THE ELECTRONIC SYSTEMS FOR EDUCATION OF STUDENTS
(THE BASIC PROBLEMS WITH THE IMPLEMENTATION)

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ABSTRACT
The education is process of passing the knowledge from the teacher to the student. The information technology could facilitate this process. The author is interested in the problem of implementation the Internet coursewares at the Czech Agricultural University in Prague. The goal of this work is to sum up the possibilities and limitations of the electronic coursewares in the process of education.

KEYWORDS
Internet, information technology, courseware, education, implementation

INTRODUCTION

Waking up the students' elation to create and recognition is the most significant knowledge of the teacher, Albert Enstein, How I see the world, page 17. 1993 NLN, ISBN 80-7106-078 –X.

THE CONCEPT OF THE EDUCATION OF CHILDREN, TEENAGERS AND ADULTS

There are few good teachers   and all experts as well. The quality of teachers is in the ability of empathy into psyche of the student. It is not easy to teach children. It is not easy to learn scholars, students and adults either If we accept Albert Einstein's opinion, we can try to apply it into the education.

We could separate the   education process into two parts
- The effort to interest the students
- The effort to increase the degree of the students' knowledge
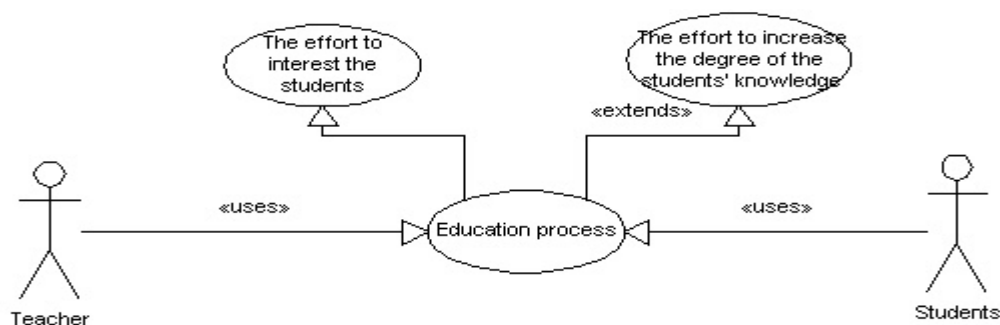
These parts are influencing each other. It is not possible to increase the degree of knowledge, without the interest. But having the interest only is not enough. The study of all the problems, without the ability to read and write will be very difficult.

The educational theme should have following
- Axioms – The student have to absorb Axioms . Whether not, the teacher has to explain the elementary problems once again. Therefore, it is difficult to explain something more.
- The logical algorithms and operations. These algorithms and operations should be in the optimal degree of complicacy. This complicacy can neither be high nor small. Otherwise the theme become uninteresting.
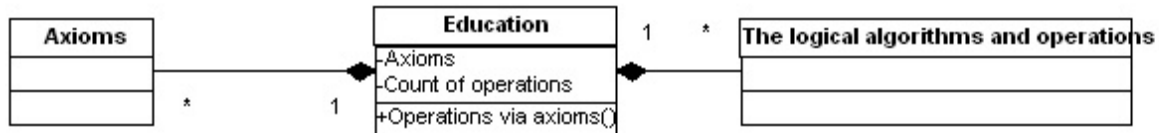
If the educational theme contains these both parts, we will be able to teach it. We suppose we will have a perfect teacher. Now there is a problem, how to test the students.

THE METHODS OF TESTING

- The axioms student has to know by heart.
- The student has to practice the logical algorithms and operations.

Problem in Setting Up the Axioms

To set up the axioms is a big problem. If we set up these axioms as the small model parts of the nature, we will have a lot of them . If we set up them too high it might be a problem to understand them.

Following example is authors" experience

Some students of the Czech university of agriculture are able to reproduce the Archimedian principle, if we ask them. This reproduction we can take as an axiom. Unfortunately, they do not see the point. Let we try to ask them, why the concrete ship is floating, but the concrete block no!

The Reason

The student correctly absorbed tenor of the principle. But he did not see the point. The teachers' mistake is in a insufficient stress on the logical point of the study matter (theme).
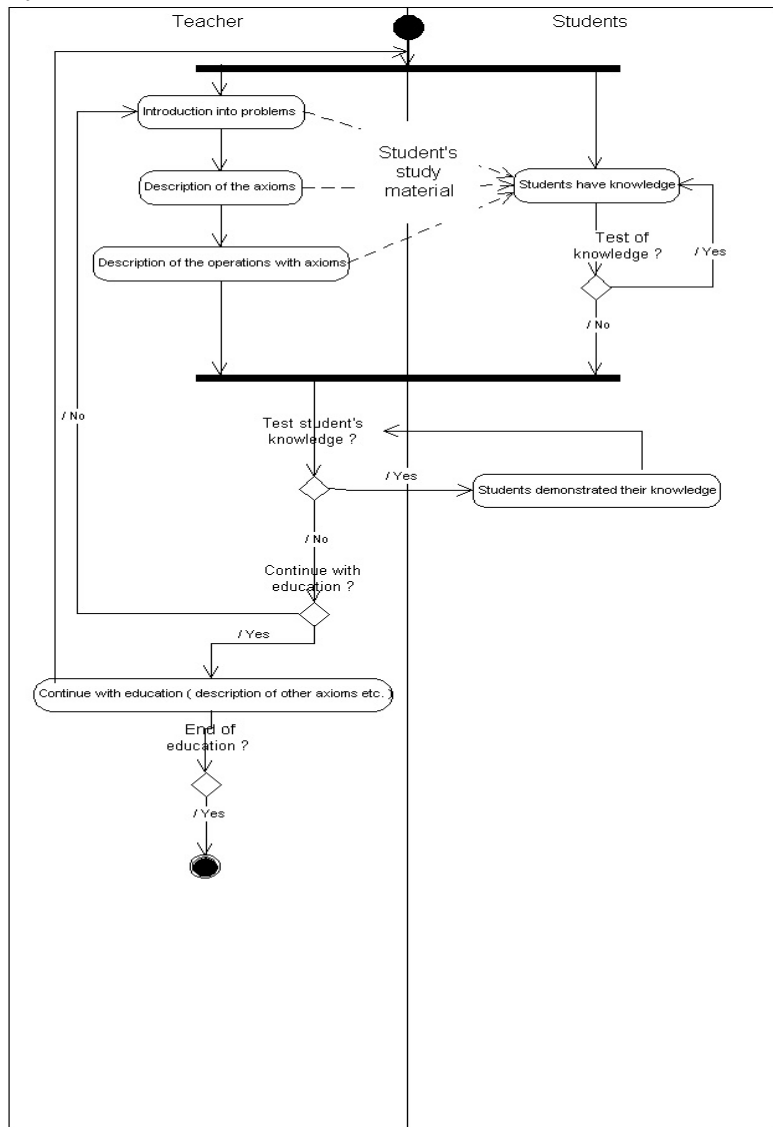
ELECTRONIC EDUCATION SYSTEM

We can take the electronics education systems as the simulators for studying. The machines, which are able to teach or test students according to the selected algorithm. Their abilities are lower smaller than abilities of the good teacher. If enough effort is dedicated, I hope that the good education simulator will be created. The machine that helps to exercise the student's ability to learn the axioms and tests them.

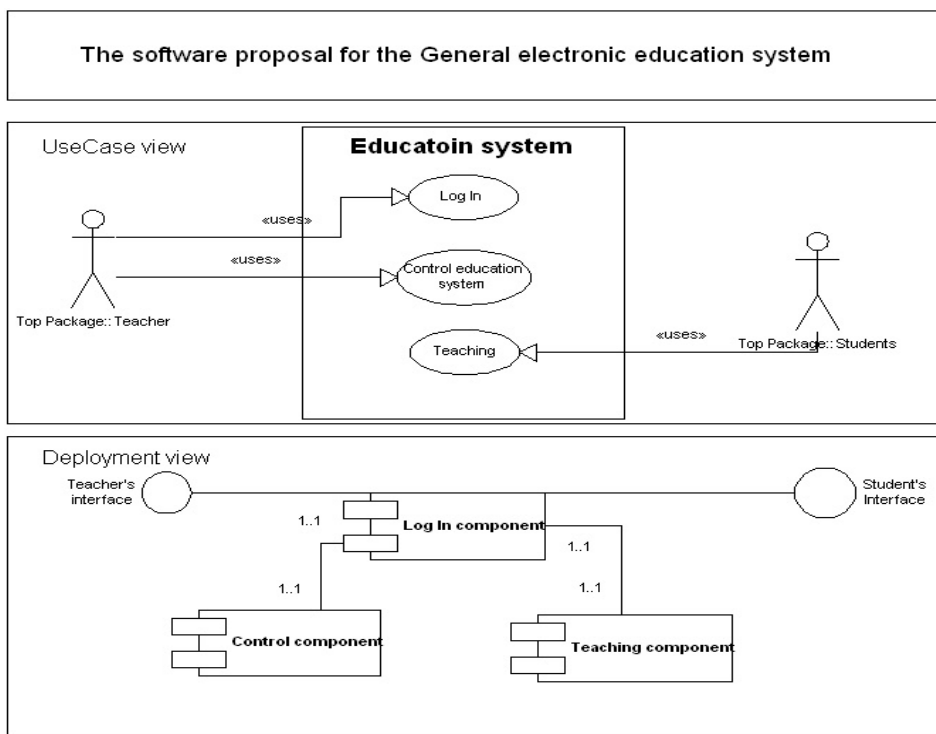## THE ELECTRONIC EDUCATION SYSTEMS VERSUS THE TEACHER

I think the electronics education systems will be never so elastic, as to will be able to compensate the good teacher. It can contribute with education of the students. This system can contribute in the practicing the elementary building stones of the education. If will be this system some type of the artificial intelligence, may be, it can in agreement with the students answers to generate new logical questions. So it can practice the reasoning. This system will be a contribution for the society. Every student might have a private electronic teacher. This teacher might be teaching the student on his adequate logical level. This system can remove the standard problem in the education process. He is typical for the elementary schools. For some students is the study matter so easy, for some hard. It does two negative effects. Better students are braked the worse students. The bed students resign on the study matter. Is it on the teacher, how settles with them.

PROPOSAL OF SOLVING

The computers can give as a lot of opportunities for developing some education systems. If we achieve the objective, we can better teach the students. The teacher can to concentrate his interpretation on the elementary axioms, he can teach how make the results from the axioms. He can to learn for example the result from the Archimedes principle. The machine can test students' knowledge of the axioms.

How to create the electronic education system

This model is the guide for Electronic education system developers.

From this first view we are able to predict the technical structure of system. We can use block schema too.
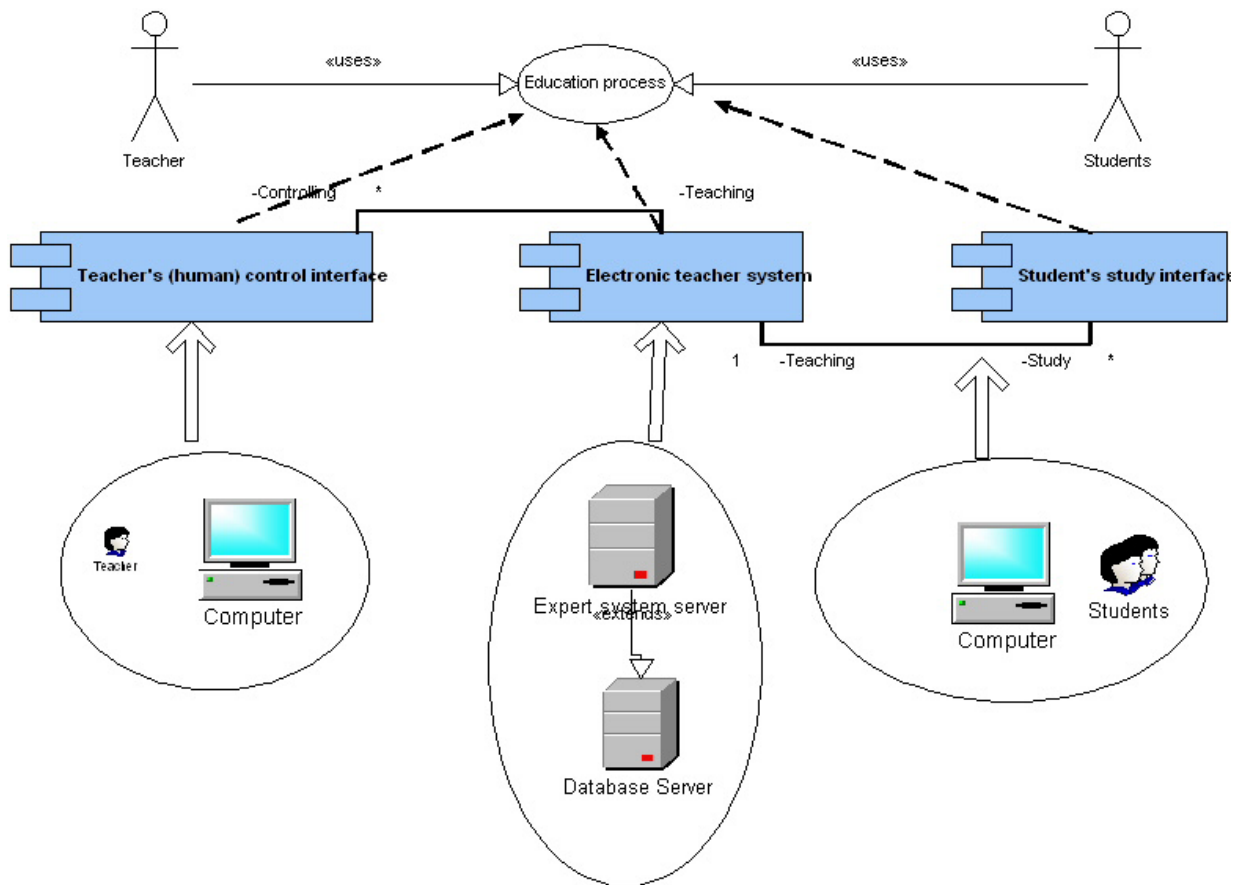
Because every information system (electronic education system too) is not possible to describe in generally, we cannot to continue with relevant analysis. For every component is necessary to create activity, class, and sequence diagram.

Nevertheless, we know elementary parts of the General electronic education system now.
1. Hardware
    a. Personal computers – Students, Teacher
    b. Servers – machine for student Expert system, may be database server
2. Components
    a. For controlling
    b. For Teaching
    c. For studying
        i. All from them expectant Log In component
3. Work procedures
    a. Control procedures from the teacher to system
    b. Study procedures from the student to system
    c. Procedures in system between teacher and student interfaces

Now is necessary good analysis of collection of requests on the electronic education system. It depends on an applicant.

DISADVANTAGES

The inadequacy of this solve is in the necessity to have got a good computers. Next is necessary to have got appropriate software. Student can take the scripts, books or notebooks into bus, bed or on the garden. This mobility is not possible with the computers. The mobile computers (notebooks) are heavy and their batteries do not last very much.

CONCLUSION

The computers can give as a lot of opportunities for developing some education systems. If we achieve the objective, we can better teach the students. The teacher can to concentrate his interpretation on the elementary axioms, he can teach how make the results from the axioms. He can to learn for example the result from the Archimedes principle. The machine can test students' knowledge of the axioms.

Nevertheless, we are able to create "intelligent – expert" machine for teaching. Our technologies give as a lot of opportunities for creating these types of education machines. Is only necessary to have a good control over them. It presents the Control component in our models and teacher's control procedures.

Electronic teaching system presents the Expert education system. It can be for example some neural network or only standard program with good developed database. Is necessary to have got a lot of good examples for training neural network in first possibility or good data in the database in second possibility. But control procedures over them are necessary too.

The last (general) part from them is the student study interface. This interface must be comfortable, logical and good ergonomic designed. Be user – friendly is first step for success. This interface must to have the easy sample of axioms and operations. This "blue" window is example of the electronic study system from the Kontis Company. This example is "management teaching part" from the big teaching system. It's a good inspiration for the education systems developers.

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