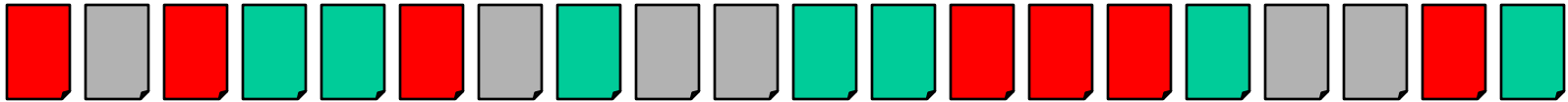
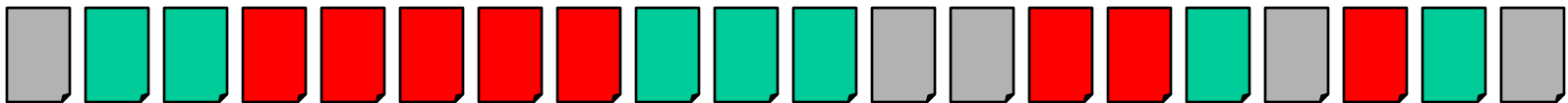


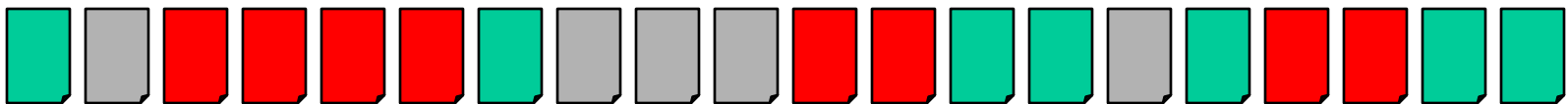
Query A: $R = 10$



Query B: $R = 15$



Query C: $R = 12$



 = Relevant  = Not Relevant  = UnJudged

Formulae

- $\text{Precision} = \text{relret} / \text{ret}$
- $\text{Recall} = \text{relret} / \text{rel}$
- $\text{AP} = \text{Sum}(\text{P}) / \#\text{rel}$
- $\text{MAP} = \text{Sum}(\text{AP}) / Q$
- $\text{P@n} = \#\text{relret@n} / n$
- $\text{R@n} = \text{precision at recall} = n$
- $\text{R-Precision} = \text{recall @ (ret = R)}$

Formulae 2

- $\text{Reciprocal Rank} = 1/(1^{\text{st}} r)$
- $\text{MRR} = \text{Sum}(\text{RR}) / Q$
- $\text{Bpref} = 1/R (\text{Sum} (1 - (n \text{ above } r < R) / R))$
- $\text{F1} = (1 + (B * B)) / (((B * B)/R) + (1/P))$
- $B = 1$ for balanced
- $B < 1$ for precision preference
- $B > 1$ for recall preference