

**TAG PRESENTS  
DIFFRACTION  
WITH  
MIKA VAINIO  
DAVID LETELLIER  
JON EGESKOV  
LAB[AU]  
17/12/2010**

The phenomenon of diffraction is richly significant in sound art, installation works and electronic music. Reducible to mathematical formulas, and yet unpredictable in its complexity, it embodies ideas of order, chaos and the tension between them. This exhibition brings together works from Mika Vainio (Pan Sonic), David Letellier (Kanding Ray) (both in collaboration with LAB[au]), and Jon Egeskov (Pixel), all known for their electronic music works on renowned German minimal electronic music imprint Raster-Noton, and a new development in Belgian art studio LAB[au]'s Particle Synthesis project. The works bring diffraction and its effects into focus revealing new perspectives on what is an often-overlooked geometric reality. These sharp and focused installations frame the beauty of our world through this phenomenon in startling and moving ways. The exhibition is curated by MediaRuimte and made possible with the kind support of Stichting Mondriaan, Gemeente Den Haag OCW, Arcadi, Dickey and the Commission des Arts Numeriques de la Communaute Française de Belgique. Many thanks to Media-Ruimte, Today's Art Festival, Janet Leyton-Grant, Rowan McCuskey, all the artists, participants and people who have made this exhibition at TAG possible.

TAG presents **DIFFRACTION WITH MIKA VAINIO, DAVID LETELLIER, JON EGESKOV AND LAB [AU]**, opening **17 DECEMBER 2010** at **19:00** at **STILLE VEERKADE 19**, Den Haag, The Netherlands. The exhibition runs 17 December until 16 January 2011, Wed - Sat from 12:00 - 17:00 o'clock. Performance at the opening night: **THE DRIVE** by Jon Egeskov at 20:30 o'clock. For more information visit **WWW.TAG.DO**.

# CURATOR'S STATEMENT

The phenomenon of diffraction is richly significant in sound art, installation works and electronic music. Reducible to mathematical formulas, and yet unpredictable in its complexity, it embodies ideas of order, chaos and the tension between them. This exhibition brings together works from Mika Vainio (Pan Sonic), David Letellier (Kanding Ray) (both in collaboration with LAB[au]), and Jon Egeskov (Pixel), all known for their electronic music works on renowned German minimal electronic music imprint Raster-Noton, and a new development in Belgian art studio LAB[au]'s Particle Synthesis project. The works bring diffraction and its effects into focus revealing new perspectives on what is an often-overlooked geometric reality. These sharp and focused installations frame the beauty of our world through this phenomenon in startling and moving ways. The natural effect of waves splintering, scattering is something that we normally take for granted, whether it's ocean waves breaking around a rock, the closely-spaced tracks creating diffraction-grating rainbows on the back of a CD or a particular space causing sound to distort in unique ways.

The term 'diffraction' was coined in the 17th century by Francesco Maria Grimaldi, from the Latin diffringere, 'to break into pieces'. Diffraction is however, much more than just degradation or destruction. It requires coherence. It creates patterns and it holds meaning. The spreading and distortion of waves as they pass through a gap or an object results in a change in the direction of the waves; If light passes through two thin, parallel slits, the slight bending of the light beam from each slit causes the different wavelengths of light to interfere with each other, producing patterns; when sound waves travel through open windows or doorways, they are diffracted so that the sound is heard round corners.

Diffraction arises because of the way in which waves propagate and is described mathematically by the Huygens–Fresnel principle. This exhibition takes place in the newly renovated TAG space in The Hague, the city where mathematician, astronomer and physicist, Christian Huygens who first advanced the wave theory of light, was born. Huygens achieved note for his argument that light consists of waves, a principle which was fundamental in the understanding of wave-particle duality. This duality has in turn been essential for the development of specific technologies such as granular synthesis and indeed electronic music equipment and electronics in general.

Mika Vainio's 2 x 540 kHz is an elegant and poignant study of sound diffraction through radio waves. A soundscape is developed in the space through the overlap and interference of the composed waves being transmitted through an arrangement of old radios. The pattern of overlap is intensified through though time-lapse of a second composition being played with the first. 2 x 540 kHz is a sound installation constituted of six vintage tube-radios on plinths. Two looping compositions of different length are sent through radio transmitters and played on 540 kHz x 540 kHz, "The result," says art writer Ive Stevenheydens, "is touching; it seems the radios communicate with each other. Or better: with creaking hum they seem to take a last breath. At the same time the installation looks stringent and minimal: placed on white, bright enlightened pedestals the sound objects from the past receive the statute of a sculpture." Setting out from a more traditionally sculptural starting point is the work of David Letellier, Tessel. Tessel is a kinetic installation combining the machinic tradition of Tinguely with the formalism of Alexander Calder. The installation comprises 40 suspended, triangular mirrors, 12 of them motorized and eight of them with audio transducers. The work sets up light and sound diffraction simultaneously, accentuating the effect with sharp edges and its highly reflective surface. The mirrors offer us an interesting, diffracting intervention in the space that demands a shift in perception and a reconsideration of everyday geometry vs chaos; order vs disorder. The idea of the wave-particle duality – that all particles exhibit wave like properties – has its origins in the seventeenth century when opposing theories were presented by The Hague's Christian Huygens (waves) and Isaac Newton ('corpuscles' or particles). Very large particles in particular can interfere and therefore diffract and it was the diffraction of electrons and neutrons that became one of the most powerful arguments in favour of quantum mechanics, a theory that had its beginnings in the discovery of cathode rays in the mid-nineteenth century and which ushered in the modern age of chemistry and physics. LAB[au]'s installation – a new edition within the Particle Synthesis project –engages directly with quantum theory as it relates to both light and sound. Starting from the position that both behave like particles. LAB[au] employs 3D particle engines (light) with granular synthesis (sound), with the aim of a convergence of visual, sonic and spatial elements rendered in a 3D multi-screen installation.

Although we are usually most aware of waves that travel on the surface of water, sound, light, and the motion of sub-atomic particles all exhibit wave-like properties. The diffraction of these waves, through bending around obstacles or when they spread after emerging from an opening, and the interference that results, are a fundamental and beautiful part of our world. The exhibition "Diffraction" encourages us to explore these processes in the context of light and sound and to appreciate them on a new and deeper level.

# EXHIBITING ARTISTS

**MIKA VAINIO** started composing experimental music in 1982. Also known as 'ø' and as 'Pan Sonic's half, he has been releasing music on a.o. raster-noton, Mute and Touch. As a composer he also wrote scores for film and dance.

**2\*540 KHZ** is a sound installation constituted of six vintage tube-radios illuminated beneath by the wood columns they are placed upon. Two looping compositions of different length (18:17 & 15:57 minutes) are sent through radio transmitters and played on 540 kHz. '2 \* 540 kHz's soundscape is based on the temporal shift and spatial distribution of both compositions. The compositions are not only constituted of the typical hum and tuning known from radio's aural landscape, but also reveals the beauty of their hidden micro-sonorities.

**DAVID LETELLIER** is mostly known under the pseudonym Kangding Ray, via which he has released music on raster-noton, the German label for minimal electronics. Trained as an architect, his work has a strong focus on the perception of space, on the edge of architecture, sound and art.

**TESSEL** is a kinetic installation investigating the perception of sound and space. A dialogue between space and sound is created as the surface slowly modifies its shape, our perception of it altered through continuously changing light and sound reflection. Its name is derived from 'tessellation', a term applied to the geometric subdivision of a surface into plane units, also known as "tiling". It also describes a software technique that allows calculation of renderings through the subdivision of surfaces into polygons. The term has its origin in the Latin word 'tessella', describing the square tiles used to make mosaics.

**JON EGESKOV** is trained as a saxophonist at Rhythmical Conservatory of Copenhagen and is mostly known for his Pixel-releases on the raster-noton label. Pixel's third album **THE DRIVE** is meant to be the soundtrack to his imaginary journey by car across the U.S.A., a road movie encoded in the track list. With warm and deep guitar amplifier hiss and feedback in connection with floating rhythms, he creates very organic sound patterns. Pixel's visuals fasten the seatbelts through a real-time captured feature of a graphic level recorder, transcribing The Drive's sonic scape to a visual one.

**LAB[AU]** (laboratory for architecture and urbanism) is an art studio founded in 1997, based in Brussels, Belgium, and constituted of Els Vermang, Manuel Abendroth and Jerome Decock. LAB[au] is concerned with the construct of 'space' and the way it can be planned, experienced and conceptualised in an information age.

The project **PARTICLE SYNTHESIS** started from the idea of combining 3D particle engines with granular sound synthesis, a research mainly motivated by the possible convergence of visual, sonic and spatial parameters processed in real time within electronic space. Both technologies are considering a shape, a form or a sound as the result of many combined elementary particles which would be individually neither visible nor audible. Particle Synthesis links generative art to real time sound processing and spatial diffusion of light and sound while exploring the aesthetics of the digital realm.

**RASTER-NOTON** is a German electronic music record label founded by Olaf Bender, Carsten Nicolai and Frank Bretschneider. Based in Chemnitz, Germany, raster-noton merged in 1999 from separate labels Rastermusik and Noton (Archiv für Ton und Nichtton). The collective label's aesthetic focus is rhythmic, minimal electronic music alternating between playful pop and introspection, partnered with unconventional and equally minimal packaging design. During the exhibition raster-notion will present a **CONCEPT STORE**.

# TAG AND MEDIARUIMTE

**TAG** is an institute for contemporary audiovisual art. The organisation investigates and presents relevant developments in the visual arts and music. TAG invites both known and unknown artists to show their work. Specifically, this results in exhibitions, lectures, workshops, concerts, residencies and publications (web and print). TAG collaborates with a number of institutions and presents its programs at various locations at home and abroad.

**MEDIARUIMTE '01t XYZ'** is a gallery for electronic arts in downtown Brussels, founded in autumn 2003 and run by LAB[au]. With a program ranging from exhibitions, screenings, audiovisual performances and conferences, to artist-residences, workshops and LAB[au]'s own R&D, MediaRuimte is as much a platform for presentation as creation, where LAB[au]'s artistic and technological know-how is acting as support through a transmedial, interdisciplinary and collaborative approach. MediaRuimte (Dutch for 'MediaSpace' and '01t (=media) XYZ (=space), should be understood as space as a medium to stage the digital medium and its multiple forms of expression, such as MR+ (MediaRuimte abbreviation to MR., say 'Mister') .xpo, .mov, .ini, .wav, .txt, .www, .tmp and .exe - hence the labelling of its broad range of activities.

LAB[au]'s gallery is internationally renown for its both avant-garde as cutting-edge features of artists and its award-winning artist-in-residence productions. MediaRuimte holds both the Flemish as the Walloon Government's cultural trademark and is recognised as an established venue within the national and international cultural landscape.

*For the 'Diffraction' exhibition MediaRuimte was invited to TAG's new exhibition space with a selection of their productions focusing on sound versus space.*

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