

**DEVELOPMENT OF A COMPUTER  
AIDED TELECOMMUNICATIONS  
LABORATORY DEMONSTRATION  
SYSTEM**

Project report submitted by  
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to

The department of Electrical Engineering  
of the Higher Technical Institute  
Nicosia, Cyprus

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for the diploma of

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IN  
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HIGHER TECHNICAL INSTITUTE	PROJECT NO <i>2281</i>
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HIGHER TECHNICAL INSTITUTE  
NICOSIA-CYPRUS

ELECTRICAL ENGINEERING DEPARTMENT

DIPLOMA PROJECT

1993/1994

Project Number: E.898

Title:

"Development of a Computer Aided Telecommunications Laboratory  
Demonstration System"

Objectives:

1. To study different types of Computer Aided Telecommunications Laboratory Demonstration Systems.
2. To select, design, develop, construct, test and calibrate a Computer Aided Telecommunications Laboratory Demonstration System.
3. To write all necessary software.
4. To write and demonstrate different experiments using the System.

Terms and conditions

1. The following items are supplied:
  - (a) Analogue/Digital I/O card
  - (b) Suitable software package

Student : Mr C Kassianides

Supervisor : Mr D Lambrianides

External Assessor :

DL/DP  
dl1(5)

DEVELOPMENT OF A COMPUTER  
AIDED TELECOMMUNICATIONS LABORATORY  
DEMONSTRATION SYSTEM

SUMMARY

This project is intended to lay the foundations for the development of a computer aided telecommunication system on the IBM PC. The software of the project forced the user to utilise the analog to digital converter of a commercially available multifanction card. This is the PCL711 from Advantech company ltd.

The basic thing of this project is to demonstrate how with the software, which is using the user addresses of the card to process analog signals. These signals are taken, in this case, from the circuits of AM modulator and low pass filter. These circuits are developed for the purposes of this project.

Unfortunately not all objectives of the project carried out because of my inexperience in programming with Turbo Pascal and it took me a lot of time to get familiar with it. Also because of the limited time the laboratory where available, and because of the complexity and quantity of work i had to do, the software to drive the hole system did not work properly.

Despide this I got familiar in programming to drive experimental hardware that is interfaced on the IBM PC, as well as with the design and construction of hardware.

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