

Optical Multicast over OBS Networks: An Approach Based on Code-Words and Tunable Decoders

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Abstract : In the frame of this work, we present an optical multicasting approach based on optical code-words. Our approach associates, in the edge node, an optical code-word to a group multicast address. In the core node, a set of tunable decoders are used to send a traffic data to multiple destinations based on the received code-word. The use of code-words, which correspond to the combination of an input port and a set of output ports, allows the implementation of an optical switching matrix. At the reception of a burst, it will be delayed in an optical memory. And, the received optical code-word is split to a set of tunable optical decoders. When it matches a configured code-word, the delayed burst is switched to a set of output ports.

Keywords : optical multicast, optical burst switching networks, optical code-words, tunable decoder, virtual optical memory

Conference Title : ICBCNS 2014 : International Conference on Broadband Communications, Networks, and Systems

Conference Location : London, United Kingdom

Conference Dates : June 29-30, 2014