WDM網路中邏輯拓樸之存活性映對設計

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摘 要

在WDM網路中，網路的拓樸分成上下兩層：邏輯拓樸與實體拓樸，邏輯拓樸中每一條鏈結可以映對到實體拓樸的某一條光路徑。當任何一條實體鏈結斷裂時，由於所有用到這條實體鏈結的邏輯鏈結也會一起斷掉，將造成邏輯拓樸的不連通及網路效能的降低。因此在WDM網路中為邏輯拓樸找尋存活性的映對，並在必要時增加一些邏輯鏈結，以維持實體鏈結斷裂後邏輯拓樸的連通性，是相當重要的問題。現有的研究都假設邏輯鏈結是雙向的，但這並不符合網路的現況，因此本論文主要探討若邏輯拓樸的鏈結為單向時，應如何找尋較佳的存活性映對。模擬結果顯示，我們提出的MML演算法能有效地減少邏輯拓樸為具備存活性時所需要增加的光路數、所需波長數及最後佔用的波道總數。

關鍵詞 : WDM網路

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