Chapter

Distributed Computing and Internet Technology

Volume 9581 of the series *Lecture Notes in Computer Science* pp 97-102

Date: 25 December 2015

Long Wire Length of Midimew-Connected Mesh Network

- M. M. Hafizur Rahman
- , Rizal Mohd Nor
- , Md. Rabiul Awal
- , Tengku Mohd Bin Tengku Sembok
- , Yasuyuki Miura

Abstract

Minimal DIstance MEsh with Wrap-around links (Midimew) connected Mesh Network (MMN) is a hierarchical interconnection network consists of several Basic Modules (BM), where the BM is a 2D-mesh network and the higher level network is a midimew network. In this paper, we present the architecture of MMN and evaluate the number of long wires, length of a long wire, and the total length for the long wire of MMN, TESH, and torus networks. It is shown that the proposed MMN possesses simple structure and moderate wire length. The long wire length of MMN is slightly higher than TESH network and far lower than that of 2D torus network. Overall performance suggests that, MMN is a good choice for future generation massively parallel computers.

Keywords

Massively parallel computers Interconnection network MMN Long wire length

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About this Chapter

Title

Long Wire Length of Midimew-Connected Mesh Network

Book Title

Distributed Computing and Internet Technology

Book Subtitle

12th International Conference, ICDCIT 2016, Bhubaneswar, India, January 15-18, 2016, Proceedings

Pages

pp 97-102

DOI
10.1007/978-3-319-28034-9_12
Print ISBN
978-3-319-28033-2
Online ISBN
978-3-319-28034-9
Series Title
Lecture Notes in Computer Science
Series Volume
9581
Series ISSN
0302-9743
Publisher
Springer International Publishing

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Keywords

- Massively parallel computers
- Interconnection network
- MMN
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- *Rizal Mohd Nor* (16)
- *Md. Rabiul Awal* (16)
- *Tengku Mohd Bin Tengku Sembok* (17)
- *Yasuyuki Miura* (18)

Author Affiliations

- 16. DCS, KICT, IIUM, 50728, Kuala Lumpur, Malaysia
- 17. Cyber Security Center, UPNM, 57000, Kuala Lumpur, Malaysia
- 18. Graduate School of Technology, SIT, Fujisawa, Kanagawa, Japan