

## Hoorizon / Hearizon - Experiences & Practices [1 Feb 2020]

This file contains additional information for the performance of *Hearizon*. The text score contains the essential information to perform this work. Feel free to ignore, re-use or get inspired by the content of this file...

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### General clarifications

In a performance of *Hearizon* there is a big difference between the sounds and music that the audience hears and the ones that an individual performer hears. The general fade-out and other acoustic transformations by the environment are almost only heard by the audience, for example the sound of a trumpet may be suddenly softer when (s)he steps off a small hill but the trumpet performer does not hear this. Consequently, a fourth musician – at the audience location – will probably have to give feedback to the performers. Also, think in advance about a system to synchronize the walking trajectories of each musician.

The ad libitum section in the text score mentions a synchronized ensemble playing over large distances. As sound travels at approx. 340 meters/second, the audience will not hear this as a synchronized performance but as a scattered, fragmented one. The aim of the technically synchronized ensemble is to make the distances and site characteristics audible to the audience.

To make the general fade-out in *Hearizon* audible, the quality and quietness of the site and its surrounding sounds are very important. Try to avoid places with too loud, continuous traffic sounds and design a quiet setting for the audience that invites to relax and listen.

In the search for suitable compositions for the performance, the website of the International Music Score Library Project (<http://imslp.org>) is a great help. Search for keywords in different languages (German, French, Italian, Russian,...). For example, you can find many compositions with references to garden, tree, street, hill, sky, field, meadow, houses, farm, village, graveyard, factory, season, day period, etc.

Based on some simple tests and experiments, I present the distances at which the sound of an instrument becomes inaudible. These tests were done in parks in Belgium, these landscapes are never really open (no desert or large lakes here...) and there is always background traffic noise. I give a range within two distances just as an indication (because elements such as the weather, wind, architecture and geography also influence the dispersal of the instrument sound). But these distances might help in the search for a concert site with the right dimensions and the fitting instruments.

- trumpet and trombone : 300 to 600 meters
- piccolo flute : 100 to 200 meters
- baritone saxophone : 200 to 400 meters
- glockenspiel : 150 to 300 meters

### 1. Performance at the burial site Campo Santo (Ghent - Belgium)

Date: 2 June 2017

Performers: Bert Bernaerts (trumpet), Pol Mareen (baritone saxophone) and Wim Konink (glockenspiel).

This ([www.hansroels.be/campo-santo-360graden-conv.mp4](http://www.hansroels.be/campo-santo-360graden-conv.mp4)) is a link to a short video of the concert site Campo Santo, recorded one week after the concert, with the camera on the place where the audience was standing. The camera view moves in a circle starting from the hill, over zone D, next C to B/A and back on the hill (the zones are indicated on Illustration 1). This video gives a nice overview of the concert location (the burial site Campo Santo).

The distance from the top of the small hill (with the audience) to the chapel on the other hill is about 300 meters. The small hill has three levels, the tent for the audience was on level 2 (near the high tree in the middle right on Illustration 2).



Illustration 2: the audience was standing on this hill

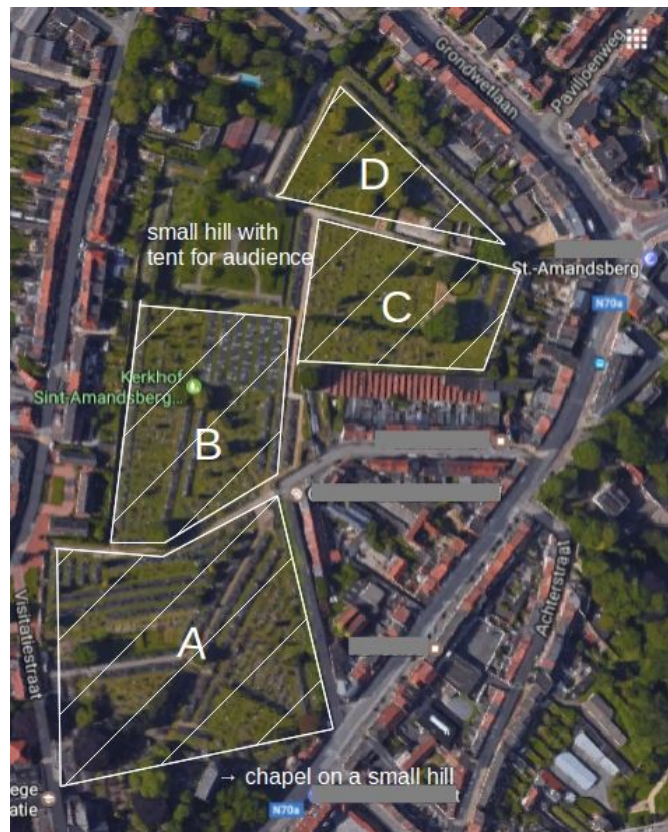


Illustration 1: The different zones of the concert site

For this performance of *Hearizon* I choose trumpet, glockenspiel and baritone saxophone because

- they formed a diverse trio in timbre and pitch range
- they were portable and weatherproof
- their dynamic level fitted with the size and distances of the concert site.

I visited the burial site Campo Santo several times in advance and these were my most striking and specific experiences:

- the burial site is a wide open, green space in the city of Ghent, with trees, branches, birds and a beautiful view on the burial site, the surrounding houses and the sky. Ghent is almost entirely flat with many houses and buildings. There are no hills where you can look upon the city, so this place and the view are exceptional.
- the concert was going to take place in spring
- the confrontation with death and departure: there are (old and new) graves everywhere on the burial site and during the day there are always visitors standing by a grave or taking care of the flowers.

Based on these 'local' experiences, I searched for music for this performance of *Hearizon*. These were the three used music compositions:

- the folk song 'Ich habe der Fruhling gesehen' (anonymous): the text describes how a man falls in love with a woman in spring when the birds are singing. The woman dies and now he cannot enjoy spring any more.
- 'Die Jungfrau und der Tod' (1827, opus 9): a 19<sup>th</sup> century song for piano, female and male voice by the composer Carl Loewe, describing the arrival of death to a young woman, while a nightingale is singing in the neighbour's garden. This song was mainly played by the baritone saxophone.
- the anonymous Renaissance villanelle 'Io volo sopra il cielo', originally for 3 voices or viols, mainly played by the glockenspiel.

I also choose these compositions because together they presented a variety of styles and tempi, suitable for the aimed polyphony.

Each performer walked a different trajectory, indicated on Illustration 3. The musical structure, based on the three compositions is found on Illustration 4. At the cue/rehearsal mark E the trumpet and glockenspiel were playing the Fruhling folksong together (using an audio track), although they were hundreds of meters apart at

that moment. Thus, the music reached the audience, scattered and transformed by this distance and the terrain. At F all three performers played the Renaissance villanelle.

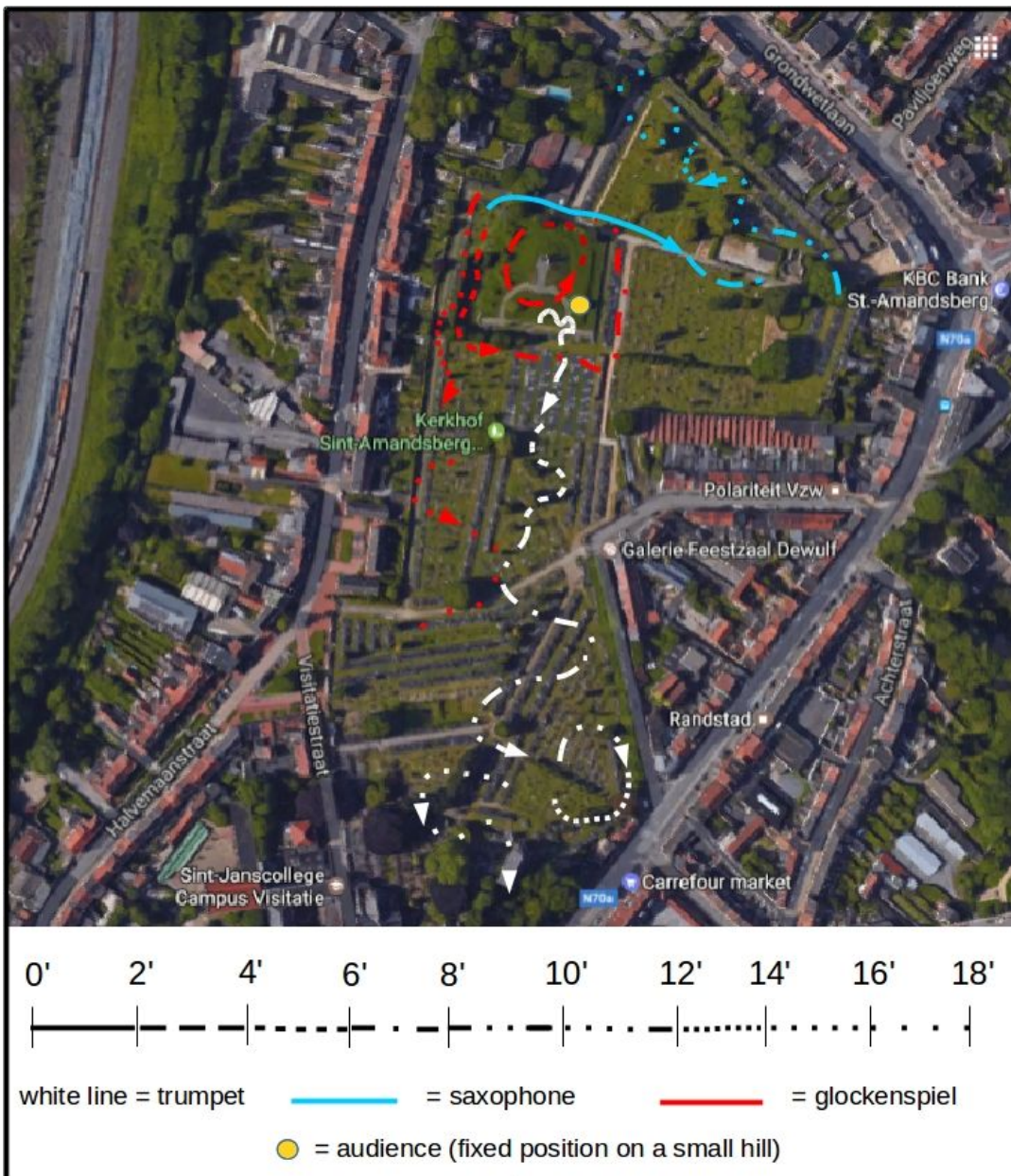


Illustration 3: The individual walking trajectories of the 3 instruments

Out of respect for the burial site and its specific character I choose not to let the performers explore the acoustic properties of 'objects' (small buildings, walls, high graves, etc.) on their trajectory too much.

The performance was organized as part of a 'Nocturne Campo Santo' with additional guided tours through the burial site and music performances on a stage (behind the hill with the chapel, about 500 meters away from the audience location of the *Hearizon* performance). More than 200 booklets were distributed to visitors on the evening of June 2<sup>nd</sup>, therefore more people than usual were walking on the burial site. There were three performances of *Hearizon*, at 20.00, 21.00 and 21.30. During the last performance it started to rain softly but the forecast thunder and lightning did not take place.

I made scores for the individual performers in advance, these 7 pdf files can be found in one zip file at [www.hansroels.be/scores-camposanto-jun17.zip](http://www.hansroels.be/scores-camposanto-jun17.zip). They mainly consisted of a reduction and transposition (for baritone saxophone and trumpet) of the original songs. There were some extra instructions on the parts (in Dutch in the original scores):

- (*saxophone*) In the first walk (rehearsal mark A in Illustration 4) play and vary the song 'die Jungfrau

und der Tod' from the end to the beginning (thus from fast rhythms and motives at the end, to quarter notes and longer notes in the beginning). In the second walk, at rehearsal mark D, do the opposite (from the beginning to the end of the song).

- (*trumpet*) Remain at the audience location in the first minutes and play a kind of echo or accompaniment for the saxophone, which is playing further away. During the next 10 minutes gradually walk away from the audience and make sure that there is a musical development from soft and sporadic playing with many silences (near to the audience) to loud and continuous (at a large distance from the audience).

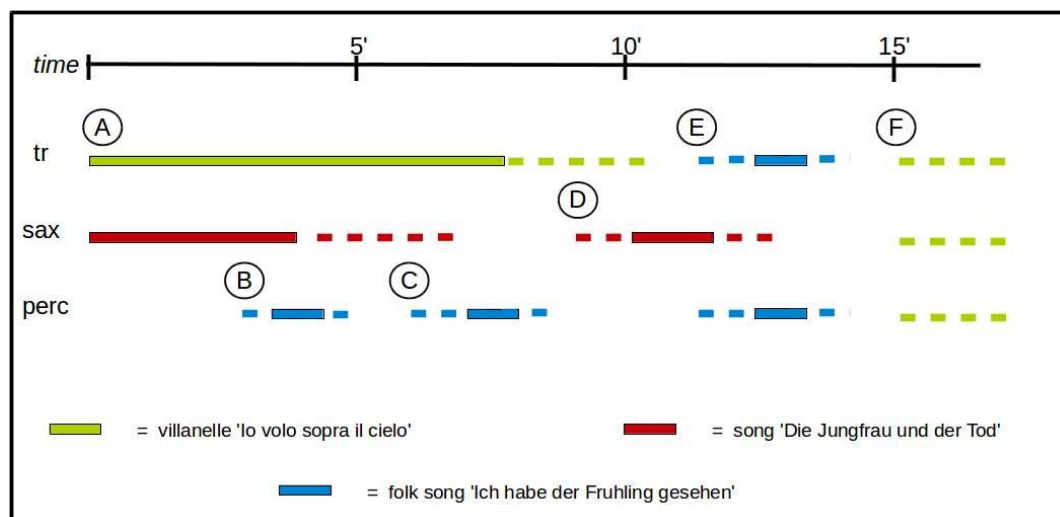


Illustration 4: Musical structure

### Exploration and rehearsals

In the first half of May 2017 I had an individual exploration-rehearsal session at the concert site with the glockenspiel and (baritone) sax player. The glockenspiel sounded louder than expected, or formulated more precisely: its sound carried a lot further than expected (more than 200 meters), even when playing between trees and (2 to 4 meters high) graves. On the other hand the sound of the glockenspiel merges and fuses very well with the surrounding sounds. One can still hear other sounds when the glockenspiel is playing. Before this individual rehearsal I had planned to let the performer make three (widening) circles around the audience spot but this was reduced to two rounds because the last (wider) round took too much time to walk.

The individual rehearsal with the baritone sax revealed that the sax was still clearly audible (and thus could not disappear in the distance) in zone C. It was sounding louder than expected. Also, walking in this zone did not produce many audible differences (at the audience location), perhaps because this zone is very open and flat and the audience spot was located above this zone (5 to 10 meters higher I guess), creating an acoustic amplification. Thus we also started exploring zone D. Especially at the top of the triangle in Illustration 1 the baritone sax became very soft, (almost) inaudible, I guess because this place is (partly) behind the hill for the audience. In the middle of zone D there is an open spot with less trees and no high graves or buildings and here the sax sounds louder.

I had hoped to synchronize the performance in real time with an FM sender, the three performers would be listening to a small FM radio in one ear or in their pocket. But at this individual session my sender (or the antenna) was not powerful enough to reach further than 150 meters. Therefore I choose to use an audio track, made in advance, at the rehearsal with all three performers on May, 23<sup>rd</sup>. (This audio track can be found at [www.hansroels.be/00campo-17min.mp3](http://www.hansroels.be/00campo-17min.mp3)) The musicians started this audio track – on an mp3 player or mobile phone – together at the beginning of the performance and played. The track consisted of

- cues (the first seconds of the next music piece to be played) at A, B, C and D (see Illustration 4)
- a synthesized version of the entire music composition, to enable the ensemble of trumpet and glockenspiel to play in the same tempo at E, and the three performers at F.

Probably due to the meteorological circumstances, the loudness of the instruments (related to the distance) sounded different compared to the individual sessions at this rehearsal with the three performers, for example the baritone saxophone was sounding softer. We tried to explore the dynamics of the whole concert site, find the zones where an instrument started to sound soft, or became inaudible and next, memorize these zones. This method was also used on the day of the concert, at the last rehearsal between 18.00 and 19.00.

Because the trees and bushes obstructed the view at the audience location more than expected, I made a small change to the saxophone and glockenspiel part after the common rehearsal on May 23rd. I asked them to play short fragments occasionally, during the pauses in between their musical sections/walks (for the saxophone: in between A and D, for the glockenspiel in between C and E, see Illustration 4). I hoped that this would give the sax and glockenspiel players and their music part more 'traceability'. (The trumpet already had a straightforward walking trajectory away from the audience.)

I add a practical but important remark concerning the site-specific rehearsals for *Hearizon*: these rehearsals are often slowed down by unexpected activities (for example forklifts emptying large dustbins on the burial site), the large distances between the performers and the central place for the audience, obliging the performers and me to walk to and fro quite often (of course mobile phones were also used to make rehearsal remarks and coordinate the movements of the performers), the weight of carrying an instrument (for the baritone sax, and to a lesser extent the glockenspiel) which makes long rehearsals impossible and finally, obstructions in the terrain (mainly steps up and down, but also paths which have a dead end or on which the combination of walking and performing is too difficult). During the rehearsals the performers needed to walk and play enough at the site to get acquainted with the walkability of the terrain.

## **Recordings**

Stereo recordings of the three performances were made by Kristof Lauwers, using a (surround) Soundfield microphone at the audience location on the small hill. This is the link to the (unedited) performance at 21.30 :

[www.hansroels.be/R26\\_0039\\_1-uitvoering-21u30.wav](http://www.hansroels.be/R26_0039_1-uitvoering-21u30.wav)

On these recordings with the Soundfield microphone the background noise (from traffic) is rather loud and harsh though (compared to the actual experience as I remember it).

The excerpt on my website is from the rehearsal at 18.00 just before the performance. This recording was made with a stereo omni couple (Aevox Classic-M stereo MkII ). The excerpt is slightly edited: to raise the general loudness I used a compressor. I didn't have a decent wind cap for the microphone during the rehearsal, you can hear wind noises around 6:48 (You can also hear an air plane and trains...).

[www.hansroels.be/hearizon-2jun17-rep-exc.mp3](http://www.hansroels.be/hearizon-2jun17-rep-exc.mp3)

[www.hansroels.be/hearizon-2jun17-rep-exc.wav](http://www.hansroels.be/hearizon-2jun17-rep-exc.wav)

Several pictures were taken during the performances at 20.00 and 21.00. If you want to listen or see more recordings or photographs, please send me an email.

## **Reflection on the concert performance and rehearsal**

In general the three performances of *Hearizon* at Campo Santo worked well, although the first one was less successful because it was so crowded and the audience made quite a lot of noise. The concert location is a beautiful spot and it was a nice and warm evening. Most people liked the distant and scattered sound of the music instruments, but some didn't and said that the music was too soft and that they couldn't 'hear anything'.

In the beginning of the Campo Santo performance the baritone saxophone was playing behind the hill (almost inaudible) and gradually became audible by walking from behind the hill to zone C. The trumpet was playing very softly and then walked away while gradually playing louder. In fact there was no loud section near to the audience, not in the beginning, not anywhere else in the whole performance. In retrospect, I believe this was a (structural) mistake: a start section with two instruments playing loud near the audience (for example trumpet and baritone sax) would have made the whole gradual fade out over 15 minutes more powerful and effective. Moreover, this would have made the start of the performance more clear. Although I gave a short introduction, saying that the 'site and its surrounding sounds were the fourth -and most important- instrument in this polyphonic piece', many people in the audience only realized after a few minutes that the performance was already going on. Moreover, the audience was sitting spread over the small hill (for example on the steps) and not just under the tent where there were supposed to be cushions on the ground. Thus not everybody heard my introduction and combined with the gradual start section, it took several minutes before the audience stopped talking and walking around.

Looking back upon the performances and rehearsals I believe that I could have chosen a better combination of instruments for this specific concert location and its sizes: all three instruments needed a distance of more

than 200 meter to become inaudible: the trumpet the largest distance and the glockenspiel the smallest. When I choose the instruments and designed the first draft of the walking trajectories (before the rehearsals) I underestimated the required distance for the baritone saxophone and to a lesser degree for the glockenspiel. Moreover, I could not use the west side of zone B and A (left on Illustration 1) for the saxophone, because this side was largely 'invisible' for the audience. Therefore I had no extra 'space' to cover the loudness of the instruments. I was not fully aware of this problem at the rehearsals and performances, and tried to solve this by asking the performers to change the general loudness of their performance, but combined with the indeterminacy of the weather and other acoustic properties, this was not a profound solution.

I used a track to synchronize the performers and could not send instructions in real time (for example to ask a performer to step further away because the sound – at the audience location – was still too loud.) The memorization of zones (where the instrument sounded soft) worked sufficiently but it is not a solution that can cope with the unpredictability of sound diffusion and damping in an outdoor place. During the rehearsal at 18.00 (on the day of the concert) the musicians and I looked for the zones where the sound was soft or gradually faded out, and these zones and trajectories were used at the performances of 20.00, 21.00 and 21.30, but this solution is not very reliable: some instruments were still too loud or did not fade out enough during the evening performances. A real-time technical solution (a wireless system) would be a better idea for a next performance.

It is important to realize though, that such a technical solution should be comfortable and non-obtrusive for the performers, because they already have to combine several activities (walking, performing, improvising/making variations, exploring the acoustic properties of the site,...) . Thus the musical structure of a performance needs to remain simple to reduce the instruction and information load sent to the performers.

Another important remark is the overestimation in advance of the visibility of the whole site (I mean the ability for a listener on the hill to see a performer walking on the site). My exploration happened in February and March and although I knew that the leaves on the trees would make a difference, this effect was bigger than expected.