About Digital Information Processing on the Base of Polistoral Logic

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Abstract

A new multivalue logic system - L_p is purposed. It is called poistoral and does not contain obviously any arithmetic and logic operations. L_p is full and complete regarding the basic arithmetic operations, thus it is capable to become a base for physical computers [1]. Physical computer does mathematical computations without obvious use of any mathematical- logic operation. It uses hidden in the system "inner" logic.

Methods for making algorithms for arithmetic and logic operations with only physical operators are shown. For the given algorithm schemotechnical realization principals are designed.

It is shown that on L_p disjunction and conjunction operations can be defined with distribution property.

Possibility of the use of L_p in digital information processing is shown when information carrier has increased amount of information in it.

References

[1] H.S. Karayan, S.G. Martirosyan, L.L. Onanyan *About the definition of a physical logic system. Algebra, geometry and Their Applications*, seminar proceedings, Yerevan, 2001, vol.**1**, p. 54-57.