The National Library of Norway, Rana Division (hereafter NB Rana), was founded in 1989 when Parliament passed its latest Legal Deposit Act. The decision to choose a location 1,000 km north of the capital was a political one. In connection with the establishment of NB Rana it was decided to build a huge storage vault blasted into the mountain. The constant rock temperature of 9°C during every season makes it suitable for long-term storage of different kinds of material. There are 42,000 metres of shelves on four floors, and we have already prepared for another storage vault. The mountain vaults can resist all conventional bombs.

To some extent it is important to know the origin of our institution to understand the development of the collections and associated activities. In addition to its state-of-the-art storage facilities, much focus has been made on building a good technical infrastructure. We have a fully-equipped conservation laboratory and a recording studio that can handle most analogue and digital formats. Our digital mass storage system became fully operational in 2001, serving both legal deposit documents and historical material. On the subject of finance, though, I have to add that due to our budget we have barely spent any money on buying records or CDs. Since NB Rana is not open to the general public, our services can only be accessed online or by contacting the staff by phone or in other ways. Statistically, most of our external correspondence is done via e-mail.

Tirén’s Lost Box: Treasures from the Past

The Swede Karl Tirén (1869-1955), despite making a living from working on the railway, is recognised for his documentation of the Sami joik (the Lapps’ traditional singing). During his travels in Sweden and Norway in the 1910s he recorded hundreds of joik melodies using the phonograph. His life’s work *Die Lappische Volksmusik* (1942), which was printed in German, meticulously describes the Sami music and poetry.¹ Until recently, however, a number of Tirén’s wax cylinders were considered lost, until the DAUM Archive [Dialekt-, ortnamns- och folkminnesarkivet i Umeå] discovered a box full of wax cylinders. A few phone calls later and after eight hours’ driving, we put one of the cylinders onto our cylinder replay machine, only to find that these rolls were some of the original Karl Tirén recordings. Eight of

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the rolls were recordings of Sami *joik* made just across the border in Tärnaby, dating from 1913.

Our cylinder machine, Tobias, was developed by Roger Arnhoff (1933-2003) to meet our demands for preserving cylinder rolls. Arnhoff was the head of our laboratory and before that he ran his own recording studio in Oslo. The history of Norwegian recorded sound goes back to 1879, just two years after Edison’s invention. The phonograph was demonstrated in Christiania with a psalm sung by Peder Larsen Diseth (1851-1936). It was recorded on tin foil, which has now been set behind glass and framed as a picture at the Norwegian Museum of Science and Technology. One day we hope to be able to listen to this recording by using sophisticated laser equipment. The first Norwegian commercial gramophone recording was made at the Grand Hotel in Oslo in 1904 by the popular show artist Adolf Østbye (1869-1907), with Carl Mathisen (1870-1933) playing the accordion. Between 1879 and 1927 about 400 artists, vocal groups or orchestras were recorded onto wax cylinder or disc. Following this acoustic period the use of microphones improved the sound quality, and the record industry became big business.

The complete collection of the Norsk Teknisk Museum [Norwegian Museum of Science and Technology], comprising ca 1,200 rolls and discs, has been transferred to NB Rana. The phonograph rolls and the Gramophone Company records are the most valuable ones relating to Norwegian cultural heritage, whereas the Pathé discs, a comprehensive collection of Edison discs and a collection of Favorite discs may be of interest outside Norway as well. The museum also holds a valuable collection of piano rolls from the early twentieth century, for example of Edvard Grieg (1843-1907) playing some of his own works. New technology makes it possible to replay some of the piano rolls with a remarkably good sound quality.

The Norwegian music ethnologist Christian Leden (1882-1957) probably made more than 1,000 recordings using the phonograph during his travels inside and outside Norway. They include a number of recordings of traditional music from Norway, even though we do not yet know exactly where they were recorded. His travels around the world included Greenland, Canada and South America, and we also have a few cylinders from Borneo. He is notable for his studies of South American Indians, and he visited Easter Island (Chile) before Thor Heyerdahl (1914-2002) made one of his expeditions to this island (1955-56). The preserved collection of more than 500 rolls may add valuable information to our cultural history. Recently we have started digitising the very first cylinders from this collection. We also keep some phonograph rolls recorded by the music researcher O. M. Sandvik (1875-1976), who is well known for his studies of traditional music. His collection includes not only recordings from the valleys in Norway, but also a number of cylinders recorded in Iceland. In addition to the collections already mentioned, we preserve about 100 cylinders from Ringve Museum.

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2 You will find pictures and further information about Tobias on the web: [http://members01.chello.se/christer.hamp/phono/arnhoff.html](http://members01.chello.se/christer.hamp/phono/arnhoff.html)

3 Oslo was called Christiania [Kristiania] between 1624 and 1925.

4 The piano rolls were made using either the Hupfeld-Dea system or the Welte-Mignon system, introduced in 1905 and 1904 respectively. You can listen to an excerpt of Edvard Grieg playing “Sommerfugl” (Butterfly) at [http://www.musikkonline.no/shop/displayAlbum.asp?id=16520](http://www.musikkonline.no/shop/displayAlbum.asp?id=16520) issued on Simax Classics, PSC 1809. This recording from 1906 was made using the Welte-Mignon system.
comprising international releases, and fifty private recordings by the Norwegian engineer Robert Rafn, who worked at Edison’s laboratory in New York City. Between 1901 and 1904 Rafn produced spoken letters to be sent across the Atlantic.

The task of preserving acoustic recordings certainly needs attention, not only because we are dealing with cultural treasures, but simply because the material itself is breaking up or developing cracks. The need for action and a historical overview is described in the publication “Plan for the Preservation of Norwegian Sound Recordings” (1997).  

Blue Suede Shoes: the Mastertape Collections

Unlike most music collections I have seen, our major collections comprise thousands of master- and multi-track tapes, in both analogue and digital formats, from record companies or even private publishers. There are reasons for objecting to such a collecting policy, but only the future will actually show if we were right about doing this. Several factors are relevant to this debate:

- There was no systematic collection of published sound recordings in Norway until the Legal Deposit Act became effective in July 1990. Despite the Act, a considerable number of record releases are still not deposited in the national collections. The masters partly fill this gap.

- Record releases in Norway are in the hundreds rather than thousands.

- Some of the tapes consist of unpublished material, or contain out-takes that have not been included on the published record.

- A large number of historical record releases (vinyl discs and even CDs) are out of stock. Re-releases can be produced from the masters.

- The requirement to produce optimal sound quality can best be done on the basis of the master tape. The record companies still focus on re-issues from analogue recordings (e.g. LP) onto digital sound carriers (e.g. CD). Producing re-releases based on digital masters, which might be data files as well, will increase in the future.

- New re-mixes can be produced from the multi-track tapes. Furthermore, these tapes can be used for special research purposes.

A large number of our collections exist because of reorganization within the record industry. If a record company goes into bankruptcy it can be difficult to trace the owners of the material, and in all likelihood nobody will feel responsible for saving the tapes. On the other hand we strive to make agreements with copyright owners, both to initiate preservation programmes and to provide better access. Our recent agreement with Universal Music

5 The Plan for the Preservation of Norwegian Sound Recordings is published on the web in Norwegian and English at http://www.nb.no/verneplan/lyd/index.html
exemplifies the synergy of preservation and access at the same moment. A wide selection of master tapes are digitised at NB Rana and will be re-issued according to the record companies' priorities. Moreover we receive the complete catalogue (database) from Universal, which may be imported into our Mavis database. The agreement covers about 6,000 master- and multi-track tapes as well as future releases in Norway, which will be acquired as sound files.

Arne Bendiksen (b. 1926) is well known within the Scandinavian record business, both as a composer, lyricist, record producer and artist and as a member of the popular vocal quartet the Monn Keys, which existed from 1951 to 1964. Once he was the owner of the biggest Norwegian record company, including artists like Wenche Myhre, Nora Brockstedt and Kirsti Sparboe. At the same time he was a true collector, keeping more than 7,000 tapes at home! Naturally he experienced problems in storing that huge number of tape reels, so he had to empty his indoor swimming pool to place his tape archive there. The complete collection is now preserved at NB Rana, though this decision caused some discussion in the media. We acquired the catalogue of more than 50,000 titles too, which was an essential part of the agreement relating to financial compensation. In a way this collection forms an oral history of Norwegian popular music from the 1950s until the 1980s, although it includes other genres such as folk, jazz and classical music too.

Other examples of tape collections are those of Roger Arnhoff (2,100 items), Bel Production or SDC Norway (7,000), Easy Sound (1,300 masters from a recording studio in Copenhagen), Grappa (1,000), Heilo (260), Mai (900), Norwegian Jazz Archives (220), Norwegian Society of Composers (1,700), Norske Gram (700), Notabene (370), Odin (200), Oslo lydstudio (300), Simax (1,700), Sweet Silence (ca 1,200 masters from the recording studio in Copenhagen), Maj and Gunnar Sønstevold (220) and Vossa Jazz (100). The original master tapes from Norsk Folkemusikksamling [The Norwegian Collection of Folk Music] consist of field recordings from different places in Norway. The collection of 3,100 tapes was acquired from the University of Oslo, while 1,700 tapes from the Norwegian Academy of Music document talented students on their way to becoming professional musicians. The Academy of Music has recorded the principal concerts relating to the institution’s activities, including hundreds of diploma concert exams. A wide range of musical styles is included on the master tapes, although their main contents are recordings of pop music. Obviously, the first priority is to collect the national musical heritage, but occasionally we add foreign material too. It is until now probably a deep secret that we keep masters of pop stars like Elvis, Bob Marley and Quincy Jones. To maintain a clean storage vault, we always wear shoes with shiny blue plastic caps when we stay there, like we did the day we discovered Elvis’ “Blue suede shoes”… All collections are accessible to the specialist user, since our directives permit access for research, education or documentary purposes.

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6 MAVIS is an acronym for Merged Audiovisual Information System, which is the database NB Rana uses for cataloguing music, broadcast and film material. It was developed by the Australian company Wizard Information Services and is used by several archives around the world. See http://www.wizardis.com.au/ie4/products/mavis/index.html

7 See the article by Hans-Hinrich Thedens elsewhere in this issue.
Jazz out of Norway: the Norwegian Jazz Base

The Norwegian Jazz Base website\(^8\) contains information about almost a century of jazz in Norway. Although no jazz was played in Norway in 1905, we have included some recordings of early ragtime tunes from that period. The first Norwegian groups to describe their music as "jazz" emerged around 1920. It seems that the influence of the early jazz bands from Europe was stronger than the influence of the black American bands. The music of the 1920s was primarily performed for entertainment and dancing, but the cradle of jazz would play a more active role during the following years. Already in 1921 the "5 Jazzing Devils" from America visited Christiania, and this was probably the first time a black jazz orchestra played in Scandinavia. The greatest early jazz event was probably Louis Armstrong and his Hot Harlem Band performing in Oslo in 1933. The eighteen-year-old violinist and saxophone player Lauritz Stang (1903-83) formed his own jazz band in 1920. This is considered to be the first Norwegian jazz band. The piano player and composer Kristian Hauger (1905-77)\(^9\) and his orchestra performed on Norwegian radio in 1924, thus becoming the first jazz act on the air.\(^9\) One of his best-remembered popular melodies, “Charleston i Grukkedalen” was also recorded by orchestras abroad.

The continuation of Norwegian jazz history is available from the website, and to a certain extent it is striking that jazz music does have such a strong position in Norway. Several performers have a good reputation abroad, leading to an international exchange that also arises in a number of international jazz festivals like Moldejazz and the Kongsberg Jazzestival. Some believe that the innovative thinking in jazz today takes place in Europe rather than the USA. “New European Jazz” is a term related to a trend of developing new formulas in contradiction to the established, and in some sense conservative, American tradition. In 2001 the author and music journalist Stuart Nicholson wrote an article, which was prominently featured in the New York Times, dealing with Norwegian pioneers like Bugge Wesseltoft, Eivind Aarset and Nils Petter Molvær.\(^10\) It is possible to trace elements from Swedish folk-influenced jazz in the 1950s and the Nordic sound of the ECM label in the late 1960s and early 1970s. Whether this new musical hybrid is jazz is probably a philosophical matter. Jan Garbarek,\(^11\) still one of Norway’s most prominent jazz players, says that he doesn’t play jazz any more… Making distinctions in the context of a discography is a challenging and difficult matter, involving other styles like electronica, techno, house or dance. This eclectic approach does open doors for a new audience; furthermore, some artists may become pop stars. Jaga Jazzist’s album “A Livingroom Hush” (2002) was elected as the year’s jazz album by BBC listeners, and the Norwegian Collective are outstanding representatives of the jazz new wave.

The Jazz Base is the result of a close co-operation with the Norwegian Jazz Archives, using the Norwegian Jazz Discography 1905-1998 by Johs Bergh (1932-2001) as its main source.

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\(^8\) See the Norwegian Jazz Base both in English and Norwegian at http://jazzbasen.no/

\(^9\) A complete recording from 1929 is available using the “Sound clips” link from the jazz base website.

\(^10\) Nils Petter Molvær’s recording "Khmer" (ECM 1560) is available using the “Sound clips” link from the jazz base website.

\(^11\) Jan Garbarek’s 8-minute recording of "Hasta siempre" (ECM 1041) is available using the “Sound clips” link from the website.
The re-issue of the book was launched on the web in March 1999. The website fully reproduces the discography sorted by performer, listing the recordings chronologically. Keeping in mind that a jazz discography differs slightly from other discographies, the essential data you can read are:

- Main performer on recording
- Other musicians/personnel, with instrument or function
- Track title
- Record label and catalogue number
- Date and place of recording
- Album title

Although the discography on the web included some search facilities, we wanted to add other functions and more advanced search options. We chose Mavis for the database and the task of transferring the printed discography into it began. The manuscript of the book was available as a Word document, but the data was not completely uniform and so we had to enter most of the data manually. The cataloguing of the 400-page book was done in Oslo and took one year to complete, the information being stored on a server at Mo i Rana.

The desire to include other kinds of material resulted in work with biographies, sound files, photographs, articles on jazz history and lists of web links. The Norwegian Jazz Archives already had valuable collections available for this purpose. In addition, the issue of copyright had to be addressed. We engaged in talks with the record companies and with organizations that deal with copyrights of composers, authors and publishers. Fortunately most of the record companies allowed us to publish complete versions of the tracks we requested, free of charge. Likewise we could digitise and publish a number of photographs without paying commission to the copyright owners, though the Norwegian Performing Rights Society [TONO] asked for a monthly fee based on total playing time of the sound tracks.

Having developed the layout and the web interface ourselves, the website was launched in October 2001. The discography is updated on a weekly basis and includes new jazz releases, which might be produced from the master tapes at NB Rana. In this context it is easy to follow the archive’s tasks all the way from collecting to access. The recent CD release “Some Time Ago – a Collection of her Finest Moments” (2003) by Radka Toneff (1952-82) is representative of this. Unfortunately, Radka Toneff died at just 30 years old, but she is still remembered as being one of our finest jazz singers.

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12 Johs Bergh’s discography is still available on the web, at [http://www.nb.no/norskjazz/](http://www.nb.no/norskjazz/)

13 Radka Toneff’s recording “The Moon is a Harsh Mistress” (Odin CD-03) is available using the “Sound clips” link from the jazz base website.
www.musiconline.no: the Combination of Business and Archiving

Professionals within the record industry and in sound archives worldwide try to predict whether we will mainly use sound carriers (e.g. CDs) or downloaded sound files (from the Internet) in the future. We all know the focus on several illegal services on the Internet, Napster being probably the most controversial. Even though Napster had to close its website due to action by five record companies, any user can easily find substitutes for this file-sharing tool. However, the new owner of Napster plans to re-launch it as a legal, “music on demand” service. A number of companies already exist providing digital music services legally, such as Pressplay, MusicNet and the recent iTunes.\(^{14}\)

The Norwegian company Phonofile AS was established in 1999, owned by FONO [Foreningen Norske Plateselskaper; Association of Independent Record Producers], NOPA [Norsk forøring for komponister og tekstforfattere; Association of Norwegian Composers and Lyricists] and TV2, Norway’s main commercial broadcaster. Phonofile is the largest Norwegian music database, comprising almost 50,000 titles and specially designed for professional users such as broadcasters, film, commercial and radio producers.\(^{15}\) The consumer service Musiconline.no was launched in September 2002 as the first major music-on-demand service in Norway.\(^{16}\) The repertoire covers a wide range of musical styles within pop, jazz, traditional and art music. You may listen to the Oslo Philharmonic Orchestra, the pianist Kjell Bækkelund, the pianist Eva Knardahl, the soprano Kirsten Flagstad, the cellist Truls Mørk, the violinist Arve Tellefsen, or pop acts like Jan Eggum, Bjørn Eidsvåg, Ephemera and St Thomas. Occasionally you will also find releases exclusively for download from Musiconline.no, such as the Henrik Njaa remix of the 1986 hit “Shouldn’t have to be like that” by Fra Lippo Lippi.\(^{17}\)

NB Rana and Phonofile initiated a co-operation in 2000 that is based on NB Rana producing and handling the sound files in addition to basic cataloguing. The CD releases are sent to NB Rana and then ripped, generating three kinds of sound files: the original WAV-file, MP3 and RM (RealMedia). The WAV-files are being stored in our digital mass storage system, while the compressed sound files are transferred each night to a file server located in Bergen. The RM-files are used for listening in a lower quality format, and the MP3 files may be downloaded for professional use in a quality (256 kb/s) very close to CD-quality. The music files available for download by consumers (held on Musiconline.no) are encoded with a bit rate of 96 kb/s using the Windows Media Audio format (WMA). Although Phonofile Online and Musiconline.no are concepts based on profitable business, their vision of making Norwegian music more accessible is certainly in accordance with the National Library’s

\(^{14}\) Pressplay is a joint venture of Sony Music Entertainment and the Universal Music Group: see http://www.pressplay.com/. MusicNet is a company and a trademark: see http://www.musicnet.com/; and iTunes is a music store from Apple Computer, Inc.: see http://www.apple.com/itunes/

\(^{15}\) Phonofile Online can be accessed by a license agreement and a digital certificate: http://www.phonofile.com

\(^{16}\) Musiconline.no is a commercial digital music service available both in Norwegian and English: see http://www.musiconline.no

\(^{17}\) Fra Lippo Lippi was the second Norwegian pop act (after a-ha) to sign a deal with an international record company.
policy. However, the most important factor for NB Rana is to preserve the CD releases. Preserving the sound files in our digital vaults obviates the need to test the physical CDs for errors, and subsequent conversion can be omitted. Providing access to the data files also makes it easier to access any CD release from any computer connected to NB’s internal network (both in Oslo and Mo i Rana). Co-operation with Phonofile has been useful in relation to the legal deposit of sound carriers too.

Copyright has been a difficult issue in regard to our vision of making the online catalogue accessible to researchers. We also aim to establish listening stations for external users at the National Library both in Oslo and Mo i Rana, maybe followed by similar solutions within public libraries. At the moment we are working on these issues in the context of the implementation of the EU Copyright Directive. We follow the Danish, who are establishing a digital music service that is similar to the Norwegian Phonofile.no,\textsuperscript{18} with great interest.

\textbf{FIGURE 1.} The 32-Track Mixing Console at NB Rana.

\textsuperscript{18}\textit{Phonofile Denmark: see http://www.phonofile.dk}
FIGURE 2. The Tobias cylinder replay machine, showing a brown wax cylinder from 1903 that has been restored at the laboratory.