Model of CRUSH hardware + software (no interrupts)

$$\text{Max}\left(\begin{array}{l} T_{interval}\ (\mu s/event) = A_1 + A_2 r + A_3 a + (C_1 r + C_2 a)\, n_{bytes}\, t_{link} \\ \qquad A_3 a \approx 0 \\ T_{interval}\ (\mu s/event) = B_1 + B_2 r + B_3 a \\ T_{interval}\ (\mu s/event) = \text{fragment size / ROL speed (MByte / s)} \end{array}\right)$$

- A_1: average startup time of external transfer, due to polling ?
- $(C_1 r + C_2 a)\, n_{bytes}\, t_{link}$: time needed for transfer via output link
- B_1: indexing time
- $B_2 r$: CPU time per RoI req
- $B_3 a$: CPU time per decision

A1 = 1.12 µs
A2 = 5.8 µs
A3 = 0.0 µs
B1 = 4.75 µs
B2 = 10.3 µs
B3 = 3.44 µs
C1 = 1
C2 = 1

r = RoI request fraction
a = accept fraction
n_{bytes} = number of bytes in fragment
t_{link} = time to send 1 byte over SHARC link = 0.025 µs