INSTRUMENTAL EQUIPMENT OF THE LABORATORY
BY THE END OF 1975

1. Instrumentation for speech analysis

2 Sona-Graphs, Kay-Electric, type 6061 A
2 amplitude display/scale magnifier units, Kay-Electric, type 6076 A
1 contour display unit, Kay-Electric, type 6070 A
1 fundamental frequency extractor ("Trans Pitchmeter")
1 intensity meter (dual channel, with active variable highpass and lowpass filters)
1 electro aerometer (dual channel)
2 air-pressure manometers, Simonsen & Weel, type HB 66 (modified)
1 photo-electric glottograph
1 Fabre Glottograph
1 palatoscope with complete outfit for palatography
1 segmentator, model IPO (Eindhoven)
1 Meyer-Schneider pitchmeter
1 stroboscope, Philips, type PR 9103
1 segmentator, type PT
1 electro-aerometer, four channel, type AM 508/4
1 audio frequency filter, type 445
1 vocal cords fiberscope, Olympus, type VF

2. Instrumentation for speech synthesis

1 formant-coded speech synthesizer
1 provisional vowel synthesizer
1 voice-source generator
1 larynx vibrator with power supply
3. Filters

1. LC highpass filter (with stepwise variation of cut-off frequency)
2. active RC lowpass filter

4. Instrumentation for visual recordings

1. mingograph, Elema 42 (4 channels)
2. mingograph, Elema 800 (8 channels)
3. kymograph (with electro-motor)
4. automatic frequency response and spectrum recorder, Brüel & Kjær, type 3332
5. oscilloscope, Telequipment (single beam)
6. oscilloscope, Tektronix, type 502 A
7. oscilloscope, Solartron, type CD 1400 (dual beam)
8. oscilloscopes, Tektronix, type 564 storage
9. dual-trace amplifier, Tektronix, type 3A1
10. four-trace amplifier, Tektronix, type 3A74
11. dual-trace differential amplifier, Tektronix, type 3A3
12. time-base, Tektronix, type 3B3
13. time-base, Tektronix, type 2B67
14. oscilloscope, Tektronix, type 465
15. oscilloscope, Tektronix, type 5115
16. dual-trace amplifiers, Tektronix, type 5A18N
17. time-base, Tektronix, type 5B10N
18. mingograph, Siemens-Elema, type 803

5. Tape recorders

1. instrumentation recorder, Lyrec, type TR 86
2. professional recorder, Lyrec, type TR 42
3. professional recorders, Lyrec, type TR 20
4. semi-professional recorders, Revox, type G 36
5. semi-professional recorders, Revox, type A 77
6. professional recorder, Revox, type A 700
1 portable semi-professional recorder, Uher, type 4000
4 recorders, Tandberg, type 92 SL
1 recorder, Tandberg, type 7

6. Gramophones

2 gramophones, Delphon (mono, Ortofon pick-up)

7. Microphones

1 microphone, Neuman, type KM 56
1 dynamic microphone, Sennheiser, type MD 21
2 crystal microphones, of different brands
2 microphones, Altec
1 1" microphone, Brüel & Kjær, type 4131/32
1 1/4" microphone, Brüel & Kjær, type 4135/36
1 larynx microphone
1 1" microphone, Brüel & Kjær, type 4145
1 microphone—power supply, Brüel & Kjær, type 2807
1 microphone—power supply, Telefunken

8. Amplifiers

1 microphone amplifier, Brüel & Kjær, type 2603
1 laboratory amplifier (mono/stereo, with matching for different impedances)
1 power amplifier, Brüel & Kjær, type 2706
1 microphone pre-amplifier, Brüel & Kjær, type 2627
1 measuring amplifier, Brüel & Kjær, type 2607 A

9. Loudspeakers/headphones

7 different loudspeaker systems
5 headphones, AKG, type K 58
3 loudspeakers, Beovox, type 2600
10 headphones, Sennheiser, type 414
4 headphones, Sennheiser, type 424
10. General-purpose electronic instrumentation

1 oscillator, Hewlett & Packard, type CD 200
1 function generator, Wavetec VGC III (0.003 c/s - 1 Mc/S)
1 frequency counter, Rochar, type A 1360 CH (5 digits)
2 vacuum-tube voltmeters, Brüel & Kjær, type 2409
1 vacuum-tube voltmeter, Heathkit, type V-7A
1 vacuum-tube voltmeter, Radiometer, type RV 23b
1 DC millivoltmeter, Danameter, type 205
1 DC nanoammeter, Danameter, type 206
1 universal meter, Philips, type P 817
1 transistor tester, Taylor, model 44
1 Piston-phone, Brüel & Kjær, type 4220
1 component bridge C/L/R, Wayne Kerr, type B 522
1 AC automatic voltage stabilizer, Claude Lyons, type BTR-5F
4 resistance decades, Danbridge, type DR 4
1 condenser decade, Danbridge, type DK 4 AV
6 stabilized rectifiers
1 multi-generator, Exact, type 126 VCF
2 stabilized rectifiers, Danica, type TPS 1d
1 stabilized rectifier, Danica, type TPS 3c
1 impulse precision sound level meter, Brüel & Kjær, type 2204
1 attenuator set, Hewlett Packard, type 350 D
1 band-pass filter set, Brüel & Kjær, type 1615
1 digital multimeter, Philips, type PM 2422
1 timer counter, Advance, type SC3
1 oscillator, Advance, type J2E
1 X-Y recorder, Hewlett & Packard, type 7044 A
1 noise generator, Brüel & Kjær, type 1405

Additional oscillators, rectifiers, etc., for special purposes.
11. Outfit for photography

1 Minolta camera SR-1 (with various accessories)
1 complete outfit for reproduction (including 1 Liesegang UNI-RAX with frame)
1 Telford oscilloscope camera, type "A" (polaroid)

12. Equipment for EDP

A computer, Digital, PDP8/E, 8k
A1 arithmetic unit, Digital, type KE 8-E
A2 bootstrap loader, Digital, type MR 8-EC
A3 add-on memory system 24k, Fabri-Tek, type 8/E
B dectape, Digital, type TD8-EM
B1 tape reader, GNT, type 24
B2 tape punch, GNT, type 34
B3 decwriter, Digital, type LA 30P
B4 teletype, Teletype, type ASR 33
B5 display terminal, Tektronix, type 4014-1
B6 real time clock, Digital, type DK8-EP
B7 a/d converter, Digital, type AB8-EA
B8 d/a converter, type PD

13. Projectors

1 Leitz projector for slides
1 Voigtlander Perkeo Automat - J 150
1 16 m/m tone film projector, Bell & Howell, "Filmsound 644"
1 projector, Leitz, type Pradovit color 250