium, a creative use of the medium. As long as one is not familiar with the medium in terms of the processes and procedures it requires, one cannot manipulate it, be creative with it, or think about it critically – except in terms of the everyday effects and social impacts, which we observe in the sense of dehumanization of technology, or hard digitalization.



Foto / Photo: Sophie le Roux

KIBLIX 2020–2021

Virtualni svetovi danes

Mednarodni festival umetnosti, tehnologije in znanosti

24. 11. 2020–18. 12. 2021

Skladno s Kiblinim dolgoročnim vsebinsko-raziskovalnim fokusom na tehnologije razširjene resničnosti (XR) in zavedanjem, da je bilo leto 2020 najbolj »virtualno leto« do sedaj, je kuratorska ekipa, ki so jo sestavljali Živa Kleindienst, Tadej Vindiš, Peter Tomaž Dobrila in Aleksandra Kostič, v središče te edicije festivala KIBLIX postavila vprašanje: kateri in kakšni so virtualni svetovi danes?

Tukaj ne gre za vprašanje fascinacije nad tehnologijo kot tako, temveč za kritično vrednotenje presečišč in ločnic med virtualnim in fizičnim. Na eni strani se namreč soočamo z neizprosno ambicijo industrije po razvoju prepričljivih tehnologij, ki oblikujejo virtualno tako, da le-to v celoti prevzema, nadzira in podreja fizično, medtem ko na drugi strani nenehno blažimo nekompatibilnost tehnologije z našo materialno realnostjo. KIBLIX 2020–2021 je tako v središče postavil izkušnjo človeka – z vsemi materialnimi omejitvami in družbeno-političnimi okoliščinami, ki pogojujejo telo – pri čemer virtualna okolja razumemo kot prostore spekulativnih realnosti, spremenljivih identitet in hkrati vedno bolj perečih družbenih transformacij.

Mednarodni festival KIBLIX 2020–2021 je potekal v novi COVID-19 hibridni obliki s pred-dogodki od 24. novembra 2020 naprej, s težiščem v decembru 2020 in skozi leto 2021. Ob umetniško-raziskovalnih projektih, ki so bili v celoti predstavljeni na spletišču in v skladu z možnostmi "lock-unlock" tudi fizično na razstavišču KIBLA PORTAL, je vključeval tudi seminarje, tematske panele, avdiovizualne nastope, Slovenia Global Game Jam in druge virtualne aktivnosti.

KIBLIX 2020–2021

Virtual Worlds Now

International Festival of Arts, Technology and Science

24 November 2020–18 December 2021

In line with Kibla's long-term research focus on Extended Reality (XR) technologies, and considering that 2020 was the most "virtual year" to date, the curatorial team consisting of Živa Kleindienst, Tadej Vindiš, Peter Tomaž Dobrila, and Aleksandra Kostič, was for that year's KIBLIX asking, what are the virtual worlds now?

This is not the question of technology as magic, but the critical evaluation of the intersections and disconnections between the virtual and the physical. On one side, we are faced with a persistent ambition of industry towards persuasive technologies, designing the virtual to fully assume, control, and subsume the physical, while on the other, we are constantly needing to mitigate technological incompatibility with the physical as such. KIBLIX 2020–2021 did therefore place the experience of the human at the centre – with their material limitations and socio-political conditions of the body – while understanding the virtual environments as spaces for speculative realities, variable identities, and ever more acute social transformations.

The KIBLIX 2020–2021 took on a new COVID-19 hybrid form with pre-events from 24 November onwards, and with special program emphasis on December 2020 and through 2021. The program encompassed artistic research projects, fully presented on the KIBLIX website, and by following the "lock-unlock" options as well in KIBLA PORTAL, as a physical exhibition. Alongside these artistic projects, the program included, seminars, thematic panels, audio-visual performances, Slovenia Global Game Jam, and other virtual activities.



Foto / Photo: Damjan Švarc

KIBLIX 2022

Ljubezen in mir

Mednarodni festival umetnosti, tehnologije in znanosti

16. 11.–30. 12. 2022

KIBLA PORTAL, Valvasorjeva ulica 40, Maribor

Če je bil epidemski KIBLIX 2020–2021 z izpraševanjem, kateri in kakšni so virtualni svetovi danes, najbolj konsistenten prikaz »digitalnih umetnosti« prostor-časa in najbolj relevantna razstava »digitalnih resničnosti« na svetu, se je KIBLIX 2022 utemeljil kot platforma Mreže centrov raziskovalnih umetnosti in kulture – RUK. Mreža, ki jo ustvarjamo Delavski dom Trbovlje, PiNA iz Kopra in KIBLA iz Maribora, je izvajala pilotne projekte, produkcije, rezidence, delavnice, razprave in podpirala umetniška snovanja z odpiranjem prostorov misli in delovanja. Omogočanje produkcij umetnikom in umetnicam, gostovanj in izmenjav, sodelovanj, predstavljanj in prikazovanj je po štirih letih mreženja obilno obrodilo. Kako, smo ponudili v presojo Vam.

Kuratorja festivala Aleksandra Kostič in Peter Tomaž Dobrila sta se odločila, da za 10. obletnico največjega neodvisnega razstavišča za sodobno umetnost KIBLA PORTAL zbereta produkcijo RUK in izpostavita snovanja in stvaritve domačih umetnic in umetnikov. V času unifikacije medijev, zapiranja distribucijskih kanalov svetovnega spletja, deplatformiranja, izločevanja, prepovedi in cenzur, omejevanja in izločanja, prebujanja in prebujenja se zdi »dobro jutro« kot kletvica. Ali vsaj poziv na pregon. Da v III. svetovni vojni ni prostora za umetnost in lastno mnenje, je pretveza za prepričane in spriajaznjene, za umaknjene in nezadostne, za vdane in speštane, ki jim na KIBLIXu od vsega začetka, leta 2022 odpiramo kanale uresničenih prihodnosti. Ob 20. obletnici festivala KIBLIX smo se spogledovali s tukaj in zdaj, gledamo nazaj in oziramo naprej.

Pri tem smo uporabljali vsa sredstva, ki jih imamo na razpolago. Takšna, kot so. Soočenje z deli, ki izhajajo iz postulatov upoštevanja in (od)sevanja, odprtosti in sodelovanja, medsebojne vzajemnosti in spoštovanja, zamisli in delovanja so bile samo poriv k sestavljanju delov v koherentno skupnost in odpiranju prostorov uresničevanja projektov z znanjem in vedenjem, ustvarjalnostjo in iznajdljivostjo, raziskovanjem in eksperimenti ter z materiali in sredstvi, ki jih imamo na razpolago. Zato je bil KIBLIX 2022 domač, prikazana dela so bila plod treh raziskovalnih laboratoriјev, DDTlaba v Trbovljah, HEKE v Kopru in KIBLA2LABa v Mariboru, kot odprtih središč sodobne umetnosti in ustvarjalnosti.

KIBLIX 2022

Love and Peace

International Festival of Art, Technology, and Science

16 November–30 December 2022

KIBLA PORTAL, Valvasorjeva ulica 40, Maribor

The epidemic-marked KIBLIX 2020–2021 explored what virtual worlds are today; it turned out to be the most consistent display of space-time »digital arts« and the most relevant exhibition of »digital realities« in the world. KIBLIX 2022 edition served as a platform of the Network of Art and Cultural Research Centers – RUK. The network, created by the Delavski dom Trbovlje, PiNA from Koper, and KIBLA from Maribor, had implemented pilot projects, productions, residencies, workshops, debates and supported artistic creations by opening spaces of thought and action. After four years of networking, the facilitation of productions for artists, guest performances and exchanges, collaborations, presentations, and screenings has borne fruit. We left you to decide how.

For the 10th anniversary of KIBLA PORTAL, the largest independent exhibition space for contemporary art, the curators of the festival Aleksandra Kostič and Peter Tomaž Dobrila decided to gather the production of the RUK network and highlight the designs and creations of local artists. In an era of media unification, closing of distribution channels of the World Wide Web, deplatforming, bans and censorship, restriction and exclusion, opening our eyes and awakening, »good morning« seems like a curse word. Or at least a call for prosecution. That there is no place for art and having your own opinion in World War III is a pretext for the convinced and the resigned, for the withdrawn and the insufficient, for the surrendered and the cobbled-together, for whom we at KIBLIX have been opening the channels of a future coming true since the beginning, in 2022. On the 20th anniversary of KIBLIX, we flirted with the here and now, looking back and looking forward.

We have used all the means at our disposal to do so. The way they are. Confronting the works that stem from the postulates of consideration, reflection and radiation, openness and collaboration, mutuality and respect, ideas and action – all this was just a push towards assembling the parts into a coherent community and opening up spaces to realize projects with knowledge and knowing, creativity and ingenuity, research and experimentation, and with the materials and resources at our disposal. This is why KIBLIX 2022 was a home-grown project, the works on display were the result of three research laboratories, DDTlab in Trbovlje, HEKA in Koper, and KIBLA2LAB in Maribor, as open centers of contemporary art and creativity.



Foto / Photo: Damjan Švarc

PILOTNI
PROJEKTI
•
PILOT
PROJECTS

VRTN!CA

intermedijska instalacija, 2021

Na intermedijski razstavi VRTN!CA v prostorih Arboretuma, ki se ponaša z enim najrepresentativnejših rozarijev na svetu, smo postavili vrtnice na drugačen način: premaknili smo jih iz naravnega okolja v literarno, zvočno in vizualno ponazoritev in intermedijsko namestitev. S tem smo želimo prikazati del njihovega bivanja in lepote ter povezanosti s človekom. Tako smo ponudili novo gledišče z nadgrajeno izkušnjo razširjene resničnosti, ki je pričaralo posebno doživetje hkrati v resničnem okolju botaničnega parka in metafizičnem svetu umetnosti. Obiskovalcu smo v prostorski avdiovizualni postavitvi predstavili štiri zgodb izbranih vrtnic: damaščanke ter sort Trubar, Peace in Prešeren.

Producija: KID KIBLA / KIBLA2LAB

ROSE

intermedia installation, 2021

The intermedia exhibition VRTN!CA (ROSE) in the premises of the Arboretum, which houses one of the most representative rosaries in the world, placed roses in a different way: we relocated them from their natural environment to literary, sound and visual illustration and intermedia installation. In doing so, we wanted to show part of their existence and beauty and connection with humans. Thus, we offered a new perspective with an upgraded experience of extended reality that simultaneously evokes a special experience in the real environment of the botanical park and in the metaphysical world of art. In a spatial audiovisual installation, visitors could experience four stories of selected roses: Damask, as well as the varieties Trubar, Peace and Prešeren.

Production: ACE KIBLA / KIBLA2LAB

Foto / Photo: Damjan Švarc



Nadvojvoda Janez, oče Meranovega

laserski skeni, fotogrametrija, 2022

Hibridna muzejska razstava na posestvu Meranovo je bila prva v seriji mariborskih obležij 200. obletnice prihoda nadvojvode Janeza na Meranovo in v Maribor. Obiskovalce popelje po zgodovini posesti na drugačen način. Ob 200. obletnici Meranovega, 240. obletnici rojstva nadvojvode Janeza in 190. obletnici prve viničarske šole na Štajerskem je KIBLA pričela s projektom Nevidni Maribor, s katerim razkriva kotičke in ljudi, povezujoč zgodovino, naravo, urbano okolje in kulturo s sodobnimi tehnologijami.

V KIBLA2LABu vsebine raziskujejo in jih z umetniškimi postopki in ambientalnimi postavtvami predstavljajo na nove načine, od fizičnih objektov do izkušenj najnovejših tehnologij (fotogrametrija, navidezna resničnost (VR), obogatena resničnost (AR), 3600 drone posnetki, animacije s pomočjo umetne inteligence (AI), laserski skeni ...).

Produkcija: KID KIBLA / KIBLA2LAB

Archduke John, Father of Meranovo

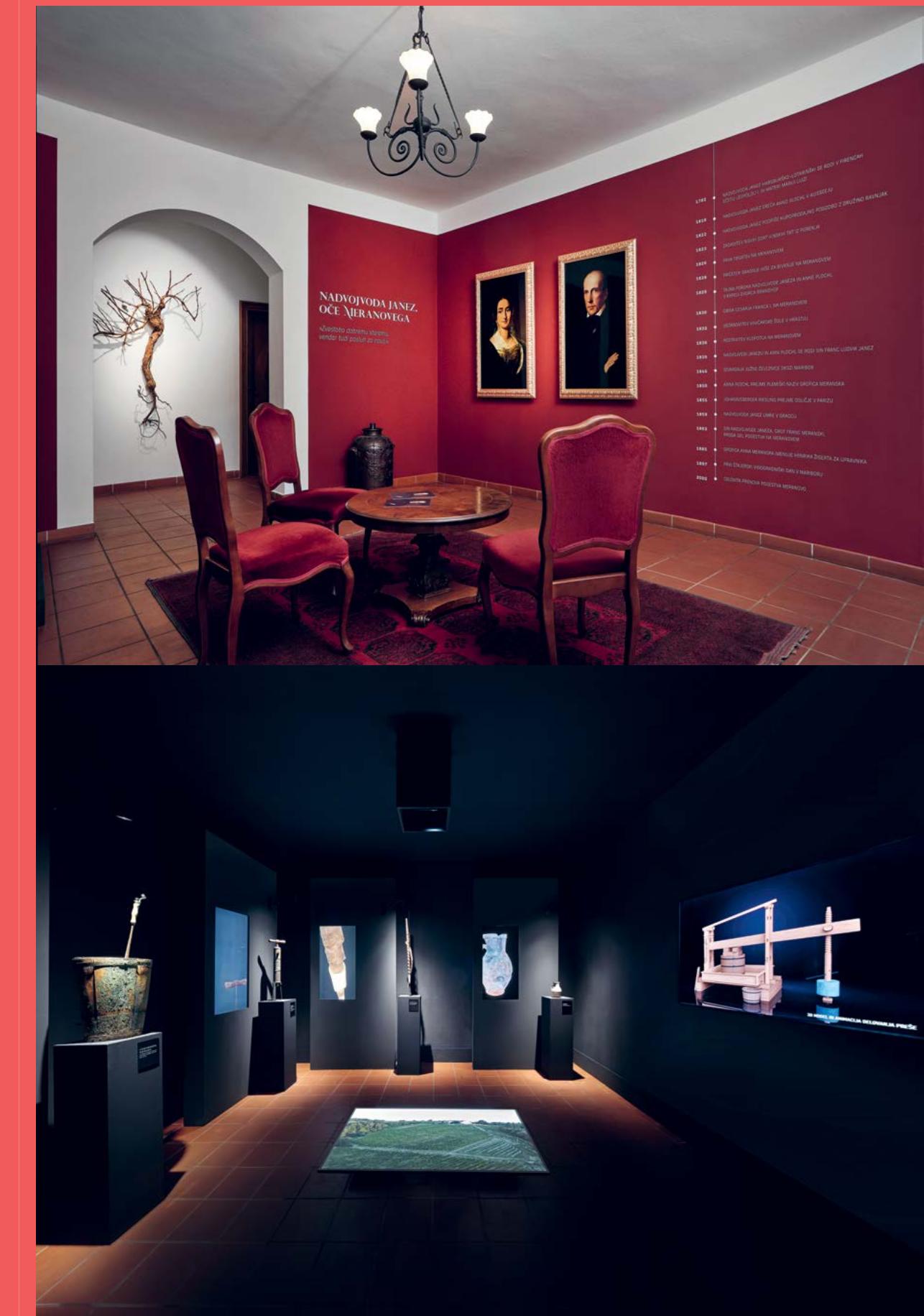
laser scans, photogrammetry, 2022

The hybrid museum exhibition at the Meranovo Estate was the first in a series of Maribor commemorations marking the 200th anniversary of the arrival of Archduke John to Meranovo and Maribor. It takes you through the history of the estate in a different way. Marking the 200th anniversary of Meranovo, the 240th anniversary of Archduke John's birth, and the 190th anniversary of the first wine school in the Styria region, KIBLA launched the Invisible Maribor project, which explores places and people while connecting history, nature, the urban environment and culture with modern technologies.

The KIBLA2LAB explores the content and uses artistic processes and ambient installations to present the content in new ways ranging from physical objects to experiences of the latest technologies (virtual reality (VR), augmented reality (AR), 3600 drone footage, animations made using artificial intelligence (AI), laser scans ...).

Production: ACE KIBLA / KIBLA2LAB

Foto / Photo: Damjan Švarc



Vodovodni stolp Brežice – virtualizacija

Vodovodni stolp predstavlja poseben arhitekturni spomenik tehnične kulture v Sloveniji in velik potencial za obdelavo z novomedijskimi tehnologijami. V pilotnem projektu mreže RUK ga je Društvo KIT4 v sodelovanju s KIBLA2LAB prikazalo kot prvo umetniško virtualno podobo zaščitenega spomenika na Slovenskem, ki je višji od 40 metrov. Celotna podoba stolpa, vpeta v mestno okolje, je bila zajeta z dronom, LiDAR skenerjem in tehniko fotogrametrije. Osnovni virtualni prikaz na zelo atraktivnem način prezentira celotno 360-stopinjsko podobo objekta, nadgrajeno s principi umetniškega posega v renderirano sliko. Atraktivno virtualno podobo si je možno ogledati v notranjosti stolpa in je obiskovalcem na voljo v odpiralnem času Posavskega muzeja Brežice. Projekt virtualizacije Vodovodnega stolpa Brežice, ki ga je pripravilo Društvo KIT4 v sodelovanju s KIBLA2LAB in Posavskim muzejem Brežice, je pilotni projekt, izbran na javnem pozivu KID PiNA v sklopu Mreže RUK (JP-PR-RUK_1_2022), ki ga sofinancirata Evropska unija iz Evropskega sklada za regionalni razvoj in Republika Slovenija (Ministrstvo za kulturo).

Brežice Water Tower – Virtualization

The water tower represents a special architectural monument of technical culture in Slovenia and a great potential for processing with new media technologies. Within the pilot project of the RUK network, the KIT4 Association, in cooperation with KIBLA2LAB, presented it as the first artistic virtual image of a protected monument in Slovenia that is more than 40 meters high. The entire image of the tower, embedded in the urban environment, was captured using a drone, LiDAR scanner and photogrammetric techniques. The basic virtual display presents the entire 360-degree image of the building in a very attractive way, which is enhanced by the principles of artistic intervention in the rendered image. The attractive virtual image can be viewed inside the tower and is available to visitors during the opening hours of the Posavje Museum Brežice. The project on virtualization of the Brežice Water Tower, prepared by the KIT4 Association in cooperation with KIBLA2LAB and the Posavje Museum Brežice, is a pilot project selected in the call for proposals by KID PiNA within the RUK Network (JP-PR-RUK_1_2022), co-financed by the European Union from the European Regional Development Fund and the Republic of Slovenia (Ministry of Culture).

Foto / Photo: ↑ arhiv PMB (Pokrajinski muzej Brežice) ↓ arhiv KIBLA



Novomedijska podoba Vinagove kleti

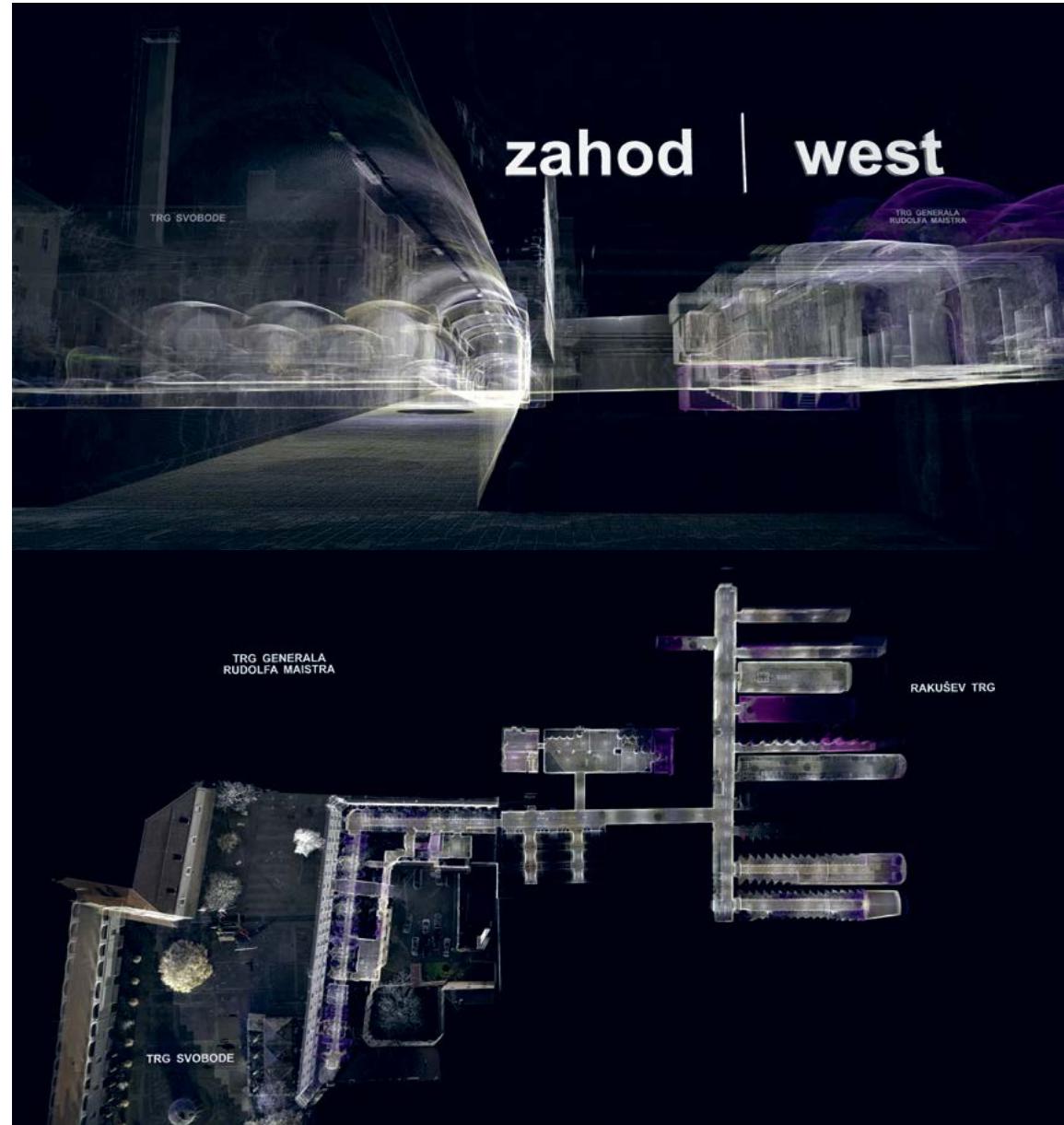
Klasična vinska klet predstavlja unikatni biser kulturne dediščine, ki smo ga oplemenitili z digitalno podobo in tako na izviren in svojevrsten način predstavili vsebino, ki se skriva pod našimi nogami, v podzemlju mestnega jedra. Nasproti znamenitega »Kodžaka« stoji mogočna Kriehuberjeva palača, v kateri je bil sedež podjetja Vinag in je vhod v vinsko klet. Stavbo je med letoma 1847 in 1858 skupaj s povsem vkopano kletjo zgradil meljski graščak Alojz plemeniti Kriehuber. Ko so jo po 2. svetovni vojni združili s še starejšo pivovarniško kletjo, je postala največja klasična tunelska vinska klet v centralni Evropi pod mestnim središčem, ki se ponaša s površino 15.000 m² in z več kot dva kilometra dolgimi podzemnimi predori. Leseni sodi, betonske cisterne, steklenice z vinsko patino imajo skupno kapaciteto tri milijone litrov. Najdragocenejša posebnost je zagotovo vinski arhiv, v katerem se trenutno nahaja 85.000 steklenic vrhunskega arhivskega vina. Ob vstopu v edinstveno klet nas vselej pozdravi 23 mogočnih stopnic; število, ki je eno temeljnih simbolov Vinaga, saj z njim povezujemo legendu o vinarjevih 23 obiskih vinograda, preden iz grozja nastane vino. Zgodovina kleti je bila burna – preživel je številna obdobja, menjala prenekatera lastnika, doživljala boljše in slabše čase, a na vrhuncu svoje moči je bil Vinag eden največjih proizvajalcev in izvoznikov vina nekdanje Jugoslavije. Ambientalna postavitev z digitalnim 3D posnetkom ponazarja njene razsežnosti in potencial za začetek neke nove zgodbe kulturnega pomena. Novomedijsko podobo Vinagove kleti je pripravilo Društvo za sodobno umetnost X-OP v sodelovanju s KIBLA2LAB iz Maribora. Nastala je v sklopu pilotnega projekta, izbranega na javnem pozivu KID PiNA v sklopu Mreže RUK (JP-PR-RUK_1_2022), ki ga sofinancirata Evropska unija iz Evropskega sklada za regionalni razvoj in Republika Slovenija (Ministrstvo za kulturo).

New media presentation of the Vinag winery

This classic wine cellar is a unique jewel of cultural heritage, which we have enhanced with a digital image, thus presenting in an original and unique way the content that lies beneath our feet, in the underground of the city center. Opposite the famous "Kodžak" stands the imposing Kriehuber Palace, which was the headquarters of Vinag and is the entrance to the wine cellar. The building was built between 1847 and 1858, by the nobleman Alojz Kriehuber from Melje, together with a completely excavated cellar. When it was merged with an even older brewery cellar after the World War II, the largest classical tunnel wine cellar in Central Europe was created under the city center, boasting an area of 15,000 m² and more than 2 kilometers of underground tunnels. Wooden barrels, concrete tanks, bottles with wine patina have a total capacity of 3 million liters. The most valuable feature is certainly the wine archive, which currently holds 85,000 bottles of fine vintage wines. Entering the unique cellar, we are always greeted by 23 monumental stairs, a number that is one of the fundamental symbols of Vinag, as it is linked to the legend of the 23 visits of the winemaker to the vineyard before the grapes become wine.

The history of the cellar has been turbulent - it has survived many historical periods, changed several owners, experienced better and worse times; but at the height of its power, Vinag was one of the largest wine producers and exporters of the former Republic of Yugoslavia. The spatial installation with 3D digital images illustrates its greatness and its potential for the beginning of a new story of cultural significance. The new media presentation of Vinag's wine cellar was prepared by the Association for Contemporary Art X-OP in cooperation with KIBLA2LAB from Maribor. It is part of a pilot project selected through the KID PiNA call for proposals within the RUK Network (JP-PR-RUK_1_2022), co-financed by the European Union from the European Regional Development Fund and the Republic of Slovenia (Ministry of Culture).

Foto / Photo: arhiv KIBLA



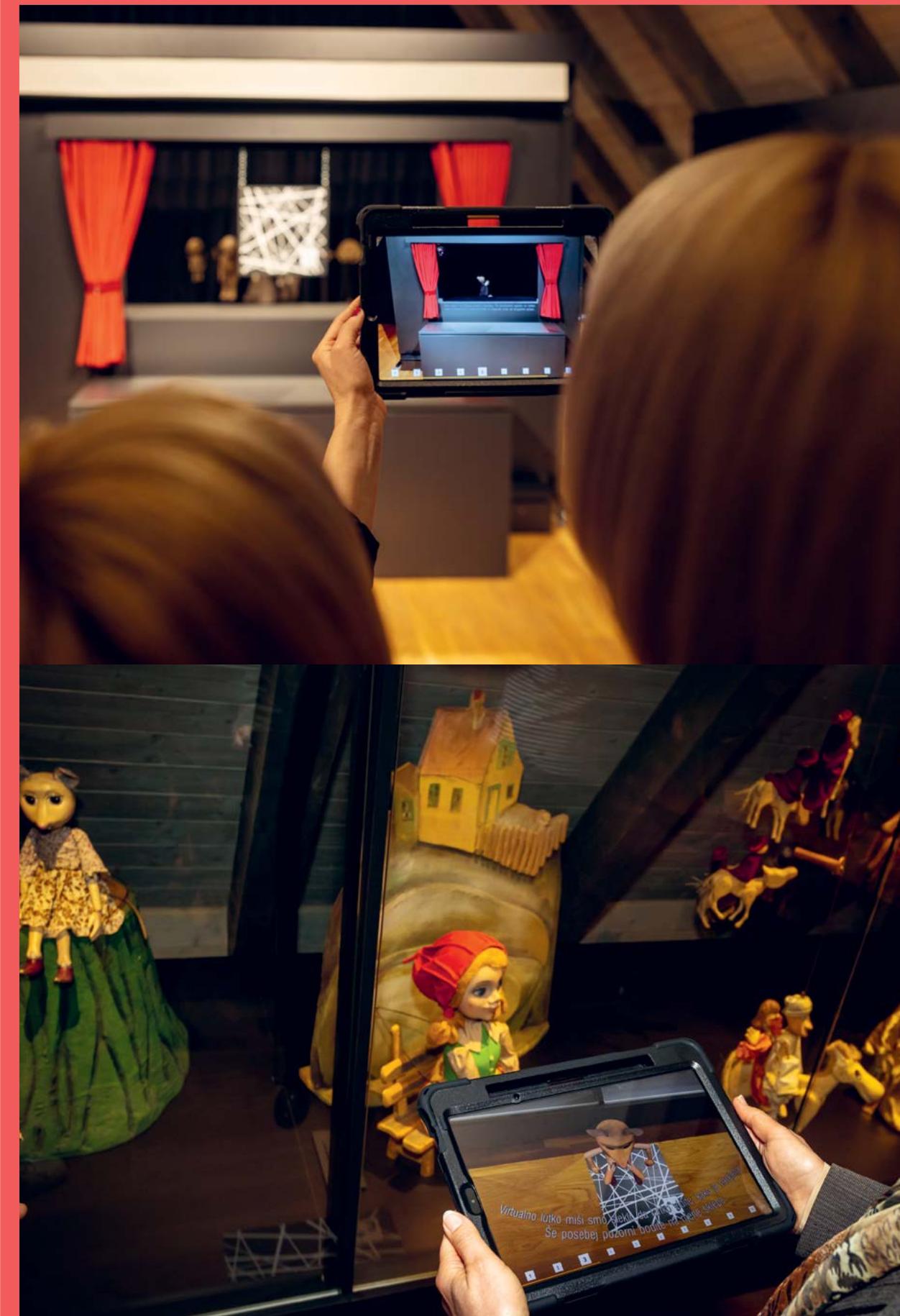
Aplikacija LutkAR

Lutkovno gledališče Maribor je za Lutkovni muzej v sodelovanju z Društvom za sodobno umetnost X-OP in KIBLA2LAB pripravilo aplikacijo LutkAR, ki prikaze razstavljenih eksponatov snovne kulturne dediščine nadgradi s sodobnimi tehnologijami in novomedijskimi postopki. LutkAR je zabavna in poučna aplikacija, skozi katero smo razstavi želeli vdahnit življenje, kot lutkar s svojo animacijo vdihne življenje prej neživemu predmetu, lutki. Tako bo preko aplikacije razstavni prostor dodatno oživel. Osredotočili smo se na obogateno resničnost, na avdiovizualno produkcijo in kombinacijo izvirnega slikovnega materiala ter fotogrametrije. LutkAR-ja lahko preizkusite v Lutkovnem muzeju Lutkovnega gledališča Maribor. Aplikacija LutkAR, ki jo je pripravilo Lutkovno gledališče Maribor v sodelovanju z Društvom za sodobno umetnost X-OP in KIBLA2LAB, je nastala v sklopu pilotnega projekta, izbranega na javnem pozivu KID PiNA v sklopu Mreže RUK (JP-PR-RUK_1_2022), ki ga sofinancirata Evropska unija iz Evropskega sklada za regionalni razvoj in Republika Slovenija (Ministrstvo za kulturo).

LutkAR app

The Maribor Puppet Theatre, in collaboration with the Association for Contemporary Art X-OP and KIBLA2LAB, has developed the app LutkAR for the Puppet Museum, which enriches the exhibition of material cultural heritage exhibits with modern technologies and new media processes. LutkAR is an entertaining and educational application that we wanted to use to breathe life into the exhibition, just as a puppeteer breathes life into a previously inanimate object, a puppet, through his animation. So the exhibition space is further animated by the app. We focused on augmented reality, on audiovisual production and on combining of original imagery and photogrammetry. You can try LutkAR at the Puppetry Museum of the Maribor Puppet Theatre. The LutkAR app, developed by the Maribor Puppet Theatre in collaboration with the Association for Contemporary Art X-OP and KIBLA2LAB, is part of a pilot project selected through the KID PiNA call for proposals within the RUK Network (JP-PR-RUK_1_2022), co-financed by the European Union from the European Regional Development Fund and the Republic of Slovenia (Ministry of Culture).

Foto / Photo: Boštjan Lah (arhiv Lutkovnega gledališča Maribor)



Virtualni Puh

V Društvu starodobnih vozil rojaka Janeza Puha si člani prizadevajo uresničiti vizijo nadgradnje muzeja Janeza Puha v hibridno okolje, v katerem bodo nove tehnologije vsebovale in predstavile materialno tehnično kulturno dediščino v razširjenih možnostih (3D modelih, animacijah, digitalnih posnetkih oziroma laserskih skenih ...), ki bodo pripomogle k večji prepoznavnosti velikega izumitelja in pritegnile v muzej tudi mlajše generacije. Prvi tovrstni projekt je nastal v sodelovanju s KIBLA2LAB in predstavlja tehnični biser, eno izmed originalnih, ročno izdelanih Puhovih motornih koles iz leta 1926, ki je umetniška plastika sama po sebi in z nadgrajeno virtualno umetniško podobo pred gledalca postavi vizualno popolnoma nov princip razumevanja žlahtnosti, inovativnosti in kreativnosti. Sinteza zapletenega stroja, kot je dvokolesnik z motorjem na notranje izgorevanje, ter modernih principov, kot so lasersko skeniranje, fotogrametrija in celoten proces virtualizacije, pred nas postavlja vizualno mobilno umetniško delo, ki ni samo videodokument, ampak razkriva globlje pomene strukture in načina razmišljanja v eonskem obdobju. Projekt nadgradnje muzeja v hibridnem okolju prinaša tudi novomedjisko tridimenzionalno podobo zunanjosti in notranjosti obej stavb, in sicer tako starejše cimprače na mestu, kjer je nekoč stala Puhova rojstna hiša, kot tudi leta 2022 odprtega novega Puhovega muzeja s številnimi impresivnimi artefakti. Z uporabo laserskega skenerja smo izdelali virtualni model snovne kulturne dediščine regionalnega, nacionalnega in internacionalnega pomena. Janez Puh, eden izmed najbolj prepoznavnih slovenskih izumiteljev in inovatorjev, s svojim delom tudi po več kot 100 letih razvoja družbe še vedno vsakogar od nas nagovarja s temeljnimi principi, kot so radovednost, trma, raziskovanje, kreativnost in neomajna želja po razvoju. Virtualna umetniška prezentacija njegovega dela obravnava prav te temeljne postulate njegovega in našega poslanstva.

Virtualizacijo Puhovega motornega kolesa iz leta 1926 in posestva z muzejem je pripravilo Društvo starodobnih vozil rojaka Janeza Puha v sodelovanju z Združenjem KODA MODRO in KIBLA2LAB iz Maribora. Nastala je v sklopu pilotnega projekta, izbranega na javnem pozivu KID PiNA v sklopu Mreže RUK (JP-PR-RUK_1_2022), ki ga sofinancirata Evropska unija iz Evropskega sklada za regionalni razvoj in Republika Slovenija (Ministrstvo za kulturo).

Virtual Puh

In the Compatriot Janez Puh Juršinci Association, members are striving to realize the vision of developing the Janez Puh Museum into a hybrid environment, where new technologies will contain and present the material and technical cultural heritage in extended possibilities (3D models, animations, digital recordings, laser scans, etc.), which will contribute to greater recognition of the great inventor and also interest younger generations in the museum. The first project of its kind was created in collaboration with KIBLA2LAB and presents a technical jewel, an original handmade Puh motorcycle from 1926, which is itself an artistic sculpture and, combined with an enhanced virtual art image, offers visitors a completely new visual principle for understanding excellence, innovation and creativity. The synthesis of a complex machine, such as a two-wheeler with an internal

combustion engine, and modern principles, such as laser scanning, photogrammetry and the whole process of virtualization, presents us with a visual mobile artwork that is not just a video document, but reveals deeper meanings of structure and mindset in the eon era. The project to upgrade the museum in a hybrid environment also brings a new media three-dimensional image of the exterior and interior of both buildings, namely both the old "cimprača" (a typical Pannonian house made of wood, clay and straw) on the site where Puh's birthplace once stood, and the new Puh Museum with many impressive artifacts, opened in 2022. With the help of a laser scanner, we created a virtual model of the material cultural heritage of regional, national and international importance. The work of Janez Puh, one of the most famous Slovenian inventors and innovators, even after more than 100 years of social development, still speaks to each of us with basic principles such as curiosity, perseverance, research, creativity and unwavering will to develop. The virtual artistic presentation of his work echoes these fundamental postulates of his and our mission.

The virtualization of the Puh motorcycle from 1926 and the museum estate was created by the Compatriot Janez Puh Juršinci Society in collaboration with the Koda Modro Association and KIBLA2LAB from Maribor. It was created as part of a pilot project selected through a public tender by KID PiNA as part of the RUK network (JP-PR-RUK_1_2022), co-financed by the European Union from the European Regional Development Fund and the Republic of Slovenia (Ministry of Culture).



Foto / Photo: arhiv KIBLA

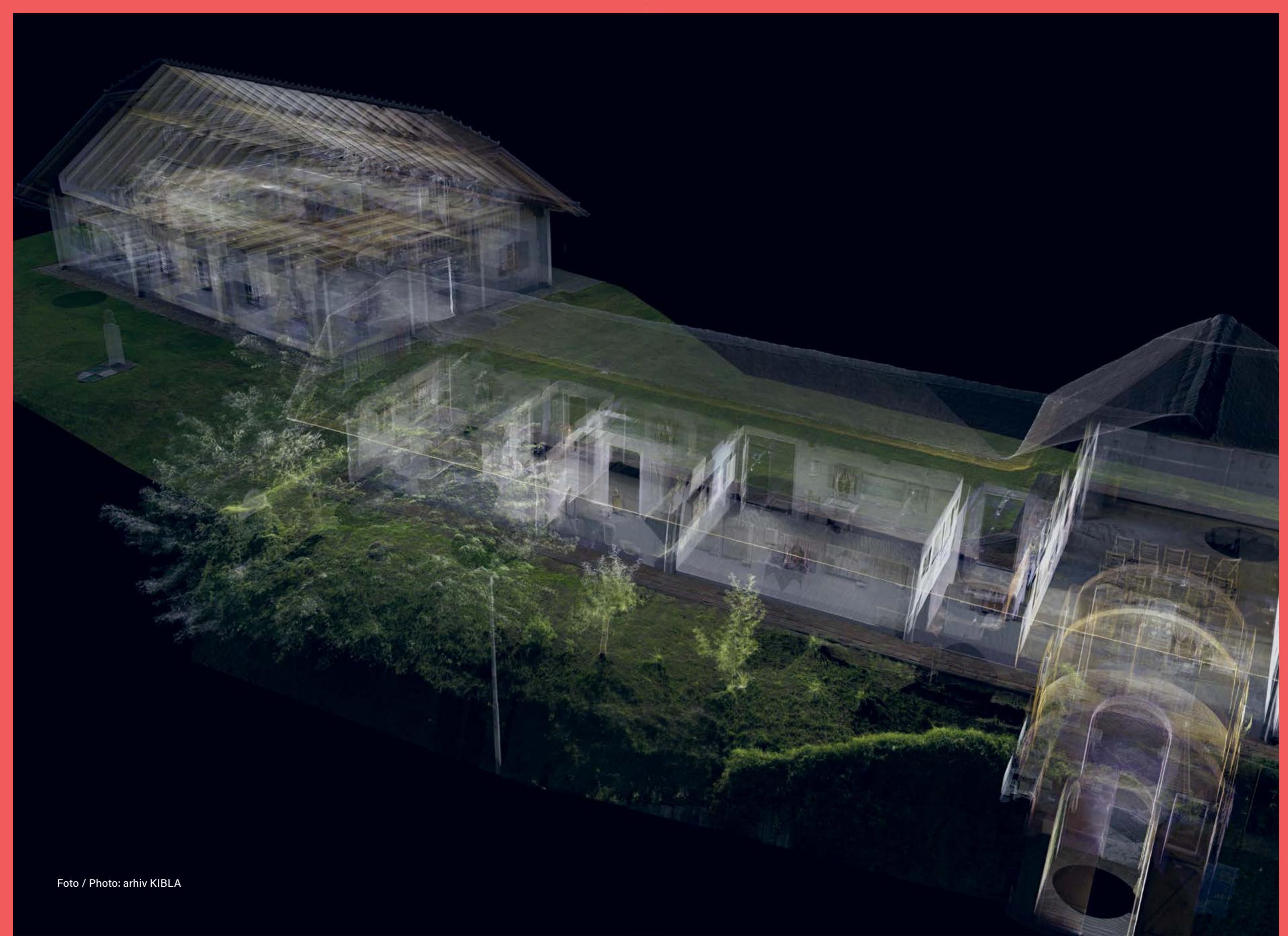


Foto / Photo: arhiv KIBLA

KIBLA

REZIDENCE
•
RESIDENCIES

Simon Whetham

RUK x KIBLA2LAB mednarodni rezidenčni program

11.-23. 10. 2022

KIBLA2LAB

V KIBLA2LAB smo v okviru mednarodnega rezidenčnega programa mreže RUK sodelovali z britanskim zvočnim umetnikom Simonom Whethamom. Simon v svoji umetniški praksi obravnava zvok kot material za ustvarjanje, pri čemer zaradi njegovega udejstvovanja v različnih interdisciplinarnih projektih njegovo delo postaja vedno bolj vizualno in oprijemljivo. V času rezidenčnega bivanja v Mariboru je Simon predstavil svojo umetniško-raziskovalno prakso, izvedel različne delavnice in se povezal z lokalnim občinstvom in drugimi ustvarjalci na področju zvočnih umetnosti.

Simon Whetham se od leta 2005 osredotoča na delo z zvokom kot materialom za ustvarjanje, pri čemer pogosto uporablja zvok iz okolja ter različne metode in tehnike za pridobivanje neopaženih in prikritih zvočnih pojavov. V sklopu svojega umetniško-raziskovalnega dela vse pogosteje sodeluje v multidisciplinarnih projektih, zaradi česar je njegovo delo postal vse bolj vizualno in oprijemljivo. Raziskuje tudi načine ustvarjanja materialnih sledi zvoka in preoblikovanja energijskih oblik. Simon nastopa in razstavlja na mednarodni ravni, sodeloval je na festivalih In Vitrø 2019 (IT), Fresh Winds Biennale 2018 in 2016 (IS), Nakanojo Biennale 2017 (JP), ACC Showcase 2018 (KR), Tsonami Festival 2017 in 2012 (CL), Madeiradig 2010 in 2011 (PT) ter Moers Festival 2011 (DE), njegova dela pa so izšla pri založbah Mappa (SK), Crónica (PT) in Line (ZDA). Leta 2017 je organizacija British Council podprla Simonovo udeležbo na festivalu Tsonami v Čilu, dvakrat pa je prejel dotacijo za umetnost Umetniškega sveta Anglije, in sicer za udeležbo na projektu Mamori Sound Project, Amazonas, Brazilija, leta 2007, in za organizacijo projekta kulturne izmenjave Active Crossover leta 2009. Leta 2011 je projekt podprla tudi fundacija PRS for Music, od takrat je gostoval v Argentini, Čilu, Kolumbiji, Nemčiji, na Norveškem in v Avstraliji, nazadnje leta 2015 na MoKS v Estoniji. Podprla ga je dotacija za mednarodni razvoj umetnikov organizacije British Council in Umetniškega sveta Anglije.

Spletna stran: <https://www.simonwhetham.co.uk>
 Twitter: <https://twitter.com/simonwhetham>
 Instagram: <https://www.instagram.com/simonwhetham/>

Foto / Photo: arhiv KIBLA

Simon Whetham

RUK x KIBLA2LAB International Residency Program

11-23 October 2022

KIBLA2LAB

KIBLA2LAB has collaborated with British sound artist Simon Whetham as part of the RUK International Residency Program. Simon's artistic practice treats sound as a material for creation, and his involvement in various interdisciplinary projects has made his work increasingly visual and tangible. During his residency in Maribor, Simon presented his artistic research practice, lead various workshops and engage with local audiences and other sound artists.

Since 2005 Simon Whetham has focused on working with sound as a material for creation, often using environmental sound, employing various methods and techniques to obtain unnoticed and obscured sonic phenomena. His artistic investigations have allowed him to work increasingly in multi-disciplinary projects, leading his work to become more visual and tangible. He also explores ways of creating material traces of sound, and transforming energy forms. Simon performs and exhibits internationally, participating in In Vitrø 2019 (IT), Fresh Winds Biennale 2018 & 2016 (IS), Nakanojo Biennale 2017 (JP), ACC Showcase 2018 (KR), Tsonami Festival 2017 & 2012 (CL), Madeiradig 2010 & 2011 (PT) and Moers Festival 2011 (DE), and has composed works published through labels including Mappa (SK), Crónica (PT) and Line (USA). In 2017 the British Council supported Simon's participation in the Tsonami Festival, Chile, and twice he received the Grant for the Arts from the Arts Council England, to attend the Mamori Sound Project, Amazonas, Brazil, 2007; and to organise the cultural exchange project 'Active Crossover' in 2009. Also supported by PRS for Music Foundation in 2011, it has since been hosted in Argentina, Chile, Colombia, Germany, Norway and Australia, and most recently by MoKS, Estonia in 2015, supported by the Artists International Development Grant from the British Council and Arts Council England.



Neo Christopher Chung

RUK x KIBLA2LAB mednarodni
rezidenčni program

3.-16. 10. 2022

KIBLA2LAB

V začetku oktobra 2022 smo v KIBLA2LAB v okviru mednarodnega rezidenčnega programa mreže RUK gostili umetnika Nea Christopherja Chunga. Umetnik, ki se ukvarja s podatki in strojno kulturo, z novomedijskimi instalacijami in intervencijami pa preučuje in razkriva nastajajočo estetiko sistemov, ki so tesno povezani z družbenimi izvivi, je v času rezidenčnega bivanja s sodelavci KIBLA2LAB razvijal sistem umetne inteligence znotraj virtualnih svetov. Njegova nedavna dela se osredotočajo na vplive medijev, umetne inteligence in kibernetike ter razkrivajo kompleksnost znanosti. V ta namen eksperimentira s senzorji, mikrokrmlniki in algoritmi strojnega učenja, s čimer ustvarja večplastna dela, ki združujejo nove medije, kiparstvo in prostorske prakse.

Neo Christopher Chung, rojen v Južni Koreji, je študiral vizualne umetnosti in biomedicinsko inženirstvo na univerzi Duke ter doktoriral iz kvantitativne in računalniške biologije na univerzi Princeton. Na Akademiji za likovno umetnost v Vroclavi je pridobil magisterij. Kot docent na Univerzi v Varšavi in raziskovalec na Univerzi Kalifornije v Los Angelesu deluje na področju računalniške biologije in strojnega učenja.

Foto / Photo: arhiv KIBLA

Neo Christopher Chung

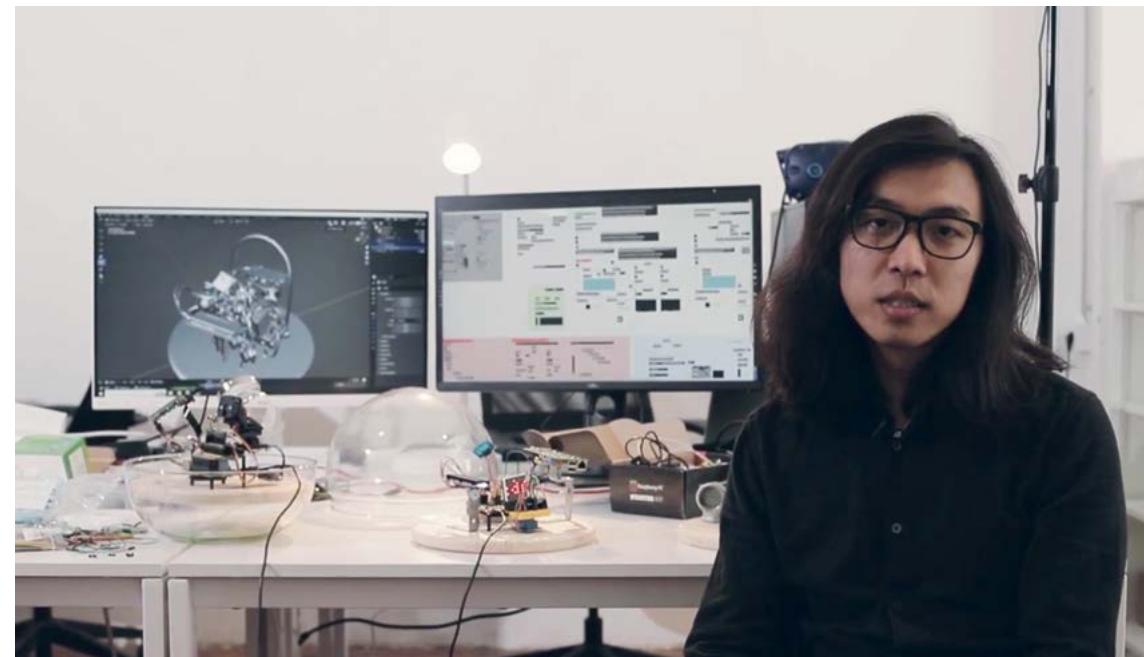
RUK x KIBLA2LAB International
Residency Program

3-16 October 2022

KIBLA2LAB

In early October 2022, we have hosted artist Neo Christopher Chung at KIBLA2LAB as part of the RUK international residency program. Chung crosses disciplines with an interest in data and machine culture. Through new media installations and interventions, he examines and reveals emergent aesthetics of systems that are deeply coupled with social challenges. His recent works focus on impacts of media, artificial intelligence, and cybernetics, exposing the complexity of science. To this end, he experiments with sensors, micro-controllers, and machine learning algorithms to create multi-layered works that merge new media, sculpture, and spatial practices.

Born in South Korea, Neo Christopher Chung studied visual arts and biomedical engineering at Duke University and holds a Ph.D. in quantitative and computational biology from Princeton University. He obtained an MFA at the Academy of Fine Arts in Wrocław. As an assistant professor at the University of Warsaw and a research scientist at the University of California, Los Angeles, he conducts research in computational biology and machine learning.



Alice Daeun Kim

RUK x KIBLA2LAB mednarodni rezidenčni program

24. 9.-1. 11. 2021

KIBLA2LAB

V petek, 24. septembra, je v Maribor prispela 3D oblikovalka digitalnih vsebin iz Južne Koreje Alice Daeun Kim. Sodelovala je pri RUK pilotnem projektu Nevidni Maribor v izvedbi KIBLA2LABa, kjer je oblikovala vsebine za AR in VR izkušnje. Alice Daeun Kim je umetnica, ki se posveča digitalnim medijskim vsebinam in oblikovanju premikajočih se podob. Raziskuje pripovedovanje zgodb in idej skozi uporabo virtualne in obogatene resničnosti. Ustvarjalko predvsem zanima prostor, premikajoče se podobe in pripovedovanje zgodb v virtualni resničnosti. Osredotoča se na raziskovanje načinov, kako zgodbe in ideje predstaviti občinstvu na interaktiven način in skozi potopitev, kar dosega ravno z uporabo tehnologij, kot so obogatena resničnost, virtualna resničnost in projekcijske tehnike, ki se uporabljajo za spremištanje predmetov, pogosto nepravilnih oblik, v prikazno površino za videoprojekcijo (projection mapping). Svoja dela je razstavljala v Londonu, Lizboni in Seulu v Južni Koreji.

<https://www.alicedaeunkim.com/>

Foto / Photo: Janez Klenovšek

Alice Daeun Kim

RUK x KIBLA2LAB International Residency Program

24 September-1 November 2021

KIBLA2LAB

On Friday, September 24, a 3D digital content designer from South Korea, Alice Daeun Kim arrived in Maribor. She participated in the RUK pilot project Invisible Maribor implemented by KIBLA2LAB, where she designed content for AR and VR experiences. Alice Daeun Kim is an artist who focuses on 3D digital media content, space and the design of moving images. She explores ways in which stories and ideas could be told by using virtual and augmented reality and how to present them to the audiences in an interactive way and through immersion. Due to this she adheres to using technologies such as augmented reality, virtual reality and projection techniques used to transform objects, often irregular shapes, into visuals. Her work was exhibited in London, Lisbon and in Seoul in South Korea.



Vojtěch Radakulan

RUK x KIBLA2LAB mednarodni
rezidenčni program

15.-27. 8. 2021

KIBLA2LAB

V nedeljo, 15. avgusta, je v Maribor namreč prispel praški umetnik Vojtěch Radakulan. Zanima ga ustvarjanje in umeščanje VR izkušnje v prostor kot instalacije, ki povezuje realni prostor z virtualnim, pri čemer gre torej za uporabo VR prostora kot nadgradnjo realnega. Prav tako ga zanima razvijanje kratke VR izkušnje z interaktivnimi predmeti, ki jih uporabniki ce lahko primejo in raziskujejo. Pri svojem delu trenutno sodeluje z oblikovalcem zvoka za zvočne efekte v VR in tako poudarja pomembnost zvoka v VR izkušnjah. Vojtěch Radakulan je umetnik in arhitekt, ki preučuje simulacije in gradnjo svetov. Pogosto se izraža s pomočjo platform za ustvarjanje iger, programske opreme za 3D rendering, pa tudi s pisanjem romanov, »gamebook-ov« (tj. interaktivna fikcija ali vizualni roman) ali preprostimi risbami in fizičnimi instalacijami. Namesto ustvarjanja fizične arhitekture se posveča kreiranju interaktivnih okolij, videov in računalniških iger, pri čemer obravnava teme, kot so simulacija, kopiranje, razdalja in premagovanje le-teh s pomočjo tehnologije. Ustvarjenim situacijam manjka jasen cilj, računalniških iger in »gamebook-ov« ni mogoče premagati, romanom in »gamebook-om« pa manjkata konec in začetek. Umetnik se rad potaplja v nenavadne situacije, ki jih težko opišemo z razumom in logiko. Ponuja brezplačno branje dogodkov in situacij, ki jih je težko dojeti, vse pa temelji na lastnih, omejenih in verjetno zelo dvomljivih osebnih izkušnjah. Neuspešno je poskušal sodelovati z industrijo Nollywood CGI. Sodeloval je pri izdelavi 3D animiranega filma, katerega naročnik je bil neznani spletni prevarant, ki je Radi poslal e-pošto, češ da je od leta 1979 zapuščen na ruskem nezemeljskem plovilu. S svojo najboljšo prijateljico, oblečeno v rumeno zaščitno obleko, se je pretepal pred največjo jedrsko elektrarno na Češkem, nato pa je odšel v center za obiskovalce, kjer si je uspešno izposodil uran. Rada je oblikoval več arhitekturnih projektov na zelo obiskanih mestih v Pragi, ki so nastajala stoletja, pri čemer pa jih ni nameraval realizirati. Zamišljene stavbe so bile npr. hiša za revne in neuspešne arhitekte, hiša za častilce atoma ali hiša, namenjena pokopu pokopališča in posledično samega sebe. Rada je spal v modernistični mučilni celici, ki jo je sam rekonstruiral, in sanjal o neskončnem številu umazanih stranišč, poravnanih v modernistični mreži. Ali pa je naredil več kopij starega pohištva, fasad, zarjavelih oprijemov in stolov iz stiroporja. Napisal je kratko knjigo in manjšo računalniško igro o dveh geodezijah in poskušal izmeriti svet, v katerem se nahajata. Te situacije imajo nekaj skupnih točk, če jih zaznamo ali ne. Gre za pojem razdalje, saj je težko vstopiti v jedrsko elektrarno, se preseliti v Nollywood ali porušiti pet stoletij stare cerkve. Jasno je, da Rada v realnosti tega ne želi, zato za dostop do teh nedosegljivih krajev uporablja različne vrste simulacij, novo tehnologijo ali stara orodja.

<https://www.vojtechrada.com/>

Vojtěch Radakulan

RUK x KIBLA2LAB International
Residency Program

15-27 August 2021

KIBLA2LAB

On Sunday, 15 August, the artist Vojtěch Radakulan from Prague arrived in Maribor. He is interested in creating and placing a VR experience in space as an installation that connects real environment with the virtual, thus using VR environment to upgrade the real. He is also interested in developing a brief VR experience with interactive objects that users can grasp and explore. In his work, he is currently working with a sound designer for sound effects in VR, thus emphasizing the importance of sound in the VR experience. Vojtěch Radakulan is an artist and architect devoted to the examination of simulations and world-building. He often expresses his thoughts by using game engines, 3D rendering software, but also by writing novels, gamebooks, or simple hand drawings and physical installations. Instead of the physical architecture, he is more fond of using his architectural skills to make interactive environments, videos, or computer games to deal with topics like simulation, copying, distance, and overcoming it by using technology. The created situations lack a clear goal, PC games and gamebooks cannot be won, and novels and gamebooks lack the end and the beginning. They are meant to be part of the world, with an open end and unclear beginning. Rada likes to dive into strange situations which are hard to describe with reason and logic. He offers a complimentary reading of the events and situations, which are hard to grasp, all based on own, limited, and probably highly doubtful personal experience. He tried to collaborate with the Nollywood CGI industry, he failed, so he ended up helping to produce a 3D animated movie for an unknown email scammer, who emailed Rada, saying that he is stranded on a Russian extraterrestrial vessel since 1979. He was fist fighting with his best friend dressed in a yellow hazard suit in front of the biggest nuclear power station in the Czech Republic. Nothing happened, so he went to the visitor center to borrow uranium successfully. Rada designed several architecture projects on very lucrative spots in Prague, taken for centuries, with no ambition for realization. For example, the proposed buildings were a house for poor and unsuccessful architects, a house for worshipers of the atom, or a house designed to bury the graveyard and subsequently itself. Rada slept in a self reconstructed modernist torture cell, having a bad dream about an infinite number of dirty toilets ordered in a very modernist grid. Or he made several Styrofoam copies of old furniture, facades, rusty handrails, and chairs. He wrote a short book and small PC game about two geodesics, trying to measure the world they are in. Some visitors sat on the chairs and destroyed them, even though they were white and completely unrealistic. The visitors wanted to read a book. So as one might or might not see, those things have a few things in common. It is a notion of distance since it is hard to get inside a nuclear power station, move to Nollywood or demolish five centuries-old churches. It is clear that Rada does not want that, so he uses various types of simulation, new technology, or old tools to get to these unreachable places.

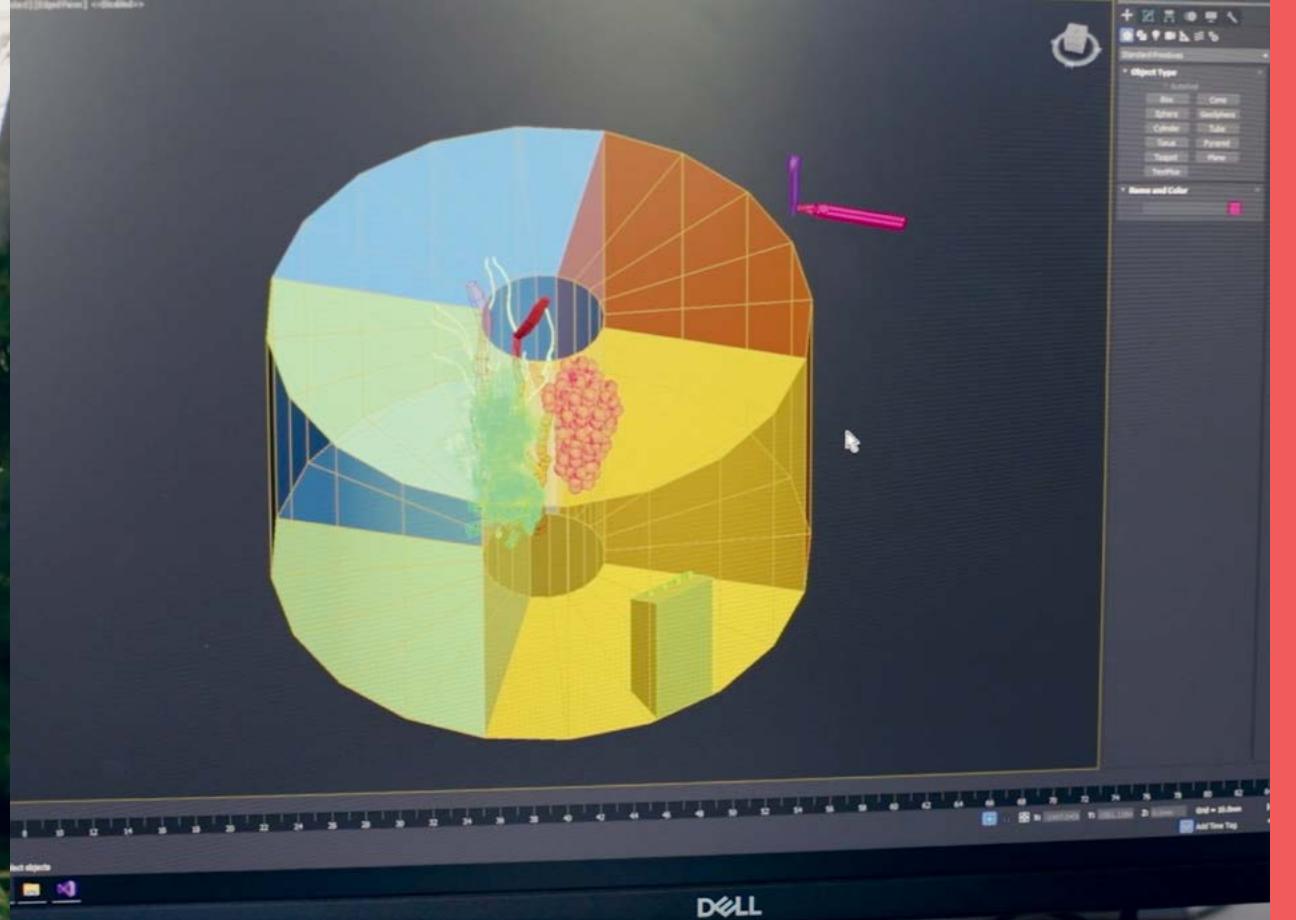
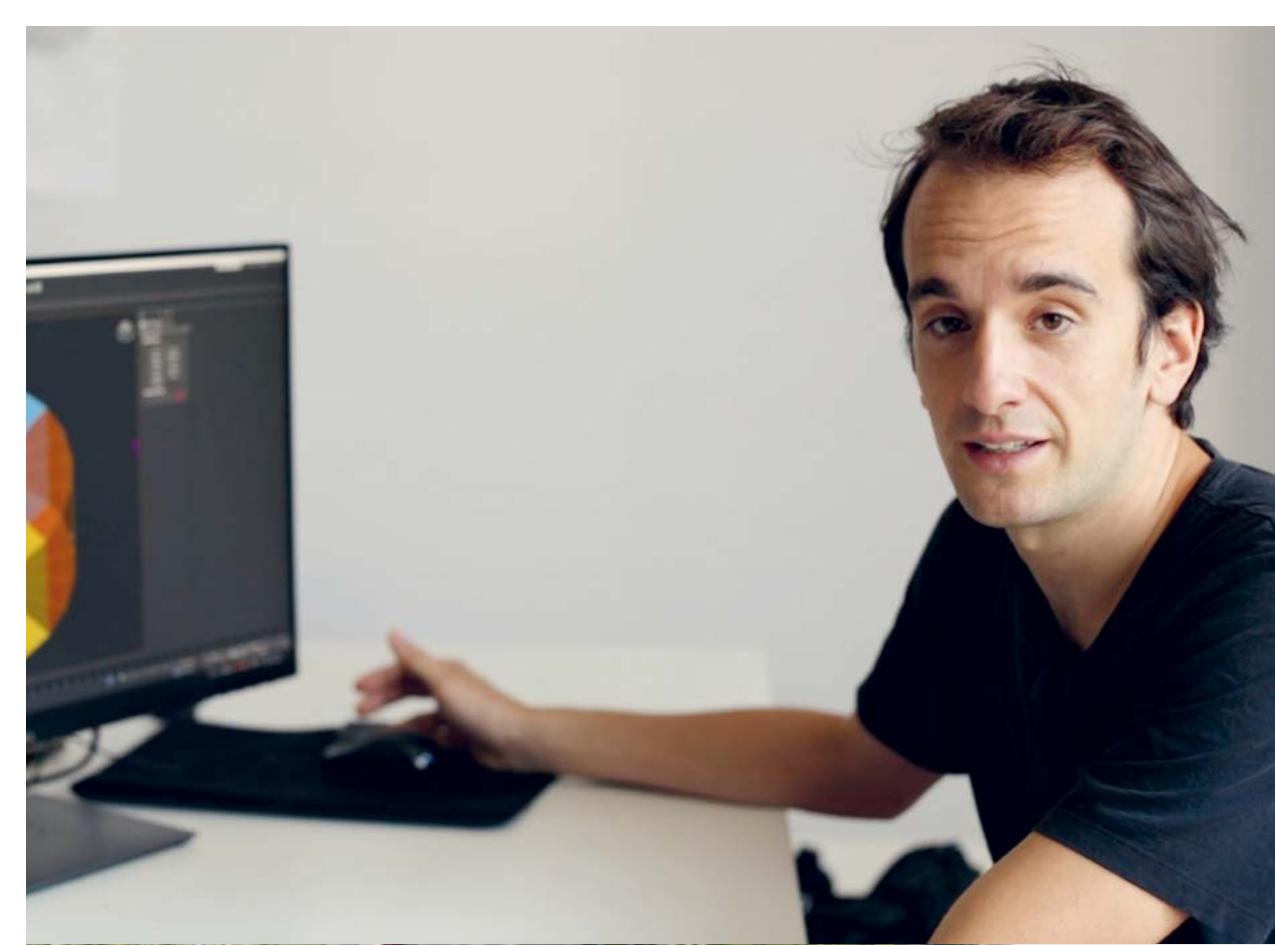


Foto / Photo: arhiv KIBLA

Uncomfortably big pine cone.

Weronika M. Lewandowska

**RUK x KIBLA2LAB mednarodni
rezidenčni program**

12.-27. 6. 2022

KIBLA2LAB

V Maribor je 12. junija 2021 prispela poljska umetnica Weronika M. Lewandowska, ki se je na umetniški rezidenci posvetila konceptualizaciji, strukturiranju in priovedništvu v virtualnih medijih in medijih razširjene ter mešane resničnosti.

Weronika M. Lewandowska je poljska pesnica, režiserka, pisateljica in izvršna producentka virtualne resničnosti Nightsss. Je doktorica kulturnih študij, raziskovalka novih medijev in potopitvenih izkušenj, predavateljica kreativnega pisanja in transmedijskih umetnosti na univerzi SWPS in trendov oblikovanja na School of Forms v Varšavi ter VR kreativna svetovalka za sistem BioMinds Healthcare XR, ki raziskuje nov način nevrološke rehabilitacije v zdravstvu. Bila je rezidenčna umetnica mednarodnega sklada za uprizoritvene umetnosti Višegrad v Pragi 2020 (360° Pesniški performans na festivalu CrossAttic/Bazaar). Je prejemnica štipendije za umetnike mesta Varšava za leto 2021. V svoji umetniški praksi se trenutno osredotoča na nova medijska orodja in imerzivne načine izražanja, ki posegajo v telesnost, posebljajo prisotnost in lahko ustvarjajo nebinarne digitalne zgodbe. Zanimajo jo percepцијa, ustvarjanje avatarjev, človeški glas in gibanje v virtualnih okoljih, prihodnost predstav v živo v realnem času in nevronski vhod, haptične inovacije izkušenj v virtualni, obogateni in razširjeni resničnosti (VR / AR / XR).

Instagram: <https://www.instagram.com/weronikamlewandowska/?hl=en>

LinkedIn: <https://pl.linkedin.com/in/weronika-lewandowska-07b617113>

Foto / Photo: Žiga Pavlovič

Weronika M. Lewandowska

**RUK x KIBLA2LAB International
Residency Program**

12-27 June 2022

KIBLA2LAB

Polish artist Weronika M. Lewandowska arrived to Maribor on 12 June 2021 to dedicate her art residency to conceptualization, structuring and storytelling in virtual media, as well as extended and mixed reality media.

Weronika M. Lewandowska is a Polish spoken word poet, director, writer, and executive producer of VR Nightsss. She has PhD in cultural studies. She is a researcher of new media and immersion experiences, a lecturer of creative writing and transmedia art at the University SWPS and design trends at School of Forms in Warsaw and VR Creative Consultant for BioMinds Healthcare XR system, which explores a new way for neurological rehabilitation. She was an artist in Residence of The Performing Art International Visegrad Fund in Prague 2020 (360° Poetry Performance for CrossAttic/Bazaar Festival). Holder of The Artistic Scholarship of the City of Warsaw for 2021. Currently, in her artistic practice, she is focused on new media tools and immersive ways of expression that interfere with corporeality, embody presence, and have the potential to create non-binary digital stories. She is interested in perception, avatars creation, human voice and movement in virtual environments, the future of real-time live performances and neural input, haptic innovations for VR/AR/XR experiences.



Armina Pilav in Damir Ugljen (Un-war Space Lab)

RUK x KIBLA2LAB mednarodni
rezidenčni program

14.-24. 4. 2022

KIBLA2LAB

Armina (dr. Armina Pilav - arhitektka, umetnica in predavateljica na Univerzi v Sheffieldu) in Damir (Damir Ugljen - samostojni raziskovalec, umetnik in arheolog), ki delujeta v okviru transmedijske raziskovalne prakse Un-war Space Lab, v Maribor pa sta prišla v četrtek, 14. 4. 2022, sta se na rezidenci posvetila raziskovanju reke Drave ter posledic izkoriščanja tega vodnega telesa preko relacijskih ekologij in tehnologij razširjene resničnosti. Dravske refleksije so kolektivni proces, ki obravnava izkoriščanje reke Drave za proizvodnjo električne energije ali druge namene in njene posledice za vodno telo Drave prek relacijskih ekologij. Teoretična podlaga projekta je delo Astride Neimanis, hidrofeministke, in njen razmišljanje o »mokri materiji« ter ustvarjanju radikalnih odnosov na vodnem telesu, ki vključujejo človeške in nečloveške vrste ali medvrste ter njihove dejavnosti na vodah Drave. Intermedijska orodja, kot so internet, avdio in video posnetki, tehnologije razširjene resničnosti, polaroidni fotoaparati, ročne risbe, pisana besedila, najdeni predmeti, pa tudi raziskave obstoječe flore in favne, vezane na specifično mesto, so bila uporabljena za razmislek o številnih antropogenih vplivih. Dravske refleksije so interaktivni in skupni proces, ki vključuje disciplinarno znanje biologov_inj, botanikov_čark in drugih znanstvenikov_c ter vsakdanje znanje ljudi, ki živijo z reko Dravo in mestom Maribor. Dravske refleksije so del širšega programa Toksična zemljišča. Gre za raziskovalno, eksperimentalno kuratorsko intervencijo in kolektivno ustvarjanje, ki prepleta krajinsko arhitekturo, film, umetniške instalacije, tehnologije razširjene resničnosti, performanse, znanstvene raziskave in aktivistične pobude. Program se je začel razvijati v uničenem in onesnaženem okolju reke Neretve, ki teče skozi mesto Mostar v Bosni in Hercegovini. Delovne metode zajemajo tako fizični kot digitalni prostor in razkrivajo skrite učinke antropocena, vojaških dejavnosti, podnebnih sprememb, kapitalističnih kolonialnih praks in ekstraktivne industrije.

Armina Pilav and Damir Ugljen (Un-war Space Lab)

RUK x KIBLA2LAB International
Residency Program

14-24 April 2022

KIBLA2LAB

Armina (Armina Pilav, PhD, an architect, artist, and lecturer at the University of Sheffield) and Damir (Damir Ugljen, an independent researcher, artist, and archaeologist) who operate in the scope of the transmedia research practice Un-war Space Lab, came to Maribor on Thursday, 14 April 2022. Their residency focused on researching the Drava River, and the implications of exploiting this body of water through relational ecologies and augmented reality technologies in collaboration with local inhabitants and experts. Drava Reflections is a shared process looking at the exploitation of the Drava River for electricity production or other uses, and its consequences on the Drava water body through its relational ecologies. The theoretical basis for the project is the work of Astrida Neimanis, a hydrofeminist, and her thinking about »wet matter« and the creation of radical water body relationships that include human and non-human species or interspecies as well as their activities on the Drava waters. The intermedia tools such as the Internet, audio and video recordings, polaroid cameras, hand drawings, written texts, found objects, as well as site-specific research on existing flora and fauna, were used to reflect on multiple anthropogenic influences. Drava Reflections is an interactive and shared process that includes disciplinary knowledge from biologists, botanists, and other scientists as well as everyday knowledge of people living with the Drava River and the city of Maribor in Slovenia. Drava Reflections are part of the wider program Toxic Lands. It is a research-based, experimental curatorial intervention and a collaborative creation encompassing landscape architecture, film, art installations, performances, scientific research, and activist initiatives. It started to develop in the destroyed and polluted environment of the Neretva River flowing through the Mostar city in Bosnia and Herzegovina. The working methods encompass both the physical and digital space and reveal the hidden effects of the Anthropocene, military activities, climate change, capitalist colonial practices, and extractive industries.



Foto / Photo: Janez Klenovšek

KOPRODUKCIJE
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COPRODUCTIONS

Koprodukcija Valerie Wolf Gang x KIBLA2LAB

Intermedijska umetnica Valerie Wolf Gang je v laboratoriju KIBLA2LAB s programerjem Žigo Pavlovičem razvila digitalno ogledalo za interaktivno instalacijo Čudoviti obraz umetne inteligence (2022). Projekt nadaljuje njeno raziskovanje odnosa in vpliva družbe na vlogo posameznika, ki ga gradi več plasti identitete in samozavedanja. Odnose med posamezniki je umetnica namreč začela raziskovati že v projektu Ljubezenski stroj, kjer je s pomočjo haptičnih in virtualnih tehnologij raziskovala možnosti nadomestitve fizičnega dotika med dvema osebama in virtualnim avatarjem. Umetničina raziskovanja so se razvila predvsem na različne interpretacije lastnega zavedanja in vlogo, ki nam jo dodeljuje širša družbena shema. Skozi močno lastno izkušnjo telesne dismorphije je doživelovala občutek nepovezanosti fizičnega telesa z dojemanjem svojega notranjega sveta; ta izkušnja jo je motivirala, da nadaljuje svoj raziskovalni fokus v smeri identitete posameznika in odnosa do lastnega meta-fizičnega telesa. Vprašanja o tem, ali se zavedamo svoje resnične podobe in kako na nas gleda družba (ter nas hkrati oblikuje), je združila s tehnologijo ogromnih baz podatkov, ki generirajo podobo posameznika, ki se pogleda v digitalno ogledalo, ki ga je umetnica ustvarila skupaj s programerjem KIBLA2LAB Žigo Pavlovičem. Digitalno ogledalo tako pokaže odsev gledalca, vendar se njegova_njena podoba začne počasi spremenljati glede na aktualno stanje v svetu. Za parametre spremnjanja tako uporabi podatke, kot so trenutno stanje vrednosti svetovnih delnic, vrednosti kriptovalut, temperatura ozračja, število svetovne populacije, dvigovanje gladine morja ipd. Vse te velike baze podatkov tako v živo vplivajo na podobo odseva posameznika v ogledalu in soustvarjajo identiteto posameznika. Drugi pomemben element instalacije pa je tudi notranji svet gledalca, ki prav tako vpliva na odsev, ki ga gleda v ogledalu. S pomočjo možganskega vmesnika (»brain computer interface«) tako umetnica beleži možganske valove gledalca, ki prav tako skozi izkušnjo začnejo počasi spremenljati obraz. Parametri aktualnega dogajanja v svetu tako vplivajo na obliko in organsko spremnjanje obraza, možganski valovi ter gledalčeve misli pa počasi spremnjujo površino kože in vsakemu se pred očmi v ogledalu začne generirati nova podoba, ki je skupek realnega fizičnega telesa, preoblikovanja in pogled družbe s svetovnega spleteta, ter notranji miselni svet, ki soustvarja našo končno podobo. Naslov instalacije ironično namigne na to, kako si javnost pogosto predstavlja tehnologijo umetne inteligence; da gre za ločen organizem, ki so-ustvarja naš svet in gradi paralelni most med tehnologijo in človeštvom, vendar je v resnici čisto druga zgodba. Središče umetne inteligence so neskončne baze podatkov, suhoparna računalniška koda, elektrika, kablove, infrastruktura in vse ostalo, kar običajnim ljudem pravzaprav ni čudovito; vse to pa razgrne instalacijo in prikaže tudi ne-čudoviti del same tehnologije, ki se skriva na drugi strani ogledala. Tehnologija umetne inteligence še zdaleč ni romantično samostojno bitje, ki bi sobivalo z nami na tem planetu, je pa odlično orodje s pomočjo katerega lahko ustvarjamo nove generirane podobe in uporabimo baze podatkov za nove izume ter pristope, ki bodo tehnološko razvili delovanje naše družbe. Medtem, ko se je v projektu Ljubezenski stroj umetnica osredotočala predvsem na odnos med dvema osebama, se tako v projektu Čudoviti obraz umetne

intelligence predvsem vrača nazaj k posamezniku in k odnosu do samega sebe. Ali se zares poznamo in ali se zavedamo naše identitete znotraj družbenih okvirjev, v katerih živimo? Odnos med tehnologijo in človeštvom je eden glavnih elementov, ki se pogosto pojavlja v delih umetnice Valerie Wolf Gang, tako da tudi tokrat opazujemo simbiozo dveh svetov in opazujemo napoved možnih scenarijev, ki jih odpira projekt in nudi nadaljnje možnosti razvoja tehnologije za preučevanje miselnih vzorcev, za analizo pojava telesne dismorphije, za podrobnejše analize uporabe možganskega vmesnika in obdelavo spletnih podatkov v smeri vplivanja na vlogo ter podobo posameznika.

The project The Beautiful Face of Artificial Intelligence was displayed as the central work at the eponymous exhibition at the Cultural Centre Tobačna 001 in Ljubljana between 24 February and 8 April 2022.

Produkcija: KID KIBLA, Mreža centrov RUK, DDT

Koprodukcija: UV Arthouse, KD Galerija GT Ljubljana

Umetnica: Valerie Wolf Gang

Tehnična izvedba: Žiga Pavlovič

Zahvala: DFKI – German Research Center for Artificial Intelligence, Goethe Institute, FabLab Maribor, Urša Bonelli Potokar, Sara Mikelić, Heike Leonhard, dr. Daniel Sonntag



Foto / Photo: Valerie Wolf Gang

Co-production Valerie Wolf Gang x KIBLA2LAB

In KIBLA2LAB, intermedia artist Valerie Wolf Gang worked with programmer Žiga Pavlovič and together they developed a digital mirror for the interactive installation The Beautiful Face of Artificial Intelligence (2022). The project continues her research of the relationship and influence of society on the role of the individual, which is built up by multiple layers of identity and self-awareness. In fact, the artist began exploring the relationship between individuals in her project Love Machine, where she used haptic and virtual technologies to investigate the possibilities of replacing the physical touch between two people with a virtual avatar. The artist's research has evolved mainly around different interpretations of our own awareness and the role assigned to us by the wider social scheme. Through her own strong experience of body dysmorphia, she experienced a sense of disconnection between the physical body and her perception of her inner world; this experience motivated her to continue her research focus towards the identity of the individual and the relationship to one's own meta-physical body. She combined the questions of whether we are aware of our true image and how society views us (and at the same time shapes us) with the technology of huge databases that generate the image of the individual looking into a digital mirror that the artist created together with KIBLA2LAB programmer Žiga Pavlovič. The digital mirror thus shows the reflection of the viewer, but his/her image starts to change slowly according to the current state of the world. It uses data such as the current state of global stock values, cryptocurrency values, atmospheric temperature, world population, sea level rise etc. as parameters of change. All these large databases thus have a live impact on the image of the individual's reflection in the mirror and co-create the individual's identity. Another important element of the installation is the viewer's inner world, which also influences the person's reflection in the mirror. With the help of a brain computer interface, the artist records the viewer's brain waves, which also slowly start to change through the experience. The current events parameters in the world thus influence the shape and organic changes of the face, while the brain waves and the viewer's thoughts slowly change the surface of the skin. A new image is being generated in front of everyone's eyes in the mirror – this image is the sum of the real physical body, the transformation and the view of society from the World Wide Web, and the inner mental world that co-creates our final image. The title of the installation ironically hints at how the public often imagines AI technology; that it is a separate organism that co-creates our world and builds a parallel bridge between technology and humanity, but in reality, it is a completely different story. At the heart of AI are endless databases, crude computer code, electricity, cabling, infrastructure and everything else that ordinary people do not perceive as wonderful; however, the installation lays it all bare and also shows the not-so-wonderful part of the technology itself that lies on the other side of the mirror. Far from being a romantic, autonomous being that coexists with us on this planet, AI technology is a great tool with which we can create new generated images and use databases for new inventions and approaches that will technologically evolve the functioning of our society. Unlike the Love Machine project, in which the artist

focused mainly on the relationship between two people, in The Beautiful Face of Artificial Intelligence the artist's main focus goes back to the individual and the relationship to the self. Do we really know ourselves and are we aware of our identity within the social frameworks we live in? The relationship between technology and humanity is one of the main elements that often appear in the works of artist Valerie Wolf Gang. In this project, we also observe the symbiosis of two worlds and look at the prediction of possible scenarios opened up by the project, which offers further possibilities for the development of technology to study thought patterns, analyze the phenomenon of body dysmorphia, analyze in more detail the use of the brain computer interface, and process online data in order to influence the role and the image of the individual.

Projekt Čudoviti obraz umetne inteligence je bil kot osrednje delo na ogled na istoimenski razstavi v KC Tobačna 001 v Ljubljani med 24. februarjem in 8. aprilom 2022.

Production: KID KIBLA, RUK Centre Network, DDT

Co-production: UV Arthouse, KD Galerija GT Ljubljana

Artist: Valerie Wolf Gang

Technical realization: Žiga Pavlovič

Acknowledgment: DFKI – German Research Center for Artificial Intelligence, Goethe Institute, FabLab Maribor, Urša Bonelli Potokar, Sara Mikelić, Heike Leonhard, Dr. Daniel Sonntag



Foto / Photo: Valerie Wolf Gang

ANTROPOMORPHIA

instalacija, 2022

V ANTROPOMORPHII se distinkcija med realnim in virtualnim skozi vidni mehanizem pretvarja v sublimacijski proces latentnega ugodja, pomešanega s pričakovanji. Lebdeča skulptura v zatemnjenem prostoru s pomočjo avtorsko generiranih vizualnih efektov zaživi, projekcije materializirajo samosvoj svet nekakšnega antropomorfnega in hkrati tudi amorfnega bitja, ki nas je obiskalo iz vesolja. Vanj se potopimo ob pritanjenem zvoku kot povabilu k neverbalni (meta)komunikaciji z objektom, da se odpravimo na popotovanje po širjavah prostorov naših misli. Sestavi se fluidnost vmesnega prostora med gledalcem, gledalko in neznanim predmetom: z umetniškim delom se povežemo v fiktivni svet lastnih zaznav in predstav, intimnega in socialnega vesolja, našega bitja in skupnega (so) bivanja. ANTROPOMORPHIA, neulovljiva in v resnici nevidna skozi izjemno senzualno in emocionalno izkušnjo vzpostavlja povezavo med materialnim in duhovnim. Povezovanje različnih medijev, fizičnega, materialnega, a nevidnega ter vidnega in sublimnega, ki pa se uresničuje kot navidezna resničnost, določa polje metaphizičnosti naših predstav s tvorbo iluzije, kar doseže z relativno enostavnimi, a zelo učinkovitimi tehničnimi sredstvi in novomedijskimi postopki v ustvarjanju umetniškega dela, s katerim se povežemo v celoviti prostorski namestitvi.

Producija:Društvo za sodobno umetnost X-OP v sodelovanju s KIBLA2LAB.

ANTROPOMORPHIA

installation, 2022

In ANTROPOMORPHIA, the dissociation between the real and the virtual is transformed through a visual mechanism into a sublimating process of latent pleasure mixed with expectations. The floating sculpture in the darkened space comes to life with the help of author-generated visual effects. The projections materialize the self-contained world of a kind of anthropomorphic and at the same time amorphous being that has visited us from outer space. We are immersed in it with the sound as an invitation to a non-verbal (meta)communication with the object, to embark on a journey through the vastness of the spaces of our minds. A fluidity of the in-between space between the viewer and the unknown object is assembled: with the artwork we connect to the fictive world of our own perceptions and representations, of the intimate and social universe, of our being and our common (co)existence. ANTROPOMORPHIA, elusive and in fact invisible, establishes a link between the material and the spiritual through an extremely sensual and emotional experience. The integration of different media, the physical, the material but invisible, and the visible and sublime, which is realized as an apparent reality, defines the field of metaphysicality of our perceptions through the formation of an illusion, which is achieved by relatively simple but very effective technical means and new media procedures in the creation of an artwork to which we connect in a complete spatial installation.

Production: Association for Contemporary Art X-OP in collaboration with KIBLA2LAB.

Foto / Photo: Damjan Švarc



BCI robot

Intermedijska umetnica Valerie Wolf Gang je v laboratoriju KIBLA2LAB s programerjem Žigo Pavlovičem razvila digitalno ogledalo za interaktivno instalacijo Čudoviti obraz umetne inteligence (2022). Projekt nadaljuje njeno raziskovanje odnosa in vpliva družbe na vlogo posameznika, ki ga gradi več plasti identitete in samozavedanja. Odnose med posamezniki je umetnica namreč začela raziskovati že v projektu Ljubezenski stroj, kjer je s pomočjo haptičnih in virtualnih tehnologij raziskovala možnosti nadomestitve fizičnega dotika med dvema osebama in virtualnim avatarjem. Umetničina raziskovanja so se razvila predvsem na različne interpretacije lastnega zavedanja in vlogo, ki nam jo dodeljuje širša družbena shema. Skozi močno lastno izkušnjo telesne dismorfije je doživila občutek nepovezanosti fizičnega telesa z dojemanjem svojega notranjega sveta; ta izkušnja jo je motivirala, da nadaljuje svoj raziskovalni fokus v smeri identitete posameznika in odnosa do lastnega meta-fizičnega telesa. Vprašanja o tem, ali se zavedamo svoje resnične podobe in kako na nas gleda družba (ter nas hkrati oblikuje), je združila s tehnologijo ogromnih baz podatkov, ki generirajo podobo posameznika, ki se pogleda v digitalno ogledalo, ki ga je umetnica ustvarila skupaj s programerjem KIBLA2LAB Žigo Pavlovičem. Digitalno ogledalo tako pokaže odsev gledalca, vendar se njegova_njena podoba začne počasi spremenljati glede na aktualno stanje v svetu. Za parametre spremnjanja tako uporabi podatke, kot so trenutno stanje vrednosti svetovnih delnic, vrednosti kriptovalut, temperatura ozračja, število svetovne populacije, dvigovanje gladine morja ipd. Vse te velike baze podatkov tako v živo vplivajo na podobo odseva posameznika v ogledalu in soustvarjajo identiteto posameznika. Drugi pomemben element instalacije pa je tudi notranji svet gledalca, ki prav tako vpliva na odsev, ki ga gleda v ogledalu. S pomočjo možganskega vmesnika (»brain computer interface«) tako umetnica beleži možganske valove gledalca, ki prav tako skozi izkušnjo začnejo počasi spremenljati obraz. Parametri aktualnega dogajanja v svetu tako vplivajo na obliko in organsko spremnjanje obraza, možganski valovi ter gledalčeve misli pa počasi spremnjujo površino kože in vsakemu se pred očmi v ogledalu začne generirati nova podoba, ki je skupek realnega fizičnega telesa, preoblikovanja in pogled družbe s svetovnega spletja, ter notranji miselni svet, ki soustvarja našo končno podobo. Naslov instalacije ironično namigne na to, kako si javnost pogosto predstavlja tehnologijo umetne inteligence; da gre za ločen organizem, ki so-ustvarja naš svet in gradi paralelni most med tehnologijo in človeštvtom, vendar je v resnici čisto druga zgodba. Središče umetne inteligence so neskončne baze podatkov, suhoparna računalniška koda, elektrika, kablove, infrastruktura in vse ostalo, kar običajnim ljudem pravzaprav ni čudovito; vse to pa razgrne instalacijo in prikaže tudi ne-čudoviti del same tehnologije, ki se skriva na drugi strani ogledala. Tehnologija umetne inteligence še zdaleč ni romantično samostojno bitje, ki bi sobivalo z nami na tem planetu, je pa odlično orodje s pomočjo katerega lahko ustvarjamo nove generirane podobe in uporabimo baze podatkov za nove izume ter pristope, ki bodo tehnološko razvili delovanje naše družbe. Medtem, ko se je v projektu Ljubezenski stroj umetnica osredotočala predvsem na odnos med dvema osebama, se tako v projektu Čudoviti obraz umetne

BCI Robot

In the framework of the tender of the Cultural Center Delavski dom Trbovlje (DDT) for innovative projects that connect intermediate arts with technology and economy, as part of the implementation of the Network of Research Art and Culture Centers(MC RUK), the Association for Art and Audiovisual Production KODA MODRO was approved the project BCI Robot, according to the coproduction agreement No. PPP-RUK -2/2022-5. With GNS PLUS d.o.o. from Trbovlje we have developed an innovation, a toy with which children can develop their creative potential, strengthen their cognitive and motor skills, and thus turn from passive users of content into creative-innovative creators. Because most toys based on new technologies are not based on high-quality didactic approaches, or the toys place children or other users in a clearly passive position and do not actively involve them in the creative co-creation of their content, children do not develop their potential when they have these types of user experiences. This is why it is so important to have high-quality educational toys that allow children to unlock their creative potential, strengthen their cognitive and motor skills, and thus move from being passive users to innovative creators. The BCI robot is an educational toy for children that stimulates motor skills and imagination. It is an innovative prototype for children of all ages and for adults. One of our goals was also to educate with new technologies. To do this, we need high-quality didactic toys that develop children's cognitive and motor potential and heighten their sensitivity to the use of technologies through their humane implementation. At the intersection of art, science, culture and economy as well as play, learning and education, the idea and realization of the BCI robot highlights how on the one hand new technologies became a part of our everyday lives and on the other how they give both the developers and parents, guardians, pedagogues, teachers and others great responsibility. New technologies are part of (our) children's lives more so than they are of ours, so it is crucial we use new technologies to educate them. Our wish and idea was to participate in the development of a smart educational toy that encourages children's creativity (but also adults'), raises their ability to concentrate and stimulates psycho-physical development. During the project we began collaborating with the Association for Art and Audiovisual Production KODA MODRO and multimedia solutions company GNU PLUS, with the aim to innovate and encourage exchange of ideas and good practices and connecting professionals from the areas of culture and creativity, art and research, education and technologies.

KIBLA

KIBLA2LAB

Intermedijski laboratorij KIBLA2LAB

V okviru projekta RUK (2019–2023) smo raziskovalni intermedijski laboratorij KIBLA2LAB slavnostno odprli 3. julija 2020, ko je produksijska ekipa KID KIBLE predstavila vizijo, aktivnosti, pilotne projekte ter napovedala prihodnje usmeritve laboratorija v kontekstu nacionalnega in mednarodnega polja povezovanja znanosti, umetnosti, tehnologije in gospodarstva. Predstavitev laboratorija so pospremile demo predstavitve pilotnih projektov ter interaktivne simulacije v okoljih navidezne resničnosti.

Poslanstvo

Na področju umetnosti, kulture, znanosti, tehnologije in gospodarstva KIBLA2LAB zagotavlja raziskave in specifična izobraževanja, vzpostavlja inkubator za ideje, razvoj idej, načrtovanje in produkcijo idej, implementacijo idej na trgu ponudb ter vzpostavlja povezovanje s partnerji: z gospodarskimi subjekti, raziskovalnimi inštituti, fakultetami in univerzami, kulturnimi in umetniškimi organizacijami in institucijami, nevladnimi organizacijami in javnimi zavodi.

Specifični okvir

Testni, produksijski in izvedbeni laboratorij je stičišče raziskovalne, produksijske in artistične dejavnosti. Postopno nadgrajujemo raziskovalni intermedijski in interdisciplinarni laboratorij s sodobno tehnologijo, z opremo za 3D skeniranje večjih stavb in urbanih površin, 3D oblikovanja in fotogrametrijo, geolokacijski VR, AR in MR vizualizacije (navidezna, razširjena in mešana resničnost) za različne potrebe, volumetrični video in film, izdelavo maket in 3D objektov. Aktivnosti, od zamisli in zaslove do modeliranja v vzpostavljenih digitalnih okoljih in realizacije v želeni formi, virtualni ali materialni kot pripravi za plasiranje na trg.

Naloge in znanja laboratorija

Namen KIBLA2LAB je interdisciplinarno izobraževanje in ustvarjanje interdisciplinarnih storitev in produktov. Vzpostavljal je namensko infrastrukturo. Nenehna nadgradnja akcijskega načrta za delovanje, vzpostavitev interdisciplinarnih ekip po posameznih projektih, z uporabo kreativnih metod (dvojni diamant in kreativni idejni modul), izdelava delovnih in poslovnih načrtov za projekte, kontinuirano izobraževanje, kreativna srečanja in osredotočene delavnice z zunanjimi sodelavci in komunikacija med kreativnim sektorjem in trgom, so temelji delovanja laboratorija KIBLA2LAB.

1. Fotogrametrija visoke kvalitete – izdelava 3D modelov

Z visokoresolucijsko DSLR kamero in tehniko polarizacije lahko ustvarimo digitalne dvojčke predmetov kulturne dediščine in jih obdelamo za prikaz v različnih digitalnih vsebinah.

2. Lasersko skeniranje

Z laserskim skenerjem Leica RTC 360 lahko hitro zajamemo večje površine, obdelamo rezultate v oblak točk in pripravimo vizualizacijo v programu Nubigon.

3. Zajem 360-stopinjskih fotografij in videa

S profesionalno kamero Insta360 Titan lahko posnamemo 360 3D, 180 3D video v 10 bitni obliku ali fotografije večje ločljivosti, ki so primerne za virtualne sprehode ali pogled skozi VR očala.

Programske in vsebinske usmeritve KIBLA2LAB

- digitalizacija naravne, umetnostne, kulturne in industrijske dediščine,
- ustvarjalno zdravje: humanizacija farmacije in medicine,
- tehnologija za demokratične procese in kritično refleksijo

RUK laboratoriji zagotavljajo ustrezeno tehnološko opremo za načrtovanje in realizacijo kreativnih rešitev in usposabljanje ter prenos inovativnega načina razmišljanja v podjetja, z vključitvijo konceptov umetniškega ustvarjanja in dizajna z namenom humanizacije storitev in produktov ter odpiranjem prostora za integracijo teh rešitev za spodbujanje trajnosti, uporabe krožnih modelov in družbenih inovacij. Hkrati je s prenosom inovativnih aplikacij na tržišče cilj tudi krepitev inovativnih malih in srednjih podjetij s čim večjim zajetjem znanj in potenciala mladih.

Ustvarjalni laboratoriji so generatorji znanja prihodnosti, saj ustvarjajo bazo zahtevanih znanj in kompetenc za poklice prihodnosti in s tem ustvarjajo potrebne pogoje za zadostitev novim potrebam v gospodarstvu, ki bodo nastajale v prihodnjih letih, tako v zvezi z uvajanjem novih tehnologij kot z nujnim ustvarjanjem alternativnih zaposlitv, ki se bodo oblikovale znotraj ali zunaj obstoječih podjetij kot posledica uvajanja digitalne transformacije in novih tehnologij v podjetja. Laboratoriji so vozlišče inovativnih odgovorov na izzive sodobnega časa.

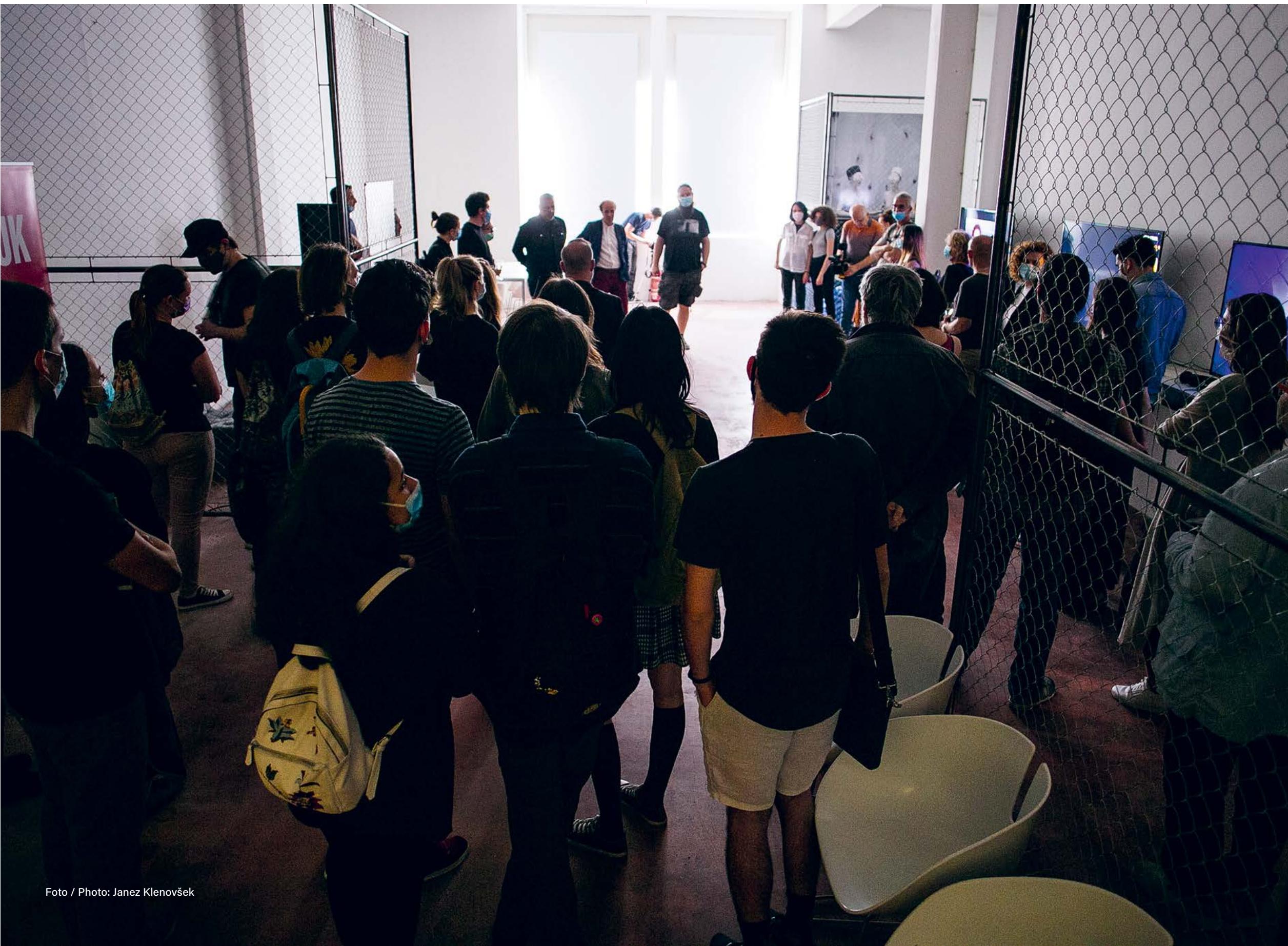


Foto / Photo: Janez Klenovšek

Intermedijski laboratorij KIBLA2LAB

The intermedia research lab KIBLA2LAB opened on July 3, 2020 as part of the RUK project (2019–2023). The production team of KIBLA presented the vision, activities, pilot projects and future direction of the lab's activities in the context of the national and international field of linking science, art, technology and business. The presentation included demo presentations of pilot projects and interactive simulations in virtual reality environments.

Mission

In the field of art, culture, science, technology and business, KIBLA2LAB provides research and specific training, constitutes an incubator for ideas, development, planning and production of ideas and their implementation in the market of offerings, and builds partnerships: with companies, research institutes, faculties and universities, cultural and arts organizations and institutions, non-governmental organizations and public institutions.

Specific frame

This testing, production and implementation laboratory is a hub for research, production and artistic activities. We are gradually equipping the intermedia and interdisciplinary research lab with state-of-the-art technology, equipment for 3D scanning of larger buildings and urban areas, 3D design and photogrammetry, geolocation VR, AR and MR visualizations (virtual, augmented and mixed reality) for various purposes, volumetric video and film, production of models and 3D objects. Activities from the idea and concept through modeling in created digital environments to realization in the desired form, virtual or material, prepared for market launch.

Tasks and knowledge of the laboratory

The goal of KIBLA2LAB is interdisciplinary education and development of interdisciplinary services and products. For this purpose, it has developed a dedicated infrastructure. The constant updating of the action plan, the formation of interdisciplinary teams for individual projects, the application of creative methods (double diamond and creative idea), the preparation of work and business project plans, continuous training, creative meetings and targeted workshops with external collaborators, communication between the creative sector and the market – these are the foundations of KIBLA2LAB.

1. High quality photogrammetry – 3D modeling

Using a high-resolution DSLR camera and polarization technique, digital twins of cultural heritage objects can be created and processed to be displayed in different digital contents.

2. Laser scanning

The Leica RTC 360 laser scanner captures large areas, processes the results into a point cloud, and prepares the visualization using the Nubigon program.

3. 360-degree photos in video capture

The Insta360 Titan professional camera captures 360- and 180-degree 3D video with 10-bit color or higher resolution photos suitable for virtual walks or VR glasses.

Program and thematic orientation of KIBLA2LAB

- digitization of natural, artistic, cultural and industrial heritage,
- creative health: humanization of pharmacy and medicine,
- technology for democratic processes and critical reflection.

RUK labs provide the appropriate technological equipment for planning and implementing creative solutions, as well as for training and transferring innovative thinking in companies, including concepts of artistic creation and design to humanize services and products and open the space for the integration of these solutions to promote sustainability, circular models and social innovation. In addition to transferring innovative applications to the market, the goal is also to strengthen innovative small and medium-sized enterprises and to bring in the largest possible pool of knowledge and potential of young people.

Creative labs are generators of the knowledge of the future. They create data on the knowledge and skills needed for the professions of the future, and thus the necessary conditions to meet the new needs in the economy that will arise in the coming years, both in terms of the introduction of new technologies and the necessary creation of alternative jobs that will be created within or outside existing companies as a result of the introduction of digital transformation and new technologies in companies. Labs are hubs for innovative responses to the challenges of the present.

Nekaj misli za Aleksandro

Vso Aleksandrino delovanje, življenje, vizije in sanje je nemogoče zajeti v le nekaj vrstic ali strani. Oziroma izjemno težko. Kajti nemogoče je beseda, ki je ni poznala. Tudi odgovor »ne« ni bil pravilen.

Aleksandra Kostič je bila in v številnih srcih še vedno je oseba številnih nazivov, vlog in ekspertiz. In to ne samo na papirju. Ali platnu. Ona je te vloge, od zasebnih do poslovnih, resnično živila in vanje vložila vso energijo, saj je natančno vedela, kakšen zaključek oziroma rezultat si želi. Energija, ki jo je iz dneva v dan, iz projekta v projekt, iz razstave v razstavo gnala naprej, je bila mnogostranska in večplastna.

Tisti, ki smo z njo preživeli tako številne vzpone kot tudi kakšen redek padec, smo lahko ves ta silni elan spremljali tudi od blizu. In se učili. In tudi naučili. Ko si nekaj naredil in si bil mnenja, da je to najbolje, kar v tistem trenutku zmoreš, je bila Aleksandra mnenja, da še enkrat pregledaš in malo razmisliš, znala pa je postreči tudi z nasvetom in komentarjem. Kar začudil si se, ko si opravil bolje. »Vidiš?« je rekla. In imela je prav.

Biti zgolj tehnično podkovan strokovnjak, teoretik, papirnati vodja ni dovolj. Na nobenem področju, še posebej pa ne na področju kulture in umetnosti. Brez srca in njegove srčnosti ne gre in to je nekaj, kar je Aleksandri izredno dobro uspevalo – z občutkom spretne vrvodokde je pogumno lovila ravnotežje med trenutki resnosti in strogosti, vztrajnosti in kompromisnih rešitev ter med trenutki sočutja, poslušanja, razumevanja in splošnim občutkom za sočloveka ali člana kolektiva. Večkrat je izpostavila ravno to dvojnost, ki je še kako nujna za dolgoročno prijetne in pristne odnose med vsemi nami. In imela je prav.

Ponedeljkovi včasih maratonski kolegiji, debate po koncu delovnika, edinstven čut in smisel za humor – vse, kar smo počeli skupaj, bomo sedaj morali brez tebe. Verjemi, dali bomo vse od sebe, tako kot si to počela ti. S tvojimi besedami: »Špegali se bomo«. Kajti ta »špegl«, to ogledalo, ki si nam ga pustila, je povednejše kot marsikatera beseda. In upamo, da boš nekoč ponosna na nas, tako kot smo mi ponosni nate. Iz srca hvala.

KIBLA je bila, je in bo tvoja velika mojstrovina. Neverjetne napore si vložila v razvoj ene največjih kulturnih institucij v Sloveniji in želeta si si, da ta zgodba nima konca, da uspešno tlakuje poti, orje ledine in predstavlja sliko, katere največji slikar si bila prav ti, naša Sandra. In imaš prav. Spet.

Vedno tvoji,
Kiblaši

Some thoughts for Aleksandra

It is impossible to summarize Aleksandra's entire work, life, visions and dreams in a few words or pages. Or at least it is extremely difficult. Impossible was not a word in her vocabulary. Neither was "no".

Aleksandra Kostič was and is in many hearts a person with many titles, roles and abilities – not only on paper. Or on a screen. She really lived those roles, whether personal or professional, and put all her energy into them because she knew exactly what result she wanted. The energy that drove her from day to day, from project to project, from exhibition to exhibition, was multi-faceted and multi-layered.

Those of us who were fortunate enough to spend many ups and occasional downs with her were able to experience this tremendous force firsthand. And learn. And we did. When you had done your work and thought that was the best you could do, she thought it best if you took another look and thought about it, always adding a comment or advice. And to your surprise – it was actually better. "You see?" she said. She was right.

It is not enough to be just a technically skilled expert, a theorist, a paper leader. In any field, and certainly not in the fields of art and culture. You can't do it without the heart and its power, and this is something that Aleksandra was very good at. With the dexterity of an acrobat, she balanced boldly between moments of seriousness and rigor, perseverance and compromise, and moments of compassion, listening, understanding, and general empathy for her fellow man or member of the collective. She often spoke of this duality as being necessary in the long run for pleasant and genuine relationships between us all. And she was right.

The (sometimes) marathon Monday team meetings, the after-hours debates, the unique sense of humor – all the things we did together, we will now have to do without you. Believe me, we will do our best, just as you always have. In your words: "We will hold up a mirror to each other." That "mirror" you left us says more than many a word. And we hope that one day you will be proud of us, just as we are proud of you. We thank you from the bottom of our hearts.

KIBLA was, is and will continue to be your masterpiece. You invested great efforts in the development of one of the largest cultural institutions in Slovenia. And you wanted this story to never end, to pave ways, to break new ground and to present a picture whose greatest painter was you, our Sandra. And you are right. Once again.

Always yours,
KIBLA team



Foto / Photo: Damjan Švarc

pila

FESTIVAL IZIS

FESTIVAL IZIS

Festival IZIS je vsakoletna razstava in prireditev, s prikazom inovativnih, mednarodno priznanih novomedijskih umetnosti. Začetki festivala segajo v leto 2013, ko se je združila inicijativa umetnikov, kulturnih producentov in pesnikov, delujočih v Istri. Skozi leta se je razširil v kinodvorane, galerije, javne prostore in industrijska poslopja, kjer domuje še danes. Festival skozi objektiv vrhunskih umetniških del raziskuje vpliv tehnologije na kulturo, družbo in naravo. Redno predstavlja dela v produkciji PiNE in nudi prostor intermedijskim umetniškim delom ostalih osrednjih slovenskih in tujih intermedijskih producentov. IZIS skozi objektiv vrhunskih umetniških del raziskuje vpliv tehnologije na kulturo, družbo in naravo. Hkrati širi obzorja in združuje umetnike, mislece in radovedno množico skozi prizmo izkušenj in kompleksnih vprašanj o vplivu tehnologije na prihodnost, robotiki, hibridnih materialih in kinetičnih skulpturah.

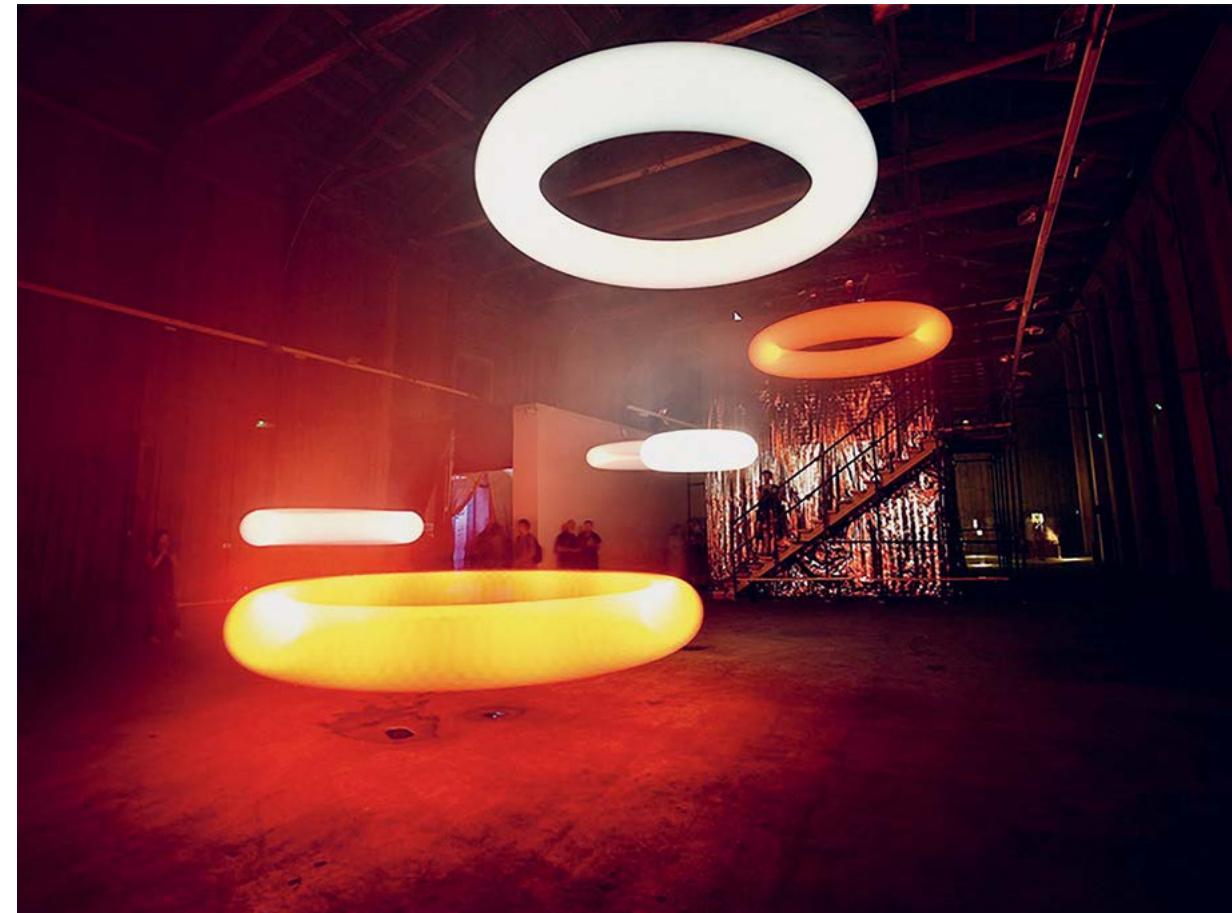
Website: <https://festival-isis.org/>

FESTIVAL IZIS

Festival IZIS is an annual event and exhibition, presenting international forward-thinking new media art. It was created by artists, cultural producers, curators and poets from the Slovenian coast in 2013. Throughout the years, the festival events were held in cinemas, galleries, public spaces and industrial buildings. Through the lens of cutting-edge artworks, the festival explores the impact of technology on culture, society and nature. It regularly presents works produced by PiNA and offers a space for intermedia artworks by other leading Slovenian and international intermedia producers. The festival explores the impact of technology on culture, society and nature through the lens of cutting-edge artistic works. The festival gathers artists, thinkers and an adventurous crowd who experience new narratives that give insight to complex topics such as robotics, hybrid materials, kinetic sculptures, immersive installations, mind-bending experiences, and questions how technology will influence the future.

Spletna stran: <https://festival-isis.org/>

Foto / Photo: ↑ Jadran Rusjan, ↓ Klemen Skočir



2019

Invazija

Monfort, Portorož

5. 7. - 26. 7. 2019

2. 8. - 23. 8. 2019

Sedma edicija Izisa je potekala v razstavišču Monfort. Šlo je za prvo intermedijsko pregle-dno razstavo v njem, v sodelovanju z Obalnimi Galerijami Piran. PiNA je okreplila sodelo-vanje tudi z ostalimi kulturnimi ustanovami, zavodi in organizacijami, ki so korpoducirale festival; Obalne Galerije Piran, Društvo Ljudmila, Zavod Projekt Atol, Svetlobna Gverila, Prostorož, Zavod Sploh, KID KIBLA in DDT.

Program festivala se je osredotočal na slovenske producente in avtorje intermedijskih del.

- Saša Spačal, Matic Potočnik: Liminoid (Ljudmila, Laboratorij za znanost in umetnost, 2013)
- Robertina Šebjanič, Aleš Hieng - Zergon, Ida Hiršelfelder: Časovni zamik/Kemobrionični vrt (Ljudmila, Zavod Projekt Atol, 2015)
- Tilen Sepič: Svetlobni oscilator (Ljudmila, zavod projekt Atol, Svetlobna gverila, 2016)
- Marko Vivoda, Karlo Hmeljak, Luka Frelih: Rear (PiNA, 2016)
- Gašper Milkovič Biloslav, Mitja Cerkvenik, Marko Turkuš, Marko Vivoda: Radia (PiNA, 2019)
- Stran22: Soap Opera (K01 M04 J01) (Svetlobna Gverila, Stran22, 2019)
- Andrej Koruza, Jan Krmelj, Gašper Torkar, Nika Erjavec (DivinaMimesis): Niti sled (PiNA, 2017)
- name: Nano-grafiti (KID KIBLA)
- performansi (Irena Z. Tomažin, Alberto Novello, Zavod SPLOH, Gašper Torkar, Luxas)

Producija: PiNA

Koprodukcija: Obalne galerije

Kurator: Marko Vivoda

Producent: Borut Jerman

Teksti: Karlo Hmeljak

Tehnična ekipa: Primož Ferš, Janko Atešek

Oblikovanje: Kaja Kisilak

Koncept: Stran22

2019

Invasion

Monfort, Portorož

5. 7. - 26. 7. 2019

2. 8. - 23. 8. 2019

The 7th edition of Izis took place at the The Monfort Warehouse. It was the first interme-dia retrospective exhibition there, in collaboration with the Coastal Galleries Piran. PiNA has strengthened its cooperation with other cultural institutions, institutes and organ-isations that co-produced the festival; Coastal Galleries Piran, Ljudmila Association, Projekt Atol Institute, Lighting Guerrilla, Prostorož, Sploh Institute, KID KIBLA and DDT.

The festival programme was focused on Slovenian producers and authors of intermedia works.

- Saša Spačal, Matic Potočnik: Liminoid (Ljudmila, Laboratory for Science and Art, 2013)
- Robertina Šebjanič, Aleš Hieng - Zergon, Ida Hiršelfelder: Time Lapse/Cemobrionic Garden (Ljudmila, Projekt Atol Institute, 2015)
- Tilen Sepič: Light Oscillator (Ljudmila, Projekt Atol Institute, Lighting Guerrilla, 2016)
- Marko Vivoda, Karlo Hmeljak, Luka Frelih: Rear (PiNA, 2016)
- Gašper Milkovič Biloslav, Mitja Cerkvenik, Marko Turkuš, Marko Vivoda: Radia (PiNA, 2019)
- Stran22: Soap Opera (K01 M04 J01) (Svetlobna Gverila, Stran22, 2019)
- Andrej Koruza, Jan Krmelj, Gašper Torkar, Nika Erjavec (DivinaMimesis).
- Nano-graffiti (KID KIBLA)
- performances (Irena Z. Tomažin, Alberto Novello, SPLOH Institute, Gašper Torkar, Luxas)

Production: PiNA

Coproduction: Obalne galerije

Curator: Marko Vivoda

Producent: Borut Jerman

Texts: Karlo Hmeljak

Technical support: Primož Ferš, Janko Atešek

Design: Kaja Kisilak

Concept: Stran22

2020

Fuck off Illusion

Libertas, Koper

2. 9. - 30. 9. 2020

"Katera je torej iluzija, ki jo moramo, kot veleva naslov razstave, odjebat? Je to svet, kot smo ga poznali, ali pa je to svet, ki smo mu priča zdaj, svet, ki je obvisel.

- Karlo Hmeljak

Izis se je tako čez leta razširil iz kinodvoran, v javne prostore in industrijska poslopja. Leta 2020 se je festivalski program razvil v pregledno razstavo koncepcionalnega umetnika Brada Downeyja, poimenovano Fuck Off Illusion in premierno predstavljeno v koprskem Libertusu. Slednjega je ekipa festivala notranje opremila in navdihnila, da je postal koprsko kulturno središče v lasti Mestne občine Koper. V sklopu Downeyeve rezidence je PiNA producira štiri umetniška dela: Melania AR; Avtoportret; Apnenec 45°32'N; 13°38'E; Nebesna ura in vzpostavila sodelovanje s Centrom odličnosti nanoznanosti in nanotehnologije.

Produkcija: PiNA

Koprodukcija: Obalne galerije, Stran 22

Kurator: Marko Vivoda

Producents: Borut Jerman, Ana Markežič

Teksti: Karlo Hmeljak, prevod: Jasmin B. Frelih

Tehnična ekipa: Deni Bordon, Rok Pahor, Gregor Pezdirec Gregorčič

Koumuniciranje: Darja Oražem

Oblikovanje prostora: Luka Murovec, Maja Linnea Wendel

Oblikovanje: Kaja Kisilak

2020

Fuck off Illusion

Libertas, Koper

2. 9. - 30. 9. 2020

"What is the illusion that must, as the title of the exhibition commands it, fuck off? Is it the world as we knew it, or is it the world we are faced with now, the world suspended in mid-air?"

- Karlo Hmeljak

Over the years, Izis has spread from cinemas to public spaces and industrial buildings. In 2020 the festival programme evolved into a retrospective exhibition by conceptual artist Brad Downey, entitled Fuck Off Illusion, and premiered in Libertas. The latter was furnished and inspired by the festival team to become the cultural center of Koper, owned by the Municipality of Koper. As part of Downey's residency, PiNA produced four artworks: Melania AR; Self-portrait; Limestone 45°32'N; 13°38'E; Sky Clock and has established a collaboration with the Centre of Excellence in Nanoscience and Nanotechnology.

Production: PiNA

Coproduction: Obalne galerije, Stran 22

Curator: Marko Vivoda

Producents: Borut Jerman, Ana Markežič

Texts: Karlo Hmeljak, translation: Jasmin B. Frelih

Technical support: Deni Bordon, Rok Pahor, Gregor Pezdirec Gregorčič

Communication: Darja Oražem

Exhibition design: Luka Murovec, Maja Linnea Wendel

Design: Kaja Kisilak

Foto / Photo: David Lotrič Banović



2021

2200 UND3R

Libertas / HEKA, Koper
24. 9. - 15. 10. 2021

Po najbolj optimističnih napovedih fizika dr. Matjaža Ličerja iz Nacionalnega inštituta za biologijo, se bo do leta 2200 srednja gladina morja v Severnem Jadranu dvignila za 3 metre. Frekvenca poplavljana bo neprekinjena, vsakodnevna.

Deveta edicija festivala, je naslavljala podnebno krizo, natančneje vpliv, ki se v območkih mestih preko dviganja srednjega morja že kaže v vse pogostejšem poplavljaju. Obiskovalci so se skozi prostor senzorično prepustili zaznavanju povezave med novomedijsko vizualno umetnostjo, tankočutnostjo in okoljsko trajnostjo.

Tema festivala se je tesno povezovala z raziskovalnimi tematikami v laboratoriju HEKA. Program je predstavil dvanajst intermedijskih instalacij, štiri delavnice in en performans. Med njimi:

- Premierna predstavitev nove produkcije – instalacija Sofia Crespo, Feileacan McCormick, Robertina Šebjanič: AquA(l)formings – Interweaving the Subaqueous.
- Na rezidenci v HEKI nadgrajen Gospod Procesor, razumete življenje? Boštjana Čadeža – Fška.
- Premierna predstavitev šestih kratkih filmov francoskega surrealističnega Jean Painlevé: Science is fiction.

PiNA je v okviru programa IZIS 2200 UND3R prvič producirala festivalske delavnice. Delavnici, ki sta bili v HEKI odprti za javnost: Robertina Šebjanič: Zvočni vodnik v podvodni svet; Mauricio Valdés San Emeterio: Ambisonična improvizacija. Ostali dve pa zaprti delavnici za srednješolce: Gjino Šutić in Robertina Šebjanič: Delavnica o mikroplastiki in nevidnih antropogenih onesnaževalih v lokalnem morju; Miha Godec: VR predstavitev morskega sveta.

Producija: PiNA
Koprodukcija: Obalne galerije, Gledališče Koper, Stran 22
Kurator: Marko Vivoda
Producenca: Borut Jerman, Ana Markežič
Produkcija delavnic: Lara Bandi
Teksti: Karlo Hmeljak, prevod: Jasmin B. Frelih
Tehnična ekipa: Deni Bordon, Rok Pahor
Komuniciranje: Darja Oražem, Klemen Skočir
Oblikovanje prostora: Luka Murovec, Maja Linnea Wendel
Oblikovanje: Kaja Kisilak, Klemen Skočir

2021

2200 UND3R

Libertas / HEKA, Koper
24. 9. - 15. 10. 2021

According to the most optimistic forecasts of physicist dr. Matjaž Ličer from the National Institute of Biology, by 2200, the sea level in Northern Adriatic will rise by 3 meters, and the frequency of flooding will become constant, daily.

On the one hand, the works of the ninth edition of the festival were incorporating the consequences of climate change that are happening at the moment. But, on the other hand, the world that awaits us, either the underwater environment, will preserve the memory of today's world. Visitors were a part of a sensory journey through the space to perceive the connection between new media visual art, subtlety, and environmental sustainability.

The ninth edition program comprised twelve intermedia installations, four workshops, and one performance. These include:

- Premiere presentation of the new production – installation by Sofia Crespo, Feileacan McCormick, Robertina Šebjanič: AquA(l)formings – Interweaving the Subaqueous.
- Mr. Processor, Do You Understand Life? by Boštjan Čadež – Fšk, upgraded at the residence in HEKA
- Premiere of six short films by French surrealist Jean Painlevé: Science is fiction.

PiNA started producing festival workshops for the first time as part of the IZIS 2200 UND3R program. Robertina Šebjanič: A Sound Guide to the Underwater World; Mauricio Valdés San Emeterio: Ambisonic Improvisation. The other two were closed workshops for secondary school students: Gjino Šutić and Robertina Šebjanič: Workshop on microplastics and invisible anthropogenic pollutants in the local sea; Miha Godec: VR presentation of the marine world.

Production: PiNA
Coproduction: Obalne galerije, Gledališče Koper, Stran 22
Curator: Marko Vivoda
Producents: Borut Jerman, Ana Markežič
Workshop production: Lara Bandi
Texts: Karlo Hmeljak, translation: Jasmin B. Frelih
Technical support: Deni Bordon, Rok Pahor
Communication: Darja Oražem, Klemen Skočir
Exhibition design: Luka Murovec, Maja Linnea Wendel
Design: Kaja Kisilak, Klemen Skočir

2022

IZIS X CEVI

Libertas / Bastion / HEKA, Koper

23. 9. - 16. 10. 2022

»Jubilejna, deseta edicija Izisa si za osnovni element jemlje cev, tisto nekaj podolgovatega in votlega, ki navadno na skritem skrbi za vsakršne dovode in odvode, ki bodisi v drobovijih naših bivališč in mest bodisi v naših telesih, skrbi za to, da naša življenga kar se da gladko tečejo.« (Karlo Hmeljak)

Deseta edicija festivala se je poleg programa uveljavljenih slovenskih in tujih umetnikov in umetnic ponašala tudi z novim prizoriščem – utrdbo Bastion v Kopru.

Program v razstavišču Libertas je obetal devet intermedijskih instalacij, nekatere so bile javnosti predstavljene prvič. Med temi:

- Pinina produkcija Maje Smrekar in soavtorstvu z Jonasom Jørgensenom: !brute_force, ki je bila premierno predstavljena na Ars Electronica med 7. in 11. septembrom 2022.
- Na rezidenci v laboratoriju HEKA nadgrajene koprodukcije Hylē Therese Schubert, APES: Marca Barottija in α kolektiva BridA.
- Predstavitev novih produkcij umetnic mlajše generacije – Sara Bezovšek: Wormhole in Nika Erjavec: 30,000,000,000 ton na leto.

Bastion je ponudil performativni program, ki je raziskoval prihodnost zvočne večkanalne imersivne (re)produkije, področje, kjer laboratorij HEKA / KUBER že orje ledino. Tekom festivala so bile predstavljene tri večkanalne zvočne instalacije in številni performansi (Tilen Lebar, Simon Whetham, Octext, Oscar Recarte & Rosa María Vall, Andrej Kobal, Marina Mårtensson).

Del programa festivila so bile tudi tri delavnice na področju zvočnega ustvarjanja, biomaterialov in zvočne polucije.

Producija: PiNA

Koprodukcija : Obalne galerije, Gledališče Koper, Stran 22

Kurator: Marko Vivoda

Kurator zvočnega programa : Mauricio Valdés San Emeterio Producentka: Ana Markežič

Teksti: Karlo Hmeljak, prevod: Jasmin B. Frelih

Vodja tehnične ekipe: Deni Bordon

Tehnična ekipa: Gašper Šavle, Grega Gregorič Pezdirec, Christopher Agnello

Koumniranje: Darja Oražem, Klemen Skočir

Oblikovanje prostora : Luka Murovec, Maja Linnea Wendel

Oblikovanje: Kaja Kisilak, Katja Mijajlović

2022

IZIS X PIPES

Libertas / Bastion / HEKA, Koper

23. 9. - 16. 10. 2022

»The 10th anniversary edition of the IZIS Festival takes up as its basic element the pipe – something elongated and hollow that normally provides, in secret, all the inflows and outflows that keep our lives running as smoothly as possible either in the bowels of our homes and cities or inside our bodies.« (Karlo Hmeljak)

In addition to the program including renowned Slovenian and foreign artists, the tenth edition of the IZIS festival also boasts a new venue – the Bastion fortress in Koper.

The program at the Libertas exhibition center consisted of nine intermedia installations, some of which were presented to the public for the first time. These include:

- PiNA's production by Maja Smrekar, co-authored with Jonas Jørgensen: !brute_force, which has been premiered at Ars Electronica between 7 and 11 September 2022.
- Upgraded co-productions at the HEKA lab: Hylē by Theresa Schubert, APES by Marco Barotti and α by BridA.
- Presentation of new productions by artists of the younger generation – Sara Bezovšek: Wormhole and Nika Erjavec: 30,000,000,000 tons per year.

Bastion has offered a performative program exploring the future of sound multi-channel immersive (re)production, an area where the HEKA lab / KUBER is already breaking new ground. Three multi-channel sound installations and numerous performances were staged during the festival (Tilen Lebar, Simon Whetham, Octext, Oscar Recarte & Rosa María Vall, Andrej Kobal, Marina Mårtensson).

Three workshops held in HEKA on sound creation, biomaterials and sound polarity were also part of the festival program.

Production: PiNA

Coproduction: Obalne galerije, Gledališče Koper, Stran 22

Curator: Marko Vivoda

Curator of the sound program: Mauricio Valdés San Emeterio Producent: Ana Markežič

Texts: Karlo Hmeljak, translation: Jasmin B. Frelih

Head Of Technical Support: Deni Bordon

Technical support: Gašper Šavle, Grega Gregorič Pezdirec, Christopher Agnello

Communication: Darja Oražem, Klemen Skočir

Exhibition design: Luka Murovec, Maja Linnea Wendel

Design: Kaja Kisilak, Katja Mijajlović

IZIS



CEVI / PIPES

Libertas & Bastion
Koper
23. 9. -
16. 10. 2022

GRATTON

Hrvoje Smrekar & Jonas
Jargić
Sara Bevacik
Nika Čepić
Lara Žager
Blaž
Marco Baroni
Muri Vlaminck
Theresa Schubert
Lubošová Svetlobor
penile

Andraž Kobal
Muri Vlaminck
Theresa Schubert
Octex
Marina Mårtensson
Simon Whetham
Tilen Lebar
Gašper Torkar

Oscar Recarte
Mauricio Valdés San Emeterio
Roko Vučić & Gjorgji Despotović

PIPES



CEVI

PILOTNI
PROJEKTI
•
PILOT
PROJECTS

Dante Copiosus

Prostorska instalacija v palači Besenghi degli Ughi obeležuje dva ohranjena kodeksa Božanske komedije s komentarjem, ki sta ob koncu 14. stoletja nastala v Izoli izpod peresa Pietra Campennija. Negativen prizvok, ki ga kopija in kopiranje običajno zavzemata v odnosu do izvirnika, se ob sledenju pomenskemu razvoju izkaže za napačnega, saj je copia – in iz nje izhajajoč pridevnik copiosus (tudi besedovit, zgovoren, domiseln) – v latinščini, ki je bila v Dantejevem času še zmeraj lingua franca, označevala obilje in bogastvo.

Obilje in bogastvo kopiranja Božanske komedije sta dokaz za strast bralcev in raziskovalcev, ki so se zapletli s tem besedilom in zaradi katerih se je sploh ohranilo. Ob odsotnosti kakršnegakoli Dantejevega avtografa pa je tako srečna okoliščina kot prekletstvo filologov hkrati. Dante Copiosus, z izjemo dveh, ne navaja verzov iz Božanske komedije, a zato obiskovalca _ko postavi v središče. Da bi se med ključnimi informacijami, čutnimi dražljaji in mnogoštevilnimi odsevi zapletel _la s tem izobiljem.

Produkcija: RUK/PiNA in Stran22
Pilotni projekt je nastal v sodelovanju z Občino Izola, JZP Izola, Italijansko samoupravno narodno skupnostjo Izola, Glasbeno šolo Koper, Turističnim združenjem Izola, ZRS Koper, Inštitutom IRRIS in Mestno knjižnico Izola.

Dante Copiosus

The spatial installation in the Besenghi degli Ughi Palace commemorates two preserved codexes of the Divine Comedy with commentary, written at the end of the 14th century in Izola by Pietro Campenni. The negative connotation that copy and copying usually take on in relation to the original turns out to be wrong when following the semantic development, since copia – and the resulting adjective copiosus (also verbal, eloquent, imaginative) – in Latin, which was still lingua franca in Dante's time, denoted abundance and wealth. The numerous copies of the Divine Comedy is a testament to the passion of the readers and researchers who have became involved with this text and due to which it has been preserved in the first place.

However, in the absence of any autograph by Dante, this is both a fortunate circumstance and a curse for philologists. Dante Copiosus, with two exceptions, does not quote verses from the Divine Comedy, but rather places the visitor at the center to confuse him/her amogst this abundance of among key information, sensory stimuli, and numerous reflections.

Production: RUK/PiNA and Stran22
The pilot project was developed in cooperation with the Municipality of Izola, JZP Izola, the Italian self-governing national community of Izola, the Music School Koper, the Izola Tourism Board, ZRS Koper, the IRRIS Institute and the Izola Principal Library.

Foto / Photo: arhiv PiNA



Ustvarjalni laboratorij Krater

Ustvarjalni laboratorij Krater je začasni produkcijski prostor, ki odpira priložnosti za trajnostne načine ustvarjanja na prostranstvih post-industrijskih ekosistemov. Nastaja v sklopu dolgoročnega oblikovalsko-raziskovalnega projekta Simbiocen kot odziv skupine interdisciplinarnih ustvarjalcev na življenje v t. i. kapitalocenu, dobi, v kateri smo zaradi ekstraktivnih ekonomskih politik priča množičnemu izumrtju vrst, podnebnim spremembam ter vse večjim družbenim neravnovesjem. Projekt raziskuje načine za oblikovanje simboličnih ekosistemov, v katerih človek-ustvarjalec_ka postane akter_ka, ki aktivno soustvarja ravnovesje znotraj poškodovane narave. V času izvajanja projekta so oživili_e degradirano površino v Ljubljani, na kateri se je razvil edinstven urbani ekosistem, preraščen z invazivnimi in drugimi divjimi rastlinami. Že dve desetletji zapuščeno gradbeno jamo, ki je poznana pod imenom Bežigradski krater, so tako spremenili_e v laboratorij, v katerem predelujejo invazivne rastline ter ostale organske odpadke. Namesto, da bi rastline izkoreninili_e, se v okviru projekta sprašujejo, kako mobilizirati ustvarjalne spretnosti za oblikovanje sonaravnih načinov bivanja, ki jih prikliče uporaba njihove biomase.

Producija: RUK/PiNA, Društvo Trajna

Sodelovanje: prostoRož, Društvo za permakulturo Slovenije

The Creative Laboratory Crater

The Creative Laboratory Crater is a temporary production space that opens up opportunities for sustainable ways of creating in the vastness of post-industrial ecosystems. It is part of the long-term design and research project Simbiocen, as a response of a group of interdisciplinary artists to life in the so-called Capitalocene, an era in which we are witnessing the mass extinction of species, climate change and growing social imbalances as a result of extractive economic policies. The project explores ways to create symbiotic ecosystems in which the human creator becomes an actor, actively co-creating a balance within a damaged nature. During the project, a degraded area in Ljubljana was revitalized and a unique urban ecosystem, overgrown with invasive and other wild plants, developed. For more than two decades, an abandoned construction pit, known as the Bežigrad Crater, has been transformed into a laboratory for processing invasive plants and other organic waste. Rather than uprooting the plants, the project seeks ways to mobilize creative skills to design sustainable ways of living that can be evoked by the use of their biomass.

Production: RUK/PiNA, Association Trajna

Collaboration: prostoRož, Permaculture Association of Slovenia

Foto / Photo: Amadeja Smrekar



Exxplorers

V sklopu pilotnega projekta Exxplorers – Take a Walk on the Invisible Side se je razvil turistični produkt za raziskovanje alpskega sveta, naravne in kulturne dediščine ter njihove večutne vsebine (tako digitalne kot analogue). Projekt predlaga alternativno obliko priповедovanja, v kateri ima uporabnik_ca aktivno vlogo pri raziskovanju lokacije, s spodbujanjem njegove radovednosti, opazovanja in raziskave. Rezultat je nov pristop odkrivanja pokrajine na različnih ravneh (zgodovinska, naravoslovna, kulturna) preko intimne, subjektivne in prilagodljive izkušnje z uporabo razširjene resničnosti.

Produkcija: RUK/PiNA

Sodelovanje: Cooperativa Puntozero, VRTeam, Slovenski planinski muzej Mojstrana

Exxplorers

As part of the pilot project Exxplorers – Take a Walk on the Invisible Side, we developed a tourism product for exploring the Alpine world, natural and cultural heritage and their multi-sensory content (both digital and analogue). The project proposes an alternative form of storytelling in which the users play an active role in the exploration of the site, by stimulating their curiosity, observation and research. This resulted in a new approach of discovering the landscape at different levels (historical, natural, cultural) through an intimate, subjective and adaptive experience using augmented reality.

Production: RUK/PiNA

Cooperation: Cooperativa Puntozero, VRTeam, Slovenian Alpine Museum Mojstrana

Foto / Photo: arhiv PiNA



Pečeno pohištvo

Pečeno pohištvo so unikatni izdelki iz reciklirane plastike, ki jih oblikujeta in izdelujeta **Nina Mršnik** in **Nuša Jelenec**. S pomočjo lastne naprave izdelata trpežne plastične plošče, ki so osnova za izdelavo pohištva in drugih izdelkov. Pečeno pohištvo je oblikovalski odgovor na velike količine odpadne plastike. Plastiko, za razliko od ostalih materialov, v povprečju lahko reciklamo zgolj dvakrat, reciklirana plastika pa je zaradi slabše kakovosti najpogosteje namenjena izdelkom kratkotrajne rabe. Izdelki Pečeno pohištvo pa so oblikovani in izdelani za dolgotrajno uporabo in tako podaljšajo življenski cikel reciklirane plastike. Za proizvodnjo plošč avtorici uporabljata zgolj eno vrsto reciklirane plastike, ki je brez vsakršnih dodatkov, kar omogoča ponovno reciklažo. Večino odpadne plastike pridobivata od predelovalcev odpadkov, manjši delež pa jo reciklira sami. Od prijateljev in znancev zbirata odpadno embalažo, s katero oblikujeta posebne vzorce. Sama narava izdelave plastičnih plošč pomeni, da je vsaka plošča malo drugačna in edinstvena. Z vsemi malimi nepravilnostmi, ki materialu dajejo karakter in poskrbijo za izvirnost. Avtorici želita vsak material čim boljše uporabiti in izkoristiti njegove lastnosti. Oblike izdelkov sledijo vzorcem in barvam v materialu, da dobita prepoznavne izdelke, ki so preprosti in uporabni. Nadzor nad celotnim procesom oblikovanja omogoča ogromno prostora za eksperimentiranje, preizkušanje različnih tehnik, vzorcev, oblik in nenehno izboljševanje procesa izdelave.

Produkcija: RUK/PiNA

Toasted furniture

Toasted furniture are unique products made from recycled plastic, designed and manufactured by **Nina Mršnik** and **Nuša Jelenec**. Using their own equipment, they produce durable plastic sheets that form the basis for furniture and other products. Toasted furniture is a design response to the large amounts of plastic waste. Plastic, unlike other materials, can only be recycled twice on average, and recycled plastic is most often destined for short-life products due to its lower quality. Toasted Furniture products are designed and built to last, extending the life cycle of recycled plastics. They use only one type of recycled plastic for the production of the panels, which is free of any additives, allowing for recyclability. Most of the waste plastic is sourced from waste processors, but a smaller proportion is recycled themselves. The packaging waste is also collected from friends and acquaintances and used to create special patterns. The nature of making plastic panels means that each panel is a little different and unique, counting all little imperfections that give the material character and make it original. The authors want to make the best use of each material and exploit its properties. The shapes of the products follow the patterns and colours in the material to get distinctive products that are simple and useful. Control over the whole design process allows a lot of room for experimentation, trying out different techniques, patterns, shapes and constantly improving the design.

Production: RUK/PiNA

Foto / Photo: Nataša Košmerl



PRODUKCIJE
•
PRODUCTIONS

!brute_force: Mehka odpornost

Maja Smrekar & Jonas Jørgensen, 2022

!brute_force je krovni naslov za večletno raziskovalno platformo, ki jo je leta 2019 vzpostavila Maja Smrekar. Projekt izhaja iz premise, da smo v današnjem svetu človeške in nečloveške živali povsem podrejeni tehnokapitalistični komodifikaciji življenja. Instalacija projekta je oblikovana kot mreža, po kateri se avtorica in pes vzpenjata skozi pokrajino plošč, medtem ko jih Smrekar premika glede na priporočilo AI, ki njune fiziološke podatke zajema in analizira. V soavtorsu z Jonasom Jørgensem so bili vsi, iz performansa zbrani podatki, prevedeni v strukturne vzorce, vgrajene v mehko robotsko morfologijo ter posredovani evolucijskemu algoritmu, ki podatke pretvori v vektorje. Z uporabo metode za nenehno uvajanje čim večje razlike v sistem, algoritem ustvarja mnoge mutantne vrednosti, ki jih nenehno pošilja pokrajini mehkih robotov. Vgrajeni v instalacijo, roboti izvajajo performans v katerem utelešajo algoritemsko neznano, pri čemer naslavljajo digitalno nevidnost sodobnega sveta.

Maja Smrekar deluje v polju umetnosti, ki temelji na raziskavah, skozi katere naslavljajo vrzeli tehnologiziranega sveta in družbenih procesov. Umetniško produkcijo razvija z meddisciplinarnimi sodelovanji v domačem in mednarodnem prostoru, k večpredstavnosti področja pa prispeva s predavanji, besedili in s pedagoškim delom. Je prejemnica nagrade Prix Ars Electronica - Golden Nica 2017 v kategoriji hibridnih umetnosti in nagrade Prešernovega sklada 2018. V letih 2020 in 2021 je bila finalistka izbora za znanstveni preboj leta v kategoriji Znanost v umetnosti v okviru tedna znanosti Falling Walls Foundation/Berlin Science Week.

Jonas Jørgensen je docent na Centru za mehko robotiko na oddelku za bio robotiko Univerze Južne Danske. Jonas se je sprva izobraževal kot fizik (BSc) in umetnostni zgodovinar (BA, MA) na Univerzi v Kopenhagnu in Univerzi Columbia (New York). Jørgensen je trenutno član upravnega odbora, ki zastopa Dansko v okviru EU COST action CA18136 „Evropski forum za napredne prakse“ (2019–2023). Skupaj z Majo Smrekar je bil partner v programu EU - Creative Europe - STUDIOTPIA (2020–2022).

Avtorja: Maja Smrekar, Jonas Jørgensen

Produkcija: RUK/PiNA, 2022

Koprodukcija: TROP - Inštitut za umetniške raziskave

Podprtvo: Ministrstvo za kulturo RS

Sodelovanje: Center za mehko robotiko (SDU Biorobotics), Inštitut Maersk Mc-Kinney, Univerza Južne Danske.

!brute_force: Soft Resilience

Maja Smrekar & Jonas Jørgensen, 2022

!brute_force is the umbrella title for a multi-year research platform launched in 2019 by Maja Smrekar. The project is based on the premise that in today's world, human and non-human animals are completely subordinated to the technocapitalist commodification of life. The installation of the project is designed as a grid, on which the artist and the dog climb through a landscape of panels, while Smrekar moves them according to the recommendation of the AI, which captures and analyses their physiological data. Co-authored with Jonas Jørgensen, all the data collected from the performance was translated into structural patterns, embedded in a soft robotic morphology and fed to an evolutionary algorithm that converts the data into vectors. Using a method to continuously introduce as much variation as possible into the system, the algorithm generates many mutant values that are continuously sent to the landscape of soft robots. Embedded in the installation, the robots perform a performance in which they embody the algorithmic unknown, addressing the digital invisibility of the contemporary world.

Maja Smrekar works in the field of research-based art, through which she addresses the gaps of the technologised world and social processes. She develops her artistic production through interdisciplinary collaborations in national and international spaces, and contributes to the multimedia nature of the field through lectures, texts and pedagogical work. She is the recipient of the Prix Ars Electronica - Golden Nice 2017 in the category of hybrid arts and the Prešeren Fund Award 2018. In 2020 and 2021 she was a finalist for the Science Breakthrough of the Year Award in the Science in the Arts category of the Falling Walls Foundation/Berlin Science Week.

Jonas Jørgensen is an assistant professor at the Centre for Soft Robotics, Department of BioRobotics, University of Southern Denmark. Jonas was originally trained as a physicist (BSc) and art historian (BA, MA) at the University of Copenhagen and Columbia University (New York). Jørgensen is currently a board member representing Denmark in the EU COST Action CA18136 "European Forum for Advanced Practices" (2019–2023). Together with Maja Smrekar, he was a partner in the EU programme Creative Europe - STUDIOTPIA (2020–2022).

Authors: Maja Smrekar, Jonas Jørgensen

Production: RUK/PiNA, 2022

Coproduction: TROP - Institute for Artistic Research (SI)

Supported: Ministry of Culture of the RS

Collaboration: Centre for Soft Robotics (SDU Biorobotics), Maersk Mc-Kinney Institute, University of Southern Denmark.



Foto / Photo: Miha Godec

Time will Tell

Name: , 2005–2020

Delo povzema naslov po prvem podvodnem grafitu, ki ga je Name: izdelal pod morjem v Izoli. Raziskovanje podvodnega grafitarstva je uvod v večji umetniški projekt, ki ga Name: pripravlja pod morjem na atlantski obali ZDA. Tam so za nekaj tisoč vlakov newyorške podzemne železnice, ki so obratovali v 70-ih in 80-ih letih 20.stoletja, našli poslednje zatočišče. Z njimi so ustvarili umetni greben namenjen morskemu živalstvu in rastlinstvu, ki pa zaradi korozije počasi izginja. Kljub temu, da je zaradi svoje mladosti zamudil priložnost, da s kultnim grafitiranjem newyorških vlakov Stainless Steel oz. Redbirda opravi napisan, a zapovedan zrelostni izpit iz grafitarstva, se je odločil, da vlakom ne bo dal miru in bo preizkus opravil kar pod morjem. Video prikazuje umetnikovo raziskovanje podvodnega grafitarstva z razmišljajmi o osebnih motivih umetnika in posegih človeka v podmorski naravnih habitat. Ali bo Name: za vedno ostal začetnik (slengovsko »toy«), ker pod morjem zob časa in narave najeda rjaveče vagone. Grafitarstvo in borba proti njemu sta neločljivo povezana. Ed Koch, župan New Yorka v 80-ih letih 20. stoletja, ki je zagnal protigrafitarsko kampanjo, je na novinarsko vprašanje, ali mu bo uspelo onemočiti grafitarje, izjavil: »Time will tell.«

Vrsta odmevnih podvigov ulične umetnosti, nastalih od leta 2005 do danes, je ostala anonimna, zato se je v javnosti pojavila potreba po identificiranju umetnika, ki se v tem času pod svoja dela ni podpisoval. Nadel si je »neimenovano ime«: Name:, ki je prva vrstica birokratskega formularja ali vprašanje uradne osebe po identifikaciji subjekta pred njo. Njegova dela konceptualno slonijo na obravnavi in vprašanjih (»zlo«) rabe javnega prostora in okolja, s poudarkom na trenutnih družbenih spremembah. Obenem raziskuje tudi tehnike in fizične omejitve intervencij v javni prostor. Lahko bi rekli, da osvaja različna agregatna stanja grafitarske kulture.

Produkcija: RUK/PiNA

Time will Tell

Name: , 2005–2020

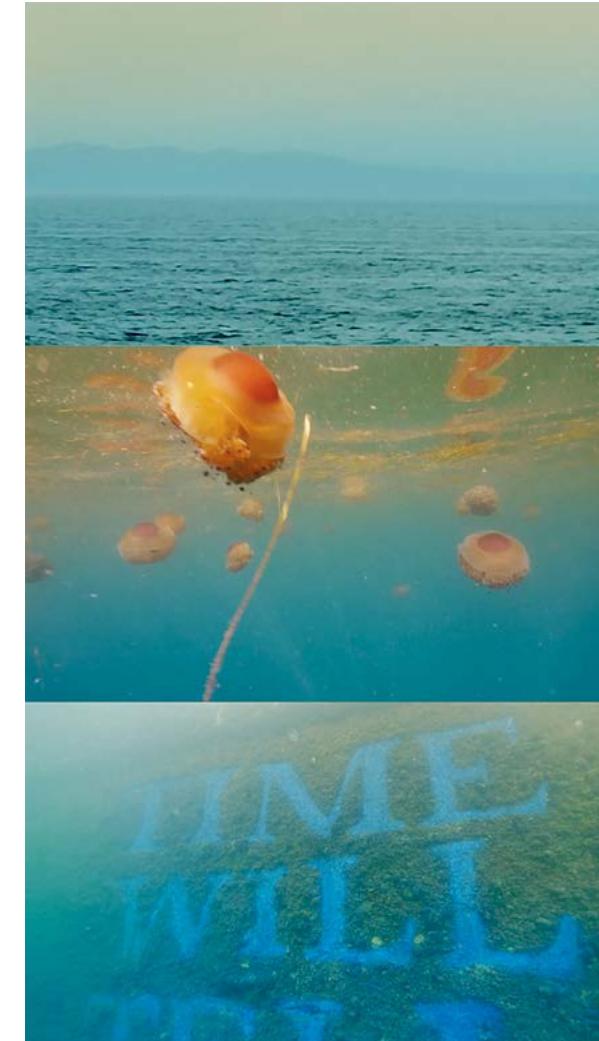
The title of the work refers to the first underwater graffiti made by Name: under the surface of the sea in Izola. Exploration of underwater graffiti art, depicted in this video, is an introduction to a larger art project by Name: under the ocean surface on the US Atlantic coast. There, several thousand New York subway trains that operated in the 70s and 80s found their final resting place. The city authorities wanted to create an artificial reef for underwater flora and fauna, but the train coaches are slowly disappearing through the process of corrosion. In spite of him missing the chance to paint cult NY trains such as Stainless Steel or Redbird and with it passing an informal maturity test in graffiti art, Name: decided not to leave trains alone and pass the test underwater. The video depicts the artist's exploration of underwater graffiti with reflections on personal motives and human interference in the natural underwater habitat. Will Name: remain a beginner ("toy")

in graffiti slang), where rusty train coaches are slowly destroyed by time and nature and possibilities of free creation grow increasingly limited? Graffiti art and the battle against it are inseparable. When Ed Koch, who was the New York mayor in the 1980s, launched an anti-graffiti campaign, he answered a reporter's question on whether he thinks he will be able to uproot graffiti in the city, by saying: "Time will tell."

From 2005 to the present, a series of high-profile street art exploits remained anonymous, requiring the public to identify an artist who had not signed his works at the time. He adopted an "unnamed name": Name:, the first line of a bureaucratic form or an official's question following identification of the subject before him. His works are conceptually based on the treatment and issues ("evil") associated with the use of public space and the environment, with a focus on current social change. Simultaneously, he investigates the techniques and physical limitations of interventions in public space. It is possible to say that he conquers various aggregate states of graffiti culture.

Production: RUK/PiNA

Foto / Photo: arhiv PiNA





BridA, 2022

Cev je objekt, ki mu moramo nameniti pozornost. Oblika cevi opredeljuje prostor, v katerem je postavljena, njena skrita vsebina pa je modulacija časa. Njen namen je v večini primerov prilagojen družbenim potrebam in kapitalu. Iz njene oblike lahko razberemo količine snovi, ki se po njej pretakajo. Percepcija njene vsebine je pogosto abstraktna in nedoločna. Cevi so speljane po vsej površini zemeljske oble in prenašajo različne vsebine, kot so voda, razni energenti, promet, informacije, atomski delci, slab in dober zrak. Včasih so enosmerne, drugič spet dvosmerne, zvite in ravne, do vsebine indiferentne, naslednjic pa namenjene, da vsebini spremenijo lastnost. Cevi so nekakšne naprave, ki med dvema točkama poskrbijo za kontroliran prenos vsebin. Čeprav mogoče nezavedno, je globalni sistem cevi zgrajen kot nekakšen mentalni vzorec sodobne družbe. Iz njega lahko razberemo njene socialne, ekonomske ter politične lastnosti.

Projekt α je destilator informacij, podob, zvoka, lastnosti okolja, prezetege z družbenim odtisom in prihodnjih napovedi le zato, da iz vsega naštetege sintetizira nekaj, kar bi kot univerzalno dobro prineslo upanje in življenje. Je nekakšna zanka, ki vodi nazaj na začetek, ko je vse možno in smiselno, pa tudi enostavno in potrebno. Je odvod zapletene matematične funkcije, katero komaj obvladujemo in za katero nismo več prepričani, da je namenjena nam samim in razumevanju naše vloge.

BridA (Tom Kerševan, Sendi Mango, Jurij Pavlica) je bila ustanovljena leta 1996 na Beneški akademiji za likovno umetnost, kjer so študirali in pozneje diplomirali člani Tom Kerševan, Sendi Mango in Jurij Pavlica. Člani BridE pri svojem ustvarjalnem delu uporabljajo različne sodobne umetniške ustvarjalne pristope in razstavljajo tako doma kot po svetu, udeležili pa so se tudi številnih mednarodnih umetniških gostovanj, delavnic in seminarjev. Njihova dela so bila odkupljena za uvrstitev v številne mednarodne zbirke sodobne umetnosti. Leta 2015 so člani BridE v počastitev njihovega dvajsetletnega uspešnega ustvarjalnega dela prejeli najvišje priznanje, ki ga podeljuje Občina Nova Gorica, nagrado Franceta Bevka. Leta 2018 so prejeli tudi mednarodno nagrado TESLA. So tudi prejemniki štipendije Iaspis, ki jo podeljuje kulturno ministrstvo Kraljevine Švedske, ter nagrade Culture Bridges (Mostovi kulture), ki jo podeljuje British Council v okviru EU.

Zvok: BridA, Glavni inženir: BridA, Svetovanje: Marko Vivoda, Producija: RUK/PiNA, 2022
Spletna stran: <https://www.brida-kud.si/>



BridA, 2022

A tube is an object that requires our attention; its shape defines the space in which it is placed, and its hidden content is the modulation of time. In most cases, its purpose is tailored to social needs and capital. The quantities of substances that flow through it can be determined by its shape. Its content is frequently perceived as abstract and vague. The pipes run across the earth's surface, carrying various contents such as water, various energy products, traffic, information, atomic particles and bad and good air. They

can be one-way, two-way, twisted and straight, indifferent to the content, or intended to change the properties of the content. In a way, pipes are devices that allow for the controlled transmission of content between two points. Although perhaps unconsciously, the global pipe system serves as a mental model of modern society, from which we can deduce its social, economic, and political characteristics.

Project α is a distiller of information, images, sound, environmental properties imbued with a social imprint, and future predictions, all in order to synthesise something that will bring hope and life as a universal good. It's a kind of loop that returns to the beginning when everything is possible and meaningful, but also simple and necessary. It is the derivation of a complex mathematical function over which we have little control and are unsure whether it is intended for us and for understanding our role.

BridA (Tom Kerševan, Sendi Mango, Jurij Pavlica) is a collective made up of graduates from the Venice Academy of Fine Arts, formed in 1996 during their university years. The group produces artwork across a wide spectrum of contemporary artistic practices, exhibits both locally and internationally, and has participated in numerous international residency programs, workshops and seminars. BridA's works have been purchased for a score of international contemporary art collections. In 2015 they received the highest award of the Municipality of Nova Gorica, the France Bevk Prize, commemorating 20 years of their successful activity; in 2018 they received the international Tesla Award. They are recipients of the Iaspis scholarship awarded by the Swedish Ministry of Culture, and Culture Bridges, awarded by the British Council under the EU.

Sound: BridA, Lead engineer: BridA, Consultancy: Marko Vivoda,
Production: RUK/PiNA, 2022, Website: <https://www.brida-kud.si/>

Foto / Photo: DK



30.000.000.000 ton na leto

Nika Erjavec, 2022

Ljudje predstavljamo 0,01 % živega na Zemlji. V zadnjem stoletju smo ustvarili 1.154.000.000.000-tonsko antropogeno gmoto in s tem odtehtali celotno biomaso, torej vse živo na planetu. Aktualna bivanjska in predmetna kultura, neskončne produkcije potrošnega in načrtno zastarelega letno doda približno 30.000.000.000 novih ton, medtem ko vzporedno biomasa in biodiverziteta upadata. 80 % vseh surovin in dobrin potuje po globalnih vodah, prečka številne ekosisteme in se v različnih fazah ustavlja v pristaniščih, kjer lahko uzremo del te gmote absurdnih razsežnosti. Še bolj abstraktno predstavljava je razsežnost posledic kulture kapitalizma, ki se razpredajo v prostor in čas daleč onkraj dometa našega življenja. Instalacija tematizira spremembe v bivanjskih pogojih, nenadnost in hiperobjektnost okoljskih sprememb od industrijske revolucije. Kot senzorični motilci nastopijo neuravnovešeni elektromotorički za plovila/vozila, ki skozi plasti zavrženih LCD ekranov in drugih pogostih materialov prenašajo vibracije in ustvarjajo različne zvočne, vizualne in taktilne motnje.

Intermedijska umetnica **Nika Erjavec** (1994) v zadnjih letih raziskuje materialne razsežnosti vibracije in zvoka, od njegove telesnosti in zaznavnosti do hiperobjektnosti okoljskih sprememb na ravni akustične krajine in širše. Diplomirala je na oddelku za unikatno oblikovanje in magistrirala na oddelku za kiparstvo na Akademiji za likovno umetnost in oblikovanje v Ljubljani. Za serijo instalacij in hibridno umetniško raziskavo (ne)VIDNO je prejela študentsko Prešernovo nagrado (2019).

Producija: PiNA/RUK, 2022

30.000.000.000 tons per year

Nika Erjavec, 2022

Humans account for only 0.01 % of all life on Earth. We created 1.154.000.000.000 tonnes of anthropogenic mass in the last century, outweighing the entire biomass, that is, everything on the planet. The current living and object culture, with its endless production, consumable and planned obsolescence, adds approximately 30.000.000.000 new tonnes per year, while biomass and biodiversity decline. 80 % of all raw materials and goods travel through global waters, passing through many ecosystems and stopping at various stages in ports where we can see a portion of this gigantic mass. Even more abstract is the dimension of the consequences of capitalism's culture, which have spread into space and time far beyond the scope of our lives. The installation thematises changes in living conditions, as well as the suddenness and hyper-objectivity of environmental changes since the industrial revolution. Unbalanced electric motors for vessels/vehicles act as sensory disruptors, transmitting vibrations and causing a variety of acoustic, visual, and

tactile disturbances through layers of discarded LCD screens and other common materials.

Nika Erjavec (1994), an intermedia artist, has been exploring the material dimensions of vibration and sound in recent years, from its physicality and perception to the hyper-objectivity of environmental changes at the level of the acoustic landscape and beyond. She received her bachelor's degree in Unique Design and her master's degree in Sculpture from the Academy of Fine Arts and Design in Ljubljana. She was awarded the student Prešeren Award in 2019 for her series of installations titled (in)VISIBLE and hybrid artistic research.

Production: PiNA/RUK, 2022

Foto / Photo: DK



Črvina

Sara Bezovšek, 2022

Črvina je posebna rešitev enačb, ki opisujejo Einsteinovo splošno teorijo relativnosti, ki povezuje dve oddaljeni točki v prostoru ali času skozi tunel. V idealnih razmerah je ta tunel krajši od razdalje med navedenima točkama, zaradi česar črvina predstavlja svojevrstno bližnjico. Čeprav črvine pogosto srečamo v znanstvenofantastičnih vsebinah in burijo domišljijo splošne javnosti, so, kolikor vemo, le hipotetične. Gre sicer za legitimne rešitve splošne teorije relativnosti, vendar znanstvenikom v dejanskem vesolju še nikoli ni uspelo ohraniti stabilne črvine. Sara Bezovšek je v svojem novem projektu z naslovom Črvina upodobila potencialen scenarij tovrstnega dogodka. Zbiranje vizualnega gradiva, ki je značilno za njeno umetniško prakso, je ključno tudi za pričajoči projekt: vsebine, najdene na spletu v obliki kratkih videoposnetkov, memov, fotografij, gifov, emotikonov in različnih zunanjih povezav, ki gledalcu omogočajo, da sam raziskuje določeno temo, ustvarjajo kompleksno in vizualno nasičeno zgodbino. Zbran material je tematsko in vizualno uredila v obliki spletnega kolaža ter ustvarila lastno narativno. Gledalec se na začetku spozna s Črvino prek interaktivne spletne strani. Interakcija med gledalcem in instalacijo se nadaljuje s klikom, ki sproži enega izmed možnih scenarijev, ta posameznika vodi na drugo stran črvine v prostoru. Črvina je del umetničinega večletnega projekta SND (Spoznavanje narave in družbe), ki je 'interactive story game' v obliki spletne strani. Sestavlja jo domača spletna stran z naslovom 'You Are Here' s številnimi apokaliptičnimi scenariji in mnogimi podstranmi, ki jih umetnica ves čas nadgrajuje, naslovljenimi: 'Overpopulation', 'Human Extinction', 'Evacuate Earth', 'False Utopia' in 'Nuclear Winter'.

Sara Bezovšek je vizualna umetnica, ki deluje na področjih grafičnega oblikovanja, novih medijev in eksperimentalnega filma. V svoji umetniški praksi zbira, shranjuje in kolažira vizualne reference, na katere naleti med brskanjem po spletu ter gledanjem filmov in televizijskih serij. Sodelovala je na različnih skupinskih in samostojnih razstavah. Njen projekt SND je bil predstavljen na splettem bienalu The Wrong Biennale ter na spletnej platformi Do Not Research. Leta 2018 je prejela študentsko Prešernovo nagrado, štiri leta kasneje pa je bila nominirana za nagrado skupine OHO, ki je del programa Young Artist Award. Leta 2021 je za svoj kratki film prejela glavno nagrado na festivalu FeKK, leta kasneje pa nagrado Vesna za najboljši slovenski eksperimentalni film.

Producija: PiNA/RUK, 2022
Programiranje: Srđan Prodanović
Spletna stran: <https://sarabezovsek.com/>

Wormhole

Sara Bezovšek, 2022

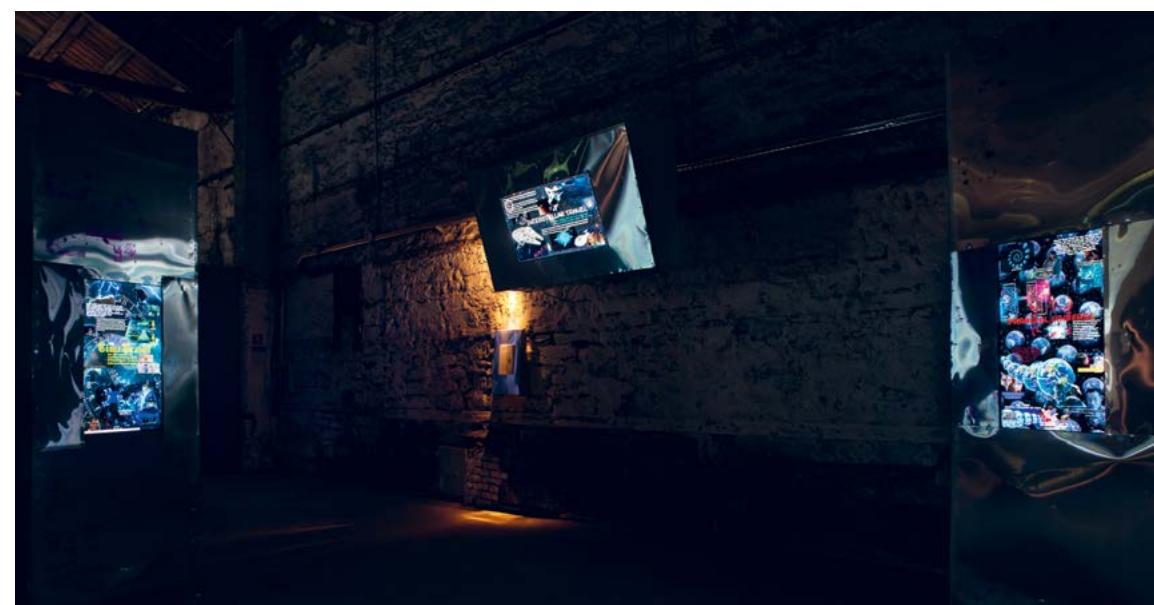
A wormhole is a special solution to the equations describing Einstein's theory of general relativity that connects two distant points in space or time via a tunnel. Ideally, the length of this tunnel is shorter than the distance between those two points, making the wormhole a kind of shortcut. Though they are a staple of science fiction and have captured the popular imagination, wormholes are, as far as we know, only hypothetical. They are

legitimate solutions to general relativity, but scientists have never figured out a way to maintain a stable wormhole in the real universe. In her new project entitled Wormhole, Sara Bezovšek depicted a potential scenario of this type of event. The collection of visual material that characterizes her artistic practice is also key to the present project: content found online in the form of short videos, memes, photos, gifs, emoticons and various external links that allow the viewer to be themselves, explore a specific topic, and create a complex and visually saturated story. She arranged the collected material thematically and visually in the form of an online collage and created her own narrative. The spectator initially meets The Wormhole through an interactive website. Interaction between the viewer and the installation continues with a click, which triggers one of the possible scenarios, that guides the individual to the other side of the Wormhole in space. Wormhole is part of the artist's current ongoing project SND, which is an interactive story game in the form of a webpage. It consists of the homepage, titled You Are Here, which depicts various apocalyptic scenarios, and multiple still-growing subpages: Overpopulation, Human Extinction, Evacuate Earth, False Utopia and Nuclear Winter.

Sara Bezovšek is a visual artist who works in the fields of new media, experimental film and graphic design, from which she also obtained a master's degree at the Academy of Fine Arts and Design in Ljubljana. In her artistic practice, she researches, stores and collages visual references she comes across while surfing the web and watching movies and TV series. She participated in various group and solo exhibitions. Her SND project was presented at the online biennial The Wrong Biennale and on the online platform Do Not Research. In 2018, she received the student Prešeren Award, and four years later she was nominated for the OHO group award, which is part of the Young Artist Award program. In 2021, she received the main prize at the FeKK festival for her short film, and one year after the Vesna award for the best Slovenian experimental film.

Production: PiNA/RUK, 2022
Programming: Srđan Prodanović
Website: <https://sarabezovsek.com/>

Foto / Photo: DK



**REZIDENCE
•
RESIDENCIES**

Marco Barotti

OPICE

2022

»Opice so naši najbližji sorodniki in jih običajno vidimo kot simbol naše evolucije.«

Delo nas popelje k metaforičnemu raziskovanju naše digitalne evolucije z navigacijo po téma kibernetske varnosti, uporabe podatkov, nadzornega kapitalizma, dezinformacij, spremenjanja vedenja in energetskih zahtev. Raziskuje koristi in dileme, ki jih nova digitalna transformacija prinaša naši družbi.

OPICE so zbirka kinetičnih zvočnih skulptur, ki spominjajo na primate. Izdelane so iz recikliranih anten za WI-FI sektor. Skulpture poganjajo algoritmi, ki prikazujejo dinamične števce uporabe podatkov in kibernetskih napadov: od Facebook všečkov, Google iskanj, Tinder potegov, porabljenih internetnih energij in poslanih e-poštnih sporočil do neželenih kibernetskih dogodkov, ki se dogajajo v realnem času. Podatki se analizirajo in prevedejo v zvok in gibanje.

Ko števci zadenejo določene ključne številke, skulpture sproščajo zvočne dogodke, ki jih sestavi UI, usposobljena za ponarejanje krikov pravih opic. Ti zvočni dogodki so modulirani v realnem času s hitrostjo podatkov in razpršeni kot štirifonična zvočna izkušnja z uporabo telesa OPIC kot resonančne komore.

Razstava prikazuje kinetične zvočne skulpture ter avdio in video intervjuje, zbrane med raziskovanjem z znanstveniki in strokovnjaki, povezanimi s projektom.

Marco Barotti je intermedijiški umetnik iz Berlina. Njegovo delo poganja želja po izumljivanju umetniškega jezika, v katerem se izmišljena postfuturistična doba izraža s kinetičnimi zvočnimi posegi v naravno in urbano okolje. Njegove instalacije zvočno tehnologijo, potrošniške predmete in odpadke združujejo v gibljive skulpture, ki jih v celoti sproži zvok. Njegov glavni cilj je ustvariti »tehnološki ekosistem«, ki se igra s podobnostmi z živalmi in rastlinami. Ta umetniška dela služijo kot prispevka antropogenega vpliva na planet in so namenjena ozaveščanju ljudi o okoljskih vprašanjih.

APES by Marco Barotti, was created during the art-science residency "RE:SEARCHING IT SECURITY" at Cluster of Excellence CASA, in collaboration with STATE.

Software programming: Marco Accardi/Anecoica Studio
Assistant Design: Xueqi Huangfu
Deep fake research and production: Lea Schönherr, Joel Frank
Cyberattacks API research implementation: Endres Puschner
Digital Wellbeing inputs: Asia Biega
Bitcoin electricity consumption inputs: Veelasha Moonsamy
Technical advisor: Benjamin Maus
Photos and video: Xueqi Huangfu

Funded by the Deutsche Forschungsgemeinschaft (DFG, German Research Foundation) under Germany's Excellence Strategy through the Cluster of Excellence "CASA - Cyber Security in the Age of Large-Scale Adversaries" (EXC 2092)

Coproduction: RUK/PiNA, Festival IZIS, Ars Electronica, Loop Space Seoul
Part of the travel and transport are supported by Berlin Senate Department for Culture and Europe

Website: <http://www.marcobarotti.com>

Marco Barotti

APES

2022

"Apes are our closest relatives and are commonly seen as a symbol of our evolution".

The work takes us on a metaphorical exploration of our digital evolution, by navigating through the topics of cybersecurity, data consumption, surveillance capitalism, disinformation, behaviour modification, and energy demands. It investigates the benefits and dilemmas that the new digital transformation brings to our society.

APES is a collection of kinetic sound sculptures resembling primates. They are made out of recycled WI-FI sector antennas. The sculptures are driven by algorithms showing dynamic counters of data consumption and cyberattacks: from Facebook likes, Google searches, tinder swipes, internet energy consumed and emails sent, to the adverse cyber events happening in real-time. The data is analysed and translated into sound and movements.

When the counters hit certain key numbers, the sculptures release sonic events composed by an AI trained to deep fake the calls of real apes. These sonic events are modulated in real-time by the data speed and diffused as a quadraphonic audio experience using the body of the APES as a resonating chamber.

The exhibition displays the kinetic sound sculptures as well as audio and video interviews collected during the research with scientists and experts associated with the project.

Marco Barotti is a media artist based in Berlin. His work is driven by a desire to invent an artistic language in which a fictional post-futurist era is expressed through kinetic sound interventions in natural and urban environments. His installations merge audio technology, consumer objects, and waste into moving sculptures triggered entirely by sound. The primary focus of his work is to create a "tech ecosystem" that plays with resemblances to animals and plants. These artworks serve as a metaphor for the anthropogenic impact on the planet and aim to make people aware of environmental issues.

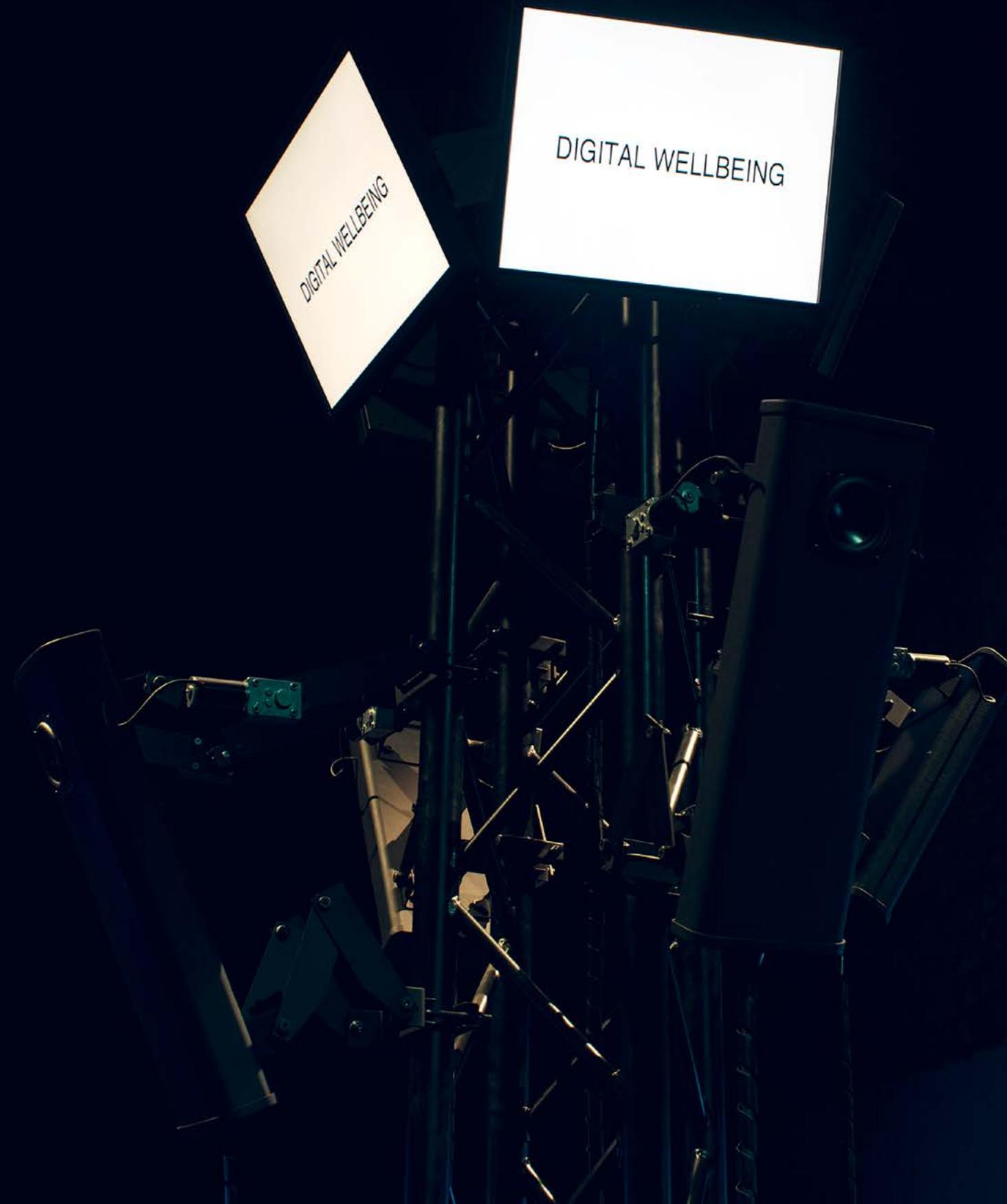
OPICE so bile ustvarjene med umetniško-znanstveno rezidenco "RE:SEARCHING IT SECURITY" v Cluster of Excellence CASA, v sodelovanju s STATE.

Programiranje: Marco Accardi/Anecoica Studio
Asistent za oblikovanje: Xueqi Huangfu
Globoki ponaredek (Deep fake) raziskovanje in produkcija: Lea Schönherr, Joel Frank
Izvajanje raziskav API kibernetskih napadov: Endres Puschner
Digitalna blaginja, vnos: Asia Biega
Bitcoin poraba električne energije, vnos: Veelasha Moonsamy
Tehnični svetovalec: Benjamin Maus
Fotografije in video: Xueqi Huangfu

Financira Deutsche Forschungsgemeinschaft (DFG, Nemška raziskovalna fundacija) v okviru nemške strategije odličnosti po grozdu odličnosti "CASA – Cyber Security in the Age of Large-Scale Adversaries" (EXC 2092).

Koprodukcija: RUK/PiNA, Festival IZIS, Ars Electronica, Loop Space Seoul
Del potovanja in prevozi so podprtji s strani Berlin Senate Department for Culture and Europe. /

Spletна stran: <http://www.marcobarotti.com>



Theresa Schubert

Hylē

2022

V Aristotelovi filozofiji je Hylē izvirna snov, prvinska snov, ki se oblikuje le s človeško obdelavo (tecnē). Povzeto po Werner Marx: *Einführung in Aristoteles' Theorie vom Seienden*, 1972, 40

Avdiovizualna instalacija Hylē sodeluje z enim od najbolj eksistencialnih telesnih mehanizmov živih bitij: dihanjem. Med opazovanjem, meditacijo, eksperimentiranjem z materialom in igrivo akcijo ponuja Hylē s pomočjo alg spremenjeno naracijo o vidikih našega sveta z raziskovanjem vizualnih metafor dinamike omrežja, modulirane v realnem času z interakcijo z živo biološko skulpturo in širšim svetom. Hylē prikazuje zaporedno medsebojno povezanost prisotnosti, dejavnosti, ki potekajo znotraj nje, ter učinkov, reakcij in povratnih informacij, ki jih povzročajo. Večkanalno video okolje je ustvarjeno iz 3D slikanja gozda in notranjosti kmetije strežnikov ter odprto za interakcijo z javnostjo prek senzorjev. Z vdihavanjem v lijakasto napravo sta prizadeta dva vidika dela; prvič: zrak, obogaten s CO₂, bo izmerjen s senzorjem, preden bo prečrpan v bioreaktorje alg. Signali senzorjev bodo sprožili motnje in abstrakcijo v skeniranih video okoljih in sintezo zvoka v realnem času. Drugič: alge potrebujete CO₂ za svojo presnova in bodo sproščale kisik v svojem fotosintetičnem procesu, ki se vrne v zrak v razstavnem prostoru, s čimer se ustvari povratna informacija med človeškim dihom, algami in avdiovizualnimi sferami. S tem Hylē predlaga estetski in konceptualni odnos z medsebojnim povezovanjem gozda kot hiperorganizma s strežniško kmetijo kot metaforo za osnovna omrežja našega digitalnega in ogljikovega življenja. Občinstvo je povabljeno, da sodeluje v interaktivni instalaciji, ki doživlja vpliv svoje prisotnosti s spremnjanjem potopnega in efemernega avdiovizualnega okolja in s tem lastnega senzoričnega stanja.

Theresa Schubert je berlinska umetnica, ki raziskuje nekonvencionalne vizije narave, tehnologije in sebe. Doktorirala je iz medijske umetnosti na Univerzi Bauhaus v Weimarju. Njeno delo združuje avdiovizualno in biomedijsko v konceptualne in poglobljene instalacije ali performanse.

V njenih umetniških delih živi organizmi, pa tudi algoritmi in modeli strojnega učenja, postanejo pomembni soustvarjalci, ki raziskujejo odnos ljudi do njihovega okolja ter pojavi snovi in pomena onkraj antroposa. V zadnjem času ustvarja z visokoresornimi video okolji in 3D laserskim skeniranjem, da bi izzvala načine zaznavanja in podvomila v odnos med človekom in strojem ter naravo v hipertehnoloških družbah.

Programiranje in zvok: Ivan Taranin
Programiranje senzorjev: Sarah Grant

Vodenje projekta: Helene Bösecker

Zahvala: Laura König-Mattern, Max-Plank Institut Magdeburg

Koprodukcija: RUK/PiNA, 2022

Hylē je finančiral komisar zvezne vlade za kulturo in medije.

Hylē je prvotno naročil laboratorij Art+Science Foundation.

Spletna stran: www.theresaschubert.com

Theresa Schubert

Hylē

2022

In Aristotelian philosophy, Hylē is the original substance, the primordial matter that only takes shape through human processing (tecnē). Translated from Werner Marx: *Einführung in Aristoteles' Theorie vom Seienden*, 1972, 40

The audiovisual installation Hylē interacts with one of the most existential bodily mechanisms of living beings: breathing. Between observation, meditation, material experimentation and playful action Hylē offers an algae-altered narration about aspects of our world by investigating visual metaphors of network dynamics modulated in real-time through interaction with a living biological sculpture and the larger world. Hylē displays the successive interconnectedness of the presence, the actions taking place within and the effects, reactions and feedback they cause. The multi-channel video environment is created from 3D-laser scans of a forest and the inside of a server farm and is open for interaction with the public via sensors. By breathing into a funnel device two aspects of the work are affected: firstly, the CO₂-enriched air will be measured by a sensor before it is pumped into the algae bioreactors. The sensor signals will trigger disturbances and abstraction in the scanned video environments and sound synthesis in real-time. Secondly, algae need CO₂ for their metabolism and will release Oxygen in their photosynthetic process which is returned to the air in the exhibition space thus creating feedback between human breath, algae and the audiovisual spheres. By this Hylē suggests an aesthetic and conceptual relation by interlinking a forest as a hyper-organism with a server farm as metaphors for the underlying networks of our digital and carbon lives. The audience is invited to participate in the interactive installation, experiencing the impact of their presence by altering the immersive and ephemeral audiovisual environment and by this their own sensorial state.

Theresa Schubert is a Berlin-based artist exploring unconventional visions of nature, technology and the self. She holds a PhD in Media Art from Bauhaus-University Weimar. Her work combines audiovisual and biomedia to conceptual and immersive installations or performances.

In her artworks, living organisms, as well as algorithms and machine learning models, become meaningful co-creators, investigating the relationship of humans to their environment and the emergence of matter and meaning beyond the Anthropos. More recently, she works with high-res video environments and 3D Laser Scanning to challenge modes of perception and question the human-machine-nature relationship in hyper-tech societies.

Programming and Sound: Ivan Taranin
Sensor Programming: Sarah Grant
Project Management: Helene Bösecker
Thanks to: Laura König-Mattern, Max-Plank Institut Magdeburg
Co-production: RUK/PiNA, 2022
Hylē was funded by the Federal Government Commissioner for Culture and the Media.
Hylē was originally commissioned by laboratoria Art+Science Foundation.
Website: www.theresaschubert.com

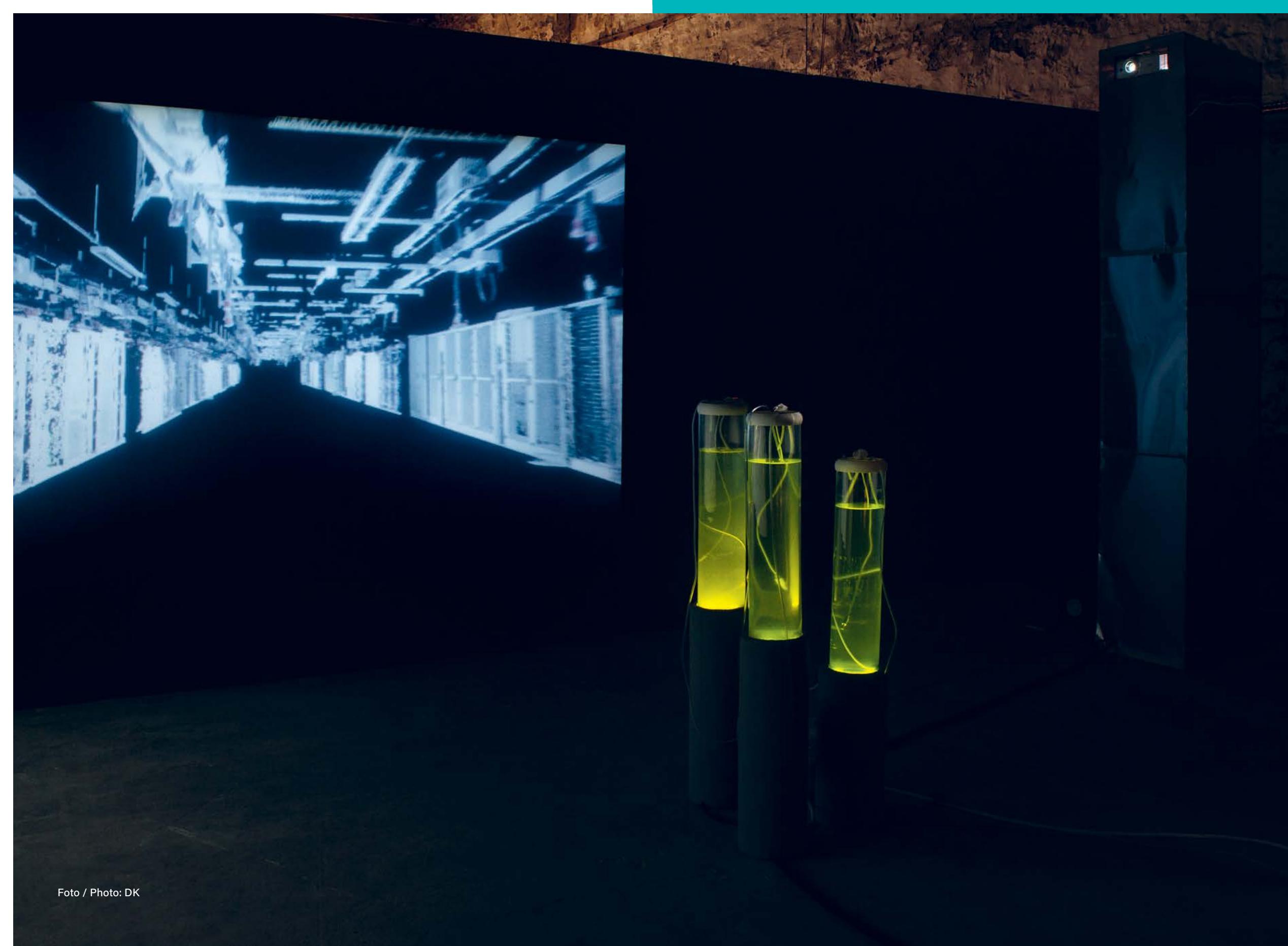


Foto / Photo: DK

Robertina Šebjanič, Sofia Crespo in Feileacan McCormick

Interweaving the Subaqueous - AquA(I)formings

2021

Projekt Interweaving the Subaqueous - AquA(I)formings sledi niti več kot le človeških prebivalcev Jadranskega morja, ki zabeleži ali kodira obliko oceanskega »spomina« kot stranskega produkta svojega obstoja. Poetični razmislek o Pinna Nobilis - velikem leščurju - in travnikih z morsko travo kot delu nepreknjenega cikla prisotnosti skozi konceptualno prepletanje področij umetnosti, morske biologije, umetne inteligence in zvoka. Ta zančni akt, ki se izvaja sčasoma, je hkrati kodiranje in dekodiranje žive izkušnje, ki jo povezuje z geološkim obsegom. S poskusom razkrivanja tega skritega priopovedovanja zgodb se stke prostor, katerega cilj je negovati potencial empatičnega medvrstnega razvoja naših odnosov z več kot le človekom v nenehno spreminjači se sedanjosti, ki jo je mogoče vplesti v številne potencialne prihodnosti.

Robertina Šebjanič je mednarodno priznana umetnica. Njeno umetniško delo se ukvarja s kulturno, (bio) politično in ekološko resničnostjo vodnih okolij. V svojih projektih se loteva filozofskih vprašanj na stičišču umetnosti, tehnologije in znanosti.
robertina.net

Sofia Crespo (Entangled Others) je umetnica s poudarkom na umetnem življenju, njeno prakso poganja veliko zanimanje za biološko navdihnjene tehnologije, kot so nevronske mreže. Njen glavni poudarek je na tem, kako organsko življenje uporablja umetne mehanizme za simulacijo in razvoj.

Feileacan McCormick (Entangled Others) je berlinski generativni umetnik, raziskovalec in nekdanji arhitekt. Njegova praksa se osredotoča na ekologijo, naravo in generativno umetnost, s poudarkom na dajanju nečloveških novih oblik prisotnosti in življenja v digitalnem prostoru.

Umetniki: Robertina Šebjanič, Sofia Crespo and Feileacan McCormick
Svetovanje: Matjaž Ličer, Marko Vivoda
Razvoj mehanskih delov: Scenart, Ljubljana
Posebna zahvala: Manja Rogelja, Aquarium Piran, Borut Jerman
Produkcija: RUK/PiNA, 2021

Robertina Šebjanič, Sofia Crespo in Feileacan McCormick

Interweaving the Subaqueous - AquA(I)formings

2021

The project, "Interweaving the Subaqueous - AquA(I)formings" follows the thread of a more-than-human inhabitant of the Adriatic sea, who records, or encodes a form of oceanic »memory« as a by-product of its existence. Through a conceptual braiding of the fields of art, marine biology, artificial intelligence and sound, it gives a poetic reflection upon the Pinna Nobilis - the noble pen shell and meadows of seagrass as part of a continuous cycle of presence. This looping act, enacted over time, is at once an encoding and decoding of lived experience, one that connects it to a geological scale. Through attempting to unveil this hidden storytelling, a space is woven that aims to nurture the potential for empathic development of interspecies and our relationships with the more-than-human in the ever-changing present, that can be woven into many potential futures.

Robertina Šebjanič is an internationally acclaimed artist. Her artistic work deals with the cultural, (bio)political and ecological realities of aquatic environments. In her projects, she tackles the philosophical questions at the intersection of art, technology and science.

Sofia Crespo (Entangled Others) is an artist with a focus on artificial life, her practice is driven by a huge interest in biologically inspired technologies, such as neural networks. Her main focus is the way organic life uses artificial mechanisms to simulate itself and evolve.

Feileacan McCormick (Entangled Others) is a berlin-based generative artist, researcher and a former architect. His practice focuses on ecology, nature and generative arts, with a focus on giving non-human new forms of presence and life in the digital space.

Artists: Robertina Šebjanič, Sofia Crespo and Feileacan McCormick
Consultancy: Matjaž Ličer, Marko Vivoda
Mechanical part development: Scenart, Ljubljana
Special thanks: Manja Rogelja, Aquarium Piran, Borut Jerman
Production: RUK/PiNA, 2021



Foto / Photo: Klemen Skočir

Boštjan Čadež - FŠK

Gospod Procesor, razumete življenje?

2019 - 2021

Gospod Procesor, razumete življenje? je naslov projekta, samozavedajočega se AGI-ja, kjer robot predstavlja znanstvenofantastičen scenarij, v katerem se umetnik igra s strahovi in nevednostjo ljudi o trenutnem stanju umetne inteligence, ki se lahko uči le iz danih nizov podatkov. Gospod Procesor je dvokolesni robot, visok približno 1 meter in se naključno premika po galeriji. Za odkrivanje ovir in ljudi v prostoru uporablja svoje senzorje in kamero. Samo delo ponuja presenetljiv, ironičen pogled na to, kaj bi v resnici pomenilo prenesti človeškost v stroj – in je, v končni fazi, bolj ogledalo nam, kot tako imenovanim »inteligencam«, ki jih rojevajo naše Prometejanske sanje.

Boštjan Čadež - FŠK je študiral industrijsko oblikovanje na Akademiji za likovno umetnost in oblikovanje Univerze v Ljubljani. V zadnjih letih se kot intermedijski umetnik osredotoča predvsem na področje računalniške, v realnem času generirane in generativne grafike ter robotike, ki jih predstavlja v obliki performansov ter instalacij. Za svoja dela na področju oblikovalskih oziroma programerskih inovacij je prejel več uglednih nagrad in priznanj. V preteklosti je deloval tudi na področjih grafitov, ulične umetnosti in VJ-anja. Leta 2013 je prejel nagrado Zlata ptica v kategoriji intermedijске umetnosti.

Produkcija: Aksioma – Zavod za sodobne umetnosti, Ljubljana, 2019

Postprodukcija: RUK/PiNA, 2021

Foto / Photo: Klemen Skočir

Boštjan Čadež - FŠK

Mr. Processor, do you understand life?

2019 - 2021

Mr. Processor, do you understand life? is the title of a self-aware AGI project in which the robot presents a sci-fi scenario in which the artist plays with people's fears and ignorance of artificial intelligence's current state, which can only be learned from given data sets. Mr. Processor is a two-wheeled robot, about 1 meter tall, and randomly moves around the gallery. It detects obstacles and people in the room using its sensors and camera. The work itself provides a surprising, ironic look at what it would truly mean to transfer humanity into a machine - and, ultimately, is more of a mirror to us than the so-called "intelligence" born of our Promethean dreams.

Boštjan Čadež - FŠK studied industrial design at the Academy of Fine Arts and Design of the University of Ljubljana. As an intermedia artist, he has recently focused primarily on computers, real-time generated and generative graphics, and robotics, which he presents in the form of performances and installations. He has received several prestigious awards and recognitions for his contributions to design and programming innovation. In the past, he has also worked in the fields of graffiti, street art and VJ-ing. In 2013, he was awarded the Golden Bird Award in the category of Intermedia Art.

Production: Aksioma – Institute for Contemporary Arts, Ljubljana, 2019

Post Production: RUK/PiNA, 2021



Brad Downey

Nebesna ura

2020

Z elektronskim mikroskopom s fokusiranim ionskim snopom vgravirano zrno peska. V sodelovanju z Bojanom Ambrožičem s Centra odličnosti nanoznanosti in nanotehnologije. Gravura je narejena na podlagi antičnega sumerskega pečata. Več znanstvenih domnev ocenjuje, da je ta pečat eden najzgodnejših izrisov našega sončnega sistema, star vsaj 4500 let, mnogo let pred Galilejem in Kopernikom, po katerih smo sprejeli dejstvo, da krožimo okrog Sonca. Zrno peska je kot nosilec za gravuro Bradu dal v uporabo Damjan Vengust, ki ga je v Slovenijo prinesel iz kraterja v Ameriki. Gravura sončnega sistema na najmanjšem s prostim očesom vidnem delcu snovi.

Brad Downey (1980, Luisville, Kentucky) lahko najbolje opišemo kot konceptualnega umetnika in najbolj znanega neznanca. Downey, magister likovne umetnosti in kiparstva, je na umetniški šoli Slade (Slade School of Art) razvijal svoje večbine pod mentorstvom Brucea McLeana. Leta 1998 se je po iniciativi inštituta Pratt odločil svojo življenjsko pot nadaljevati v New Yorku. Downeyjevi projekti sprevračajo navade in konvencije urbanega okolja ter dvomijo o normah, ki so tako močno vpete v družbo, da jih ta dojema kot prave in ustrezne in ne kot omejujoče in invazivne.

Produkcija: RUK/PiNA

Posebna zahvala: Bojan Ambrožič, Center odličnosti nanoznanosti in nanotehnologije

Foto / Photo: David Lotrič Banović

Brad Downey

Sky Clock

2020

A grain of sand engraved with an electron microscope using a focused ion beam. In cooperation with Bojan Ambrožič from the Center of Excellence in Nanoscience and Nanotechnology. The engraving is based on an ancient Sumerian seal. Many scientific hypotheses consider this seal to be one of the earliest depictions of our solar system, at least 4500 years old, made millennia before Galileo and Copernicus convinced us that we are in fact revolving around the Sun. The grain of sand to be engraved was given to Brad by Damjan Vengust, who brought it to Slovenia from a crater in America. The solar system is engraved on the smallest particle visible to the naked eye.

Brad Downey (1980, Louisville, Kentucky) can best be described as a conceptual artist and the most famous stranger. Downey, a master of fine arts and sculpture, developed his skills at the Slade School of Art under the mentorship of Bruce McLean. Downey's projects distort the habits and conventions of the urban environment and cast doubt on norms that are so firmly embedded in society that it perceives them as real and appropriate rather than restrictive and invasive.

Production: RUK/PiNA

Special thanks: Bojan Ambrožič, Centre of Excellence in Nanoscience and Nanotechnology



Brad Downey

Apnenec 45°32'N, 13°38'E

2020

Pripoved o prijateljstvu in slovenskem kamnu. Prijateljstvu med Jimmiejem Durhamom, ki predlaga napis, in Bradom, ki da na kamen, preden ga kasneje odvrže na dno morja, vklesati tole: »Ta kamen je apnenec, sedimentna kamnina. Prinesen je bil iz kamnoloma v Lipici in je težak 731 kilogramov. Odkupil sem ga od kiparja po imenu Miha Pečar v Portorožu, od koder ga je v Izolo s kamionskim prevozom pripeljal Gregor Basiaco. V Izoli sem najel obrtnika Roka Pahorja, da mi pomaga vklesati napis. Potem sem najel barko Morski volk, da bi ga odvrgel, sem, v Jadransko morje.« In na spodnji strani kamna preprosto: »Rock Bottom.« Razstava bo s tehnologijo razširjene resničnosti ponudila možnost obiska umetniškega dela, ki leži na dnu morja. Poskušala prikazati nevidnost tako prijateljstva kot potopljenega kamna.

Brada Downeyja (1980, Luisville, Kentucky) lahko najbolje opišemo kot konceptualnega umetnika in najbolj znanega neznanca. Downey, magister likovne umetnosti in kiparstva, je na umetniški šoli Slade (Slade School of Art) razvijal svoje večine pod mentorstvom Brucea McLeana. Downeyjevi projekti sprevračajo navade in konvencije urbanega okolja ter dvomijo o normah, ki so tako močno vpete v družbo, da jih ta dojema kot prave in ustrezne in ne kot omejujoče in invazivne.

Produkcija: RUK/PiNA

Foto / Photo: Žiga Pavlovič

Brad Downey

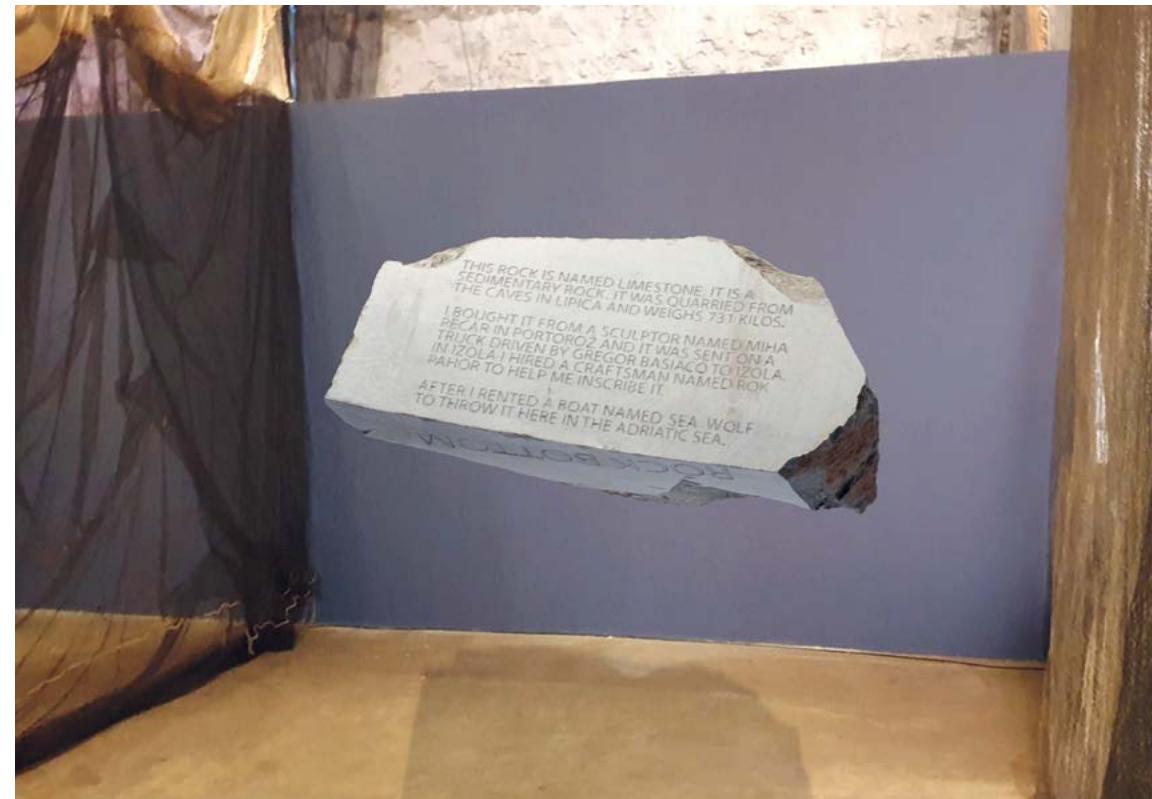
Limestone 45°32'N, 13°38'E

2020

A tale of friendship and a Slovenian rock. Friendship between Jimmie Durham, who suggests the inscription, and Brad, who, before dropping it into the sea, carves the following into the rock: "This is limestone, a sedimentary rock. It was brought from a quarry in Lipica and weighs 731 kilograms. I purchased it from the sculptor Miha Pečar in Portorož and transported it to Izola with a truck owned by Gregor Basiaco. In Izola I hired a craftsman Rok Pahor, who helped me carve the inscription. Then I rented the boat Sea Wolf and dropped the rock here in the Adriatic Sea." And on the bottom of the rock, simply: "Rock Bottom."

Brad Downey (1980, Louisville, Kentucky) can best be described as a conceptual artist and the most famous stranger. Downey, a master of fine arts and sculpture, developed his skills at the Slade School of Art under the mentorship of Bruce McLean. In 1998, at the Pratt Institute's initiative, he decided to continue his life in New York. Downey's projects distort the habits and conventions of the urban environment and cast doubt on norms that are so firmly embedded in society that it perceives them as real and appropriate rather than restrictive and invasive.

Production: RUK/PiNA



pila

HEKA

HEKA

HEKA je laboratorij na presečišču znanosti, umetnosti in gospodarstva, ki temelji na konceptu t. i. družbene znanosti (»citizen science«).

Je platforma povezovanja in sodelovanja različnih deležnikov, ki vzpostavlja dialog med družbo in znanstvo z uporabo umetnosti in umetniškega razmišljanja. Osnovno izhodišče HEKE je vpeljava empatične radovednosti in sočutja, ki je lastna umetnosti, v znanstvene metode raziskovanja. Vodilo dela je zavest, da imajo tehnologija, umetnost in gospodarstvo vedno učinek na posameznika _co in na družbo. Družbi in posameznikom _cam želimo ta področja približati v sožitju.

Gre za prvi tovrstni prostor v Istri, ki deluje na naslednjih tematskih področjih:

- Raziskovanje človeških vplivov na morski ekosistem.
- Raziskovanje prostorske zvočne reprodukcije.
- Raziskovanje biomaterialov.
- Sodelovanje s Srednjo tehniško šolo Koper pri izvajanju laboratorijskih vaj izobraževalnega programa tehnik mehatronike.

Rdeča nit, ki subtilno povezuje tematska področja, je spoprijemanje s podnebno krizo in njenimi posledicami. Tematska področja osmišljajo zunanji sodelavci in sodelavke. Trenutno v laboratoriju delujeta intermedijiški umetnik in raziskovalec biomaterialov v HEKI, Marko Vivoda ter raziskovalec zvoka, oblikovalec medijskih sistemov in kurator v polju glasbenih umetnosti Mauricio Valdés San Emeterio.

HEKA je prostor povezovanja za vse, ki prepozna vrednost v aktivaciji potencialov, izobraževanju, transformaciji in humanizaciji skozi empatično spajanje znanosti, umetnosti in gospodarstva. Laboratorij je za javnost odprt skozi delavnice, večje dogodke in dneve odprtih vrat, na katerih je obiskovalcem na voljo vodena predstavitev delovanja HEKE.

HEKA

HEKA is a laboratory at the intersection of science, art and the economy based on the concept of so-called »citizen science«.

It is a platform of networking and cooperation between different stakeholders, establishing a dialogue between society and science using art and artistic thinking. The primary starting point of HEKA is the introduction of empathetic curiosity and compassion, which is characteristic of art, into scientific methods of research. The guiding principle is the awareness that technology, art and the economy always impact an individual and society. Therefore, we want to bring these areas closer to individuals in harmony.

It is the first space of its kind in Istria. It operates in the following thematic areas:

- Researching the human impacts on the marine ecosystem.
- Researching spatial sound reproduction.
- Researching biomaterials.
- Cooperation with the Central Technical School in Koper in implementing the training program of mechatronic techniques laboratory work.

The red thread that subtly links the thematic areas deals with the climate crisis and its consequences. The thematic scope are prepared by external collaborators. Currently, the laboratory houses intermedia artist and biomaterials researcher at HEKA, Marko Vivoda and sound researcher, media systems designer, and curator in the field of musical art Mauricio Valdés San Emeterio.

HEKA is a space of integration for all who recognize the value of activating potentials, education, transformation, and humanization through the empathetic merging of science, art, and the economy. The laboratory is open to the public through workshops, major events, and open days, where visitors are able to attend a guided demonstration of the operation of HEKA.



Foto / Photo: Aleš Rosa

KOČERJA V "THE HOLY CRAB"

Marko Vivoda, Gjorgji Despodov

Delavnica je posvečena premisleku o prehrabbenih odpadkih, osredotočenih na polimere, pridobljene iz rakovih oklepov. Udeleženci skozi prijoved spoznajo pozitivne lastnosti hitosana in kako ravnati s snovjo. Na delavnici udeleženci izdelujejo krožnike, nože, vilice in žlice iz materialov, narejenih iz kombinacije hitosana (rakovih oklepov), križanimi z drugimi biomasami. Pripravljeni izdelki, niso primerni za človeško uporabo, ker so kemične in mehanske lastnosti proizvodov namenjene rastlinam, saj zagotavljajo hranila, protimikrobnna sredstva in naravna gnojila v različni fazi rasti. Izvajalca delavnice sta želela opozoriti na to, da je potreben kritičen premislek o materialih za enkratno uporabo.

Marko Vivoda je intermedijijski umetnik, kurator in producent ter član kolektiva Stran 22. Od leta 2013 je aktivni kurator festivala IZIS. Že dve leti je kreativni vodja in raziskovalec biomaterialov znotraj laboratorija umetnosti in znanosti HEKA (PiNA, Koper).

Gjorgji Despodov je multidisciplinarni umetnik, katerega praksa je usmerjena v oblikovanje in eksperimentiranje s 3D-vizuali in ilustracijo. Diplomiral je na nacionalni akademiji za umetnost v Sofiji v Bolgariji.

DUNCH AT THE HOLY CRAB

Marko Vivoda, Gjorgji Despodov

The workshop "Dunch at The Holy Crab" is dedicated to rethink food waste, focused on polymers obtained from shrimp shelves. Participants are learning the positive properties of chitosan and how to treat the material throughout the narration. Participants are producing plates, knives, forks, and spoons from materials made from the combination of chitosan (shrimp shelves) and crosslinked with other biomasses. The products aren't suitable for people's use, because the chemical and mechanical properties of the products are in purpose for the plants, by providing nutrients, antimicrobial agents and natural fertilizer in the different stage of growth. The purpose of the workshop is to critically rethinking the disposable materials from the sustainability point; large production of disposable accessories can lead to massive consumption for one-time usage.

Marko Vivoda is an intermedia artist, curator, producer and member of the collective Stran 22. Since 2013 he has been an active curator of the IZIS festival. For the past two years he has been the creative director and biomaterials researcher at the HEKA Art and Science Lab (PiNA, Koper).

Gjorgji Despodov is a multidisciplinary artist whose practice is focused on design and experiments with 3D visuals and illustration. He holds a BA from the National Academy of Arts in Sofia, Bulgaria.

Foto / Photo: ↑ PiNA arhiv ↓ Niside Panebianco



KUBER

Eksperimentalni zvočni studio odkriva potencial digitalnega prostorskega zvoka za umetniško izražanje in raziskovanje. KUBER je odprt prostor, v katerem lahko zaživijo inovativne ideje o prostorskem zвуку.

Naš pristop temelji na: produkciji, reprodukciji, raziskovanju in izobraževanju.

KUBER služi kot produkcijski prostor, namenjen eni osebi, prostor za imersivno poslušanje in kot snemalni studio. Sodelujemo z umetniki in glasbeniki pri razvoju vsebin in prilagojenih orodij za različne umetniške kontekste.

KUBER

Experiential sound facility is exploring the potential of digital spatial audio for artistic expression and research, KUBER is an open space where innovative ideas about spatial audio can come to life.

Our approach is based on: Production, Reproduction, Research, and Education.

KUBER serves as a one-person-centered production space, immersive listening room, and recording studio. We collaborate with artists and musicians to develop content and customized tools for various artistic contexts.

Gostujoči e umetniki in umetnice / Hosted artists:

Artist Görkem Özdemir

Oscar Recarte

Diego Losa

Åke Parmerud

Rodrigo Sigal

Blaž Pavlica

Mojca Kamnik

Ida Hiršenfelder

Matevž Kolenc

Tamara Lašić Jurković

Gašper Torkar

Jure Ažiček

Robertina Šebjanič

Nika Solce

Tilen Sepič

Alastair McNeill

Foto / Photo: Klemen Skočir





Foto / Photo: Aleš Rosa

Shekana meditacija

Tamara Lašič Jurković

2020

Shekana meditacija je vodena meditacija, ki poslušalcu spodbudi k razmisleku o tem, kaj (ne) pomeni biti človek, če naj priznamo vse organizme, ki soobstajajo z nami. Pomaga nam razumeti, kako odvisni smo od naravnih sistemov in drugih biotskih organizmov. Z njeno pomočjo spoznamo, da smo vpleteni v mrežo življenja in ne obratno – v kar nas je prepričal neoliberalizem, namreč da smo na vrhu piramide življenja in da imamo pravico izkoriščati naravne vire in brezglavo onesnaževati okolje. Tako kot tradicionalna meditacija tudi ta spodbuja samozavedanje na dveh ravneh: telesa in duha, vendar s ključno razliko: odpira pluralistični pogled na obe ravni in na ta način spodbuja drugačen odnos do sveta in našega mesta v njem.

Tamara Lašič Jurković, umetnica mlajše generacije, se v okviru Iniciative za podporo mladim umetnikom U30+ predstavlja na samostojni razstavi v Aksiomi z delom Shekana meditacija. Ustvarjalka, ki je po izobrazbi industrijska oblikovalka, se v umetniški praksi osredotoča na okoljske in družbene problematike 21. stoletja ter raziskuje teorijo posthumanizma v kontekstu oblikovanja.

Instalacija, je nastala v KUBER/HEKA v sodelovanju z Aksiomo, Zavodom za sodobno umetnost, Ljubljana.

Hacked Meditation

Tamara Lašič Jurković

2020

Hacked Meditation helps us understand how dependent we are on natural systems and other biotic organisms. It makes us realize we are involved in the web of life – not the other way in which neoliberalism convinces us as being situated at the very top of the pyramid of life and entitled to exploit natural resources and pollute the environment to any end. Just like traditional meditation, Hacked Meditation encourages self-awareness on two levels: the body and spirit – but with a key difference: it opens a pluralistic view on both and in this way sparks a different attitude towards the world and our place in it.

Tamara Lašič Jurković, an artist of the younger generation, is presenting her solo exhibition Hacked Meditation at Aksioma as part of the U30+ Young Artists Support Initiative. The artist, an industrial designer by training, focuses her artistic practice on environmental and social issues of the 21st century and explores the theory of post-humanism in the context of design.

The audio installation was produced at KUBER/HEKA in collaboration with Aksioma, Institute of Contemporary Art, Ljubljana.

In Saturn

Gašper Torkar

2022

Ambisonična zvočna instalacija In Saturn Gašperja Torkarja je poetično potovanje v sanje o prihodnosti človeštva v času njegove negotovosti. Delo je bilo zasnovano v okviru umetniške rezidence v Kubedu junija 2022. Štirikanalni koncert 'Helium Rain' Gašperja Torkarja je v živo nadaljevanje potovanja, ki se je začelo v okviru njegovega instalacijskega dela 'In Saturn'. Kontemplativni prostor se umakne realnosti izpostavljenosti elementom pod pritiskom.

Gašper Torkar je vsestranski umetnik, ki se v različnih kontekstih ukvarja predvsem z zvokom in jezikom. Poleg raziskovanja klubske glasbe ustvarja glasbo za gledališke, umetniške in video instalacije ter performanse, kar vpliva na njegovo lastno ustvarjanje.

Tehnično svetovanje: Mauricio Valdés San Emeterio
Produkcija: KUBER (HEKA)/PiNA, 2022

And Saturn

Gašper Torkar

2022

The ambisonic sound installation work 'And Saturn' by Gašper Torkar is a poetic journey into a dream of humanity's future in times of its uncertainty. The work was conceived as part of the artist residency in Kubed in June 2022. Four-channel concert 'Helium Rain' by Gašper Torkar is a live PA continuation of the journey started within his installation work 'And Saturn'. The contemplative space gives way to the reality of the exposure to elements under pressure.

Gašper Torkar is a multifaceted artist working primarily with sound and language within different contexts. Beside exploring club music, he makes music for theater, art and video installations and performances, all of which influences his own creative output.

Technical Consultancy: Mauricio Valdés San Emeterio
Production: KUBER (HEKA)/PiNA, 2022

Zlato

Olenc

2022

Zlato je kratek eksperimentalni del, ki je del večkanalne zvočne podlage za plesno predstavo "Meals I've already cooked" Vite Osojnik (PTL, 2022).

"Ustvarjalni proces sem začel s snemanjem zanimivih prasketajočih zvokov. Vedno mi je bil všeč zvok, ki ga nekdo tipka na prenosnem računalniku poleg mene, medtem ko poskušam zaspati, majhni poki, ki prinašajo občutek topline in intimnosti. Vendar sem želel ustvariti nekaj, kar bi zvenelo na novo in bi le namigovalo na te občutke. Eksperimentiranje z odejo za prvo pomoč iz zlate folije in plastično cevjo mi je dalo nekaj lepih rezultatov. Po številnih ponovnih vzorčenjih, granulacijah in spektralnem upogibanju sem ustvaril virtualne instrumente, posledično pa tudi skladbo."

Matevž Kolenc / Olenc je zvočni umetnik, ki živi v Ljubljani in se ukvarja predvsem s pisanjem glasbe za gledališče, združevanjem zvočnega oblikovanja in glasbene partiture v eno celoto, eksperimentiranjem z binauralnim snemanjem, večkanalnimi kompozicijami in različnimi zvočnimi iluzionističnimi tehnikami.

Prilagojeno za immersivni zvok: Alastair McNeill v KUBER (HEKA)/PiNA

Gold

Olenc

2022

Gold is a short experimental piece, part of a multichannel soundtrack for the dance performance "Meals I've already cooked" by Vita Osojnik (PTL, 2022).

"I've started the creative process by recording interesting crackling sounds. I've always liked the sound of someone typing on the laptop next to me while I'm trying to sleep, the small pops that bring the feeling of warmth and intimacy. But I wanted to create something that sounds new, and only hints at those feelings. Experimenting with the golden foil first aid blanket and a plastic tube gave me some nice results. After a lot of resampling, granulating and spectral bending, I've created virtual instruments, and the track subsequently."

Matevž Kolenc / Olenc is a sound artist residing in Ljubljana, Slovenia, focusing mainly on writing music for theater, combining sound design and music scores into one entity, experimenting with binaural recording, multichannel compositions and different sound illusionist techniques.

Spatialized and mixed for immersive audio: Alastair McNeill at KUBER (HEKA)/PiNA

Desierto Sonoro

Mauricio Valdés San Emeterio

2022

Prvo delo, ki je v celoti nastalo izkustvenem prostorskem studiu KUBER (HEKA) / PiNA, temelji na knjigi Valerie Luiselli "Arhiv izgubljenih otrok". Predstavlja zgodbo o otrocih, ki sami prečkajo mejo med Mehiko in ZDA. V delu so uporabljeni stavki in odlomki iz knjige, kot da bi šlo za gledališko igro za ušesa. Delo je namenjeno poslušanju v omenjenem studiu, saj uporablja tri različne oblike prostorske umestitve zvoka, ki jih je mogoče zaznati le tam. Pred vami je binauralna različica instalacije za slušalke kot približek tega, kako je prostorska porazdelitev umetniškega dela v prostoru.

Mauricio Valdés San Emeterio se na mednarodnem področju ukvarja z glasbeno kompozicijo, podprtjo s tehnologijo, improvizacijo, kot tudi s kuratorstvom glasbenih/soundart festivalov. V svoji več kot 20-letni karieri je bil vključen v širok spekter umetniških projektov in raziskav o novih tehnologijah. Od leta 2021 deluje kot kurator in vodja raziskave/razvoja zvoka v laboratoriju za umetnost in znanost HEKA v Kopru. To je studio za uporabo in raziskovanje različnih imerzivnih avdio tehnologij za zvočno in glasbeno ustvarjanje na novih formatih, kot sta ambisonics in dolby atmosfera.

Produkcija: KUBER (HEKA)/PiNA

Desierto Sonoro

Mauricio Valdés San Emeterio

2022

This is the first piece entirely produced at the Experiential Spatial Audio Unit KUBER (HEKA) / PiNA, the argument of the piece it's based on Valeria Luiselli's "Lost Children Archive" a story about childrens crossing the border between Mexico and the USA alone. The piece uses phrases and fragments of the book, as if it was a theater play for the ears. The piece it's meant to be listened to in the above mentioned studio, as it uses 3 different forms of sound spatialisation that can only be perceived there. This installation it's a binaural version for headphones as an approximation of how the spatial distribution of the piece it's in the room.

Mauricio Valdés San Emeterio has an International profession in the fields of music composition supported by technology, and improvisation, as well as curator of music/sound art festivals. With more than 20 years of career, he has been involved in a wide range of art projects and research around new technologies. Since 2021 he has worked as Curator and Head of the R/D of sound at HEKA, art and science lab in Koper, Slovenia. A studio for the application and research of different immersive audio technologies for sound and music creation on new formats, like ambisonics and Dolby atmos.

Production: KUBER (HEKA)/PiNA

Design & Science poletna šola

Design+Science je multidisciplinarna poletna šola, ki spodbuja raziskovanje in eksperimentiranje na stičišču oblikovanja in različnih znanstvenih področij, ki jih vodijo priznani strokovnjaki na svojih področjih. Tedenska poletna šola vključuje delavnice, gostujuča predavanja, oglede in druge dejavnosti. Pristop poletne šole temelji na multidisciplinarnem skupinskem delu. Odprt je za udeležence s področja oblikovanja, pa tudi za vse sorodne prakse, kot so arhitektura, umetnost, računalništvo, družboslovje, naravoslovje in druge. Tako za magistrske in doktorske študente kot mlade strokovnjake. Teme preteklih edicij variirajo od bolj usmerjenih (npr. sintetična hrana) do zelo abstraktnih (npr. sobivanje, parainterligenco). Pomembno je, da je tema aktualna ter omogoča vključitev različnih profilov udeležencev.

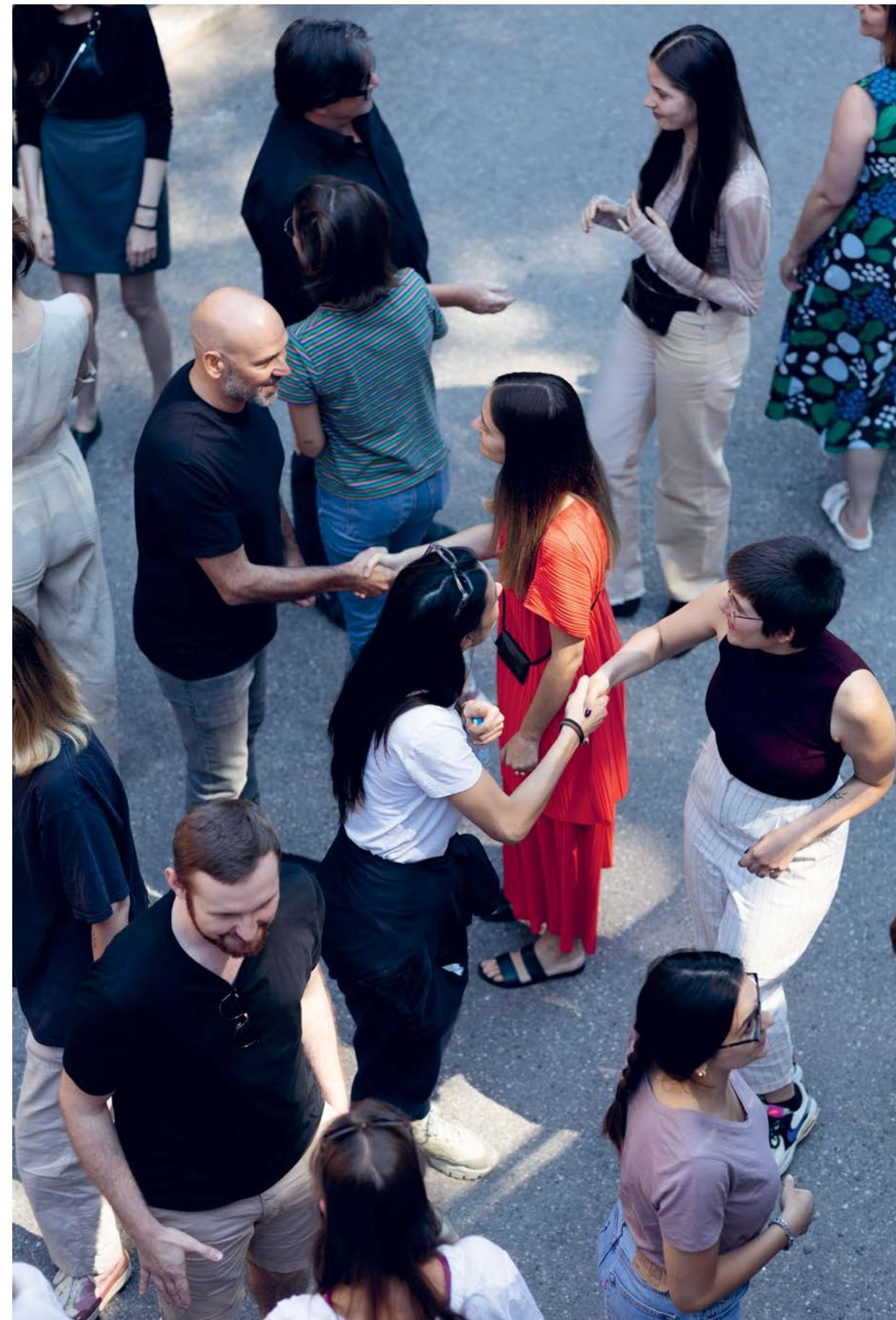
Sodelovanje: Univerza v Ljubljani, Univerza v Splitu, FH Joanneum, Graz, PiNA
Spletna stran: <https://www.designscience.school/>

Design & Science Summer School

Design+Science is a multidisciplinary Summer School that promotes exploration and experimentation at the intersection of design and various scientific fields, led by renowned experts in their respective fields. This week-long Summer School includes workshops, guest lectures, tours, and other activities. The summer school approach is based on multidisciplinary group work. It is open to participants from the design field but also to all related practices such as architecture, art, computer sciences, social sciences, natural sciences and others. Both for master's and PhD students and young professionals. Topics range from the more focused (e.g. synthetic food) to the very abstract (e.g. cohabitation, paraintelligence). It is important that the topic is up-to-date and allows for the inclusion of different participant profiles.

Collaboration: Univerza v Ljubljani, Univerza v Splitu, FH Joanneum, Graz, PiNA
Website: <https://www.designscience.school/>

Foto / Photo: Tine Lisjak



Kulturni management

Kulturni management je 16 urno izkustveno usposabljanje. Med usposabljanjem kulturnega managementa so udeleženci pridobili praktične izkušnje in spoznali načine, kako v praksi izpeljati kulturne projekte. Spoznali so okvir možnosti pravnih oseb za izvajanje dejavnosti na področju kulture in možnosti financiranja. Poleg teoretičnega znanja so se naučili tudi uporabnih metod in orodij za razvoj idej ter načrtovanje projektov. S pomočjo dela v skupinah in izkustvenih nalog so se udeleženci povezali med seboj, si izmenjali izkušnje in ideje ter tako soustvarili mrežo strokovnjakov na področju kulturnega managementa. Na koncu usposabljanja so udeleženci pripravili svoje akcijske načrte za izpeljavo svojih idej, kar jim je pomagalo pri načrtovanju prihodnjih projektov in izvedbi kulturnih dogodkov.

Cultural management

Cultural Management is a 16-hour experiential training course. During the training, participants gained practical experience and learned how to implement cultural projects in practice. They learnt about the framework of possibilities for legal entities to carry out cultural activities and about funding possibilities. In addition to the theoretical knowledge, they have also learned useful methods and tools for developing ideas and planning projects. Through group work and experiential tasks, participants networked with each other, exchanged experiences and ideas, and thus co-created a network of professionals in the field of cultural management. At the end of the training, the participants prepared their action plans to implement their ideas, which helped them to plan future projects and cultural events.

Creatorship

Creatorship je program, ki ga je PiNA oblikovala z namenom krepitev vodstvenih sposobnosti podjetnikov, obrtnikov, ustvarjalcev in drugih vodij v sodobni družbi. V povezavi z načeli laboratorija HEKA, Creatorship ponuja izkušnjo usposabljanja, ki združuje znanost vodenja z močjo umetniške iznajdljivosti, z namenom opolnomočenja vodij s spremnostmi za vodenje skupin, reševanje izzivov in krmarjenje v negotovosti ter hitrih spremembah 21. stoletja.

Zakaj kreativnost?

Bolj kot kdajkoli prej se posamezniki in podjetja soočajo z izzivi pri iskanju novih načinov dela, ki finančno varnost povezujejo s hitro razvijajočo se tehnologijo, povezanimi družbenimi odnosi, zdravjem in blaginj ter pravičnostjo in naravo. Odločilna kakovost, ki nam omogoča uspeh v tem prostoru možnosti, je ustvarjalnost - stanje prisotnosti, toka in izražanja, ki nam omogoča, da skupaj ustvarimo tisto, kar prej ni obstajalo.

Creatorship

Creatorship is a program designed by PiNA to develop leaders who are innovative, authentic, collaborative and networked. Connecting with the principles of the laboratory HEKA, Creatorship provides a training experience that combines the science of leadership with the power of artistic ingenuity to empower leaders with skills and insights to lead collaborative teams, solve challenges and navigate the uncertainty and rapid change of the 21st Century effectively.

Why Creativity?

More than ever before, individuals and businesses are being challenged to find new ways of working that integrate financial security with fast-moving technology, connected social relationships, health and wellbeing, equity and nature. The defining quality that enables us to thrive in this space of possibility is creativity - a state of presence, flow and expression that allows us to create what has not existed before, together.



Foto / Photo: Klemen Skočir

Za humano tehnologijo

Pregledna razstava Mreže centrov raziskovalnih umetnosti in kulture

24. 4.-4. 5. 2023

Cankarjev dom - Prvo preddverje in Štihova dvorana

RUK je mreža raziskovalnih centrov umetnosti in kulture na presečišču sodobnih tehnologij, znanosti in gospodarstva. V tem interdisciplinarnem vozlišču se razvijajo inovativni produkti in storitve za mehko in humano tehnologijo prihodnosti. Naložbo sofinancirata Republika Slovenija in Evropska unija iz Evropskega sklada za regionalni razvoj.

Cilj RUK je integracija umetnosti in kulture v znanstvene in tehnološke raziskave, razvoj in inovacije, digitalizacijo, podjetništvo, usposabljanje in izobraževanje s poudarkom na humanistiki in družboslovju, ekologiji, krožnem gospodarstvu in trajnostnem razvoju, saj je RUK del decentralizirane Slovenije, ki prispeva k enakomerному razvoju regij in trem temeljnim stebrom razvojne strategije S4: digitalnemu razvoju, krožnemu gospodarstvu in Industriji 4.0.

Mreža centrov RUK je sestavljena modularno iz treh lokalno-regionalno-nacionalno-mednarodno umeščenih platform DDT, PiNA in KIBLA, ki kapilarno vpenjajo akterje iz svojih okolij, platform in mrež. V partnersko sodelovanje se uvrščajo znanstvene organizacije in institucije, podjetja, univerze in druge izobraževalne institucije. Povezovanje domačih deležnikov in njihovih kapacitet, spodbujanje razvoja prebojnih in integriranih novih produktov in storitev omogočajo vključevanje v pripravo in izvedbo zahtevnejših razvojnih projektov, ki jih prinaša pokoronsko obdobje.

RUK laboratoriji DDTlab, KIBLA2LAB in HEKA, zagotavljajo ustrezno tehnološko opremo za načrtovanje in realizacijo kreativnih rešitev in usposabljanje ter prenos inovativnega načina razmišljanja v podjetja, z vključitvijo konceptov umetniškega ustvarjanja in dizajna z namenom humanizacije storitev in produktov ter odpiranjem prostora za integracijo teh rešitev za spodbujanje trajnosti, uporabe krožnih modelov in družbenih inovacij. Hkrati s prenosom inovativnih aplikacij na tržišče, je cilj tudi krepitev inovativnih malih in srednjih podjetij s čim večjim zajetjem znanj in potenciala mladih.

Ustvarjalni laboratoriji so generatorji znanja prihodnosti, saj ustvarjajo bazo zahtevanih znanj in kompetenc za poklice prihodnosti in s tem ustvarjajo potrebne pogoje za zadostitev novim potrebam v gospodarstvu, ki bodo nastajale v prihodnjih letih, tako v zvezi z uvajanjem novih tehnologij, kot z nujnim ustvarjanjem alternativnih zaposlitev, ki se bodo oblikovale znotraj ali zunaj obstoječih podjetij kot posledica uvajanja digitalne transformacije in novih tehnologij v podjetja. Laboratoriji so vozlišče inovativnih odgovorov na izzive sodobnega časa.

Towards a Humane Technology

Showcase exhibition of the Network of Art and Culture Centers

24. 4.-4. 5. 2023

Cankarjev dom - First Foyer and Štih Hall

RUK is a network of research centers of art and culture at the intersection of contemporary technologies, science, and the economy. In this interdisciplinary hub, innovative products and services for the soft and humane technology of the future are being developed. The project is co-financed by the Republic of Slovenia and the European Union from the European Regional Development Fund.

RUK's goal is the integration of art and culture in scientific and technological research, development and innovation, digitalization, entrepreneurship, training, and education with an emphasis on humanities and social sciences, ecology, circular economy, and sustainable development. RUK is a part of decentralized Slovenia and contributes to even regional development and supports the three fundamental pillars of the S4 development strategy: digital development, the circular economy, and Industry 4.0.

The network of RUK centers consists modularly of three locally-regionally-nationally-internationally located platforms DDT, PiNA, and KIBLA, which capillary connect operators from their environments, platforms, and networks. Partnerships include scientific organizations and institutions, companies, universities, and other educational institutions. Connecting domestic stakeholders and their capacities, promoting the development of breakthrough and integrated new products and services, enable their involvement in the preparation and implementation of more demanding development projects in the post-corona period.

RUK laboratories DDTlab, KIBLA2LAB and HEKA provide appropriate technological equipment for the design and implementation of creative solutions and training and the transfer of innovative thinking to companies. They include the concepts of artistic creation and design to humanize services and products, and open space for the integration of these solutions to promote sustainability, use circular models and social innovation. Along with the transfer of innovative applications to the market, the goal is to strengthen innovative small and medium-sized enterprises by maximizing the coverage of young people's knowledge and potential.

Creative laboratories are the generators of future knowledge, as they create the base of required knowledge and competencies for the professions of the future. Thus they create the necessary conditions to meet new needs in the economy that will arise in the coming years, both in terms of introducing new technologies and employment that will be created as a result of digital transformation and new technologies in companies. Laboratories are a hub of innovative responses to the challenges of modern times.

Konferenca RUK

V ponedeljek, 24. aprila 2023, na dan odprtja pregledne razstave Mreže centrov raziskovalnih umetnosti in kulture RUK, je v novoodprtih Dvorani Alme Karlin v Cankarjevem domu potekala konferenca Za humano tehnologijo. Po konferenci je v Prvem preddverju sledilo odprtje razstave Za humano tehnologijo. V Mreži RUK si prizadevamo za integracijo umetnosti in kulture v znanstvene in tehničke raziskave, razvoj in inovacije, digitalizacijo, podjetništvo, usposabljanje in izobraževanje s poudarkom na humanistiki in družboslovju, ekologiji, krožnem gospodarstvu in trajnostnem razvoju. Na konferenci smo z umetniki, umetnicami, odločevalci in odločevalkami ter strokovnjaki in strokovnjakinjami na zgoraj omenjenih področjih spregovorili o vizijah prihodnosti, ki združujejo najsodobnejše tehnologije in v središče postavljajo temeljne postulate sodobne družbe 21. stoletja.

RUK conference

On the day of the opening of the survey exhibition of the RUK Network of Art and Culture Research Centers, April 24, 2023, a conference entitled Towards a Humane Technology was held in the newly opened Alma Karlin Hall of the Cankarjev dom Cultural Center, followed by the opening of the Towards a Humane Technology exhibition. The RUK network focuses on the integration of art and culture in scientific and technological research, development and innovation, digitalization, entrepreneurship, training and education, with an emphasis on humanities and social sciences, ecology, circular economy and sustainable development. The artists, decision-makers and experts from the above-mentioned fields who participated in the conference discussed visions of the future that bring together the most advanced technologies and relate to the postulates of the modern society of the 21st century.

Foto / Photo: Kristina Bursać



RUK: Za humano tehnologijo / Towards a Humane Technology
Pregledna razstava Mreže centrov raziskovalnih umetnosti in kulture
Showcase exhibition of the Network of Art and Culture Centers
24. 4.–4. 5. 2023

Cankarjev dom - Prvo preddverje in Štihova dvorana / First Foyer and Štih Hall

Vodje projekta: mag. Špela Pavli Perko (direktorica, Delavski dom Trbovlje), Peter Tomaž Dobrila (predsednik, KID KIBLA), Borut Jerman (predsednik, PiNA)

Kurator razstave: Marko Vivoda
Avtor obrazstavnega besedila: Peter Tomaž Dobrila
Obliskovalec razstave: Luka Murovec
Grafična podoba: Dorian Šiško
Producenktki: Ana Markežič, Živa Kleindienst
Komunikatorke: Živa Kleindienst, Darja Oražem, Tanja Hanžič

Project Leaders: mag. Špela Pavli Perko (Director, Delavski dom Trbovlje), Peter Tomaž Dobrila (President, ACE KIBLA), Borut Jerman (President, PiNA)
Exhibition Curator: Marko Vivoda
Author of the exhibition text: Peter Tomaž Dobrila
Exhibition Design: Luka Murovec
Graphic Design: Dorian Šiško
Producers: Ana Markežič, Živa Kleindienst
Communicator: Živa Kleindienst, Darja Oražem, Tanja Hanžič





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DELAVSKI DOM TRBOVLJE


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