

ABSTRACTS

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L.I. Lozovska, V.V. Dudnyk

MODERN APPROACHES TO THE VALUATION OF SOFTWARE PRODUCTS

The article generalizes the experience in computer software value estimation. The following approaches to valuating the market value of the software are studied and analyzed: comparative approach that employs analyzing the price of the similar products that are currently traded; revenue-based approach which anticipates future profit that can be made by the software owner; cost-based approach which includes analyzing the spending for development, advertising, and selling of the software.

Software development is remarkable for its very high levels of uncertainty and innovation, thus there can be several solutions to a given problem which require different scope of work, have respectively varied complexity and final cost of the software. If the cost estimates for the software are highly overstated, it is impossible to accurately determine the required amounts of financial and time resources. Conversely, should the estimates be understated, there will be not enough financial and time resources for the development which leads to a crisis. It is advisable to use the approaches to software cost estimation in the following order: the revenue-based approach should be used first, then the comparative one with the cost-based approach at the end.

Basic COCOMO model is rather approximate as it does not involve differences in equipment, qualification of the developers, and complexity of the software. Intermediate COCOMO gives more precise estimate of software costs due to inclusion of fifteen attributes that define peculiarities of the given software. Detailed COCOMO increases the precision of the estimates further by hierarchically decomposing the software and calculation of the cost factors for each decomposition level and phase of work. However, each approach can have its own merits in some particular cases.