

The CEUS project

Ampico piano rolls in the 21st century

Carreño • Godowsky • Mascagni • Moiseiwitsch • Rachmaninoff • Copeland

*"Golden Age"
pianists playing
Debussy, Ravel,
Chopin and more
in the romantic
style of the times*

Reflections

Reproducing piano rolls, the digital recording technology of the early 1900s, now adapted to today's digital world. Hear this sparkling, expressive music as never before on the new Bösendorfer CEUS Imperial, mastered in 192kHz/24 bit stereo.

Realised by Peter Phillips



elected
PAA-003

Afternoon of a Faun • Reflections in the Water • Andante Spianato • Cavalleria Rusticana • Clair de Lune



Alexander Brailowsky



Teresa Carreño



George Copeland



Leopold Godowsky



Josef Lhévinne



Pietro Mascagni



Benno Moiseiwitsch



Leo Ornstein



Sergei Rachmaninoff



Olga Samaroff

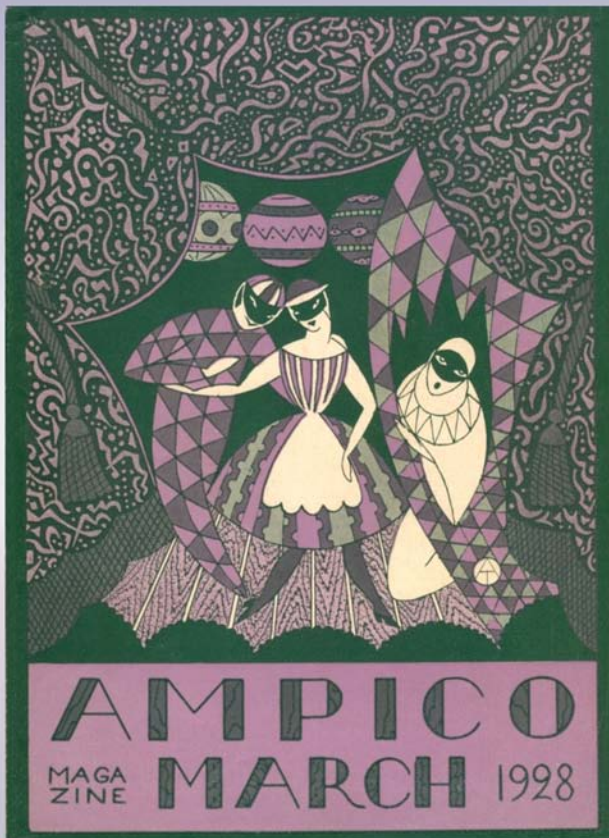


E. Robert Schmitz



Milton Suskind

Photos adapted from various Ampico publications



Ampico published a monthly magazine for most of the 1920s. Free to Ampico owners, each issue listed new releases and presented articles about Ampico artists, notable Ampico owners and the company in general. This example of the front cover art is typical of the later issues.

Reflections

Legendary pianists playing a program of romantic and impressionist music from their Ampico reproducing piano rolls, performed on a 290 Bösendorfer Imperial piano fitted with a computerised playback system. See booklet for details.

- 1 *Arabesque No.1 (Debussy) Leo Ornstein [4:57]*
- 2 *Berceuse Op.57 (Chopin) Teresa Carreño [5:34]*
- 3 *Beside the Spring (Liszt) Alexander Brailowsky [2:47]*
- 4 *Afternoon of a Faun (Debussy) George Copeland [6:48]*
- 5 *Andante Spianato (Chopin) Leopold Godowsky [4:17]*
- 6 *Cavalleria Rusticana (Mascagni) Pietro Mascagni [3:21]*
- 7 *Gardens in the Rain (Debussy) E. Robert Schmitz [3:24]*
- 8 *Gondoliera (Liszt) Josef Lhévinne [5:18]*
- 9 *Reflections in the Water (Debussy) Leo Ornstein [5:58]*
- 10 *Nocturne Op.9 No.2 (Chopin) Alexander Brailowsky [4:32]*
- 11 *Floods of Spring (Rachmaninoff) Milton Suskind [2:56]*
- 12 *Impromptu Op.36 No.2 (Chopin) Benno Moiseiwitsch [5:09]*
- 13 *Maiden's Wish (Chopin-Liszt) Sergei Rachmaninoff [3:36]*
- 14 *Jeux d'eau (Ravel) E. Robert Schmitz [4:29]*
- 15 *Liebesleid (Kreisler-Rachmaninoff) Sergei Rachmaninoff [3:57]*
- 16 *Clair de Lune (Debussy) Olga Samaroff [4:25]*
- 17 *Consolation No.3 (Liszt) Victor Wittgenstein [4:12]*

Total time 76:22

Realised by Peter Phillips

Reflections

Some of the works on this CD are performed by “Golden Age” pianists, who recorded them when the written score tended to be more of a *guide* to the interpretation, unlike today’s more reverential attitude. From the romantic and impressionist repertoire, each piece is played in the style of the times, giving a program of music by numerous composers performed by a range of pianists that invites you to relax and slip back to another time.

1. *Arabesque No.1* in E major (published 1888, followed in 1891 by *Arabesque No.2*) was composed when Debussy was in his late twenties. For Debussy, the “*eternal arabesque*” was “*based on the principle of the ornament, which is at the root of all art.*” Decoration in the form of arabesques was popular in the visual arts at the time, and Debussy was influenced by the idea that thought could be expressed by the line and the arabesque. This piece, although often regarded as French romantic music, is indeed built on small decorative, repeating motifs which often build into long sweeping lines.

It is played by Russian born Leo Ornstein, who recorded it on Ampico roll around 1922. Born in 1892, Ornstein moved to the USA in 1906, and lived to be 108. During his concertising career he championed works by contemporary composers, including some of his own, fearsome pieces that moved one baffled Norwegian music critic to conclude that “*the young man went temporarily mad*”. Most performances of this work take less than four minutes, Ornstein’s takes nearly five, giving us a more languid and romantic look at this popular piece which is sometimes misjudged as being “easy to play”.

2. Chopin wrote his Op.57 *Berceuse* in 1843 under the title *Variations*, changing it when the piece was published. A lullaby (or cradle song), it begins and finishes in 6/8 time. The harmony is disarmingly simple: one modulation repeated every bar throughout the work, with the last four variations becoming less complicated and finally returning to the melody.

According to Ampico publicity, Venezuelan pianist Teresa Carreño recorded this work on Ampico piano roll around 1916, not long before she died at age 64. Her interpretation is much slower and less dramatic than typically heard today, taking at least a minute longer than many modern performances, and therefore possibly more effective as a lullaby. Ampico also claimed that Carreño recorded Schubert's *Impromptu Op.90 No.3* at the same time. In fact it was recorded for the Hupfeld piano roll company a few years before.

Born in 1853, Carreño and her almost destitute family had immigrated to New York in 1862 where, as a child of nine her talents as a pianist earned money to help support her family. Her increasing fame took her to the White House in 1863, where she performed for Abraham Lincoln. She was a highly renowned artist who also took up conducting and composing, even singing. She composed over 40 piano works and died June 12, 1917.

3. Liszt's *Au bord d'une source* or *Beside the Spring* is the fourth of nine works forming the "Years of Pilgrimage: 1st year, Switzerland", published in 1855. This romantic work is a lyrical and poetic interpretation of the scene in the title, set in a Swiss landscape. It first appeared in Liszt's "Album d'un voyageur" of 1835-36, published in 1842. Liszt's "Years of Pilgrimage" contains 26 works, three with musical imagery that refers to water in some way: this piece, *At the Lake of Wallenstadt* and *The Fountains of the Villa d'Este*.

This work has been recorded by many pianists, but again there are differences between the performance on this CD to contemporary offerings. The pianist, Alexander Brailowsky plays some parts more quickly, often with a lighter touch than many of today's pianists, giving another view of this popular work. Brailowsky (1896–1976) was a Russian pianist who studied with Busoni and Francis Planté, making his debut in Paris in 1919, becoming a French citizen in 1926. His recording career began in the acoustical era and continued well past the introduction of stereo. He recorded this work on roll in 1929.

4. *Prelude to The Afternoon of a Faun* is Debussy's first significant work for orchestra and is scored for strings, two harps, flute, oboes, English horn, clarinets, French horns and antique cymbals. It was inspired by the poem *L'Après-midi d'un faune* by Stéphane Mallarmé, with its premier in 1894 being enormously successful. Its fame was further assured through the ballet choreographed by Vaslav Nijinsky who in 1912 caused a scandal in the final scene by miming masturbation with the scarf of a nymph. Debussy describes the piece as a “*succession of scenes through which pass the desires and dreams of the faun in the heat of the afternoon. Then, tired of pursuing the timorous flight of nymphs and naiads, he succumbs to intoxicating sleep, in which he can finally realise his dreams of possession in universal Nature.*”

Debussy wrote a version for two pianos, and others such as Leonard Borwick have transcribed it for one piano. The arrangement played here is by American pianist George Copeland, who recorded it on Ampico roll around 1919. He also recorded this work on disc for Victor in 1933.

Copeland (1882–1971) travelled to Paris to study with Debussy, later publishing the article *Debussy, the man I knew*. After hearing Copeland play, Debussy is reported to have remarked “*I never expected to hear my music played this well.*” Copeland made his debut in Boston in 1905, and 50 years later was still receiving critical acclaim. He recorded 16 Ampico rolls, and also made disc recordings for Victor and MGM.

5. Chopin's *Andante Spianato* in G major, for solo piano, is usually followed by the *Grande Polonaise* in E-flat major for piano and orchestra. The work was composed in two stages; the *Polonaise* in 1831, followed in 1834 by the *Andante Spianato*, which is played on this CD by legendary pianist Leopold Godowsky. The Italian term “*spianato*” means even or smooth, and the *Andante* presents a dramatic contrast to the dashing *Polonaise*.

Godowsky claims to be largely self-taught. At the height of his fame as a pianist, he was among the highest-paid and most sought after artists in the world. It was during this time he made his 21 roll recordings for Ampico, also showing his faith in the system by allowing his roll recordings to be used at the first public demonstration of the Ampico system, held at the Hotel Biltmore in New York, in 1916. Reports of this event show it was highly successful, being reported in some papers as “extraordinary”. This performance of *Andante Spianato* is much-loved by Ampico piano owners, for its lyricism, and for the many reasons that made Godowsky so famous at the time. It was issued on roll twice, around 1914 and again in 1919.

6. The *Intermezzo* from the one-act opera *Cavalleria Rusticana* depicts the exultation of Easter and is played by the orchestra while a congregation spills out of a church onto an empty stage. The opera reflects a timeless Sicilian conflict between love and honour, justice and violence, and caused a sensation when it was premiered in 1890, a success Italian composer Pietro Mascagni (1863–1945) never repeated, despite writing over 15 operas. This recording of his performance and arrangement of the famous *Intermezzo* was issued as an Ampico roll in 1916, and was recorded some years earlier.

7. *Gardens in the Rain* (*Jardins sous la pluie*) is the third of three pieces from Debussy’s “Estampes” for piano, L.100, written in 1903. A toccata-like piece, the work creates long stretches that move harmonically without suggesting any definite key, all within the context of a *perpetuo moto* that evokes a musical impression of the visual image of rain falling on a garden during a storm. It is based on two French folk melodies: *We’ll Go No More to the Woods* and *Sleep, Child, Sleep*. The different stages of the storm are presented through various scales: minor for the beginning, chromatic and whole-tone scales as its force builds, and the major depicting the sun’s brilliance after the rain.

The pianist, Elie Robert Schmitz (1889–1949) studied at the Paris Conservatory, touring Europe in 1912 after having memorised all of Debussy’s works, which he often performed. He wrote two books, *The Capture of Inspiration* (1935, a system of piano study), which was voted in 1936 as one of the “fifty books of the year”, and *The Piano works of Claude Debussy* (published 1950). The E. Robert Schmitz School was established in San Francisco in 1945, and offered a Debussy Prize for pianists. He recorded over 20 rolls for Ampico, with nearly half of these of works by Debussy.

8. *Gondoliera* is the first item in the supplement to Liszt’s “Second Years of Pilgrimage: Venice and Naples”, published in 1861. The title means “Gondolier’s Song” and Liszt is said to have based it on the song *La Biondina in Gondoletta (The Little Blonde in the Little Gondola)* by Giovanni Battista Peruchini. However, it could be that Liszt’s inspiration is from Rossini’s *Otello*, or the work is an arrangement of a gondolier’s barcarolle Liszt heard when in Venice. Either way, it glides along in its watery way spreading Venetian charm in its wake, unmistakably a barcarolle.

This performance by Lhévinne was issued on roll in 1929. Regarded as one of the supreme technicians of his day, Josef Lhévinne (1874–1944) was trained in the Russian discipline, making his debut at age 14 performing Beethoven’s *Emperor Concerto*, conducted by Anton Rubinstein. He graduated at the top of a class which included Rachmaninoff and Scriabin, winning the Gold Medal for piano in 1892. He and his wife were interned in Berlin during WW I, afterwards moving to New York where Lhévinne continued his concert career and taught piano at the Juilliard School. He recorded exclusively for Ampico, making more than 20 rolls but leaving only a handful of acoustic recordings, some of which are now regarded as legendary.

9. Although Debussy eschewed the term *impressionism*, there is a close link between impressionist art and his music, particularly in the choice of subjects, such as a dreamy young woman gazing at reflections in water. Sometimes the reflections are not merely on the surface, instead they are in the water, as glimpses of a river bed, of oneself, the sky—layers which coalesce in some way onto canvas (a painterly problem) or as tonal textures and colour in music. *Reflections in the Water (Reflets dans l'eau)* is regarded as one of the finest of all impressionist water-pieces, with its soaring tone colour that sweeps all before it. It is the first of three “Images” in Set 1 for piano, L110, composed in 1905.

Leo Ornstein’s performance of the work was issued on roll in 1916, a mere 11 years after Debussy composed it. His treatment sometimes borders on the spectacular, with flourishing changes in dynamics and tone colour that might be regarded today as eccentric. He was a trailblazer for modern compositions, and is regarded as the earliest of the modernists. Ampico describes him as “*perhaps the best known exponent of the excessively modern in music.*” This is a reference to Ornstein’s own compositions, which were regarded at the time as radical, even baffling. He died in 2002 at age 110.

10. *Nocturne Op.9, No.2* in E flat is possibly Chopin’s best known work, for some maybe too familiar. It is the second item of three in the opus 9, published around 1831, and is also among the earliest, written when the composer was 29. Chopin wrote 21 nocturnes, which are musical compositions inspired by, or evocative of the night.

The piece is played by Alexander Brailowsky, who recorded it around 1925, also at the age of 29. Brailowsky was a Chopin specialist and gave recitals of the complete Chopin works in cities all over the world. In this performance, Brailowsky takes liberties that would not be permissible today. The opening sequence will be unfamiliar, and piano students will soon hear other differences throughout the piece.

Today this performance would get bad reviews, for its excessive rubato, sentimentality, and of course the deviations from the score. However, you may find it a refreshing look at this piece, so forget the score, and let Brailowsky take you into the night with his romantic reading of this well known nocturne.

11. Rachmaninoff composed his *Floods of Spring* (*Fruhlingsfluthen* or *Spring Torrents*) in 1896, the eleventh of twelve songs in his opus 14, one of over 80 songs he wrote during his life. The song was inspired by a poem by Fyodor Tyutchev that heralds the onset of spring, and has a happy theme, supported by rapid and colourful passages. Although not widely known as a song, it has been arranged for piano by a number of people, including pianist Earl Wild. There is no record of who wrote the arrangement played by Milton Suskind, who is possibly the least known pianist on this CD.

Born Milton Suskind in 1898, he is better known by the name he adopted when he first started recording for Ampico in 1916: Edgar “Cookie” Fairchild. Born in New York in 1898, he earned a scholarship to what later became the Juilliard School, taking a postgraduate course with Walter Damrosch. Godowsky pronounced him “*America’s greatest hope for a native virtuoso.*” By 1918 he had become Ampico’s Chief Editor, the same year Rachmaninoff signed up as an exclusive artist.

This position required Suskind to produce piano roll recordings by pianists such as Rachmaninoff, who refused to work with any other editor, often inviting Suskind to his home to work on his roll recordings. Suskind recorded many Ampico rolls himself, and later became musical director for Eddie Cantor, as well as scoring numerous movies for Universal Studios. During his time in England in 1927–28, he won the favour of the Prince of Wales (later King Edward VIII), thereby securing many musical engagements during the season Balls. He died on 20 February 1975 at Woodland Hills, Los Angeles.

12. Chopin's best known impromptu is the posthumously published *Fantasie Impromptu* Op.66, popularised by the song *I'm Always Chasing Rainbows*. He wrote four impromptus; a free-form musical style with the character of an improvisation. The second of the four is the work on this CD: *Impromptu Op.36*, composed in 1839. Written in the less common key (for the times) of F-sharp, it has a gentle, sweet melody that occurs throughout the piece, which starts in typical nocturne fashion building with an indefinite tonality towards a climax, then retreating to a gentle though definite conclusion. When this work was published, it was issued by Wessel in a series he called "Les Agrémans au Salon", or (roughly) "Drawing Room Trifles". Chopin was incensed, writing to Fontana in 1841: "that wretched Wessel, I shall no longer send him... anything ever."

It is played by Benno Moiseiwitsch, who recorded this *Impromptu* on roll in 1928. Moiseiwitsch (1890–1963) began his studies at age seven at the Odessa Music Academy, Ukraine. At age nine he won the Anton Rubinstein Prize, afterwards studying under Leschetizky in Vienna. He first appeared in London in 1908 and made his American debut at Carnegie Hall in 1919. Regarded as an expert in the Romantic repertoire, he had a reputation as a Chopin interpreter, giving complete recitals of his works. His Queens Hall (London) Chopin recitals became an annual event during the 1920s.

He married Daisy Kennedy, an Australian concert violinist, and had one daughter, Tanya. Moiseiwitsch recorded piano rolls exclusively for Ampico, making over 30 rolls during the 1920s. Ampico hailed him as having "a place in the front rank of the world's greatest pianists." After all, he was the company's number two star, after Rachmaninoff.

13. *Maiden's Wish* is one of the 16 Polish songs Chopin wrote that were published posthumously as opus 74, written between the years 1829–1847. Also called *The Wish* (*Zyczenie*), this is the first of the songs, written in 1829. Liszt transcribed six of Chopin's

songs, including *Maiden's Wish*, the version played on this CD by Rachmaninoff, who recorded it around 1924 on roll, and on record in 1942. Surprisingly, his roll recording takes about one minute longer than his disc recording.

Sergei Rachmaninoff (1873–1943) is the most notable pianist to record exclusively for Ampico. Trained at Moscow Conservatory, he was forced to leave Russia in 1917, settling in America in 1918 where he performed to increasing acclaim. He made his first Ampico piano roll recordings in 1919 and over a 10 year period recorded some 35 piano rolls, with 19 being of his own compositions or transcriptions. He never lost his love for his native Russia, and became a US citizen only a few weeks before his death.

14. Ravel wrote *Jeux d'eau* (*Water games* or *Fountains*) around 1901 while he was attending Fauré's class at the Conservatoire, to whom it is dedicated. It received its first public performance, by Ricardo Viñes, at the Salle Pleyel in April 1902. This piece is considered one of the first examples of musical impressionism among Ravel's works. Written on the original manuscript is a quote from a poem by Henri de Régnier: "*River god laughing as the water tickles him*", a reminder that the piece is to be played lightly. The performance on this CD was recorded by E. Robert Schmitz around 1928, not long before he retired from the concert hall in 1933 to take up teaching in San Francisco.

15. Fritz Kreisler's *Liebesleid* (*Sorrow of Love*) is marked to be played in the style of the Austrian (or German) *Ländler*, an old dance in slowish 3/4 time, the forerunner of the waltz. Written for violin and piano, it was transcribed for solo piano by Rachmaninoff in 1921, the same year he recorded it on gramophone disc. His Ampico roll performance was recorded June 4, 1922, and was issued in 1923. This work, and its companion piece *Liebesfreud* (*Love's Joy*), are still often performed today, loved all the more for their simplicity and heart-wrenching, vibrato-drenched melodies.

16. *Clair de Lune (Moonlight)* is Debussy's best known composition, and takes its title from a poem of the same name by Paul Verlaine. It is the third item in the four part "Suite Bergamasque", published in 1903, which Debussy began working on around 1890. This work is in contrast to the offerings of the romantic composers of the time, such as Richard Wagner. The tranquil *Clair de Lune* is written in D-flat major and incorporates a sublime melody, cascades of rolling notes, colourful harmonies and intriguing dynamic phrases, and is intended to be played pianissimo.

It is played in true romantic style by Olga Samaroff (1880–1948) who was born Lucy Mary Agnes Hickenlooper in San Antonio, Texas. Realising her name to be a drawback to a concertising career, she changed it to Olga Samaroff (her maternal great-grandmother's name). In 1905, she self-produced her New York debut at Carnegie Hall in which she rented the hall, orchestra and conductor Walter Damrosch, making an overwhelming impression with her performance of Tchaikowsky's *Piano Concerto No.1*.

Her second husband was conductor Leopold Stokowski, who left her in 1923 for actress Greta Garbo in a scandal that made headlines. In 1924 she joined the faculty of the Juilliard School in New York and for the next two decades reigned as a powerful, demanding teacher, who was much loved by her pupils. She made four Ampico rolls and several recordings in the early 1920s for the Victor Talking Machine Company.

17. *Consolation No.3* is one of six that Liszt composed (S172), and is by far the best known, especially among budding pianists who rejoice in its relative simplicity. According to Liszt expert Leslie Howard, this consolation, written in D-flat major, was a replacement for another in E-major that Liszt used in his first *Hungarian Rhapsody*. The consolations as a set are not devoid of technical challenges, but as Howard points out, "*they do not cry out for the desperately 'worthy' style of performance to which they are often subjected.*"

This gentle and reflective performance was recorded in 1916 by Victor Wittgenstein (1886–1961), who is no relation to Paul Wittgenstein, for whom Ravel wrote his *Piano Concerto for the Left Hand*. While the latter was born in 1887 in Vienna, Victor's birth took place around the same time in Louisville, Kentucky in the USA. He studied with MacDowell in 1903, then with Joseffy for a further three years. He made his debut in Amsterdam in 1912, and gave many successful concerts in Europe, before returning to the USA. He recorded four works for Ampico, including Saint-Saëns' *Piano Concerto No.2*.

The CEUS project

The aim of this project was to record performances of Ampico reproducing piano rolls realised as MIDI files and played on a Bösendorfer 290 Imperial grand piano, fitted with Bösendorfer's new CEUS (as in *Zeus*) computerised player system. The recordings were made in March 2007 at the Paul Badura-Skoda recording studio in Vienna.

From paper roll to e-roll

A reproducing piano roll is, in effect, a digital recording of a live artist, with information stored as holes that are 'read' and translated into sound by a pneumatically powered player piano. In 1977, I began developing a means of converting piano roll data into an electrical signal. A pioneer in the field, I needed to develop two components: a roll reader to produce the required electrical signal, and an electro-pneumatic adaptor fitted to my Ampico reproducing piano to receive this signal and actuate the Ampico mechanism as if it was playing from a roll. I completed the system in 1980, and began a 10 year recording project in which I borrowed Ampico rolls from collectors around Australia to build up a library of over 1500 Ampico *e-rolls*.

I designed the roll reader so it 'read' the rolls with air, as in a player piano, and also so it could play rolls directly into my modified Ampico, with a single wire connecting the two. Therefore, I was able to convert the rolls to electrical data by playing them in real time while hearing the recorded output on my Ampico piano, similar to recording a live pianist. This recording methodology is unique to these *e-rolls*, and I believe gives the highest timing accuracy and therefore the best musical results.

During the 1990s the *e-rolls* were converted to MIDI format so they could be played on an electrically powered MIDI piano, such as Yamaha's Disklavier (introduced in 1988) and all other such instruments, in particular the Bösendorfer CEUS.

Bösendorfer CEUS Imperial

The 290 Imperial piano, first introduced around 1900, is Bösendorfer's flagship concert grand piano. It has its own sound quality, sometimes called the Viennese sound, and features extra keys and bass strings. Bösendorfer has long had an involvement with player mechanisms, starting with the Ampico system in the 1920s. The CEUS player system is an all-new high-end computerised player system, developed in Vienna to Bösendorfer's specifications, and only available in a Bösendorfer piano.

The recordings

This recording project has a number of unique aspects, in particular the use of electronic versions of Ampico rolls as the musical source. This compares to the many recordings of piano rolls made to date that are mostly of original instruments playing original rolls. While a pneumatic reproducing piano can give an excellent performance, it is necessarily limited by the tone of the piano and the capabilities of the player system. Some recordings use a vorsetzer (push-up pneumatic player) to play a modern piano, such as a Steinway concert grand. The limitation is then the vorsetzer, bearing in mind that there have been no advances in pneumatic player technology since the 1930s. In this project, the player system is state-of-the-art, and is fitted to a new concert grand piano with a legendary tone.

Another significant feature of the CEUS project is the range of pianists and items that have been recorded, some for the first time. For example, few may have heard the *Etude Op.15 No.8* by Sergei Bortkiewicz (played by Liszt pupil Moriz Rosenthal), or know of composers such as Halfdan Cleve. An important aspect too is the link between the pianists to composers such as Chopin, Liszt and Debussy. Performance practice in the 1920s differs from that of today, and perhaps these recordings might show just how different.

The Ampico

Ampico (American Piano Company) was one of several companies that developed, manufactured and marketed pneumatic reproducing pianos during the first half of the 20th century. This type of instrument was invented in 1904 by German company Welte and Sons, in which the piano roll contained all the information to reproduce a performance recorded by a live pianist. This differs from the so called 88-note player roll in which it was up to the pianist to introduce expression and rubato by operating the controls of the player piano while 'foot pumping' the player. The reproducing piano achieves its high level of performance from information stored as perforations in the piano roll, and incorporates a complex pneumatic system to control the volume of each note. Reproducing pianos have a vacuum pump powered by an electric motor.

The success of the Welte instrument caused Ampico to enter the market around 1912. By the early 1920s, the Ampico reproducing piano had reached a high level of development, and was marketed as the Ampico A, selling extensively around the world. A reliable mechanism, it was fitted to many brands of piano, including Bösendorfer, Mason & Hamlin, Chickering, Knabe and many others, except Steinway.

The success of the Ampico A led to the development of the Ampico B in the mid 1920s, which took the technology to its highest level. The new instrument, with all its technical advances, was intended to be compatible with previous models. However, the full capabilities of the Ampico B could only be realised by playing model B rolls, which were produced from around 1926. Subsequently, Ampico rolls fall into two main categories, model A and model B rolls. Early rolls (pre-1916) are referred to as Stoddard-Ampico rolls. (Charles Fuller Stoddard is the inventor of the Ampico system.)

Ampico rolls

These were produced from around 1911 to 1941, with the majority being produced in the 1920s. It is estimated that Ampico produced between 4000 and 5000 rolls over this period (both popular and classical). An important marketing aspect was the line-up of pianists who recorded exclusively for a particular reproducing piano company. Ampico secured exclusive contracts with pianists such as Rachmaninoff, Moiseiwitsch, Nyiregyhazi, Loesser, Rosenthal, Kreisler and Levitzki. Non-exclusive artists included Rubinstein, Godowsky, Carreño, Cortot and many others.

Producing an Ampico piano roll was a complex, labour intensive process. After recording a performance, editors would convert the myriad of information stored as lines on recording sheets into holes in a paper master. Editing would continue until the pianist was satisfied. The technology used ensured a high degree of accuracy in the timing of note and pedal information. For example, each recording was made on a note sheet passing over a rotating drum whose surface was covered with a sheet of carbon paper. Small stylus points rested lightly on the top side of the sheet, such that when a piano key was pressed, a circuit was closed causing a solenoid to press its stylus against the moving note sheet, thereby marking a line on the underside of the sheet while the key was being played.

Master rolls were three times the length of the rolls cut on perforators from the master, giving a high level of timing resolution. The expression information was derived in various ways, with skilled editors translating this information into holes to operate the Ampico expression mechanism. After 1926, expression information was derived from a complex device called a *spark chronograph*, the only documented expression measuring system used by any of the reproducing piano companies. It recorded hammer velocity as the distance between two marks on a note sheet produced by electrical sparks.

The cast

Ampico [roll numbers] and date of issue (year/month):

- 1 Arabesque** [61233] 1922/11; **2 Berceuse Op.57** [53045] 1916; **3 Beside the Spring** [69783] 1929/4
4 Afternoon of a Faun [56027] 1919; **5 Andante Spianato** [56084] 1919; **6 Cavalleria Rusticana Intermezzo** [50633] 1916
7 Gardens in the Rain [68943] 1928; **8 Gondoliera** [69693] 1929/3; **9 Reflections in the Water** [50715] 1916
10 Nocturne Op.9 No.2 [64023] 1925/2; **11 Floods of Spring** [2851] 1930; **12 Impromptu Op.36** [69053] 1928/7
13 Maiden's Wish [62803] 1924/2; **14 Jeux d'eau** [69383] 1928/11; **15 Liebesleid** [62103] 1923/6
16 Clair de Lune [52305] 1916; **17 Consolation No.3** [50824] 1916

The above piano rolls were loaned for transfer to MIDI format by Australian collectors.

Producer: **Peter Phillips** (www.petersmidi.com)

Project concept and organiser: **Albert Frantz** – pianist and teacher

Acoustic and recording consultant: **Hans Deutsch** (www.hans_deutsch.akustikforschung.com)

Recording engineer: **Gernot Reetz** (www.one-world-music.com)

Music consultants: **Sally Sargent** – 19thC performance practice (www.sallysargent.com)

Albert Petrak – Reproducing Piano Roll Foundation (www.rprf.org)

Piano technician: **Hans Muff** Piano roll MIDI technician: **Peter Phillips**

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The CEUS project CD series

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Reflections

Legendary pianists playing a program of romantic and impressionist music from their Ampico reproducing piano rolls, performed on a 290 Bösendorfer Imperial piano fitted with a computerised playback system. See booklet for details.

- 1 *Arabesque No.1 (Debussy)* Leo Ornstein [4:57]
- 2 *Berceuse Op.57 (Chopin)* Teresa Carreño [5:34]
- 3 *Beside the Spring (Liszt)* Alexander Brailowsky [2:47]
- 4 *Afternoon of a Faun (Debussy)* George Copeland [6:48]
- 5 *Andante Spianato (Chopin)* Leopold Godowsky [4:17]
- 6 *Cavalleria Rusticana (Mascagni)* Pietro Mascagni [3:21]
- 7 *Gardens in the Rain (Debussy)* E. Robert Schmitz [3:24]
- 8 *Gondoliera (Liszt)* Josef Lhévinne [5:18]
- 9 *Reflections in the Water (Debussy)* Leo Ornstein [5:58]
- 10 *Nocturne Op.9 No.2 (Chopin)* Alexander Brailowsky [4:32]
- 11 *Floods of Spring (Rachmaninoff)* Milton Suskind [2:56]
- 12 *Impromptu Op.36 No.2 (Chopin)* Benno Moiseiwitsch [5:09]
- 13 *Maiden's Wish (Chopin-Liszt)* Sergei Rachmaninoff [3:36]
- 14 *Jeux d'eau (Ravel)* E. Robert Schmitz [4:29]
- 15 *Liebesleid (Kreisler-Rachmaninoff)* Rachmaninoff [3:57]
- 16 *Clair de Lune (Debussy)* Olga Samaroff [4:25]
- 17 *Consolation No.3 (Liszt)* Victor Wittgenstein [4:12]

Total time 76:22

Realised by Peter Phillips

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