Automation Selective Monitoring Base on University Training and Research Satellite Receiver Teleport

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ABSTRACT
This paper deals with the study of information technologies and approaches to solve problems related to the automation of selective monitoring on the base of university training and research satellite receiver teleport. Indeed, the utilization of satellite TV technologies at all scientific research and educational process stages could be called a new educational paradigm that has a huge potential for complete development of each student and teacher during educational and research processes. The authors study and describe the approaches of such companies as BBC, SES, Red Bee Media and the two other systems.

Keywords: Domain-Specific Ontology, EPG (Electronic Program Guide), Satellite TV Channel, TV Program, TV Program Ontology, TV Programs Self-Recording

INTRODUCTION
Educational and experience level of a modern man is determined by his intellectual potential, ability to produce, internalize and practically use the new knowledge and technological innovations that altogether lead to the new forms and methods of scientific research organization and educational process.

On the other hand the innovation and competitive ability level of higher education establishment is determined by its global (worldwide) rankings (ARWU, THE, QS, GUR, WEB, PRSP et cetera) that are generally based on the appraisal of its research achievements according to different criteria.

In this situation regular modernization of scientific research and educational process organization forms and methods is not only necessary but also compulsory in the modern higher

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1. Regular modernization and development of scientific research and educational process organization forms and methods is nowadays connected with implementation of ICT (information and communication technologies) and new digital TV technologies (DTVT) to the scientific research and educational process. Currently the DTVT are widely and intensively being adopted by many leading universities of the world. In many places we can find the examples and organization juridical special aspects of practical use of subject resources of opened (Free-To-Air) public satellite digital video broadcasting and training and research satellite receiving teleports concept (TRSRT) (Liu, X., et al., 2011; Li, Y., et al., 2013; Milicic, V., et al., 2013; Rizzo, G., et al., 2012; Milicic, V., et al., 2013; Pablo C., et al., 2014).

For a modern progressive university TRSRT is a complex of interrelated means and specifications, general concepts, standards, rules and theoretical innovations that along with ICT and other DTVT determine not only functioning but also development of scientific, research, educational and innovative structures on a higher education establishment scale. By the authors’ opinion the use of TRSRT (even at minimum configuration) allows:

- Higher education and scientific establishments to have continuous access to local and World scientific data resources of satellite TV channels;
- Higher education establishment to organize extra support for its technologies of distance education;
- Every student, teacher or scholar to preplan on the base of available information (satellite TV channels programs) and make the personified temporary records (for the scientific and research purposes) of current thematic stories and information cognitive programs in any available present languages in the computer classrooms (for postponed review). It means that with the help of satellite system we get supplementary global information source aside from Internet and other sources;
- To provide the required videos broadcasting to different auditoriums with interactivity function;
- To provide online translation of performances of university, city or state top figures, to the big TV receivers situated in the halls of higher education establishment different buildings;
- To provide the satellite channels important information broadcasting to all higher education establishment buildings;
- To habituate the future specialists to team work within the frames of satellite TV structures and learn them to make researches using the satellite TV technologies and TV channels.

According to the authors study, utilization of TRSRT in scientific researches and educational processes is based on solving the following tasks:

- Collecting, storage, processing and analysis of satellite TV channel program in real-time mode;
- Creation of the general EPG\(^1\) (Electronic Program Guide) of satellite TV channels in the real-time mode;
- Collecting, storage, progressing and analysis of users personal preferences;
- Creation of satellite TV channels personal program in real-time mode;
- Organization of personal subject record procedure of satellite TV channels program;
- Creation and organization of common video archives;

\(^1\) EPG: Electronic Program Guide.
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