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**MULTIMEDIA TOOL FOR ORGANIZATION AND CONTROLLING OF TRAFFIC**  
**MULTIMEDIÁLNÍ NÁSTROJE PRO ORGANIZACI A ŘÍZENÍ DOPRAVY**

**Abstract**

This article briefly describes multimedia tool which can be use especially for teaching subject Organization and controlling of traffic. Fundamental parts of the tool are textual and pictorial materials set to HTML format. Further part of the tool contains some collections of questions, video sequences, lectures at PPT format etc. This study material was prepared according to IGIP standards.

This paper was made with using outcomes of the project number 1661/2005/F1/d "Study multimedia materials for teaching the subject Organization and controlling of traffic" which is realized with financial support of state budget thorough the Fond of high school development.

**Abstrakt**

Príspevek ve stručnosti popisuje multimediální studijní pomůcku pro výuku předmětu Organizace a řízení dopravy. Hlavní části pomůcky jsou textové a obrazové materiály převedené do HTML jazyce. Další části pomůcky obsahují okruhy kontrolních otázek, videozáznamy, přednášky ve formátu PPT apod. Tento studijní materiál byl zpracován podle standardů IGIP.

Príspevek byl zpracován s využitím výsledků projektu č. 1661/2005/F1/d „Studijní multimediální materiály pro výuku předmětu Organizace a řízení dopravy“, který je realizovaný za finanční podpory ze státních prostředků prostřednictvím Fondu rozvoje vysokých škol.

**1 Introduction**

Subject "Organization and controlling of traffic" was recently taught in one semester for the specialization "Operation and maintenance rail vehicles", for branch "Operation and maintenance of road vehicles" master degree on the Institute of Transport, Mechanical faculty VŠB – Technical University Ostrava. From the academic year 2004/2005 is the subject already taught in two semesters as a Organization and controlling I. and Organization and controlling II for the specialization "Transport technique and technology", and branch "Road traffic" master degree at continuing study.

The students are familiarized with the kind of organization and controlling at road traffic, theory of traffic stream, draft of signalization plans on the crossroads, preference of Mass transport, monitoring and evaluation of conflicting situation in road traffic by using video apparatus, road accidents etc.

In the practice part students pursuing among others their own traffic monitoring and draft of fixed signal plan on the chosen crossroad. Significant part of listeners than continue in this problematic by writing their diploma work or later dissertation.

It is necessary update the content of the subject "Organization and controlling of traffic I. and II" because of permanent evolution in this field, especially in the sphere of automatic collection of

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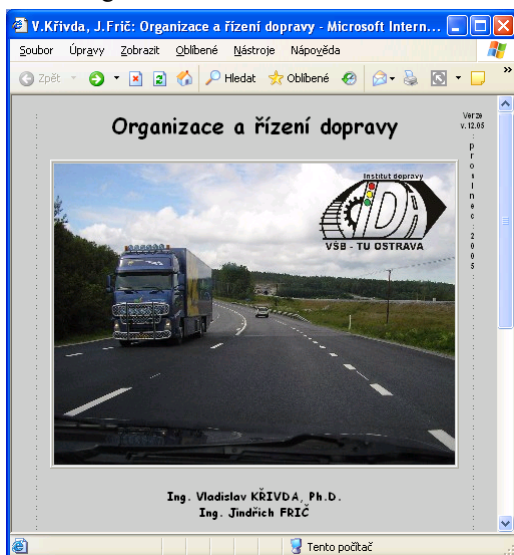
data and telematic. However in the last few years students on the lectures or practices could meet mainly just oral form of teaching, with out possibility of quality presentation with using modern technology. At the self-study field the students could use only their notes from the lectures.

That's why is important to ensure for the students more visual form of teaching by using multimedia presentation. Considering the character of the subject is maximally suitable make the problematic more interesting on the practical examples. Multimedia studies materials of mentioned subjects allow to students make the problematic easy and understand the principle. As well as acquire easy access to complex study material (CD, internet).

## 2 Targets and way of solution of the project

As a main goal which was specified are follows:

- Creating of multimedia study tool for teaching subject "Organization and controlling of traffic I and II", eventually following subjects accessible on CD or on the web site.
- Using this tool while teaching on the lectures and practices and this way make the teaching more quality and fast.
- Possibility to practice mentioned subjects in the frame of self-study by using web sites or multimedia CD.
- Possibility of multimedia presentation an also more complicated problems from the practice.
- Regular update considering to relatively fast evolution in the field of organization and controlling of road traffic.



Picture 1: Introductory page of teaching tool



Picture 2: Example of content

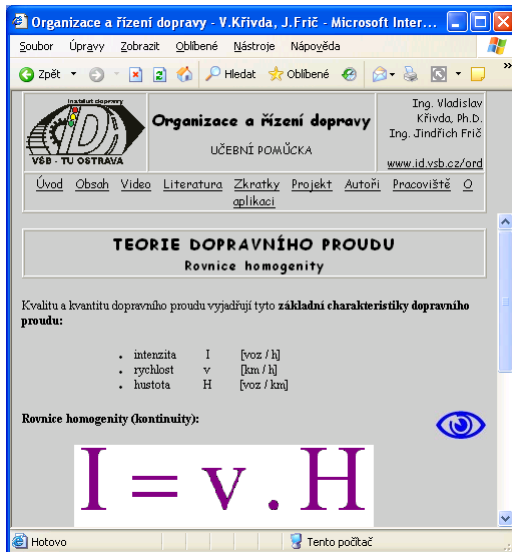
The way of solving the project is possible to summarize in to the following steps:

- Theoretical part of the subject will be innovated following current knowledge from the field of organization and controlling of road traffic.
- Previous part will be completed by visual examples together with graphic enclosures and examples for practicing when self-studying.
- Upcoming materials will be processed in synoptic form of HTML. In this way it will be possible to use them normally by using web site explorer or on the teaching CD and as well in standard teaching process.

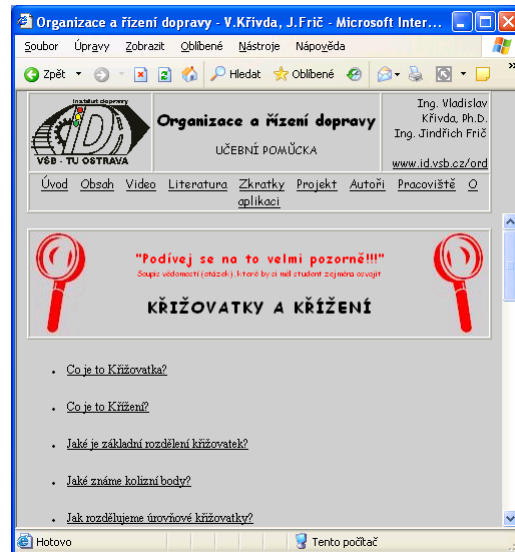
### 3 Extract of the study tool

After opening teaching CD or other source of data and confirmation introductory page, picture 1 will be open page with contents. In the time of creation was processed following chapters from the organization and controlling of road traffic. History of the development; introduction to organization and controlling of road traffic; basis of road traffic; crossroads and intersection; roundabouts; draft of light signalization; theory of traffic stream; traffic monitoring; video analyze of conflicting situation; parking, stopping and staying; rail intersection; stops, station, lines of mass transport; systems; ....; preference of mass transport; cyclist transport; pedestrian traffic, passageway of the roads thorough inhabited areas; traffic accidents and road safety; using of telematic service fleet management for improving economical efficiency of lorries; other and supplements.

Detail dividing of the theme will open after clicking on arbitrary hypertext, picture 2. Main text is fulfilled by appropriate amount of pictures, tables, formulas etc.(with hypertext connection on them). The most important curriculum is marked with icon with eye shape (picture 3), what mean "look here carefully". Student knew this way already during teaching on the important passage of the text, formulas, term etc.



Picture 3: Icon with eye shape  
„Look here carefully!“



Picture 4: Set of control questions

Each chapter have own set of question (picture 4), what is in fact list of knowledge, which student should learn (question should be for example part of knowledge test or final examination). This parts are market as "Read it properly and carefully", also there is possibility to achieve them from the content by clicking on the icon with shape magnifying glass (picture 2 on the right site). Each question "is prepared as hypertext", it make possibility for the student to find corresponding part of the text and this way prove his knowledge. Part of this set of question are concrete assignment of examples for practicing (solution will be accessible here).

Some chapters contain in the content camera icons (picture 2 – right site down). And when clicking the icon a content of video sequences connecting to actual problematic will open (traffic monitoring on the crossroads, crash testing etc.)

At the end of content are bring out presentation of concrete lectures, which are primary determine for schoolteacher. There are also some examples from practice (project etc.).

At the top header of each page are among others "quick lines" for example content, video, recommend literature, used abbreviation and information about project, authors and their workplace, also about application (picture 2 at the top).

#### 4 Conclusions

Presented teaching tool, named as “multimedia study tool for teaching subject Organization and controlling of traffic”, will serve to students for studying not only already mentioned subjects “Basis of organization and controlling of road traffic”, which is from the academic year 2005/2006 taught at bachelors study program and in specialization “Traffic technique” and ”Traffic technology”-branch of “Ground traffic”, eventually others subjects.

Paper doesn't have a goal to describe in detail solving project, how far is not a purpose of it. The reason why the paper presents this project is effort of authors to inform people on the Mechanical faculty about activity of Institute of Transport workers in the sphere of pedagogy. It can be used also as a theme for creating other teaching tools for others subjects. Another using is possible for example for e-learning.

#### References

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