$n := 1, 3 .. 80$ $Pf := 0.0165$ $p := 0.05$ $Ldata := 1024$ $NDBPS := 72$

$$A1 := \frac{p}{16\left[\frac{(1-p)}{8} + \frac{p}{32}\right]} \qquad A2 := \frac{p}{16\left[\frac{(1-p)}{8} + \frac{p}{32}\right]} \cdot \sum_{L=1}^{15} \left[\frac{(1-Pf)}{(1-2Pf)}\right]^{L} \qquad A3 := A1 + A2$$

$$C3 := C1 \cdot B3 + C2 \cdot B3 \qquad D1 := \frac{p}{128\left[\frac{(1-p)}{8} + \frac{p}{256}\right]} \qquad D2 := \frac{p}{128\left[\frac{(1-p)}{8} + \frac{p}{256}\right]} \cdot \sum_{L=1}^{127}$$

$$F1 := \frac{p}{512\left[\frac{(1-p)}{8} + \frac{p}{1024}\right]} \qquad F2 := \frac{p}{512\left[\frac{(1-p)}{8} + \frac{p}{1024}\right]} \cdot \sum_{L=1}^{511} \left[\frac{(1-Pf)}{(1-2Pf)}\right]^{L} \qquad F3$$

$$taw := \frac{1}{1 + A3 + B3 + C3 + D3 + E3 + F3 + G3} \qquad taw = 0.232$$

$$tDATA := \left[16 + 4 + 4 \cdot \frac{[16 + 6 + 8 \cdot (34 + Ldata)]}{NDBPS} + 6\right] \cdot 10^{-6} \qquad tRTS := \left[16 + 4 + 4 \cdot \frac{[16 + 6 + 8 \cdot (2}{NDBPS}\right.$$

$Tatime := 9 \cdot 10^{-6}$ $tSIFS := 10 \cdot 10^{-6}$ $tDIFS := 28 \cdot 10^{-6}$ $tDelay := 1 \cdot 10^{-6}$ $tRTS = 3.611 \times$

$Ts := tRTS + 3 \cdot tSIFS + 4 \cdot tDelay + tCTS + tDATA + tACK + tDIFS$

$Tc := tDIFS + tRTS + Tatime$

$$Ptr(n) := 1 - (1 - taw)^{n} \qquad Ps(n) := \frac{n \cdot taw \cdot (1 - taw)^{n-1}}{1 - (1 - taw)^{n}} \qquad Pc(n) := 1 - Ps(n) \qquad BEB(n) :=$$

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$$B1 := \frac{p}{32\left[\frac{(1-p)}{8} + \frac{p}{64}\right]} \qquad B2 := \frac{p}{32\left[\frac{(1-p)}{8} + \frac{p}{64}\right]} \cdot \sum_{L=1}^{31} \left[\frac{(1-Pf)}{(1-2Pf)}\right]^{L} \qquad B3 := B1 \cdot A3 + B2 \cdot A$$

$$\left[\frac{(1-Pf)}{(1-2Pf)}\right]^{L} \qquad D3 := D1 \cdot C3 + D2 \cdot C3 \qquad E1 := \frac{p}{256\left[\frac{(1-p)}{8} + \frac{p}{512}\right]} \qquad E2 := \frac{p}{256\left[\frac{(1-p)}{8} + \frac{p}{51}\right.}$$

$$:= F1 \cdot E3 + F2 \cdot E3 \qquad G1 := \frac{p}{1024\left[\frac{(1-p)}{8}\right]} \qquad G2 := \frac{p}{1024\left[\frac{(1-p)}{8}\right]} \cdot \sum_{L=1}^{1023} \left[\frac{(1-Pf)}{(1-2Pf)}\right]^{L} \qquad G3 :$$

$$\left.\frac{20)]}{} + 6\right] \cdot 10^{-6} \qquad tCTS := \left[16 + 4 + 4 \cdot \frac{[16 + 6 + 8 \cdot (14)]}{NDBPS} + 6\right] \cdot 10^{-} \qquad tACK := \left[16 + 4 + 4 \cdot \frac{[16 + 6 + 8 \cdot (1}{NDBPS}\right.$$

$$10^{-5} \qquad tCTS = 3.344 \times 10^{-5} \qquad tACK = 3.344 \times 10^{-5}$$

$$= \frac{Ps(n) \cdot Ptr(n) \cdot (Ldata \cdot 8)}{(1 - Ptr(n)) \cdot Tatime + Ps(n) \cdot Ptr(n) \cdot Ts + Ptr(n) \cdot Pc(n) \cdot Tc}$$

BEB(n) =

$1.183 \cdot 10^{7}$
$1.176 \cdot 10^{7}$
$1.125 \cdot 10^{7}$
$1.053 \cdot 10^{7}$
$9.59 \cdot 10^{6}$
$8.447 \cdot 10^{6}$
$7.149 \cdot 10^{6}$
$5.785 \cdot 10^{6}$
$4.469 \cdot 10^{6}$
$3.301 \cdot 10^{6}$
$2.343 \cdot 10^{6}$
$1.609 \cdot 10^{6}$
$1.077 \cdot 10^{6}$
$7.062 \cdot 10^{5}$

1.5

1

BEB(n)

5

$7.062 \cdot 10^5$
$4.562 \cdot 10^5$
...

$$\lambda 3 \qquad C1 := \frac{p}{64\left[\frac{(1-p)}{8} + \frac{p}{128}\right]} \qquad C2 := \frac{p}{64\left[\frac{(1-p)}{8} + \frac{p}{128}\right]} \cdot \sum_{L=1}^{63} \left[\frac{(1-Pf)}{(1-2Pf)}\right]^L$$

$$\left.\frac{}{2}\right] \cdot \sum_{L=1}^{255} \left[\frac{(1-Pf)}{(1-2Pf)}\right]^L \qquad E3 := E1 \cdot D3 + E2 \cdot D3$$

$$= \frac{G1 + G2}{1 - G1 - G2} \cdot F3$$

$$\frac{4)]}{} + 6\Big] \cdot 10^{-6}$$