Precedent Studies

There are five precedent studies examined in this section. The first deals with the compositional relationship between sound and space. The second and third engage with the process of revealing untold acoustic stories of objects and spaces. The fourth is a conceptual take on the ability of architecture to compose the soundscape of a place and the fifth explores the ability of architecture to reveal the latent qualities of a soundscape through careful spatial design. These precedent studies are complemented by a series of examples and ideas that have permeated the rest of the document.

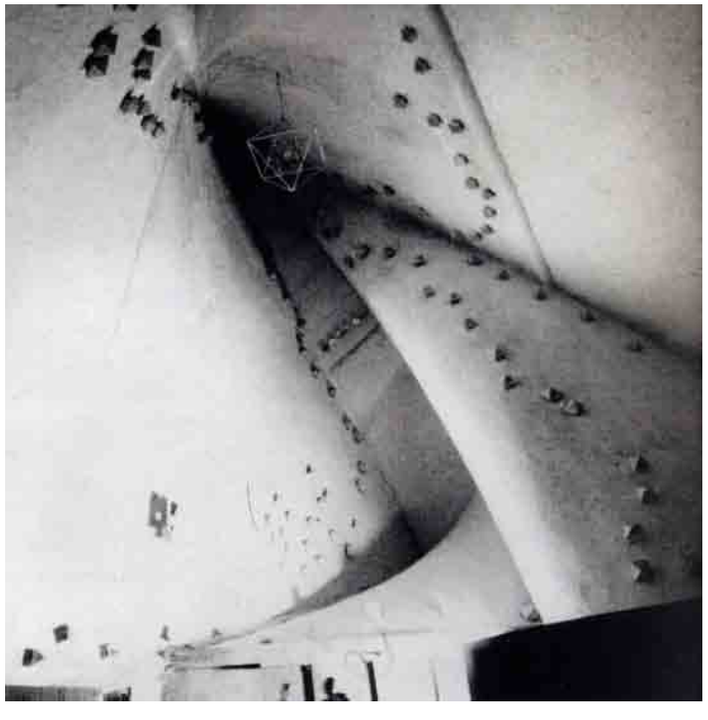
1. The Philips Pavilion: ‘Poème Électronique’

Design: 1956-1958
Construction: 1958
Architects and Composer: Le Corbusier, Iannis Xenakis, Edgard Varèse
Client: The Philips Corporation, Holland
Programme: World Fair Pavilion to showcase the electronic audio/visual technologies of the Philips Corporation.

Description

In 1956 the Philips Corporation began to make preparations for their pavilion at the 1958 World’s Fair in Brussels. The fair, the first since the end of World War Two, was to celebrate the rejuvenation of civilization after years of wartime destruction (The Philips Pavilion - Poème Électronique).

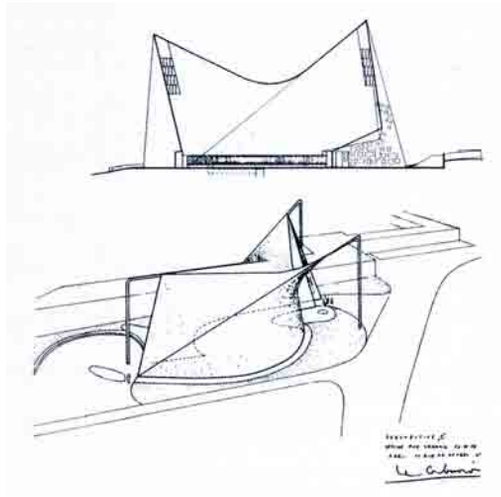
The company proposed that, instead of simply displaying commercial products, they should assemble an international team consisting of an architect, an artist and a composer to create a pavilion that would showcase electronic technology to its fullest potential. They approached Le Corbusier, who was reportedly enthusiastic, replying: “I will not make a pavilion for you but an Electronic Poem and a vessel containing the poem; light, colour, image, rhythm and sound



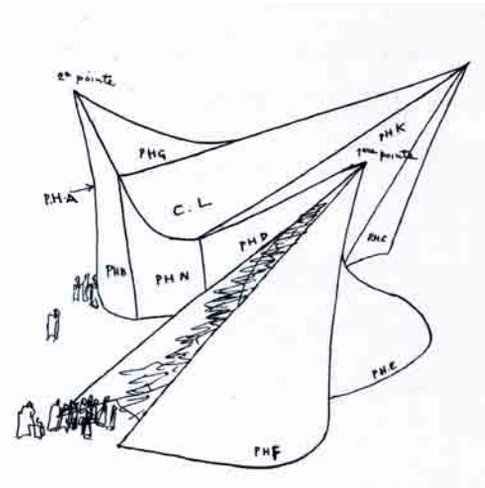
▲ Fig. 162
Exterior view of Philips Pavilion

▲ Fig. 163
Le Corbusier

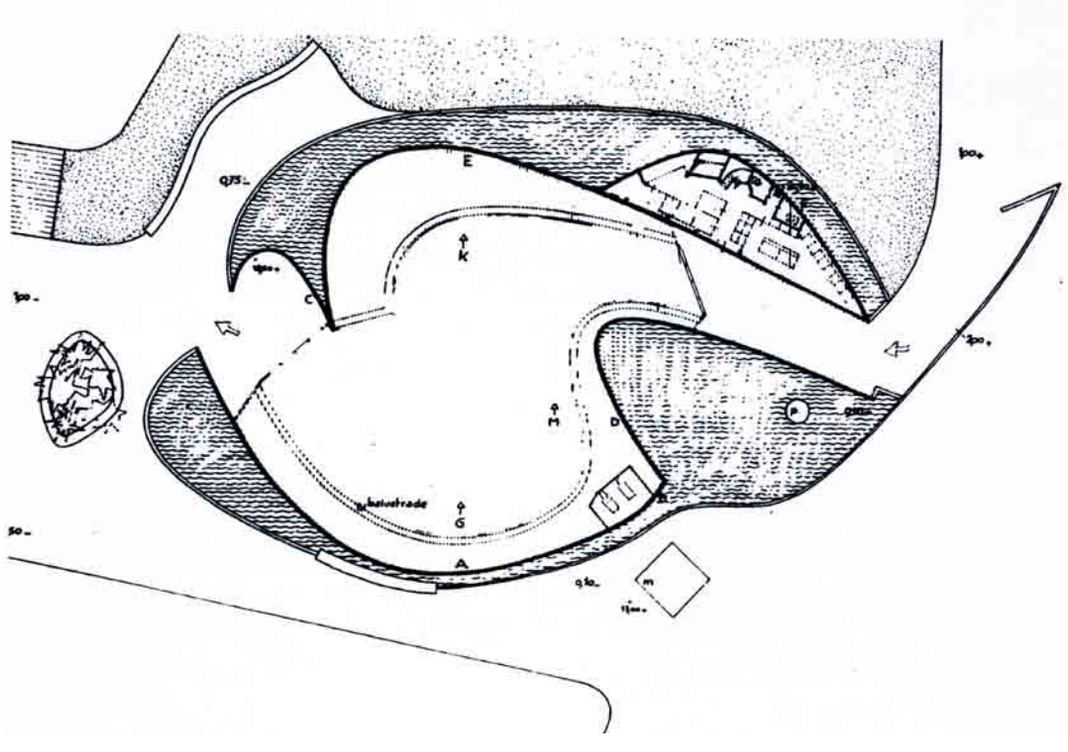
◀ Fig. 164
Interior view of roof showing sound system



▲▶ Fig. 165-166
Sketches of the exterior of the the pavilion



▼ Fig. 167
Plan of the pavilion



joined together in organic synthesis." (The Philips Pavilion - Poème Électronique). Le Corbusier insisted that he also be responsible for the artistic and visual elements and that Edgard Varèse be the composer for the installation.

Le Corbusier initially provided a rough outline as to look and function of the event and installation:

- The interior, to be shaped like the stomach of a cow, would hold audience members in groups of 500 that would be allowed to enter in ten minute intervals.
- As the audience entered the interior a two minute transition piece would be played, followed by the darkening of the room and the commencement of the eight minute music and light show.
- The eight minute show consisted of coloured lights, images, and film that would immerse the audience. The music specifically was composed to be played over a huge array of speakers – the sound thus surrounding and traversing the audience.
- The music and visuals would not be synchronised in any way, except by chance and a specified moment of silence six minutes into the work.

The project was managed by Iannis Xenakis, a young architect at Le Corbusier's office that would also come to compose the shorter transition piece. Indeed, Xenakis would become the principal coordinator of the project during the two years of development – creating the exterior design, structural details, and coordinating the artistic team.

The audio component of the piece was to demonstrate the effects of stereophony, reverberation, and echo: sounds appeared to move through the space from different directions and around the audience. The piece was one of the most elaborate and site-specific projects ever created: the sound being written for the space and vice versa.

Design Considerations

The Philips Pavilion was one of the first immersive installations in which sight, sound and space were designed and manipulated together to such an extent as to influence each other. Although less shocking today thanks to MTV, the effect of quickly moving and changing images and sounds in 1958 was revolutionary. The images and sound were designed to create a specific atmosphere and feeling that immersed the viewer completely in experience. The effect however was very carefully choreographed and relied heavily on technology to achieve it. The sounds and images were not the sounds of the everyday and could only be experienced within the hermetically sealed and controlled environment of the pavilion. It does not allow for chance encounters with its content but rather forces it upon the user. For the purposes of this thesis it the role of chance encounters within city that drive the design and ultimately provide opportunities for the poetic experience of sound in the city.

▲▶ Fig. 168-170
Interior projections (as created by Le Corbusier)

▶ Fig. 171
Exterior view of Philips Pavilion

2.1 Recorded Delivery

Description

Janek Schaefer was trained as an architect at the Royal College of Art, London before becoming interested in sound as an art form. His first encounter with sound as an art medium in itself came in the form of a piece called 'Recorded Delivery', produced in 1995 for the 'Self Storage' exhibition curated by Brian Eno, Art Angel and Laurie Anderson. The space allocated to each artist was a generic room in a self storage centre, not a physical or specific place to which the artists could respond. The question was how to create a piece that was specific to 'a place' without having visited the place itself. For Janek the aspect of 'delivery' became pertinent. Delivery essentially involves the movement of an object from one specific place to another specific place (Schaefer, 1995). This 'movement of objects' informed the creation of a 'parcel with ears' – essentially a voice activated tape recorder placed inside a parcel that would 'listen' to the 'interesting bits' of its journey to the exhibition (Schaefer, 1995).

Design Considerations

'Recorded Delivery' documents the life of a seemingly ordinary object during a seemingly ordinary day; a story that would ordinarily never be heard. The effect of highlighting the parcel's journey draws attention to the vast and varied soundscape that surrounds society's daily interactions; with each other, objects and built space.

2.2 Vacant Space

Installation: 25th November 2006 to 25th January 2007
Artists: Janek Schaefer, in collaboration with Chris Watson and David Tinapple
Venue: Southall Park Gallery, London
Program: Audio-Visual Immersive Installation

Description

The second piece by Janek Schaefer that merits investigation is entitled 'Vacant Space'. His architectural training necessarily involves him reacting to the specifics of a given place rather than the 'virtual idea' of it (Schaefer, 1995), creating very site-specific sound works in the process – the idea that sound and space combine to create unique places. When confronted with the generic white void of the contemporary art gallery,

▲Fig. 172-175
'Recorded Delivery' by J. Schaefer

▲Fig. 176-180
'Vacant Space' by J. Schaefer

Janek explored the nature of the void in respect to vacant or vacated spaces that he had encountered late at night after his live performances. Listening to these 'vacant spaces', he discovered that that: (a) there is no such thing as silence, (b) sound travels around corners and through barriers and (c) it forces you to imagine the source of the sound itself. He thus decided to amplify these spaces – record them and turn them into a piece for public consumption in the form of an audio-visual immersive installation.

Working with sound-recordist Chris Watson and Media Art MA student David Tinapple (who programmed the software), Janek created a blank white wall within the space of the exhibition room onto which was projected life-size, scrolling, 360° panoramic images of the spaces he had recorded. The scrolling of the images was controlled by, and reacted to, the soundtrack of the piece – audio snippets of the spaces themselves. For example, silence caused the image to pause and increased volume caused the image to brighten. The 'art' of the piece took place in the blurring boundaries between the visual-spaces and the sound-spaces.

The conceptual installation was also broken down into a number of deliberate actions that the viewer had to perform: walking into the space, picking up a pair of headphones, putting them on (dampening the ambient sounds of the gallery), walking to the wall, plugging into the wall itself and standing or sitting within a certain distance of the projection (causing it to appear life-size and making the viewers shadows interfere or participate).

Design Considerations

'Vacant Spaces' is an artwork that requires you to participate in its creation with a carefully choreographed routine. The process of interaction carefully reveals the makeup of the work as the user becomes more involved and more immersed. The act of 'plugging in' to the sounds of the projected spaces captures the user in the activity of listening; the void of the gallery becoming the frame for untold stories of built space.

3. Mix House

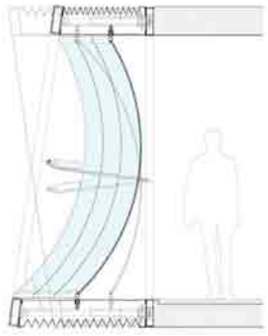
Date: 2007
Architects: Joel Sanders, Karen van Lengen, Ben Rubin
Programme: Residential unit that provides the inhabitants with the opportunity to actively produce both the internal and external sonic environments.

Description

Mix House extends the Modern notion of visual transparency to include aural transparency. The house itself consists of two sound-gathering volumes that contain three 'audio-visual' windows. The windows contain a louvered glass window that regulates the ambient sound of the environment, and a parabolic dish that electronically targets domestic sounds. The recorded sounds can then be used to manipulate and control the acoustic environment of the interior, and also projected into the neighbourhood.

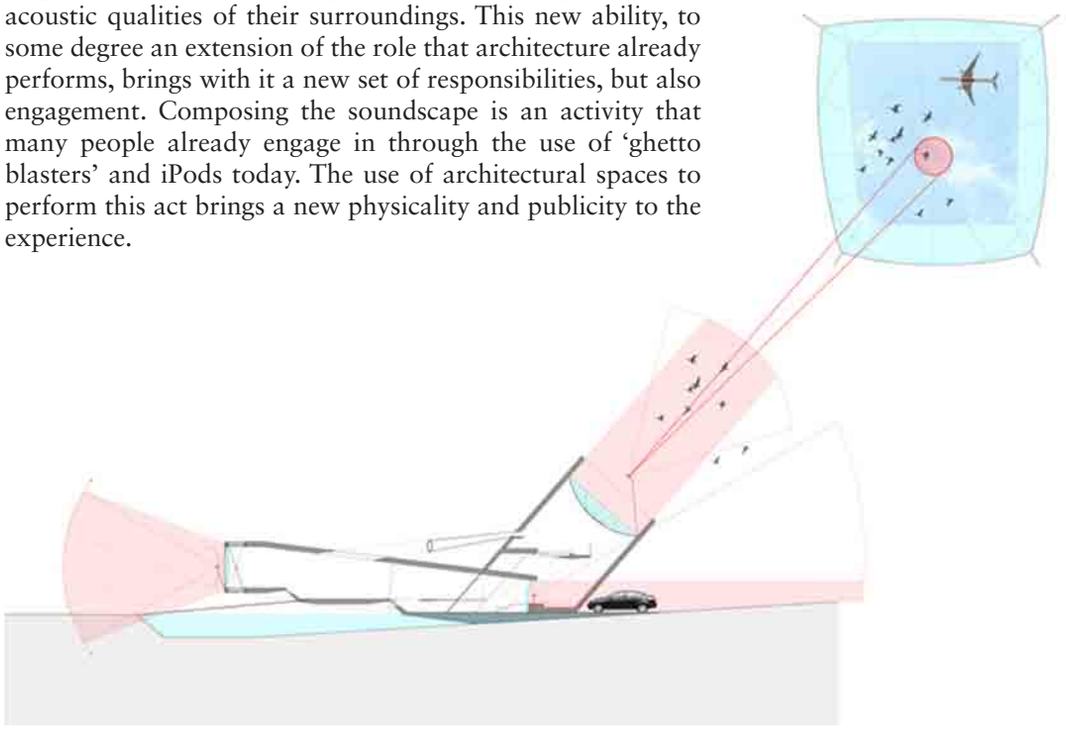
Design Considerations

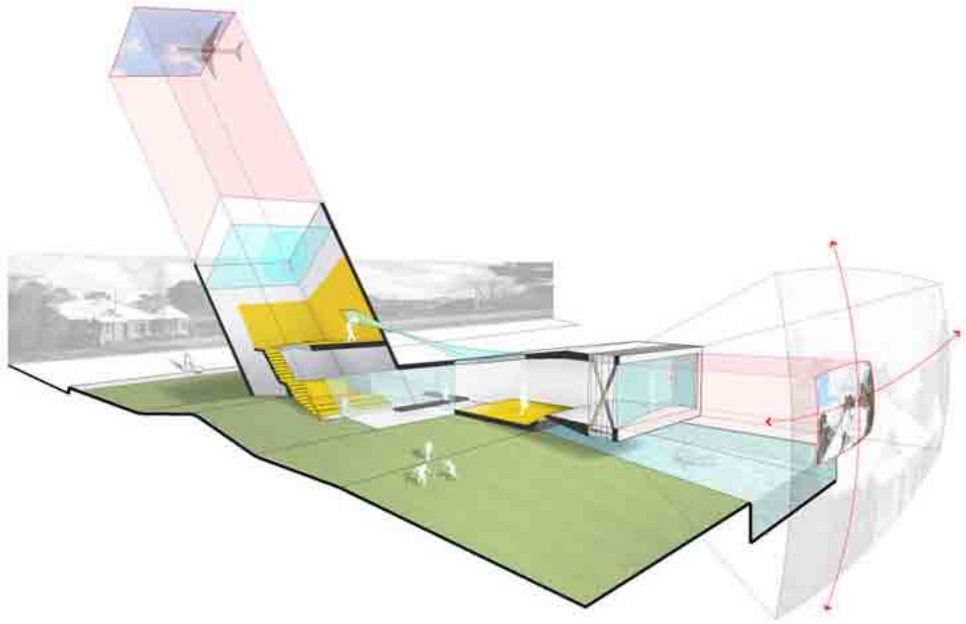
Entirely conceptual in its execution, *Mix House* poses more questions than practical answers. A series of such buildings would have the ability to compose the soundscape of a neighbourhood and allow people to actively produce the acoustic qualities of their surroundings. This new ability, to some degree an extension of the role that architecture already performs, brings with it a new set of responsibilities, but also engagement. Composing the soundscape is an activity that many people already engage in through the use of 'ghetto blasters' and iPods today. The use of architectural spaces to perform this act brings a new physicality and publicity to the experience.



▲Fig. 181
Mix House, amplifying window detail

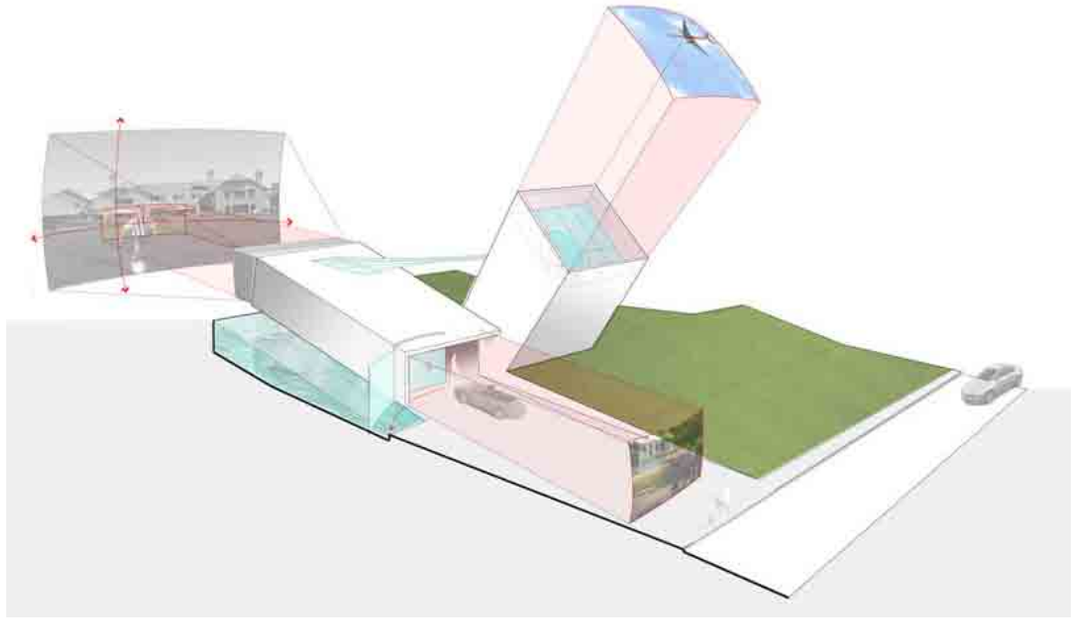
▼Fig. 182
Mix House, section





▲Fig. 183
Mix House, exterior view

▼Fig. 184
Mix House, exterior view



4. Swiss Pavilion for the 2000 Exposition in Hannover

Date: 2000
Architect: Peter Zumthor
Programme: Exposition pavilion

Description

The everyday Scandinavian image of stacked timbers has been skilfully translated into a grid of walls that create a volume that is at once open and closed. The walls themselves are comprised of unseasoned timber members that are stacked without mechanical fixings. The labyrinthine effect created by the walls is permeated by larger open volumes that serve as gathering and performance spaces. In essence the entire building has been turned into a giant musical instrument that is 'played' by nature. The galvanised gutters that form the roof, for example, cause the sound of rain to reverberate through the entire volume.

Design Considerations

The irregular rhythms of nature create impromptu performances that the pavilion enhances; being open enough for the user to feel a part of these rhythms, and sheltered enough for the performances to be experienced comfortably. The programme of the pavilion complements these natural performances through hosting culturally expressive musical performances.

▲Fig. 185
Swiss Pavilion, aerial view

▲Fig. 186
Swiss Pavilion, roof

▼Fig. 187
Swiss Pavilion, interior view

▶Fig. 188
Swiss Pavilion, interior view