

The Virtual and Mixed Media Orchestra for Game Music

Note: There will be a multiple computer DAW setup connected to a Dolby surround system with a midi keyboard.

Session Description: Attendees of this session are given a unique insight into the capabilities, options, tools and methods available to the modern day composer, from the computer based virtual orchestra to the mixture of the virtual and the live recorded orchestra, with the primary focus on orchestral game music. Pencil and paper composers to the technologist composer learn about the latest developments in software, hardware and sampleware products as well as learning about the marriage of music technology combined with recorded live musicians from some of the most knowledgeable practitioners of music technology in game music. The game producer and audio director gain knowledge about the capabilities and options in orchestral game music, as well as learning about the pro and con tradeoffs of various approaches to orchestral game music. Attendees learn about the history and progress of music sample technology from one of the leading developers of music sample libraries. Attendees also see technology demonstrations and hearing demonstrations of all approaches to game orchestral music in surround sound provided by Dolby Labs. The overall goal is to raise standards and expectations for game music: there is no longer any excuse for poor or sub-standard music and sound in orchestral or mixed media game music.

Session Idea Takeaway: Attendees walk away with a focused understanding of the history, technology, methodology, and capability of the modern day composer. The attendees also have a better grasp of the capabilities and tradeoffs of the virtual, live and mixed media orchestration, and what forces impact those capabilities and tradeoffs. Composers take away a better knowledge of the array of software, hardware and samples libraries available. Producers and audio directors also have a better perspective of what is possible from live orchestral recordings to the virtual orchestral recordings, and what are the constraints within talent, budgets, and time.

Session Outline

(First presentation by Doyle W. Donehoo)

1. **Introduction:** The purpose and outline of the session. An emphasis on current trends and advances in music technology for both the long-time working composer and the entry level composer in game music, as well as an eye-opener for the game producer as to what to expect from the computer savvy cutting edge composer.
2. **Mini-introduction** of whom is on the panel. The panel members are Jeremy Soule, Bill Brown, Maarten Spruijt, and Doyle Donehoo.
3. **The New Studio.** Major technical advances of the last year in computer based music technology. Finally it is possible to have a cost-effective computer based studio with Pro-Tools like performance without the Pro-Tools like expense. The small computer based cutting-edge studio (for those who cannot drop a small fortune on a Pro-Tools setup). Why recent advances in music technology are important to contemporary game music composers. Recent advances in sample based instruments and computer technology. The relation of advances in computer technology to music technology. What new things are/were possible.
4. **Starting from scratch:** a suggested approach for constructing a modern computer based music composition studio. The question of MAC or PC. The Session DAW and its use.
5. **Sequencers.** A quick review of available sequencers and the Mac verses PC question, and why it matters. (*Demonstration*).

6. **Sample Playback.** Sample-players overview, explanation and demonstration. (VSTi, stand-alone and again the Mac vs. PC question.) Integration with sequencers. (GigaStudio, Kontakt, VSampler, etc.). (*Demonstration*).
7. **Other Available Instruments.** Other useful stand-alone and VST non-sample based instruments. (Absynth, Reason, Crystal, etc. Some quick demos.) (*Demonstration*).
8. **Other useful software.** (Vegas, Sound Forge, others...) (*Demonstration*.)
9. **The Revolution.** An overview and the use of major advances in computer based music technology. (FXTransport, FXFreeze, Midi-over-lan, Bidule, VStack, VST, VSTi, SIR, ReverbIt and more...) (*Demonstration*).
10. **Putting it all together.** (One example). A systematic approach to constructing an economical cutting edge computer based music studio. (*Demonstration*).
11. **Sample instrument libraries:** Another revolution in sound for the sample based orchestra. My part: Libraries under \$1000 and a suggested list (not the major 5th generation orchestral libraries). (Sonic Implants Symphonic Strings, Garritan Orchestral Strings, Garritan Personal Orchestra, SAM Brass, GTOWN Percussion, Westgate Woodwinds, Voices Of The Apocalypse, DIVA, Rare Instruments, and others.) (*Demonstration*.)
12. **Second presentation by Maarten Spruijt** Short introduction and bio the topic he will be covering.
13. **GDC 2004 Outline Maarten Spruijt**

Concept:

As opposed to Doyle's, Bill's and Jeremy's presentations, Maarten's presentation will focus on the technical aspects of sampling. It will be the most technical and theoretical presentation of the four. However, Maarten will put the technical information into a practical concept using examples, sharing development ideas and demoing certain techniques.

Outline:

- A. A practical and short overview of sampling history. What sampling *generations* can be distinguished? Each sampling generation added a new dimension to the spectrum. How many sampling *dimensions* can be distinguished and which ones are important (e.g. dynamics, length, articulation)?
- B. An overview of the current state of sampling technology. What are the latest developments getting samples to a higher level? In-depth look into 1) the multi-microphone approach of modern libraries (how it was done & its purpose), 2) realtime legato techniques as used in the Vienna Symphonic Library (how does it work?), 3) the VSTi hype and its pros and cons. Explanation of the term "*early expression/phrasing control*".
- C. Samples versus live: the technical side of the story. An in-depth look into the difference in complexity ("dimensions") between a sample patch and a live player/instrument.
- D. The future of sampling. Does sampling have a future? In what way should sampling evolve if we want to take it to a new level? A look at some advanced controlling concepts (realtime and/or offline control over various musical aspects as discussed in A. and C.) Explanation of the term "*advanced expression/phrasing control*". Closing off (food for thought): how our current musical input method will have to change for sampling to evolve.

Goal:

The audience will walk away with a better understanding of the technology and new developments in sampling, the relative technical point where sampling is at nowadays and a useful insight into how sampling will evolve.

Third presentation by Jeremy Soule Short introduction and bio the topic he will be covering.

Concept and goals: Jeremy will discuss his experiences with real and virtual orchestras, the combining of

the two, and the questions that need answering when working in this media. Jeremy will address such issues as:

"What are the business metrics surrounding all of this cool new capability?" In other words, this technology changes the dollar landscape for all musicians and production companies. This calls into question the gear/software investment vs. return and learning curves vs. productivity requirements. This also brings up hardware and software maintenance philosophy (cutting edge vs. bleeding edge) and music styles vs. tools required.

"What companies want in selecting a virtual orchestra composer" Skills vs. talent. A producer's question always seems to be..."Should we hire live musicians?" and "Where is technology now and how does it stack up to live players?" "How will our production techniques influence my budget and will we sell any more games with these methods?" "How do I sell this concept to my boss?" "What marketing potentials exist?"

"What roll is education playing game orchestral music?" Jeremy believes there is some redemption in getting the world's orchestral composing talent to at least regularly evaluate the past so that new music can be built up from the enormous heritage that is Classical music.

Professional composers should always strive to create a higher standard of composition. There should be some connections drawn between traditional education and emerging technologies. Traditional education/skills can enhance the results that can be achieved with these sample libraries/emerging technologies. As the virtual orchestra can now be so realistic, real-world rules are starting to apply.

Fourth presentation by Bill Brown and the topic he will be covering. .

Concept and goals: Bill will be getting in to the real meat of the combination of the virtual orchestra, the real orchestra, synthesizers and other mixed media. Bill will present audio examples from his recent experiences of combining the mixed media in the hybrid orchestra. Bill will demonstrate how it sounds when the different orchestral / synthetic elements are brought together. He will provide explanations of what the session attendees are hearing and how it is achieved. Bill will also discuss the challenges/opportunities involved with the hybrid orchestra and extrapolate on how music will be made in the future.

14. Summary statement and Q&A session combined with a raffle give-away.

The below will be a *very* useful and essential resource for finding/contacting the distributors of the key products and tools discussed during the session.

Links

<p>FX-MAX: http://www.fx-max.com/ company@fx-max.com</p>	<p>FX TELEPORT FX FREEZE FX GIGA VST ADAPTER</p>
<div style="display: flex; align-items: center;">  <p style="font-style: italic;">FX & Instrument Solutions with MAXimum Efficiency</p> </div> <div style="display: flex; justify-content: space-around; align-items: center; margin-top: 20px;">    </div>	
<p>GTown Sounds http://www.gtownsounds.com</p>	<p>Tobias Marberger - Music for film and media (Free!)</p>
<p>Project SAM http://www.projectsam.com/ info@projectsam.com sales@projectsam.com <i>(Free instruments available.)</i></p>	<p>SAM Brass: SAM Trombones, SAM Horns, SAM Trumpets, more... Bilderdijkstraat 74 3532 VJ Utrecht The Netherlands, Europe +31 (0) 30 294 91 28</p>
	
<p>Sonic Implants: http://www.sonicimplants.com/ info@sonicimplants.com (888)769-3788</p>	<p>Sonic Implants Symphonic Strings http://www.sonicimplants.com/Strings/index.asp</p>



**SONIC
IMPLANTS**

Garritan Orchestral Libraries

<http://www.garritan.com/home.html>
support@garritan.com
 (360) 376-5766

**Garritan Orchestral Strings
 Garritan Personal Orchestra**
 P.O. Box 400
 Orcas, WA 98280 U.S.A.

Native Instruments

<http://www.nativeinstruments.de/>
sales@native-instruments.com
 1-866-556-6487

KONTAKT 1.5 -- REAKTOR 4

NATIVE INSTRUMENTS USA
 5631 A Hollywood Boulevard,
 Los Angeles, CA 90028
 USA



NATIVE INSTRUMENTS
 SOFTWARE SYNTHESIS

Echo Digital Audio Corporation

6460 Via Real
 Carpinteria, California 93013
 (p) 805.684.4593
 (f) 805.684.6628

Echo Layla24

sales@echoaudio.com
info@echoaudio.com

Echo Digital Audio Corporation designs and manufactures DSP based audio software and hardware.

ECHO

Westgate Studios

<http://www.swgames.com/westgate/>
timzydee@yahoo.com

Westgate Studios

Woodwind Collection

EXPANDED-EDITION (GIGA) (*Free* instruments available.)



Plogue Bidule *Free* VST(i) host: http://www.plogue.com/e_news.html

SIR *Free* Impulse Response Processor: http://www.knufinke.de/sir/index_en.html

DOLBY LABS

415-558-0200
415-863-1373 fax
info@dolby.com

DOLBY LABS

San Francisco Office
Dolby Laboratories, Inc.
100 Potrero Avenue
San Francisco, CA 94103-4813



Propellerhead Software

Rosenlundsgatan 29c
118 63 Stockholm
Sweden

REASON and other products

Telephone:
(Int+46 8) 556 08 400
Fax:
(Int+46 8) 556 08 401



EDIROL

Edirol Corporation North America
425 Sequoia Drive, Suite 114
Bellingham, WA 98226 U.S.A.

PCR-80 USB MIDI Keyboard Controller

Corporate Office
Tel: (360) 594-4273
Fax: (360) 594-4271



Kirk Hunter Libraries:
<http://www.kirkhunterstudios.com/samplelibraries.html>

Vienna Symphonic Libraries:
http://vsl.co.at/english/pages/profile/news/product_news.htm

Quantum Leap Symphonic Library and other libraries:

<http://www.soundsonline.com/>

Dan Dean brass, woodwinds and other libraries:

<http://www.dandeanpro.com/>

BOB Bigga Orchestral Brass:

<http://www.biggagiggas.com/About%20BOB.htm>

Diva vocal library:

<http://www.beladmedia.com/>

Post Pianos:

<http://www.postpiano.com/home.php>

Spectrasonics, Atmosphere, Trilogy, Stylus and other libraries:

<http://www.spectrasonics.net/index.html>

ILIO: Sample based libraries:

<http://www.ilio.com/>

Best Services: More sample based libraries:

<http://www.bestservic.de/>

Noizeloops:

<http://www.noizeloops.com/site.html>

Bolder Sounds:

<http://www.boldersounds.com/>

BigFish Audio, Prosonus and others:

<http://www.bigfishaudio.com/4DCGI/index.html>

ChickenSys Translator and other products:

<http://www.chickensys.com/translator/>

Nemesys GigaStudio 2.x and 3:

<http://www.nemesysmusic.com/index.php>

Cakewalk Sonar3 and other tolls and instruments:

<http://www.cakewalk.com/>

Soundforge and Vegas:

<http://mediasoftware.sonypictures.com/>

Waves sound tools:

<http://www.waves.com/>

Sound cards and other tools:

<http://www.m-audio.com/index.php>

Plugins from Spin Audio:

<http://www.spinaudio.com/products.php>

Altiverb Reverb:

<http://www.audioease.com/Pages/Altiverb/AltiverbMain.html>

Crystal, a free semi-modular software synthesizer:

<http://www.greenoak.com/crystal/index.html>

MidiOx and MidiYoke:

<http://www.midiox.com/>

RME, a well respected sound card maker:

<http://www.rme-audio.de/english/hdsp/>

Bitshift Audio:

<http://www.bitshiftaudio.com/>

XLUTOP Chainer:

<http://www.xlutop.com/>

Find the VStack VST(i) host here:

http://www.steinbergusa.net/Products/V_stack.htm?sid=0

Console VST(i) host:

<http://www.console.jp/eng/>

MidiOverLan:

http://www.musiclab.com/products/rpl_info.htm

Hubie Midi Loopback free:

<http://www.sonicspot.com/hubismidiloopbackdevice/hubismidiloopbackdevice.html>

Scarbee: The best samples bass guitar there is; check the demos:

<http://www.scarbee.com/>

Numerical Drones:

<http://www.numericalsound.com/smpcdgig.html>

KVR-VST: Need more plugs? Look here:

<http://www.kvr-vst.com/404error.php>

BIOS of Session Speakers

Jeremy Soule

A critically acclaimed composer and musician, Jeremy Soule heads Artistry Entertainment, a distinguished leader in music production for the interactive entertainment industry. According to 2002 figures furnished by www.NPD.com, Artistry Entertainment is the most distributed provider of original "film-quality" music for the games industry. This accomplishment includes over ten major releases and as many as six top-sellers composed for five of the world's largest publishers. Jeremy's award-winning, orchestral soundtracks have elevated the standard of music in the interactive entertainment industry to a level previously limited to the motion picture genre. His dynamic compositions reveal a natural ability to create powerful and engaging music using both fine instruments as well as an unsurpassed, proprietary library of synthesizers that successfully emulates the sound and feel of a 100-piece orchestra. Soule's creativity, technological expertise and cutting-edge approach to composition has placed him at the top of the composer A-list in the entertainment software industry, and his work has been applauded time and time again by some of the world's most prominent music and entertainment industry professionals. Most recently, Jeremy's score for The Elder Scrolls 3: Morrowind was nominated for "Game Soundtrack of the Year" in Game Industry News (www.gameindustry.com). Soule also created the original score for Harry Potter and the Chamber of Secrets for EA, which won the IGN 2002 award for Best Adventure Game." In February, four titles

featuring soundtracks created by Soule were announced as finalists in the 2002 Interactive Achievement Awards, sponsored by the Academy of Interactive Arts and Sciences. These titles garnered a total of eight nominations in several categories, including "PC Game of the Year," "PC RPG of the Year," "Family PC Game of the Year," "Outstanding Achievement in Game Design," "Innovation in PC Gaming" and "Outstanding Achievement in Original Music"

Bill Brown

Composer, Director of Music, Soundelux DMG

Bill Brown's innovative and powerful scores for Tom Clancy's Rainbow Six series, Ghost Recon series, Lineage II: The Chaotic Chronicles, Command & Conquer: Generals, The Sum of All Fears -PC, Return to Castle Wolfenstein, Clive Barker's Undying, Windows XP music and system sounds and feature film titles such as Oliver Stone's film Any Given Sunday and Ali, directed by Michael Mann have gained special recognition in the industry. Bill is director of music for the award winning music and sound design team at Soundelux Design Music Group, Hollywood California, and has worked with top directors and producers including Steven Spielberg, Michael Crichton, Oliver Stone, Clive Barker, Tom Clancy, Gus Van Sant and more.

Maarten Spruijt

Maarten Spruijt studied Music Technology at the Faculty of Art, Media & Technology in Hilversum, part of the School of Arts Utrecht, The Netherlands. Here he got his Master degree in "Composition in Context", cum laude. During his years at this school Maarten studied composition, scoring for the media, orchestration, production and built a firm knowledge of modern music technology. With composition in context (film, TV, theater, media) as his specialization, he studied under industry composers and musicians as Rens Machielse (composer) and Marc van Vugt (composer/performer). On a regular basis Maarten worked as an assistant composer and orchestrator for composer Paul M. van Brugge on European films as Tom & Thomas (Esmé Lammers) and Valentín (Alejandro Agresti). Nowadays, Maarten Spruijt works as an independent composer, living in Utrecht, The Netherlands. He composed the scores for a number of Dutch film productions including The Wretched (Martijn Smits), Thom & Alice (Jonas Klinkenbijn), Tsar, De D van Dag (Allan van O.T. Andersen) and Die Erleichterung Des Leids (Bram van Alphen). In 2002 Maarten teamed up with songwriter Vincent Beijer and composer Marco Deegenars founding Project SAM, a music company developing, producing and selling music sample libraries. Anno 2003, Project SAM has developed three dedicated orchestral sample libraries, SAM Horns, SAM Trombones and SAM Trumpets, which are sold internationally through Project SAM's own online shop and by a number of major, worldwide Distributors (Soundsonline, Time & Space, Bestservice). Project SAM's products are endorsed by well-known US composers as Bill Brown and Robert Kral and are used by industry people in the US, Europe as well as other continents. Maarten also has a fair share of involvement with other sample developers, testing and composing demos for the Vienna Symphonic Library, the Quantum Leap Symphonic Orchestra and Eric Persing's virtual instruments.

Doyle Donehoo

Composer, Engineer, Radar Music

Doyle W. Donehoo is a self-contained game composer, which means he delivers final mastered original composed music from his studio using the latest computer and music technology. While delivering music in any style desired, his specialty is larger than life bombastic Hollywood movie-style symphonic scores with high production values. All of his recordings so far were created entirely in his studio using his virtual orchestra and no live music or live musicians were used. Doyle also delivers music in surround and DOLBY 5.1 Surround. Much of Doyle's music can be easily found on his web site www.sierra-trails.com/radarmusic.html. Doyle have spent many years in the computer industry as a senior Windows software engineer and manager, and he is comfortable working with software professionals such as those found in the game and music industry. With his background, Doyle's forte is computer and music technology, a unique advantage in the computer technology driven game and music business. Major leaps in music technology has happened in just the last year, and Doyle's portion of the GDC session will deal directly with these advances as well as other music technology.