Chapter 13

Development of a Global Policy of All-Pervading E-Learning, Based on Transparency, Strategy, and Model of Cyber Triple H-Avatar

Vardan Mkrttchian
HHH Technology Inc. (HHH University), Australia

Alexander Bozhday
Penza State University, Russia

Alexander Bershadsky
Penza State University, Russia

Tatiana Noskova
Herzen Russian State Pedagogic University, Russia

Svetlana Muminova
Russian State University of Tourism and Service, Russia

ABSTRACT

This chapter brings the sciences of services to a new level, to implementation of embedded systems and networks and is becoming to Sciences of Services with the Cyber Control and Engineering (SSCCE). Purpose of chapter is show possible ways of developing global policy all-pervading e-learning, based on transparency, strategy and model of Cyber Triple H-Avatar. Realization of this purpose is the result of interdisciplinary design, which can be roughly divided into three main components. Stage of solving the problem at the application level, when need to find the right methods and algorithms without implementation details. It is the work of specialists of computer science, it is called an architectural, or high-level system design. The implementation phase, during which engineers, programmers and application specialists provide a previously defined requirements such as functionality required dynamic behavior, reliability and safety of operation, size, power consumption, cost and manufacturability of replication, need people equally well versed in technology and business. Us are offered is use aspects method of the designing.

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INTRODUCTION

Since widespread global network of Internet, telecommunications technology and personal mobile devices to the concept of Distance Education (DE) came to a new level. However, at the same time new challenges have emerged. Educational resources and accumulated experience lacked a unified standard and could not be used in the global distance education systems. For the same reason, the life cycle of such resources was quite short, the cost of developing new resources was high, and the value was limited to commercial distribution.

Globalization of the education system (and distance education in particular) required a strict international standard for educational information systems, distributed approach to the storage of educational resources, educational platform interoperability and technical environments. Work in this direction led to the emergence of a new concept of learning – electronic learning (E-Learning). UNESCO experts define as E-Learning training through the Internet and multimedia. Obviously, such a definition is too generalized and covers not only the training through the Internet. The concept of E-Learning covers the design and standardization of training systems. In particular, as defined:

- Learning Technology Systems Architecture (LTSA);
- Learning Management System (LMS);
- Learning Content Management System (LCMS);
- Requirements to model student and teacher;
- Requirements for the content of training courses;
- Storage requirements of educational resources, and metadata;
- Requirements for forms of interaction of the student and the teacher.

Ideology of E-Learning based on the principles of multiple use (reusability) and free distribution (share ability) copyright courses. Therefore, developers of training courses must adhere to generally accepted standards. To date, the most widely used model of the following courses:

2. System specifications consortium of LMS (such as for example Content Packaging Specification, Metadata Specification, Digital Repositories Interoperability, Digital Repositories).
3. Specifications Committee of AICC (Aviation Industry Computer-Based Training Committee), originally intended for the development of computer-based training systems and technologies in the field of aviation industry.
4. Specifications of SCORM (Shareable Course Object Reference Model), developed within the framework of ADL (Advanced Distributed Learning), performed by the Ministry of Defense. This is the industry standard for exchange of training materials based on tailored specifications ADL, IEEE, IMS, AICC. SCORM is the basis of the model modular design of educational material by separating the individual autonomous educational units (SCO - Shareable Content Objects) and their representation in the Web-specific repositories. SCO modules can be assembled together in various combinations and compiled into electronic textbooks using LMS-system.