O projeto de unidades funcionais balanceadas, capazes de executar quantidades próximas ou proporcionais do número de instruções, do número de dependências e do número de latências, pode ser o próximo passo para o desenvolvimento de arquiteturas superscalares mais agressivas.

Na verdade, ainda é necessário o desenvolvimento de técnicas para executar este tipo de balanço. Mas isto é tema para trabalhos futuros.

7. Referências Bibliográficas


ODP Channel: an Open Mechanism for Supporting Media Flows in Distributed Environments

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Abstract

Today’s distributed applications need to interoperate across different administrative domains, handle multiple types of media, and execute on different computer platforms with different processing and networking capabilities. This demand poses several challenges to the application designer. Issues such as interoperability, real-time communication, security and performance must be properly addressed. This paper addresses the issue of multimedia communication across packet switching networks such as the Internet. The paper describes the design, implementation and evaluation of a generic communication infrastructure based on the Reference Model of Open Distributed Processing (RM-ODP). The infrastructure’s components are implemented as distributed objects. The implementation can be easily integrated into cooperative applications such as teleconference and telemedicine; serve as a basis for implementing stream interfaces as proposed by the Object Management Group (OMG); or still be a key component of a Distributed Processing Environment (DPE).

Keywords:

ODP Channel, CORBA, Quality of Service, Distributed Multimedia Systems,

1 Introduction

The idea behind open distributed processing is to have a common framework from which distributed applications are built. Examples of such frameworks are the Reference Model of Open Distributed Processing (RM-ODP) from ISO [1], and the Telecommunication Information Network Architecture (TINA) from the TINA Consortium (TINA-C) [2]. Such frameworks favor interoperability by stating precisely the rules of the application’s components, the kind of services they provide, how components interact, which components are mandatory, and so on.

For instance, RM-ODP states how objects in a ODP-compliant application must interact. The model describes an abstraction named channel that mediates the interaction between two or more objects. The channel has three main objects at each endpoint: one for presentation services (the stub); one for managing a side of the channel (the binder); and the third for interacting with the network (the protocol adapter). ODP defines precisely which functionalities are provided by the channel for object interaction as well as where these functionalities are to be placed.

Reference models for open distributed processing do not define precisely the interfaces presented by their components. It is the case of ODP channels where the functionalities of each component is specified by the operations that implement these functionalities are not.

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