Essay

韓国のコンピュータ音楽概観
AN OVERVIEW OF COMPUTER MUSIC IN KOREA

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ABSTRACT

韓国の大学システム内や音楽現場では、この 20 年間に、コンピュータ音楽はますます顕著になってきた。韓国の高等教育では、電子およびコンピュータ音楽プログラムの多くは、音楽学部（特に作曲）に付随している。しかし、中にはコンピュータ音楽と音楽工学をより技術的な教学プログラムに組み入れている大学もある。一般に、後者のプログラムは、コンピュータオーディオのゲーム、デザイン、マルチメディア、ヴィジュアルアートなどへの実際的な応用に焦点をあてる傾向にあるが、一方で前者は、一般にコンサート音楽、センサを用いたインタラクティブパフォーマンス、ラップトップ音楽などに焦点が当てられる。大学の外に目を向けると、コンサート音楽の領域では、現代音楽の演奏団体がテクノロジーと融合するのは遅々としてなか進んでいない。しかし、ここ数年の間に韓国のローカルな演奏団体や音楽祭では、しばしば大学のスタジオとコラボレーションすることにより、自分達コンサートにテクノロジーの関わる音楽を含んできた。しかし、米国、欧州、および日本と異なり、コンピュータ音楽の計算論的な側面を発展させるための協調的な努力はあまりしてこなかった。これは、オーディオエンジニアリング、デジタル信号処理、および音響学で、音楽に焦点を当てた学位プログラムの創設が例として挙げられ、今後発展が期待される分野である。

During the past two decades, computer music has become increasingly prominent in both the university systems and on the musical scene in Korea. In the realm of higher education, many of the electronic and computer music programs in Korea are attached to music (and specifically composition) departments, but some universities have included computer music and music technology in slightly more technical programs of study. Generally speaking, these latter programs tend to focus on practical applications of computer audio to games, design, multimedia and the visual arts, whereas the former are generally focused on concert music, interactive performance with sensors, and laptop ensemble improvisation. Outside of the universities, in the realm of concert music, contemporary music ensembles have been slow to integrate technology, but in the past several years some local ensembles and festivals in Korea have been beginning to include music with technology in their concerts, often in collaboration with university studios. Unlike the United States, Europe and Japan, however, there has not yet been a concerted effort to develop the computational side of computer music. This is one potential area of development for the future - the creation of musically-focused degree programs in audio-engineering, DSP, and acoustics.

1. INTRODUCTION

Electronic and computer music began to appear in the Korean university system in the early to mid 1990s, after the first generation of Korean composers returned to Korea from studies abroad. Many of this first wave of Korean electronic music composers studied in Germany and Northern Europe, partially due to the influence of Isang Yun (who emigrated to Germany in the 1970s) and partially due to the affordability of the German and Dutch university systems. Although there were some early forays into musique concrète in Europe in the 1950s by expatriate Nam June Paik, a few initial experiments with tape music in the 1960s in Korea by composer Sukhi Kang, and some creative (and influential) sound design used for radio and TV advertisements in Korea throughout the 70s and 80s, it was not until the 1990s that the first wave of computer musicians to work with electronic and computer music in Europe would bring back this new

technology to academic settings in Korea. This wave of composers included Sung Ho Hwang and Donoung Lee, who founded the first computer music studios in the early 1990s at The Korean National University of the Arts (KNUA) and Hanyang University, respectively[1].

2. KEAMS

These first studios, and others which were established soon afterward at university music departments around Seoul, fostered a small but active community of composers and computer musicians interested in new technology. This community banded together to form the Korean Electro-Acoustic Music Society (KEAMS) in 1993, in order to promote and foster electronic and computer music through concerts, festivals, competitions, seminars, workshops and publications. Nearly two decades later, the society is still an active hub for computer music in Korea and its members now comprise several academic generations of composers, computer musicians and researchers who have studied in Asia, Europe, and the Americas.

2.1. The SICMF

One of the first activities of the newly-founded Korean Electro-Acoustic Music Society was the creation of a festival of electro-acoustic music in 1994. This festival, now known as the Seoul International Computer Music Festical (SICMF), was initially a small festival of computer music by Korean composers, but has grown into an international festival including a call for scores from composers around the world, and an annual invited guest ensemble, and seminar lecturers from abroad. The festival has become one of the largest computer music festivals in Asia, spanning 4 to 5 days, and allowing a generous amount of rehearsal time in the hall for each of the composers programmed on the evening concerts.

2.2. The Korea Computer Music Contest

KEAMS has also helped to foster computer music education nationally through the annual Korea Computer Music Contest for student composers, first held in 1998, and the related Fest-M concert for student electro-acoustic works, which takes place each Spring. The most outstanding student composition each year is awarded a professional performance on one of the concerts in that year's SICMF. Students may submit works for fixed media, mixed music (including acoustic instruments), real-time interaction, or multi-media (including video, dance, etc…).

2.3. The Emille Journal

The Emille Journal (named after a massive 8th century bronze bell now in the National Museum of Gyeongju) is a Korean-language publication focused on computer music research, analysis and musicology. The journal is non-periodic and there have been a handful of issues published since 2001. Publications have not been annual, perhaps because of the more concert-oriented focus of the Korean computer music community. Nonetheless, it is still one of the main outlets for computer music publications in Korea.

3. COMPUTER MUSIC STYLE

There is a wide variety of styles amongst electronic and computer music composers and musicians in Korea. This is perhaps due to the wide variety of international locations where Koreans have gone to study abroad over the past several decades. Most university studios in Korea teach a broad overview of computer music, although each studio tends to have its particular focus[2].

3.1. Traditional Instruments

In addition to western classical music, many universities throughout Korea have dedicated degree programs for traditional Korean music. Surprisingly, many performers of traditional instruments are interested in, or at least curious about, working with technology. (This may be in part due to the National Center for Korean Traditional Performing Arts regular use of amplification for traditional instruments in their concert hall!) As a result there have been many electro-acoustic works composed for traditional Korean instruments during the past two decades. It is beyond the scope of this article to provide an exhaustive list, but both established composers and younger composers in Korea are interested in increasing the repertoire of electro-acoustic compositions for these instruments.

3.2. Fixed Media

As elsewhere around the world, there have been many compositions for fixed media (i.e. "tape music") composed in Korean studios. These are generally for stereo or 4-channel speaker setups. (Most studios in Korea do

not have large multi-channel speaker arrays, although 4-channel setups in studios are not uncommon. Stylistically, fixed media compositions range from acousmatic and concrète works, to works based on synthesized sounds, to works for acoustic instruments and fixed media. There is not one particular university that focuses on "tape music," and most degree programs in computer music teach this genre of music both in the context of sound editing, as well as from an historical perspective.

3.3. Sensors and Installations

Sensors and alternate controllers have never been extremely prominent on the Korean electronic and computer music scene. This could be due to the fact that the heyday of their use during the MIDI era was already waning by the time computer music became established in Korea. Nonetheless, the computer music Studios at Seoul National University have recently been the most active in integrating sensors into musical performance. They have also been the main studio to champion musical installations via the creation of dedicated electronic instruments.

3.4. Real-Time

Since the proliferation of fast personal computers, there has been a general shift to the use of computers for real-time audio processing. As with fixed media, most university programs in Korea also teach real-time processing techniques as part of their computer music curriculum. Nonetheless, Hanyang University has been one of the main promoters of concert music for acoustic instruments with real-time processing. This has been focused mainly on getting musicians interested in integrating technology into their concerts, most recently in collaboration with the TIMF Ensemble.

3.5. Live Coding and Laptop Performance

Perhaps paradoxically, the studio at the Korean National University of the Arts has been the main proponent of Live Coding and Laptop Orchestra performances. They have regularly performed at the Nam June Paik Art Center south of Seoul.

3.6. Multimedia

In the past few years, there have been an increasing number of computer musicians interested in integrating video into their work. This is generally, but not always, in collaboration with video artists. The 2009 SICMF included a concert dedicated to multimedia works, including both video and dance.

3.7. Culture Technology

The Graduate School of Culture Technology at the Korea Advanced Institute of Science and Technology (KAIST) in Daejeon is one of the main schools that focuses on the computational side of computer music. Their primary aim is not specifically developing technology for concert music, but developing audio technologies which could be used in a wide array of applications from mobile phones and gaming consoles, to more artistic endeavours.

3.8. Noise Music

Outside of the academic setting, there is a small but active and internationally visible community of underground and experimental noise music performers. Generally these musicians come from the visual arts or pop music scene, and work with sound either on its own, or in conjunction with video. One of the most prominent of these musicians on the international scene is Hankil Ryu. The Yogiga Expression Gallery in Seoul is the hub for this community. They have regular concerts, improvisations and have sponsored an International Noise Conference in 2008.

4. THE FUTURE

Computer Music in Korea is well established and the future looks bright. The Korean computer music community has strong ties to the international computer music community via organizations like the International Computer Music Association (ICMA), and via international collaborations between studios in Europe and the Americas. Additionally, within Asia, Korea is working, along with Japan and Singapore, to develop a more tightly-knit Asian computer music community through the newly-founded Asia Computer Music Project[3], which will be hosting its first event this October. On the education front, courses in electronic and computer music are taught at the undergraduate level at most universities with sizeable music departments throughout Korea, and Masters programs specifically in electronic and computer music have been offered at the largest universities in Seoul for nearly a decade. Doctoral programs in music are currently being inaugurated in some of these universities (inc! luding Ewha and Hanyang University), and starting in 2011 Hanyang University will opening its

doctoral program in New Media Music (computer music composition). The one area remaining to be developed is the creation of musically-focused degree programs in audio-engineering, DSP, and acoustics. The lack of these programs is mainly due to the integration of computer music into music schools instead of engineering schools, however, this important realm of musical computing may soon be on the horizon.

5. REFERENCES

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6. AUTHOR'S PROFILE

Richard Dudas

Richard Dudas holds degrees in Music Composition from The Peabody Conservatory of Music of the Johns Hopkins University, and from The University of California, Berkeley. He additionally studied at the Franz Liszt Academy of Music in Budapest, Hungary and the National Regional Conservatory of Nice, France. Richard's compositions have been performed in the U.S, the U.K., France, Germany, Hungary, Russia and Korea, among others. In addition to writing music for acoustic instruments, he has been actively involved with computer music since the late 1980s. From 1996 to 1998 he taught computer music courses at the musical research center IRCAM in Paris, France, and from 1999 to 2008 worked for Cycling ' 74, Inc., developing musical tools and audio effects for the musical software programming environment, Max/MSP. In the Spring of 2002 he was a visiting lecturer in computer music at the State University of New York at Buffalo, and was aregular lecturer at the CNMAT "Max/MSP Nightschool" summer workshops in Berkeley, California from 1998 to 2004, and at the Fourm Neues Musiktheater Max/MSP/Jitter workshops in Stuttgart, Germany from 2005-2006. Since 2007 he has been teaching music composition and computer music at Hanyang University in Seoul, Korea, where he currently holds the position of Assistant Professor of composition.

Jongwoo Yim

Jongwoo Yim graduated from Seoul National University in Korea, where he studied composition with Sukhi Kang. He also studied in the Netherlands, both following the sonology course at the Institute of Sonology of the Hague Royal Conservatory and studying composition with Klaas de Vries at the Rotterdam Conservatory, where he received a diploma in composition. Subsequently, he studied electro-acoustic, computer and instrumental composition with Philippe Manoury, Marco Stroppa and Denis Lorrain at the SONVS studios of the National Superior Music Conservatory of Lyon, France, obtaining a DNESM degree. In 2001-2002 he attended the IRCAM Cursus for composition and computer music, in Paris. His works have been performed at international competitions and festivals such as Gaudeamus, Resonance, Agora, SICMF, ISCM world music day, ACL New music festival, Alea III, Nova Musica, and the Faroese Art Festival. Currently, he is professor of composition and New Media Music (electro-acoustic music) and director of the Institute of Audio Technology and Musical Computing at Hanyang University In Seoul, Korea.