Construction Site

From April 2000 until May 2001, a construction site (Goddard Hall) was located on the New Mexico State University campus adjacent to the Klipsch School of Electrical and Computer Engineering. Fig. 1 shows the construction site (after completion).

Figure 1: Construction site.

Recording Conditions

Extremely noisy
Minimal reverberation

Recording Equipment

(1) Dell Dimension XPS R400 PC (Pentium II @ 400MHz, 128MB RAM, 40GB disk, Windows 98) (`www.dell.com`)
(1) Echo Layla 20-bit multitrack recording system (`www.echoaudio.com`)
(2) Shure omni-directional microphone Model VP64A2 (`www.shure.com`)
(2) Shure miniature dynamic lavalier (clip-on) microphone Model SM11 (`www.shure.com`)
(4) Applied Research And Technology (ART) Professional processor series tube preamp (`www.artroch.com`)
(4) Balanced (XLR) microphone cables from microphones to preamps
(2) Balanced (XLR) microphone cables from preamps to Layla

Recording/Editing Software

Syntrillium Software Corporation's Cool Edit Pro v1.2 for recording and (`www.syntrillium.com`)
Aurora Plug-in vx.x for Cool Edit pro for impulse response measurements (`aurora.ramsete.com/aurora/`)
Mathwork's MATLAB v5.2 for editing signals to desired lengths (`www.mathworks.com`)
SoundApp PPC v2.7.3 for sample rate conversion to 16kHz from 48kHz (`www-cs-students.stanford.edu/~franke/SoundApp/`)

Recording Setup

Fig. 2 shows the schematic of recording setup with dimensions. Two speakers each wearing a Lavalier stand outside of the back door of the Klipsch School facing each other; the construction site begins approximately 15' away. Two omni-directional microphones are placed approximately 10' away from the speakers in opposite directions and facing the construction site. Background noise, mainly from workers and power tools is included with and without speakers. A three-minute recording sampled at 48kHz, 16 bit resolution was done for each of the following scenarios:

Recording 1 – Male speaker and male speaker with background noise
Recording 2 – Male speaker and female speaker with background noise
Recording 3 – Female speaker and female speaker with background noise
Background Noise – Background noise only

Figure 2: Schematic of recording setup.

Available Files

The file naming scheme is as follows.

```
aaaaaaaaa_bc_dd_eee_fff.wav

a = Acoustic environment
b = (L)eft or (R)ight microphone
c = (C)lip-on or (O)mnidirectional Microphone
d = (M)ale(M)ale, (M)ale(F)emale, (F)emale(F)emale, (B)ackground(N)oise
e = fs, (16k) or (48k)
f = duration, (15) or (180) seconds
```

Files available for this recording environment are listed below.

Recording 1	*Recording 2*
Construct_LC_MM_16k_15.wav	Construct_LC_MF_16k_15.wav
Construct_LC_MM_16k_180.wav	Construct_LC_MF_16k_180.wav
Construct_LC_MM_48k_15.wav	Construct_LC_MF_48k_15.wav
Construct_LC_MM_48k_180.wav	Construct_LC_MF_48k_180.wav
Construct_LO_MM_16k_15.wav	Construct_LO_MF_16k_15.wav
Construct_LO_MM_16k_180.wav	Construct_LO_MF_16k_180.wav
Construct_LO_MM_48k_15.wav	Construct_LO_MF_48k_15.wav
Construct_LO_MM_48k_180.wav	Construct_LO_MF_48k_180.wav
Construct_RC_MM_16k_15.wav	Construct_RC_MF_16k_15.wav
Construct_RC_MM_16k_180.wav	Construct_RC_MF_16k_180.wav
Construct_RC_MM_48k_15.wav	Construct_RC_MF_48k_15.wav
Construct_RC_MM_48k_180.wav	Construct_RC_MF_48k_180.wav
Construct_RO_MM_16k_15.wav	Construct_RO_MF_16k_15.wav
Construct_RO_MM_16k_180.wav	Construct_RO_MF_16k_180.wav
Construct_RO_MM_48k_15.wav	Construct_RO_MF_48k_15.wav
Construct_RO_MM_48k_180.wav	Construct_RO_MF_48k_180.wav
Recording 3	*Background Noise*
Construct_LC_FF_16k_180.wav	Construct_LO_BN_16k_15.wav
Construct_LC_FF_48k_180.wav	Construct_LO_BN_16k_180.wav
Construct_LO_FF_16k_180.wav	Construct_LO_BN_48k_15.wav
Construct_LO_FF_48k_180.wav	Construct_LO_BN_48k_180.wav
Construct_RC_FF_16k_180.wav	Construct_RO_BN_16k_15.wav
Construct_RC_FF_48k_180.wav	Construct_RO_BN_16k_180.wav
Construct_RO_FF_16k_180.wav	Construct_RO_BN_48k_15.wav
Construct_RO_FF_48k_180.wav	Construct_RO_BN_48k_180.wav

Room Impulse Response Measurement

There is no impulse response measured for this acoustic environment.