國立交通大學

電信工程研究所

碩士論文

無線網路巴拉巴拉巴拉巴拉

Fire! Neo armstrong cyclone jet armstrong cyclone jet cannon!

研 究 生：金城武

指導教授：鐵拳無敵 教授

中 華 民 國 一 零 四 年 七 月

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指導教授：鐵拳無敵　　Advisor：　Dr. Wu

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碩士論文

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無線網路巴拉巴拉巴拉巴拉

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摘　　要

這邊是中文摘要

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ABSTRACT

This is English abstract.

誌　　謝

謝天, 謝地, 乾蝦大家. 也可以謝謝女朋友, 在就學期間沒有出來干擾我, 讓我可以順利完成學業. (咦?)

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Chapter 1 Introduction

這邊可以開始寫 Introduction 了.

Chapter 2 Related works

2.1 Background of Link Rates Schemes

IEEE 802.11 ..... (以下略)

(放一篇 ref, Fig 跟 Table 當例子)

Each data rate is associated with a certain $SINR$ threshold. The method of selecting an appropriate link rate for transmitting/retransmitting packets is generally comprehended as the link (rate) adaptation mechanism.

The most commonly used rate adaptation technique is perhaps auto-rate fallback (ARF), which is widely implemented in present wireless devices [1].

Table 2.1: $optCW$ estimation for IEEE 802.11b

M	$p_{opt}^{r_1}$	$optCW^{r_1}$	$p_{opt}^{r_2}$	$optCW^{r_2}$	$p_{opt}^{r_3}$	$optCW^{r_3}$	$p_{opt}^{r_4}$	$optCW^{r_4}$
10	0.0112	177	0.0155	128	0.0243	81	0.0320	61
15	0.0074	271	0.0102	196	0.0159	125	0.0210	94
20	0.0055	364	0.0076	263	0.0119	168	0.0157	127
25	0.0044	458	0.0060	331	0.0094	211	0.0125	159
30	0.0036	551	0.0050	398	0.0078	254	0.0104	191
35	0.0031	645	0.0043	466	0.0067	297	0.0089	224
40	0.0027	738	0.0037	533	0.0059	340	0.0078	256

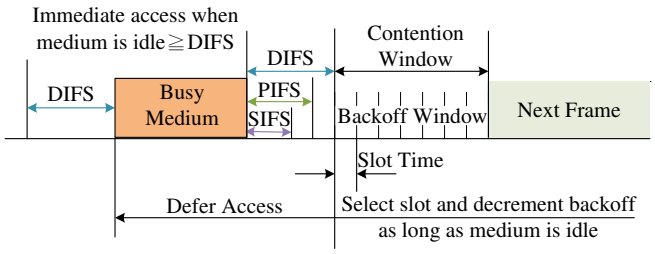

Figure 2.1: IEEE 802.11 MAC mechanism.

Algorithm 1 EARC Algorithm at Receiver

while (DATA packet transmitted at rate r_i received) **do**
  Look up the RSR table and decide a best sustainable rate r_j based on E_{rx};
  if (i != j) **then**
    EARC Rate Flag set to *true*;
    Set value($b_1b_2b_3$) = $j-1$ in the **EARC Control** field;
  else
    EARC Rate Flag set to *false*;
    Compare E_{rx} with E_{tx} and calculate E_{diff};
    if (E_{diff} == 0) **then**
      EARC CW Flag set to *false*;
    else
      EARC CW Flag set to *true*;
      if ($E_{diff} < 0$) **then**
        Set b_1 = 0; // to decrease CW
      else
        Set b_1 = 1; // to increase CW
      end if
      if (($\frac{k}{K} < |E_{diff}| \leq \frac{k+1}{K}$) && ($0 \leq k < K-1$)) **then**
        Set value(b_2b_3) = k;
      else
        Set value(b_2b_3) = $K-1$;
      end if
    end if
  end if
  Return ACK packet back to transmitter;
end while

Chapter 3 Conclusions

本論文終於寫完了

3.1 Future Work

未來就交給幸運兒 (?) 了 XD

參 考 文 獻

[1] A. Kamerman and L. Monteban, “”WaveLAN-II: A High-Performance Wireless LAN for the Unlicensed Band”,” *Bell Labs Technical Journal*, vol. 2, no. 2, pp. 118–133, 1997.