

4

**HIGHER TECHNICAL INSTITUTE**  
**COURSE IN COMPUTER STUDIES**

**DIPLOMA PROJECT**

**A MULTIMEDIA GUIDE TO HANDBALL**  
**STEP BY STEP**

**CS/238**

**STELIOS IOANNOU**

**7 JUNE 2000**

HIGHER TECHNICAL INSTITUTE	PROJECT NO. 3103
----------------------------------	---------------------

# INTRODUCTION

The objectives of this project are the analysis, design and implementation of a multimedia package. This project should be designed for self study by trainers and referees and as a demonstration tool. It should provide practical exercises with solutions. With this project the user, even if he doesn't know anything about handball should be able to learn everything about this game and play this game. Handball is a popular team game. It is exciting with lots of drama and physical contact. It requires technical and tactical versatility from the players. Also handball is an exciting contest between two teams demonstrating the skills of both, players and goalkeepers.

It is good to have a brief history in the development of Handball.

The modern times have become the age of sport. Knowledge of sport appears in diverse aspects of modern society and it has become an essential part of everyday living. The specialization of sport quickened and this gave handball a new thrust.

In fact, - gymnastics – which was the dominant sport of the time, needed a supplementary sport to loosen muscles, was enjoyable and developed skills. Similarly – soccer and rugby – still in the initial stages were too rough and caused too many injuries.

In this way then , at approximately the same time at the turn of the century three very similar games involved called haanbold, hazena and torball which are considered the direct ancestors of handball. In a short time these three games became very popular all over Europe. However, because each had different rules it was impossible to organize international tournaments. Thus,

it became necessary to unify the rules and this was done by Karl Schelez in 1917 in Berlin.

**Field Handball** became the name of the new game played outdoors with 11 players a side on a soccer field. Although the goal size, the goal area shape and a few rules have changed a little, this game was already set to be played for decades.

However the fast growth of handball need the establishment of an international body which aimed to :

- promote handball
- organize international tournaments and world championships
- co-ordinate the work of national associations and
- prepare a programmed putting handball into the Olympic Games

**Indoor Handball** : For a short time they played both field handball and indoor handball and organized world championships for both. However, indoor handball, with its speed, variety and excitement gradually pushed the slower field handball into the background.

From 1966 World Championships were organized only for indoor handball and the development of the game accelerated.

1972 was another turning point; because of its popularity, men's handball had to be re-introduced at the Munich Olympics.

1976 – due to the success of the men, women's handball followed into the Montreal Olympics and handball became one of the most popular team sports of the Games.

Handball of the 80s was characterized by its popularity, stabilization, consolidation of the rules and the game. The growing popularity of the game

necessitated the Formation Continent Federations which organize continental championships for national teams and clubs. The IHF coordinates the work of the Continent Federations as well as organizing the big events for the national handball teams such as the Olympic Games, World Championships and the World Cup.

**These days, the IHF has over 100 member countries and more than 10 million players who play competitively.**

As can be seen then, handball has become a very popular and universally played game in such a short time, and who knows where this development will lead.

# CONTENTS

## Acknowledgements

Introduction.....	1
<b>1. Investigation Phase</b>	
Introduction.....	4
<b>1.1 Initial Investigation.....</b>	<b>5</b>
1.1.1 Few words about Handball Game.....	5
1.1.2 Some basics of Handball.....	5
1.1.3 Handball Rules.....	10
1.1.4 Define the Problem.....	14
1.1.5 Existing Procedures.....	14
1.1.6 Development Tool to be used.....	15
<b>1.2 Feasibility Study.....</b>	<b>15</b>
1.2.1 Financial Feasibility.....	15
1.2.2 Schedule Feasibility.....	17
1.2.3 Technical Feasibility.....	17
1.2.4 Operational Feasibility.....	18
1.2.5 Human Factors Feasibility.....	19
<b>2. Analysis and General Design Phase</b>	
Introduction.....	20
<b>2.1 New System Requirements.....</b>	<b>20</b>
2.1.1 Overview Narrative.....	20
2.1.2 System Function.....	20
2.1.2.1 About the Game.....	21
2.1.2.2 Basics.....	21
2.1.2.3 More Details.....	21
2.1.2.4. Exercises.....	21
2.1.3 Inputs to the system.....	21
2.1.4 Outputs to the user.....	21
2.1.5 User Interface with the system.....	22

2.2 New System Design.....	22
2.2.1 Performance Criteria.....	22
2.3 Implementation and Installation Planning.....	22
2.2.2 Preliminary System Test Plan.....	23
2.2.3 User Training outline.....	23
2.2.4 Preliminary Installation Plan.....	24
<b>3. Detailed Design and Implementation Phase</b>	
Introduction.....	25
3.1 Technical Design.....	26
3.1.1 Program Structure.....	26
3.2 Test Specification and planning.....	26
3.2.1 Module(Unit) testing.....	26
3.2.2 Integration testing.....	27
3.2.3 Function testing.....	27
3.2.4 System testing.....	27
3.3 Programming and Testing.....	27
3.4 User Training.....	28
System Test.....	28
<b>4. Installation Phase</b>	
Introduction.....	29
4.1 File Conversion.....	29
4.2 System Installation.....	29
<b>5. Review Phase</b>	
Introduction.....	30
5.1 Development Recap.....	30
5.2 Post Implementation Review.....	30

## Appendixes

- A: Time Table
- B: Structure Chart
- C: Context Diagram
- D: Data Flow Diagram