

Making Music out of Field Recordings

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Abstract

At the start of the 1970s I was simultaneously exposed to two distinct, yet related approaches to music deriving from environmental sounds. On the one hand was John Cage, postulating that everything sonic around us could be regarded as music, and on the other, Mauricio Kagel, assembling field recordings into so-called radio plays (*Hörspiel* in German), expanding that medium from recordings of enacted plays for radio broadcast into a semantically independent acoustic art form. Cologne Radio (*Westdeutscher Rundfunk*) producer Klaus Schöning and his “Composers as Radio Playwrights” series were instrumental in establishing this new medium.

After attending Kagel’s 1970 *Hörspiel* course, one of his annual “Cologne Courses for New Music”, I recorded everyday sounds in various world cities for assemblage into a radio play in Kagel’s sense. These music cassette recordings were of poor quality. In 1977, supported by Cologne Radio’s Folk-Music Department, I went with AKG microphones and a reel-to-reel Stellavox tape machine, all of high quality, on a three-month trip to Calcutta, recording a total of 20 hours of sound at 60 venues. Schöning commissioned a radio play out of this material. The result was *CCU*, 48 minutes long, first aired in May 1980 and inspiring Schöning to launch his “Metropolis” series, commissioned acoustic portraits of cities around the world.

Two decades later Klaus Schöning commissioned a radio play from me a second time (his last Metropolis commission). I intended to enter the year 2000 during a three-month journey around the world, which was to take me from and to Western Europe through North America, Oceania, Australasia, South-East Asia and India. On this trip, I recorded almost 10 hours of sound, which I assembled at the end of 2000 to form the 41-minute *Zero Crossing*, first aired in April 2001.

This paper describes the making of these two pieces.

Keywords: radio play, acoustic art, soundscapes, electronic music.

CCU

Calcutta, founded in 1697 by the British, became two centuries later the second largest city in the British Empire (after London) and a metropolis of fifteen million today. Few other cities are home to so many world religions: not only Hinduism but various Islamic, Christian and Buddhist groupings as well as Sikhism, Jainism, Judaism and Zoroastrianism all have a place there. Calcutta is also a significant cultural centre with a strong sense for the muses running through all levels of society. It is also one of the most important world centres of North Indian Classical Music. Contributing to the cultural richness of this capital city of West Bengal are several peoples not only from India but also from Tibet, China and Armenia.

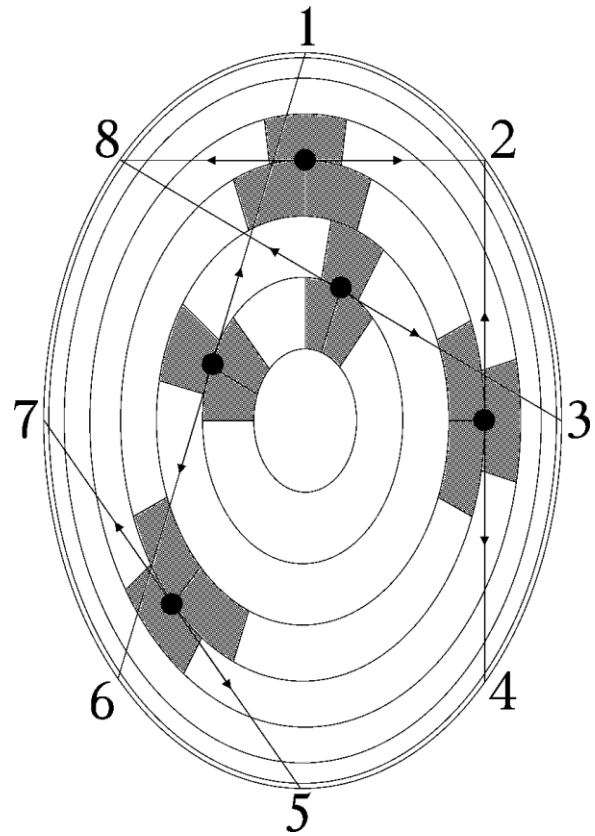
CCU (code for Calcutta Airport) is a 48-minute octophonic electronic work involving the layered placement of stereo recordings totalling seven hours (carefully selected from 20 recorded hours) of life in 1977 Calcutta. These recordings reflect a vast variety of public activities, street sounds,

religious services, concerts etc. etc. The moment each recording is heard in the piece corresponds to the time of day it was made. Other parameters are dynamics (for fading the sounds in and out) and spatialization: symbolically placing the eight loudspeakers on the city's elliptical geocultural rim (miniaturized to the bounds of the concert hall), each stereo recording is patched to two speakers joined by a line, the midpoint of which corresponds in direction and distance to the recording site from the centre, at the crossing of Middleton Street and Nehru Road. Fig.1 is a city map with the sectored ellipse's rim circumscribing speaker positions 1 to 8. Some of the sectors are shown, shaded, in Fig.2, exemplifying the correlation between recording site and speaker allocation – a stereo recording made in any one shaded sector is patched to the two speakers terminating the tangential straight line that intersects the black dot in the middle of the sector group, e.g. loudspeakers 2 and 8 for the three topmost shaded sectors. The mixing necessitated was especially difficult in 1980, given the large number of simultaneously running recordings.

Fig.1 – Calcutta, its geocultural limits shown as a sectored ellipse with eight loudspeaker positions



Fig.2 – The segmented ellipse at left in terms of stereo to octophonic allocation



The position in time of events in *CCU* correspond to the time of day (irrespective of date) at which these were recorded: 24 hours are reflected in 48 minutes. Thus each two-minute mark of the piece corresponds to the start of another hour of a hypothetical day in Calcutta. However, none of the recorded material was changed in speed. I first logged all 20 hours of recordings.

To this end I designed the chart shown in Fig.3. Each of the four horizontal strips represent 105 seconds of a recording, the whole chart 7 minutes in all. With one eye on the tape recorder's time display, I pencilled lines following the sound amplitude and time into the strips. Then I cut out the individual strips for the seven hours I selected, joining them end to end to form longer strips, like the tapes containing the recordings. These I glued into eight books of endless paper of the type used for printers of that time – see Fig.4 for two time-concurrent excerpts of such books, one above the other. Each strip was allotted a certain amount of space almost twice as long as the strip (the dark areas in Fig.4) depending on which point in time of the corresponding recording was to match the preordained time of day in the piece. Aligning the books one above the other on a long surface, I slid the strips sideways back and forth, eyeing them along the books from below in order to synchronize events before fixing. These books formed the “screenplay” for mixing the selected tape segments on 16-track recorders in the studios of Cologne Radio.

Fig.3 – chart for inscribing a log of the events heard in a recording (7' each chart)

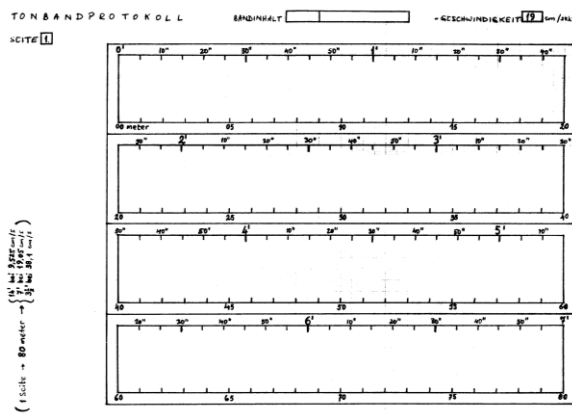
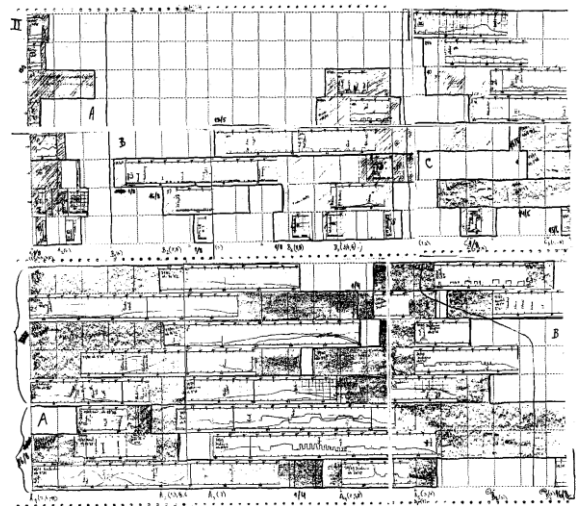


Fig.4 – two time-concurrent excerpts of positioned and fixed log-chart strips.



Zero Crossing

Although the ancient Greeks knew the earth is round, it took another two millenia for this fact to be generally known. Since then, crossing large distances, formerly costing weeks, later hours (or at least huge telephone bills), has shrunk to a few mouse-clicks. Thus the earth's spherical shape, recognized with initial difficulty, has now lost much of its relevance. Our digital experience of today's “globalised” world has moved away from the physical feel of the “globe as such”.

When 1999 gave way to 2000 I documented a physical rounding of the earth. The journey, from 23 November 1999 till 11 February 2000 (80 days as it happens), led from and back to Cologne north of a great circle (a line dividing the globe into equal halves) via Düsseldorf, London, Dublin, New York, Montreal, Chicago, Los Angeles, Santa Barbara, Tahiti, New Caledonia, Wellington, Sydney, Melbourne, Perth, Bali, Bangkok, Calcutta and Frankfurt. Augmenting the experience was a flight on 1 January 2000 eastwards over the dateline back into 1999 in Tahiti, where I brought in the New Year a second time.

Each day of the trip I made a digital sound recording at the same stellar time (a stellar day, the period of rotation of the earth as seen against the stars, lasts 23 hours and 56 minutes). The content of each of the recordings – made for instance in cafés, of people on streets, of birds and frogs, of the ocean or of road and air traffic – was usually decided on at short notice in the place I was in. An exception: the New Year celebration at midnight in Noumea, New Caledonia. The resulting 10 hours of sound material were edited and assembled for Cologne Radio to form a 41-minute composition.

The title *Zero Crossing* (a standard term in acoustics) refers both to a sound wave crossing its zero displacement position as well as my crossing of time-space thresholds such as the Greenwich Meridian (once), the Equator (twice), the Dateline (three times) and last but not least Midnight between 1999 and 2000 (twice). This eight-channel piece gives the listener the impression of seamlessly gliding through time and space.

Fig.5 shows the planned and actual (Central European) time of every recording, the former as a straight line, the latter as little blocks, the heights of which indicate the duration. Also shown: the date according to Central European time (above) and to local time (below) as well as the places where the recordings were made.

Fig.5 – Date and time of recordings

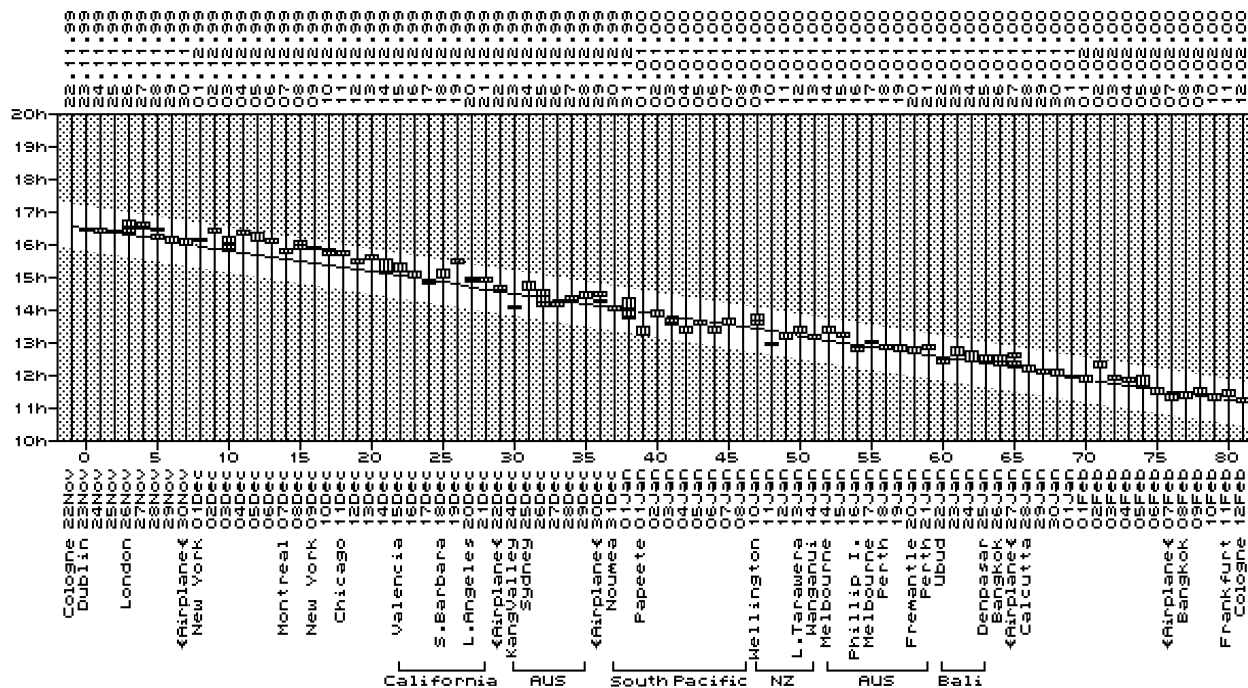


Fig.6 is a map of the world in equidistant projection with a great circle close to my airports of call, shown as button-like discs and by airport codes. Also shown are the two poles of the great circle, one at 45°N, 165°E in the North Pacific near Kamchatka, Siberia, and the other in the middle of the South Atlantic. Further shown are zones traversed by day (white on black) and by night (white on black).

Fig.6 – Equidistant World Map with great circle (as a sine curve) and my airports of call nearby

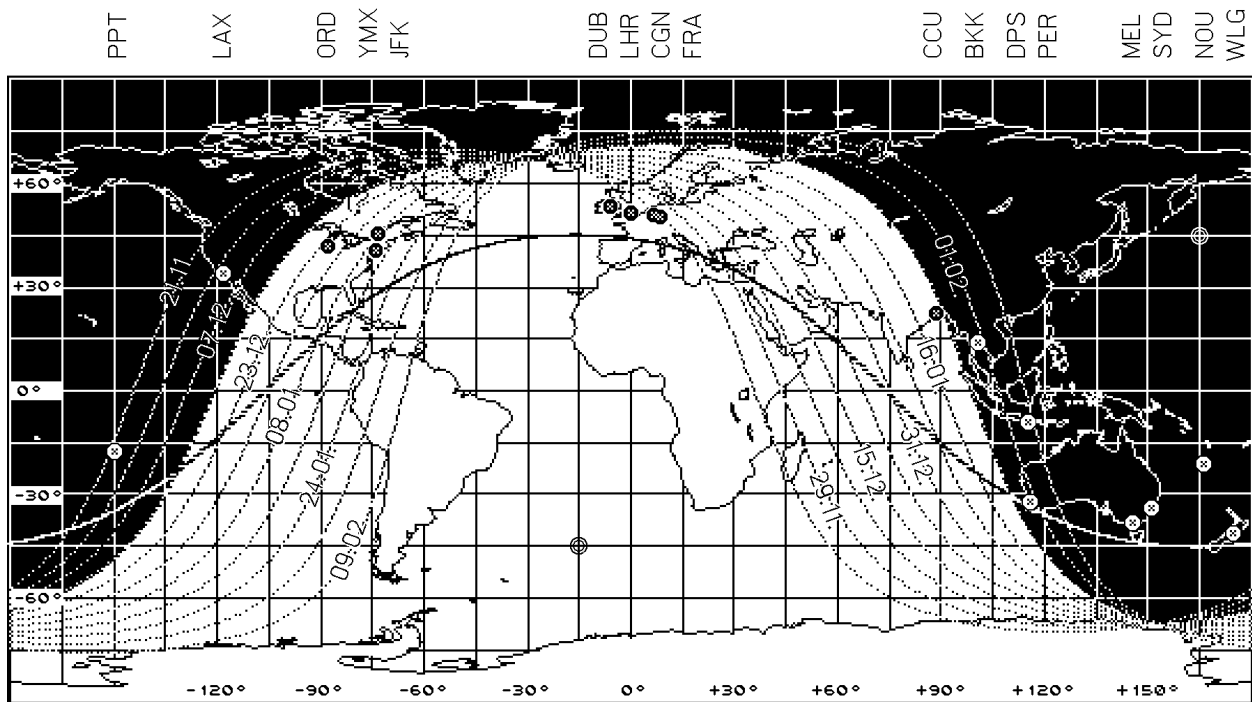


Fig.7 shows the same map in polar projection centred at the great circle’s pole near Kamchatka. All places visited were situated between the great circle and a smaller circle 30° to its north.

Fig.7 – Polar World Map (cf. Fig.6)

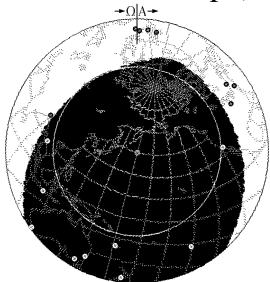
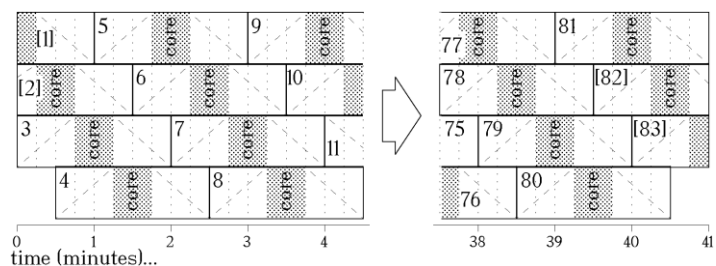


Fig.8 – Layering of the 83 editions



The recordings of each of 83 days (including those before departure and after arrival in Cologne) were meticulously edited down to two minutes each containing a 30-second “core” right in the middle. The twice 45 seconds leading to and from the core were spent gently fading the “edition” in and out. Fig.8 shows the layering of the editions. The result starts and ends in Cologne, almost imperceptibly moving around the world. The piece is also panned through eight loudspeakers – four along the left and the right walls of the projection space – from front to rear, seemingly carrying the listener slowly forward in this simulated journey through space and time.

References

Contact the author at <barlow@music.ucsb.edu> for URLs and pdfs.