New digital devices allowed more sophisticated manipulation of sound in the studio. Musique concrete evolved into cut-up, collage and montage techniques that mixed field recordings, electronic/digital sounds and conventional instruments.

The idea of "the microphone as an extended ear" propounded by Loren Chasse was best expressed in the ambient minimalist works that digitally processed field recordings: albums such as Siphon Glimmers (1997) and Hedge Of Nerves (2002) basically documented sound sculptures of musique concrete and interactive electronic/digital music. Coelacanth, a collaboration with Jim Haynes, manipulated and layered sounds of rocks, sand, leaves, electrical devices and waves to obtain a viscous tapestry of ambient music, as on Mud Wall (2004). Of was a project that mixed natural sounds and live instrumental improvisations by Chasse himself, for example The Sun And Earth Together (2008).

Thuja's discs documented the collective improvisations of guitarists Steven Smith and Glenn Donaldson (both of psychedelic-rock band Mirza), sound sculptor Loren Chasse and pianist Rob Reger. They devoted the ambient vignettes of Suns (2002) and the abstract frescoes of Pine Cone Temples (2005) to a study on the psychological properties of natural sounds. These works exorcized urban life and aimed to recapture the essence of the human condition on Planet Earth while retaining the high-tech world that humans erected on it. Ultimately, all Thuja albums were duets between the human brain and the human environment.
British composer Simon Wickham-Smith used the computer on Extreme Bukake (2002) to create a collage inspired by Buddhist and Catholic religious music.

Irr. App. (Ext.), the project of San Francisco-based composer Matt Waldron, applied musique concrete to the anarchic, provocative aesthetic of surrealism, perfecting the fusion of field recordings, event music and electronic soundsculpting with the two lengthy suites of Ozeanische Gefuhle (2004), originally recorded in 2001.

After recording a tetralogy of albums, that focused on digital processing of natural sounds, under the moniker of Hazard, Morthound's mastermind Benny "BJ" Nilsen created the arctic and alien dronescapes of Fade To White (2004) and The Short Night (2007) by manipulating natural sounds and instruments.

Icelandic avantgarde electronic trio Stilluppsteypa, featuring Heimir Bjorgulfsson, worked out a Dadaistic multi-layered style of soundsculpting that juxtaposed with the horror or high-brow trends of the era, notably on Reduce by Reducing (1998) and Interferences Are Often Requested (1999).


**Texas between the extended ear and droning minimalism**

Texas boasted a vibrant electroacoustic school of droning musique concrete in the tradition of Eric LaCasa. Mnortham, the project of Michael Northam, was the virtuoso of this technique, producing dense aggregates of sound from the tiniest and slightest of sources. His first demonstration, the 30-minute piece of Many Rivers Move Along The Surface Of The Magnet (1995), was the manifesto for the entire Texas school. Also influential were his two collaborations with John Grzinich: The Stomach Of The Sky (1997) and The Absurd Evidence (1998). Mnortham's essays on how to acoustically reconfigure the environment picked up speed with the 21-minute piece of Breathing Towers (2000), the three extended compositions of Coyot (2001), the three extended compositions of From Within The Solar Cave (2001), and the 54-minute "raga" of A Great And Riverless Ocean (2002). Seth Nehil composed chamber music for found objects and instruments, as documented on Tracing the Skins of Clouds (1998). In 1994 John Grzinich and Seth Nehil had formed the live electro-acoustic ensemble Alial Straa, documented on Tunnels/Stairwell (1997). The duo's study of timbres, texture and dynamics reaches new heights of paroxysm on Confluence (2002). John Grzinich, a builder of amplified piano-wire instruments, was perhaps the most lyrical in this sound art of weaving together digitally manipulated field recordings. His Intimations (2004) diluted and abstracted piano notes, then merging them with field recordings of cicadas, birds and waves; while the sources of Insular Regions (2005) were all collected from a small village in Estonia, therefore creating a personal transfigured diary.

**Turntable music**

The turntablist as an instrumentalist was an artistic person that migrated from hip-hop music into avantgarde, rock and jazz music during the 1990s. The turntable allowed musicians to achieve two goals (that were frequently overlapped): 1. quote from a musical source by another musician (and therefore create collages of quotations), and 2. produce sequences of extreme noise. Christian Marclay spearheaded the new trend towards "composing", performing and improvising using phonographic records. De facto, he applied John Cage's indeterminism and, in general, Dadaism's provocative principles of aesthetic demystification to the civilization of recorded music. His specialty consisted in devising mechanisms for letting a record evolve a sound over time, typically by having people somehow degrade its sound (as in *Record Without a Cover* of 1985, a record sold with no cover and no jacket so that it keeps deteriorating after every playing, or *Footsteps* of 1990, a totally random composition resulting from hundreds of people walking on a record).

The idea was refined in Britain by Philip Jeck and in Japan by Otomo Yoshihide.

Philip Jeck (3) created the chaotic cacophony of *Vinyl Requiem* (1993) for 180 turntables. *Vinyl Coda I-III* (2000) and *Vinyl Coda IV* (2001) documented Jeck at the peak of his virtuoso art, mixing snippets of old records in a jungle of turntable noises. The 24-minute *Skew*, off *Host* (2003), was even more radical, while the three-movement *Fanfare Song Trilogy*, off *Sand* (2008), abandoned the discontinuous, glitchy format of his beginnings and turned to crystalline, slowly-revolving, quasi-ambient soundscapes.

Otomo Yoshihide (2), Ground Zero's guitarist, harked back to the most brutal musique concrete ever conceived as well as to Morton Subotnick's electronic ping-pong music for the screeching and hissing tornadoes of *Sound Factory* (1997). The three-movement concerto of *Anode* (2000) evoked John Cage's aleatory music by only providing the performers with vague instructions.

**Bionic music**

In the late 1990s computer processing was becoming pervasive.

The installations of Michael Schumacher (2) often started with field
recordings or accidental events, that were then processed at the computer
to produce long spatial tones, as documented in the **Four Stills** (2002). A
complex computer algorithm generated the sparse sounds that populated
the **Room Pieces** (2003).

The "live" laptop manipulations of British musician **Kaffe Matthews**, such
as the theremin-based **Cd Eb And Flo** (2003), yielded droning
compositions that are layered to the point of becoming dense mobile
textures. She also organized Lappetites' **Before The Libretto** (2005), a
collaboration with Elaine Radigue (France), Ryoko Kuwajima (Japan), and
Antye Greie-Fuchs (Germany), basically a multinational all-female laptop
quartet, ranging in age from the 70-year old Radigue to the Japanese
teenager.

In 2001 **Matt Rogalsky** developed his "Kash" software to interact with live
performers on traditional instruments. The resulting live performances are
subtle and subliminal works, in which Rogalsky toys with fictitious
microtonal sounds in a very sparse and desolate soundscape. Another kind
of software, "Sprawl", allows Rogalsky to operate on densely layered
structures, that yield floating clusters similar to the ones that fuel ambient
and cosmic music.

New Zealand's digital manipulator **Rosy Parlane** mixed melodic drones,
sample loops and field recordings on the languid and cinematic three-
movement symphonies **Iris** (2004) and **Jessamine** (2006) that emanated a
sense of calm and harmony made more humane by an underworld of
microscopic events.

Japanese composer **Koji Asano** engineered the monumental **The Last
Shade of Evening Falls** (2000) for computer-processed violin and
contrabass, a nightmarish exercise that ran the gamut from chaotic and
wildly atonal to densely droning.

Chinese composer **Fan Wang**'s **Sound Of Meditation Within the Body**
(2001) blended Western and Eastern ways of music via musique-concrete
collages of subterranean currents and otherworldly noises that slowly grow
into om-like cosmic drones, oscillating between the internal and the
external soundscape.

Chinese laptop composer **Jun Yan** explored the convergence of noise-
sculpting techniques that came from musique concrete and the improvised
techniques that came from jazz in lengthy creative sequences of artificial
sounds.