有理函數BCH和Reed-Solomon碼之研究

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摘要

由於數位技術的發展，要求數據傳輸和連接效率的人越來越多，用量也隨之提高。通信系統研究和開發服務的進一步要求，不僅在於速度，也重視質量。錯誤更正碼，為提高產品質量信息系統的相關研究領域之一。 在這研究中，non-Bose-Chaudhuri-Hocquenghm (BCH)和Reed-Solomon（RS）基於“ 有理函數 ”運作，產生一個新最小距離極大化的碼。這種結合提高BCH上限，在某些時候Hartmann-Tzeng (HT)亦有相同情況。本研究主要目的為基於新的最小距離界線上，提高錯誤校正能力。我們提出修正Berlekamp演算法（BA）和歐幾里得演算法（EA），並包括執行必要的解碼步驟。

關鍵詞 : 非BCH碼、RS碼、有理函數、BCH界限、HT界限、Berlekamp演算法、歐幾里德演算法

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