



Masaki Fujihata

Simultaneous Echoes

In collaboration with Frank Lyons
 Technical assistance: Takeshi Kawashima

Simultaneous Echoes is a practice-based research project. The project explores how fragmented musical elements, which were recorded in different locations and at different times can be reconstructed in cyberspace. The cyberspace is used as a musical notation, a '3D locative music score'. The fragmented sound and images of the location are sampled with a set of audio recording and video cameras and with the support of GPS data sampled in specifically selected locations in and around Londonderry and in collaboration with communities of interest there including choirs.

As a music score constitutes a kind of thinking space for a music composer, this spatial, locative music score is also a media thinking space for conducting music in a new way. It reframes in innovative ways the process of producing whole data, recording, capturing, editing and disseminating music and soundscapes.



Masaki Fujihata, *Simultaneous Echoes*, Screen shot, 2009



Biographies

Masaki Fujihata is one of the pioneers of Japanese new media art, beginning his career working in video and digital imaging in the early 1980s. He was one of the first artists to use stereolithography, a technique in which a laser polymerises a liquid resin as it sweeps its surface. He also created the world's smallest sculptures by using the manufacturing techniques for integrated circuits. However, he is most recognised for his sophisticated interactive network installations, and his primary concern has been to employ multimedia technology in order to examine the possibilities for communication within virtual spaces. His interactive works include *Removable Reality* (1992), which used an infrared cordless phone, and *Impressing Velocity* (1994), in which he used a laptop computer equipped with GPS to digitally map Mount Fuji, making it available for viewers to explore interactively. Fujihata has exhibited extensively throughout Japan and internationally, including at the 1983, 1984, 1996, and 2000 Siggraph conferences (USA), *Ars Electronica* (Linz), *DEAF* (Rotterdam), "CyberForum" (Lisbon), *VEAF* (Vancouver) and his work is part of the permanent collection of the *ZKM* (Karlsruhe). www.fujihata.jp

Frank Lyons holds a PhD in Music Composition and is a Senior Lecturer in the School of Creative Arts, University of Ulster, UK. He has developed an international profile as a composer and researcher with performances of his works in Australia, the US, Europe, the UK and Ireland by artists such as Ensemble *Noszferatu*, Darragh Morgan, Carlos Bonell and Alan Banks. CD releases include *Mnemonics* for solo guitar played by Alan Banks (Oct 2005) and *Blitzed, Dazed* by the Haze and Rush, all for violin and electronics, played by Darragh Morgan.



Mapping Scapes of Sound and Vision

Notes on the field work *Simultaneous Echoes*, an audiovisual installation by Masaki Fujihata (visual artist) in collaboration with Frank Lyons (music composer) for ISEA 2009, Londonderry/Derry, Northern Ireland

Yvonne Spielmann

Field Works

For more than a decade, Japanese media artist Masaki Fujihata has explored in a series of field works the interrelationships between the visual representation of natural landscapes as we perceive them in painting, cartography, video and films, and the audiovisual expression of our physical activity to walk and move in these scapes and meet the people who live and work therein. The process of a field work is driven by the concept that the artist in person and small teams equipped with recording technologies of video, microphone, and GPS (Global Positioning System) enter the selected field with the target to measure, map and visualise real spaces according to the parameters of human activity and behaviour. For example, Fujihata and crew were climbing up and down Mount Fuji with laptop, video and GPS equipment by foot in 1992, and several measuring teams in parallel were surrounding and crossing Lake Shinji in 2002 by boat and bicycle, thereby collecting the visual data from camera and mobile phone imagery.

In the following field projects outside Japan, Fujihata increased public participation and collected position data and video images of his encounter with other foreigners who live and work in and around the Swiss cityscape as interpreters. While they walk and drive by car together in the city of Geneva and its vicinity the audiovisual interviews with the interpreters in *Landing Home in Geneva* (2005) focus on questions of their cultural homes. Respectively, Fujihata's participating investigation wishes to communicate views and attitudes of how to translate cultures across languages and borders. And with regard to the contemporary division of mobile phone and Internet access zones, effective technological barriers are also addressed. With the preceding

project *Alsace* (2002), the border topic is even more sharply pointed out in the chosen location of the field research because this multi-cultural and multi-lingual territory in-between France and Germany had changed its borders several times. In search for people of Alsace who can talk about the experience of intercultural communication in quotidian life and are knowledgeable of the history of alternating citizenships in this region, Fujihata's recording team pursues pressing questions of citizenship, homeland and cultural history from an outside position.

The advantage being that the intervening artist-interviewer from Japan is not directly involved or considered to be taking sides in European geopolitical matters, however, at this point all the field works are connected in Fujihata's overriding aim to immerse himself physically into the processes of the project. Which means the artist himself, not unlike a multiple personality, is in the field, is conducting the collection of the data, making the interviews, designing the virtualisation of the merged data inputs and overseeing the presentation formats of installations and workshops (which will involve further participants). Following the approach to visualise one's own experience in the field, captured video images, location data (GPS) and direction data of an angular sensor (used to relocate the camera angle in the data space) are processed in the computer. Synchronisation of position/location and orientation/direction data is necessary to reconstruct the walking experience in the natural landscape and attach video images in the computer space accordingly.



en
on
al
rd
is.
ut
in
ry
i's
of
m

In *Alsace* and *Landing Home in Geneva*, GPS lines, in particular, are needed to create translocational nets of activity in the computer, which make visible the merged subjective-objective scape of the project. The viewer/user of the interactive installation can navigate along these lines that were initially drawn in the real space. S/he will activate a variety of visual fields, which appear like a swarm of wandering frames, each of which contains short, one to two minute long moving sequences of different moments in time and space. In total the accessible recorded/edited video interviews build an impression of the field that represents the notion of a field work. The subject of 'work' also means that the reconstruction of natural landscapes in cyberspace results from processes of reworking of the real: images that appear in interconnected frame structures are only supposedly free flowing and crossing in the virtual space. Rather, access to the live recorded mini-narratives and soundscapes that overlap like a fragmented picture is controlled and limited by the artist, who in restricting interactivity wants us to become aware of the intervening processes. This may instigate critical reflection on transgressing borderlines and how we can make connections on virtual maps quite differently from cartographic maps that we usually use for orientation.

In these manoeuvrable video sequences, the artist will then be seen and heard in the same virtual space together with his team members and the public participants. They explore the territory in different directions and with various speeds and vehicles in order to remap physical spaces in cultural and intercultural terms. The resultant installation shows the virtual representation of compressed and composite imagery and sounds of a reality that had been modelled according to

the depiction of the real traces. These are the routes that many different people took who were in the same area, but not always at the same time. Herein, real and virtual are mixed not only audio-visually but also with regard to multiple authorships.

In this respect, an interesting notion of interactivity occurs. Fujihata's interest is to artistically express one's personal processes of interacting with the real environment. Against any seemingly objective and moreover culturally neutral endeavour to generate a scientific cartographic map of the world we live in, the artists' tools are: incorporation of our traces into newly generated audiovisual scapes that the computer displays in 3D. Naturally, confronting the 'objective' (standard map) and the 'subjective' (personal map) results in conflicting presentations, when the scale and shape of the displayed measure and image data in 3D computer graphics only vaguely remind of the underlying real object. Instead they give an accurate impression of the velocity and directions of walking and the multiple perspectives of viewing.

As the work's title *Impressing Velocity* suggests, the deviation in the computer generated visualisation of Mount Fuji's shape reflects the exhaustive ascent and descent of the research-recording team in direct translation: by making a dent in the middle of the visual appearance of the mountain when the climbing speed was high and reversely expanding top and bottom when the team was slow and resting.



st-
ed
an
all
i's
to
re
ty,
of
rg
its
of
ve
ch
d,
S)
to
re
of
is
ce
es



[Fig: Impressing Velocity].

The scaling device that is used to translate the real into the virtual mountain is the human activity, which through the means of computer graphics draws a more realistic image of the mountain after the effort it takes to walk up and down. Naturally, scaling here departs from both, the artistic fiction in natural landscape painting and also from cartographic realism. While the first leads to painterly views of Mount Fuji with maladjusted proportions of width and height, most prominently in the *Thirty-six Views of Mount Fuji* by Japanese painter Hokusai (1826-1833), the latter is completely ignorant to any subjective views and walks, to any lively encounter with the material at all. But in the 3D graphic visualization, personal input can be conflated and superimposed with the area map so that Mount Fuji's contours becomes the 'raw material' of experience based data. Their expression transforms the whole object into an exploding array of arrow heads in all directions.

This project highlights Fujihata's idea to incorporate and – with the simulation technologies of the computer – almost physically imprint

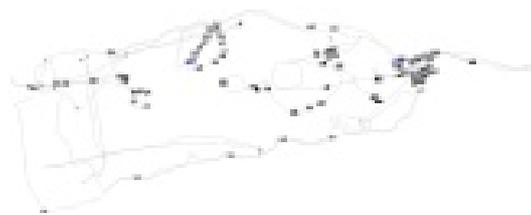
one's personal-physical impression of a natural environment onto the presentation of the object itself. Landscapes and cityscapes that are external to our experience are then constructed as if internally accessible so that recorded data of people's behaviour in a particular environment will be used to remodel mountain, lake and landscapes and make these look as if someone had purposefully deformed their shape. Herein, the artist departs from two opposing principles in representation that are dominant in our culture, that is, the aesthetic concept of drawing what we see, and the scientific notion of standardised measuring principles that are externally exercised to all natural phenomena in the geosphere, regardless of cultural and subjective specificities. Fujihata sets other priorities and interrelates both, personal experience (seeing, hearing, moving) and manpower (walking, driving and carrying equipment) as selected input data for the creation of altered scale and form.

Likewise the banks and the waters of *Lake Shinji* in the virtual visualisation of this field project from 2002, appear like a number of endlessly intertwined Möbius strips of images that are floating in the virtual space. In the computer, video images taken from boats were modelled as horizontal image strips. It causes disturbances when viewing them simultaneously displayed with other images from mobile phones and also overlaid with the GPS lines that refer to the other field teams (on bicycle). All this is compressed densely in a completely arbitrary perceptual environment, that is, nevertheless, based on actual field data of the group experiences. Position data (from GPS transmitters and mobile phones) and the orientation data (coming from an angle measuring sensor) of the different teams who were in the field are actually combined to build meandering





loops that tell the crossings and meetings of the experiencing-recording teams. Then, in the virtual remapping process, the surface of the lake serves like a sketch map onto which the video images are 'drawn' from incoherent, logically incompatible views created by fixed camera positions at both sides and at the front of the steering boat as it runs across the lake.



[Fig: Lake Shinji]

The participatory and interactive notion of field works is culturally enriched, when the concept of interfaces with permeable information flow in both directions (artist/interviewer and interviewed/performer) is exported from Japan to projects in Europe. In this new context, Fujihata's research and interview techniques both demand careful consideration of the fact that the artist in the production process holds a multi-faceted position oscillating in-between strangeness and closeness. Evidently, the artist is a participating interviewer when asking a number of foreign interpreters in the intercultural communication environment of the multi-lingual city of Geneva, Switzerland, which they consider as their homeland. By the same token, the dual inside-outside position manifests in the scrutiny of overlapping national and cultural identities in the French-German border region of Alsace that has changed its national status in twentieth century quite often. And recently, Fujihata expands the participatory interaction and collaborates with Irish composer Frank Lyons to co-creatively develop audio and

visual tools to investigate the Irish cultural roots of instrumental sounds in juxtaposition to the landscapes of Northern Ireland. In comparing the various field works, one common drive that is also grounding the Northern Ireland project *Simultaneous Echoes* strikes out: to stay in the region and observe as long as it takes and go wheresoever necessary, regardless of distance and climate, in order to receive the relevant data from the people and in the natural environment. The artistic team is convinced and proves, by interacting with the field and becoming participant you will get to the core of examining one's own geographical and geopolitical position in the encounter with other cultural specificities.

Simultaneous Echoes

The field work *Simultaneous Echoes* is situated in Londonderry and the larger vicinity and has a different starting point. When visiting the region, Masaki Fujihata felt the need to get acquainted with the field by investigating the Irish audio cultures and balance visual and sound information of the field in the installation. As a result, the project was developed co-creatively with composer Frank Lyons, who collaborates on the media cultural research and the interplay of acoustic and visual scores. Shared concepts were developed through dialogue and exchange on an interpersonal basis between the different expertises, and resulted in combined aesthetic approaches to record, rework, defamiliarise and recreate/recompose the 'raw materials'.





[Fig. Simultaneous Echoes]

In the work process of *Simultaneous Echoes*, the interplay of three different types of sounds, instrumental sounds of recorded Irish drum and piper players, natural sounds of wind, water and sheep and compositional scores produce novel soundscapes that have the spatialisation of sounds as the main characteristics. In this respect the mixing, assembling and sampling of different sounds is a way to show a technique of fragmentation and compression as it corresponds to similar compositional activity regarding the design of the visual scapes. Here again, different types of video images, one to two minute long mini-movies of instrument players, natural landscapes, and concise historical landmarks in the vicinity of Londonderry/Derry and the counties of Northern Ireland are overlaid, converged and presented in a virtual three-dimensional scape of panoramas that are interconnected by lines drawn from the GPS data of the recording position.

In the beginning, video technology and GPS data were recorded and connected so that panorama and frame types of moving images could be reconstructed with their locational data in the virtual space. This activity of making a virtual map allows the artists to attach sounds to images and vice versa that document the initial

encounter with Irish pipe and drum players, and with the winds, waters and other sounds of the natural landscape. In the artistic reworking of field data, namely location, movement, sounds and images that express actual experiences of behaving physically in these scapes, the leading idea is to use these inputs in the virtual space to draw traces of the music performances and the travelling routes. The computer graphic design will demonstrate the distances, connections and crossings of the research journey, but most importantly in the virtual display of the data space there are no borders. In this new way of remapping geographical locations an open virtual scape is constructed that enables the artists to control interactively the movement and timing of locations which were recorded with the images and are now used to compose the audio scores. In correspondence to the raw materials of visual and locational data, the musical composition evolves as a field process and not a coherent, conventional composition. Many elements are overlaid and interact as freely as one manoeuvres in the 3D space.

The interplay between objective position information of GPS and video images, which together form the field data, and their appearances in the computer where they get manipulated, fragmented and recomposed is not interesting because of aesthetically appealing deformation and deviation from physical reality. But differently from l'art pour l'art approaches the merger creates a new model of interactivity that is driven by the physical impression of the real, which becomes visible by using the GPS input to draw three-dimensional maps in the computer. These GPS lines remind of geographical accuracy and the authenticity of the events presented in virtuality. In the realisation of the field work in computer graphics, the input from reality is visualised as a



wire frame and can be regarded as the matrix for building a structure of design and composition. Once this structure is interconnecting audio and visual scores, us, the audience can experience traces of the initially real routing of sounds and images as they now travel seemingly freely in the cyberspace. The reverse side that simultaneously echoes against this joyful mix of juggling excerpts unfolds forced synchronisation of position and orientation data with the multichannel sound layers. These systems are created in correspondence to the tonality of the moving panoramic images in the computer and will produce unheard and unseen soundscapes.

Outside – Inside Positions

The general approach of Masaki Fujihata's field projects is to collect exact data of the traces of subjective experiences in the real environment. This information, position data, sounds and images, are presented in the virtual space of the computer as combined artistic-scientific results of actual human behaviour, mobility and communication in the field. It stands in stark contrast to the supposedly objective measuring principles, which are common for standard cartographic representation of the world in maps. Fujihata's unconventionally conceived field data are used to aesthetically remap and remodel our perception of location and orientation, because he uses recording and display tools to represent the real spaces according to actual subjective parameters and not to cartographic rules. The most subjective views are gained from the public participation of people who inhabit, visit or travel in and through a specific region at different times and meet with Fujihata's recording team at different locations. All of these activities get registered and the enterprise develops in many directions. It

entails communicative, interview and intercultural situations with and between locals and foreigners. It also extends in multiple media dimensions, has many visual and auditive layers of recording and display, and in the presentational mode of an interactive installation reverses subject-object distinction between the artist and his work. Fujihata's field of activity deliberately positions itself in-between inside and outside the 'objects' of scrutiny. And in prolongation of observing borders, differences and translations from multiple viewpoints, the artist being the interviewer at the same is audio-visually integrated in the recorded scene. This intervention with his processes of field research is further highlighted when we, the viewers and users, see and hear the artist immersed into a real scene at the time when he records it and that through the visible timeline we can now access from various arbitrary viewpoints in the virtual. Visual fields are connected to the real events and at the same time express a selecting creative activity whereby the artist has programmed certain interactive choices that allow navigating between visual fields containing small movies. Hereby, having control of the field and being part of its unfolding vividness, subject and object positions become evident as flexible and interchangeable.

By starting off with dialogue, the technological choices in these works serve the need to transform landscapes and cityscapes after the impression these locations put on us (the 'visiting' artist-interviewer and the people who permanently or temporarily inhabit these areas). Then the work expresses this initial impression as if it were possible to talk back, to communicate with the environment in different languages of views and sounds in the virtual scapes. Intervention has paradoxical meanings: one aim



is to readjust and relocate the scale, velocity, extension and tuning of experienced 'raw materials' that need to be synchronised with a complex set of interconnected parameters. Raw materials in this respect are physical sounds and images, notations of location and orientation data. In the 3D virtual environment the scientific position and orientation data and the artistic data of recorded sounds and images get interwoven: panoramas and mobile frames are interconnected through the time line of the position/location data obtained from the GPS, and the orientation data adjust the viewing angle. As a result a mountain can appear with a dent, and organic sounds will be sampled and transformed into acoustic scapes. The other aim also manifests with this wired connection between locational sounds and images insofar this structure unfolds translocal, transcultural and transmedial connections on the level of virtual reality.

In *Simultaneous Echoes*, the encounter of different spheres, real and virtual, acoustic and visual in the travelling frames of various sizes, shapes and behaviour expresses rather violently: intermedial interconnections between mobile vision and sound materials clearly demonstrate that the assembling and transforming process is driven primarily by the video with the aim to provoke new forms of acoustic spaces. This sampling process as it relates to videos, which contain sounds of the location and can be altered, exchanged and further manipulated, leads to a new technique. It shall be called acousmatic composition. Nevertheless, the field recordings of the winds, the pipers and drummers are the raw materials that get mixed and combined in the broader context of demonstrating cultural roots in the virtual environments. One idea is to work with familiar sounds and defamiliarise the sources so that new and alternate compositional possibilities

occur. These, with regard to the divisional traditions of performing also entail the prospect of variation and flexible usage in the future. The musical scores that are rendered into acousmatic scapes express an idea of open fields. Therein, the sounds have strong connections to the actual site and Irish culture, on the one hand, and are also presented as media elements that can be recombined, blurred and blended to present another, dialogical aspect of cultural roots. Metaphorically speaking, the arrangement of elements of physical and/or arbitrarily connected sound and image scapes in the work installation transgresses the historical frame of Irish music performance. This field work echoes between past and present and simultaneously presents travelling concepts of the inside knowledge of the composer Frank Lyons and the outside investigation of the Japanese artist Masaki Fujihata.

A double viewpoint of the research approach in *Simultaneous Echoes* becomes evident. One is driven by the external view of the Japanese media artist, and the other unfolds in co-creativity with the local knowledge of the Irish composer. Together and with dual languages, here vision, there sound, they observe the political divisions of the troublesome history as these have become manifest in the different usage of pipes and drums. For example, the Irish pipes (Uilleann Pipes) need to be distinguished from the highland bag pipes which were associated with Protestant cultures and used by marching bands. Furthermore, the marching drums refer to the British tradition in distinction to the Irish drums (Bodhran). By mixing and sampling these sounds – performed by real players with environmental 'noise'–, singing and synthetic sounds, specific and limited connotations of the individual elements are transgressed. It is then possible to explore more freely and within a



larger time span of past and present the roots and routes of a cultural scape. Technological-aesthetic tools of the computer are employed and enlarged to interrogate from a combined intercultural and intermedial perspective how people relate to the field they live in by performing specific practices of sounds and music.

The starting point of this endeavour was that all field inputs need to be processed to match and meet in the virtual space. Therefore, it is necessary to adjust all the metaphorical travelling of concepts in time and space and actually relocate and reposition the field data with an exact address. Connecting lines that bridge between previous creative activity and present access to the movies and their sounds hereby render the medium to self-reflexivity. In the multi-layered sound and vision composition, the computer system is forced to exhaust the concept of space into open scapes that exceed conventional parameters. Scapes are rather ambiguous fields and depart from spatially, historically and culturally bounded landscapes and cityscapes insofar as scapes are affected by participatory activity. And this encompasses processes of interaction between the observer and the

In this respect, the unique co-creativity between visual artist Masaki Fujihata and composer Frank Lyons emerges with the articulation of acousmatic aesthetics and manifests in the open forms of the interactive installation work. Therein, processes of deterritorialisation lead to novel mapping of locational sounds and images in a specific, unconventional design of virtuality that includes the physical activity of research with regard to the cultural specificity of the presentation and its location. The collaborative mixing of real and virtual results in spacious sounds and sounding imagery. It unfolds another dimension of art

with computers, where the artistic intervention into traditional and natural fields produces an understanding of ethnoscares.

