Bushdesertrainforest and Crowd
Two Compositions for Radio
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Abstract

A presentation of two works of musique concrète that were composed for the German WDR radio (WDR 3 open: Studio Akustische Kunst, editor: Markus Heuger). The conceptual framework and working methods of both compositions will be explained. The works were available in full length on tape listening stations during the conference.

Bushdesertrainforest is a composition about "sonic niches" (Bernie Krause), analyzed in natural habitats in three different biomes with very different characteristics regarding the density of animal vocalizations: the savannah (Kruger National Park/Rep. of South Africa), the desert (Namib and Kalahari/Namibia and Rep. of South Africa), the rainforest (Amazónia/Brazil). The composition is partitioned into three parts, and the recorded sounds were processed according to the original listening experiences on site, not according to the wider technical specifications of the microphones. By separating and re-orchestrating of various layers of vocalizations, some insights on possible geneses of some African and South American traditional music could be guessed from attentive listening.

Crowd is composed from the sounds of human crowds in various cultures and various situations on a scale between prayer and demonstration or armed conflict, between partying, enjoyment and aggression or pain, between sizes of a group of 7 and 1 million, with many steps inbetween.

The composition has six main areas: spiritual, political/social, cultural, nutritional, economic, mobile. We know the sound of crowds from our own experience, but also from movies and from music history – a choir is also a crowd. The tension between an individual observer from within the crowd and the rest of the crowd is questioned as well as different connotations of the crowd: a quantity of people (German: Menschenmenge), a multitude (Portuguese: *multidão*), a pressed density (Italian: *folla*).

Bushdesertrainforest

Discovered by biologists through sonogram analysis, the term "sonic niches" (Bernie Krause) describes the phenomenon that in a given natural sound spectrum different animal species would "place" their calls (vocalizations, signals) in different, rarely overlapping frequency bands, to the effect that different species cannot claim each other's acoustic habitats – especially when their calls are very loud. Similar to niches in a spatial sense there are very clear differentiations – often vitally important. Different animal species (genera likewise, e.g. birds, amphibians and insects between themselves) divide a biotope, but emit their calls at different locations within the available frequency spectrum.

The work on my radio piece Bushdesertrainforest did not start with a concept or a composition layout, but rather with a few days and nights of deep listening.

Concrete sound recordings made during three journeys, to the Kruger National Park in March 2008, to the Amazon rainforest in December 2008 and to the Namib and Kalahari deserts in March 2009, are the basic material for the piece.

Beyond mere listening, some additional context opens up. The locations I visited are embedded in ecological sets of problems, or even symbolize these: the importance of the big deserts of Southern Africa and of the Amazon rainforest for the world climate, the deforestation of the latter in order to grow economic plants, the creation of national parks according to the model of the Kruger National Park – not only to create space for endangered species, but also for added values in tourism and therefore economy.

Each of the visited locations in South Africa, Namibia and Brazil is shaped by colonial history, and last but not least, my visits, carried out in order to make sound recordings, also mark the colonialisation of immaterial values within a new layer of history. The exotism of the recorded sounds is of such appeal to Central Europeans that it might lead to ideas for ecological utopias. Paradise reloaded. The appropriation required is executed with modern sound recording technology, the work resulting from this goes beyond the documentary, the catalogued, and beyond approaches to turn the sounds into a museum. During work, the hunt for authentic sounds transformed into the quest for a sound utopia, which in turn refers to the imitation of nature in the prehistoric evolution of man-made music.

The listening to and experiencing of locations in a largely natural state, and in partly extreme climatic conditions, as well as the re-listening and evaluation of the recorded sound material from those locations set the work methodology for Bushdesertrainforest. In all visited places in scrubland, desert, and rainforest I perceived great joy for the existence and the utterances of the creatures present. My self-esteem has changed during this time, the sounds I heard have changed my ideas about sound, in so far as there is a personal layer beyond the technical layer of sound editing and composition. A somewhat remote, but subjective mediator is at work, who develops intensity and recognizability of certain acoustic events in the sound material, and who makes those aspects of the stays in scrubland, desert, and rainforest which go beyond sound, become applicable parameters for composition.

Bushdesertrainforest is a comparative study of three diverse ecosystems, or biomes, which more or less succeed each other; savannah the transitory zone between rainforest and desert.
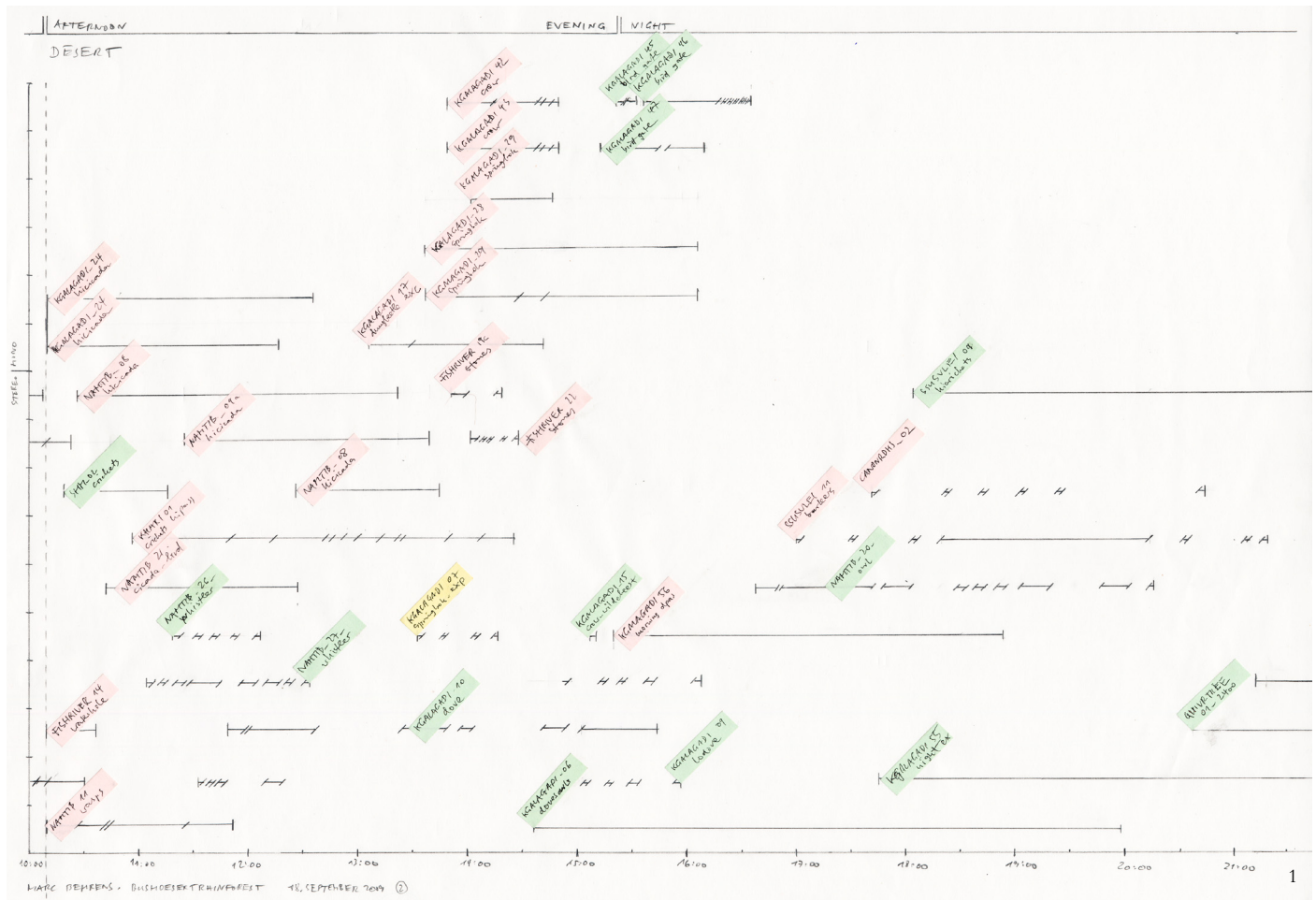
1   score excerpt of Bushdesertrainforest, Desert part. Each sticky note stands for
    a single field recording

A three-part composition of 52 minutes was produced from the sound material: Bush, Desert and Rainforest. Material-wise, the three parts are clearly divided from each other. Scrubland (savannah, bush) is the point of origin from which a traveller/listener would reach first the one, then the other more extreme ecosystem.

The three biomes, scrubland, desert, and rainforest are partitioned into 10 minutes, 20 minutes, 20 minutes. By frequency domain filtering and shifting (partly with various equalizers, partly by direct access changes in the spectrograms, by resynthesis) individuals or groups of animals are highlighted more than would be the case in nature, and put into relation beyond the possible combinations present in nature. A second temporal structure is developed throughout the piece's duration, respecting sections of day and night, but sometimes stretching out a late afternoon or an early morning into an overdimensioned length respective to other sections.

A microphone will always record a given sound widely unfiltered (of course depending on the microphone's characteristic). But the direct impression of listening on location is filtered in the listener's mind, according to criteria of attention, the listener's inner state and the cross-relations with visual, olfactory and haptic sensations. To communicate such an experience, which furthermore mutates with temporal distance in memory – eroding, so to speak – to the listener of a radio broadcast, it is necessary to edit the original recordings.

First, the technically almost "neutral" sound recordings through microphones were compared to the actual and subjective listening impression in my perception/memory. Therefore the frequency spectrum of the recordings was filtered, limited, parts of it amplified or supressed. This kind of subtle editing stands in contrast to the possible extreme manipulations which take an audio recording far from its original context. I have tried to recreate my immediate listening impression, in order to make it communicable to the listener in the first place. The only exception in the piece regarding the degree of sound manipulation, is a two-and-a-half-minute passage – an interlude – in the Rainforest part. A range of the spectrum that occured before the interlude, is frozen into a static sound. A highly slowed down field recording is inserted into this passage of already expanded time. This transformed and timestretched sound opens a new insight into the inherent musicality of the original material. At the same time this interlude creates a short recreation phase in the rainforest's intense soundscape. It refers directly to the hallucinations I experienced in the rainforest during hypnagogue states in the early morning hours, which transformed my perception of the surrounding sound.

In a second phase of sound editing I have graphically influenced the spectrograms by direct access, in order to isolate utterances of individual species, and to illustrate the phenomenon of the sonic niche. I have described the nature of
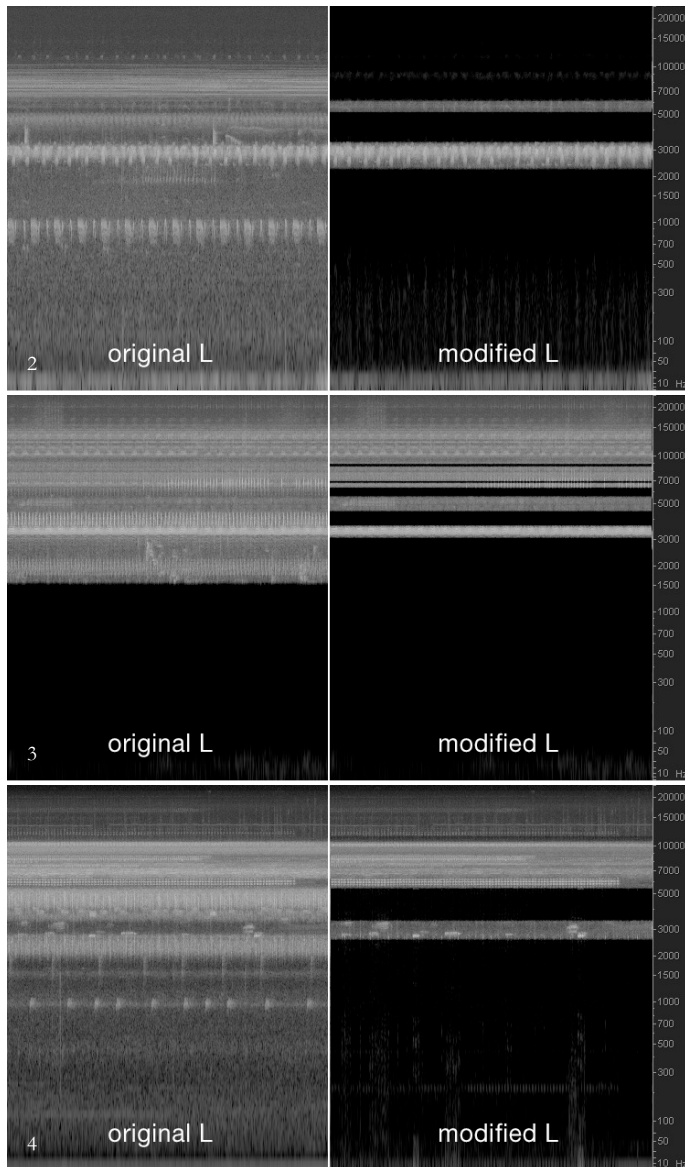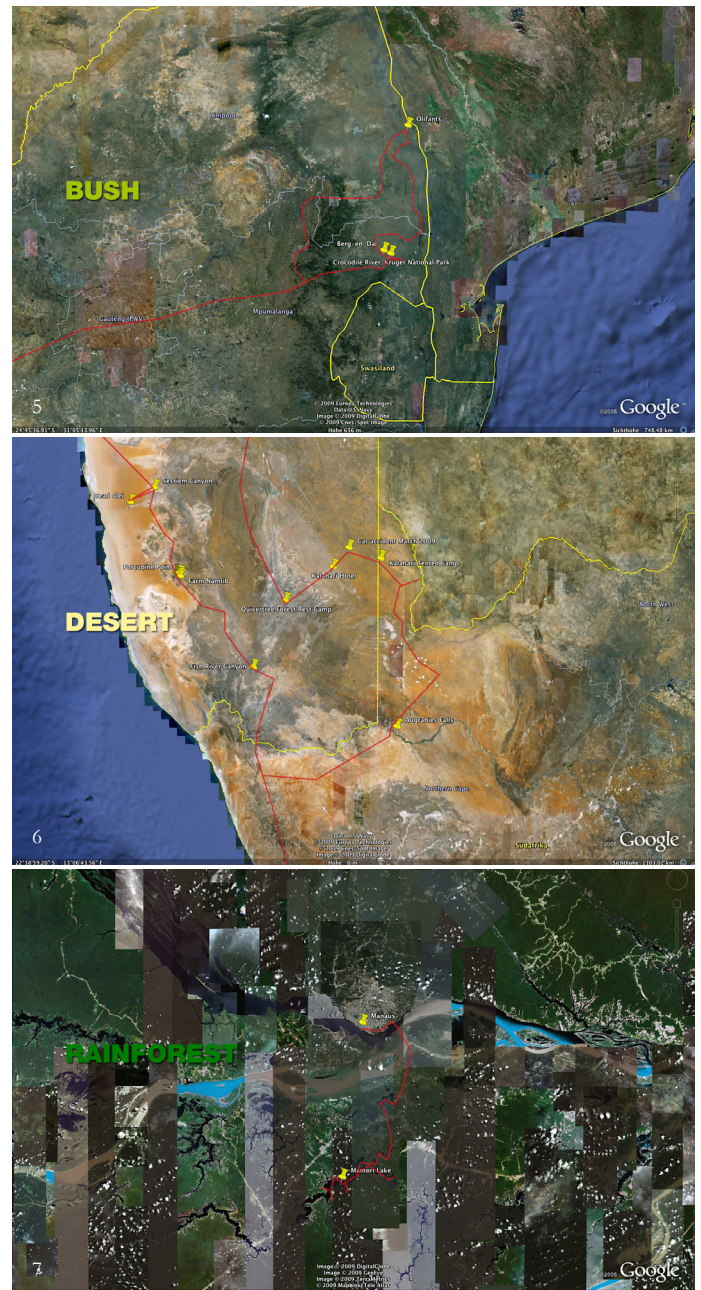
2–4   three examples for isolation/selective enhancement of some species'
        vocalizations, graphic-based spectrogram editing

5   map of bush itinerary (red line) in the Kruger Park (South Africa), March 2008
6   map of desert itinerary (red line) in the Namib and Kalahari deserts (Namibia
     and South Africa), March 2009
7   map of rainforest itinerary (red line) in the Amazon rainforest (Brazil),
     December 2008

this phenomenon above. Different animal species are acoustically active – "broadcasting," so to speak – either on different frequency bands or at different times of the day. Signals are "placed" in different, rarely overlapping frequency bands, similar to band splitting in mobile communication or radio.

The production and placement of Bushdesertrainforest by the WDR radio and in the WDR radio's program (WDR 3 open: Studio für Akustische Kunst, premiere broadcast on October 2, 2009) creates therefore the perfect space for the work. As it were, aspects of the condition of radio are mirrored in the work, as aspects of the condition of nature – meaning animal vocal communication – are mirrored in radio technology.

Sound recordings (Bush)

– various birds, insects and mammals at Berg-en-Dal, Crocodile Bridge, Olifants and various unspecified locations in Kruger Park, South Africa, frogs and insects at Thelema vineyard, Stellenbosch, South Africa
– Hippopotami and general atmosphere at Nthandanyati, Kruger Park

Sound recordings (Desert)

– insects, zebra and stones at Fish River Canyon, Namibia
– birds, barking ghekkos and insects at Sossusvlei, Quiver tree forest, Seeheim and Namtib Guest Farm, Namibia and in the Kgalagadi Transfrontier Park (the Kalahari desert is shared by Botswana, South Africa and Namibia)
– jackals at Namtib Guest Farm, springbok and giraffe in the Kgalagadi Transfrontier Park

Sound recordings (Rainforest)

– birds, amphibians and insects around Lago Mamori and Lago Yuma, Amazónia, Brazil

Crowd

The entity in English simply called *crowd,* is named *Menschen-menge* (quantity of humans) in German. In Portuguese for example it is translated as *multidão* (multitude), in Italian as *folla,* which can be traced back to *follare* (to compress) and thus evokes the actual density of a crowd. It seems that a crowd as entity is perceived differently in distinct cultures. We know the sounds of crowds from our own experiences, but also from movies and from music history – a choir is always also a crowd. Crowds are formed all the time throughout the world. Some crowds are simply present, unobtrusively immersed in their activities, others develop extreme energies involving their environment and other humans around them. We know crowds from demonstrations and other political or religious events, and also from natural or manmade catastrophes. Crowds appear throughout movie and radio history, not only in football broadcasts, history and documentary movies. Already in silent film classics like "Metropolis" or "The Battleship Potemkin" one imagines easily how the depicted crowds might sound. Crowds appeared on the 1960s–1980s sound library vinyl records for home movie hobbyists, which today are mostly dusted and unused. They often included a few recordings of crowds, e.g. in swimming pool and pub.

Crowds can sound entirely different from each other – depending on situation, language and culturally determined behaviour. Some dramatic examples from the beginning of the year 2011, like the experience of the live broadcast of the jubilating crowd on Tahrir Square in Cairo after president Mubarak's resignation, have shifted the human crowd into the center of my listening attention.

In 1995, in my 30-minute composition "Advanced Environmental Control," I tried to create a connection between traffic signals for the blind and movements of crowds in urban space, recording many occurences of both. But since then, on many recording trips – and not only while on the lookout for "natural" animal sounds – I have avoided human presence or even deleted human voices and other man-made sounds from recordings during post-production. Since 2008 though, I have recorded (sometimes entirely unplanned) human crowds more often: for example in China, Portugal, Turkey and also in Germany. This happened more or less to also probe into soundscapes contrasting my earlier attempts, which were rather based on a utopian, idealized sound conception of a world devoid of human presence, but influenced and perceived by humans. It seems easier to embrace the observer role when recording landscape or animal sound (unless we speak about dangerous and big animals), but recording humans can become dangerous in other ways. During the recording situations for Crowd, the various crowds were observed and recorded by an individual. This individual is physically situated most times within the crowd, a part of it, but at the same time "untouched" in the crowd's role, because it is not involved in the activity of the crowd itself. On one occasion, recording clandestine currency conversion and brokerage activity in Istanbul, I was beaten by some members of the crowd.

8   Crowd: main areas with all allocated field recordings as of March 2012
9   Crowd: main areas with field recordings used in the composition, with the itinerary of fields marked

Can the phenomenon of a human crowd be defined sonically? Can we speak of a consistent phenomenon at all? A human crowd can be defined as a "granular fluid" [1] in its movements and viscosity. This is interesting as it provoked me to use granular (re)synthesis in Crowd – at various points in the composition, sounds generated with the various plug-ins from Michael Norris' Soundmagic Spectral (spectral freeze, spectral average) are mixed into the stream of recorded material, mostly used like "sound shadows" of a given passage.

The composition Crowd constitutes an inventory and processing of audio recordings and thereby also of the situations of various crowds throughout the globe, whereas an alternation from broad multitude to reduced unity and back to multiformed sound mass is maintained throughout the piece's duration.

The spectrum of the human crowd sounds recorded in various cultures and various situations reaches from prayer to demonstration or armed conflict, from partying, enjoyment to aggression or pain, from flee markets to clandestine activities. Crowds between sizes of a group of 7 and 1 million, with many steps inbetween, were encountered. I also included some material by two artist colleagues into my own catalogue of recordings: field recordings of demonstrations in Rome and in Cairo (Arab Spring) and the Kumbh Mela religious festival in India, recorded by Claudio Curciotti, and of a riot in London, UK, recorded by Matthias Kispert.

The composition has six main areas, designed as a rough map of crowd activity – a pentagon with five flaps (see images 8 and 9) – to which the various sounds were allocated on small post-it stickers. Some recordings bridge the sections between various areas, for example the London riot recording bridging between "Economic" and "Political/Social."

Area 1 – **Nutritional** (7:57): food and drink, partying
Area 2 – **Economic** (7:59): markets, shopping centres, clandestine economic activity
Area 3 – **Political/Social** (10:22): demonstrations, riots, conflict
Area 4 – **Mobile** (5:45): mass transportation, urban traffic
Area 5 – **Cultural** (8:25): education, playing, contemporary folk culture
Area 6 – **Spiritual** (11:36): various religious practices

Sound recordings (Nutritional):
– Istanbul, Turkey: hamam (January 2009)
– Dorf Nähe Benavente, Spain: countryside pub on a Sunday morning (April 2010)
– Frankfurt am Main, Germany: bottle party in public square (April 2010)
– Lissabon, Portugal: Bairro Alto, nightlife (January 2011)
– Melbourne, Australia: drunk party guests (July 2011)
– Cóvas do Monte, Portugal: multilingual crowd in restaurant (July 2011)
– Frankfurt am Main, Germany: drunk crowd during district party, rude remarks (August 2011)
– Palermo, Sicily: party crowd on Piazza Vucciria (December 2011)

Sound recordings (Economic):
– Xining, China: night market (July 2008)
– Istanbul, Turkey: crowd doing clandestine currency conversion (January 2009)
– Istanbul, Turkey: pedestrian area (September 2011)
– Penang/Georgetown, Malaysia: markets (February 08–09, 2012)
– Porto, Portugal: flee market (February 2012)

Sound recordings (Political/Social):
– Istanbul, Turkey: demonstration (Januar 2009)
– Porto, Portugal: demonstration on April 25, 2011 on occasion of the anniversary of the Portuguese Revolution
– Porto, Portugal: demonstration on May Day 2011
– Frankfurt am Main, Germany: demonstration against police violence (June 2011)
– Penang/Georgetown, Malaysia: police chasing actors disguised as terrorists, resulting gun fight (February 2012)
– Porto, Portugal: Europa League football match, FC Porto vs. Manchester City (February 16, 2012)

Sound recordings (Mobile):
– Hong Kong, China: various crowds, subway (September 2008)
– London, UK: various subway stations (November 2010)
– Bordeaux, France: train station (December 2010)
– Rio de Janeiro, Brazil: crowds in urban traffic and on market (February 2011)
– Favignana, Sicily: travellers with trolleys (December 2011)

Sound recordings (Cultural):
– Porto, Portugal: Festa de São João (June 23–24, 2010)
– Mühltal-Traisa, Germany: procession during country fair (August 2011)
– San Sebastián, Basque Country: children (January 2012)
– Porto, Portugal: children on school yard (February 2012)

Sound recordings (Spiritual):
– East-Jerusalem: Ethiopian lepers and other believers sing in the Church of the Holy Sepulchre (June 2006)
– Fráguas, Portugal: Catholic mass on a Sunday (March 2011)
– Kuala Lumpur, Malaysia: Thaipusam Festival (February 05–07, 2012)
– Penang/Georgetown, Malaysia: Chinese temple (February 08–09, 2012)

Crowd was first broadcast on March 23, 2012.

[1] (online): http://en.wikipedia.org/wiki/Crowd.

More info here:
http://marcbehrens.com