

University of Wisconsin

INVENTION RECORD AND REPORT**RECEIVED**
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Office of the DeanCompiler - Bernard Z. Friedlander, Ph.D.Date - January 14, 1970

1. Brief descriptive title: Time-sampling Tape Recorder System
2. Full name of inventor, home address, and position:

Bernard Z. Friedlander, Ph.D.
517 Eugenia Avenue
Madison, Wisconsin 53705

Position: Research Associate (Lecturer)
University of Wisconsin, Madison
3. Source of grant, contract or award funds contributing to invention and amount:

Children's Bureau, U.S. Dept. of Health, Educ. & Welfare

This invention was realized during Years 1 and 2 of the project entitled "Automated Language Tests and Enrichment for Deaf Infants." The total DHEW support for this project during Year 2 was \$ 188,986.

4. Recommendation of inventor as to whether patent protection should be sought:

I am undecided as to whether or not patent protection for this device should be sought, due to a number of factors entering into this decision. I will be prepared to discuss these factors as it may become relevant to do so.

5. Object or results to be achieved by the practice of this invention:

The purpose of the Time-sampling Tape Recorder System is to make orderly, systematic tape recordings in a sound environment on an adjustable time-sampling basis in approximately the same fashion that time-stop movie photography permits time-sampling of a visual environment. There are numerous reasons why one might wish to observe an auditory environment on a time sampling basis. The reason why this device was developed for the present research was to secure sample records of language environments in the home where children acquire language competence.

6. Outline of means discovered for achieving above objects. Point out means which are essential, others which are important or useful and any critical limitations on any of these:

Time-sampling records of an auditory environment are achieved by insert-

ing an adjustable automatic "on-off" clock timer network in the operating power line that feeds a tape recorder fitted with a voice-activated microphone. The automatic clock timer performs the critical function of gating the power to the tape recorder system at regular, pre-selected intervals. Hence it is possible to sample the auditory environment on the basis of any time schedule that may be desired. Several minor accessory circuits add to the operating convenience of the system as a whole, without affecting the main principal of the periodic on-off control provided by the clock timer.

7. Chronology of principal events in conception and development:

- (a) Earliest conception date - No records on hand--probably about December 1968-January 1969 when I started making systematic tape recordings in homes and found the process very inefficient for lack of a system for sampling the sound environment selectively.
- (b) Date of disclosure to other persons and names of such persons - The technique was mentioned in a letter to Dr. Arthur McCaffrey of Harvard University, dated April 14, 1969.
- (c) First written record pertinent to invention - same as (b)
- (d) Date and result of first test of the invention - The system prototype was completed in the late spring of 1969 and placed in service during the summer of 1969, during which time a research assistant devoted considerable time to codifying language samples recorded with the system. Highly successful realization of the mechanical-electrical properties of the system emerged from the beginning of use. Scientifically worthwhile data analyses emerged shortly thereafter.

8. Date and place of publication of disclosure of invention :

First results were first distributed in the Year 2 Progress Report of this project, forwarded to The Children's Bureau, Dept. of Health, Education and Welfare, on December 31, 1969. A report for prospective publication is now in preparation.

9. Background of published information and practice in the field of the invention:

As far as I am aware, there is no literature on the specific problem of sampling the auditory environment on a periodic basis, but I do not exclude the possibility that such a literature might exist. A remotely related problem of compressing play-back time of intermittent infant vocalization was dealt with by Chan, Lenneberg and Rebelsky in an article entitled, "Apparatus for reducing play-back time of tape recorded, intermittent vocalization," in Bellugi, Ursula and Brown, R. (eds.) The Acquisition of Language, 1964, Soc. Res. Child Devel. Monogr. Serial no. 92, No. 1, pp. 127-129.

10. Features embodied in this invention which would not have been obvious to or readily foreseeable by the typical skilled worker in the field:

Combining the automatic clock timing network with the voice-activated microphone feature might not be obvious to a typical skilled worker in the field.

Signature of Compiler Bernard Z. Friedlander

Signature of Inventor

Date

Witness to Inventor's Signature

Bernard Z. Friedlander

1-14-70

Paul Zuck