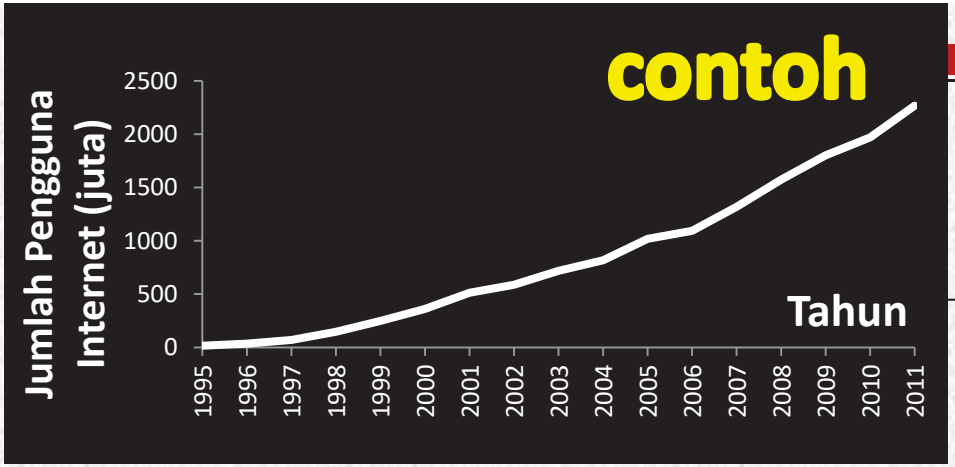
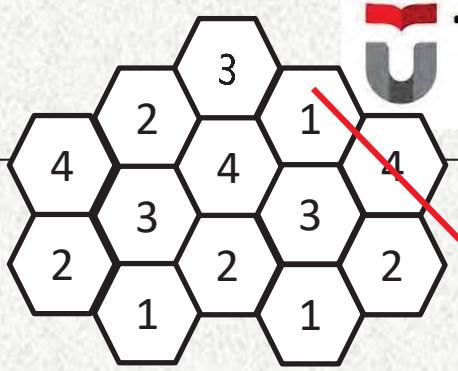
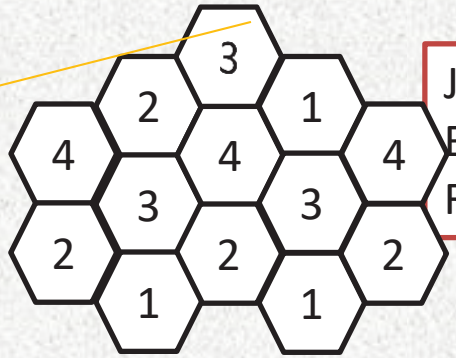


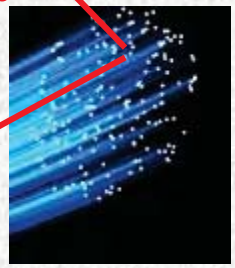


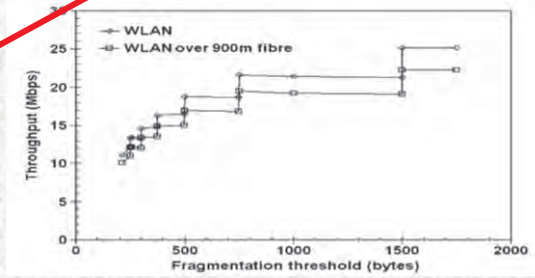
+/-250 m



Jarak server ke AP pendek
Bandwidth sempit
Redaman koaksial besar

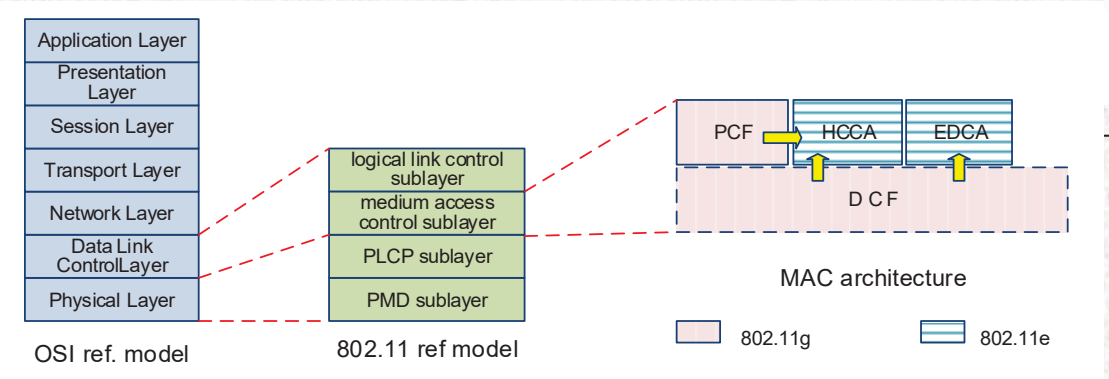
PLUG & PLAY

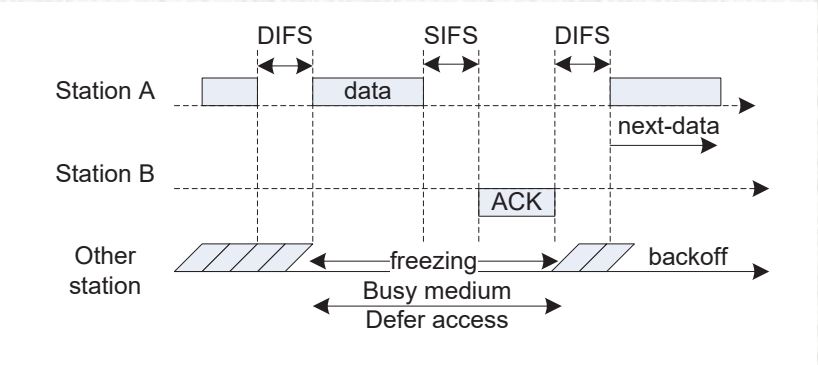


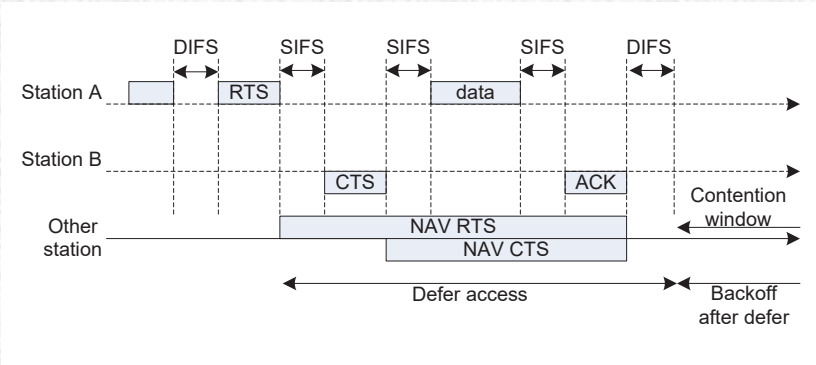


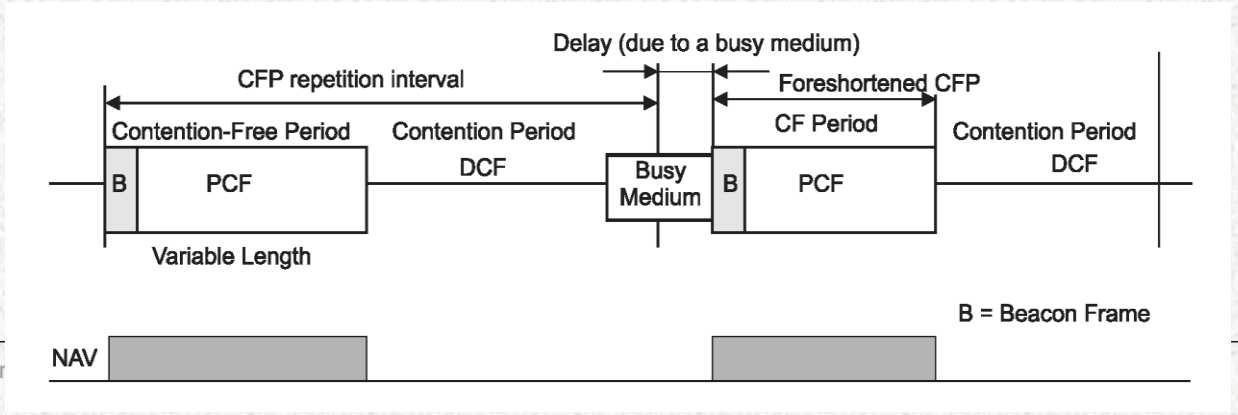
DELAY

Identifikasi Masalah (1)

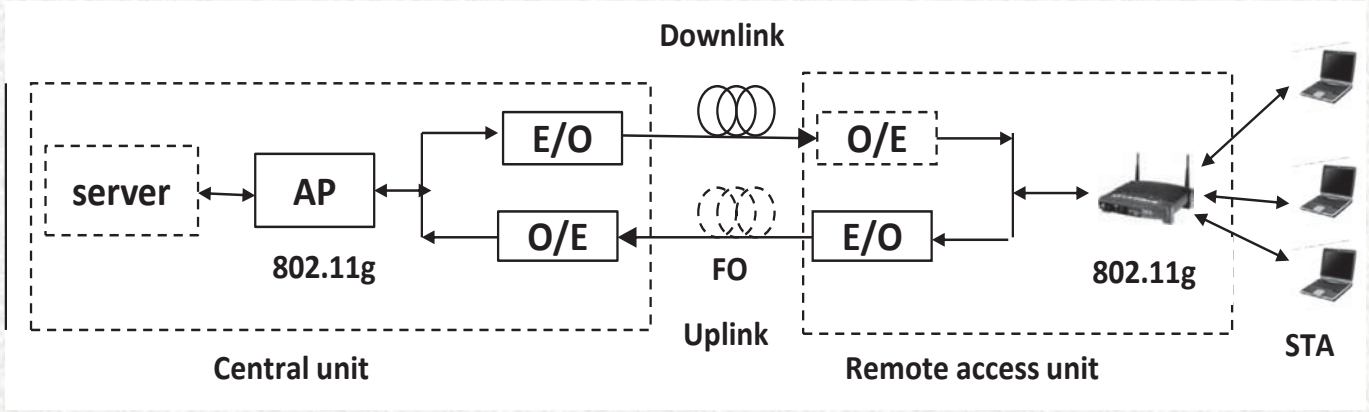


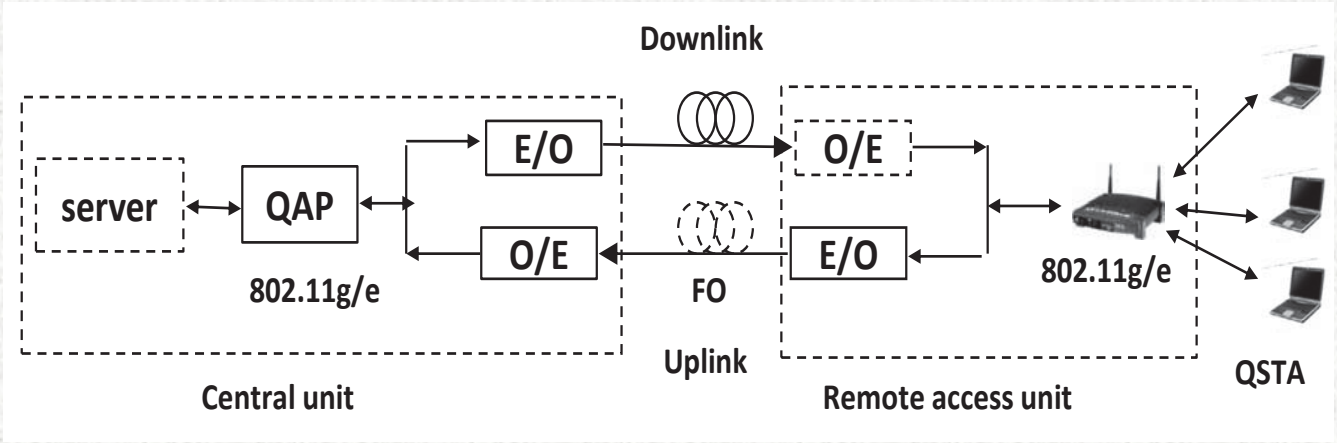




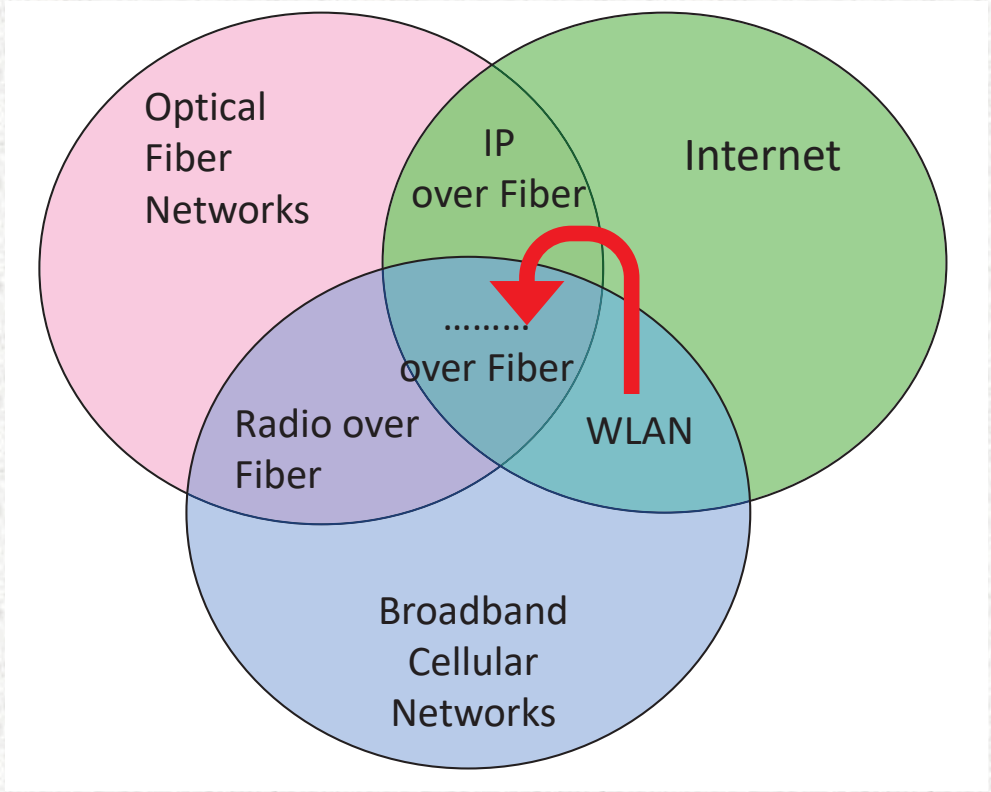


Konfigurasi Jaringan



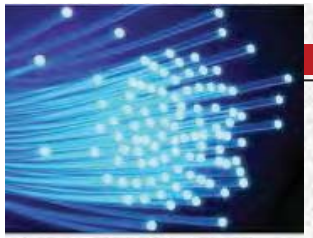


State of the Arts



Publikasi WiLANoF

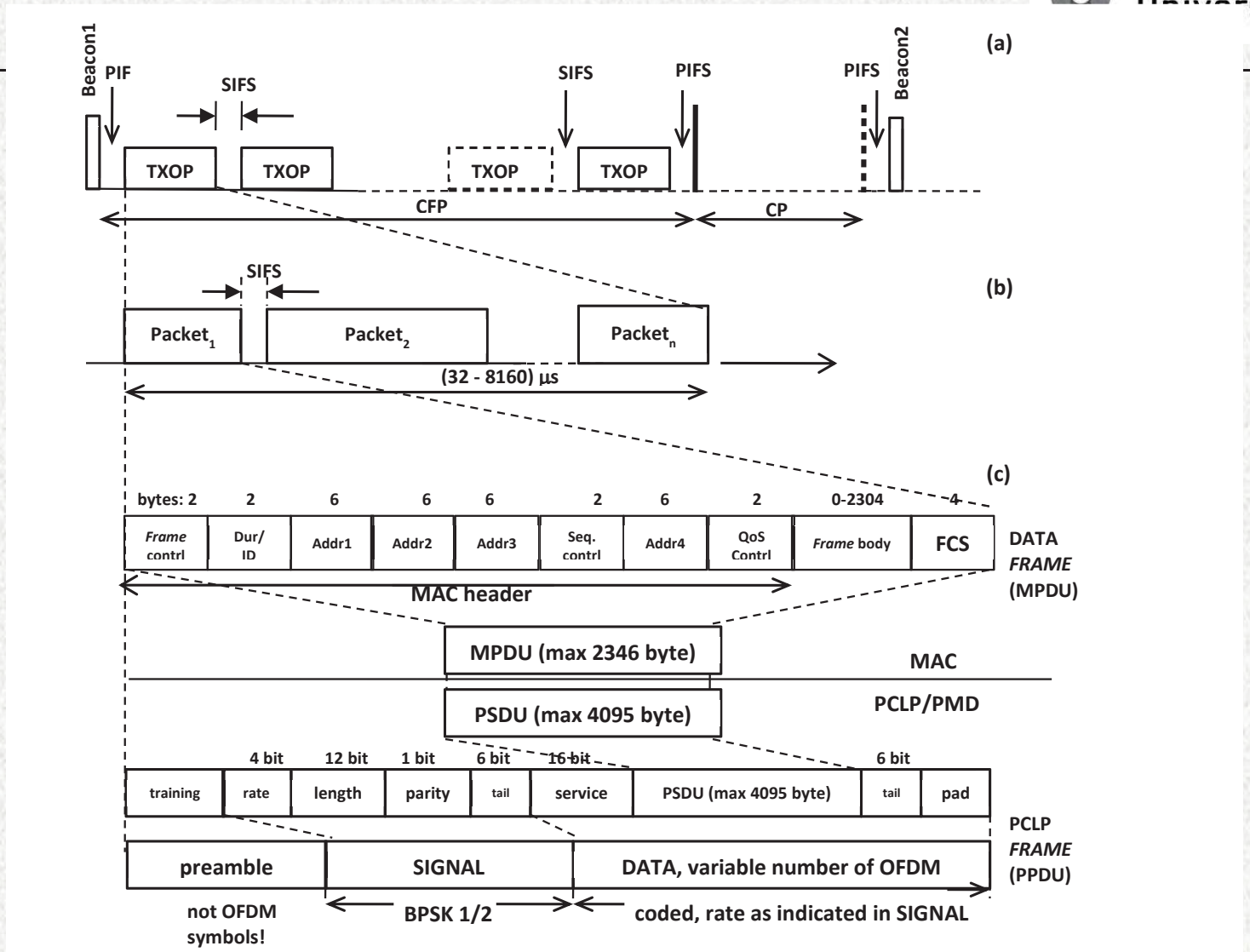
Peneliti	Tahun	Protokol	Parameter
B. Kalantarisabet, et al.	2006	802.11b	DCF, BA, RTS/CTS, *Timeout*
A. Das, et al.	2007	802.11b/g	*Throughput*, RTS/CTS, *Hidden node*
M. Mjeku, et al.	2007	IEEE 802.11g/e, EDCA	*Throughput* , TXOP, *Policy block & no* ACK
B. Kalantarisabet, et al.	2008	802.11b	*Throughput*, *Timeout*
M. Mjeku, et al .	2008	802.11b	*Throughput*, DCF
E. S. Sugesti, et al.	2009	802.11g	*Propagation medium delay*
E. S. Sugesti, et al.	2010	802.11g ERP-OFDM	*Delay bound*, DCF, *Timeout*
E. S. Sugesti, et al.	2010	Interoperable WLAN b/g, ERP-PBCC, ERP-CCK, DSSS-OFDM	*Delay bound*, *Timeout*
Shen Xi, et al.	2013	802.11g, ERP-OFDM	*Throughput*, BA, RTS/CTS, CTS-to- Self, *Timeout*



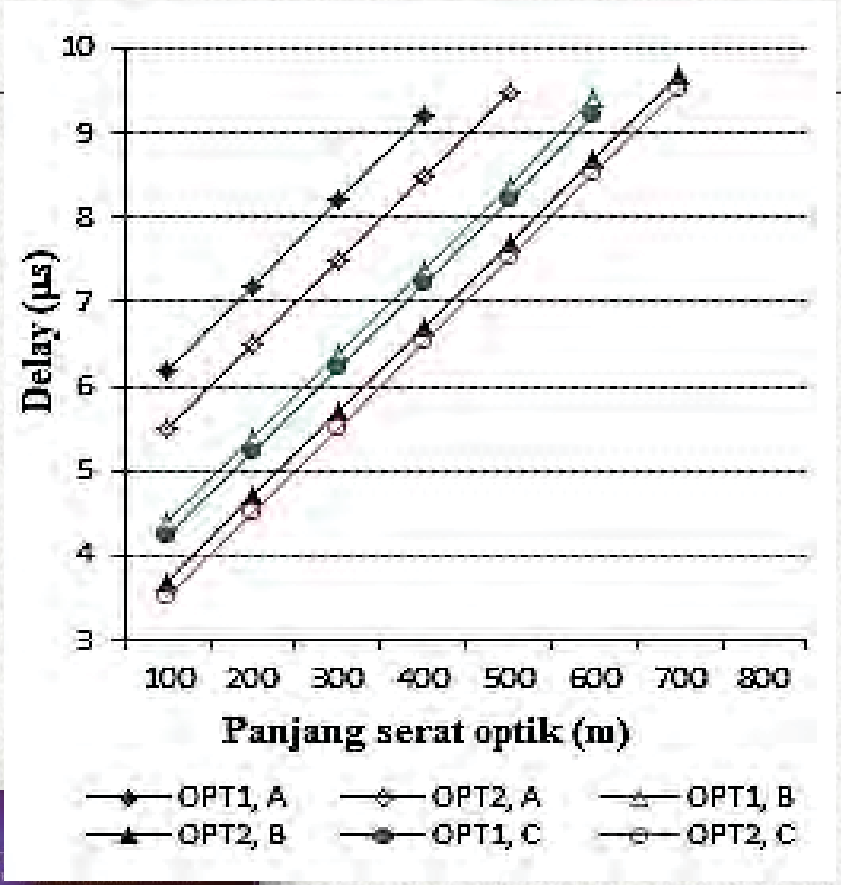
Publikasi WLAN

Peneliti & Tahun	Tahun	Protokol	Parameter
J. Majkowski, et al.	2006	IEEE 802.11e, EDCA	TXOP *Multiplepacket in single channel access*
Y. Higuchi, et al.	2007	IEEE 802.11e, HCCA	*Scheduling latency rate, Service interval,* CBR & VBR
H. Zen, et al.	2008	IEEE 802.11e, EDCA	*Throughput Online and offline procedure optimation*
Y. He, et al.	2010	IEEE 802.11e, HCCA	*Single* & *Multi collision, Deterministic backoff,* CBR & VBR
E. S. Sugesti, et al.	2013	IEEE 802.11e, HCCA	TXOP *Knapsack optimation Real-time* CBR

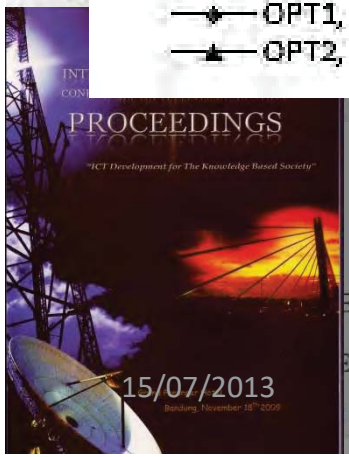
Model Rekayasa Protokol



Panjang serat optik untuk SIFS



t_{opt} (µs)		t_{air} (µs)	
OPT1	1,6	A	1
OPT2	1,25	B	0,1
		C	0,01



ANALYSIS OF DELAY BOUND IN IEEE 802.11g WLAN OVER FIBER NETWORKS

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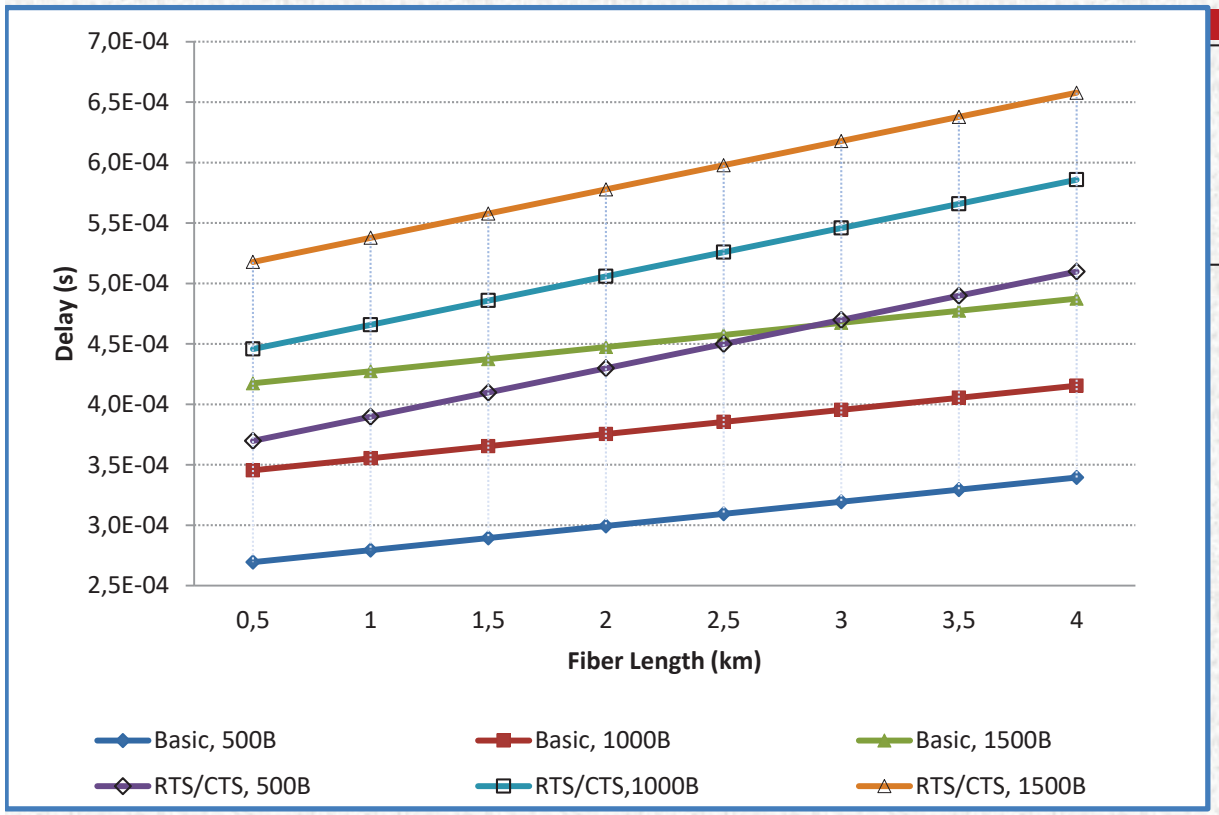
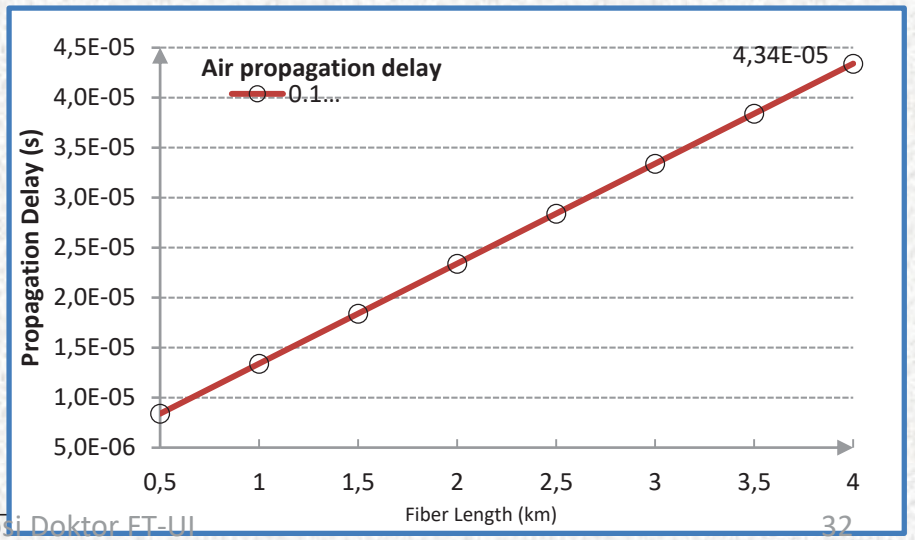
ern@ittelkom.ac.id, erna.sri@ui.ac.id, [2]{pspriambodo, bbudi, k.ramli}@ee.ui.ac.id

Analysis of Delay Bound in IEEE 802.11g WLAN over Fiber Networks, pada International Conference on Telecommunication (ICTel) 2009 di Bandung

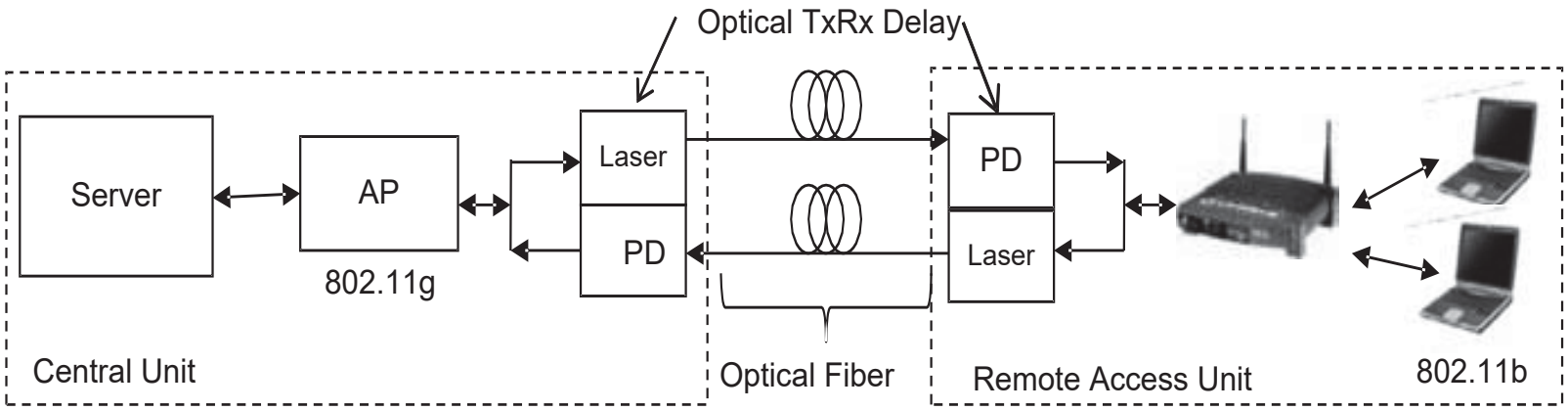


Delay Bound Analysis for Hybrid Network: IEEE 802.11g ERP-OFDM WLAN over Fiber, Proceedings of Australasia Telecommunication Network and Application Conference 2010 (ATNAC) di Auckland-New Zealand November 2010

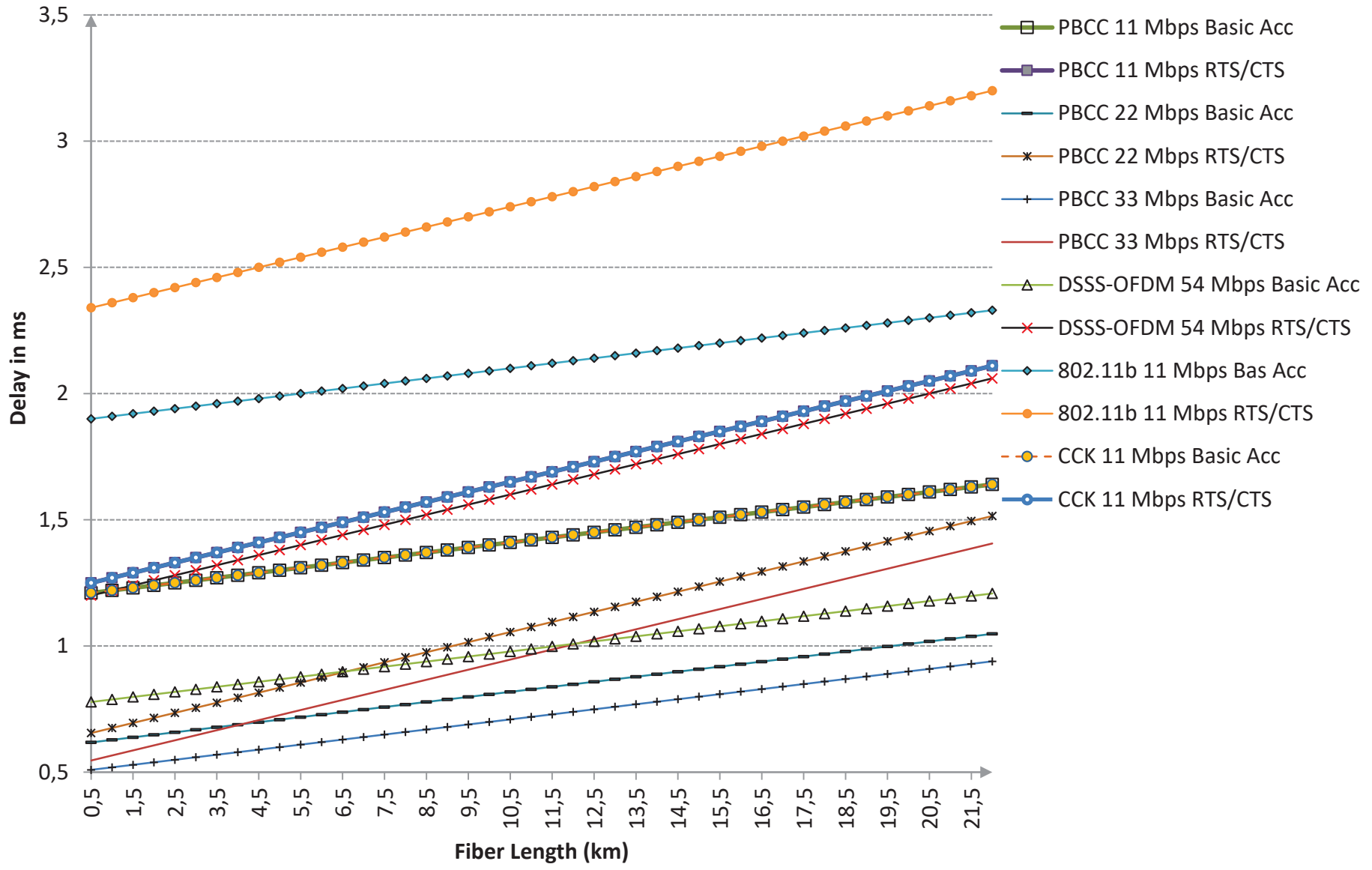
Frame Length (byte)	Basic access (ms)	RTS/CTS (ms)
500	335	501
1000	411	577
1500	483	649



Analisis Interoperable IEEE 802.11b/g WLAN *over Fiber*

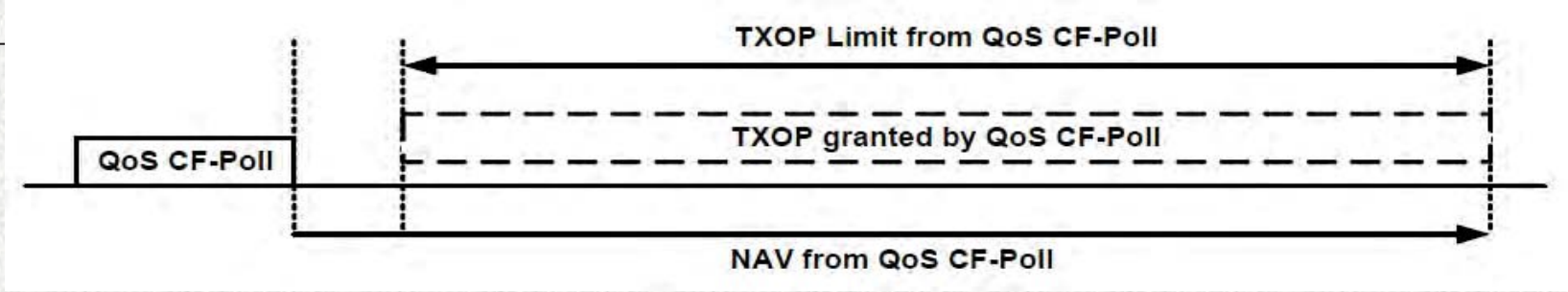


Modulasi	Delay Bound (ms) Skema Basic access untuk Panjang Frame			Delay Bound (ms) Skema RTS/CTS untuk Panjang Frame		
	500B	1000B	1500B	500B	1000B	1500B
802.11b 11 Mbps	1,59	1,95	2,32	2.47	2.83	3.19
802.11g CCK 11 Mbps	1,11	1,37	1,63	1.56	1.83	2.09
802.11g PBCC 11 Mbps	1,11	1,38	1,64	1.58	1.84	2.11
802.11g PBCC 22 Mbps	0,91	0,98	1,04	1.37	1.44	1.5
802.11g PBCC 33 Mbps	0,87	0,90	0,93	1.33	1.36	1.39
802.11g DSSS-OFDM 54 Mbps	1,05	1,13	1,20	1.9	1.98	2.05



***Delay Bound Analysis for Hybrid Networks: Interoperable* IEEE 802.11b/g WLAN *over Fiber*, Proceedings of International Conference on Ultra Modern Telecommunication 2010 (ICUMT), di Moscow-Russia Oktober 2010**

Konsep dan Formulasi Utilisasi TXOP



$$T_B = T_{CFP} + T_{CP}$$

$$T_{TXOP}^{D} = \frac{T_{CFP} - \{n \cdot T_{SIFS} + 2 \cdot T_{PIFS}\}}{N_{TXOP}} \Rightarrow n = N_{TXOP} - 1$$

$$T_{TXOP}^{D} = \sum_{i=0}^{Q} \frac{i(x)}{r(x)} + n \cdot T_{SIFS} \Rightarrow i(x) = \left(L_P + L_{LAY}\right) \times 8$$

$$L_{LAY} = L_{RTP} + L_{UDP} + L_{IP} + L_{MAC}$$