



The Labyrinth of Time

Stéphane de Gérando

A polyartistic and technological work

Detail of existing modules [2]

With an example of an installation

Document for and ordering guide — 2026

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DESIGNING YOUR *LABYRINTH*

MUSEUM INSTALLATIONS, EXHIBITIONS, PERFORMANCES, CONCERTS, MONUMENTAL PROJECTIONS, VIRTUAL REALITY...

Depending on your means, a venue, an event, from the smallest form (for example a video projection) to a «large form» LDT installation over an extended period, with varied installations, labyrinthine pathways, event planning, educational spaces, LDT concerts, auditorium-type projection room (Fragmentation), monumental mapping, interactive installations, spectacular creation of a grand cycle of the LDT, virtual immersion (VR headset)...

Define:

- the technical equipment available, number of screens (digital terminals), computer(s), sound system,
- une trajectoire dans le lieu d'installation,
- an initial programme idea for the public: scheduling of events over the duration of the installation from the twenty or so possibilities.

I. EXAMPLES OF AVAILABLE MODULES

GRAND CYCLE

Spectacular monumental real-time performance of the LDT

A Grand cycle of the Labyrinth of Time (GCLDT) is a spectacular sound and visual installation created in real time by all the algorithms of the Labyrinth of Time, combined and forgotten memories, fragmentations of the Labyrinth's satellites — chaotic memory games and combinatorial invention.

This installation is designed either for one (or several) event evenings, with the possibility of incorporating performers via a specific commission (forces to be determined): musical with real-time electronics and/or theatrical and/or related to dance.

Equipment

- *Depending on the scale, 2 latest-generation IMAC computers with a minimum of 16 GB RAM networked (sound and image), then depending on the chosen setup, one computer per performer*
- *Monumental projection on wall or large screen*
- *Laser video projector of 15,000 lumens minimum (in darkness)*
- *RME Fireface 802 type sound card, at least 4 professional speakers with subwoofer*
- *Professional microphones if necessary for real-time instrument processing*
- *Allow one morning for installation and testing*

MONUMENTAL MAPPING

Monumental projection of the Labyrinth — Exterior / interior of buildings / natural sites

Monumental projection of the Labyrinth outdoors or indoors (new Labyrinth images can be created for a specific site).

Possibility of a mixed creation, with musicians, actors, dancers.

Example: event, evening, 8pm – midnight.

Equipment

- *IMAC type computer(s)*
- *Fireface 802 type sound card*
- *Professional speakers around the audience*
- *Laser video projectors 40,000 lumens and above*
- *Networked LDT software*

SOUND INSTALLATION

Outdoors or indoors, sound files (electroacoustic)

Labyrinthine forest

Par exemple à proximité extérieure du « bâtiment », nous entrons dans le Labyrinthe du temps (LDT) sans y entrer, ombre sonore discrète du LDT qui vient à nous sans s'imposer, comme une découverte de ce qui a toujours été.

Technical note: Simple installation, a few sound speakers discreetly fixed to the ground, manual triggering of a CD or via a computer (and LDT programme).

WALL OR FLOOR PROJECTION

Real-time virtual painting of the LDT (a laptop, video projector or screen)

Entropic fringe

Floor projection of a playful real-time algorithmic painting of the LDT, with possibility of interactive control via the public by tablet, iPhone...

These floor paintings come from the LDT satellites, like space-time fringes creating their own spaces in real time, topological and multidimensional *mise en abîme*.

Technical note: Very simple technical installation after standard checks. Placement of the video projector (Epson laser EB-L30000U type), from the top of the building or in a tower on the side (outdoors). Very simple control via a laptop or IMAC and wifi network if interactive control with the public (QR code to scan). Triggering can be automated or manual.

SLIDESHOW — VIRTUAL PAINTINGS EXHIBITION

Fixed images of the LDT — one computer with large screen or video projection (Screen 1)

Still

Slideshow controlled by the LDT programmes.

Like stopped and silent memory flashes, present or absent memories of thousands of images from the totality of the Labyrinth, these paintings offer a singular reading of the work, a four-voice rhythmic counterpoint distributed algorithmically in real time between fixed images, the poetic texts of the Labyrinth, choreographic postures and the LDT Manifesto translated into six languages.

Technical note: A 27-inch IMAC type computer screen or laptop with a 4K TV screen (wireless network possible) or video projection on wall or screen, screen at face height (standing public). Original LDT control interface (software provided, very easy to use).

AUDITORIUM — CINEMATIC-TYPE PROJECTION

1h30 of sound and visual immersion, simple HD video format (Screen 2)

Fragmentation

Spectacular 5.1 sound and visual installation of cinematic type — Large screen, comfortable audience installation (auditorium for example) — Installation controlled in real time by computer.

Memory crosses, interweaves, uncrosses: over 1h30 of Labyrinth videos, Fragmentation is a journey through a symphony of forms, sounds and colours, a process of slow memorisation for the public and fragmentation at very high speed, alternation of combined videos and silent paintings close to stillness (playing on differential perception thresholds). The installation is controlled by an algorithm so that the succession of videos remains always unpredictable for the public.

Technical note: Simple installation and automatic operation, start with "one click". Video projection on wall or screen / or 4K TV large screen. Latest-generation IMAC (Apple) type computer with 16 GB RAM minimum. LDT control interface (software provided). Sound card and 5.1 sound system (4 speakers minimum around the audience).

ZERO POINT — IMMERSIVE SATELLITE

VR headset type Oculus 2

A fractal figure of the Labyrinth of Time contained within the Labyrinth, in total immersion combined with the possibility of a large-screen projection for the rest of the public, dive into the virtual Labyrinth of Time by piloting your trajectory in real time via a virtual headset: black rooms, red rooms, exterior space, the geode and its hundreds of paintings, the theatre, its floating words, the primordial space of doors, sculptures and music of Zero point, the labyrinthine heart and its game of infinite corridors and teleportations, the research or more pedagogical aspects... a proliferating symphony of colours, sounds, forms...

Equipment

VR headset(s) type Oculus 2

Optional for the "external" public: video projection, computer, 2 speakers

ALGORITHMIC PAINTINGS CHOSEN BY THE PUBLIC

Screen 4 or screen 4 sharing

The Heart — algorithmic painting 1

Automatic or at the public's choice. The words of the Labyrinth at the heart of a rotating translucent cube, these words sound to the rhythm of a constantly different score created in real time and played by a quarter-tone crotale, melodies without repetition of pitches or intervals, all associated with the «infra-bass» trembling of the heart.

L'Hydre du Labyrinthe — tableau algorithmique 2

The hydra escapes from a centre following a visual and sound trajectory calculated mathematically according to «the Bernoulli lemniscate», a figure-eight curve symbolising infinity and traversing space through an iterative process, creating paintings, unique and erased moments.

Infinity Passage — algorithmic painting 3

The sound algorithm draws on ideas of auditory illusions and more particularly the Shepard-Risset glissando, playing on the ambiguity between tonal and spectral pitch. The real-time image is drawn from the other videos of the Labyrinth of Time (Fragmentation).

Voile dévoilées — algorithmic painting 4

First series of the Labyrinthine Topos, Topos 1 is inspired by a trianguloid trefoil modelled by a mathematical formula, in silence like a dance... In duo, counterpoint to the movement of this trefoil, a creation of surfaces is displayed using a mathematical model called Nurbs.

Topos 2 — algorithmic painting 5

Visual and sound algorithmic space, spiralled, starred, coloured, continuous nested deformations...

Couloir — algorithmic painting 6

“Couloir LDT” is a fully automated real-time creation, sensation of extreme speed in a corridor made of moving cubes.

Equipment for these six paintings

One 27-inch IMAC computer — minimum i7, 32 GB RAM

With depending on context a 4K TV large screen or video projection on wall or screen, preferably quadraphonic sound system (possible in stereo, headphones, or via network)

REAL-TIME ALGORITHMIC PAINTING (2)

Screen 4 or screen 3 sharing

Death of Labyrinth — infinite algorithmic landscape

The death of the labyrinth is a landscape that invents itself in real time, creation of synthesised images and sounds endlessly renewed towards what has always been — "the same and the different".

Equipment

One 27-inch IMAC computer — minimum I7, 32 GB RAM

With depending on context a 4K TV large screen or video projection on wall or screen, quadraphonic sound system

INSTALLATION WITH REAL-TIME POLYARTISTIC SCORE OF THE LDT

Physical, textual, visual, musical, electronic — Screen 5

Completion

Real-time polyartistic score, participatory installation with the public (musician with any type of instrument and level, with real-time electronics).

A virtual score simultaneously visual (images of the Labyrinth), musical-electronic, physical and textual invents itself in real time and is displayed continuously on one or more computers (3 maximum). A sound transmutes «in the moment» into body movement, image, declaimed text...: it is a writing of completion, prehistory of a new labyrinthine story.

Participatory and polyartistic, this installation can be animated by the public (bringing any type of instrument), or even a dancer and actor — amateur or professional.

Equipment

1 to 3 IMAC type computers maximum networked, screen projection possible

RME Fireface 802 type sound card, at least 4 professional speakers with 1 subwoofer

Professional microphones if necessary (real-time instruments)

Configurable LDT control interface (software provided, very easy to use)

PLAYFUL, INTERACTIVE AND CREATIVE DIGITAL EDUCATIONAL SPACE

From one screen (with sharing) to five screens — up to five digital terminals

1. LDT Discovery Workshops

Interactive and playful installation, discovery of sound, light, programming, etc. (Screen 6 or screen 5 with sharing)

These thirty or so interactive and playful digital workshops at the user's choice (from a menu) are open to all audiences from age 10: discoveries of sound, light, ear tests and timbre recognition, discovery of programming and randomness/determinism issues, real-time virtual scores, real-time sound and image transformation...

2. Star Heads — Augmented Reality

Playful and creative interactive installation, augmented reality, remote hands-face control by the public. (Screen 7 or screen 5 with sharing)

Facing the public, a screen and two speakers: your image appears on the screen with 11 floating translucent objects. A star-shaped virtual helmet automatically identifies and surrounds

your head. Through hand movements, you mix 11 sound tracks. Facial movements control real-time sound transformations.

3. Quadrature

Via the computer screen, the public invents in real time moving visual and sound paintings drawn from the Labyrinth's satellites: Boreal, Homometric attractor, Floating planet, Plisse, Remember. (Screen 8 or screen 5 with sharing)

4. Granulaspeaker

You type a text into the Labyrinth of Time using the computer keyboard. Through the control of Granulaspeaker, a kind of talking robot, you hear your text within the Labyrinth, fragmentation of the text up to the spatialised granulation of sound. (Screen 9 or screen 5 with sharing)

5. Choice

Collapse – suspension: 500 coloured spheres collapse, transition from noise to silence. Then the public projects the coloured spheres one by one which collide in a space in near suspension before falling.

Particleshand: density and size of a cloud controlled remotely by the hand.

Will-o'-the-wisp: clap your hands and watch the movement of the will-o'-the-wisp...

Duo curved dance: one audience member starts to dance creating imaginary curves, another responds by drawing curves in real time on the large screen.

Traces en Ison: through vocal improvisation, you create your visual traces, ephemeral digital paintings.

Study in pixels no.7: the space consists of coloured points whose trajectories are controlled automatically or by the public. (Screen 10 or screen 5 with sharing)

CONFERENCES

"The challenges of artistic and technological creation in the 21st century: the Labyrinth of Time"

- Duration: approx. 2h or several sessions
- Scientific conferences — universities, grandes écoles
- Audience: humanities, musicology, mathematics, physics, computer science departments
- Technological workshops based on the experience of the Labyrinth of Time: real-time algorithmic invention of sound and image, MAX-MSP-JITTER (beginner post-baccalaureate to engineer level). Duration: from 2h to a full year of courses.

MASTER CLASSES OF THE LABYRINTH

- Composition and digital creation of image and sound
- Instrumental classes — performance of Labyrinth music
- Theatre / Dance

WORKSHOPS

- Poly-artistic and technological workshops — Audience: from age 16 and adults, dancers, musicians, actors. Duration: 2 to 6 workshops of 2h.
- Real-time visual and sound algorithmic creation workshop — Audience: 11-15 years and from age 16. Duration: 2 to 6 workshops of 1h30.

- Digital sculpture on building workshop (3D mapping) — Audience: from age 16. Duration: 2 to 6 workshops of 1h30.

Real-time workshops for instrumentalists

1. The chaotic horizons: writing (or «guided improvisation») of small labyrinthine fragments with discovery of the real-time electronic interactions of the Labyrinth.
2. The Labyrinth of Time and real time: real-time score reading or improvisation with electronics (advanced instrumentalists). Duration: 1 to 6 workshops of 2h.

Dance workshops

"The Dance of the Labyrinth" (two groups: 11-15 years and from age 16), possibility of collaborations with a professional Labyrinth dancer or professional company linked to the host country.

Theatre workshops

The theatre of the Labyrinth (two groups: 11-15 years and from age 16), possibility of collaborations with an actor or professional company linked to the host country.

Writing workshops

Based on Locquin's archetypal phonemes and other labyrinthine writing processes. (11-15 years and from age 16)

LDT DIGITAL SCULPTURES

The 3D models of Labyrinth images echo the possibility of creating 3D sculptures of all dimensions.

Several techniques possible: 3D mapping on any 3D volume or on forms cut from extruded polystyrene (simple techniques to implement whatever the dimensions), possibility of recycled materials or holographic projections.

Creation on commission according to a specific location.

Equipment

IMAC type computer(s)

Fireface 802 type sound card

Professional speakers around the audience

Video projectors and polystyrene sculptures, or holographic technique

LDT — THE BOOK OF THE LABYRINTH

Limited edition publication — book or catalogue of the Labyrinth

Publication (paper version) of the book of the Labyrinth or catalogue of a Labyrinth creation. Images and texts published in a limited edition for each event. Book in digital version (possible to present on computer screen).

Equipment

IMAC type computer with large screen for the digital version

LDT GENESIS AND DEVELOPMENT OF THE LABYRINTH

History of the Labyrinth, research and creation stakes

Five chapters to immerse yourself in the genesis and development of the Labyrinth of Time, concert videos, creation photos, conferences, research articles and world premieres, institutional collaborations, development perspectives.

1. Concepts and development over 15 years
2. Scientific research and world premieres
3. Catalogue of creations
4. Educational activities
5. The future of the Labyrinth
6. Conferences

Equipment

An IMAC type computer at face height for standing public

2 small professional speakers / or stereo headphones

LDT general public user interface (software provided)

LDT CYBERLAB

Interactive visit to the LDT on the internet. Event broadcast live on the dedicated Labyrinth website, public interview, conferences, online educational workshops, educational database...

II. EXAMPLE OF A THEMATIC AND SPATIAL SCENOGRAPHY OF THE LDT («LARGE FORM»)

11 THEMES — 20 SPACES

THEME 1 (3 SPACES) — “NO BEGINNING NO END”

Space 1 — Exterior: Sound path towards the Labyrinth

Labyrinthine sounds invite the public inside the Labyrinth. Outdoors towards a main building.

Space 2 — Exterior: «Entropic fringes»

Monumental LDT mapping outdoors. A Labyrinth algorithm virtually paints the facade of the main building (or on the ground) in real time, automatic or interactive triggering with the public via phones or tablets.

Space 3 — Institutional hall: «Still framed by The Heart and Voile dévoilées»

In a hall, the public is always in the Labyrinth, discovering three installations: slideshow of fixed images, stopped memories of the totality of the Labyrinth installations (Still), accompanied by two real-time algorithm paintings, The Heart and Voiles dévoilées.

THEME 2 (2 SPACES) — “HISTORY AND FUTURE OF THE LABYRINTH”

Space 4 — Auditorium type: «Fragmentation»

Over 1h30 of Labyrinth videos («the LDT Satellites»), spectacular cinematic-type projection with automated reading by the LDT algorithms, large screen and spatialised sound around the public.

Space 5: «Genesis, research and creations of the Labyrinth»

Interactive presentation of the genesis of the Labyrinth, its development and stakes, scientific research and world premieres, examples of creations, educational activities, international collaborations.

THEME 3 (3 SPACES) — “LABYRINTHINE LANDSCAPES”

Space 6: «The Hydra — Infinity — Topos, real-time sound and visual paintings»

Three real-time algorithmic paintings for «3D» immersion on three walls of the same room, sounds chosen by the public.

Space 7: «Labyrinth Death» and «Couloir LDT» alternating

Two new installations from the labyrinthine landscapes series: you travel at different speeds through the Death of the Labyrinth, a sound and visual landscape created by real-time synthesis. "Couloir LDT" is controllable in real time by public tablets or phones.

Space 8: «Pixel immersion»

Floor-to-ceiling immersion in a 3D cube created in real time by squares.

THEME 4 (4 SPACES) — “CREATING YOUR LABYRINTH”

Space 9: «Star Heads, augmented reality and interaction»

Recompose the Labyrinth remotely with your hands and face. Augmented reality, playful and creative interactive installation, control and invention of the Labyrinth satellites remotely hands-face by the public.

Space 10: «Quadrature — inventing your journey through four Labyrinth satellites»

Creative and interactive sound and visual installation, invention of one's trajectory through four Labyrinth satellites, real-time sound and visual mixing by the public.

Space 11: «Playful labyrinthine sound and visual interactions»

- Collapse — suspension
- Particles hand
- Will-o'-the-wisp
- Traces en Ison

Space 12: «Granulaspeaker — your text becomes Labyrinth music»

The public writes a text in the Labyrinth of Time and through the control of a LDT talking-transformer robot, you hear your text transformed within the Labyrinth, through granulation of a synthesised voice.

THEME 5 (2 SPACES) — “POLYARTISTIC PARTICIPATORY SPACE”

Music — Dance — Theatre of the LDT

Space 13: «Labyrinthine Completion» — General public or professionals

Real-time physical, textual and musical scores, participatory and poly-artistic installation animated by the public, particularly dancers, musicians (bring instruments), actors — amateurs or professionals.

Space 14: «The Chaotic Horizons» — For professionals

Real-time electronic installation, so that professional musicians can perform the series of Chaotic Horizons (commission encouraged during a Labyrinth creation).

THEME 6 (1 SPACE) — “INTERACTIVE EDUCATIONAL INSTALLATION”

Space 15: Playful and interactive educational installation

Sound, vision, illusions, algorithms, real-time scores, perception, ear training, sound and visual objects, sound and visual synthesis, transformations... These «Discovery Workshops» introduce simple notions present in the invention or realisation of the LDT, from cultural curiosity to more professional training of contemporary creators.

THEME 7 (1 SPACE) — “3D SCULPTURES”

Space 16: «LDT Sculptures»

Sculptures drawn from the 3D inventions of the Labyrinth. Holographic helices and mapping on 3D volume.

THEME 8 (1 SPACE) — “IMMERSIVE LDT — VIRTUAL HEADSET”

Space 17

A real Labyrinth containing a virtual Labyrinth (VR headset): memory combines in the polymorphic dimensions of a Labyrinth — virtual paintings, 3D sculptures, fragments of poetic texts and floating words in space, research and scientific world premieres up to projections of the fourth geometric dimension...

THEME 9 (1 SPACE) — “SCIENTIFIC CONFERENCES — MASTER-CLASSES”

Space 18: «Conferences — Master Classes»

See the proposed list of conferences, master-classes, educational workshops in the general catalogue of installations.

THEME 10 (1 SPACE) — “LDT SALES SPACE”

Space 19: «Sales space»

- CD and DVD, Grand cycle of the Labyrinth of Time
- Digital paintings — digital or printed versions
- Exhibition catalogue or book of the Labyrinth (images and texts of the LDT)
- Digital book of the LDT
- The Labyrinth of Time, fully digital interactive 3D version (under study)

THEME 11 (CYBERSPACE) — “CYBERLAB”

Space 20: «CyberLab»

Live event on the dedicated Labyrinth website, public interview, conferences, online educational workshops, educational database...

THEME 12 (1 SPACE) — “GRAND CYCLE OF THE LDT”

Evening event from 8pm to midnight

Space 21: «The creation of a Grand Cycle of the Labyrinth»

Spectacular large-screen or outdoor projection, real-time creation by all the Labyrinth's algorithms. Memorial synthesis between the satellites (all other installations) and this grand cycle, unique real-time creation.

Example with a soprano, a dancer and actor and real-time electronics.

ANNEXES

1. BIOGRAPHICAL NOTE — STÉPHANE DE GÉRANDO

Stéphane de Gérando (L'Haÿ-les-Roses, France, 23 June 1965) is a contemporary French creator and researcher. He has dual training as a composer and researcher, at the Conservatoire National Supérieur de Musique et de Danse de Paris (Premier Prix and 3rd cycle in composition), at university (doctorate, habilitation to supervise research) and at IRCAM (music computing curriculum).

He won the international Stipendianspreis 1994 at the Darmstadt Contemporary Music Festival, the Prize of the Association of Former Students and Students of the Conservatoires Nationaux Supérieurs de Musique et d'Art Dramatique de Paris (1991), the Academic Prize of SACEM (1995), and was a laureate of the Sasakawa Foundation in 1993 and 1994. His catalogue includes more than 130 works, from solo instrument to orchestra, with or without electronics, digital installations, monumental projections, virtual paintings, polyartistic creations — theatre, dance, music, digital technologies.

Since 2007, he has devoted himself primarily to the *Labyrinth of Time*. His publications (books, articles, dictionary) address historical, aesthetic, pedagogical and institutional questions related to creation, as well as algorithmic issues (world premieres) or those related to digital technologies, in collaboration with researchers such as Athanase Papadopoulos, Franck Jedrzejewski, Christophe Mourougane (mathematicians), Jérôme Pétri (astrophysicist), Louis Bigo (computer scientist) and Gilles Baroin (doctor-engineer) for the latest version of a satellite of the Labyrinth in virtual reality (VR headset).

2. DOCUMENTS AVAILABLE ON THE LABYRINTH OF TIME

1. Flyer (2 pages)
2. Presentation and budgetary aspects (5 pages)
3. Details of modules
4. Examples of creations (100 pages, photos)
5. Example of monumental mapping (100 pages, photos)
6. ZERO POINT (virtual reality), user guide
7. ZERO POINT, press release
8. Example of educational installation (Radio France)
9. Example of catalogue publication
10. To learn more...
11. Catalogue of works by Stéphane de Gérando

Founding texts of the LDT

12. The Manifesto of the Labyrinth of Time (translated into ten languages)
13. Polyartistic practice of the Labyrinth of Time. Rules of invention and interpretation, physical (dance), textual (theatre), musical scores
14. Labyrinth of Time. Typocrite of the sign, theatre of the LDT, collection of texts

3. INTERNET LINKS — TO FIND OUT MORE

- Teaser (video): https://youtu.be/6L6JAPqM4Xo?si=iivlYKt8st3H_IAQ
- Presentation dossiers (100 pages), with LDT creation photos: <https://www.calameo.com/books/00566730425e61d1f5778>
- Virtual reality, ZERO POINT (360° video, works with Google Chrome for example) https://youtu.be/R6XVwkDYe-A?si=48fRCGUKZDP81t_K
- Virtual reality, installation (360° video, with Google Chrome for example) https://youtu.be/QMy6Uq7_x40?si=j-v9EFMpxC5V3LQq
- International monumental mapping — Azadi Tower <https://www.youtube.com/watch?v=3bYdXzkeH1I>
- Annonce France-Musique, 10 heures d'installation algorithmique, "Fine-terre 2023" <https://youtu.be/sOhE5vmftnc?si=w9hrRa6sovlknrye>
- De Gérande website — extensive information about the Labyrinth of Time: <http://www.degerando.com/fr/>
- Research aspects — HAL archives: <https://cv.hal.science/stephane-de-gerando>
- Example of interactive digital educational installation — Festival Présences 2023, Radio-France, Paris: <https://www.maisondelaradioetdelamusique.fr/evenement/atelier/voyage-au-coeur-du-labyrinthe/festival-presences>

4. CONTACT

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