

CS/012

Athletics Information System:

Analysis and General Design

CS/013

Athletics Information System:

Design and Implementation of Prototype System, General Design of Target System

CS/014

Athletics Information System:

Detail Design, Programming, Implementation of Target System

PART B

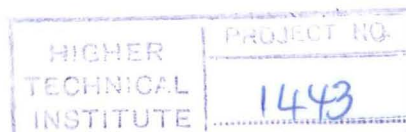
Project report Submitted by

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TESTING, USER TRAINING AND SYSTEM SECURITY

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TESTING

The system for the III Games of the Small States of Europe was designed to be used only for the days that the Games were going to be held. It has not been designed to be a General Purpose package, therefore testing had to be conducted very carefully and thoroughly to ensure that as much as possible no errors would occur during the four days of operation.

The following testing techniques and strategies were applied :

Unit Testing

White box testing was applied for every module to test all statements and conditions to ensure that no logical, interface or other errors would appear. This testing was applied by the programmers after the completion of each module.

Top Down Integration Testing

Black box techniques were applied to test and validate the system as a whole. Results produced by a combination of modules were evaluated against the expected results.

Validation testing

Validation tests were performed to ensure that the system which has been implemented was the right one and that all user requirements have been accommodated. Real time testing was conducted for various Sports such as:

Athletics during "THE KH' MATSIA "

Tennis in "PANCYPRIAN TENNIS GAMES"

Judo in "PANCYPRIAN JUDO GAMES"

Shooting IN "NICOSIA CUP"

Basketball PC/VAX during "CYPRUS BASKET CHAMPIONSHIP"

Volleyball PC/VAX during "CYPRUS VOLLEY CHAMPIONSHIP"

During the testing, operators were needed to use the system, so the testing of the system was combined with the training of the users. Special forms were designed with the necessary codes of the system for the operators (see Appendix I).

In order to comply with the standards of the III Games of the Small States of Europe, the Associations were asked to organize the various events that were going to be used for testing to be compatible with the system.

For example :

- *Four digit numbers were used for all participating athletes.*
- *Unique numbers for each player in Basket Ball and Volley Ball games were used.*
- *Calendar of events for the games were prepared well in advance.*
- *Input forms were handed in a prespecified order.*

It was obvious that during the games all Associations had to be in full cooperation with the information team. Testing helped to succeed such a cooperation since it gave to all parties the opportunity to work efficiently.

Many operational weaknesses and technical problems of the system were pointed out or discovered by the team and solutions were suggested to the Associations and implemented.

Where no real time testing was possible, extensive simulated testing with data of previous games was carried out.

SYSTEM TESTING

The system contained a lot of components (software, hardware - processors, li-vewere, communication lines, e.t.c) which needed a lot of coordination. It was necessary to test the system as a whole with all its components.

Performance Testing. During actual testings - MATSIA, Judo, Shooting - the performance of the system was checked.

Stress Testing. During people training, when all the terminals were used, memory allocation and response time were tested.

For the correction of errors Debugging facilities of the VAX/VMS was used.