

Structure and Simulation of Interactive Computer Systems Based on Multibases Switching Processors

R. Tsanko, O. Volynskyy, V. Puyul, I. Pituh

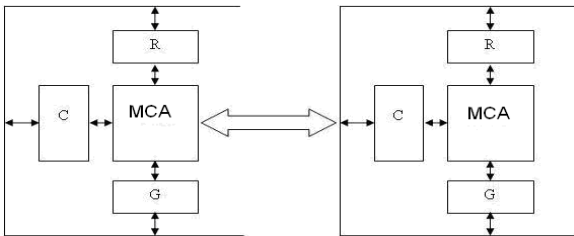
Abstract - Submitted the architecture of computer systems based on multibases switching processor, attributes, and interactive topology matrix patterns of movement data management interface frames actuators, block diagram of a multibases specialized processor.

Keywords - frames, multibases processor, interactive computer systems

INTRODUCTION

Interactive computer systems are increasingly being applied to the implementation of distributed computer systems in real time. A feature of such systems is the use of interactive models of star-backbone architecture and multibases switching processors.

An example of star-backbone architecture is the architecture of computer systems, which is shown in Fig. 1 [1].



R - processing element in the basis of Rademacher, C - processing element in the basis of Krestenson, G-processor element in Galois basis, MCA - memory of collective access

Fig.1. architecture of computer systems based on multibases switching processors

Proposed attributes and topology interactive matrix models of motion data are shown in Fig. 2 [2].

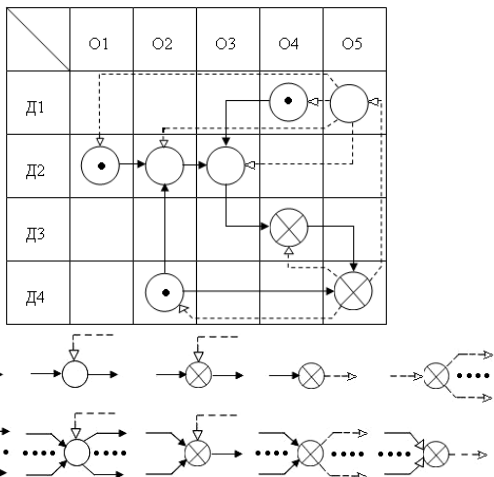


Fig. 2. attributes and topology interactive matrix models of motion data

In such systems are using frames of management the actuator interface Fig. 3 [2].

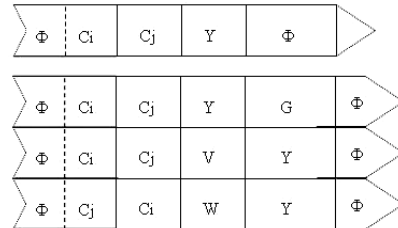


Fig. 3. frames management interface actuators

In such systems should be used multibases Switching Specialized processor based on the theoretical and numerical bases Rademacher, Krestenson and Galois [1].

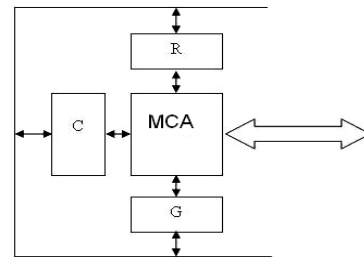


Fig. 4. block diagram of a multibases multifunctional specialized processor.

As a unit of mathematical operations in the basis used by the core of the classical Rademacher -speed arithmetic logic unit in binary notation. Thus the benefits of using other bases for the multibases multifunctional Specialized processor we will receive:

Basis Krestenson provide performance when performing single-cycle operations of sets;

Galois provide simplification (structure) encoder and the use of associative memory and displacement increments.

CONCLUSION

Blocks of mathematical operations in a variety of theoretical and numerical bases represent the individual independent of each other processor elements that allow for parallel-serial processing of data, according to the set of algorithms that are formed with command controller.

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Ruslan Tsanko - Ternopil National Economy University L'vivs'ka Str., 11, Ternopil, 46000, UKRAINE, E-mail: rtsa@ukr.net