# Transitivity, Time Consumption, and Quality of Preference Judgments in Crowdsourcing

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### **Research Questions:**

**Q1:** Do weak/strict preference judgments exhibit transitivity when collected using

Holds among strict preferences Not hold among tie judgments

## Time Consumption (seconds)

Judgment Time

34,17

24,24

<sup>d</sup><sub>3</sub> crowdsourcing?

Q2: How do weak/strict preference judgments compare against graded judgments in terms of time consumption?

Q3: Can weak/strict preference judgments collected using crowdsourcing replace



32,43

### Judgment Quality

Judgment quality in terms of agreements relative to TREC judgments Preference judgments lead to significantly better quality Strict preference judgments are significantly better

#### Percentage Agreement 74%







#### Strict Weak Graded Judgments Preferences Preferences

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