PROPOSAL OF THESIS TOPIC FOR MGR INŻ. (MSE) PROGRAMME IN TELECOMMUNICATIONS AND COMPUTER SCIENCE

1. Topic: Simulation and correction of hearing disorders basing on audiograms

2. Supervisor: dr hab. inż. Paweł Strumiłło prof. PL

3. Auxiliary supervisor: mgr inż. Michał Bujacz

4. Goals and scope of the work:

Through measurement of the threshold of hearing of various pure tone sounds during audiometric testing, a patient’s hearing loss characteristic can be determined. The goal of the project is to prepare an application that can simulate that characteristic using digital filters, as well as reverse it. This would enable the simulation of hearing loss, i.e. hearing of recorded sounds in a way that a person with imperfect hearing does, and correction of sound recordings in such a way that a person with hearing loss perceives the natural spectrum of sounds.

Cooperation with a laryngologist will be needed to collect audiometric test results from persons with hearing loss.

5. Prerequisites (e.g. experience in writing programs in a computer language or knowledge of a foreign language):

Digital signal processing. Fundamental programming skills in Java or C++.

6. Literature:

Basic references will be provided by the supervisor.

Łódź, 2009-05-29

Supervisor’s signature

THESIS TOPIC SELECTION ACKNOWLEDGMENT

Student’s name: _______________________________ Student’s ID __________

Faculty: ________________________________

Main subject/major/module: ________________________________

Date and student’s signature

Supervisor’s signature