

Documentation and publication of electroacoustic compositions at NEAR¹

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In 1995, non-profit information centre and publisher of Dutch music Donemus began a programme for Dutch electroacoustic repertoire: NEAR. Donemus was established in 1947 to make available, preserve, publish and promote Dutch art music. Donemus is a Music Information Centre and a non-profit music publishing house for Dutch music after 1950. The name “Donemus” is made up of the Dutch words Documentatie Nederlandse Muziek – that is: documentation of music from the Netherlands.

But what is documentation? Documentation is a word with many different uses, and this often causes confusion. Here I will focus on one specific way of documentation: the “extended score documentation” of electroacoustic music. Different forms of electroacoustic music need different forms of extended score documentation – I will give examples from our Dutch repertoire.² The documentation and publication of electroacoustic music involves fundamental issues like the role of the composer, the identity of the composition and the preservation, repeatability, reproduction or representation of musical compositions. NEAR publishes only Dutch electroacoustic music, but I hope this paper will stimulate the exchange of ideas and experiences with institutions and individuals in other countries.

1.1 Donemus

Donemus was established in 1947 to make available, preserve, publish and promote Dutch art music (Kolsteeg 1997).

Donemus publishes scores and parts, mostly “on demand” by printing from tracing-paper or digital file (PDF). Many scores are copies of composers’ manuscripts. For compositions with several instruments or voices, scores and parts are produced for Donemus by copyists; in the past by hand, now with the music notation software Finale. The scores are put on microfilm for preservation. At this moment, Donemus has more than 10.000 compositions of almost 600 composers available. Donemus has also published scores of electroacoustic compositions, mainly of mixed works for acoustic instruments/voices and electronics; but in the past Donemus did not take care of the electroacoustic parts. The availability of the electroacoustic parts

¹ This paper was presented at the Electroacoustic Music Studies network conference, Montréal, October 22, 2005. A previous version is published on <http://www.ems-network.org>

² Of course it is possible to give many important examples from the international repertoire, but for the purpose of this paper the examples are restricted to some electroacoustic compositions of composers who live and work in the Netherlands. The examples are chosen for their suitability to illustrate the argument of this paper and to show some of the repertoire published at NEAR/Donemus. The choice of the examples does not imply an opinion on their aesthetic value and neither on their importance to Dutch or international musical life. It is possible to give many other valid examples from the Dutch and international electroacoustic repertoire.

became problematic after some time, especially when a composer died or emigrated; moreover, the information in the scores about the electroacoustics was sometimes incomplete or obsolete.

Donemus is a Music Information Centre³ and member of the International Association of Music Information Centres (IAMIC). The function of the MIC is integrated with the music publishing house: on the one hand, the publishing of scores is an effective way of making musical information available; on the other hand, biographical information, work lists etc. are mainly collected for composers whose compositions are published at Donemus and support the promotion of this music. The information department also takes care of the composition catalogue database. Although the main focus is on acoustic art music, the information archive does contain clippings from newspapers and journals, photographs, programme notes, etc., related to Dutch electroacoustic music. Its audio library also contains recordings of Dutch electroacoustic music (LPs, CDs, recordings from radio programmes, and low quality tape copies); the purpose of this collection is informative listening by experts (concert organisers, radio programmers, students, etc.), not publication or performance.

For the promotion of Dutch art music, Donemus published journals, LPs and CDs. In the journals *Sonorum Speculum*, *Keynotes* and *THD*, Dutch electroacoustic developments were discussed⁴. In 1978-79 two double LPs “Anthology of Dutch electronic tape music”, edited by Dick Raaijmakers, were released in a limited edition by Donemus under the label Composers’ Voice (CV 7803 and CV 7903).⁵ Some recordings of mixed electroacoustic music appeared on Composers’ Voice CDs.⁶

1.2 NEAR

In 1995, Donemus adopted a plan for an archive centre of Dutch electroacoustic music NAEM, launched in 1994 by Alcedo Coenen (Coenen 1996; Coenen 1997). With the name NEAR, the emphasis was shifted from archive to repertoire, from “all Dutch electroacoustic compositions” to a selection, thereby bringing it in line with the publishing function of Donemus.⁷ Although the initial plans and expectations were wide-ranging and ambitious, NEAR’s activities would turn out to be closely related to the main functions of Donemus, and also limited by the circa 0.5 FTE of personnel (one part-time employee, 16-24 hours a week).⁸ Although the term “electroacoustic

³ Donemus had an exemplary function for the Music Information Centres in several other countries (Kolsteeg 1997: 63).

⁴ Articles on Dutch electroacoustic music appeared in, among others, *Sonorum Speculum* 25 (1965), 33 (1967-68), 42 (1970), 48 (1971), 52 (1973), 53 (1973); *Keynotes* 8 (1978/2), 14 (1981/2), 18 (1983/2), 25 (1988-89), 30/1 (1996); and in the three issues of *THD* (1997).

⁵ These LPs will be released on CD by Basta Music.

⁶ For example, by Cornelis de Bondt (CV 113), Michel van der Aa (CV 119) and Roderik de Man (CV 139).

⁷ Initially, the plan was called NAEM (Nederlands Archief voor Elektronische Muziek, Dutch archive for electronic music); NAEM was mentioned in the policy plan 1997-2000 of Donemus (Amsterdam, 1995). It was realised under the name NEAR (Nederlands Elektro-Akoestisch Repertoirecentrum, Dutch electroacoustic repertoire centre), reflecting the change from archive to repertoire.

⁸ From 1995-1998 NEAR was run by René Uijlenhoet, afterwards by me. In 1995, L. J. (Bèr) Deuss was managing director of Donemus. In 1995 and 2005, Donemus had circa 18 FTE for circa 24 employees (part-time and full-time). (In 2000-2004, various organisational changes took place under the name MuziekGroep Nederland.)

music” is meant in its broadest sense⁹ and there is no intention to exclude musical (sub)genres beforehand,¹⁰ the context of Donemus leads to a focus on composed music from the Western art music concert tradition. Throughout NEAR’s existence, a tension between separation and integration of electroacoustic and acoustic music can be perceived. Although integration of electroacoustic with acoustic music is a strong tendency, from a historical, practical and institutional point of view the separateness of both traditions must also be respected.

Among NEAR’s main activities is the production and release of CDs, under the label CV-NEAR, a sub-label of Donemus’ Composers’ Voice. NEAR produced three CD-boxes containing the core of the electroacoustic oeuvre of the composers Jan Boerman, Dick Raaijmakers and Ton Bruynèl; these include much information in a large booklet or on a CD-ROM track. Separate CDs were also produced, with music of Ton Bruynèl, Kees Tazelaar and René Uijlenhoet.

Since 1999, NEAR also focuses on the publishing on demand of electroacoustic music, somewhat in the same way as Donemus’ publishing on demand of sheet music. When there is a request for a tape part of a composition published by Donemus, NEAR takes care of finding and publishing the tape part. Old analogue tapes are digitised and edited. A stereo sound track, whether originally composed on analogue stereo tape or on a digital medium, is prepared and burned as audio on CD-R, that is used as a master for duplication of copies with a CD copier. CD-Rs are sold or rented together with the scores. When the tape part is not stereo but multitrack audio, it is rented on ADAT or DA-88 format and/or as data files on CD-R.

A similar procedure can be used for tape music without a score. However, the absence of a score turned out to be an obstacle for the inclusion of the composition in the information database and catalogue of Donemus, because the composition database of the information centre had the score as its basic entity. Since this problem was resolved in 2004, a start has been made with the publication on demand of pure tape compositions, without a score, whether in stereo format on CD-R or in another format (e.g. ADAT or DVD-R), for sale or for rental. The catalogue is accessible via the website <http://www.donemus.nl/>.

Other activities of NEAR are: information, advise and promotion of Dutch electroacoustic music, an e-mail newsletter and a website, the acquisition of Dutch electroacoustic music for publication or for the media library, and to support and stimulate electroacoustic music in Donemus’ activities.

⁹ Similar to the use of the term “electroacoustic” in the second edition of the New Grove Dictionary of Music and Musicians: “Music in which electronic sound technology, now primarily computer-based, is used to access, generate, explore and configure sound materials, and in which loudspeakers are the prime medium of transmission” (Emmerson & Smalley 2001: 59); and by for example the Canadian Electroacoustic Community: “The CEC adopts a very broad definition of 'electroacoustic', and supports any exploratory audio work made using electronic technology” (http://www.sonus.ca/def_e.html, accessed February 14, 2006).

¹⁰ As was stated by the NEAR advisory board 1999-2004.

1.3 music documentation

I propose to discern the following types of musical documentation:

1. documentation of the musical work itself (“extended score”);
2. documentation of the composition process (e.g., information on compositional ideas and procedures, on the production of the sounds and structure of tape music, planning document);
3. documentation of a performance (e.g., audio and video recording, photographs and/or description of a performance);
4. documentation of the production of a performance (e.g., information on: the specific equipment and instruments used, set up, stage direction, musical interpretation, rehearsals);
5. documentation of reception (e.g., information on prizes, numbers of visitors; reviews; analyses; descriptive listening scores)
6. additional information (explanatory notes, biography of the composer, work list, etc.)
7. derivative documentation (e.g., information on title, year of composition, length)
8. documentation of a musical practice.

Moreover, I propose to make a distinction between producing vs. collecting documents (scores, texts, recordings, etc.), and between publication and distribution vs. depositing (library, archive).

1.4 extended score documentation

Here, I would like to argue for the importance of the documentation of the musical work itself. I name this the “extended score documentation”. I use the word “score”, because the idea that a composition is determined as prescriptions for future performances, comes from the notion of the score in the Western art music tradition.

“A score is a musical notation the main purpose of which is to serve as a work prescription. It records a set of instructions addressed to performers, the faithful execution of which generates an instance of the piece it specifies. The instructions transmitted via a score must be sufficient to characterize a work of the kind in question.” (Davies 2001: 100).

But the “extended score documentation” does not need to consist of any traditional music notation signs on paper. It is “extended”, and could exist of one or more audio or video recordings or computer data files, drawings, photographs or text – as long as it is essentially a set of prescriptions concerning the “what” and “how” of future performances of the work. The extended score documentation of a musical work

- specifies and determines the musical work;
- and provides sufficient prescriptive information and material to make multiple performances (instances) of the musical work possible without the presence of the composer (“multi-instantiability”, Davies 2001: 13).

Thus, an extended score documentation preserves and makes available the musical work itself.

However, a musical score can not function without the knowledge and ability of the musical performance practices to understand, interpret and perform the score, and without the proper instruments, equipment, facilities, places and social structures.

Usually, not all determinative properties are notated in a score – many are determined by and taken for granted within the musical performance practice. It is the question how much of such musical and technical knowledge has to be documented in the extended score documentation of electroacoustic compositions.

A public existence is essential for a musical work: “A musical idea or gesture does not become part of a work unless and until it is incorporated within a work specification, and work specifications necessarily are public, since they are addressed to performers who may be unknown to the composer.” (Davies 2001: 14).

2 extended score documentation of electroacoustic music

Since electroacoustic music is a diverse genre, its extended score documentation will vary. Here, I discern the following types of electroacoustic music: stereo tape music, multitrack tape music, mixed electroacoustic music with live acoustic instruments or voices, film and video, live electronics (partly improvised or not, with or without acoustic instruments or voices), electroacoustic music theatre and installations.

2.1 tape music

Nowadays, composers seldom make scores for tape compositions, but in the 1950s, 60s and 70s, it was more common. One of the reasons to do so, was related to copyright (Davies 2001: 135; Chew & Rastall 2001).¹¹ Davies (2001: 135) argues that such notations are not scores, since these are not directed to performers, and that they also fail as musical notations, since the reader can not extrapolate from such pictures the level of detail that is essential for such works. The tape work itself is not defined in a score, but on the tape recording.

2.1.1 stereo tape music

The Dutch composer Ton Bruynèl made a few “scores” of his two-track tape compositions (published by Donemus): *Mobile* (1965) and *Mobile II* (1971). In the strict sense, these are not scores since these scores are not meant for the performance of the work nor is it the intention to re-make the tape compositions from these scores; in the score it is explicitly stated that the original tape may not “in any way be refashioned or imitated via electronic or other means”.¹² These scores are a documentation of the composition process, as is stated in the score of *Mobile*: “This

¹¹ Davies writes that “in the early days of electronic composition, there was no way for the composer to copyright his work, so it was the ‘score’ that was copyrighted” (Davies 2001: 135). However, in 1958 a report was published in the journal of the Dutch organisation for musical performing rights BUMA, which stated clearly that electronic music works are objects of authors’ rights and fall under the category of musical works of article 2 of the Berne Convention, and that there must be no difference regarding the handling of electronic and traditional music works by BUMA (Schaffers & Van Nus 1958: 19). In the Netherlands, and in for example Germany as well, there are no restrictions to the form of works for obtaining authors’ rights, only that a work must have a perceptual form (Van Lingen 1998: 24, 51-3). I thank L.J. Deuss for his remarks and for referring me to Schaffers & Van Nus 1958 (personal correspondence March 4, 2006).

L.J. Deuss remarks that at the time of Karlheinz Stockhausen’s *Studie II* (1956), electronic music was protected by authors’ rights in Germany, but scores were required for the registration of compositions at the German musical authors’ rights organisation GEMA, i.e. for the transference of the handling and exploitation of the performing rights of compositions to GEMA (personal correspondence March 4, 2006).

¹² The score of *Mobile* provides more information on the composition than the score of *Mobile II*.

score is a report on the production of the basic material and the work-processes used in making *Mobile*.”

The extended score documentation of tape music seldom consists of a real score. The core of the extended score documentation of two-track tape music is a stereo audio recording; nowadays in a digital format of at least CD quality. Old analogue tapes are digitised.¹³ New compositions are provided by the composer in a digital format and digitally copied. However, what will happen with these digital formats in the future is a matter of concern – we’ve already experienced the obsolescence of DAT.

Some examples of stereo audio publications are the two-track tape compositions by Jan Boerman,¹⁴ Ton Bruynèl¹⁵ and René Uijlenhoet,¹⁶ released on CDs of the Donemus label CV-NEAR. Recently, NEAR also started to publish stereo audio compositions on demand on audio CD-R, on a smaller scale, similar to the on demand publication of scores of Donemus. Examples of such on demand publications are Bas Kalle’s *Trog* (2004) and *Drieluik* (2002), Bart Spaan’s *Register* (2002) and compositions of Victor Wentink and Peter Plompen. Another form of publication could be via the Internet; however, the sound quality of mp3 or RealAudio is useful for promotional purposes but is not good enough for the extended score documentation of the composition itself.

2.1.2 multitrack tape music

For the publication of multitrack tape music, several different media may be convenient, such as ADAT, DA-8 tape or audio data files on CD-R or DVD±R to import into multitrack audio editing software of choice. The competing formats and the lack of a single standard is somewhat inconvenient; ADAT is already almost obsolete.

NEAR now has available multitrack tape compositions by Jan Boerman, Kees Tazelaar and René Uijlenhoet. Jan Boerman’s multitrack tape compositions are available on ADAT and data CD-R and most of these also have a score.¹⁷ Jan Boerman made these scores for the interpretation/diffusion, study and analysis of these works, and for the reconstruction of the multitrack composition from the separate analog tapes. Joined by an extensive introduction with some explanation of the compositional structure and some instructions on the performance of the tape (such as the position of the loudspeakers), the scores themselves are a representation

¹³ Kees Tazelaar is an expert in the digitisation, restoration and reconstruction of old analogue tape music in the Netherlands. See his website <http://home.wanadoo.nl/tazelaar/>. His digitisation projects include electroacoustic music of Jan Boerman, Tom Dissevelt, Kid Baltan (Dick Raaijmakers), Henk Badings, Gottfried Michael Koenig, Luctor Ponse, György Ligeti and Edgard Varèse. Of special interest is his CD production *Popular Electronics: Early Dutch Electronic Music from Philips Research Laboratories 1956-1963*, published by Basta Music (<http://www.bastamusic.com/>).

¹⁴ The two-track tape compositions by Jan Boerman published on CV-NEAR 4/5/6/7/8 are: *Musique Concrète* (1959), *Alliage* (1960), *Alchimie* (1961), *De Zee II* (1966), *Variant IV* (1967-70), *Variant IX* (1969-70); plus stereo versions of several multitrack tape compositions.

¹⁵ The two-track tape compositions by Ton Bruynèl published on CV-NEAR 12 are: *Reflexes* (1961), *Chicharras* (1985), *Mobile* (1965), *Collage Resonance II* (1963), *Mobile II* (1971), *Coda voor K.* (1963), *Resonance I* (1962), *Décor* (1968).

¹⁶ The two-track audio compositions by René Uijlenhoet published on CV-NEAR 14 are: *Wedge* (1994), *Batalla* (2002); plus two-track versions of compositions for two or four audio tracks.

¹⁷ Scores are available at Donemus of Jan Boerman’s tape compositions *Kringloop I en II* (1995), *Vlechtwerk* (1987-8, score 1998), *Kompositie 1989* (1989), *De Zee I & II* (1964-5, score 1995), *Kompositie 1972* (1972, score 1995), *Kompositie 1979* (1979, score 1996), *Vocalise 1994* (1994), *Tellurisch* (1991), *Muziek voor het Maasproject I & II* (1988 – 1994/1995).

of the sounds by graphical notation with some conventional notational elements. Jan Boerman considers a performance of his multitrack tape work as an interpretation, in which the technician-performer makes decisions on dynamics and set up, depending on the specific situation. The technician-performer therefore has to study the piece and rehearse with the score. These scores are not a full extended score documentation in themselves, since the reader can not extrapolate from these scores the level of detail that is essential for these works. For the full extended score documentation, the audio material of the multitrack tape has to be provided. But as an aid for the performance of these works, the scores are an essential element of the extended score documentation. However, these scores also document some aspects of the composition process.

2.1.3 different versions

Often there are different versions of a tape composition: a multitrack version for concert performance and a stereo version for CD. This is the case with all multitrack tape compositions by Jan Boerman¹⁸, René Uijlenhoet¹⁹ and Kees Tazelaar²⁰ published by NEAR. Stereo versions of these compositions are published on CD (CV-NEAR); digital multitrack versions are available for concert performance by rental.

2.1.4 mixed tape music

For the publication of compositions for instrument(s) and/or voice(s) with tape, the score and the digital audio material are combined. Circa 150 mixed electroacoustic compositions are published by NEAR/Donemus, for example compositions of Michel van der Aa, Henk Badings, Jan Boerman, Ton Bruynèl, Roderik de Man, Tera de Marez Oyens, Luctor Ponse, Jacob ter Veldhuis, and many other Dutch composers.²¹ Special attention has to be paid to the synchronisation of score and tape. The tape part may consist of one or more sections; extra marks may be added for the convenience of the performers. The notation of the tape part consists of a timeline and graphical representation of the musical events that are most important for synchronisation. As performance instructions, this is more convenient than a printed audio wave form or spectrogram; a score is mainly a set of instructions for performers, not a depiction of an abstract sound structure (Davies 2001: 63). Some compositions have a strict synchronisation, other compositions have a more flexible, loose synchronisation.

Some performers prefer a strict synchronisation and ask for a perfect match of the timeline in the score and the tape part, or even for a click track (for example Jan Vriend's *Albedo II* (2000), for guitar, bass clarinet and sound tracks). However, the time indications in the scores of Ton Bruynèl are notoriously inexact.²² When one pays attention to the score and the tape part of Bruynèl's compositions, the musical intention becomes clear, since important musical cues of the tape part are notated in

¹⁸ Tape compositions of Jan Boerman with multitrack (6-track or 8-track) and two-track versions, published by NEAR/Donemus: *De Zee I* (1965), *Kompositie 1972* (1972), *Kompositie 1979* (1979), *Vlechtwerk* (1988), *Kompositie 1989* (1989), *Tellurisch* (1991), *Vocalise* (1994), *Muziek voor het Maasproject I & II* (1995), *Kringloop I en II* (1995), *Ruïne* (1997).

¹⁹ Compositions of René Uijlenhoet with versions for two audio tracks or four audio tracks, published by NEAR/Donemus: *Lichtgewicht* (1999/rev.2000), *Red Junction* (2001).

²⁰ Multitrack audio compositions of Kees Tazelaar published by NEAR/Donemus, with two-track versions on CD CV-NEAR 13: *Paradigma* (1993, 8-track), *Depths of Field no. 3* (1997, 5.1), *Torso* (1998, 4-track), *E pur si muove...* (2001, 8-track).

²¹ These compositions can be found in the catalogue at <http://www.donemus.nl/>.

²² Rumour has it that he worked with a defect stopwatch. Also, he made several slightly different versions of a tape part with slightly different timings.

the score and are easily recognized in the tape part. However, the indicated timing (in seconds) does not always match exactly. Essential for the performance of these works is that the performers do not play like robots strictly following a timeline, but take the time to rehearse both the instrumental/vocal parts and the tape part and to study the tape part and its combination with the acoustic parts.

There are also a few compositions for which the performers may record their own tape part, such as Peter Schat's *Hypothema* (1969), for tenor recorder and electronics (tape, VC-gate) and Chiel Meijering *You can't keep a good man down* (1991), for six bass clarinets or one bass clarinet and pre-recorded tape.

Of special interest is the extended score documentation of Ton Bruynèl's *Signs* (1969), for wind quintet and soundtracks. The score is accompanied by a CD with the soundtracks (tape part) of *Signs* and a recording of a performance by the Ardito quintet. The score is visualized by visual artist Gérard Leonard van den Eerenbeemt. Originally, the score was printed in a large format for an exhibition at the Stedelijk Museum in Amsterdam in 1970. In 1995, this score was published in a smaller sized limited edition reprint, with the CD.²³ The score contains performance instructions for musicians (a combination of conventional and graphical notation), extensive information on the production process of the tape part (explanation, tables, flowcharts), and an artistic, associative graphical listening score of the tape part made by Van den Eerenbeemt (see Uijlenhoet 2004 for an analysis of the different layers of the score). Thus, this documentation of *Signs* is a hybrid documentation of extended score (notational instructions for performers + soundtracks on CD), reception (listening score), composition process (information on the production of the soundtracks) and a performance (recording on CD).

2.1.5 playback versus performance of tape music

Davies (2001: 7-10, 25-29) argues that tape music is ontologically different from other kinds of musical works, because tape music is not for performance, but for playback only: "following a composer's instructions in order to instance his work is radically more creative than replaying a disc, and thereby different in kind" (Davies 2001: 9). However, multitrack tape music is not instanced by "replaying a disc", but is performed at a concert with a specific set up of speakers, mixer and other equipment, adjusted to the specific concert hall, according to the instructions of the composer, to the insights of the musical director or technician and to the electroacoustic performance practice. Set up and sound check are essential for the quality of the performance, and often adjustments are made during the performance of the piece. With the art of "live diffusion", a performance of a tape piece is explicitly an interpretation, when for example a stereo tape piece is played over multiple loudspeakers in different ways.

Davies (2001: 26) claims that for tape music "it is industry and technological norms that determine what counts both as an accurate copy and as an adequate playback." However, at concerts, tape compositions are mostly played by their composers, to make sure that the rendition meets their intention. This shows that a concert with a tape composition is a performance, with specific musical requirements, instead of a purely technical standard practice. But it also shows that the performance practice of tape music is still not generally established. Because it is not generally acknowledged that tape music must be performed by an expert, with enough time and

²³ This limited edition is out of stock, but on demand copies are available at Donemus, with a standard Donemus cover, and including the CD. Earlier, the tape part and a recording of a performance were released on 12" LP.

attention for set up, sound check and rehearsal, the composer does not want to leave the playing of his tape music to others. And because composers generally perform their own tape music, they do not provide instructions for other performers with their tapes. Thus, this seems a vicious circle. For concert tape music to become mature as a musical work for performance, the extended score documentation must contain the audio material in a clear and unambiguous way, with clear indexes and annotations that others can understand easily, and enough instructions to qualify the constitutive properties of the composition and the freedom for interpretation and variation. As well, it must be acknowledged by concert organisations and technicians that concert tape music is not a matter of dumb replaying an audio storage medium, but needs to be performed by experts.

2.1.6 ontologies of CD recordings

“Replaying a disc” may be appropriate terminology only for “consumer CDs”²⁴ that are played at home or on the radio. However, a CD with electroacoustic music may contain audio recordings with different ontologies. For example, on the CD’s of Jan Boerman, Ton Bruynèl and René Uijlenhoet, we find three different kinds of recordings:

1. stereo tape compositions (“the musical work itself”), as mentioned in 2.1.1.
2. stereo versions of multitrack tape compositions, as mentioned in 2.1.3.
3. stereo recordings of performances of compositions for instrument(s)/voice(s) and stereo/multichannel tape/live-electronics, for example Ton Bruynèl’s *Reliëf* (1964) for organ and four soundtracks, performed by Willem Tanke, June 22, 2000, in the Westerkerk in Amsterdam (CV-NEAR 12), or René Uijlenhoet’s *Dialogo sopra i due sistemi* (2003), for organ and quadrasonic live electronics, performed by Jan Hage and René Uijlenhoet, October 8, 2003, in the Laurenskerk in Rotterdam (CV-NEAR 14).

Only for stereo tape compositions (1) is the CD an appropriate storage medium that can be used for concert performance. It is not a good idea to play at a concert a stereo recording of a multitrack tape composition (2) or a recording of a performance of a mixed electroacoustic work (3), since this is not a performance of the musical work but indeed just “replaying a disc” with a recorded representation of a specific instance of the work.

CDs are of special importance to electroacoustic music. One may divide electroacoustic music into music for concert performance and music for stereo replay (CD or radio), whereas acoustic art music is primarily for concert performance. A CD recording of an acoustic work is a recording of a performance of the work, not the work itself; while a stereo tape composition on CD is the publication of the work itself. With electroacoustic music, the CD producer deals more directly with the composer and his/her work. In much electroacoustic music the composer is simultaneously performer of the music and producer of the recording. In the electroacoustic music world, there is a “do it yourself” ethos, and relations and practices are less standardised. While this situation can on the one hand stimulate exceptional productions and on the other hand lowers the costs of the production of simple electroacoustic CDs, it differs from acoustic music CD production.

²⁴ Or, in the past, consumer LPs or audio cassettes.

Because music on CD is in general not considered appropriate for concert performance, the status of stereo tape compositions on CD is somewhat ambiguous. It seems a little inappropriate to play at a concert a stereo track from a CD that the audience could also buy and play at home. Moreover, a consumer CD does not include performance instructions. One could argue that the quality of the concert audio equipment makes it a different experience. To enhance the concert experience of stereo tape music, the composition is sometimes performed with “live diffusion” on multiple speakers. However, since there are no performance instructions on the CD, one does not know whether swooping the audio around the concert hall does or does not conflict with the identity of a carefully crafted stereo tape composition, unless it is performed by the composer her/himself. The extended score documentation of a tape composition provides an alternative: a CD, CD-R or other high-quality storage medium with the tape recording that goes with sufficient instructions for performance or even a score. Since such extended score documentation is targeted at the small professional market of concert organisers and performers, publication on demand may be more convenient than the 500+ mass production of the “consumer” CD.

2.1.7 tape music and copyrights

A problem with the publishing on demand of electroacoustic music is that it is difficult to deal with the authors’ rights in a formally proper way. Of course, all composers do completely agree with the way NEAR publishes their work.

But one has not only to deal with the composer and the Dutch law, but also with the rules and regulations of the musical authors’ rights organisation Buma/Stemra. There are different regulations for the reproduction of musical scores and the “mechanical reproduction” of musical audio. A composer can give Donemus permission to copy his scores; however, he can not give his publisher permission to copy his audio files, since he transferred his “mechanical reproduction rights” to the musical authors’ rights organisation Stemra. Formally, the permission to copy his tape music has to be obtained from Stemra, but Stemra has no regulations for this kind of on demand publication of the audio part of extended scores.²⁵ This is a strange situation: for example, with a composition for flute and tape, the publication (or copying) of the flute part (score) has a different status than the publication (or copying) of the tape part.

Another complication is that composers have authors’ rights as well as neighbouring rights as performers and producers of their tape music. Moreover, for some electroacoustic compositions the composer recorded a performance of a musician; it is a good idea to ask this musician permission for publication or reproduction of this electroacoustic part. Sometimes composers use other recordings in a composition, without taking into account the copyright issues involved.

2.1.8 tape music: what’s in a name?

With such a diversity of media: analogue tape, DAT, CD, digital formats on Hard Disk, etc., it is strange to use the word “tape” music, while nowadays often there is no

²⁵ However, this lack of explicit permission from Stemra is not a severe problem since both the author and the publisher agree on making these copies, the copies are in small numbers, and the unavailability of copies would disadvantage the composer as this would make performances of his compositions impossible. I thank L.J. Deuss for these remarks (personal correspondence, March 4, 2006). Recently, Buma/Stemra announced the intention to develop a more flexible regime, with more possibilities to make specific exceptions for music authors and publishers (press release on www.bumastemra.nl, January 13, 2006.)

tape involved at all. Sometimes, a composer calls a composition “for flute and CD” – that sounds even stranger. Does it matter whether the stereo audio is played from CD or Hard Disk? Later CDs will be obsolete too, but hopefully these compositions will still be performed. One could argue that the specific medium (such as analogue tape or CD-R) is essential for the composition; but for most compositions, this does not seem to be the case - composers like Ton Bruynèl started to put their stereo analogue tape parts on DAT or CD as soon as these new media became available. Only in exceptional, conceptual musical works may the storage medium form an indissoluble part of the work itself. For the common “tape/CD” composition on audio storage medium, I prefer a name that is independent of the medium. Ton Bruynèl called his tape parts “klanksporen”, that he translated as “soundtracks”. I find “klanksporen” a beautiful name; however, “soundtracks” may remind of film sound too much. “Sound tracks” or “audio tracks” could be an alternative. In the past, the word “tracks” was used as in multitrack tape recorder. Now, a piece on CD is a “stereo track”. Parallel audio streams are now often designated as “channels”. I propose to differentiate between separate parallel audio *tracks* in the *source*, and parallel audio *channels* in the *diffusion* to several loudspeakers. A composition for two sound tracks (stereo format) can be diffused over eight loudspeakers; this will sound different from a composition for eight sound tracks that is performed over eight loudspeakers.

2.2 other formats of electroacoustic music

While it can be difficult and time consuming to find and restore old tapes for digitisation and publication, there are more fundamental problems with the publication of mixed media electroacoustic compositions or live electronics. To tackle these problems, I set up a project on the documentation and publication of mixed media and live electroacoustic music for the Professional School of Arts Utrecht (PSAU) of the Utrecht School of the Arts and Utrecht University, for an interdisciplinary group of master students,²⁶ with Hans Timmermans as their supervisor. The group of the first project 2005-2006 works on the documentation of one composition by Anne La Berge, *Drive* (2003), studies the possibilities and complications of such documentation and the related issues of author’s rights, and writes a report with recommendations for future documentations of such works.

2.2.1 film and video

More and more, composers combine audio with video, in such a way that the audio is very prominent and the video has a musical quality. Some examples are *In situ Amsterdam* (2000) for video and four audio tracks, by Jan-Bas Bollen and *Helen Barbara* (2001), for amplified ensemble, tape and film, by David Damm (music) and David Lammers (film). When the video/film is a specific and required part of the composition, this material is an essential part of the extended score documentation of the composition. The development of cheaper and better digital video technology stimulates the use of video by composers and makes it easier to publish such work. However, there are several technical and organisational problems. The DVD-video format is not ideal because of the lossy compression of video and audio and the compatibility problems of DVD-R and DVD+R; and the DVD-video format probably will be obsolete soon. Moreover, the main problem with the publication of

²⁶ For the project 2005 – 2006, the students are: Erik van Hengstum, Rik ’t Jong , Aleksandra Popovska, Leo van der Veen, Jaap Westerop, Caglayan Yildiz; they come from Law Studies, Composition, Music Technology and Media Technology.

audiovisual compositions is the difference between the music world and the film, video and television world with respect to authors' rights and distribution networks. Often, the music and the video have different authors, each working in a different context, with different interests and different institutional ties. When video and audio have the same author, as with Jan-Bas Bollen's *In situ Amsterdam*, the musical background of the author and the publisher are a disadvantage for funding (a music fund does not pay for the video work) and promotion (both composer and publisher are unknown to video festivals etc.). For assistance with video technology and promotion, NEAR contacted the Dutch Institute for Media Art.²⁷

2.2.2 live electronics

Music with live electronics is the most difficult for documentation and publication.

There are several reasons for this:

- 1) complex production & set up;
- 2) "composed" computer programmes / patches: compatibility problems, early obsolescence, authors' rights;
- 3) improvisation;
- 4) composer=performer.

1) complex production & set up

Donemus published the score and produced the instrumental parts of several pieces for ensemble or orchestra with live electronics; for example Willem Boogman's *Moving* (1998-2000), for computer, ensemble and sound projection. But in these scores there is no sufficient information about the electronics. This is in the first place caused by the production process of the composition. The production process of the electronics requires experimentation, special software is programmed, and many decisions are made during the last rehearsals; whereas the sheet music score and parts have to be produced well beforehand, so that the musicians can practice their parts. Often, the composer does not have complete knowledge of the piece because of his collaboration with a technician and software engineer. The knowledge of the electronics is in the heads and hands of those involved; and years later, this knowledge, and therefore the composition itself, will be lost, if it is not documented. Moreover, this often involves electroacoustic equipment and software that may become obsolete soon.

2) "composed" computer programs / patches

When specific software is made for a composition, there are problems of compatibility, early obsolescence and authors' rights. If specific software is used for the live electronics that is written by someone else, it becomes difficult to deal with permissions and authors' rights. But also when the composer made the software herself, complications arise.

For example, Anne La Berge composed *Drive* (2003) and *Toss* (2004) for musicians, samples and LiSa, the live sampling software of Steim. However, she experienced that not all performers have LiSa or are willing to buy and learn it. Therefore, she wanted to transfer her LiSa patches to Max/MSP, for immediate use by

²⁷ While the video facilities of this institute are very good, it soon became clear that they were not used to deal with the uncommon audio part of *In situ Amsterdam* (four parts of four track audio). As music and video, but not a common audiovisual work, *In situ Amsterdam* is intermedial and thus risks to fall between institutions but, with some effort, might also function as a bridge.

a potentially larger group of musicians.²⁸ We also believe that it is important to describe the programmes and patches in a general way, independent of a specific brand of software or hardware, as a generic prescription or algorithm that can be implemented in different computer languages and musical software. In theory, this is a very strong idea, solving both the problems of compatibility and early obsolescence. However, can we expect that someone in the future will take the trouble to implement someone's generic models in a new computer language? Moreover, we have to find out if such a general description is always possible. This might be related to composing style: does the composer start with abstract, general ideas on sound and structure, or does the composer make a piece by playing around within some specific computer environment? And is the software transparent or a black box?

3) improvisation

The use of live electronics can be fully composed and determined. However, often "live electronics" implies improvisation, and thus depart from Donemus' domain of composed music. One student of the NEAR/PSAU-group, Caglayan Yildiz, develops a notation system for improvised elements in composed music; this notation system might also be used for improvised electroacoustic music. However, when working on the documentation of Anne La Berge's *Drive*, it became clear that the compositional and improvisational style is related to the notational style. Anne La Berge preferred her prose style for the notation of the improvisation instructions, since this corresponds with her idea of these compositions as based on stories; instead of a sophisticated musical notation of improvisational elements, that might encourage the musicians to stay too much in a conventional musical style or structure.

4) composer = performer

Often, in improvised live electronics the composer is performing his own music as a musician of a particular, self-invented electronic instrument, like Michel Waisvisz with his "Hands". In such cases, there may be no wish to make instructions for other performers, and thus no need for an extended score documentation. Anne La Berge's compositions *Drive* and *Toss* are in a transitional phase from "performance by the composer" to "composed for other performers".

For the notions of the musical work and its extended score documentation, it is essential to distinguish between the roles of the composer and the performer, even if these two roles are embodied by the same person; and thus, to distinguish between the constitutive features of a composition and the characteristics of a particular performance/instance of the work.

2.2.3 electroacoustic music theatre

In electroacoustic music theatre, the electroacoustic music and the theatrical play may be very much integrated. Unlike traditional opera, there is no clear division between music, text, performance and stage direction, and new media are involved. Michel van der Aa's *One* (2002) is composed for one specific performer, Barbara Hannigan, who also appears on the projected video.²⁹ *Divine Excess* (2005) is an initiative of mezzo-

²⁸ Max/MSP has a longer history than LiSa and is better backwards compatible. With Max/MSP, it is possible to make a stand alone version, that musicians can use without buying the full software package and without the possibility to change the specific patch. This accounts for the separate roles of composer and performer, whereas LiSa is suited to the role of the composer-performer-improviser in one person.

²⁹ For information on Michel van der Aa and *One*, see <http://www.doublea.net/>.

soprano Gerrie de Vries, with electroacoustic music by René Uijlenhoet, the co-operation of several others, and many textual and musical citations; there is not one main author (or two) of this production, but it is strongly related to Gerrie de Vries. Because of the dispersed or collective authorship, the conflation of work and performance and the sometimes site-specific character of a production, electroacoustic music theatre works seldom survive its performances. Some examples of famous electroacoustic music theatre productions are *Der Fall/Dépons* (1993) and *De val van Mussolini* (1995) of the theatre group Hollandia, Dick Raaijmakers and Paul Koek.

Lautsprecher Arnolt (2003) is an opera for loudspeakers, with music of Huba de Graaff.³⁰ In this piece, custom made loudspeaker objects are part of the play. There is only one human actor (Marien Jongewaard), who performs the persona Arnolt (whose is metaphorically designated as a *Lautsprecher*); other personae are represented by loudspeaker objects, for example Arnolt's girl friend. In a different sense this play is also about loudspeakers, and the role of PA, Public Address, and sound amplification and mass media in Nazi Germany. What is electronic music and what is theatre in this play? Could the play be performed by other people, in another time and place? Then, the musical elements would have to be documented extensively, and the loudspeaker objects should be preserved or rebuilt.

2.2.4 electroacoustic installations

Electroacoustic music theatre and electroacoustic installations often contain objects and machines that are specifically made for the work. An extended score documentation of these works could provide the objects or provide documentation on how to (re)build such objects. The conservation of such objects is more the task of a museum than of a music publisher. In the Netherlands, it is the Haags Gemeentemuseum that houses the material objects of several electroacoustic installations. However, generally these installations are not preserved and documented in such a way that the installations could be presented again in a performance or exhibition conveniently. Examples of Dutch electroacoustic installations are the *Ideofonen* (1971) of Dick Raaijmakers, the *Kubus-project* (1971) of Ton Bruynèl and *Wired Life* (1995) of René Uijlenhoet. Frits Weiland made a documentary film *Geluid <=> Kijken*³¹ on the exhibition at the Stedelijk Museum in Amsterdam of the *Ideofonen* and the *Kubus-project*.

Wired Life was a large installation made of old electroacoustic equipment, making music “by itself”, in a continuous process of change influenced by environmental sounds and its own machinery, for example by recording and playback of enormous tape loops. Its first exhibition was in 1995 in De IJsbreker in Amsterdam, and it played until 2000 in the Haags Gemeentemuseum. A re-installation seems impossible, but the composer plays with the idea to re-implement the installation in software. However, the visual aspect of this collection of old electroacoustic equipment was an important element of this installation, and one may wonder what remains of the identity of the installation without this old equipment. But the installation lives on as inspiration for new compositions, such as Uijlenhoet's electroacoustic work *De Voorzienigheid* (2006).

Morandi's clarinet (2001), an installation with electronic tape music of Jos Janssen and kinetic shadows of Constantin Jaxy, won a mention in the 31e Concours International de Musique et d'Art Sonore Electroacoustiques de Bourges 2004. The kinetic shadows are the result of light that shines through moving objects made by

³⁰ For information on Huba de Graaff and *Lautsprecher Arnolt*, see <http://www.euronet.nl/~hubiware>.

³¹ Information on screening or copies of this film is available via NEAR.

Constantin Jaxy. This installation may be documented and published as a box with shadow objects, lamps, engines, audio material, a DVD and instructions to set up the installation without the presence of the authors.

3 ontological issues

Electroacoustic music belongs to the tradition of Western art music, in which the notions of the score and the musical work are regulative forces since about 1800, as Lydia Goehr shows in her book *The imaginary museum of musical works* (1992); Stephen Davies (2001) even argues that a broader concept of the musical work is historically, culturally and geographically universal. In our contemporary musical culture, we still find that the work-concept prevails and has a regulative function in many musical institutions. Goehr (1992) argues that the musical work-concept is a strong and flexible open concept. The extended score documentation of electroacoustic compositions stretches the concept of the score and articulates new forms of the work-concept.

In electroacoustic music, there are often different versions of a composition, related to a diversity of media: for example a stereo version for CD and a multitrack concert version of a tape composition, such as the compositions by Jan Boerman, Kees Tazelaar and René Uijlenhoet; or a version for video and live instruments and a purely audiovisual version, as with David Dramm's *Helen Barbara*; or, as with Anne La Berge's *Drive*, a version for one instrumentalist with electronics, a version for several instrumentalists and electronics, and an installation version - and since the choice of instruments is free and the composition involves improvisation, each performance of each version will differ greatly. This way, the musical work is not one fixed object, but a cluster of versions for different media and different situations, of which the determination or openness is well defined in the extended score documentation.

For extended score documentation, one has to define what is constitutive of the composition, what elements are fixed and what is open to interpretation or indeterminate. Some compositions will have a very detailed and determinate representation, other compositions will have much freedom for interpretation or improvisation. Davies argues that a musical work can be "thick" or "thin" in its constitutive properties (Davies 2001: 20). A "thin" work has few determinative properties and allows more freedom to the performer. In a "thick" work, more sonic details are determined by the composer – thus, a tape composition is a very "thick" musical work. Moreover, Davies claims that not everything notated in the score has the status of a work-determinative instruction – some are recommendations. The musical conventions and musical practice determine what are determinative features and what are recommendations. In the practice of contemporary art music, it is usual that composers determine many details in the score; therefore, I think most extended score instructions are to be interpreted as constitutive. However, composers may change their mind with regard to the amount of details they prescribe. At first, the score may be directed to a specific performance situation. Later, the composer may determine that in different situations, performers have more freedom to adjust the performance; or that they may use different equipment when the prescribed equipment is obsolete; or that they may change a set up when it is too complicated for different performance situations. An example of such "thinning" of an electroacoustic

work is Victor Wentink's *De Sonate nr. 1* (1969/83), for 1-5 players and electronic sounds.³² On the other hand, not all determinative features are explicitly prescribed in the score – some are implicitly determined by the performance practice in which the score is based. When, as is the case with live electronic music practices, a performance practice is not widely known or changes fast and extinguishes soon, it is important to document such implicit features explicitly in the extended score documentation.

Especially for the long term, it is important to think about what we tend to take for granted in the documentation. Knowledge and skills that are now self-evident, may become forgotten and lost later; therefore, we have to try to make this information explicit. Equipment and instruments that are common now, may be obsolete soon. A solution could be to describe and specify these instruments, or to provide general suggestions for alternatives and allow the future performer some freedom for interpretation. When the extended score documentation contains non-standard notation or when other non-standard systems are used (unusual software, for example), its explanation must be part of the extended score documentation.

“Where the notation is non-standard, there are unlikely to be established, commonly understood conventions for its interpretation. If such a notation is to specify a work, thereby qualifying as a score, it should supply the rules according to which its indications are read. Unless there is the possibility of a distinction between correct and incorrect interpretations, the notation requires nothing from the performer and, hence, fails as a score.” (Davies 2001: 126)

In such a small and fast developing niche as electroacoustic music - traumatised by early obsolescence – there is a need for additional documentation of the equipment, the software and other musical practices in which the composition is based.

A consequence of the dependency of compositions on the musical practice they belong to, is that the extended score documentation of a composition is not enough to preserve the music. Documentation of the musical practice is necessary too. This could consist of interviews with composers, technicians, musicians and other experts; photographs and video recordings of the operation and repair of electroacoustic equipment; recordings of the sounds and performative features of electroacoustic instruments; etc. Some aspects may be very difficult to document, such as the intuitive performance of live electronics. Documentation may involve a process of articulating, structuring and inventing terminology and symbols of musical aspects that are not fully conscious yet.

Audio and video recordings of performances may be useful additions to extended score documentation, as examples or as prescriptions, especially when it is

³² Whereas the score contains quite detailed instructions on the synchronisation of tape and instruments and the diffusion (by means of a Rotator) of the stereo tape over four loudspeakers, in 2002 the composer added additional explanatory notes to the CD-R with the tape part, that allow the performers much freedom in relation to the tape and the score and that position the composition in the context of its time. In the new explanatory notes, the composer writes: “The score (1 to 5 players) seeks to inspire musical actions. The graphic notations are meant as a starting point. Later on, when the musicians have formed their ideas as to the night music atmosphere of the tape sounds, they can forget about the notation altogether. It is even possible to play down the tape when the musical actions are secure enough. It is for the musicians themselves to make this decision. The piece can be understood in the tradition of the *Lehrstücke* by Bertolt Brecht, which were functioning at the time as a model for a new, anti-classical, artistic attitude. The choice of instruments is free. Electrical amplification and/or distortion-equipment can also be used. The tape can be played over two or four loudspeakers, the diffusion is free. The volume and positioning of the sounds can be done with an additional simple mixing device.”

difficult to notate all constitutive features of the compositions. However, the danger is that features that belong to a particular performance and that are not constitutive of the composition per se, become normative of future performances and thus wrongfully become constitutive of the work; with one recording of a performance, it is difficult to distinguish the work from its interpretation. To avoid this, one could include recordings of several different performances. For example, Anne La Berge's *Drive* has versions for one solo performer and for chamber ensemble, and a large degree of improvisational freedom. By including recordings of very different performances, the interpretative width of this composition is illustrated; whereas the provision of only one recording of a performance of the composer herself could urge others to imitate her performance too strictly and too exactly. Another complication is that recordings of performances have to comply to different copyright regulations and to additional neighbouring rights: it will add different copyright owners to the extended score documentation of one composition.

Documentation of electroacoustic music involves ontological questions about the definition of the electroacoustic work, the difference between composition, improvisation, interpretation and performance, the demarcation and intertwining of music and other disciplines, and the articulation and symbolisation of semi-unconscious electroacoustic musical features. The extended score documentation relates to and extends the musical tradition. Although conventional music publishing may not seem to suit the variety of electroacoustic and mixed media music, I am convinced that it is a worthwhile effort to find means of extended score publication that make the works themselves available in the best possible way. Availability is essential for the development and survival of electroacoustic music; it makes its study, criticism, discussion, interpretation, perception and enjoyment possible. In this era of electronic reproduction, it is a valuable and feasible ambition to reproduce and distribute electroacoustic and mixed media works, because these are then available to people beyond the confines of place and time and outside of institutions. Obstacles to the publication of the variety of electroacoustic and mixed media music are the media-dependency of many regulations and practices, because these musics often combine different media or do not fit into the categories of music and art institutions and of the music industry. Extended score documentation and publication of electroacoustic music is best served by a flexible approach geared to the versatility of this genre.

acknowledgements

I thank Bèr Deuss and René Uijlenhoet for their comments.

references

- Chew, Geoffrey & Richard Rastall. 2001. "Non-mensural and specialist notations", in: Stanley Sadie (ed.). *The New Grove Dictionary of Music and Musicians*, 2nd. ed., Vol. 18, pp. 182-189. London: Macmillan.
- Coenen, Alcedo. 1996. "NEAR: The Netherlands Electroacoustic Repertoire Centre", *Key Notes XXX* (3): 20-21 (Amsterdam: Donemus).
- Coenen, Alcedo. 1997. "NEAR: The Netherlands Electroacoustic Repertoire Centre", *Organised Sound* 2(1): 19-21 (Cambridge: Cambridge University Press).
- Davies, Stephen, 2001. *Musical works & performances: A philosophical exploration*. Oxford: Oxford University Press.
- Emmerson, Simon & Dennis Smalley. 2001. "Electroacoustic music", in: Stanley Sadie (ed.). *The New Grove Dictionary of Music and Musicians*, 2nd. ed., Vol. 8, pp. 59-67. London: Macmillan.

- Goehr, Lydia. 1992. *The imaginary museum of musical works: An essay in the philosophy of music*. Oxford: Oxford University Press.
- Kolsteeg, Johan. 1997. *Één groot oeuvre. Donemus: Vijftig jaar tussen componisten en publiek*. Amsterdam: Donemus.
- van Lingen, N. 1998. *Auteursrecht in hoofdlijnen*. Alphen aan den Rijn: Samson.
- Schaffers, H.J.R. & van J. van Nus. 1958. "Concrete en elektronische muziek", *Auteursbelangen* 45: 9-19.
- Uijlenhoet, René. 2004. "Signs (1969) by Ton Bruynèl: A signal to analysts of electro-acoustic music.", *Tijdschrift voor Muziektheorie* vol. 9 no.2. This paper was presented at the Fourth European Music Analysis Conference, Rotterdam, October 22, 1999; and is also published on the CD-ROM track of the CD box Ton Bruynèl: Looking Ears complete (CV-NEAR 12).