

Establishment of Web-based Asian Network for Education in Nuclear Technology

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1. Introduction

The Korean nuclear community recognizes the importance of nuclear knowledge management and the essential role of nuclear manpower development. International cooperation in the field could be an important vehicle for the promotion of attracting the young generation, facilitating the accessibility of nuclear personnel to the international forum, developing the careers of nuclear personnel, upgrading education and training capabilities, and increasing the mutual benefits. The expected framework of future international cooperation for nuclear education and training may need to focus on the integration and sharing of available resources at national, regional and inter-regional levels [1,2]. A good example of the IAEA activity set forth echoing the expectation is ANENT (Asian Network for Education in Nuclear Technology) using the web-based network [1-3].

2. Development of the ANENT Website

The web-based networking is to establish an effective and sustainable focal point, which fulfills effectively the following roles of:

- communication among the ANENT members;
- connection to sources of information/materials and courses for the nuclear education and training;
- sharing of collected information/materials through a database;
- support for the ANENT activities.

2.1 Functions

The functions of the ANENT website have been identified in terms of the main functions and the web operation functions. Main functions in the form of menu items have been set to realize the targeted roles, and they are "About ANENT", "Activities", "NET DB", "Related Events", "Board", "Link", and "Photo Album". Of the functions, a primary emphasis has been put on "NET DB" (database for nuclear education and training information) and "Link" at this stage. "Activities" is also an important function because the group activities provide the great resources of ANENT website. Operational functions are to help management and user convenience.

2.2 NET DB

The hierarchy of the NET DB is structured in five levels namely "Country", "Institution", "Field", "Course (or Subject)", and "Course Material". Each level includes

necessary sub-items. Figure 1 depicts the overall scheme of the NET DB. Data input is conducted by the data providers who are designated by the national coordinators or the group activity leaders and authorized by the ANENT web administrator.

Country	Institutions	Field	Subject/Course	Material
	<ul style="list-style-type: none"> • Institution - Name - Postal Address - Web Site - No. of Researcher - Major Fields - Equipment • Contact Person - Name - Position - Tel - Fax - E-mail - Postal Address 	<ul style="list-style-type: none"> - Nuclear Power - Non-Nuclear Power - Medical Applications 	<ul style="list-style-type: none"> - Title of Subject/Course - Contents of Subject/Course - Level - Duration - Credits - Language - Subject/Course Material - Title of Text - Title of Cyber Multimedia - Prerequisite Subject/Course - Accredition Organization - Domestic & Foreign Linkage 	

Figure 1. The structural hierarchy of the NET DB

2.3 Link System

The link of the ANENT website with other relevant websites is considered as a means of information exchange and networking. The link system is designed with two access modes, i.e. access by an institutional hierarchy and by a subject-wise hierarchy. For the institutional hierarchy, the top level is grouped as IAEA, ANENT members, collaborating members, and internet resources. Again each group is specified until specific websites are reached. For the case of the subject-wise hierarchy, websites or web-pages available to worldwide, are grouped into a number of subject areas so that specific information can be reached by the users in an effective way. Another feature of the link is an interconnection between the ANENT website and INIS2.com[4]. Also substantial effort has been made, on the part of KAERI, for the establishment of a cyber training system on its own website [5].

2.4 Overall System Structure

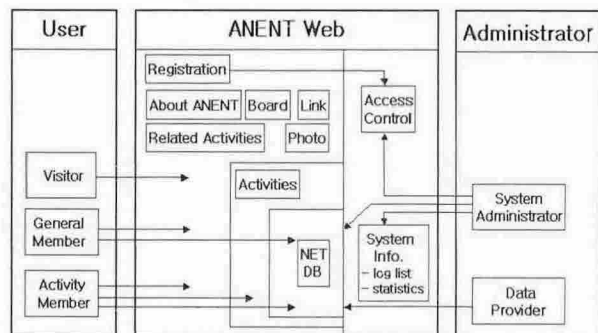


Figure 2. Overall structure of the ANENT website

3. Future Plan

The outcome of the ANENT website establishment will be reported to the second ANENT Coordination Committee meeting which is planned for 2005. Until that time additional data for the NET DB and information for other menu items will be added, website functions will be improved, and an operation process established through the coordination of KAERI with the ANENT member country coordinators.

Much more long term improvements will be required to accomplish the intended objective of the web-based networking for the ANENT. For this, the upgrading of the web functions, maintaining the required quality of the contents, and the assurance of a sustainable operation seem to be important issues.

4. Conclusion

As part of the group activities of the IAEA's program on ANENT, KAERI has established a website (www.anent-iaea.org) as shown in Figure 3, where the image of front web-page highlights "NET DB" and the group activities which are inter-connected. The required information and material for nuclear education and training is being collected and loaded onto the database. Also, being given great attention is the link of the ANENT website with relevant sources. The website is to be improved step-by-step, while its effective and sustainable operational system will be secured so that the intended web-based networking within the ANENT framework can be accomplished.



Figure 3. The front menu page of the ANENT website

The web-based networking is expected to promote communication, and the sharing of information and materials including multi-media and cyber material related to nuclear education and training that are available from ANENT members. It will also promote a joint creation of the required information and material. These will also facilitate greatly ANENT members in their self-learning as well as their implementation of and participation in the specific ANENT activities, e.g. regional and bilateral education and training programs including distance learning. Also members in need of introducing new nuclear programs or expanding their on-going programs will benefit from establishing the required human resource development infrastructure. Further, young generations in the Asian region will be encouraged by the network which intends to facilitate a regional level mutual recognition of educational credits and thereby provide more meaningful opportunities for region-wide master and doctoral courses. Finally, the web-based network for ANENT is expected to play an important role within the framework of a global network, cooperating with other networks like the WNU (World Nuclear University) network [6]. Thus this will lead to the establishment of internationally qualified curricula to deal with advanced nuclear technology combined with the other emerging technologies including bio, nano, information, and space technologies.

REFERENCES

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- [5] Website of Nuclear Training Center of KAERI, <http://www.kntc.re.kr/>
- [6] Website of World Nuclear University (WNU), <http://www.world-nuclear-university.org/>