transformed fragment patterns. Intermediary stages during changing consistencies are formed, between concrete and abstract, natural and artificial, and so on. Thus, the artificial soundscape appears as an ensemble of desubjectivised expressive matter in the artistically layered sound system of the horizontal, rhythmic-melodic sound figure and the vertical, resonant-harmonic sound-space.

3. THE FIVE MOST IMPORTANT TYPES OF SPACE-SOUNDINSTALLATIONS

Over several years, different types of Space-soundInstallations have crystallised and developed – due to, amongst other things, different performance situations. The five most important types will be illustrated below:

- The Space-soundObject
- The circumambulatory Space-soundBody
- The enterable Space-soundBody
- Space-within-Space
- Concert Space-soundBody

3.1. The Space-soundObject

The characteristic aspect of the Space-soundObject is a two-dimensional arrangement of the loudspeakers, which radiate sound in one direction. This results in an optimal reception zone in which the visitor can approach and move away from the object. Therefore, Space-soundObjects are usually positioned against a wall. Figure 1 shows the Space-soundObject Sonic Lines, commissioned by Nuova Consonanza, Rome in 1998. The two-dimensional loudspeaker configuration is placed in the shape of an eight-limbed line alongside a marble wall in the foyer of the Goethe Institute in Rome. The loudspeaker configuration of the Space-soundObject is inspired by the specific dimensions of the architectural space. Clearly perceptible ‘line-sounds’ (forming rolling-ball motifs) are counterpointed by internally fluctuating water sounds which represent the liquid, unstable condition of the eight-channel Space-soundComposition.

Figure 2 shows the Space-soundObject Hörbild (‘Audible Picture’). The eleven-limbed speaker ensemble is set into a monochrome, blue sound-wall, resulting in an object resembling an image on a panel. The speaker matrix of the Hörbild forms the shape of an infinity symbol. However, the sound does not only move along the path of the infinite bow, but the speaker tableau becomes instead a territory, a construction for sounds on which they spread, compress, evaporate and become solid again. The Space-soundObject was commissioned by the Siemens Arts Program, Munich and was presented for the first time at the Berliner Festwochen 1995 with the eleven-channel Space-soundComposition Tableau I-III. Further works were produced in 1997 for the first exhibition of the Sender Freies Berlin (SFB) sound gallery and for the Musikantriennale Cologne 1997, commissioned by the Studio Akustische Kunst of the WDR (Klaus Schöning).

3.2. The circumambulatory Space-soundBody

The circumambulatory Space-soundBody is a type of Space-soundInstallation the individual exhibits of which have a three-dimensional sculptural structure of loudspeakers which can radiate sound in different directions and which is specifically developed for the particular architectural space. The distribution of the sound sources in the space is arranged in such a way that both a horizontal and a vertical linear loudspeaker body are formed, around which one can walk and through which the individual sound strata sound with specifically developed types of movements.

The dimensions and measurements of the individual loudspeaker-body depend on the size of the performance space. As required, an object is developed for the loudspeaker ensemble on which the loudspeakers
are installed, as shown in figures 3 and 4. As the loudspeakers can radiate in different directions and the loudspeaker ensemble is free-standing in the space, the visitor can – by contrast with the Space-soundObject – perceive the sound from different directions; the term ‘circumambulatory’ primarily refers to the three-dimensional reception mode of the variable listening perspectives, which are of equal quality throughout the entire space.

The two examples illustrated here from the project series Sonic Lines n’ Rooms represent an eight-limbed ‘diagonal-horizontal’ (figure 3) as well as an eight-limbed ‘diagonal-vertical’ (figure 4), circumambulatory Space-soundBody. The loudspeakers are installed on steel crossbeams – each approximately ten metres long – running across the space. The figures show two of the four rooms of the vaulted cellars of the Fürstlichen Fürstenbergischen Hofbibliothek, for which the artist-couple created a four-part Space-soundInstallation, as a commissioned piece for the Donaueschinger Musiktage 1999.3

3.3. The enterable Space-soundBody

The characteristic aspect of the enterable Space-soundBody is the artistic-poetic treatment of the architectural space. This is initiated by the artificial transformation of the raw material ‘space at location’ in order to open up the composed sound space by means of the three-dimensional movement of the sounds and to facilitate specific states in the acoustic becoming of architectural space.

The loudspeaker configuration of an enterable Space-soundBody almost always includes the entire architectural space. Generally, the speakers are positioned around and close to the walls on different levels so the visitor – surrounded by the loudspeaker body – can move freely within the space in order to experience very different auditory perspectives. The result is specific sound spaces which are, among other things, shaped by the special characteristics of the particular architecture. What takes place is in effect an ‘acoustic topographing’, so that the dimensions of the imaginary auditory space and the real ‘sounding’ sound space interweave and create a state of a specific space-time-continuum. Through the aspect of permanence these states preserve a certain authenticity of the ‘real’ in their being-staying-the-same and their constantly varied repetition.

For the recipient, real space and moved sound space create specific synergies. The illusory space of imagination develops (through the moved sound and one’s own movement) within the real space. What happens here is, so to speak, the cancellation of the ‘real’ boundaries of space. Mental processes of changing

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3Further information on the project series can be obtained at: www.sabineschaeferoachimkrebs.de.
location are initiated, which – though imaginary and removed – are evoked by means of the shaped ‘real’ location with its corresponding sound architecture. A specific space emerges in order that perception itself becomes specific.

The enterable Space-soundBody shown in figures 5 and 6 represent another component of the aforementioned four-part Space-soundInstallation project *Sonic Lines n’Rooms*. The four-part ensemble as a whole – with a thirty-two-channel Space-soundComposition for 4 x 8 loudspeakers – is the artist-couple’s first production for the project series of the same name: *Sonic Lines n’Rooms*. The series links the two different types of Space-soundInstallations ‘circumambulatory Space-soundBody’ and ‘enterable Space-soundBody’, which are – depending on the project – applied individually or in combination.

The Space-soundBody 3 from *Sonic Lines n’Rooms* was premiered in 2000 as a separate enterable Space-soundBody at the ‘KlangArt Buch’, organised by the Akademie der Künste Berlin. The concert performance of the Space-soundComposition *Sonic Lines n’Rooms* No. 3 took place in the same year in Rotterdam, the Netherlands, as part of the ‘v_2’ series of events, *Time-Based Space*.

The Space-soundBody 4 from *Sonic Lines n’Rooms* was first presented separately as part of the MIX.01 festival in Aarhus, Denmark in 2001, and the Space-soundComposition *Sonic Lines n’Rooms* No. 4 was premiered as part of the 10th Florida Electroacoustic Music Festival in Gainesville, USA.

There are of course manifold hybrid forms of the three described types of space-sound installations (Space-soundObject, circumambulatory and enterable
3.3.1. Hybrid form of enterable and circumambulatory Space-soundBody with Space-soundObject

The eighteen-limbed Space-soundInstallation \textit{LOST} (figure 7) was staged with lighting and was created for rooms with high ceilings and long reverberation periods. It was first exhibited in 1992 in the light-well of the Badischer Kunstverein in collaboration with the ZKM (Centre for Art and Media) in Karlsruhe, Germany. The Space-soundInstallation is, above all, characterised by an approximately seven-metre high, six-limbed loudspeaker column (figure 7, level A). Sound-masses plunge down over this Space-soundObject and pull themselves up again in specific phases.

When entering the space through the gallery in the upper floor, the visitor is occasionally surrounded by a band of sound that moves across an enterable Space-soundBody in the shape of a six-limbed loudspeaker-semicircle (figure 7, level B) and counterpoints the plunging sound gestures. The circumambulatory Space-soundBody of level C, which is positioned on the floor, mainly transmits fluctuating sound-colour priming coats ('Klangfarbgrundierungen') and forms the sound tableau for the moved sounds of levels A and B.

3.3.2. Hybrid form of enterable Space-soundBody with two circumambulatory Space-soundBodies

The twenty-eight-limbed Space-soundInstallation 'TopophonicPlateaux' (figure 8) which is staged with
lighting consists of a twenty-seven-limbed loudspeaker ensemble with a computer-controlled concert grand piano. The twenty-eight-channel Space-soundComposition was designed as a commission by the Donaueschinger Musiktage 1995 specifically for the Sternensaal concert hall in Donaueschingen, Germany. This Space-soundBody is characterised by three installation components (see figure 8):

- **Component 1**: an outer circle – consisting of fifteen loudspeakers – which starts at the right edge of the stage and ends at the left edge. The loudspeakers are positioned at heights which successively ascend and then descend again. The computer-controlled grand piano is located on the stage and thus, as the sixteenth limb, it completes the space-enclosing loudspeaker circle. The grand piano is triggered in real time and is synchronised with the loudspeaker ensemble via the computer.

- **Component 2**: two columns – each consisting of four loudspeakers – which are positioned opposite each another in the inner space. The loudspeakers are staggered at different heights and radiate in different directions. The two loudspeaker columns represent typical circumambulatory Space-soundBodies.

- **Component 3**: four loudspeakers, each of which is positioned on the floor in the corners of the space. This group of loudspeakers applies sound priming coats to the space and extends the loudspeaker circle described under component 1 to a twenty-limbed enterable Space-soundBody.
3.4. Space-within-Space

This artistic concept is based on a self-contained enterable Space-soundBody as 'space within (architectural) space'. Consequently, the enterable Space-soundBody also becomes circumambulatory. Through the combination of the features of circumambulation and enterability, new qualities emerge which establish an autonomous type of space-sound installation art. An example of this is the Space-soundBody *Klangzelt* ('Sound Tent') from the project series *SonicRooms* (figure 9).

The architechtomic dimensions of the space surrounding the Space-soundBody itself are not explored acoustically – or, to put it better, 'sonified' – a process which would in a sense render the room itself 'audible'.

On the contrary, the installation aims to eliminate as much as possible the real – visual as well as acoustical – environment of the place where the enterable Space-soundBody is installed – it is in fact a room within a room.

The interior of the Space-soundBody entitled *Klangzelt* ('Sound Tent'), which is easily and effectively separated from its surrounding space by a double fabric cover, leaves aside as much as possible the visual aspect of the artistic design of space and time to intensify the auditory reception of the artificially created virtual SoundSpaces.

As visual contact, a crucial premise for orientation and localisation, is prevented by thin draping which is impervious to light but permeable to sound, it is...