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MARD – Maritime Academic Resource Database

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ABSTRACT: IAMU (International Association of Maritime Universities) was established fifteen years ago. For this moment IAMU content close to 60 Members Institution. One of the research activities in years 2012- 2014 was: preparing the algorithm for collect and analyze the necessary information and convert it into Matrix form. Both: IAMU MEMBERS INSTITUTION DATABASE and HUMAN RESOURCE DATABASE include comparison indicators such as academic degree, teaching subjects, qualifications, research experience and so on. In opinion of group of researchers new established database should be very useful and helpful in field of cooperation between IAMU Members Institutions.

1 INTRODUCTION

As mentioned IAMU has actively worked for 15 years as the network of leading maritime universities / faculties around the world, which is rarely seen in other academic fields.

With this philosophy of the organization in mind, the members have cooperated to achieve measurable and worthwhile outcomes in scientific and academic research, and in forward looking developments and practical applications associated with Maritime Education and Training [1].

In many countries, there is currently a vigorous debate between education and training and many more arguments to place emphasis on "skills" development. At present, there are no publications with comparable information about IAMU Member MET systems.

1.1 *Research Objectives*

There are three objectives for collecting information of the human resource database of IAMU member institutions (Fig.1).

1 To provide the possibility f academic collaboration based on the current situation in each member universities.
2 To provide the possibility of quality academic interaction with maritime education staff members and research staff.
3 To provide for safe navigation and clean ocean by improving quality of the maritime education, training and research [2].

This research work is an initial stage of comprehensive analysis of educational systems of IAMU Member Institution. Well prepared algorithm with strictly formed information and database on initial stage of research is to be collected by selected members of IAMU.

On second stage such information should be collected from all four IAMU regions. This database

in matrix form will be helpful in preparing for future IAMU Model courses.

1.2 *Concept of the Procedures [3]*

1.2.1 *(Plan)*

Decision of system of collecting of information of the IAMU Member Institution database and human resource database.

1.2.2 *(Do)*

To collect the information of the institution and human resource database of IAMU Member Institutions.

1.2.3 *(Check)*

To make sure the statistic database are correct and actual, minimize of missing parts of both databases.

1.2.4 *(Act)*

Using of database for academic exchange, information about publications of the IAMU Members possible cooperation with other databases and others.

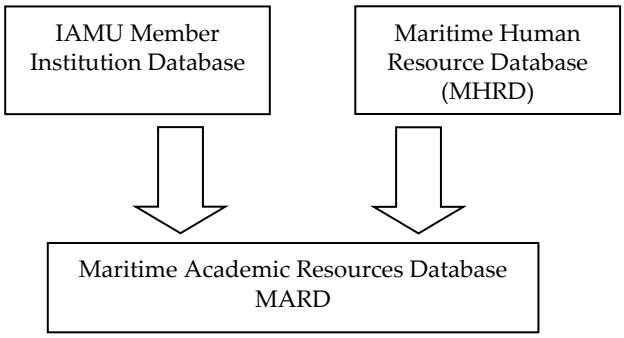

Figure 1. Structure of developing of MARD.

2 INSTITUTION DATABASE

In formal and informal discussion between representatives of IAMU Member Institutions, a lack of valuable information concerning national systems of MET, qualifications of teachers/instructors, existing system of professional career etc. have been observed. Proper collected information is very useful and utilized in different national MET systems and its exchange should be considered by IAMU members. Establishing a proper database according to original algorithm prepared by group of researchers gives a tool for developing National model and methods of MET systems (Fig.2).

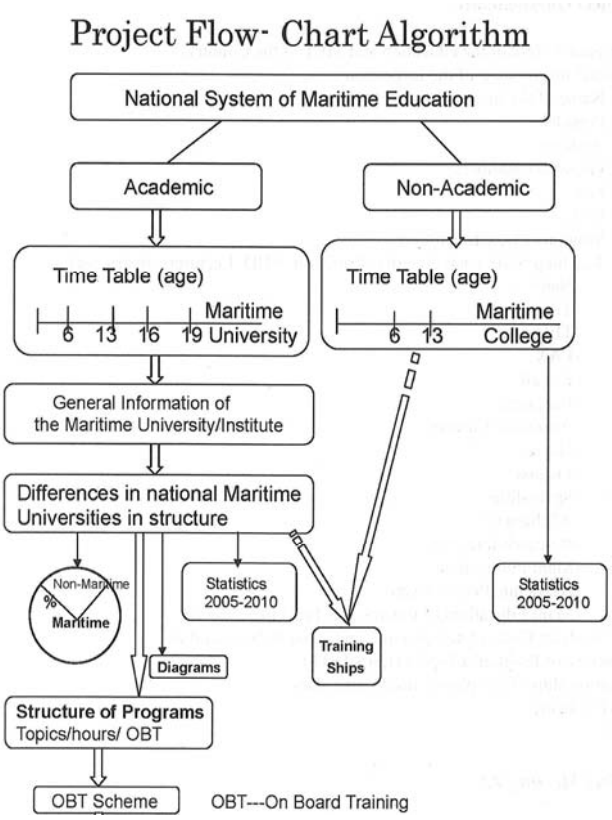

Figure 2. Institution collecting information algorithm [1].

Prepared Special Questionnaire help to collect of unified information from all IAMU Member Institution, content following items:

1 National system of the education and MET in the Country.
2 General information of the Institution
- Name of the Institution:
  President:
  Address:
  Phone / fax numbers:
  Fax:
  URL:
- Structure of the Institution
- Teaching Staff Total quantity (Professor, PHD, Lecturers, Instructor)
  Name
  Title
  TEL
  FAX
  E-mail
  Language
  Academic Careers
  Degree
  License
  Specialties
  Affiliations
  Research Interests
  Main Publications
  Academic Prizes / Award
  Main Educational Contents and Teaching Subjects
- Students / Cadets total quantity and separate by Faculties

3 Structure of Programs (Topic / Hours / OBT).
4 Training ship, if yes please insert particulars.
5 OBT Scheme.

Fig. 3 and Fig. 4 presents examples of received information from selected universities.

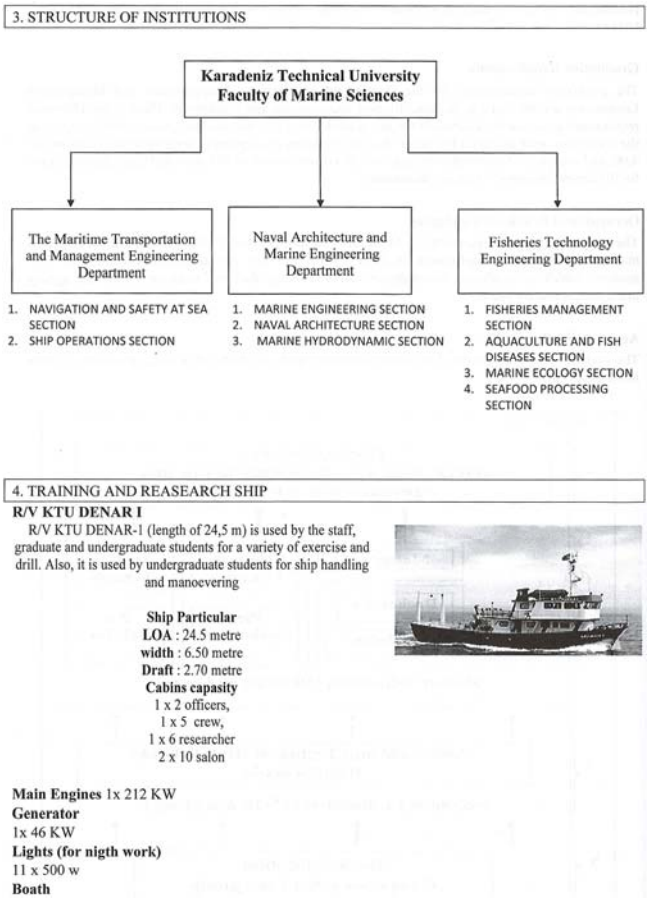

Figure 3. Example of part of General information of the institution (Karadeniz Technical University, Turkey) [3].

3 MARITIME HUMAN RESOURCE DATABASE (MHRD)

Teaching staff and research members are requested to input their personal data into the Maritime Human resource Database. The 3 objectives for the database are:

1 To provide the possibility f academic collaboration based on the current situation in each member universities.
2 To provide the possibility of quality academic interaction with maritime education staff members and research staff.
3 To provide for safe navigation and clean ocean by improving quality of the maritime education, training and research.

The database URL is: http://mhrc.imerc.maritime.kobe-u.ac.jp Fig. 5.

Logically – database is a collection of information in specific field or area of interests.

Every modern activity organization what IAMU no doubt is, should understand, that proper information is a crucial matter.

User can generate different list (ideal list) or (close to ideal list) according to expected needs.

Our database do not content any wrong information or mistakes – what is a great handicap of our HR base.

FACULTY OF NAVIGATION

Summer semester (IV); SUM of ECTS: 30

No.	Course title	Description	A	C	L	ECTS	Unit
1	Celestial Navigation	The algorithmization of computations on celestial navigation. The estimation of accuracy of astronomical observations and calculation of precision of celestial fix.	10	10		4	1
2	Construction And Stability Of Ship	Ship strength, ship equipment.	20		10	3	2
3	Maritime Transport Economics	Maritime transport and its functions in the global economy. Costs in maritime transport companies and their classifications. Charging schemas and practices; freight indices. Freight markets - their dynamic and methods of their analyses. Shipping policy and regulation schemas in maritime sector.	20			1	4
4	English	General English; Maritime English- Cargo Handling Gear. Containerization. Standard Marine Communication Phrases. MarEng. SMCP		30		2	24
5	Navigation	Great Circle, Rhumb Line, Accuracy Standards for Navigation, Chartwork Exercises.	10		20	3	1
6	Sea Environmental Protection	Sea Environments Protection' course gives overview of the situation of sea ecosystems and how to manage and protect it.	20			1	14
7	Maritime Law	Public maritime law. Maritime administration, (maritime office), maritime chambers, safety at sea, protection and preservation of marine environment. Maritime labour law. Elements of polish labour law. International Labour Organization, conventions ILO. International law of the sea (UNCLOS, territorial sea, innocent passage, straits, e. e. z, high sea area).	30			2	2
8	Cargo Handling And Stowage	The technical application of transportation science based on current trends is presented. During the lectures the most important properties of some group of cargoes connected with their safe transportation are discussed.	20		20	3	2
9	GIS - ECDIS	GIS - Definition, Vector Data versus Raster Data, Data Display, International standards for ECDIS, main Types of ECS, ECDIS Data, main Functions of ECDIS, Presentation of ENC, Navigational sensors, Route Planning, Route Monitoring, Special Functions, Data Updating, Alarms and Indications, Malfunction of ECDIS, System Integrity, Back-up Arrangements, System Limitations.	10		20	2	1
10	Navigational Equipment	Basic radar principles, radar system – operational principles and controls, false and unwanted radar responses. Radar navigation, radar beacons, passive and active radar reflectors	20		10	3	1
11	Sports	Teaching water life-saving techniques.		10			23
12	Navigational Practice					6	1

Figure 4. Example of part of Structure of Program (Gdynia Maritime University, Poland) [3].

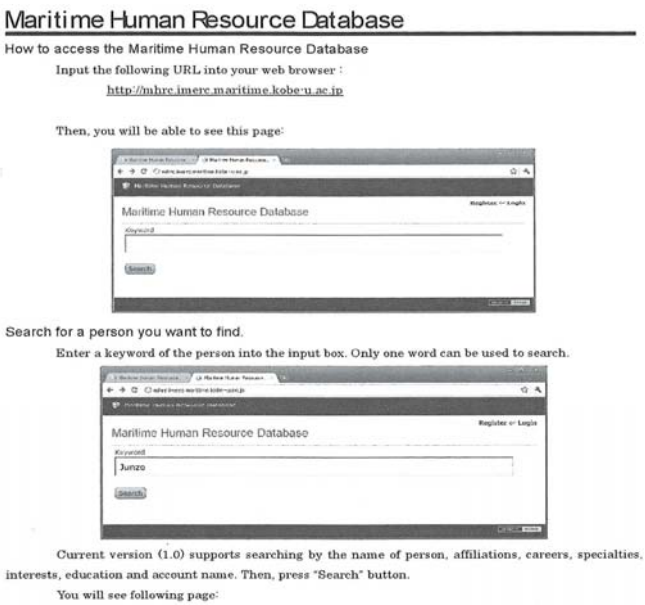

Figure 5. Example of screenshot of access to the Maritime Human Resource Database [3].

Our database is practically a modern version of traditional files but exist not only in one direction (how it is in library database which specifically is prepared only to make a selected list of books / articles). Different reason of using MHRD.

MHRD gives a quick access to information, easy reporting Fig.6.

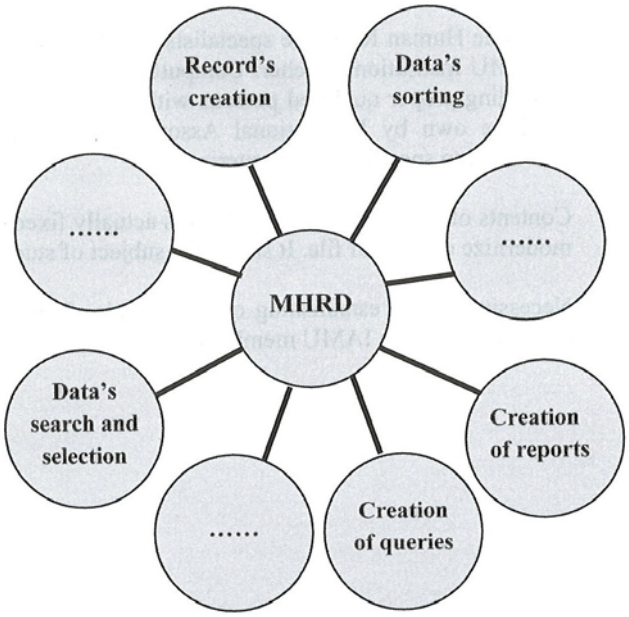

Figure 6. Function diagram of MHDR [3].

Fig. 7 presents example of personal profile of one of MHDR user.

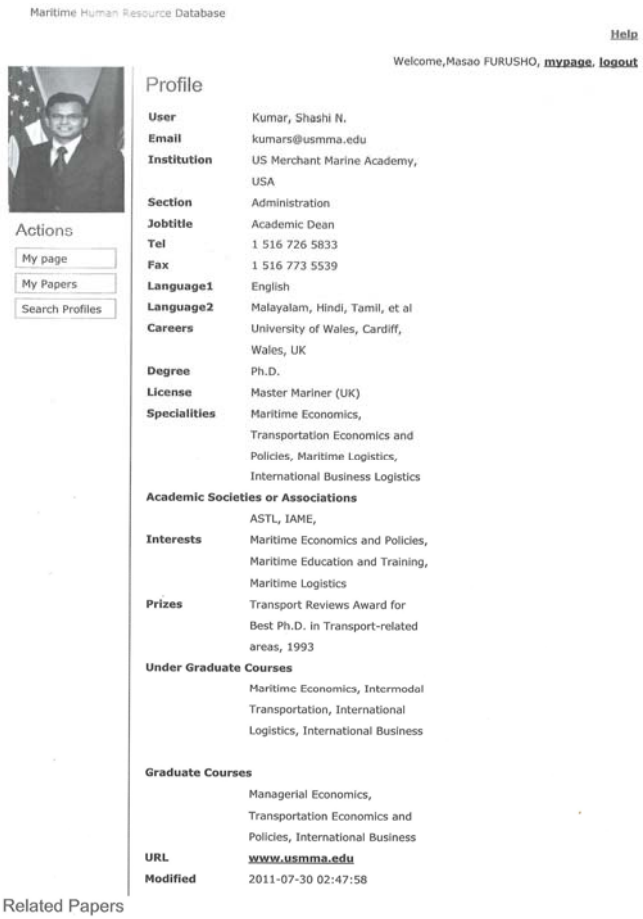

Figure 7. Example of personal profile of one of the MHDR user [3].

4 UTILIZATION OF MARD

In 2014 MARD Project was finalized and the database was transferred to IAMU. The number of registered users has increased to 708, and all IAMU Universities/Institutions were registered into database.

The database will be used by IAMU faculty members who are looking to collaborate with other researchers in their field, create new educational exchange opportunities, etc. The current registered\non-registered restrictions will stay in place.

Expectations of possession users may require to permanent develop of database.

All records of registered people in Maritime Human Resource Database should be every year or every two year updated.

Computer interlinks give the possibilities of approaching to database in global dimensions:

- Mailing – way of activity using e-mail addressing from database,
- Teleconference – way of activity using mobile phone / computer to initializing voice conference with several person,
- Videoconference - way of activity using mobile phone / computer to initializing voice conference with several person,
- To use above ay of communications as tele and video conference the database should be increased by two additional fields: the Skype identifier and website address on Facebook social network,
- Conference information sent to selected addresses for people who declared interest in separate field of activity.

Good idea is to create moderator accounts for each institution. Every institution might have their own account, where a moderator could access and update crucial staff information that is found in the database. The final goal is for IAMU members to have access to and use MARD, thus ensuring that a maximum number of users can benefit from the database [4].

Dean of Navigation Department in Gdynia Maritime University Prof. Weintrit declared that in process of preparing 10th Conference TransNav (June 2013) was used MHRD, but only in selected list of addresses. In process of preparing 11th TransNav Conference the MARD has to be used in more wide scope.

IAMU directory contain only Presidents and contact person addresses. MHRD gives a chance to approach to much more people and strait to people may be interested in particular subject of conference.

Maritime Human Resource specialists face the increasingly challenging issue an ever-greater number of IAMU Institutions teacher. Computers can obviously be a tremendous help for different processes of finding proper qualified persons with their skills, personal experience, can be stored in centralized database own by International Association of Maritime Universities (IAMU) and then retrieved according to specific search criteria.

Contents of personal files in MHRD is actually fixed but maybe near future will require developing or modernize content of file. It should be subject of study in next period f develop of project.

Necessity for the establishing of a databank of Different Specialties Teachers, Instructions etc. was discussed between IAMU members institutions [4].

The database, when it becomes functional, will provide for the possibility of academic collaboration among member institution. In that respect it must offer extensive research functions, among others, and user-friendly data import and export functions.

The database could improve quality and increase communication in areas of academic interaction between maritime education staff and research members. The database could improve the quality of maritime education, training, and research and thus provide safer navigation and cleaner oceanic environment [5].

To access the MARD database please enter on website:

http://mhrc.imerc.maritime.kobe-u.ac.jp

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