Shared Data and Community Evaluations

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A brief history of datasets in IR

- Information Retrieval – the science of search engines.
- In the 1960s, Cyril Cleverdon built what may have been the first dataset for measuring search: “Cranfield”
  - 1400 abstracts from aerospace engineering journal articles.
  - 200 queries taken from random documents.
  - Goal: figure out the best way to index the articles for search. (several styles of fixed vocabularies vs. using the words in the abstract)
- This dataset was a sensation, because now researchers could use a common benchmark.

History, cont.

- From the 60s through the 80s, a number of other datasets were built by different organizations and shared with the research community.
- Each one had its own quirks, and its own bugs.
- And, to a one, they were all quite small, on the order of 10k documents maximum.
- The cost of obtaining documents, labeling them, and processing them made it prohibitive to grow datasets much larger than this.
  - Part of this is 1970s computers, part is labor costs, and part is each group reinventing the process of building the dataset.

Birth of TREC

- In 1991, DARPA asked NIST to build a dataset with around a million documents.

- NIST proposed an open-participation workshop series:
  - NIST would collect and label the data.
  - Participant contributions would help create the dataset by identifying which parts of the data to label.
  - The resulting community could explore the quality of the dataset.
  - In the next year, those lessons would inform the **next** dataset.

What problems did TREC solve?

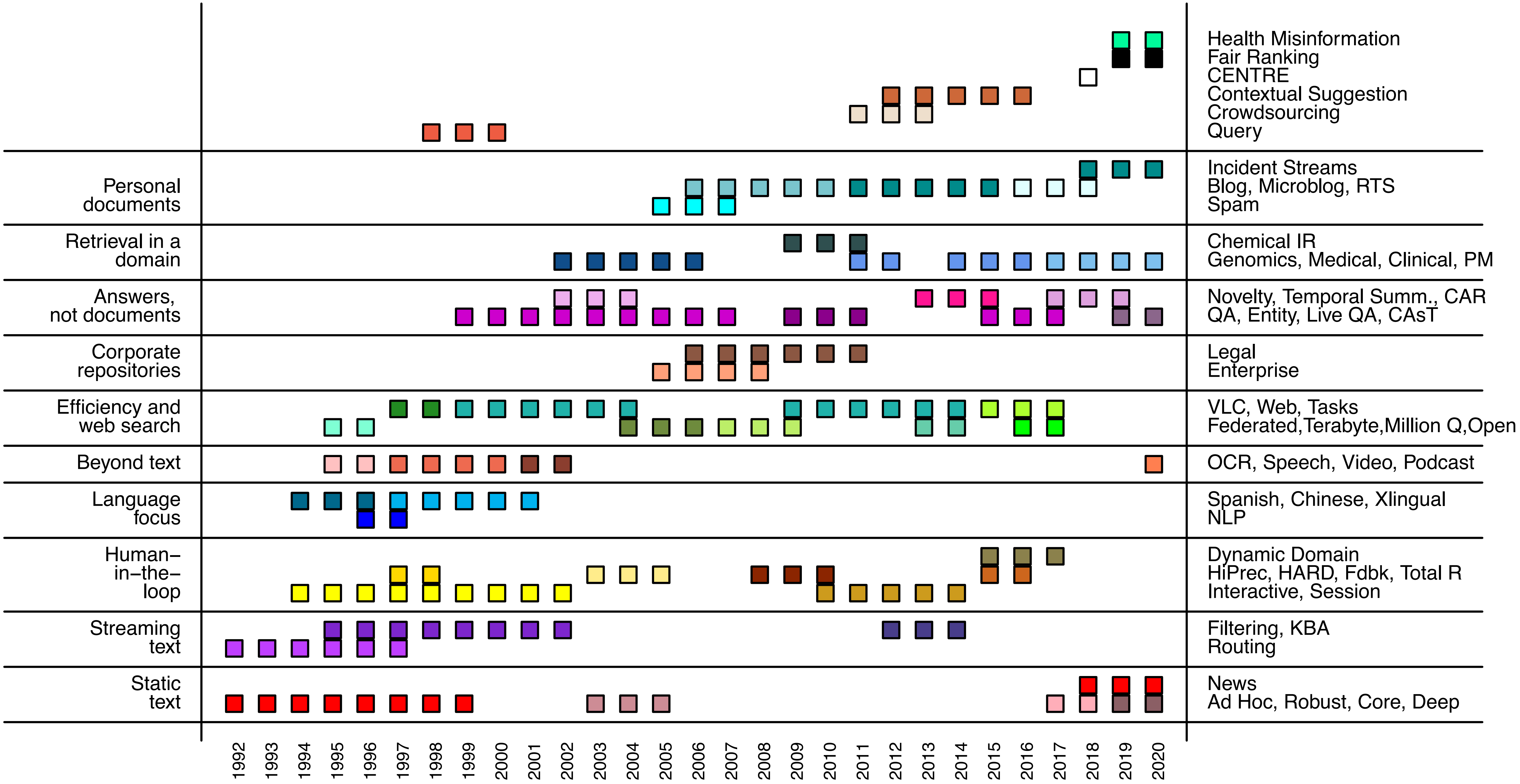
- NIST was able to absorb a cost that was beyond individual research teams, and to make the benefit available to everyone.

- Many eyes made bugs shallow.

- Shared datasets **and** a cycle for improving them.

- The community became involved in the process of creating the datasets, which meant that they were more strongly informed by the needs of the community.

- Together, NIST and the research community were able to standardize methods for building datasets, the experimental methods for using them, and how results would be reported.



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