



## PROVA DE LÍNGUA INGLESA

### Texto I

#### A Network Architecture for Mobile Robotics

Paulo R.S.L. Coelho  
Daniel H. Moraes  
Eliane G. Guimarães  
Eleri Cardozo  
Thienne Johnson  
Fernanda C.A Atizani

Abstract - Mobile robotics environments must adopt networking solutions that provide secure and reliable communications for mobile robots across wide areas such as hospitals, factories, farms, etc. This paper proposes a network architecture for large mobile robotic environments built above the existing networking infrastructures. The architecture relies on an overlay network built above an already deployed network. The overlay network must fulfill the requirements demanded by mobile robotic applications, mainly, communication continuity during handover, security, and quality of service. A prototype of this architecture was implemented and evaluated in a mobile robotic environment composed of Pioneer P3-DX mobile robots accessed through the Internet or high speed private networks such as the RNP/Giga and Fapesp/KyaTera networks. Results from simulation show that the architecture scales well in larger networking scenarios.

Fonte: 27<sup>o</sup> Simpósio Brasileiro de Redes de Computadores e Sistemas Distribuídos. 2009. Disponível em <http://www.eventoexpress.com.br/cdsbrc/pdfs/sbrc59.pdf>. Acesso em 01 fev. 2011.

**INSTRUÇÃO:** Leia o Texto I para responder as questões de 1 a 5. Todas as perguntas deverão ser respondidas em português.

#### Questão 01

Traduza o título do Texto I.

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#### Questão 02

Qual o objetivo do artigo?

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#### Questão 03

Explique, com suas palavras, como se deu a avaliação da proposta de pesquisa?

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#### Questão 04

Qual o resultado da pesquisa?

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**Questão 05**

Traduza o fragmento sublinhado no texto I.

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**Texto II**

**Performance evaluation of a discovery and scheduling protocol for multihop ad hoc mobile grids**

Antônio Tadeu Azevedo Gomes  
Artur Ziviani  
Luciana dos Santos Lima  
Markus Endler

Abstract - Despite the many research efforts addressing the integration of mobile nodes into grids, only a few of them have considered the establishment of mobile grids over wireless ad hoc networks (hereafter, mobile ad hoc grids). Clearly, such grids need specialized resource discovery and scheduling mechanisms. To the best of our knowledge, though, the research on these mechanisms for mobile ad hoc grids is still preliminary. Besides, and more importantly, it has approached discovery and scheduling as separate mechanisms, which, we argue, is not suitable for mobile ad hoc grids. In this paper, we propose the integration of resource discovery and scheduling for mobile ad hoc grids into a single protocol called DICHOTOMY (Discovery and sCHeduling prOTocol for MobilitY). This protocol allows computational tasks to be distributed appropriately in a mobile ad hoc grid, while mitigating the overhead of discovery messages exchanged among the nodes. Our experiments show that the protocol: (i) does proper scheduling, allowing an efficient load balancing among the nodes and helping with lowering the average completion time of tasks; (ii) keeps the discovery efficiency at acceptable levels in mobility scenarios and (iii) scales very well with respect to an increasing number of nodes, both in the total amount of energy savings due to packet transmissions and the distribution of such savings among the nodes.

Keywords: mobile grids, resource management, self-organizing networks.

Fonte: Journal of the Brazilian Computer Society. [online]. vol.15, n.4, 2009, pp. 15-29. Disponível em:  
<http://bibliotecadigital.sbc.org.br>. Acesso em: 01 fev. 2010.

**INSTRUÇÃO:** As questões de 6 a 10 devem ser respondidas com base no Texto II. Todas as perguntas deverão ser respondidas em português.

**Questão 06**

Explique, com suas palavras, qual o assunto do texto II?

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**Questão 07**

Qual a opinião dos autores sobre as pesquisas, indicada no início do texto?

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**Questão 08**

Segundo os autores, qual a vantagem do uso do protocolo DICHOTOMY?

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**Questão 09**

O que propõem os autores na pesquisa efetuada?

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**Questão 10**

Os experimentos realizados pelos autores revelam 3 descobertas. Descreva, com suas palavras, uma (1) delas.

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