

**HIGHER TECHNICAL INSTITUTE  
COURSE IN COMPUTER STUDIES**

**DIPLOMA PROJECT**

**COMPUTER AIDED LEARNING TOOL FOR  
TEACHING CYPRUS GEOGRAPHY**

**CS/233**

**ATHENA EFTYCHIOU**

**7 JUNE 2000**

HIGHER TECHNICAL INSTITUTE	PROJECT NO. 3098
----------------------------------	---------------------



## **COMPUTER AIDED LEARNING TOOL FOR TEACHING CYPRUS GEOGRAPHY**

### **SUMMARY**

The software tool for teaching Cyprus Geography was proposed by Mrs. Maria Hadjiyiannakou lecturer of the computer studies department, of the Higher Technical Institute. It was issued as one of the requirements for the diploma in Computer Studies.

The software tool was designed both for self-study by students, as well as for teaching tool by the professor. It includes all theory, exercises and pictures included in the geography book “Γεωγραφία της Κύπρου” issued by the Ministry of Education.

The software tool was developed using Microsoft Visual Fox Pro 6, since it was the most appropriate for the implementation of the tool.

The software tool for teaching Cyprus Geography can be run on a Pentium PC that has at least 32MB RAM and 2GB Hard Disk. It runs under Windows 98 environment.



# CONTENTS

	<u>Page</u>
<b>ACKNOWLEDGMENTS</b>	1
<b>SUMMARY</b>	2
<b>INTRODUCTION</b>	3
<b>CHAPTER 1 – INVESTIGATION PHASE</b>	5
1.1 INTRODUCTION	5
1.2 INITIAL INVESTIGATION	6
1.2.1 Overview Narrative	6
1.2.2 Persons involved in the existing work	6
1.2.3 Existing work done in schools	6
1.2.4 Information about existing Cyprus Geography books	7
1.3 FEASIBILITY STUDY	8
1.3.1 Overview Narrative	8
1.3.2 Financial Feasibility	8
1.3.3 Operational Feasibility	9
1.3.4 Technical Feasibility	10
1.3.5 Schedule Feasibility	10
1.3.6 Human factors Feasibility	11
1.3.7 Conclusion	11
<b>CHAPTER 2 – ANALYSIS AND GENERAL DESIGN</b>	12
2.1 INTRODUCTION	12



2.2 EXISTING SYSTEM REVIEW	13
2.2.1 Overview Narrative	13
2.2.2 Organization	13
2.2.3 Description of the existing process	14
2.2.4 Inputs to the existing system	14
2.2.5 Outputs from the existing system	14
2.3 NEW SYSTEM REQUIREMENTS	15
2.3.1 Overview Narrative	15
2.3.2 System Functions	15
2.3.3 Processing	16
2.3.4 Data Dictionary	16
2.3.5 Outputs to the users	17
2.3.6 Inputs to the system	17
2.3.7 User interface with the system	18
2.4 NEW SYSTEM DESIGN	19
2.4.1 Overview Narrative	19
2.4.2 Processing	19
2.4.3 Data Dictionary	19
2.4.4 Inputs to the system and outputs to the user	20
2.4.5 Performance criteria	21
2.4.6 Security and control	21
2.5 IMPLEMENTATION AND INSTALLATION PLANNING	22
2.5.1 Overview Narrative	22
2.5.2 Preliminary detailed design and implementation plan	22
2.5.3 Preliminary system test plan	22
2.5.4 User Training	23
2.5.5 Preliminary Installation Plan	23



<b>CHAPTER3 – DETAILED DESIGN AND IMPLEMENTATION PHASE</b>	<b>24</b>
<b>3.1 INTRODUCTION</b>	<b>24</b>
<b>3.2 TECHNICAL DESIGN</b>	<b>25</b>
3.2.1 Overview Narrative	25
3.2.2 Human Machine Interface	25
3.2.3 Application Software Design	26
3.2.4 Logging Requirements	26
<b>3.3 TEST SPECIFICATION AND PLANNING</b>	<b>27</b>
3.3.1 Overview Narrative	27
3.3.2 Test Specifications	27
<b>3.4 PROGRAMMING AND TESTING</b>	<b>29</b>
3.4.1 Overview Narrative	29
3.4.2 “VISUAL FOX PRO” – The tool for the implementation	29
3.4.3 Programming Sequence	29
3.4.4 Testing	29
<b>3.5 USER TRAINING</b>	<b>30</b>
3.5.1 Overview Narrative	30
3.5.2 User Training Description	30
3.5.3 User Manual	30
<b>3.6 SYSTEM TEST</b>	<b>31</b>
3.6.1 Overview Narrative	31
3.6.2 Tests to be applied on the s/w tool for teaching Cyprus Geography	31



<b>CHAPTER 4 – INSTALLATION</b>	<b>32</b>
4.1 INTRODUCTION	32
4.2 SYSTEM INSTALLATION	33
4.2.1 Overview Narrative	33
4.2.2 Installation of the s/w tool for teaching Cyprus Geography	33
4.2.3 Conclusion	33
<b>CONCLUSION</b>	<b>34</b>
<b>REFERENCES</b>	<b>35</b>



## APPENDICES

**Appendix A** – Gantt Chart

**Appendix B** – Organizational Chart

**Appendix C** – Context Diagram for Existing Teaching Process

**Appendix D** – Data Flow Diagram for Existing Teaching Process

**Appendix E** – Context Diagram for Proposed System

**Appendix F** – Data Flow Diagram for Proposed System

**Appendix G** – Data Dictionary

**Appendix H** – System Flowcharts

**Appendix I** – Screen Design

**Appendix J** – Hierarchic Structure Chart