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UNIX requirements for architectural support

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Abstract

Requirements of the UNIX operating system to a machine's interface are determined by means of vertical migration methodology. Measurements of artificial workloads with different characteristics are taken as base for migration candidate selection. The results of the selection process are interpreted as requirements for architectural support. In a first step a UNIX oriented interface of a base machine is derived. Based on this machine an advanced architecture is discussed.



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Keywords

Problem-oriented architecture; Vertical migration; Instruction set extension; coprocessor system

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Bernhard Holtkamp (born in Gelsenkirchen, FR-Germany 1955) works as researcher at University of Dortmund. There he received his diploma in informatics in 1982. For one year he investigated the migration of software components to coprocessors. In the vertical migration project he cooperates with the Central Research Institute for Physics and the Computer and Automation Institute in Budapest (Hungary). His fields of interest are microprogramming, computer architecture and operating systems.

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