HARDtrack results—Microsoft Research Ltd

**Run ID**: MSRC-e0p1

**Run Description**: not a baseline; used both title only

### Passage-based Evaluation (42 topics)

**Passage Level Averages**

- **F-Score**
  - At 5 passages: 0.2710, 0.0387
  - At 10 passages: 0.2609, 0.0661
  - At 15 passages: 0.2307, 0.0672
  - At 20 passages: 0.2264, 0.0806
  - At 30 passages: 0.2059, 0.1000
  - At 50 passages: 0.1917, 0.1175
  - At 100 passages: 0.1432, 0.1196

- **R-Precision**: 0.1526

### Document-based Evaluation (48 topics)

**Hard-rel vs. Soft-rel**

- **Total retrieved**: 47683476
- **Total relevant**: 51237576
- **Total rel. ret.**: 32904508

- **MAP**
  - Hard-rel: 0.2115
  - Soft-rel: 0.2337

### Document Level Averages

- **Precision**
  - At 5 docs: 0.3708 (Hard-rel), 0.4375 (Soft-rel)
  - At 10 docs: 0.3729 (Hard-rel), 0.4333 (Soft-rel)
  - At 15 docs: 0.3528 (Hard-rel), 0.4153 (Soft-rel)
  - At 20 docs: 0.3542 (Hard-rel), 0.4177 (Soft-rel)
  - At 30 docs: 0.3403 (Hard-rel), 0.4007 (Soft-rel)
  - At 100 docs: 0.2323 (Hard-rel), 0.2933 (Soft-rel)
  - At 200 docs: 0.1741 (Hard-rel), 0.2245 (Soft-rel)
  - At 500 docs: 0.1071 (Hard-rel), 0.1416 (Soft-rel)
  - At 1000 docs: 0.0685 (Hard-rel), 0.0939 (Soft-rel)

- **R-Precision**
  - Hard-rel: 0.2462
  - Soft-rel: 0.2703