

PROPERTY E-BUSINESS SYSTEM

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Abstract. The article contains description of Property e-Business System developed by authors. Applying the Property e-Business System it is possible to obtain quantitative and conceptual information that describes property in various aspects (i.e. economic, legislative, infrastructural, social, qualitative, technical, technological, etc.). Following such information and with assistance of the System the user is able to perform as follows: property valuation in different aspects (i.e. determination of market value, value in use, investment value, etc.), valuation of special factors affecting value of property (for example valuation of property location, property depreciation, etc.) and determination of the highest and best use of a property.

I. COMPONENT PARTS OF PROPERTY E-BUSINESS SYSTEM

Based on the analysis of existing electronic commerce, information, expert and decision support systems a Property e-Business (PEB) System consisting of a database, database management system, model-base, model-base management system and user interface was developed.

A database (<http://193.219.145.99/PROJ2/TEORIJA/teorija1.htm>) was developed providing a multiple criteria analysis of property from economical, legislative, infrastructural, social, qualitative (architectural, aesthetic, comfortability), technical, technological and other perspectives. This information is provided in a most user-oriented way. To design the structure of a database and perform its completion, storage, editing, navigation, searching, browsing, etc. a database management system was used.

Since the analysis of property is being usually performed taking into account economic, quality, technical, legal, social and other factors a model-base should include models (<http://193.219.145.99/PROJ2/TEORIJA/teorija1.htm>) enabling a decision maker to carry out a comprehensive analysis of the variants available and make a proper choice.

The more property are investigated, the greater is the possibility to achieve a more rational end result. Strong and weak sides of investigated property are given an analysis. Facts of why and by what degree one version is better than the other are also established. All this is done basing oneself on conceptual and quantitative information. For instance, it is possible to make a detailed analysis of strong and weak sides of property under investigation following the calculated criteria, criteria significances, priorities of property, level of utility degree and market value of property under valuation.

II. INTRODUCTION OF PROPERTY E-BUSINESS SYSTEM IN WEB SITE

Property e-Business System home page (<http://193.219.145.99>) has links to other Web pages:

- Theory Web page (<http://193.219.145.99/PROJ2/TEORIJA/teorija1.htm>). It includes the theory suggested by authors following on that the models of model-base have been developed.
- User guide for work with System Web page (<http://193.219.145.99/proj2/help2.pdf>). With assistance of this guide it is quite simple to use System in practice.
- Description of System aims and capabilities Web page (<http://193.219.145.99/proj2/help1.pdf>). This Web page includes a short description of the interested parties that could apply System in their activities and capabilities of System.

- Commercial property Web page (<http://193.219.145.99/PROJ2/PARDUOT/parduot.htm>).
- Dwellings Web page (<http://193.219.145.99/PROJ2/NAMAI/namai.htm>).
- Farmer's homestead estates Web page (<http://193.219.145.99/PROJ2/SODYBOS/sodybos.htm>).

These links are presented in underline text. Seeking to explore the link, click the underline place. While further development of PEB System it is provided to expand a database (above Web pages) with other types of property.

Presentation of information in commercial property, dwellings, farmer's homestead estates and other types of property Web pages may be in conceptual (digital, textual, graphical, photographic, video) and quantitative forms. Thus, quantitative information presentation involves criteria systems and subsystems, units of measurement, values and initial significances fully defining the variants provided. Quantitative information of property is submitted in a form of grouped decision making matrix, where the columns mean n property under valuation, and rows include quantitative information. Conceptual information means a conceptual description of the property, the criteria and ways of determining their values and significances, etc. Conceptual information is needed to make more complete and accurate valuation of the property considered. In this way, System enables the decision maker to get various conceptual and quantitative information on property from a database and a model-base allowing him to analyze the above factors and make an efficient solution.

III. CAPABILITIES TO USE THE SYSTEM IN PRACTICE

Capabilities to use the PEB system in practice are:

- Property valuation in various aspects (i.e. determination of market value, value in use, investment value, etc.). For example, solving the problem of determining the market value of a property being valued that would make it equally competitive on the market in comparison with the property already sold, a module of defining the utility degree and market value of a property was created. This was based on a complex analysis of all the benefits and drawbacks of the property considered.
- Valuation of factors affecting value of property (for example valuation of property location, property depreciation, etc.).
- Determination of the highest and best use of a property.

In this way we have a great number of participants of real estate market of Lithuania (appraisers, vendors, brokers, real estate agents, investors, various organisations, enterprises, banks, other financial institutions and other creditors, insurance companies, purchasers, courts, local authorities, state and their respective institutions, etc.) that would like to have detailed information on property being offered in the market. These interested parties would be able to implement their objectives more operatively and professionally applying PEB System in practice.

IV. OUTLINE OF FURTHER ACTIVITIES

While further development of PEB System it is provided to expand a database with other types of property, to create possibilities to perform property assignment operations (rent, lease, donation, purchase-sale, etc.) and payment, payment control, to receive information about the state of personal account of a customer, to perform information exchange (announcement board, discussions forums, advertising, e-mail box, information on activities of property appraisers, brokers, articles, information of market situation, its changes and future prospects, information bulletins issued, etc.). Since the information on offered property subject on regular changes, therefore the up-to-date information should be searched in Web pages of brokers and other interested parties. Thus it is envisaged to submit links to Web sites of the interested parties.