

## [Mazetools Presskit 2024 \(en\)](#)

[Mazetools 2024: Motion-Based Sound Control & Upcoming Tools](#)

[Mazetools - The Creative Fusion](#)

[Links](#)

[Mazetools Soniface Update Version 4.2](#)

[Links](#)

[Mazetools Soniface Basic Features](#)

[Mazetools Mutant Update Version 1.5](#)

[Overview of Mazetools Mutant](#)

[Feature List](#)

[Links](#)

[Upcoming Projects](#)

[Mazetools Botany](#)

[Modyyssey VR - A Geometric Poem](#)

[Links](#)

[Background on the development of Mazetools](#)

[Development: The project later evolved into Soniface and then Maze Core.](#)

[Mazetools Mutant & Assist](#)

[From VR prototype to performance](#)

[Links](#)

[Mazetools team](#)

[Stephan Kloß: Idea, Concept, Design, Programming & Artistic Application](#)

[Jakob Gruhl: Management, Co-Concept, Management, Artistic Application & Mediation](#)

[Background of Ectoplastic Laboratory](#)

[CV Stephan Kloß & Jakob Gruhl \(Ectoplastic/ Mazetools seit 2013\)](#)

# Mazetools Presskit 2024 (en)

## Mazetools 2024: Motion-Based Sound Control & Upcoming Tools

For more than ten years, we have been combining movement and sound. The introduction of Kinect 2 brought about a significant change in media art, and now, in 2024, motion tracking through TensorFlow can be accomplished using any standard webcam.

After two years of research and development, this technology has been effectively integrated into Mazetools, resulting in enhanced quality and performance. We have recently made improvements to our motion tracking capabilities, with a particular focus on controlling sound and music through body movements and gestures.

Our tracking system now functions seamlessly with the cameras on a range of mobile and desktop devices, including iOS, Android, and Windows. In addition, we have implemented a motion recorder and made significant enhancements to our room-scale tracking for Azure Kinect and RealSense. We invite you to view examples of our performance projects at ZiMMT in Leipzig, which showcase the full extent of our capabilities.

Please find below an overview of the Soniface and Mutant updates, new app releases in 2024, and background information on Mazetools and their use in projects. Additionally, we would like to invite you to visit our YouTube channel @mazetools, where you can find many new videos. We appreciate your interest in our products.

Should you have any questions or require further information, please do not hesitate to contact us.

Best wishes, Stephan Kloß & Jakob Gruhl

Contact: Jakob Gruhl

gruhl@ectoplastic.com

<https://www.mazetools.com>

<https://www.ectoplastic.com>

<https://www.instagram.com/mazetools>

<https://www.youtube.com/@mazetools>

<https://www.twitch.tv/mazetools>

## Mazetools - The Creative Fusion

Mazetools provides a novel approach to music and creativity, which involves exploring sounds in a unique way, experiencing them visually, and modifying them through gestures.

Emphasising the process of creating music and sounds rather than the end result, the applications are distinctive, intricate and experimental, much like works of art themselves, and are constantly evolving.

Mazetools currently offers two options: Mutant and Soniface. Mutant serves as a loop machine and operates with a set number of instruments, while Soniface is more flexible in terms of adding instruments and integrating them with visuals. It is worth noting that a new instrument, Botany, is currently in the alpha phase.

The development of Mazetools is led by Stephan Kloß and Jakob Gruhl in Halle and Leipzig. Our team consists of a small group of enthusiasts who work independently. We have strong connections within the local scene and are excited to see our community grow with your support.

## Links

App Store

<https://apps.apple.com/us/developer/ectoplastic/id1103228660>

Play Store

<https://play.google.com/store/apps/dev?id=7553249825125172783>

Steam (PC/ MAC/ LINUX)

<https://store.steampowered.com/search/?publisher=Ectoplastic%20UG>

Mazetools 2024

[https://www.youtube.com/playlist?list=PLwK2Bs1UOdOL8mfLb0QlgS9HVx-QMqh\\_r](https://www.youtube.com/playlist?list=PLwK2Bs1UOdOL8mfLb0QlgS9HVx-QMqh_r)

You can support our work in general and the development of our free app. Thank you!

<https://ko-fi.com/mazetools>

# Mazetools Soniface Update Version 4.2

During the past two years, we have worked tirelessly on this major update, adding numerous new features and putting a lot of effort into it. Soniface now supports, beside Kinect v2/ Azure Kinect, the use of a webcam as a motion-tracking sensor to control music and sound through body movements.

With the new demo version available on Steam, users can easily try out Soniface. In addition, Linux support has been added along with several useful features. These include a new optional user interface design, making it more user-friendly on smaller displays. On iOS, Audiobus and Inter-App Audio routing, MIDI In&Out routing, and Airplay for visual output are now supported.

The new version includes a new feature for modular linking of controllers, allowing complex interconnections of mazes and instruments to create synth and effect chains for live performances. For a sneak peek, check out our YouTube channel.

## New Features and Improvements:

- Enhanced app performance, structure, audio, and image quality
- New design mode for small displays (simple design)
- Visual interface for the mobile Pro version
- Webcam-based motion tracking for sound interface
- New preset structure for all instruments
- Rhythm sequencer pattern mode
- Parametric EQ for Master, Rhythm, and Sampler
- Notation interface with chord and scale selection
- New automation interface: modular linking of all controllers across mazes
- Keyboard and live pad for dynamic instrument input
- New guide, improved in-app help in English and German
- iOS: Background audio, Audiobus support, Inter-App Audio, MIDI In&Out, Airplay visual screen support

## Links

App Store: <https://apps.apple.com/us/developer/ectoplastic/id1103228660>

Play Store: <https://play.google.com/store/apps/dev?id=7553249825125172783>

Steam (PC/ MAC/ LINUX)

<https://store.steampowered.com/search/?publisher=Ectoplastic%20UG>

Mazetools Soniface 4.0 (free version) Demo Video: <https://youtu.be/gOclM-TfEZA>

Mazetools Soniface Pro 4.0 Demo Video: <https://youtu.be/OP1fUrkJK44>

Performances using Mazetools Soniface Pro:

<https://www.youtube.com/playlist?list=PLwK2Bs1UOdOKLRmGbpQOJdvPlz2DyfwCO>

Dr.Eck - Schwimm (Album) made with Mazetools Soniface Pro:

<https://lss-records.bandcamp.com/album/schwimm>

## Mazetools Soniface Basic Features

### Key Features

- Create custom scenes with audio and visual objects
- Control controllers and play instruments using multitouch
- Motion interface for gesture and movement-based sound control
- Project file compatibility across all platforms
- Separate design modes for small and large displays
- Enhanced in-app guide, FAQ & help functions in German and English

### Instruments

- Gridsynth: Generative visual synthesizer for drones and melodies with sequencer & arpeggiator
- Rhythm sequencer for sample- and synth-based basses and drums
- Spatial & Granular Soundscape Sampler with Mic-Input, Sample Library, and File Integration
- Tonart interface for instruments with progression sequencer
- Note-LivePad for Gridsynth, Bass & Sampler

### Automation & Connectivity

- Advanced controller automation: LFO, Touch-Editor, SideChain, LeapMotion
- MIDI input and output (Motion 2 MIDI Bridge)
- Master FX and Ableton Link
- Mouse and keyboard support
- Touch alternatives (iOS App on MacOS)
- Audiobus integration
- Inter-App-Audio

### Mazetools Soniface Pro Features

- **Unlimited Instruments (Mazes):** Enjoy the flexibility of creating an unlimited number of instruments or mazes within the software.
- **Pattern Mode for Scene Creation:** Utilize the Pattern Mode to craft unlimited scenes featuring multiple instruments and samplers, each with distinct settings such as tempo, pitch, main EQ, sequence length, and motion-tracking connections.
- **Visual Mode with Live Video Outputs:** Immerse yourself in the Visual Mode, offering 1-3 live video outputs for performances and VJing. (iOS supports Airplay for visual output.)
- **The Desktop Version Features Spatial Sound Editing & Playback in 5.1 & 7.1:** Experience spatial sound editing and playback in 5.1 and 7.1 formats, providing an immersive audio environment. Desktop versions support native output in Spatial Audio.
- **Unlimited Internal Audio Recording:** Record your creations limitlessly with unlimited internal audio recording capability in .wav format, supporting up to 7.1 channels.

- **The Pattern Mode** enables the creation of diverse scenes, each featuring multiple instruments and samplers. These elements can be customized with varying fundamental settings, including tempo, pitch, main EQ, sequence length, and motion-tracking connections.
- **The Visual Interface** adds a layer of creativity by allowing the customization of the visual representation for each scene. The visual elements are designed to correspond with both the audio output and motion interactions, including the primary effects.

### **Difference: Mazetools Soniface & Soniface Pro**

For over 10 years, we have been working towards fostering creativity. Our workshops and development of new interfaces have been inspired by these questions. Soniface serves as an initial point of connection, but it is only a part of a broader creative process. While some may find Soniface too intricate and complex, it remains an essential tool for achieving our goals. On the other hand, many people are fascinated by the combination of visuals and sound, musical interaction, and various forms of virtuosity. However, Soniface remains a unique and intricate instrument, beginning as an artistic experiment that has evolved into a canvas for creative possibilities. Ultimately, its worth lies in its application within the realms of art and music.

Since its release in 2017, we have provided both a Soniface Free App and a Soniface Premium App. The Soniface 4.0 update unlocks significant features for the free version. Purchasing the Pro version directly supports the free version, which has been downloaded and used globally. Our passion and love for this software is reflected in our aim to share it with people worldwide who enjoy making music and being creative. Soniface stands for Sonification Interface – a platform to translate anything into sound. This utopian concept is a metaphor for a tool that translates one's emotional state into sound. Soniface reflects this subjectivity. Development is ongoing, and more Mazetools will emerge, building upon Soniface and translating insights into new tools. The development process has been shared publicly since late 2023 through our YouTube channel in live streams, engaging with our community.

What distinguishes Soniface (free) from Soniface Pro? The 'Pro' version gives you access to all facets of the software, encompassing the full spectrum of our years of development. It offers essential features in the context of musical and artistic applications. The distinction lies in the scope: the Free App permits compositions with up to 5 objects, each hosting 3 instrument modules. Soniface Pro combines modular concepts with generative sound synthesis, allowing for instrument accompaniment, sampling, and recording processing in other tools.

It enables unlimited scene creation and is used for audiovisual performances and interactive installations. Crucially, it supports Kinect (Windows) and the linking and output of motion data as MIDI commands, enabling the control of three projectors while composing in 7.1 Spatial Audio. The application has been tested under high load and consistently delivers performance, even on entry-level gaming PCs. Examples of our work can be found in the links below.

# Mazetools Mutant Update Version 1.5

In addition to developing Soniface, we have also made improvements to Mutant. These enhancements cover a wide range of areas and contribute to an overall better app experience. Our latest update introduces the Mutant Cloud, which allows you to store your own sound scenes, beats, and presets. The Cloud takes you on a journey of ever-evolving mutations of your created scene. Furthermore, we have improved the display of instrument notes. This is complemented by a new interface that allows you to set scales and chords, which are then applied to the instruments.

New features and improvements:

- Enhanced app performance and audio quality
- New scale and chord interface
- Snapshot Cloud: to load snapshots into a 3D cloud (offline), defined by mood, energy, and structure
- Interactive cloud navigation and snapshot filtering by author, key, and tempo
- Snapshot Mutation Interface for merging two snapshots
- Improved setup interface
- New guide, improved in-app help in English & German

## Overview of Mazetools Mutant

Mazetools Mutant enables loop-based music production. The software features synths, drums, samplers, sequencers, filters, and effects, all of which can be played on a square surface. These instruments collectively form the Hypercube, a dynamic space that alters the music from various perspectives.

To illustrate, imagine a turntable playing a vinyl record at 33 or 45 RPM, resulting in a higher and faster sound. Conversely, the sound becomes slower and deeper from 45 to 33. Although the song remains the same, the altered conditions create a different experience. Mutant operates on a similar principle. By starting with a beat loop and turning the Hypercube, new perspectives emerge, leading to fresh ideas and outcomes in the musical process. Perfection is not necessary. Mutant is focused on experimentation, loop creation, and sound exploration. The session, moment, and audio recording are all important.

To capture the created loops, take a snapshot - an anchor point with all instruments that you can always return to. When you load your snapshot into the Cloud, you can position it in three dimensions with Mood, Energy & Structure. Choosing a different snapshot will alter it in a specific manner, resulting in numerous new perspectives. Although the Cloud is currently offline, it is technically designed to potentially become part of an online cloud for user data and content sharing. The storage system is compatible with machine learning. The project originated from the research project Mazetools Assist. For more information, visit [Ectoplastic.com](http://Ectoplastic.com).

Collaboration: In Collab Mode, two Mutant users can create music together over a local network. All inputs are transmitted live, and each person plays instruments or effects.

## Feature List

- 7 Cubes with different settings as a starting point for your session
- Interactive, quantized loop machine within the cube cell
- 7 instruments with sequence-based note input, envelope, filter & effects
- 4 different synthesizers, 2 drum sequencers, 1 sampler with slice, granular, and pitch-shift modes
- Optimized for loop input via multitouch
- Sample library with user file integration
- Instrument-cross interface for defining chords and scales
- Main FX interface including echo, reverb, reverser, note envelope & flanger
- Snapshot principle: captures the played loop; the snapshot list can be used like a playlist of different loops
- Save session to store the snapshot list
- Interactive cube cell navigation to switch from one cell to another and vary the musical perspective in key, tempo, and pitch
- Snapshot Cloud: load your snapshot into a 3D cloud, defined by mood, energy, and structure Cloud navigation and snapshot filtering by author, key, and tempo
- Snapshot Mutation Interface to merge two snapshots, creating infinitely many new perspectives
- Audio recording as a .wav file
- Ableton Link
- Integration with Audiobus & Inter-App-Audio (experimental support)
- Setup menu to define graphic and sound quality settings
- Main zoom to adjust the overall size of the user interface
- In-app guide in German and English

## Links

App Store      <https://apps.apple.com/us/app/mazetools-mutant/id1483123496>  
Play Store    <https://play.google.com/store/apps/details?id=com.mazetools.mutant>  
Steam          [https://store.steampowered.com/app/1174980/Mazetools\\_Mutant/](https://store.steampowered.com/app/1174980/Mazetools_Mutant/)  
Mazetools Mutant Demo 2023      <https://youtu.be/35Xk7Q627Zs>  
Mazetools Mutant Introduction 2020 [https://youtu.be/-3oPU2Qjk\\_E](https://youtu.be/-3oPU2Qjk_E)  
Dr.Eck - Fly (AV Performance with Mazetools Mutant, 2023)  
<https://youtu.be/l0FZ12QE7x0>  
Dr.Eck - Bredlow (Album made with Mazetools Mutant, 2022)  
<https://lss-records.bandcamp.com/album/bredlow>



# Upcoming Projects

## Mazetools Botany

The app is a multi-sensory world that combines gaming and musical interaction to create a relationship between humans and plants. It offers an immersive and intuitive musical experience for all music enthusiasts.

Through musical interaction, a plant grows from seed to tree, with the growth of roots, trunk, branches, leaves, flowers and pollen directly connected to various instruments. Experience is more important than the end result or active learning when it comes to music. It's about the creative flow, a meditative moment that comes and goes, leaving behind a positive feeling and resonance - like a plant.

The project is scheduled for publication in 2024, and we will document the journey as it progresses. We will continue to collect ideas and involve the community in the development, including collaborations with artists who design their own seeds.

Mazetools Botany will be researched in cooperation and further developed as a project in the field of digital education and participation. The application works with several levels of interaction and incorporates the movements of the body, hands, and face. The prototype was created in 2022 with the support of Marc-André Weibezahn, Jan Lorenz, and Elisabeth Reiche, and was funded by the Saxony-Anhalt DIGITAL CREATIVITY (EFRE) programme.

Learn more about Mazetools Botany at: <https://www.ectoplastic.com/botany/>

First impressions <https://youtu.be/PhmSSgWyNdU>

## Modyssey VR - A Geometric Poem

Modyssey explores metaphysics, geometry, and immersion, taking visitors on a journey of transformation where their associations shape the story of being and becoming. The VR experience guides users through the imaginary life cycle of an abstract self from the future or past. The Mitteldeutsche Medienförderung (MDM) and the Kunststiftung Sachsen-Anhalt have funded the project. The Modyssey performance featuring Mia Gara was produced in 2023 as part of Tanz Digital.

Geometry is a universal language that has been a part of art, music, and entertainment industries, as well as mathematics, physics, and biology, from the quadrivium of antiquity to the digital present. In virtual reality, geometry forms the basis of every experience. The aesthetic impact of geometry is captivating for most people. Modyssey aims to make the interdisciplinary connection between generative game mechanics visible, tangible, and audible.

The term 'Odyssey' in the name is a metaphor for a journey into the unknown that appears to start and end in the same place. The visitor navigates a labyrinthine system of lines and paths, interacting with a world that is constantly transforming. Inspired by the seven liberal arts of antiquity and the Quadrivium, Modyssey - A Geometric Poem utilises stylistic devices from philosophy, geometry, computer science, music, and art. The aim is to emotionally and interdisciplinarily explore these disciplines in a coherent process of experience.

"Our creation is the modification of relationship." In the context of 2020, Rabindranath Tagore's quote aptly describes the current state of human relationships. Individuals and their counterparts are increasingly interacting through avatars, and virtual correspondence is becoming the norm, creating new starting points for dealing with a new dimension of virtuality.

Modyssey - A Geometric Poem centres around the interaction with the 'other' as an abstract dialogue, encompassing intentional and unintentional connections and the experience of action and reaction. This dialogue occurs on multiple levels - passive, active, mental, and physical - with associated contexts interpreted by the viewer without linguistic clues. The environment is virtual and the other person is artificial. The phrase 'Our creation is the modification of relationship' also describes the transformation process of the altered communication between humans and machines.

## Links

"Modyssey - Awakened", ZIMMT Leipzig, Kurzvideo  
<https://www.youtube.com/watch?v=FcToxn5pd8>

"Modyssey - Awakened" Probe  
[https://youtu.be/rzRTdhDB\\_XQ](https://youtu.be/rzRTdhDB_XQ)

# Background on the development of Mazetools

Development: The project later evolved into Soniface and then Maze Core.

The project started in 2013 as Maze, created by multimedia designer and musician Stephan Kloß. It gained significant attention when Kloß performed with the project as the winner of the Ircam Call For Performance, organized by IRCAM and WARP Records, at the Centre Pompidou. The groundwork for developing an interface to control sound through movement was established in 2014 by integrating Leap Motion and Kinect into the Maze Prototype.

This was followed by additional advancements in the context of concerts, performances, and festivals. With a start-up grant from the state of Saxony-Anhalt, we successfully transformed the prototype into an app. The initial release of Mazetools, Soniface 1.0, received the App Art Award from ZKM in Karlsruhe in May 2017. Stephan Kloß and Jakob Gruhl founded Ectoplastic in the same year.

Since then, the development of Mazetools has continued, specifically the programming of the Maze Core. This is the technological backend that consists of self-developed, generative audio, visual, and interface modules in the Unity game engine environment. Currently, the Maze Core allows for the distribution of Mazetools on Windows, MacOS, iOS, iPadOS, Android, and Linux platforms. Special pipelines and workflows have been developed for all platforms to ensure continuous updates.

## Mazetools Mutant & Assist

In 2020, Ectoplastic released Mazetools Mutant, an app based on Stephan Kloß's master's thesis at Burg Giebichenstein University of Art and Design Halle. The app offers a multi-perspective experience of music reception and explores the possibilities of a collaborative interface for digital music-making, similar to working together on an online document. Kloß's technology has been successfully realised and can be used in Mazetools Mutant.

The Mazetools Assist project, funded by the Federal Ministry for Economic Affairs and Climate as part of the IGP programme 2021, was a milestone in the further development of Mazetools Mutant. It aimed to research and develop a machine learning-compatible storage system and implement AI-supported forms of interaction. These included camera-supported motion recognition of the body, hands, and face, which could be used as controllers within electronic music.

## From VR prototype to performance

The development of Maze Core has involved collaborations and artistic and musical applications of the software since its inception. An example of this is the VR project 'Modyyssey - A Geometric Poem', which was initiated in 2021 and funded by the Mitteldeutsche Medienförderung and the Kunststiftung Sachsen-Anhalt. The project is expected to be released as a VR app by the end of 2024. In 2022, a project called

'Modyyssey Performance' was created in collaboration with musician and performer Mia Gara. This audiovisual, motion-tracking-based performance was produced as part of the 'Tanz Digital' programme, with funding from the Neustart Kultur programme and the Federal Government Commissioner for Culture and the Media. It was performed at the Leipzig Centre for Immersive Media Art, Music and Technology. The collaboration with Hamburg-based artist Arthur Schmitt further influenced the development of the interface between movement and music.

In 2023, the concept of motion-tracking-based performance continued with the 'Take Off Sound' project. This project explored the creation of sound through movement and the control of movement through interactive sound. Tomoko Nakasato, the performer, acted as a 'human mixing console' (Thaemlitz). Her digital image transmitted change data of her body to generative synths, granular samplers, effect chains, spatialisers, and visuals via motion tracking. Tomoko performed live interpretations of musical fragments by Schneider TM and Jakob Gruhl in four acts. The project received support from Musikfonds, ZiMMT e.V., Ausland Berlin, Not A Number GmbH, and the fashion architecture label BIEST (Berlin).

## Links

Take Off Sound - Live at ZiMMT, complete performance video, 2023

<https://www.youtube.com/watch?v=wioEeMYQuU0>

Tomoko Nakasato & Ectoplastic, Live at Ausland Berlin, short video, 2022

<https://www.youtube.com/watch?v=wioEeMYQuU0>

"Mazetools to motion", Kurzdokumentation, 2022

<https://youtu.be/u1NRiuYfBbw>

Ectoplastic Performance Live at ZiMMT (Stephan Kloß & Jakob Gruhl)

<https://youtu.be/BNPvYKLYswI?si=oVr2-y2EO8Tg1cfd>

Ectoplastic Videos, 2013-2021

[https://www.youtube.com/playlist?list=PLCxFDJDns-bfEUb4N3YavAh5aa\\_0xKTTe](https://www.youtube.com/playlist?list=PLCxFDJDns-bfEUb4N3YavAh5aa_0xKTTe)

Mazetools Development, 2013-2015

[https://www.youtube.com/playlist?list=PLCxFDJDns-bfEUb4N3YavAh5aa\\_0xKTTe](https://www.youtube.com/playlist?list=PLCxFDJDns-bfEUb4N3YavAh5aa_0xKTTe)

## Mazetools team

### Stephan Kloß: Idea, Concept, Design, Programming & Artistic Application

Stephan Kloß was born in Bautzen in 1985. In the late 1990s, he started producing electronic music and hip-hop on his PC under the pseudonym Dr. Eck. Stephan studied Multimedia & VR Design (BA, 2015) and Multimedia Design (Master, 2019) at the Burg Giebichenstein University of Art. He has worked as a freelancer in game and VR development, specializing in audio development, multimedia design, and music and audio production. Stephan explores and develops audiovisual connections, generative design, and DSP with a focus on Unity (C#) and VVVV. (<http://kloss.media/>)

During his studies, he developed the Spatial Audio application EARScape in 2010. In 2011, he started with the first prototypes of the current Mazetools project. In his Bachelor of Arts in 2015, he developed the audiovisual motion-tracking installation ECHO. In the Master's program in 2019, he dedicated himself to collaborative music apps. Stephan worked as an audio developer on the VR application 'A Symphony of Noise' with Prefrontalcortex Studio in Halle, alongside producer Michaela Pňáčková. He provided soundtracks for media artist Marie-Eve Levasseur's VR application. Since 2023, he has been working as a UI designer for Not A Number GmbH, collaborating with Felix Deufel and Daniel Rudrich (Atmoky) on the 'Grapes' project. Stephan has won multiple art and design awards, such as the ZKM App Art Award, the Giebichenstein Design Award, Soundcinema Düsseldorf, and the IRCAM Call for Performance.

### Jakob Gruhl: Management, Co-Concept, Management, Artistic Application & Mediation

Jakob Gruhl was born in Bautzen/Budyšin in 1986. He completed his museology studies with a diploma in 2012, focusing on mediating contemporary history through new media. Since 2013, he has acted as a liaison between art, music, and technology within Ectoplactic, specifically in the Mazetools project. As a musician, he is known by the pseudonym JKUBE. He frequently conducts workshops on hip-hop and electronic music in schools and socio-cultural institutions. Jakob produces music for Afghan rapper and activist Mustafa Bahaduri. He is also a composer, lyricist, and performer of Sorbian hip-hop songs, as well as an audiovisual performer in the ambient/electronica genre. As a native Sorbian speaker, Sorbian themes often accompany his creative work. Jakob is a co-initiator of the DRASTA DIGITAL project, which aims to digitize and promote the cultural heritage of Sorbian costumes.

Jakob Gruhl is a founding member of the Center for Immersive Media Art, Music, and Technology e.V. in Leipzig (<https://zimmt.net/>). He focuses on concept development and has developed the 'Immersive Sound - Forum for 3D Audio.' Additionally, he is a co-initiator of the 'Spatial Audio Network Germany' and the 'Spatial Audio Network Europe,' which has been running as an EU cooperation project since 2024. Since 2022, he has served on the interdisciplinary advisory board for the Cultural Office of the City of Leipzig. Since 2024, he has been the deputy board member of the Music Tech Germany industry association.

## Background of Ectoplastic Laboratory

Stephan Kloß and Jakob Gruhl have been acquainted for over 20 years. In 1999, they exchanged their first beat loops on floppy disks, delved into hip-hop, and produced their initial electronic music using Fruity Loops. Presently, they remain fascinated by sound, releasing their own music on their label, Laser Sound System, and performing live audiovisual sets and performances. In 2013, they established the Ectoplastic Laboratory and founded the eponymous company in 2017.

Ectoplastic operates at the intersection of art, music, and technology. Founders Stephan Kloß and Jakob Gruhl conceive creativity as a network, serving as interfaces and initiators of interdisciplinary, technology-based cultural projects. Ectoplastic creates conditions that foster creativity by combining art and music with immersive technologies and inquiries into practical cultural participation and inclusion.

Ectoplastic develops interactive interfaces between audiovisual media and artistic expressions. The company explores how music enthusiasts can enter a creative flow and how electronic music and musical gestures can come closer together. These pursuits led to the development of Mazetools and instruments for generative sound and visuals, as well as new forms of interaction such as body, hand, and face tracking. The team has received support from the Federal Ministry for Economic Affairs and Climate, the Federal Commissioner for Culture and Media, EFRE and Saxony-Anhalt, the Cultural and Creative Pilots of Germany, the Art Foundation Saxony-Anhalt, and the Mitteldeutsche Medienstiftung.

The company not only develops and distributes Mazetools products but also engages in advisory, artistic, and mediating activities in various fields. These include music technology, immersive technologies, game and VR audio development (Unity, C#), motion tracking within creative applications, UI design in the music domain, music and soundtrack composition, as well as audiovisual performances and installations.

Links:

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

[https://www.instagram.com/ectoplastic\\_lab](https://www.instagram.com/ectoplastic_lab)

<https://www.youtube.com/@ectoplastic>

## CV Stephan Kloß & Jakob Gruhl (Ectoplastic/ Mazetools seit 2013)

2024 SubSorb Festival Hoyerswerda with Kolektiv Wakuu, Live-Ambient, Sorbian Rap Performance

2024 Mazetools Soniface 4.0 & Mazetools Mutant 4.0 Update

2023 Simulmitmachpreis, Free State of Saxony, Project: Drasta Digital Installation in 3D

2023 Drasta Digital II Workflow Development, funded by the Foundation for the Sorbian People

2023 Motion-Tracking Performance with Tomoko Nakasato & SchneiderTM, ZiMMT Leipzig & Ausland, Berlin, funded by the Music Fund

2023 Concert support for Mia Gara, IFZ, Leipzig

2023 Modyssey - Awakened, Audiovisual Motion-Tracking Performance with Mia Gara, ZiMMT, Leipzig, funded by Neustart Kultur, Federal Commissioner for Culture and Media, and Dachverband Tanz within the framework of Tanz Digital

2022 Simulmitmachpreis, Free State of Saxony, Project: Drasta Digital, Sorbian Traditional Elements in 3D

2022 Scholarship Musikfonds, Jakob Gruhl, Project "Traditional Sorbian Music Meets Experimental Electronic Beats"

2022 Scholarship Musikfonds, Stephan Kloß, Project "Modyssey Mirror"

2022 Motion-Tracking Performance with Tomoko Nakasato, Born Global Startup, Halle

2022 Motion-Tracking Performance with Tomoko Nakasato, Ausland, Berlin

2022 Motion-Tracking Performance with Mia Gara, MDR Wissen, Halle

2022 Mazetools Botany Prototype, funded under the framework of Saxony-Anhalt DIGITAL CREATIVITY (EFRE)

2021 Soundtrack Stems for VR Experience Biolum, Leipzig

2021 Audiovisual Performance, Spatial Audio, ZiMMT Leipzig

2021 Audiovisual Performance, Lusatia Festival, Drebkau

2021 Audiovisual Performance, Filmfestival Cottbus

2021 Audiovisual Performance "SerbPop" by Radio Berlin Brandenburg (RBB), Cottbus

2021 Workshop & Conference Host, Immersive Sound - Forum für 3D Audio, ZiMMT Leipzig

2021 Scholarship "INITIAL" Academy of Arts, Jakob Gruhl, Project: "ZiMMT Connect"

2021 Mazetools Assist Prototype, funded by the Federal Ministry for Economic Affairs and Climate

2020 Cultural and Creative Pilots of Germany

2020 Installation, Mazetools Mutant, Silbersalz Festival, Halle

2020 Release Mazetools Mutant 1.0

2020 Release Mazetools Soniface 2.5

2019 Workshop: App2Music, with Bühnen Halle & App2Music e.V., Halle

2019 Giebichenstein Design Award for Mazetools Mutant, Best Experiment, Halle, 2020

2019 Audiovisual Performance, Forum Social Entrepreneurship, Magdeburg

2019 Concert, "SerbPop," Radio Berlin Brandenburg (RBB); audiovisual performance; Glad House Cottbus

2019 Motion-Tracking Performance, Finissage "Sorbian Street Style" Sorbian Museum Bautzen, in cooperation with Marthe Hovitz, Bautzen

2019 2nd Contact Improvisation Festival Leipzig; Live improvisation during Contact session; Leipzig

2019 Visual Performance, GaggaLacka Rave, La Bim, Halle

2019 Release Mazetools Soniface 2.0

2019 Acoustic Stories Award, OMYK - A Space Odyssey, Sound Cinema Düsseldorf, Düsseldorf

2019 Workshop: Mazetools Mutant, Concept & Prototype, Interactive Conference Day, DOK Leipzig, Leipzig

2019 Workshop: IRCAM Forum, Motion-Tracking in Mazetools Soniface, IRCAM Institute, Paris

2018 Workshop: App2Music, App2Music e.V., Halle

2018 "The Sound of Light"; audiovisual performance with Michael Vetter (Organ), Robert Simmchen (Saxophone); Cathedral St. Petri, Bautzen

2018 "Wisp Laboratory"; Motion-Tracking performance; Leipzig

2018 1st Contact Improvisation Festival Leipzig; Live improvisation during Blind-Contact-Session; Leipzig

2018 Workshop: Motion-Tracking in Mazetools Soniface, FIK Festival, Usti nad Labem, Czech

2018 Audiovisual Performance: Fraunhofer Institut, Halle

2018 Workshop: Wallifornia Music Tech, Liège, Belgium

2018 Audiovisual Performance: WISP Laboratory, Leipzig

2018 Workshop: Ostlichter Festival, Leipzig

2017 Interactive Soundtrack: Das Herzenhören von Jonas Schütte, Halle

2017 Audiovisual Performance & Workshop: Genius Loci Festival, Weimar

2017 Workshop: Hybrid Music Lab Conference, Berlin

2017 ZKM AppArtAward for Mazetools Soniface, Category Sound, Karlsruhe

2017 Audiovisual Performance, TedX Uni Halle, Halle

2017 Release Mazetools Soniface 1.0, iOS, Android, PC & Mac

2017 Founding Ectoplastic company

2016 Scholarship: ego.-Start Founder Scholarship, State of Saxony-Anhalt & EU ESIF Funds

2016 Audiovisual Performance: "Prolog" Exhibition Opening; with Thomas Schönfeld; Japanisches Palais, Dresden

2016 Audiovisual Performance: "Grassi Invites: IN BETWEEN"; with Mustafa Bahaduri, Omar Shalash; Grassi Museum Leipzig

2016 Workshop: Sound Laboratory, Children and Youth Culture Workshop JoJo, Leipzig

2016 Visual Performance: Maschinenhören, with Stefkovic van Interesse, Felix Franzke, Leipzig

2015 Visual Performance: Psychedelic Orchestra, Binuu, Berlin

2015 Visual Performance: Tolerave, Festspielhaus Hellerau, Dresden

2015 Audiovisual Performance: Bundesfestival Video, Halle

2015 Audiovisual Performance: "OMYK" @ VERTIGO; IFZ, Leipzig

2015 Audio-Contact Performance: "XYZ"; with Juliane Zöllner & Aleksandr Oglaza; Freiraum Festival Leipzig



2015 Motion-Tracking Performance: ECHO, with Anna-Theresa Leitenberger, Leipzig  
2015 Audiovisual Performance: Generate! – Festival for electronic arts; Thübingen

2014 Audiovisual Performance: with Seth Schwarz, Omar Shalash, David Copley, Chaise, Halle

2014 Audiovisual Performance: Hühnermanhattan, Halle

2014 Visual Performance: Nachtaktiv, Westwerk, Leipzig

2014 Visual Performance: 40th Anniversary Turm, Halle

2014 Workshop: Open Lab, Ectoplastic Laboratory, Halle

2014 Audiovisual Performance: 3000° Festival; Wustrow

2014 Workshop: Sound Laboratory, Children and Youth Culture Workshop JoJo, Leipzig

2014 Performance with David Copley: "Diashow" Exhibition Opening, Karoline Schneider, MUCK Leipzig

2013 Visual Performance: Kasseler Dokfest, Kassel

2013 Audiovisual Performance: with David Copley; Reilfest, Halle

2013 Audiovisual Performance & Workshop: Elektro-Konsumenten x Mazetools; with Stephan Kloß, David Copley, Thomas Schönfeld, Sepp Müller; GfZK Leipzig

2013 Workshop: Learning & Sports Camp for Youth, Creative Module HipHop, Leipzig

2013 Performance: IRCAM & WARP Call for Performance, Gaîté Lyrique, Paris